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1.大会重点报告

1.1 大会重点报告一

社会治理视域下的阶层心理研究

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报告摘要：

心理学视角下的社会阶层指的是一种用来反映个体在社会层级阶梯中相对位置高低的社会分类，一个人的社会阶层代表了其所占有的客观社会资源及其主观上所感知到的自身社会地位。当前全球的经济不平等形势日益严峻，关注社会阶层对于个体或群体心理与行为的影响，对于理解和缓解不平等现状、促进社会治理与政治文明的进步具有重要意义。十年来，本研究小组结合我国社会文化与社会治理实际，持续关注社会阶层心理学问题。首先，以国际学术同行关于社会阶层心理学理论框架和实证研究为基础，将阶层心理与社会公平问题相结合，关注与社会公平正义相关的不同社会阶层者的心理与行为。其次，我们通过序列研究积累，从不同变量揭示了不同层面的阶层心态差异，提出了归因和补偿（认知和动机）作为一系列不同表现背后的心理基础。低阶层者更倾向于对社会事件进行外归因，同时有更多的认知失调补偿过程，这使其相对于高阶层者有着较低的系统合理信念、更高的结构需求倾向和阴谋论信念。再次，针对于低阶层者在社会竞争中的劣势处境，我们的研究挖掘了多方面不利于低阶层向上流动的典型特征，包括低阶层者的物质主义倾向、短视的决策风格、更高的威胁敏感性与相对剥夺感以及由此引发的集群行为意向，这些都需要引起政府和学界足够重视并探讨改善之策。最后，我们从提升其系统合理信念、促进其目标追求、增强其社会参与意愿、引导其经济决策等不同侧面，分析了有助于低阶层者摆脱困境、向上流动的社会治理思路，同时也考察了促进高阶层者再分配意愿的干预策略。综上我们建议，应关注社会阶层心理学之于社会治理的理论与实践意义，面对当下中国社会的矛盾，深入考察不同阶层者心理和行为的特征、需求、机制及其干预方法，为切实加强和创新社会治理提供心理学智慧与支持。

关键词：社会阶层，社会治理，社会心态，社会阶层流动

1.2 大会重点报告二

中国儿童青少年积极发展研究：基于中国文化的视角

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林丹华：北京师范大学心理学部教授，中国心理学会认定心理学家。教育部高等学校心理学类专业教学指导委员会副主任委员，中国心理学会学校心理专委会副主任委员，中华预防医学会行为健康分会副主任委员。担任 SSCI 收录期刊 *Applied Psychology: Health and Wellbeing* 杂志副主编。作为首席专家主持国家社会科学基金重大项目、国家自然科学基金项目、北京市教育科学“十三五规划”重点项目等多项国家级和省部级重要项目。发表中英文学术文章 150 余篇，其中在 *Child development* 和 *Applied Psychology: Health and Wellbeing* 杂志上发表的文章入选“ESI 全球高被引论文”（2020，2021）。获得中国学位与研究生教育学会研究生教育成果奖二等奖（2016）、北京市高等教育教学成果奖二等奖（2017）。主持的课程获得首批国家级一流本科课程（2020）。

报告摘要：

积极青少年发展(Positive Youth Development, PYD)观是近年来发展心理学领域理论与实证研究范式的重大转变，变“缺陷模型”视角为关注青少年的自身优势和潜能，对儿童青少年发展的公共政策和教育实践均起着重要且关键的作用。目前国外该领域的研究方兴未艾，但我国尚缺少基于中国文化的积极青少年发展的理论、内涵和测量工具，系统的实证研究也很欠缺，尤其是在处境不利儿童中开展的积极发展研究非常欠缺。那么，我国青少年积极发展的理论、结构与内涵具有哪些浓厚的中国文化特色，我国儿童青少年（尤其是留守儿童等处境不利儿童）的积极发展具有哪些发展变化的趋势与轨迹特征，影响我国留守儿童等处境不利儿童积极发展的“神经生理-心理-社会”作用机制是什么？回答这些问题至关重要，在国家社会科学基金重大项目的资助下，过去五年多我们运用长期追踪研究设计，采用深度访谈法、问卷法等多种研究方法，综合采用多模态磁共振成像技术以及唾液和头发皮质醇检测等技术手段，在基于我国文化背景下积极青少年发展的理论建构、测量工具研发、我国普通和处境不利儿童青少年积极发展的轨迹与变化趋势的多元性、积极发展与内外化问题之间是共存还是“此消彼长”的关系、留守儿童积极发展的内在“神经生理-心理-行为”作用机制等方面进行了一系列深入的研究，取得了系列成果，在理论上建构了中国文化下青少年积极发展的内涵和结构，制定了青少年积极发展的指标体系和测评工具，建立了可向心理学、公共卫生学、社会学等多学科开放的青少年积极发展数据库和共享平台。并将研究成果及时转化为政策建议和教育实践指南，提出应建立处境不利儿童“减少问题与促进积极发展并重”的公共政策，开展了一系列深入的针对留守儿童、流动儿童等处境不利儿童的“减少问题与促进积极发展并重”的应用实践工作。研究成果被《光明日报》专栏《光明调查》整版刊发，相关内参报告被中宣部所采纳。本报告将对以上内容做全面、深入、多角度的介绍与诠释。

1.3 大会重点报告三

社会交互场计算模型预测人类面对面交互行为

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报告摘要：

作为社会性动物，我们生活在一个复杂的社会环境中。面对面的社会互动在我们的生活中起着重要的作用。之前的研究发现，人们在面对面的交互中会形成一定的空间结构。之前的研究提出了空间关系理论定义了人类不同个人和社会空间，并依此解释人类面对面交互中形成的空间关系。但是这些理论仅仅限于对空间关系的定性化描述，缺乏定量化的分析和数学化的计算模型。我们的研究利用最新的虚拟现实实验平台，量化控制社会场景中的各种参数，把传统实验心理学中的心理物理法，应用到分析各种社会场景中的因素与人类交互行为的量化关系，并依此构建了社会交互场的计算模型。该模型成功预测了人们在多人、复杂社会场景下，人们面对面交互形成的动态过程和最终的空间结构。该计算模型可以应用到服务机器人等行业中，提升机器人的宜人性和人类交互的融入性。

1.4 大会重点报告四

脑-音乐交互：理论、方法与应用

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主要成绩：原创脑电零参考技术，建立无标度脑波音乐技术，提出脑器交互学概念。先后发表期刊论文 200 余篇，Google 引用 1 万余次，h 指数 55。2014-2018 入选 Elsevier “中国高被引学者”榜单，新近入选 World's Top 2% Scientists 的神经科学领域的 “生涯影响力”（1960-2020）和 “年度影响力”（2020）榜单。

报告摘要：

本报告将从“和谐”入手，讨论脑波音乐的创作；讨论 Mozart 音乐效应及其节奏效应；讨论音乐家大脑的影像特征，以及音乐训练与音乐创作的脑影像；讨论音乐和脑波音乐在干预调控脑功能方面的研究。

更多细节可参考：

<https://neuro.uestc.edu.cn/name/shopwap/do/index/content/97>

1.5 大会重点报告五

拖延的认知神经机制及干预

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冯廷勇：西南大学心理学部教授，博士生导师，教育部青年长江学者，美国宾夕法尼亚大学访问学者，重庆市学术技术带头人，认知与人格教育部重点实验室副主任，国际儿童心理与家庭咨询研究中心主任（西南大学）。研究领域：时间认知与决策（拖延行为、跨期选择）的神经机制及干预、儿童认知发展及脑可塑性（包括正常儿童、ASD、ADHD）。先后主持了 4 项国家自然科学基金项目和 10 余项省部级等各类项目，以第一或通讯作者在国际心理学顶级期刊 JEP: *General*、*Cerebral Cortex*、*Neuroimage*、*Human Brain mapping* 等发表 100 多项研究成果（SCI/SSCI 50 多篇），研究成果入选国际顶级刊物《Science》的 Editor's Choice。

报告摘要：

跨文化研究表明，不同文化背景下有 15%~20% 的成年人存在慢性拖延，超过 70% 的学生承认自己存在学业拖延行为，甚至部分人群会形成病理性拖延。首先，提出拖延的时间决策模型（TDM）从任务负性过程和任务正性结果的权衡及自我调控角度揭示了拖延产生的认知机制；其次，通过行为-脑、脑-行为和机器学习的联合分析，揭示了拖延行为的三重神经结构拓扑网络：自我控制网络（背外侧前额叶和前扣带回为核心）、情绪调节网络（以脑岛和眶额叶为核心）和预期想象网络（以腹内侧前额叶和海马为核心）；最后，通过预期想象训练或者 TDCS 阳性刺激左侧背外侧前额叶，都能够有效提高执行力，降低拖延行为，其作用机制包括降低任务过程的负性情绪和提高任务结果的正性价值，进一步证实了拖延的时间决策模型。

1.6 大会重点报告六

与不确定性共处：适应与主动行为

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陆昌勤：北京大学心理与认知科学学院研究员，博士生导师，管理与社会心理学系副主任，研究领域为管理心理学和职业健康心理学。

陆昌勤博士主持、参与多项国家自然科学基金、国家自然科学基金重大研究计划(子课题)、国家科技支撑计划等课题，以及国际合作项目；研究成果发表在 *Journal of Applied Psychology*, *Personnel Psychology*, *Journal of International Business Studies*, *Journal of Organizational Behavior*, *Journal of Vocational Behavior*, 《心理学报》等专业期刊上，曾获得美国管理学会(AOM)、美国工业与组织心理学学会(SIOP)的年度最佳会议论文和优秀审稿人，以及北京大学教学优秀奖等荣誉；目前担任国际应用心理学会(IAAP)会刊 *Applied Psychology: An International Review* 副主编，以及 *Journal of Managerial Psychology*, *International Journal of Stress Management*(APA)等多家国际学术期刊编委和审稿人，曾为多家企事业单位提供人力资源管理方面的咨询和培训服务。

报告摘要：

当今社会与经济环境的一个主要特征就是不确定性。不确定性的存在打破了个体与组织之间交换关系的平衡，使得个体、组织的应对与行为选择面临着困境与挑战，但同时也会蕴藏着机遇与重塑的空间。本次会议报告以工作不安全感(job insecurity)这一工作场所中的不确定性事件为主题，汇报作者开展的系列研究(Lu, Wang, Lu, Du, & Bakker, 2014; Xu, Du, Johnson, & Lu, 2021; Yang, Zheng, Liu, Lu, & Schaubroeck, 2020; Wang, LeBlanc, Demerouti, & Lu, 2018; Wang, Lu, & Siu, 2015; 冯冬冬, 陆昌勤, 萧爱铃, 2008)，重点从组织和个体的视角来探讨组织公平、个体主动行为在人们应对不确定性威胁中的作用，以及作用机制和边界条件，期望能够丰富不确定性管理方面的理论，并为不确定性管理与应对提供合理化的建议。。

2. 专题报告

2.1 “教育心理专业委员会”专题研讨会

(1) “教育心理专业委员会”专题研讨会 1

亲子冲突与 CLOCK 基因 rs1801260 多态性对学前儿童助人行为的交互影响

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摘要 已有研究表明, 家庭环境因素会对个体的助人行为会产生重要影响。个体(基因)—环境交互作用理论认为, 助人行为可能是遗传和家庭环境相互作用的结果。但是有关于学前儿童助人行为的个体(基因)—环境的交互机制目前鲜有研究予以探讨。本研究以 461 名学前儿童($M_{\text{年龄}} = 4.90$ 岁, $SD = 0.89$)为被试, 通过家长报告的《亲子关系问卷》中的亲子冲突分问卷测量学前儿童的亲子冲突水平, 《长处与困难问卷》中的助人行为题目测量儿童的助人行为, 从唾液样本中提取 DNA 进行分型, 获得 CLOCK 基因 rs1801260 位点多态性, 进而考察亲子冲突与 CLOCK 基因 rs1801260 多态性对学前儿童助人行为的交互作用以及性别在其中的调节作用。结果表明, 亲子冲突对学前儿童助人行为的主效应显著, 亲子冲突与 CLOCK 基因 rs1801260 多态性对学前儿童助人行为存在交互作用, 但该交互作用仅在男孩中显著。具体来说, 亲子冲突对学前儿童助人行为具有显著的负面影响, 亲子冲突与 CLOCK 基因 rs1801260 多态性交互作用于男孩的助人行为, 即与 TC/CC 基因型的男孩相比, TT 基因型的男孩在亲子冲突水平较低情况下表现出更多的助人行为, 而在亲子冲突水平较高的情况下表现出更少的助人行为, 该交互作用符合差别易感性模型。而亲子冲突与 CLOCK 基因 rs1801260 多态性对女孩的助人行为无显著交互作用。本研究发现推进了学前儿童助人行为的个体(基因)—环境的交互研究, 并为差别易感性模型提供了新的研究证据。

关键词 亲子冲突, CLOCK 基因, 学前儿童, 助人行为, 个体(基因)—环境交互

The interaction effect of parent-child conflict and the CLOCK rs1801260 polymorphism on preschoolers' helping behaviors

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Abstract: It has been demonstrated that family environmental factors play a key role in the development of an individual's helping behaviors. The gene-environment (G×E) interaction model proposed that individuals' helping behaviors may be the result of the interaction between heredity and environment. However, few studies focused on preschoolers' helping behaviors from the perspective of the interaction between gene and environment. The present study sought to investigate the interaction effect of parent-child conflict and CLOCK rs1801260 polymorphism on preschoolers' helping behaviors. A total of 416 children ($M_{\text{age}} = 4.90$, $SD = 0.89$) participated in the present study. Parents of the participants completed questionnaires regarding parent-child conflict and helping behaviors. DNA samples of children were extracted from their saliva to genotype the CLOCK rs1801260 polymorphism. After controlling for age and family socioeconomic status, the results indicated that parent-child conflict was negatively

associated with preschoolers' helping behaviors. Moreover, the significant interaction effect of parent-child conflict and the CLOCK rs1801260 polymorphism was verified, which only existed in boys. Specifically, parent-child conflict had a negative effect on preschoolers' helping behaviors and the interaction effect of parent-child conflict and the CLOCK rs1801260 polymorphism was significant in boys, i.e., boys with TT genotype performed more helping behaviors than in case of the lower level of parent-child conflict and performed less helping behaviors in case of the higher level of parent-child conflict than TC/CC genotype carriers, which provide evidence for the Differential Susceptibility Model. However, there was no significant interaction effect in girls. The findings of the present study expand our knowledge about the G×E underpinnings of preschoolers' helping behaviors.

Keywords: parent-child conflict, CLOCK gene, preschoolers, helping behaviors, gene-environment interaction

儿童对不同权力情境中权力者亲社会行为的预期

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摘要 社会权力关系普遍存在于儿童的日常生活中, 社会权力的认知在儿童的社会活动中起重要作用。研究显示, 成人对于高低社会权力者会有不同的社会行为预期(Tiedens, Ellsworth, & Mesquita, 2000), 但目前少有实证研究关注儿童对高低权力者行为的预期和推断。儿童获得权力的途径一般有两种: 基于支配(自己夺取获得权力)和基于声望(他人授予获得权力)的权力获得策略。不同权力获得策略在不同年龄阶段受到不同的关注, 产生不同的影响(Hawley, 1999), 因此不同年龄阶段的儿童对采用不同策略获得资源的权力者可能存在不同的亲社会预期。本研究在这两种权力获得情境中考察了 4-8 岁儿童($N = 116$)对高低权力者亲社会行为的预期。儿童分别观看基于声望的和基于支配两种权力情境的视频后, 对视频中的高低权力者的资源占有和分享行为做出预估。随后, 儿童判断两个情境中的高权力者谁更有可能占有或分享资源, 以及更愿意和谁成为朋友。结果显示: 学前儿童(4-6 岁)预期两种权力情境的高权力者均比低权力者更可能占有资源; 学龄早期儿童(7-8 岁)预期基于支配的高权力者比低权力者更可能占有资源, 更不可能分享资源, 但对声望情境中的高低权力者的占有资源和分享资源行为没有预期差异。此外, 4-8 岁的儿童更喜欢与通过他人授予的权力者作好朋友, 他们也都认为有声望的权力者而非支配性的权力者更可能分享资源; 但是在资源占有上, 4-8 岁儿童均没有明显的行为预期差异。这说明从学前期到学龄期, 儿童对两种不同权力获得方式的态度和信念由未分化状态逐渐表现出分化。学前期儿童预期两种方式的权力获得者均会更加自利, 而学龄儿童对高权力者的行为预期在两种权力情境中出现差异, 预期基于支配的高权力者会更加自利, 而对于基于声望的高权力者的行为不再表现出自利的预期偏好。

关键词 社会权力, 声望, 支配, 社会预期, 分享行为

Children's Expectations for Power Holders' Prosocial Behaviors in Different Power Situations

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Abstract: Social power relations exist in children's daily life. Children's understanding of social powers plays a key role in their social life. Research shows that adults have different social expectations for people with high and low power status (Tiedens, Ellsworth, & Mesquita, 2000), but there has been limited empirical research on children's expectations for people with different power status. Children most commonly gain power by two strategies: dominance-based (power grabbed) strategy and reputations-based (power granted) strategy. Different strategies are received differently in different age groups and lead to different consequences (Hawley, 1999). Therefore, children in

different age groups may have different prosocial expectations for power holders based on how they acquired power. The present study examined 4- to 8-year-old children's ($N = 116$) expectations regarding prosocial behaviors of power holders in different power situations. Children watched videos introducing a reputation-based power situation and a dominance-based power situations respectively, and reported their expectations for the members with high power and low power regarding their resource occupying and sharing behaviors. Children were then asked which one of the two power holders in these two power situations were more likely to occupy or share resources, and who the children would like to befriend. Results showed that preschool-aged children (4- to 6-year-olds) predicted that power holders in both power situations would be more likely to occupy resources, whereas early school-aged children (7- to 8-year-olds) predicted that the power holder in dominance-based power situations would be more likely to occupy resources and less likely to share resources. School-aged children predicted no difference in occupying and sharing behaviors between the member with high power and the member with low power in the reputation-based power situation. In addition, children in both age groups preferred to befriend the power holder whose power was granted by others, and they believed the reputation-based power holder would be more likely to share resources. Children did not expect a difference in occupying behaviors between the power holders in the two situations. The findings show that children's attitudes and beliefs towards power strategies shift from undifferentiated to differentiated as they become school-aged. Preschool-aged children expected power holders in both power situations to be more self-interested, whereas early school-aged children expected the two to act differently, namely, power holder in the dominance-based power situation would be more self-interested, whereas power holder in the reputation-based power situation would not show any preference for self-interest.

Keywords: social power, reputation, dominance, social expectation, sharing behavior

家庭功能与儿童亲社会行为发展的纵向关系： 催产素受体基因多态性的调节作用

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摘 要 本研究考察了家庭功能和小学儿童亲社会行为发展的纵向关系，并进一步探究了催产素受体（oxytocin receptor, OXTR）基因多态性 OXTR rs2254298 在其中的调节作用。208 名西安市某小学一年级儿童（98 名女孩，47.1%）参与了研究。研究采集儿童唾液样本进行 DNA 提取和 OXTR 基因多态性检测，并邀请儿童父母在儿童一年级、二年级、三年级时分别填写长处与困难问卷中的亲社会行为问卷以及家庭适应性和亲密度问卷中文版来报告儿童的亲社会行为和家庭功能。研究结果发现，家庭功能和儿童亲社会行为发展的纵向关系显著，从一年级到三年级家庭功能的提高能够显著预测儿童亲社会行为的生长，并且三年间良好的家庭功能能够预测儿童更高的亲社会行为表现。更重要的是，研究发现 OXTR rs2254298 基因多态性能够显著调节家庭功能和儿童亲社会行为发展的纵向关系，家庭功能的提高能够显著促进儿童亲社会行为的发展，这种积极作用在携带 OXTR rs2254298 GG 基因型（相比 A 等位基因）的儿童中更为明显。当家庭功能有较大提升时，携带 OXTR rs2254298 GG 基因型的儿童亲社会行为将显著高于携带 A 等位基因儿童的亲社会行为。研究结果表明，小学儿童亲社会行为会受到儿童家庭功能和 OXTR 基因多态性的共同影响。OXTR rs2254298 和家庭功能对儿童亲社会行为发展的交互影响模式符合优势敏感模型，rs2254298 GG 基因型表征了儿童对更良好的家庭功能的敏感性。研究结果为理解 OXTR 基因和家庭功能对儿童亲社会行为发展的基因-环境交互作用模型提供了依据。

关键词 儿童亲社会行为发展，催产素受体基因多态性，家庭功能

Longitudinal association between family functioning and prosocial development in children: The moderating effect of oxytocin receptor gene polymorphism

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Abstract: The present study examined the longitudinal association between family functioning and prosocial development in elementary school-age children, and further explored the moderating role of oxytocin receptor (OXTR) gene polymorphism OXTR rs2254298 in such association. 208 children (98 girls, 47.1%) at 1st grade participated the present study, OXTR rs2254298 (GG vs AA/AG genotypes) was genotyped among children at 1st grade, and parents completed the prosocial scale of the Strength and Difficulties Questionnaire and the Family Adaptability and Cohesion Evaluation Scale to assess children's prosocial behaviors and family functioning at 1st, 2nd and 3rd grades. The results showed the significant longitudinal association between family functioning and children's prosocial development. Increased family functioning significantly positively associated with children's increased prosocial behaviors from 1st to 3rd grade, and children with higher family functioning could exhibit more prosocial behaviors during the three years. More importantly, the present study found the significant moderating effect of OXTR rs2254298 on the longitudinal association between family functioning and children's prosocial behaviors. The growth of family functioning could significantly facilitate the development of children's prosocial behaviors, and this positive effect was much stronger in children with the OXTR rs2254298 GG genotype (compared to the A allele). When family functioning was greatly improved, children with the OXTR rs2254298 GG genotype would behave more prosocial behaviors than children with the A allele. The present study demonstrated the significant interaction effects of family functioning and OXTR rs2254298 on prosocial behaviors in elementary school-age children. Moreover, the findings suggested the interaction model was more conform to the Vantage Sensitive model, and the rs2254298 GG genotype represent children's environmental sensitivity to improved family functioning. The present findings have helped to understanding the gene-environment interaction model of OXTR gene polymorphism and family environment on children's prosocial development.

Keywords: children's prosocial development, OXTR gene polymorphism, family functioning

接受对象的常规行为与资源需求对 5~6 岁幼儿分享行为的影响

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摘要 本研究探究接受对象的常规行为与资源需求对幼儿分享行为的影响。采用两因素被试间设计考察 5~6 岁幼儿在不同常规行为表现与资源需求程度条件下分享行为的差异。被试任务是根据接受对象的常规行为与资源需求的特征, 决定最终分享的糖果数量。结果发现, 常规行为的主效应显著, 相比常规行为差的接受对象, 幼儿给常规行为好的接受对象分享的糖果更多。资源需求的主效应显著, 与无资源需求相比, 接受对象有资源需求时, 幼儿分享的糖果更多。常规行为与资源需求的交互作用显著, 与其他条件相比, 接受对象常规行为好且有资源需求时, 幼儿分享的糖果更多。此外, 结果可能表明, 常规行为好比有资源需求更能促使 5~6 岁幼儿慷慨分享。

关键词 分享行为, 常规行为, 资源需求, 5~6 岁幼儿, 接受对象

The Influence of Recipients' Conventional Rule and Resource Neediness on Sharing behavior among preschoolers at age of 5~6

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Abstract: This study explored the effects of recipients' conventional rule and resource neediness on preschoolers' sharing behavior. A two-factor between-subjects design was used to investigate the difference of sharing behavior among preschoolers aged 5 ~ 6 years under different conditions of conventional rule and resource neediness. According to the difference of recipients' conventional rule and resource neediness, the participant would decide the amount of candy to be shared. The results showed that the main effect of conventional rule was significant, and the amount of candy shared by participants to recipients with good behavior in conventional rule was more than that to recipients with bad behavior in conventional rule. The main effect of resource neediness was significant. Compared to recipients without resource neediness, participants shared more candy when recipients preformed resource in need. The interaction between Conventional rule and Resource neediness was significant. Compared with other conditions, when recipients performed good behavior in conventional rule and resource in need, participants shared more candy. These results perhaps indicate that preschoolers prefer to share with recipients who performed good behavior in conventional rule and resource in need. Moreover, our results may indicate that good behavior in conventional rule can induce more generously sharing behavior among preschoolers aged 5~6, in contrast with resource neediness.

Keywords: sharing behavior, conventional rule, resource neediness, preschoolers at age of 5~6, recipients

(2) “教育心理专业委员会”专题研讨会 2

探究适应创新与脑电微状态的关系：以入睡困难为调节

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摘要 科顿适应创新的效率性与大五人格的尽责性关系密切。尽责性与突显网络(Salience Network, SN)的主要组成部分—背侧前扣带皮层(dorsal anterior cingulate cortex)和脑岛(insula)的功能连通显著相关，脑电微状态 MS3 也与该脑区关系密切。然而，在先前失眠症研究中，经常观察到 SN 的过度激活。因此为探讨效率性、微状态与睡眠三者间的关系，本研究对中国大学生发放科顿适应创新量表和匹兹堡睡眠质量量表，并采集了静息态脑电数据。研究结果表明（1）科顿适应创新效率性与 MS3 的持续时间呈显著的正相关；（2）入睡时间与 MS3 持续时间呈显著的正相关；（3）入睡时间在科顿适应创新效率性预测 MS3 持续时间的关系中起正向调节作用，即对于入睡时间长的被试，效率性正向预测 MS3 的持续时间；而对于入睡时间短的被试，则无此效应。为此，我们得出结论（1）对于科顿适应创新效率性更高的人或入睡时间更长的人，MS3 持续更久；（2）在入睡时间的调节下，只有在入睡时间长的人群中，当其效率性上升时 MS3 的持续时间才有显著增长，而在入睡时间短的人群中则没有此效应。本研究在中国大学生群体中发现了效率性、入睡困难和 MS3 持续时间的关系，揭示了在入睡时间的调节作用下，高效率群体的神经异质性。

关键词 科顿适应创新，效率性，入睡时间，微状态，突显网络

Exploring the Relationship between Adaption-Innovation and Resting-State EEG Microstate: the Moderating Role of Falling Asleep Difficulty

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Abstract : Efficiency subcomponent in Kirton Adaption-Innovation Inventory (KAI) is closely linked to conscientiousness in Big-Five personality traits. Neurologically, conscientiousness is associated with the functional connection of dorsal anterior cingulate cortex (dACC) and insula, two main components of Salience Network (SN). However, an over-activated SN was frequently observed in previous insomnia research. Therefore, to explore the relationships among efficiency, MS3 and sleep quality, Chinese college students' adaption-innovation and sleep quality were measured by KAI and Pittsburgh sleep quality index, and the resting state EEG data were collected for microstate analysis. The results showed that: (1) There was a significant positive correlation between efficiency and MS3. (2) Duration of MS3 was positively correlated with sleep latency. (3) We also found a significant effect of the duration of MS3 on Efficiency, which was moderated by Sleep Latency. That was, the duration of MS3 has a significant positive predictive effect on efficiency in subjects with long sleep latency. However, for the subjects with short sleep latency, there was no such effect. Therefore, we conclude that (1) people with more efficiency or people with more long sleep latency have longer MS3 duration; (2) There is a significant increase in the duration of MS3 when efficiency increases only in people with long sleep latency, without those with short sleep latency. This study finds the relationships among efficiency, MS3 and falling asleep difficulty, and reveals the neural heterogeneity of high-efficiency groups under the regulation of different sleeping latency through Chinese college students.

Keywords: Kirton Adaption-Innovation Inventory, Efficiency, Sleep Latency, Microstates, Salience Network

思维枯竭状态下样例新颖性及多样性对创造力的影响

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摘要 在创造性观点生成过程中, 常出现思维枯竭状态。呈现样例线索是激发创造性的有效手段。已有创造性思维枯竭研究中, 样例线索多为高新颖、多样化, 且多聚焦在特殊性领域如设计领域, 较少关注样例新颖水平、类别变化对领域一般性创造性思维的影响。因此, 本研究分别探究创造性思维枯竭状态下样例新颖性水平及类别多样性对创造性的作用。研究包括两个实验, 采用非常规用途任务测量发散性思维, 实验范式皆为阶段一诱发思维枯竭状态; 阶段二呈现不同新颖水平的样例并在相同规定时间内继续完成任务。实验1招募96名高二学生, 分别分配至高、中、低新颖组及控制组, 并完成阶段一和阶段二的非常规用途任务。结果发现: (1) 阶段一任务完成时间及任务表现存在组别差异, 表现为在新颖性表现上高、中新颖样例组好于控制组, 控制组阶段一用时长于低新颖组; (2) 当阶段一用时与任务表现作为协变量控制后, 整体任务的表现(流畅性、新颖性及灵活性)皆发现组别差异, 具体表现为: 思维枯竭存在时, 高新颖样例更能促进想法的新颖性, 而低新颖样例更能促进想法的流畅性和灵活性; 且样例组的表现皆好于控制组。实验2前期通过产品改进任务筛选出高、低创造力84名高二学生, 同样在诱发思维枯竭后呈现样例, 与实验1不同的是样例皆为高新颖水平想法, 且区分出同类别样例和不同类别样例两种条件。结果发现: (1) 在阶段一任务完成时间及任务表现上, 高创造力个体用时显著长于低创造力个体, 且在任务流畅性和灵活性表现上显著好于低创造力个体。(2) 当阶段一用时与任务表现作为协变量控制后, 相较于低创造力个体, 高创造力个体在流畅性、新颖性和灵活性上受样例的促进作用更大。此外, 多类别样例条件下, 个体灵活性表现好于同类别样例条件。

两个实验结果证实了线索同化假说及 SIAM 理论, 为未来激发创意工作人员灵感及教育领域创造力的培养提供启示。

关键词 样例线索, 新颖性, 多样性, 思维枯竭, 创造性

The role of example's novelty and relevance in the stimulation of creative idea generation under creative exhaustion

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Abstract: People usually get exhausted during creative ideation. How to understand and cope with creative exhaustion is an important issue. Presenting example cues during creative ideation is an effective way to stimulate creativity. Previous studies have paid little attention to the novelty and semantic relevance of examples during creative exhaustion. This study aimed to explore these two factors' influence under creative exhaustion. The study included two experiments, both of which adopted a two-stage task paradigm. Stage one was intended to induce creative exhaustion while stage two presented different examples. In Experiment 1, 96 senior high school students were randomly assigned to four groups including high, medium and low-novelty example group and control group. Results showed that: (1) creativity performance and task duration in stage 1 were different among the four groups. Specifically, participants in high-novelty and medium-novelty groups performed better in originality than those in control group. In addition, task duration was longer in control group than that in low-novelty group. (2) When controlling the possible effect of task duration and creativity performance in stage 1, the whole creativity performance including fluency, originality and flexibility differed among the four groups. In particular, high-novelty examples facilitate originality while low-novelty examples were beneficial for fluency and flexibility. In Experiment 2, 84 senior high school students were selected by production improvement task from 182 students. Experiment 2 adopted the same paradigm except that the examples were high and varied in category. The results showed that: (1) For task duration and performance in stage 1, high-creativity individuals spent long time and performed better in fluency and flexibility than low-creativity individuals. (2) When excluding the possible role of task duration and creativity performance in stage 1, high-creativity group benefited more from examples than low-creativity group. Moreover, examples of different categories facilitated flexibility more than examples of the same categories. Findings of both experiments were consisted with the SIAM (Search Idea in Associative Memory) theory and opportunistic assimilation hypothesis. This study provide insight for fostering creativity under creative exhaustion exactly for designers.

Keywords: example cue, novelty, relevance, creative exhaustion, creativity

在线互动背景下的社会创意产生研究

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摘要 关于头脑风暴的研究发现, 在创意产生过程中情境因素与个体特征均可能具有显著的影响, 但是, 对于可以促进或抑制创意产生的环境线索, 已有的研究结果并不一致, 而且, 已有的研究尚未澄清认知风格和动机这些个体特征在这一过程中可能发挥的调节作用。此外, 作为一种重要的个体特征, 动机尤其是内在动机是创意产生的核心动力, 内在动机较高的个体的创意的新颖性和灵活性通常更高。但是, 已有的研究尚未澄清创意产生过程中个体的内部动机与环境线索之间的交互作用。而且, 关于社会创意产生的研究也可能具有领域特殊性。本研究以招募的大学生为被试, 采用在线头脑风暴技术, 以常见的社会性问题为创意产生

的实验任务,探讨了在线互动背景下不同认知风格的个体在不同环境线索条件下的创意表现,探讨了环境线索与动机特别是内在动机在这一过程中的交互作用。结果表明,具有场独立认知风格的个体的创造性水平显著高于具有场依赖认知风格的个体,但是,在有线索的情况下,两种认知风格的个体的创造力没有显著差异;环境线索的数量显著影响社会创意的新颖性,动机水平可以调节这种影响;线索特征对社会创意的流畅性和灵活性的影响受到内在动机的调节,线索越新颖,被试创意的水平就越高。社会创造力的培养应兼顾个体与情境的作用及其交互影响。

关键词 在线互动, 社会创意产生, 在线头脑风暴

The Research on Social Creative Idea Generation in the Context of Online Interaction

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Abstract: The studies on brainstorming have found that both situational factors and individual characteristics may have a significant impact on the process of creative idea generation. However, the results of previous studies are inconsistent on the environmental cues that can promote or inhibit creative idea generation. Moreover, previous studies have not clarified the regulatory role of cognitive style and motivation in this process. In addition, as an important individual characteristic, motivation, especially intrinsic motivation, is the core power of creativity. Individuals with higher intrinsic motivation usually have higher originality and flexibility. However, previous studies have not clarified the interaction between individual intrinsic motivation and environmental cues in the process of creative idea generation. Moreover, the research on the creative idea generation in social creativity may also have domain specificity. The present study adopted electronic (online) brainstorming (EBS) technology and used common social problems as the experimental task of creativity generation to explore the creative performance of individuals with different cognitive styles under the background of online interaction with different environmental cues, and to explore the interaction between environmental cues and motivation, especially intrinsic motivation in this process among recruited college student participants. The results showed that the creativity level of the individuals with field independent cognitive style was significantly higher than that of the individuals with field dependent cognitive style, but there was no significant difference between two groups when there were clues; the number of environmental cues significantly affected the novelty of social creativity, which was moderated by the level of motivation; the effect of cue characteristics on the fluency and flexibility of social creativity was regulated by intrinsic motivation. The more novel the cue was, the higher the level of creativity was. The cultivation of social creativity should take into account the interaction of individuals with situations.

Keywords: online interaction, social creative idea, electronic brainstorming

“越创造, 越幸福!”创造性培养提高小学生主观幸福感

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摘要 积极心理学观点认为, 创造性和幸福感之间有正相关关系, 但也有研究者基于精神病症的观察认为两者呈负相关关系。本研究探索了创造性与小学生主观幸福感之间的关系。研究一采用主观幸福感问卷(包括生活满意度分量表和快乐感分量表), 威廉斯创造性倾向测验问卷, 托伦斯创造性测验(TTCT, 包括AUT任务和图形测验)测量 165 名学生的主观幸福感和创造性水平。结果表明, 威廉斯创造性倾向测验分数与小学生生活满意度以及积极情绪正相关, 但是与消极情绪相关不显著。研究二进一步采用行为学实验, 对学生的创造性进行训练, 分别从两个小学中各选择三个班级参与实验, (平均)每个班级 30 人给予同一实验处理,

两个学校作为平行实验进行数据处理。对于每个学校的三个班级，一组接受 6 周的创造性训练，一组接受 6 周常规认知训练，另外一组不接受训练，三组被试均在训练前后完成主观幸福感测验以及创造性的平行测验（AUT 测验，图形测验）。结果表明，创造性训练组主观幸福感的增加（后测-前测）显著的高于其他两组。以上结果表明，创造性越高的被试，主观幸福感越高；且创造性训练有助于提升被试的主观幸福感，即“越创造，越幸福！”

关键词 创造性，主观幸福感，小学生

“Creativity makes you feel better!”

——Creative training improves the subjective well-being

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Abstract: The positive psychology suggests that there is a strong positive correlation between creativity and happiness, however, other researchers have observed a negative correlation based on psychiatric disorders. The present study explores the relationship between creativity and subjective well-being of primary school students. The subjective well-being (life satisfaction and happiness) and creativity levels of 165 students were measured using the subjective well-being questionnaire, the Williams creative tendency questionnaire and the creativity tests. The results show that Williams creative tendency test score is positively correlated with life satisfaction and positive emotions of primary school students, but not significantly correlated with negative emotions. In the second study, a behavioral experiment was further adopted to train students' creativity. Three classes were selected from two primary schools to participate in the experiment. Thirty students in each class were given the same experimental treatment (on average), and the data of two schools were analyzed as parallel experiments. Three experimental conditions were creativity training group, conventional cognitive training group and no training group, separately, three groups of subjects completed subjective well-being test and creative parallel test (AUT tests, graphical test) before and after the training. The result shows that the subjective well-being score(post-pre) of creative training group is significantly higher than that of the other two groups. The finding suggests that the people who engaged in more creative activities experienced higher levels of well-being; In addition, creative training is helpful to improve the subjective well-being, that is, "creativity makes you feel good!"

Keywords: creativity, subjective well-beings, positive emotion

创造力的 5-I 训练理论模型以及训练工具的功能特定性

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摘要 创造力被认为是 21 世纪最重要的能力之一。以往研究证实，训练是提高人的创造潜力最有效的方式。创造力发展的多层面理论认为，创造力虽然有特定的认知基础，但是它的发生发展受到个人特质，认知风格和环境等多方面因素的影响。基于此，我们的研究提出了一个新的创造力训练模型：5-I 训练模型。该模型包含五个训练成分，*Inclination, Ideation, Interaction, Identification, and Inspiration*，每个成分包含多个训练工具，目的是训练一个或多个影响创造力的因素。在本次报告中，我将首先以一个 5 周的在线创造力训练项目作为示范，介绍 5-I 训练模型的设计方式，训练工具及其有效性。进一步，我们的研究检验了针对特定创造力认知成分的训练工具的效果。研究采用多个创造性测验指标，检验了四种特定的创造力训练工具（SCAMPER，随机联接，模式冲突和简单想法生成），在促进创造力的发散和聚合思维上的作用差异性。结果发现，SCAMPER 工具在某种程度上促进了新颖性，随机联接和模式冲突两种工具促进了流畅性和灵活性，而简单想法生成没有显著性的效果。

关键词 创造力训练，5-I 训练模型，在线训练，训练工具

Stimulating Creativity: Examining the Effectiveness of the 5-I Training Framework and Whether Techniques differ in Enhancing Specific Creativity Indicators

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Abstract: Creativity is among the most desired work and life skills in the 21st century. Training has been a preferred and effective way to foster creativity. As suggested by the multifaceted nature of creativity, creativity does not rely on cognitive processing alone. Rather, other non-cognitive factors (e.g., personal and contextual) also come into play in the creative process. This suggests that when aiming to train creativity, one has to take into account the interdependence and interaction among the creative process and these factors. In our earlier work, we proposed a new theoretical framework for training creativity, the 5-I training framework. It consisted of five components, Inclination, Ideation, Interaction, Identification, and Inspiration. Several training techniques were incorporated, each focusing on one or several components of the 5-I training framework. During this presentation, I will talk about the design and the effectiveness of the 5-I training framework in fostering university students' creativity throughout a five-week online training. Furthermore, I will talk about whether and how training techniques (SCAMPER, random connection, schema violation, and simple ideation) involving different cognitive processes that underlie creativity differ in the type of creative performance they enhance. Our earlier results suggested that the SCAMPER technique showed a potential to enhance originality, the random connection and the schema violation technique tended to improve fluency and flexibility, while the simple ideation technique led to no creativity enhancement.

Keywords: Creativity training, 5-I training framework, online training, training techniques

基于技术支持的创造性教育整合模型

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摘要 教育应当以提高学生的创造力为重要目标。在数字时代, 信息和数字技术在课程中得到了广泛的应用, 为促进创造性教学和改革传统课堂教学提供了巨大的潜力。然而, 有关信息和数字技术对学生创造力的影响机制尚不清楚。为此, 本研究系统回顾了创造力研究所涉及的 8 大类 35 种技术产品, 分析得出技术产品通过知识与信息、高阶思维能力、动机、合作能力、创造性学习环境促进学生创造力, 从而构建了以技术产品支持创造性教育的整合模型。最后, 论文就数字时代创造性教育对教师和教师培训者的相关要求, 以及关键研究议题进行了讨论。

关键词 创造性教育, 信息与数字技术, 创造力要素论

An Integrative Model of Teaching for Creativity Supported by Technology

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Abstract: Improving student creativity is a primary goal of all levels of education. In the digital era, information and digital technologies have been widely used in courses. They have demonstrated a big potential of improving teaching for creativity as well as reforming traditional teaching strategies in classrooms. However, the influence mechanism of using information and digital technologies to improve student creativity keeps unclear. This study aims to fill this gap by systematically reviewing the literatures which focused on student creativity and use of technical products in classrooms. Taken together, 35 technical education products belong to 8 categories of technology were demonstrated

benefit student creativity through improve knowledge and information, high-order thinking skills, motivation, cooperation skills and learning environment for creativity. This paper generates an integrated model of teaching for creativity supported by technology. At last, requirements for teachers and teacher educators as well as the critical research issues about how to improve teaching for creativity by technology are discussed.

Keywords: Teaching for creativity, Information and digital technologies, Component Theory for creativity

(3) “教育心理专业委员会”专题研讨会 3

农村青少年网络成瘾模式与抑郁症状和问题行为的纵向关系： 基于潜在剖面分析

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摘 要 网络成瘾是青少年面临的重要心理社会问题之一。已有研究证实网络成瘾给青少年带来很多不利的影响，但很少有研究系统考察中国农村青少年群体网络成瘾的内部异质性及其对抑郁和问题行为的纵向预测作用。本研究通过为期一年的追踪研究，对 1194 名农村青少年（ $M_{age}=14.53$, $SD=0.72$ ）进行调查，采用潜在剖面分析的方法，探究网络成瘾剖面的不同模式亚群组的影响因素及其对抑郁和问题行为的预测作用。研究发现：1）农村青少年网络成瘾模式可分为四个亚群组：正常网络使用组（41%）、风险网络使用组（39%）、过度网络使用组（9%）和网络游戏组（11%）；2）农村青少年网络成瘾模式人群与性别、越轨同伴和亲子疏离具有显著的相关关系，但与留守状态不相关；3）风险网络使用组、过度网络使用组以及网络游戏组的抑郁水平均高于正常网络使用组。过度网络使用组和风险网络使用组比正常网络使用组表现出更高的问题行为水平，而网络游戏组的问题行为水平高于其他三个亚群组。这些发现表明，中国农村青少年的网络成瘾存在相当大的异质性，并且性别、越轨同伴和亲子疏离是影响农村青少年网络成瘾的风险因素，且网络成瘾剖面能够对农村青少年的抑郁和问题行为产生不同程度的影响。该项研究结果可以提供针对性的干预以及预防策略，减少农村青少年网络成瘾，进而降低农村青少年抑郁和问题行为的风险。

关键词 网络成瘾，潜在剖面分析，抑郁，问题行为，纵向研究

Pattern of Internet Addiction among Rural Chinese Adolescents: Longitudinal Relations with Depressive Symptoms and Problem Behaviors

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Abstract: Internet addiction is one of the important psychosocial problems faced by teenagers. It has been proved that Internet addiction has brought a lot of adverse effects on teenagers, but more attention has been paid to urban adolescents, while less research has been done on rural adolescents. In addition, few studies have systematically investigated the internal heterogeneity of adolescents' internet addiction and its predictive role. Through a one-year follow-up study, 1194 rural adolescents ($M_{age} = 14.53$, $SD = 0.72$) were investigated. The latent profile analysis was used to explore the influencing factors of different subgroups of internet addiction profile and their predictive effects on depressive symptoms and problem behaviors. The results show that: 1) The internet addiction patterns of rural adolescents can be divided into four subgroups: normal internet use group (41%), risk internet use group (39%), excessive internet use group (9%) and online game group (11%); 2) There is a significant correlation between rural adolescents' internet addiction patterns and gender, deviant peers and parent alienation, but not with left behind status;

3)The level of depressive symptoms in risk internet use group, excessive internet use group and online game group were higher than those in normal network use group. The level of problem behavior in the excessive internet use group and risk internet use group are higher than that in the normal internet use group, while the problem behavior level of the online game group is higher than that of the other three subgroups. These findings indicate that there is considerable heterogeneity in internet addiction among rural adolescents in China, and gender, deviant peers and parent alienation are risk factors of internet addiction among rural adolescents, and the profiles of Internet addiction can have different degrees of impact on depressive symptoms and problem behaviors of rural adolescents. The results of this study can provide targeted intervention and prevention strategies to reduce rural adolescents' internet addiction and inhibit the development of rural adolescents' depressive symptoms and problem behaviors.

Keywords: Internet addiction, latent profile analysis, depressive symptoms, problem behavior, longitudinal study

留守儿童亲子亲合与安全感的关系： 领悟社会支持与自我效能感的链式中介作用

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摘要 由于长期的亲子分离、缺乏父母的关爱与教养, 留守儿童表现出一系列的心理与行为问题, 其中安全感作为影响留守儿童心理健康发展的重要因素, 具有极高的研究价值。已有研究表明, 儿童的安全感与社会支持、父母教养方式、同伴关系等因素密切相关, 但较少探究留守儿童亲子亲合与安全感之间的关系。本研究以留守儿童安全感量表、亲子亲合量表、领悟社会支持量表和一般自我效能感量表作为测量工具, 对来自2所小学、2所初中和2所高中的1005名留守儿童(男生518名, 女生487名)进行问卷调查。通过数据分析, 研究结果如下: 差异分析显示: (1)在安全感方面, 单留守儿童安全感水平显著高于双留守儿童; 男生安全感水平显著高于女生。(2)在亲子亲合方面, 母子亲合水平显著高于父子亲合水平; 男生亲子亲合水平显著高于女生。相关分析显示: 留守儿童亲子亲合、领悟社会支持、自我效能感与安全感两两之间存在显著正相关。多重回归分析显示: (1)留守儿童的亲子亲合能够显著正向预测领悟社会支持、自我效能感与安全感; (2)留守儿童领悟社会支持在亲子亲合与安全感中起部分中介作用; (3)留守儿童自我效能感在亲子亲合与安全感中起部分中介作用; (4)留守儿童领悟社会支持、自我效能感在亲子亲合与安全感的链式中介作用中起部分链式中介的作用。研究结果说明了亲子亲合对留守儿童安全感的重要影响以及社会支持、自我效能感的中介作用机制, 有助于加强学校、家庭和社会各方面对留守儿童安全感的重视程度, 从而促进留守儿童的心理健康发展。

关键词 留守儿童, 安全感, 亲子亲合, 领悟社会支持, 自我效能感

A Research on the Relationship between Parent-child Affinity and Security of Left-behind Children: Chain Mediating Role of Perceived Social Support and Self-efficacy

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Abstract : Due to the long-term separation of parents and children, the left-behind children show a series of psychological and behavioral problems. At the same time, as an important factor affecting the mental health development of left-behind children, sense of security has high research value. Previous studies have shown that children's sense of security is closely related to social support, parental rearing style, peer relationship and other factors, but little research has been done on the relationship between parent-child affinity and security of left-behind

children. In this study, 1005 left-behind children (518 boys and 487 girls) from two primary schools, two junior high schools and two senior high schools were investigated by using the left-behind children's sense of security scale, parent-child affinity scale, perceived social support scale and general self-efficacy scale. Through data analysis, the following conclusions are drawn. The difference analysis showed that: (1) in terms of sense of security, the level of single left-behind children was significantly higher than that of double left-behind children; the level of security of boys was significantly higher than that of girls. (2) In the aspect of parent-child affinity, the level of mother-child affinity was significantly higher than that of father-child; the level of parent-child affinity of boys was significantly higher than that of girls. Correlation analysis showed that parent-child affinity, perceived social support, self-efficacy and security of left-behind children were positively correlated. Multiple regression analysis showed that: (1) left-behind children's parent-child affinity could significantly positively predict perceived social support, self-efficacy and security; (2) perceived social support of left-behind children played a part of mediating in role parent-child affinity and security; (3) self-efficacy of left-behind children played a part of mediating in parent-child affinity and sense of security; (4) left-behind children's perceived social support and self-efficacy played the role of chain mediation in the relationship between parent-child affinity and security. The results showed that parent-child affinity had an important impact on left-behind children's sense of security and the mediating mechanism of social support and self-efficacy, which could help to strengthen the attention of school, family and society to the sense of security of left-behind children, so as to promote the mental health development of left-behind children.

Keywords: Left-behind children, Security, Parent-child affinity, Perceived social support, Self-efficacy

农村留守妇女与儿童焦虑的代际传递：HPA 轴活动的作用

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摘要 焦虑是儿童青少年期最普遍的心理障碍之一，观察学习理论和西方研究均表明，焦虑具有代际传递性。在中国农村，由于配偶长期外出务工，留守妇女较之非留守妇女承受着更多的心理压力，这可能提升了其焦虑水平及其母子焦虑的代际传递程度。此外，尽管焦虑具有代际传递性，但并非所有父母焦虑的儿童都具有焦虑问题。发展心理病理学认为，个体的生理压力反应系统对外在环境的差别易感性影响不利处境对儿童发展的影响。HPA 轴(下丘脑-垂体-肾上腺轴，hypothalamic-pituitary-adrenal axis，简称 HPA)是人体应对压力的重要神经内分泌系统，其终产物-皮质醇常作为衡量个体压力反应的生理指标。对父亲外出的儿童来说，尽管外出打工的父亲为家庭提供了更多的经济支持，但传统的家庭结构发生了重大变化，在这一不利处境下，他们的 HPA 轴活动及其对焦虑代际传递的影响可能与农村完整家庭的儿童有所不同。为此，本研究以农村 169 名留守与非留守的母亲及其子女为被试，采用问卷调查法（母亲报告、儿童报告）和唾液皮质醇检测法，考察了 HPA 轴活动对留守、非留守母子焦虑代际传递的调节作用。结果发现：(1)留守与非留守母子焦虑的代际传递程度基本相当；(2)伴随上午基线皮质醇水平的提高或皮质醇一日变化节律的增强，留守母子焦虑的代际传递由显著变得不再显著；(3)伴随下午基线皮质醇水平的提高，非留守母子焦虑的代际传递变得不再显著。这表明，农村家庭结构模式影响不同的 HPA 轴活动指标对母子焦虑代际传递的调节效应。

关键词 焦虑，代际传递，HPA 轴活动，留守妇女，儿童

The Moderating Role of HPA Axis Activity in the Transmission of Anxiety from rural Left-behind Women to Children

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Abstract: Anxiety disorders represent one of the most common psychiatric disorders in childhood and adolescence. Social learning theories and Western empirical studies suggested that parental anxiety is transmitted to their offspring. In rural China, left-behind women compared to their non-left-behind counterparts take on more environmental stress due to the migration of their husbands, which might increase the anxiety level of left-behind women and the strength of the transmission of anxiety from left-behind women to the next generation. Additionally, although offspring of parents with anxiety symptoms are, in general, at raised risk for the disorder themselves, only a proportion are affected. The perspectives of developmental psychopathology suggest that individuals' differential susceptibility to adverse environments due to sensitivity of stress response systems may affect their psychological and behavioral outcomes. HPA axis is one of the core stress systems in response to environmental threat and stress. HPA axis activity can be estimated using measures of its end products, salivary cortisol. For children from families with a migrating father, although migrant fathers provide more economic benefits for their family members, traditional family structure has experienced dramatic changes. In this vulnerable situation, their HPA axis activity and the effect of HPA axis activity on the intergenerational transmission of anxiety may different from those of children from non-migrant families. Considering the aforementioned reasons, the present study examined the intergenerational transmission of anxiety and the potential moderated mechanisms of HPA activity in this association with the survey of questionnaire (mother and child reports) and the test of salivary cortisol, by using a cross-sectional data of 169 mother-child dyads in families with a migrating father and non-migrant families. The main results were shown below: (1) The extents of the transmission of anxiety from mothers to children in families with a migrating father and non-migrant families were at the same level. (2) High level of the morning basal cortisol and diurnal cortisol change broke the transmission of anxiety from left-behind mothers to children. (3) High afternoon basal cortisol broke the transmission of anxiety from non-left-behind mothers to their offspring. These findings to some extent demonstrated that the interactive effects of mother's anxiety and children's HPA axis activity on the intergenerational transmission of anxiety varied between families with a migrating father and non-migrant families in rural China.

Keywords: anxiety, intergenerational transmission, HPA axis activity, left-behind women, children

亲子分离背景下同伴侵害对青少年主观幸福感的影响

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摘要 伴随着城市化进程的不断加快, 农村父母外出务工现象日益普遍, 导致父母与子女间亲子分离的状况频繁发生。据统计, 超过 6000 万农村青少年正承受亲子分离的困扰。在亲子分离背景下, 青少年遭受同伴侵害的现象时有发生, 日益成为损害农村青少年心理健康的重要危机事件。根据自我系统信念模型, 自尊是解释风险因素对主观幸福感影响作用的重要变量。那么在亲子分离的背景下, 同伴侵害是否会通过降低青少年的自尊进而降低其主观幸福感? 哪些保护性因素可以缓解同伴侵害带来的消极作用? 已有研究主要从横断研究角度关注了同伴侵害的直接危害作用, 缺乏从积极发展视角考察其长期影响及其缓解机制。本研究采用整班施测方式对贵州省 487 名青少年进行两次追踪调查, 考察同伴侵害对遭受亲子分离后的青少年的主观幸福感的长期影响以及自尊在同伴侵害与主观幸福感之间的中介作用, 同时检验朋友支持和教师支持对该中介路径的调节作用。结果表明: (1) 同伴侵害不仅能长期显著负向预测遭受亲子分离后青少年的主观幸福感, 还能通过自尊的中介作用间接预测主观幸福感; (2) 朋友支持可以调节同伴侵害与遭受亲子分离的青少年主观幸

幸福感之间的关系，相对于高朋友支持的个体，同伴侵害对遭受亲子分离的青少年主观幸福感的影响在低朋友支持的个体中更显著；(3) 教师支持可以调节遭受亲子分离的女生同伴侵害与主观幸福感之间的关系，相对于高教师支持的女生，同伴侵害对主观幸福感的影响在低教师支持的女生中更显著。此外，教师支持还可以调节遭受亲子分离的女生同伴侵害与自尊之间的关系，相对于低教师支持的女生，同伴侵害对自尊的影响在高教师支持的女生中更显著。

关键词 亲子分离，同伴侵害，主观幸福感，自尊，社会支持

Effect of peer victimization on the subjective Well-being in Adolescents Based on the Features of Parent-child Separation

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Abstract: With the acceleration of urbanization, the phenomenon of rural parents going out to work is increasing frequently, leading to a rise of separations between parents and children. According to statistics, more than 60 million rural teenagers are suffering from parent-child separation. Under the background of parent-child separation, the phenomenon of peer victimization in adolescents occurs from time to time, which has increasingly become an important crisis event to damage the mental health of rural adolescents. Based on the self-system belief model, self-esteem is an important variable to explain the impact of risk factors on subjective well-being. In the context of parent-child separation, will peer victimization reduce the subjective well-being of adolescents through self-esteem? Which protective factors can moderate the negative effects of peer aggression? The existing studies mainly focus on the direct harmful effects of peer victimization with cross-sectional studies but lack the recognition of long-term effects and moderation mechanisms from the perspective of positive development. To investigate the long-term effects of peer victimization on adolescents' subjective well-being and the mediating role of self-esteem between victimization and well-being, as well as the moderating roles of friend support and teacher support under the experience of parent-child separation, a total sample of 487 adolescents was recruited from Guizhou province through the longitudinal design of two follow-up surveys. The results show that: (1) Peer victimization not only significantly and negatively long-term predicted the subjective well-being of teenagers, but also indirectly predicted subjective well-being through the mediating role of self-esteem after separation from parents. (2) Friend support significantly moderated the relationship between peer victimization and the subjective well-being of adolescents: higher levels of peer victimization negatively predicted subjective well-being only among those who reported less friend support after separation from parents. (3) Teacher support significantly moderated the relationship between peer victimization and the subjective well-being of girls after separation from parents: more teacher support alleviated the negative influence of peer victimization on subjective well-being. Also, teacher support could moderate the relationship between peer victimization and self-esteem of girls after separation from parents: more teacher support exacerbated the negative effect of peer victimization on self-esteem.

Keywords: Parent-child separation, Peer victimization, Subjective well-being, Self-esteem, Social support

亲子分离经历与大学生抑郁的关系： 亲子亲合与迷走神经活动的作用

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摘要 生命早期的亲子分离经历会显著提高个体出现心理病理问题的风险，且这种影响持续终生。随着父母外出务工所致的亲子分离成为一种全球性现象，揭示亲子分离对个体发展的持续影响、探明能够降低亲子分离消极影响的因素及作用机制成为亟待解决的重要科学问题。然而，已有研究主要关注亲子分离的即时影响以及环境因素的作用，相对忽视了亲子分离经历对个体产生的长期持续影响以及神经生物因素在其中的作

用。本研究将聚焦具有早期亲子分离经历的大学生，以亲子亲合作为家庭保护因素的指标，以迷走神经活动作为个体对压力的生物敏感性指标，系统探讨早期亲子分离经历对个体抑郁的长期持续影响以及亲子亲合、迷走神经活动在其中的交互作用。对 261 名大学生的亲子分离经历、亲子亲合和抑郁进行测查，并运用 MP160 生理多导仪采集了大学生在静息状态和压力任务下的 RSA 水平（Respiratory Sinus Arrhythmia，迷走神经活动的测量指标）。结果发现：（1）有亲子分离经历大学生的抑郁水平显著高于无亲子分离经历的大学生，其母子亲合和父子亲合水平均显著低于无亲子分离经历的大学生；（2）母子亲合和父子亲合均能够显著负向预测大学生的抑郁，且能够调节亲子分离经历与抑郁的关系；（3）RSA 反应性能够调节亲子分离经历与男大学生抑郁之间的关系；（4）RSA 反应性与父子亲合的交互作用能够调节亲子分离经历与抑郁的关系，但该调节作用仅存在男生中。这表明，早期的亲子分离经历能够对个体成年后的抑郁水平产生长期持续影响，但是这种影响会因为亲子亲合水平、个体迷走神经活动水平和性别的不同而存在差异。

关键词 亲子分离经历，亲子亲合，迷走神经活动，抑郁，大学生

The Relationship Between Parent-child Separation Experience and Depression in College Students: The Roles of Parent-child Cohesion and Vagus Nerve Activity

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Abstract: Parent-child separation has been considered as the most serious form of early life adversity, which puts individuals at increased risk for suffering psychopathological problems. Considering that parent-child separation caused by parents' migration has become a global phenomenon, it is critical to explore the long-lasting effects of parent-child separation, identify the protective factors and its underlying mechanism. However, existing research has typically focused on the immediate effect of parent-child separation and the role of environmental factors, which ignores the longitudinal effects of parent-child separation on individuals' development, and the role of neurobiological factors in the associations between parent-child separation and individuals' development outcomes. Thus, the current study aims to examine the impact of early parent-child separation experience on undergraduates' depression, and explore the moderating role of parent-child cohesion and vagus nerve activities in the association between early parent-child separation experience and undergraduates' depression. A total of 261 college students were asked to complete the questionnaires of parent-child separation experience, parent-child cohesion, and depression. RSA (respiratory sinus arrhythmia; an indicator of vagus nerve activity) data was collected using a Biopac system (MP160, Biopac System Inc., Goleta, CA). The results indicated that: (1) Undergraduates with parent-child separation experience had significantly higher levels of depression, but had significantly lower levels of mother-child cohesion and father-child cohesion than those without parent-child separation experience; (2) Both mother-child cohesion and father-child cohesion can significantly predict undergraduates' decreased depression, and moderate the link between parent-child separation experience and depression; (3) RSA reactivity moderated the link between parent-child separation experience and depression, but only for male; (4) The interaction between RSA reactivity and father-child cohesion moderated the association between parent-child separation experience and depression, but only for male. These findings suggest that early parent-child separation has a long-lasting harmful effect on individuals' depression, and the effects of early parent-child separation on depression vary by parent-child cohesion, vagus nerve activity, and gender.

Keywords: Parent-child separation experience, Parent-child cohesion, Vagus nerve activity, Depression, College students

家庭情感虐待、情感忽视与留守青少年的孤独感：同伴接纳的作用

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摘要 父母一方或双方长期外出务工极大增加了留守青少年经历家庭情感虐待和忽视的风险。大量研究表明，遭受家庭情感虐待、情感忽视的青少年更易产生较高水平的孤独感。在亲子分离的不利处境下，家庭情感虐待和忽视的消极影响可能会更强。因此，探讨能够缓解家庭情感虐待和忽视对留守青少年消极影响的保护因素就成为该领域研究中一个重要的研究问题。然而，已有的研究主要关注家庭情感虐待和忽视对青少年发展的直接影响，相对忽视了对能够缓解其消极影响的保护因素的探究，对于留守青少年群体的关注也相对不足。随着个体进入青少年期，同伴的作用日趋重要。在亲子分离的背景下，同伴接纳就成为青少年满足社交需求、获得情感支持和安全感的重要源泉。鉴于此，本研究以山东省的1631名农村青少年为被试，基于留守青少年和非留守青少年的比较，在分别考察家庭情感虐待、情感忽视与青少年孤独感关系的基础上，重点揭示了同伴接纳在其中的保护作用，并探讨了变量间关系的性别差异。结果表明：（1）相比非留守青少年、父亲外出青少年，双亲外出青少年经历了更高水平的情感忽视；（2）情感忽视显著正向预测青少年的孤独感，情感虐待显著正向预测父亲外出青少年和非留守青少年的孤独感；与情感虐待相比，情感忽视对孤独感的预测作用更强；（3）在父亲外出家庭中，情感忽视对女生孤独感的正向预测作用高于男生；（4）同伴接纳能够调节情感虐待与双亲外出儿童孤独感之间的关系，高同伴接纳可以缓冲情感虐待对孤独感的正向预测强度。这表明，家庭情感虐待和忽视对青少年孤独感的影响因留守类别和性别的不同而有所差异，可以通过提升同伴接纳水平来缓解情感虐待对双亲外出青少年孤独感的消极影响。

关键词 留守青少年，情感虐待，情感忽视，孤独感，同伴接纳

Emotional Abuse, Emotional Neglect and Left-behind Adolescents' Loneliness in Rural China: The Role of Peer Acceptance

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Abstract: Parent absences, caused by parents' rural-to-urban migrations, have greatly increased left-behind adolescents' risk of experiencing emotional abuse and neglect. Many studies have suggested that emotional abuse and neglect were associated with adolescents' increased loneliness. In the unfavourable context of parental-child separation, emotional abuse and neglect may have stronger effects on adolescents' loneliness. Thus, it is critical to identify the protective factors that may buffer the harmful effects of emotional abuse and neglect. Although existing research has examined the associations between emotional abuse and neglect and adolescents' loneliness, the associations among left-behind adolescents have been relatively unexplored, and little is known about the protective factors in buffering the detrimental effects of emotional abuse and neglect on loneliness. Peers play an increasingly important role in adolescents' lives. For left-behind adolescents, peer acceptance becomes an important source for them to meet the needs of social contact, obtain emotional support and sense of security. Therefore, the current study aimed to examine the unique impact of emotional abuse and neglect on loneliness among Chinese rural left-behind adolescents, non-left-behind adolescents from the same rural areas as the comparison group, with an exploration of the moderating role of peer acceptance and gender. A total of 1631 rural adolescents were recruited from Shandong Province. The results indicated that: (1) Adolescents from both-parent migrant families experienced higher levels of emotional neglect than those from father-only migrant families and non-left-behind adolescents; (2) Emotional neglect was significantly associated with increased adolescents' loneliness; Emotional abuse significantly predicted higher levels of loneliness among adolescents from father-only migrant families and non-left-behind adolescents; Emotional neglect was more strongly associated with loneliness than emotional abuse in three groups; (3) In father-migrant group, the association between emotional neglect and loneliness was stronger in girls than in boys; (4) Peer acceptance was significantly moderated the association between emotional abuse and loneliness in adolescents

from both-parent migrant families. Specifically, emotional abuse was positively associated with adolescents' loneliness at lower levels of peer acceptance, but such association was not significant at higher levels of peer acceptance. These findings suggested that the effects of emotional abuse and neglect on adolescents' loneliness vary by left-behind status and gender. Providing interventions to improve peer acceptance is beneficial in mitigating the effect of emotional abuse on loneliness among adolescents from both-parent migrant families.

Keywords: Left-behind adolescents, Emotional abuse, Emotional neglect, Loneliness, Peer acceptance

(4) “教育心理专业委员会”专题研讨会 4

数学焦虑与基本算术能力的关系： 认知反思、专业 and 性别的作用

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摘要 数学焦虑 (MA) 指的是在需要使用数字和数学的情境下产生的消极情绪体验 (Hembree, 1990)。Ashcraft 和 Kirk (2001) 曾报道, 在涉及数学或数学活动的情况下, 大约 20% 的人群会表现出焦虑。在数字认知领域, 大量的横断和纵向研究都揭示了数学焦虑对数学表现的消极影响, 数学焦虑不仅会降低个体在复杂任务中的表现, 也会导致个体在简单的计数、加法和乘法任务中表现不佳。现有理论多从工作记忆的角度进行对两者之间的关系进行解释, 但其他认知因素 (如认知反思) 和个体因素 (如性别和专业差异) 的作用也不容忽视。因此本研究基于已有实证研究, 以认知与自我调节学习的整合模型为基础, 探讨数学焦虑与数学表现之间的关系, 揭示认知反思、专业和性别在数学焦虑中的作用。选择 1026 名大一新生, 测量他们的数学焦虑、认知反思、基本算术能力。结果发现, 仅在理科学生中, 数学焦虑可通过认知反思影响基本算术能力, 而在文科学生中并未发现该间接效应; 将性别纳入分析发现, 并非所有的理科学生都表现出该间接效应, 而是仅在女生个体中存在。本研究的发现对于教学实践具有重要意义, 从认知反思的角度出发, 教育实践者可以通过一些认知训练 (如元认知策略), 来提高理科女生的认知反思能力, 进而提高女生的数学表现。

关键词 数学焦虑, 基本算术能力, 认知反思, 专业, 性别

The Roles of Conflict Reflection, Major and Gender in the Relationship between Math Anxiety and Basic Arithmetic Skills

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Abstract: Math anxiety (MA) refers to the negative emotional experience in the situation of using numbers and mathematics (Hembree, 1990). Ashcraft and Kirk (2001) reported that about 20% of the population would show anxiety when they were involved in mathematics or mathematical activities. In the field of numerical cognition, a large number of cross-sectional and longitudinal studies have revealed the negative impact of math anxiety on mathematical performance. Math anxiety not only reduces the performance of individuals in complex tasks, but also leads to poor performance in simple counting, addition and multiplication. The relationship between MA and math performance are usually explained by the view of working memory. However, cognitive factors, such as cognitive reflection, and individual factors, such as gender and major also play an important role on the correlation. Based on the empirical studies and Integrating the Model of Epistemic Cognition and Self-regulated Learning, this study was designed to reveal the effect of cognitive reflection, major and gender on the relationship between MA and math

performance. We recruited 1026 freshmen measuring their math anxiety, cognitive reflection and basic arithmetic ability. The results showed that math anxiety predicted the basic arithmetic ability through cognitive reflection only among the students majoring in science. Further analysis revealed that this indirect effect only existed in female students, not for students majored in arts. The findings of this study are of great significance, from the perspective of cognitive reflection, teachers in education are suggested to adopt cognitive training(such as metacognition strategies) in order to improve cognitive reflection ability and mathematical performance for females majoring in science .

Keywords: Math anxiety, Basic arithmetic skills, Cognitive reflection, Major, Gender

抑制控制在类比推理发展中的作用

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摘 要 类比推理作为抽象逻辑思维的一种重要形式，是将相关元素从一个熟悉任务的心理表征转移到另一个任务中，从而使人们在目标任务中缩小表征的差距(Chuderski & Chuderska, 2009)，被认为是人类智能的主要载体之一(Holyoak, 2012)。当个体在加工类比问题时，需要考虑多种关系及物体，这时激活与目标相关的信息并有效抑制干扰或分心刺激就很重要。已有研究采用不同的研究范式在不同的年龄群体中发现了抑制控制在类比推理中的重要作用（Richland et al., 2006; Simms, et al., 2018; 马晓清, 冯廷勇, 李宇和李红, 2008）。但少有研究从发展的角度揭示抑制控制在类比推理中的作用如何随着年龄的增长而变化的。负启动范式作为经典的抑制控制测量范式，可以通过负启动量这一量化的指标来揭示不同年龄群体在同一认知任务的抑制控制效率的变化。此外，认知负载理论提出任务难度可能会影响个体在认知过程中抵制分心的效率。鉴于此，本研究采用负启动范式揭示抑制控制在不同年龄群体类比推理中的发展模式，并进一步探究任务难度如何影响抑制控制效率的发展。实验1以31名7岁儿童、33名10岁儿童和34名成年人为被试，设置相对大小匹配的负启动任务考察抑制控制在类比推理中的作用。该任务由测验条件和控制条件组成，每个条件包含启动刺激和探测刺激。测验条件的启动刺激呈现的是表面相似性匹配和相对大小关系匹配相冲突的类比匹配任务，控制条件的启动刺激则为中性的类比匹配任务。测验条件和控制条件的探测刺激均为表面相似性匹配和相对大小关系匹配一致的类比匹配任务。结果发现，三个年龄群体都出现了负启动效应，且负启动量随着年龄的增长不断降低。这表明，随着年龄的增长，个体完成类比推理的抑制控制效率不断提高。在实验2中，30名7岁儿童、30名10岁儿童和32名成人完成和实验一类似但任务难度较小的相对大小匹配的负启动任务。结果发现所有年龄群体都出现了负启动效应，但是三个年龄群体间的负启动量无显著差异。这说明，当任务难度下降时，儿童和成人完成类比推理任务的抑制控制效率无显著差异。

关键词 类比推理，抑制控制，负启动，年龄特点

The Role of Inhibitory Control in the Development of Analogical Mapping: Task Difficulty Matters

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Abstract: Analogy is one of the most important ways for human beings to understand concepts and transfer knowledge to new situations, which might require complex cognitive processes that place a burden on individuals' executive functions. (Gentner, 1983; Glady, et al., 2017; Thibaut, et al., 2010). However, how general cognitive processes, especially inhibitory control, engage in the analogical mapping remains unclear. Negative priming (NP) paradigm can tap on the inhibitory control component in cognitive processes and provide straightforward evidence (e.g., NP effect) for the role of inhibitory control and its changes. The logic of NP is as follows: if response to an item was previously inhibited, then the subsequent processing of the same or similar item will be less efficient, resulting in slower or less accurate responses (Tipper, 2001). In addition, the perceptual load theory suggests that task difficulty

would affect the role of inhibitory control in analogical mapping. Taken together, the aim of the present study was to establish the role of inhibitory control efficiency in analogical mapping with the NP paradigm among children at different ages and adults. To achieve the goal, in Experiment 1, we tested 7-year-olds, 10-year-olds, and adults with a size-mapping task using NP paradigm. In the paradigm, participants were supposed to respond to two conditions: the test condition and the control condition. Each condition included pairs of stimuli: the prime stimuli and the probe stimuli. Participants' performance on probes in test condition would be compared with their performance on probes in control condition. Findings revealed the NP effect in all participants and the effect decreased with ages. To test whether task difficulty might influence the efficiency of inhibitory control in analogical mapping, in Experiment 2 we intended to change the materials in Experiment 1 into stimuli with lower cognitive demands. Specially, the number of objects required to be processed in Experiment 2 was significantly decreased compared to Experiment 1. In Experiment 2, thirty 7-year-olds, thirty 10-year-olds, and thirty-two adults completed a similar task which was easier than the task in Experiment 1. Results also demonstrated the NP effect among all participants, but the effects showed no differences with ages. The current study suggests the importance of inhibitory control and task difficulty in the development of analogical mapping.

Keywords: analogical mapping, children, inhibitory control, negative priming, task difficulty

教师重评创造力的测验编制及其与职业幸福感的关系

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摘要 重评创造力是日常生活创造力的重要表现, 是情绪背景中的创造性思维。这一能力需要灵活使用超越常规的新的思维模式, 对负面情境产生有创造力的重评意味着在情绪背景下具有较高创造力。中小学教师在日常工作中需要处理与学生、同事、领导以及家长等多个人群的复杂人际关系, 经常会遭遇人际冲突、矛盾等负面情境。本研究首次将重评创造力定义引入职业领域, 具体研究教师群体的重评创造力表现, 通过编制教师重评创造力测验, 探究其对职业幸福感的影响。具体研究由两个部分构成: 研究一以 210 名中小学教师为研究对象进行问卷调查, 并完成了教师重评创造力测验的情境材料筛选和信效度分析, 最终编制了教师重评创造力测验; 在研究二中, 以 202 名中小学教师为研究对象, 进一步考察了教师重评创造力和其职业幸福感之间的关系, 以及开放性人格和性别在其中的作用。结果发现: (1) 本研究开发的教师重评创造力测验的评分者信度、内部一致性信度以及校标关联效度符合心理测量学各项标准, 能够用于客观测量教师在工作中的重评创造力; (2) 教师使用重评创造力能有效降低愤怒情绪, 其独特性能够预测情绪调节的有效性; (3) 教师重评创造力与职业幸福感呈显著正相关, 对职业幸福感有预测作用; (4) 开放性人格在教师重评创造力和职业幸福感之间起中介作用, 教师重评创造力可以通过开放性人格影响职业幸福感; (5) 性别在教师重评创造力对开放性人格的影响中起调节作用, 对女性教师而言, 这一影响更加显著, 重评创造力越高, 对开放性人格预测作用越大; 对男教师则效果微弱。上述结果对于了解职业领域中的重评创造力表现特点, 提升中小学教师的情绪调节能力、职业幸福感均具有重要的意义。

关键词 教师, 重评创造力, 情绪调节, 职业幸福感, 开放性人格

Teachers' Reappraisal Inventiveness: The Measurement and Its Relationship with Professional Well-being

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Abstract: Reappraisal inventiveness is an important manifestation of daily creativity; it is also a form of creative

thinking in emotional context. This ability requires flexible use of new unconventional thinking patterns. Reappraisal inventiveness in negative situations means high level of creativity in emotional context. Primary and secondary school teachers need to deal with complex interpersonal relationships with students, colleagues, leaders, and parents in their daily work. They often encounter negative situations such as interpersonal conflicts and contradictions. This study introduces reappraisal inventiveness into the professional field for the first time, and specifically studied the performance of reappraisal inventiveness in teacher groups. In addition, this study also explored its impact on professional well-being through the teachers' reappraisal inventiveness test (TRIT). The specific research consists of two parts: Study 1 conducted a questionnaire survey among 210 primary and secondary school teachers. The teachers' reappraisal inventiveness test (TRIT) was ultimately compiled through both situational material selection and testing of reliability and validity. In the second study, the influence and function of teachers' reappraisal inventiveness were further explored. 202 primary and secondary school teachers were involved to explore the relationship between teachers' reappraisal inventiveness and professional well-being, as well as the role of openness to experience and gender. Results are as follows: (1) The inter-rater reliability, internal consistency reliability and criterion relevance validity of the TRIT meets to the requirements of psychometrics. (2) Teachers' reappraisal inventiveness can effectively reduce anger, and its uniqueness can predict the effectiveness of emotional regulation. (3) Teachers' reappraisal inventiveness has a significant positive correlation with professional well-being, and it can predict their professional well-being. (4) Openness to experience plays a mediating role between teachers' reappraisal inventiveness and professional well-being. Besides, teachers' reappraisal inventiveness can influence occupational well-being through openness to experience. (5) Gender plays a moderating role in influencing teachers' reappraisal inventiveness on openness to experience, which is even more pronounced for female teachers. The higher the reappraisal inventiveness is, the greater the predictive effect on open personality. However, this effect is weak on male teachers. These results are of great significance for understanding the features of reappraisal inventiveness performance in the occupational field; it also has important implications in improving emotional regulation ability and occupational well-being for primary and secondary school teachers.

Keywords: teachers, reappraisal inventiveness, emotion regulation, professional well-being, openness to experience

整数比数字结构中乘法策略的过度使用及其认知机制

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摘 要 乘法是数学学习中最常用的问题解决策略之一，掌握乘法思维更是学生学习高阶数学知识的必备条件。小学生从加法思维到乘法思维的转变标志了他们开始能够理解数值的相对大小以及数量之间的相互关系，这对于学生进一步理解比率、比例、分数、线性方程等具有至关重要的作用。然而，许多研究发现，学生熟练掌握了乘法思维之后却很容易过度使用乘法思维。例如，对于“A 和 B 在操场上跑步，两人速度一样但是 A 比 B 先开始跑，当 B 跑了 3 圈的时候，A 跑了 6 圈，请问当 B 跑了 9 圈时，A 跑了多少圈？”这样的问题，许多学生会得出 18 圈的答案，而题目中涉及的是加法关系，正确的答案为 12 圈。以往的研究发现这种乘法思维的过度使用与题中的数字比结构有关，当数字比为整数时（如： $6/3=2$ ），学生更容易使用乘法思维来解题。然而，为什么整数比的结构会诱发学生使用乘法思维，这一现象背后所涉及的内在机制却仍不清楚。本研究认为整数比的数字结构会优先激活乘法策略，导致学生在解决非乘法运算的题目上错误地使用乘法策略，而正确完成整数比结构下的非乘法运算，则需要抑制乘法策略的干扰。研究一基于双加工的视角，以 3 至 8 年级以及大学生为被试，发现各个年级的学生在整数比数字结构的题目中均出现了乘法策略的过度使用，且不同的年级存在发展性差异。与加法运算相比，乘法运算的反应时更短，错误率更低，出现自动激活的特征。研究二基于抑制控制模型，采用负启动实验范式，考察了 3 至 8 年级以及大学生被试是否需要抑制自动激活的乘法策略来完成加法运算。结果发现，各个年级的学生都出现了负启动效应，说明学生需要依赖抑制控制来完成整数比数字结构的加法运算，且儿童、青少年和成人三个群体之间的抑制效率逐渐提高。研究三采用 ERP 技术探讨整数比数字结构中乘法运算与加法运算的脑电波差异，结果发现，与整数比结构的加法运算相

比，乘法运算激活更大的 P2 和 P3 波幅，进一步证明乘法策略是基于直觉的自动化激活策略，而完成整数比的加法运算需要更多的认知资源。

关键词 整数比数字结构，乘法思维的过度使用，双加工理论，抑制控制，事件相关电位

The Overuse of Multiplication Strategy in Integer Ratio Structure Problems and Its Cognitive Mechanism

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Abstract: Multiplication is one of the most commonly used problem-solving strategies in mathematics learning. Mastering multiplication thinking is also critical for students to understand advanced mathematics knowledge. For elementary school students, the transformation from additive thinking to multiplicative thinking allows them to understand the relative magnitude of values and the interrelationships between quantities, which is vital for them to further understand ratios, proportions, fractions, and linearity. However, studies have found that when students are getting familiar with multiplication, they start to show a strong tendency to overuse multiplication strategies. For example, for the problem “A and B are running on the playground, they run equally fast but A started earlier. When B has run 3 laps, A has run 6 laps. If B has run 9 laps, how many laps has A run?” Many students will come up with the answer of 18 laps while the question involves an additive covariation and the correct answer is 12 laps. Previous studies have found that the overuse of multiplicative thinking is related to the number ratio structure in the question. When the number ratio is an integer (eg: $6/3=2$), students are more likely to use multiplication strategies to solve the problem. However, it is still unclear why the structure of integer ratios could induce students’ multiplicative thinking and what is the underlying mechanism of this phenomenon. The present study suggested that multiplication strategies will be automatically activated when there is an integer ratio number structure, causing students to use the multiplication strategy to solve non-multiplication problems. Moreover, completing the non-multiplication operation under the integer ratio structure requires students to inhibit the multiplication strategy. Based on the dual-process theory, study 1 found that 3 to 8 graders and college students all demonstrated the overuse of multiplication strategies in the non-multiplication problems with an integer ratio number structure, developmental differences were observed. Besides, compared to addition operations, the reaction time of the multiplication operation showed a shorter response time and a lower error rate. Indicating that multiplication is an automatic activation process. Based on the inhibitory control model, study 2 employed the negative priming paradigm to investigate whether 3 to 8 graders and college students need to inhibit the multiplication strategy to complete the addition operation. The results found that students in all grades demonstrated a negative priming effect, indicating that students need to rely on the inhibitory control mechanism to complete the addition problems with an integer ratio numbers structure. We also found that inhibitory control efficiency gradually increased from children to adults. Study 3 used the Event-related potential (ERP) technology to explore the brainwave difference between multiplication and addition operations in the problems with an integer ratio structure. The results showed that comparing to addition operations, multiplication operation activates larger P2 and P3 amplitudes. The findings further proved that the multiplication strategy is an intuition-based strategy that will be automatically activated when the integer ratios structure is presented in the problem while addition operation requires more cognitive resources.

Keywords: Integer ratio number structure, overuse of multiplicative thinking, dual-process theory, inhibitory control, Event-related potential

科学发现、科技开发、技术发明与创造力培养

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摘要 科学发现是采用科学研究的方法探究、发现和表达规律的社会实践活动。规律是事物间内在的、本质的、必然的联系或关系。探究、发现和验证规律需要采用一定的方法和技术。为此而开发和发明新方法、新工具、新技术、新材料的活动是创造性社会实践活动。发现规律后，需要表达规律和制订科学规则供人类共享。科学原理就是对规律的表达。科学规则是根据规律或科学原理制订的支配人心理与行为活动的准则。建构科学原理和制订科学规则也是创造性社会实践活动。掌握了科学原理和科学规则就可以实现对事物运动变化的预测、控制和利用。科技开发就是根据规律、科学原理或科学规则开发出新技术、新材料、新设计等创造性社会实践活动。运用新技术、新材料和新设计可以生产或创造出新产品。技术发明是为了满足人们的需要，探究新技术、制作新工具、制造新产品的创造性社会实践活动。因此，从事科学研究、科技开发和技术发明等创造性社会实践活动都需要人的创造能力。人的创造力从哪里来？从创造性社会实践活动中来。人的创造力怎么培养？在创造性社会实践活动中培养。所以，各级各类的创造性教育必须为学生从事创造性社会实践活动提供条件，诸如时间、空间、信息、工具和材料等；还要制订学生从事创造性社会实践活动质量、价值和效果的评价指标和评定标准以及鼓励和奖励等强化措施。如此才能激励学生积极从事创造性社会实践活动，并将其培养为创造性科技人才。

关键词 科学发现，科技开发，技术发明，创造力培养

Scientific Discovery, Scientific and Technological Development, Technological Invention and Creativity Cultivation

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Abstract: Scientific discovery is a social practice in which laws are explored, discovered and expressed by means of scientific research. Law is the intrinsic, essential, necessary connection or relationship between things. It is necessary to adopt certain methods and techniques to explore, discover and verify laws. To develop and invent new methods, tools, technologies and materials is a creative social practice. After discovering the law, we need to express the law and make the scientific rules for human sharing. Constructing scientific principles and formulating scientific rules are also creative social practices. Master the scientific principles and rules can realize the prediction, control and utilization of the changes in the movement of things. Scientific and technological development is to develop new technology, new material, new design and other creative social practice activities according to law, scientific principles or scientific rules. Technological invention is a creative social practice activity to explore new technology, make new tools and produce new products to meet people's needs. Therefore, engaged in scientific research, scientific and technological development and technological invention and other creativity social practices activities need people's creativity. Where does human creativity come from? From creative social practices. How to cultivate people's creativity? Cultivate in creative social practice. Therefore, creative education at all levels and of all kinds must provide conditions for student to engage in creative social practice activities, such as time, space, information, tools and materials, etc. In addition, the evaluation index and evaluation standard of the quality, value and effect of the creative social practice activities as well as the reinforcement and reward should be formulated. In this way, students can be encouraged to activity engage in creative social practice and cultivate creative scientific and technological talents.

Keywords: scientific discovery, scientific and technological development, technological invention, creativity cultivation

新高考背景下高中生不同选科组合与其创造力的关系

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摘要 创造力对于个体和社会发展均具有极为重要的意义。知识多元性作为影响创造力的关键因素之一, 一直是研究者关注的一个重要主题。大量研究显示, 知识多元性和创造力之间的关系是复杂的; 无论从多元文化经验视角还是从相同文化视角来看, 二者的关系均存在着诸多不一致之处。我们认为, 造成二者之间关系不一致的一个重要原因, 是不同的研究中使用了不同的知识多元性和创造性评估方式。近年来, 在新高考政策的推动下, 部分省区实行了“6选3”的选科模式。这种做法为我们考察个体的知识多元性提供了一个相对客观的视角。有鉴于此, 本研究旨在以高中生的不同选科组合作为衡量个体知识多元性的指标, 同时采用多种任务考察创造性的方式, 进一步探讨知识多元性与创造力的关系。本研究包含四项具体研究。研究对象均为上海已分科的高中生。研究1以年级、选科组合和生活经验多样性为自变量, 考察其在图形想象、非常规用途任务和创造性观点与行为量表的得分。研究2a和2b考察不同选科组合与创造力的关系, 及智力、开放性人格的智能特征的中介作用和认知需求的调节作用。研究3以选科组合和性别为自变量, 考察其在特殊领域创造力的得分。本研究的结论为: (1) 高中生的不同选科组合与其创造力存在一定关联: 无论在一般领域创造力(图形想象任务和AUT任务)还是特殊领域创造力(设计笔任务)方面, 纯理组合的学生的创造性水平都显著高于文理组合的学生。(2) 智力在不同选科组合和一般领域创造力(图形想象任务和AUT任务)的关系间起完全中介作用: 相比文理组合的学生, 纯理组合的学生因为推理等方面的智力更强, 所以在一般领域创造力(图形想象任务和AUT任务)方面的表现更好。(3) 认知需求边缘显著地调节了不同选科组合和某些发散思维能力(AUT灵活性)之间的关系。本研究为高中生创新能力的培养提供一定的理论依据, 即在培养高中生的创造力时, 要充分注意选科组合、智力及认知需求在其中所具有的重要作用。

关键词 6选3新高考, 选科组合, 创造力, 智力, 认知需求

The Relationship Between High School Students' Subject Selection and Their Creativity in the Context of New College Entrance Exam

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Abstract: Creativity is of great importance to individual and social development. Diversity of knowledge which affect creativity greatly was paid sustained attention from researchers. A large number of studies have shown that the relationship between them is complex; no matter whether this connection is examined from the perspective of multicultural experience or from the perspective of the same culture, findings remain mixed. We believe that an important reason for those inconsistencies is that diversity of knowledge and creative are assessed in different ways across studies. In recent years, under the background of implementing the new college entrance examination reform policy, some provinces and regions of China have applied the "choose 3 from 6" subject selection mode. This approach provides a relatively objective perspective for us to investigate the construct of the diversity of individual knowledge. Given this perspective, current study aims to take subject selections as indicators of diversity of individual knowledge and use a variety of tasks to investigate the creativity of high school students and furtherly explore the relationship between the diversity of knowledge and creativity. This study consists of four well-defined studies. The study used high school students who had finished subject selection in Shanghai as participants. In study 1, the creativity scores on figural imagination and alternative uses tasks (AUT) along with scores on Runco Ideational Behavior Scale (RIBS) of the participants in different grades, with diverse selection combination and diversity of life experience were examined. In study 2a and 2b, we examined the relationship between different choices of subjects

and domain-general creativity, the mediating effect of the intelligence and intellect characteristics of openness, and the moderation effect of the need for cognition. In study 3, we aimed to explore how different combinations of subject selection and gender affect the domain-specific creativity. In general, under the conditions of this study, the following conclusions can be drawn: (1) Different subject selections of high school students were correlated with their creativity to some extent: both in domain-general fields (figural imagination tasks and AUT tasks) and in domain-specific fields (the pen designing task), students with pure sciences combination selection had a significantly higher level of creativity than students with arts and sciences combination. (2) Intelligence completely mediated the relationship between different combinations selection of subjects and domain-general creativity (figural imagination tasks and AUT tasks): compared with the students chose arts and sciences subjects group, students with pure science subject selections had stronger intelligence in reasoning, so they performed better in the domain-general creativity (figural imagination tasks and AUT tasks). (3) The need for cognition marginally moderated the relationship between different combination of subject selections and some divergent thinking ability (AUT flexibility). The conclusion of this study provides a theoretical basis for the cultivation of high school students' creativity, that is to say, in the cultivation of high school students' creativity, we should focus on the important role of subject selection, intelligence levels and the need for cognition levels.

Keywords: "choose 3 from 6" new college entrance examination, subject selection, creativity, intelligence, need for cognition

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大学生感知到的任务价值在教师热情和课堂无聊间的纵向中介作用

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摘 要 课堂无聊是学生在课堂学习过程中普遍体验到和经常抱怨的一种消极和低唤醒的情绪。教师热情是指教师对所学科和教学的热情行为、个人特质或者积极情绪, 可以从教师报告、学生感知等多个层面进行测量。此前的研究结果表明, 相对教师报告的热情, 学生感知到的教师热情对其课堂无聊有更显著的负向预测作用。在成就情绪研究领域, Pekrun 提出的成就情绪的控制-价值理论将教师因素看作是课堂环境的重要因素, 认为影响学生包括课堂无聊在内的成就情绪的教师主导的环境变量主要包括教学质量、价值诱发和自主支持等, 其中教师热情是价值诱发的核心成分。其实在教育学研究领域, 教师热情很早就被看作是教师胜任力和教学有效性的核心要素, 近年来随着教育心理学研究领域中学生情绪和教师情绪研究的升温, 教师热情对学生学习的影响重新受到了研究人员的关注。此前的横断研究结果表明: 学生感知到的教师热情可以显著地负向预测其体验到的课堂无聊, 学生感知到的任务价值在教师热情和课堂无聊间起到了显著的中介作用。相对使用横断数据进行的中介机制研究, 纵向中介机制研究结果具有更高的说服力和价值。本研究拟使用纵向数据探讨学生感知到的教师热情对其体验到的课堂无聊的纵向预测作用及学生感知到的任务价值在两者中间可能起到的纵向中介作用。使用问卷调查的方法在一个学期内 4 次调查了 5 所大学的 1371 名大学生。结果表明: 学生感知到的教师热情显著地负向预测了其体验到的课堂无聊; 学生感知到的任务价值在教师热情和课堂无聊间起到了显著的纵向中介作用。

关键词: 教师热情, 课堂无聊, 任务价值, 纵向中介作用, 大学生

The longitudinal mediating role of college students' perceived task value in the relation between perceived teacher enthusiasm and class-related boredom

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Abstract: Class-related boredom is a negative and low-arousal emotion widely experienced and complained by students. Teacher enthusiasm has been defined as enthusiastic behaviors, personal disposition or positive emotion for subject and teaching, which can be measured by teachers' self-report and students' perceiving et al. Based on Pekrun's control-value theory of achievement emotions, main environmental variables influencing achievement emotions include multiple teacher factors, for instance, instruction, value induction and autonomy support. Among these variables, teacher enthusiasm is the core of value induction. In fact, teacher enthusiasm considered as a core factor in the evaluation of teacher competence and teaching effectiveness for a long time. With the increasing research on students' and teachers' emotions in the domain of educational psychology in recent years, more importance has been attached to the effects of teacher enthusiasm on student learning. Previous cross-section researches showed that students' perceived teacher enthusiasm predicted students' experienced class-related boredom significantly and negatively, students' perceived task value playing mediating role in the relation between perceived teacher enthusiasm and class-related boredom. Compared with mediating mechanism proposed in the cross-section model, longitudinal mediating model has a higher persuasion and value. The current research aimed to explore the longitudinal predicting role of students' perceived teacher enthusiasm on their class-related boredom and the longitudinal mediating role of perceived task value between them. Questionnaire survey was used to measure 1371 college students in five colleges at four time point. Results showed that students' perceived teacher enthusiasm predicted class-related boredom significantly and negatively across the four time point. Also, students' perceived task value playing longitudinal mediating role between them.

Keywords: Teacher enthusiasm, Class-related boredom, task value, longitudinal mediating role, College student

家庭环境质量、成就目标、学业情绪和学业倦怠之间的关系： 来自巴基斯坦和中国青少年的证据

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摘要 初中生学业倦怠是环境因素和个体因素共同作用的结果。家庭环境质量，学业情绪和成就目标是与学业倦怠有密切关系的环境和个体变量。已有关于学业倦怠的研究大多基于同一文化群体下的个体，少有研究着眼于初中生学业倦怠的文化差异性。中国和巴基斯坦两国有不同的文化渊源，文化差异较大。因此，环境（家庭环境质量）和个体因素（学业情绪、成就目标）对学业倦怠的作用机制在中国和巴基斯坦青年少年中是否存在差异值得探讨。本研究运用问卷调查的方法，分别以 813 名巴基斯坦（426 男，387 女）和 420 名（224 男，196 女）中国初中生为被试，所有被试分别填写人口学调查问卷，家庭环境质量问卷，学业情绪问卷，成就目标问卷和学业倦怠问卷。结果发现，家庭环境质量和学业倦怠间的关系具有跨文化的一致性，无论在中国文化背景下还是巴基斯坦文化背景下，家庭环境质量和学业倦怠之间均呈显著负相关。学业情绪和趋近成就目标在两国文化背景下均在家庭环境质量和学业倦怠间起中介作用。但是，回避成就目标只在巴基斯坦文化背景下在家庭环境质量和学业倦怠间起中介作用。该跨文化研究为中国和巴基斯坦两国的家长、教师及学校结合本国的实际情况，采取不同的措施有效预防初中生学业倦怠的产生提供了依据。

关键词 家庭环境质量，成就目标，学业情绪，学业倦怠，比较研究

Association among Family Environment Quality, Achievement Goals, Academic Emotions and School Burnout: Evidence from Pakistani and Chinese Adolescents

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Abstract: The school burnout of adolescents is the results of the combined effects of environmental factors and individual factors. Previous studies suggested that family environment quality, academic emotion, achievement goals are all related to adolescents' school burnout. In addition, many studies on school burnout are based on the same cultural group. China and Pakistan have different culture origins and the cultural differences are large. Whether the mechanism of environmental (family environment quality) and individual factors (academic emotion, achievement goals) on academic burnout are different between Chinese and Pakistani adolescents is worth exploring. Totally 420 Chinese adolescents and 813 Pakistani adolescents were recruited from China and Pakistan. All participants completed five questionnaires, including Demographic Questionnaire, Achievement Goals Scale, Maslach Burnout Inventory-Student Survey, Academic Emotions Questionnaire and Beach Center Family Quality Of Life Scale. The results suggested that no matter under Chinese or Pakistani culture, the family environment quality is negatively related to school burnout. The academic emotion and approach achievement goal play mediators between family environment quality and school burnout under both Chinese and Pakistani culture. However, the avoidance achievement goal plays a mediator between family environment quality and school burnout just under Pakistani culture. This cross-culture study provides an evidence for school burnout prevention for Chinese and Pakistan educators.

Keywords: Family environment quality, achievement goals, academic emotions, school burnout, comparative study

网络学习中师生交互与大学生学习投入的关系： 自主动机与学业情绪的序列中介作用

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摘要 在抗击新冠肺炎疫情的背景下，网络学习已然成为当今大学生的主流学习方式。如何优化网络教学过程、改善网络学习体验也因此受到了高校教师和管理者的广泛关注。其中，网络学习中的师生交互对大学生的网络学习投入具有重要影响，但少有研究涉及其内部作用机制。为了探索大学生在网络学习中师生交互与学习投入的关系，以及自主动机和学业情绪在其中的中介作用，本研究在结合有指导的教学会谈理论、控制-价值理论和自我决定理论的基础上，采取问卷调查法，使用师生交互问卷、自主动机问卷、大学生学业情绪量表、学习投入量表，对 563 名大学生开展调研。结果发现：（1）网络学习中师生交互、自主动机、积极情绪与学习投入两两显著正相关，消极情绪仅与自主动机显著负相关；（2）网络学习中的师生交互既可以直接显著正向预测学习投入，也可以通过积极情绪间接影响学习投入，还可以依次通过自主动机和积极情绪的链式中介作用正向预测学习投入，而消极情绪在其中的中介作用不显著，自主动机也并未在其中起到简单中介作用。研究结果表明，高质量的师生交互能激发大学生网络学习的自主动机，让大学生体验到更多积极情绪，从而提高其学习投入水平。因此，在网络教学实践中，教师应注重优化师生交互过程，培养学生的自主学习动机，关注学生的情绪体验并给予及时的反馈和支持，以此促进学生的学习投入。

关键词 网络学习，师生交互，大学生学习投入，自主动机，学业情绪

The Relationship Between Teacher-Student Interaction and College Students' Learning Engagement in Online Learning: Mediation of Autonomous Motivation and Academic Emotion

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Abstract: During the period of fighting against COVID-19, online learning has become the mainstream learning mode among college students. Accordingly, how to optimize the online learning process and improve the learning experience has been widely considered by teachers and administrators in universities. The teacher-student interaction has shown great effect on learning engagement in online learning. However, few studies so far focused on their internal functioning mechanisms. In order to explore the relationship between teacher-student interaction and learning engagement, as well as the role of autonomous motivation and academic emotion in online course, Teacher-Student Interaction Questionnaire, Learning Self-Regulation Questionnaire, Academic Emotions Questionnaire for College Student and Utrecht Work Engagement Scale-Student were used to measure 563 college students based on the Guided Didactic Conversation Theory, Control-Value Theory and Self-Determination Theory. Results were as follows: (1) In the context of online learning, teacher-student interaction, autonomous motivation, positive emotion and learning engagement were all positively correlated with each other, while negative emotion was only negatively correlated with autonomous motivation. (2) The internet teacher-student interaction could not only directly predict learning engagement positively, but also could affect learning engagement positively through the mediation of positive emotion and the chain mediation of autonomous motivation and positive emotion. However, the mediating effect of negative emotion was not significant, and the autonomous motivation did not play a simple mediating role either. These results show that teacher-student interaction with high quality in online learning can stimulate autonomous motivation of college students, promote positive emotion and improve their learning engagement. Therefore, teachers should focus more on optimizing the interaction with students, cultivating autonomous motivation, paying more attention on emotional experience as well as providing students with timely feedback and support, so as to promote the engagement in online courses.

Keywords: online learning, teacher-student interaction, leaning engagement, autonomous motivation, academic emotion

知觉教师自主支持和控制与学生课堂学业情绪的双向关系

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摘要 基于自我决定理论和控制-价值理论, 本研究对 455 名小学生进行了连续五周的问卷追踪调查, 深入考察了知觉教师教学风格 (自主支持和控制) 与学生课堂学业情绪 (愉悦、无聊、焦虑和绝望) 间的双向关系。通过构建三阶段的纵向结构方程模型, 研究 1 发现教师自主支持和控制与学生课堂学业情绪间的相互作用可在较短时期内发生, 且两者间存在双向的循环回路: “学生课堂愉悦高→教师自主支持增多→学生课堂愉悦进一步增强”, “教师控制高→学生课堂绝望增多→教师控制进一步加剧”。研究 2 则综合考虑变量的特质和状态属性, 采用潜变量增长曲线模型, 更为细致地考察了教师教学风格与学生课堂学业情绪间的双向关系。结果发现, 学生在某节课中的状态性学业情绪主要取决于其先前特质性课堂学业情绪及教师当下的状态性教学风格; 学生先前特质性课堂焦虑和绝望对教师状态性控制的初始水平的负面影响较为顽固, 具有一定的延续性, 表现在即使控制教师先前的特质性控制和学生状态性课堂学业情绪后, 这些影响依旧存在; 学生状态性课堂学业情绪可预测同一时间点的教师状态性教学风格。整体而言, 本研究揭示了知觉教师教学风格和学生课堂学业情绪间的双向关系, 丰富和拓展了现有理论框架及实证研究, 深化了对班级内教师“教”与学生“学”相互作用的认识, 为教育工作者如何进一步优化或改善教学等提供了启示。

关键词 教师自主支持, 教师控制, 课堂学业情绪, 双向关系

Reciprocal Relations Between Perceived Teacher Autonomy Support and Control and Student Academic Emotions in the Classroom

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Abstract: Grounded in control-value (CVT) and self-determination (SDT) theories, the current investigation, a multi-wave longitudinal study spanning five weeks, aimed to systematically explore whether teacher teaching style is reciprocally associated with student academic emotions in the classroom by surveying 455 primary students. With three-wave longitudinal structural equation model analysis, Study 1 found the reciprocal effects between perceived teacher teaching style and student class-related emotions in the short time frame and some reciprocal feedback loops: High enjoyment in class → increased perceptions of teacher autonomy support → increased enjoyment in class, high perceptions of teacher control → increased hopelessness in class → increased perceptions of teacher control. Study 2 further deeply examined the bidirectional effects between teacher teaching style and student academic emotions in the classroom by using the latent growth curve analysis and considering the state and general perceptions of the main variables simultaneously. Results revealed that (a) state academic emotions among students in a specific class mainly depended on their momentary perceptions of teacher teaching style and their prior general academic emotions in the classroom, yet the predictive role of prior general teacher teaching style seemed to be not prominent; (b) general class-related anxiety and hopelessness had salient effects on the initial levels of state perceived teacher control, with higher prior anxiety and hopelessness aggravating students' state perceptions of teacher control even after controlling for prior general perceived teacher control and incorporating state anxiety or hopelessness; and (c) students' class-related emotions seemed to exert immediate effects on perceived teacher teaching style in a specific class. As a whole, the findings indicate the reciprocal relationship between perceived teacher teaching style and student academic emotions, further contribute to SDT- and CVT- based research efforts in educational psychology, bear important implications for our understanding of the reciprocal relation between teachers' teaching and students' learning in the classroom, and give more accurate guides for how teachers optimize education effectiveness.

Keywords: Teacher autonomy support, teacher control, student class-related emotions, reciprocal relation

学业自我概念对学业成就的影响及其神经基础

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摘要 学业自我概念是指个体在学业情境中形成的对自己在学业发展方面比较稳定的认知、体验和评价, 其与学生的课程选择、成就目标、学业兴趣和学业成就密切相关, 因此被视为教育的一个重要目标。研究者们提出了三个模型描述学业自我概念和学业成就的关系: 自我提升模型(学业自我概念能够显著预测学业成就, 而学业成就对学业自我概念没有影响)、技能发展模型(学业成就能够显著预测学业自我概念, 而学业自我概念对学业成就没有影响)和交互作用模型(学业自我概念与学业成就是互相影响的, 同时包含自我提升效应和技能发展效应)。许多实证研究为技能发展效应提供了支持, 而对自我提升效应尚存在较大争议由于意识到了自我概念对一系列心理、行为和社会结果的重要性, 研究者们开发了许多针对提升自我概念的干预项目, 这些项目背后所依赖的假设是自我提升效应, 而这个假设是否成立不得而知。本研究共招募了 105 名小学高年级学生 ($M_{\text{年龄}} = 10.07 \pm 0.96$ 岁), 从神经科学角度结合行为数据及脑成像数据探究了学业自我概念对学业成就的影响及其神经基础。层级回归分析结果表明, 在控制了当前的学业成就后, 个体的学业自我概念及其学业能力知觉和学业情感体验仍然能够显著地预测其未来的学业成就, 支持了自我提升效应。VBM 结果发现, 与学业自我概念显著负相关的脑区是左侧 dIPFC 和 dmPFC, 而且左侧 dIPFC 的灰质体积能够显著预测学生一年后的学业成就。中介分析结果表明, 左侧 dIPFC 的灰质体积在学业自我概念及学业能力知觉、学业情感体验对一年后的学业成就的影响中发挥着部分中介作用, 这些结果表明了左侧 dIPFC 可能是自我提升效应的神经基

础。

关键词 学业自我概念, 学业成就, 交互作用模型, 背内侧前额叶, 左侧背外侧前额叶

The Influence of Academic Self-Concept on Academic Achievement and Its Neural Basis

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Abstract : Academic self-concept (ASC), which was defined as the relative stable cognition, experience and evaluation of individual in the academic context was closely related to course selection, achievement goals, academic interest and academic achievement, were thus considered as a significant goal of education. Researchers have proposed three models to describe the relationship between ASC and academic achievement: the Self-Enhancement Model (ASC could significantly predict achievement, but achievement has no effect on ASC), the Skill-Development Model (achievement could significantly predict ASC, but ASC has no effect on achievement) and the Reciprocal Effects Model (ASC and achievement are mutually related, and includes self-enhancement effect and skill-development effect). Many empirical studies have provided support for the skill development effect, but there was still much controversy over the self-enhancement effect. Aware of the importance of self-concept to a range of psychological, behavioral and social outcomes, researchers have developed many intervention programs which relied the hypothesis of self-enhancement effect aimed at improving ASC (Marsh, Richards, & Barnes, 1986). However, it is unknown whether this hypothesis holds. The present study combined behavioral data and fMRI data to explore the impact of ASC on academic achievement and its neural basis from the perspective of neuroscience. 105 children ranging in age from 9.11 to 11.03 years were assessed on ASC and achievement. Hierarchical regression analysis showed that after controlling T1 academic achievement and the individual's ASC, academic competence perception and academic emotional experience could still significantly predict their future academic achievements, which validates the self-enhancement effect. VBM results found that the gray matter volume (GMV) of left dlPFC and dmPFC was significantly negatively related to ASC, and the GMV of the left dlPFC could significantly predict students' academic achievement at T2. In addition, the results of mediation analysis revealed that the GMV of left dlPFC plays a part mediating role in the effect of T1 ASC, academic competence perception and academic emotional experience on T2 achievement. Thus, left dlPFC may be the neural basis underlying the influence of ASC on achievement.

Keywords: academic self-concept, academic achievement, Reciprocal Effects Model, dorsolateral prefrontal cortex (dlPFC), dorsomedial prefrontal cortex (dmPFC)

留守儿童社会适应及其与家庭亲密度的关系：心理素质的中介作用

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摘 要 父母外出务工使留守儿童在成长中面临诸多不良家庭因素, 并导致留守儿童出现各种社会适应问题。因此, 本研究旨在考察留守儿童社会适应（人际和谐、环境认同、生活独立、学习自主）的现状, 以及心理素质及各成分在家庭亲密度和社会适应间的中介作用。采用问卷星形式在网上发布调查, 共测得留守儿童 17375 人（小学生 8521 人, 中学生 8854 人）, 平均年龄为 12.78 岁（7~19 岁, $SD=2.52$ ）。结果发现：（1）留守儿童社会适应在性别、独生子女、居住地、学段、年级和留守时长上均存在显著差异。具体地, 女生的社会适应及各维度均显著高于男生; 独生子女的生活独立显著低于非独生子女, 在社会适应及其他维度上差异不显著; 居住在城镇的学生的社会适应、人际和谐、环境认同、学习自主均显著高于居住在农村的学生,

在生活独立上差异不显著；小学生的社会适应、人际和谐、环境认同、学习自主显著高于中学生，生活独立显著低于中学生；社会适应及各维度均存在显著的年级差异，大致表现为先缓慢增长（小学），然后逐渐下降（初中），最后又有所回升（高中）的趋势；社会适应及各维度在不同留守时长上均存在显著差异，大致表现为留守时长在半年以内和 5 年以上的学生显著高于留守 1~2 年和 2~5 年的学生。（2）相关分析发现家庭亲密度、心理素质、社会适应间两两显著正相关。（3）在中介效应分析中将人口学变量作为协变量进行控制后发现，心理素质及其各成分均在家庭亲密度和社会适应间起到部分中介作用，说明家庭亲密度不仅可以直接影响社会适应，还可以通过心理素质及各成分的中介作用间接影响社会适应。这启示教育者和监护者不仅应重视不同人口学特征对社会适应的影响，还可以通过增强家庭亲密度、培养留守儿童心理素质来提高其社会适应水平。

关键词 留守儿童，家庭亲密度，心理素质，社会适应，中介作用

Social adaptation of left-behind children and its relationship with family cohesion: The mediating role of psychological *suzhi*

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Abstract: Parents working outside make left-behind children face many bad or unhealthy family factors in their growth, and lead to various social adaptation problems. Therefore, this research aimed to investigate the characteristics of left-behind children's social adaptation (e.g., interpersonal harmony, environmental identity, independent life, and learning autonomy), as well as the mediating role of psychological *suzhi* and its components between family cohesion and social adaptation. The survey was published online in the form of wx.cn. A total of 17375 left-behind children (8521 pupils and 8854 middle school students) participated in the test, with an average age of 12.78 years (7-19 years old, $SD = 2.52$). The results showed that: (1) There were significant differences in the social adaptation of left-behind children in gender, only child, place of residence, school period, grade, and length of stay-behind. Specifically, the social adaptation and all dimensions of girls were significantly higher than boys; The independent life of only children was significantly lower than that of non-only children, and the difference in social adaptation and other dimensions was not significant; The social adaptation, interpersonal harmony, environmental identity, and learning autonomy of students living in cities or towns were significantly higher than those of students living in rural areas, and there was no significant difference in independent life; Primary school students' social adaptation, interpersonal harmony, environmental identity, and learning autonomy were significantly higher than those of middle school students, and their independent life was significantly lower than middle school students; There were significant grade differences in social adaptation and each dimension, which was roughly manifested as a slow increase (primary school), then a gradual decline (junior high school), and finally a trend of recovery (high school); There were significant differences in social adaptation and all dimensions for different stay-behind time. The students who stay behind for less than half a year or more than five years were significantly higher than those who stay behind for 1-2 years or 2-5 years. (2) Correlation analysis found that there were significant positive correlation between family cohesion, psychological *suzhi*, and social adaptation. (3) After controlling for demographic variables as covariates in the mediating effect analysis, it was found that psychological *suzhi* and its three components play a partial mediating role between family cohesion and social adaptation, indicating that family cohesion can not only directly affect social adaptation, but also indirectly affect social adaptation through the mediating effects of psychological *suzhi* and its components. Those results suggest that educators and guardians should not only pay attention to the impact of different demographic characteristics on social adaptation, but also improve left-behind children's social adaptation level by enhancing family cohesion and cultivating their psychological *suzhi*.

Keywords: left-behind children, family cohesion, psychological *suzhi*, social adaptation, mediating role

(6) “教育心理专业委员会”专题研讨会 6

分阶综合运动大社交干预对自闭症谱系障碍儿童的症状改善

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摘要 本研究根据自闭症谱系障碍(ASD)儿童诸多方面的缺陷, 如共同注意缺陷、社交困难、运动障碍等, 基于皮亚杰的发展认知理论、勒温的团体动力学理论与“微生物-肠-脑轴”理论, 并结合国际循证实践, 设计了社交分阶综合运动训练的大社交干预方案并实施干预, 以期改善 ASD 儿童多方面的症状, 帮助他们更好地融入社会。“分阶综合运动训练”的分阶: 一指运动从易到难, 从单项的热身运动开始, 逐渐过渡到 2 种动作组合的运动, 再到多种动作的组合运动; 二指从单人运动到亲子互动、同伴互动再到团体互动。综合: 指团体干预、注意指引、运动、游戏四元素的有效结合, 多种功能融为一体, 并引入考察运动强度的心率实时监控, 挖掘运动训练的多功能与潜能。两次干预共 75 名 4-10 岁 ASD 儿童被随机分为干预组和对照组, 两组同时接受常规康复训练, 干预组在此基础上给予每周 3 次, 每次 1 小时, 共计 15 次的分阶综合运动大社交干预, 采用主客观指标相结合的方式评估运动干预的有效性, 在训练前期、中期、后期和训练结束一个月采用《自闭症治疗评估量表》和《社交反应量表》量表评估; 在训练前、训练后分别对 ASD 儿童的肠道微生物进行考察, 分析其与 ASD 症状的关联。结果发现中高强度的运动干预能显著改善 ASD 儿童感知觉、交往、躯体、自理方面的能力, 且干预效果存在一定延时性, 至少可保持至干预结束后一个月; 该方案对轻度、中度 ASD 儿童症状都有一定改善。中度组较轻度组患儿在语言、行为和交往能力方面进步幅度更大, 且在感觉、自理能力上进步更早; 生化指标检测发现干预能使致病的丹毒丝菌属减少, 保证代谢、维持肠道正常生理功能的拟杆菌属增加, 引起体内脂肪堆积的厚壁菌属减少; 有益菌霍氏真杆菌属、副萨特氏菌属有明显增加, 说明中高强度运动训练对 ASD 儿童个体的肠道菌群的改善有一定作用。

关键词 自闭症谱系障碍, 运动干预, 社交互动, 肠道微生物

Effects of stepped integrated sport-group social intervention on children with autism spectrum disorder

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Abstract: This study bases on the multiple deficiencies in children with ASD, including joint-attention deficits, social interaction difficulties, and dyskinesia as well as developmental cognitive theory, group dynamics theory, microbe-gut-brain axis theory, and in line with international evidence-based practices, this dissertation designs an intervention means of social interaction stepped integrated exercise training to relieve symptoms of children with ASD and help them better integrate into society. “Stepped” first refers to the movement from easy to difficult, starting from a single warm-up exercise, and gradually transitioning to a combination of two movements, and then to a combination of multiple movements; second refers to the movement from single movement to parent-child interaction, peer interaction and group interaction. “Integrated” refers to the effective combination of the four elements of team intervention, attention guidance, exercise and games. Through this model, multiple functions have been integrated, tapping into the multi-functionality and potential of exercise training and fully ensuring the feasibility and effectiveness of training. 75 children with autism spectrum disorder aged 4-10 years were randomly divided into an intervention group and a control group. The two groups received routine rehabilitation training at the same time. On this basis, the intervention group was given 3 times a week for 1 hour each time. A total of 15 staged comprehensive sports social interventions, using the “Autism Treatment Evaluation Scale” and “Social Response

Scale” to conduct immediate and short-term follow-up evaluation of intervention effects. We use a combination of subjective and objective indicators to evaluate the effectiveness of sports interventions. Scales were used for evaluation in the early, mid, late and one month after training. The intestinal microbes of ASD children were analyzed before and after training to investigate the impact of exercise intervention on the physiological indicators of ASD children, and the relationship between intestinal microbes and intestinal microbes. We find that moderate to high-intensity exercise intervention can significantly improve the sensory, communication, physical, and self-care abilities of children with ASD, and the intervention effect is somewhat delayed. This proposal can somewhat relieve the symptoms of children with mild and moderate ASD. In the moderate group, the improvement in language, behaviors, and communication skills is greater than those in the mild group and the improvement in sensory and self-care abilities comes earlier. This study introduced biochemical index testing and found that social exercise training can help improve the intestinal flora of ASD. Through moderate to high-intensity exercise intervention, the disease-causing erysipelas decreased, the Bacteroides that ensure metabolism and maintain the normal physiological functions of the intestine increased, and the Firmicutes that caused the accumulation of fat in the body decreased; at the same time, the beneficial bacteria Eubacterium_hallii_group and the genus Parasutterella have increased significantly, indicating that the medium-to-high intensity exercise training has a role to play in improving the intestinal bacteria in individual children with ASD.

Keywords: Autism Spectrum Disorder, exercise intervention, social interaction, intestinal microbe

感恩者心理资本发展的叙事研究

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摘 要 感恩是人类的一种心理特质，可划分为认知成份、情感成份和行为成份三个层面。心理资本是个体在成长和发展过程中表现出来的一种积极心理状态，包括自我效能、韧性、乐观和希望四个方面。文章从心理资本建设的角度出发，采用叙事研究方法，以个体 M 的感恩成长经验为例，采用生命线图作为线索进行访谈，在生命线图上标出 M 成长历程中的关键事件，凭此来回顾 M 的生命故事。文章从感恩的认知、情感和行为三个层面对个体心理资本建设的经验进行归纳分析，得出强化个体的感恩特质可以提升其心理资本的结论。以期为个体的心理资本发展和积极心理品质培养分享感悟和经验。

关键词 感恩，心理资本，叙事研究

Narrative Research on the Development of Gratitude's Psychological Capital

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Abstract: Gratitude is a psychological trait of human beings, which can be divided into three levels: cognitive component, emotional component and behavioral component. Psychological capital is a positive psychological state shown by individuals during their growth and development, including self-efficacy, resilience, optimism and hope. From the perspective of psychological capital construction, this paper adopts narrative research method, takes the grateful growth experience of individual M as an example, uses life line diagram as a clue to interview, and marks the key events in M's growth process on the lifeline diagram, so as to review M's life story. This paper sums up and analyzes the experience of individual psychological capital construction from three levels of gratitude cognition, emotion and behavior, and draws the conclusion that strengthening individual gratitude characteristics can enhance their psychological capital. With a hope to sharing insights and experiences for the development of individual psychological capital and the cultivation of positive psychological quality.

Keywords: gratitude, psychological capital, narrative research

自闭症干预取向转型：从行为主义到建构主义

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摘要 根据美国最新精神障碍手册第五版, 自闭症谱系障碍的核心症状是社交障碍和重复刻板行为。自闭症个体的社交障碍随着年龄增长和发展不会得到改善, 甚至当他们的社交需求已经超过其所拥有的社交技能时, 社交障碍的症状会更加明显并影响着他们的身心健康, 同时自闭症个体被社会孤立和同伴欺压的风险也正在增加。基于大脑损害的神经可塑性原理, 自闭症个体可以通过早期密集的干预改善症状。越来越多的自闭症干预方法被开发出来, 基于底层原理不同, 这些干预方法可以分为两种主要干预取向: 行为主义干预取向和建构主义干预取向。前者以行为主义为底层原理, 以行为改变为干预目标, 以操作性条件反射原理为核心手段的应用行为分析是当前自闭症干预的主导取向。然而, 行为主义取向的自闭症干预方法只能处理较为表层、静态的行为问题以及更关注于表面、静态的行为, 难以形成动态、灵活的适应情景的社交能力, 改善更深层的认知缺陷, 是一种碎片化的加工方式, 故近年来受到越来越多的批评。以建构主义为底层原理的自闭症干预方法是未来更加有前景的干预取向, 通过促进动态社交能力的发展和改善更深层的认知问题, 把儿童通过主动学习搭建新旧经验融合的知识网络放在最为核心的位置, 认为儿童不是被动接受知识, 而是主动探索世界, 通过经验与“活动”建构自己的知识世界, 把学习看做是根据经验发展变化的过程, 是一种整体化的加工方式。相比于行为主义取向的干预方法, 建构主义取向的干预方法体系性仍然较弱。本文系统总结了自闭症建构主义取向干预方法的原理和框架, 指出建构主义取向干预方法未来发展的方向, 并介绍了笔者三年多来, 开发的一套“大社交”自闭症干预体系。“大社交”干预基于皮亚杰的建构主义理论、班杜拉的社会学习理论、维果斯基的最近发展区理论与勒温的团体动力学理论等先进教育和心理学理论, 设计了从易到难、新中有旧、旧中有新的进阶团体活动课程, 通过多轮干预实验, 已取得良好效果。

关键词 自闭症, 行为主义, 建构主义, 转型

Transition of Intervention Approach in Autism: From Behaviorism to Constructivism

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Abstract: According to the fifth edition of the latest American Mental Disorder Handbook, the core symptoms of autism spectrum disorder are social disorders and repetitive stereotyped behaviors. The social barriers of individuals with autism will not be improved with age and development, and even when their social needs have exceeded their social skills, the symptoms of social barriers will be more obvious and affect their physical and mental health at the same time, individuals with autism are at increased risk of social isolation and peer bullying. Based on the neuroplasticity principle of brain damage, individuals with autism can improve their symptoms through early and intensive interventions. More and more intervention methods for autism have been developed. Based on the different underlying principles, these intervention methods can be divided into two main intervention approaches: behaviorist approach and constructivist approach. Applied behavior analysis with behaviorism as the underlying principle, behavior change as the intervention goal, and operational conditioning principle as the core means is the dominant approach of current autism intervention. However, behaviorist-approach autism intervention methods can only deal with more superficial and static behavior problems and more attention to surface and static behaviors. It is difficult to train dynamic and flexible social skills to adapt to the situation and improve deeper cognition defects, defect is a fragmented processing method. So it has been criticized more and more in recent years. The autism intervention method with constructivism as the underlying principle promotes the development of dynamic social skills and improves deeper cognitive problems, which is a more promising intervention approach in the future. Constructivism puts children at the core of building a knowledge network that integrates new and old experiences through active

learning. It believes that children do not passively accept knowledge, but actively explore the world and construct their own knowledge world through experience. Constructivism regards learning as a process of development and change based on experiences which is a holistic processing method. But compared with behavioral approach intervention methods, constructivism approach intervention methods are still relatively weak. This article systematically summarizes the principles and framework of constructivism approach intervention methods for autism, and points out the future development direction of constructivism approach intervention methods and introduces the author developed a set of "Great Social" autism intervention system in the past three years. . The "Great Social" intervention is based on Piaget's constructivism theory, Bandura's observational learning theory, Vygotski's theory of the zone of recent development and Lewin's group dynamics theory and other advanced educational and psychological theories. Designed advanced group activity courses from easy to difficult, old in the new, and new in the old. Through multiple rounds of intervention experiments, good results have been achieved.

Keywords: Autism, Behaviorism, Constructivism, Transition

《自闭症症状干预进阶评估问卷》的编制

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摘要 目的: 编制《自闭症症状干预进阶评估问卷》, 为考察自闭症谱系障碍 (Autism Spectrum Disorder, ASD) 儿童核心障碍所处阶段、设计符合 ASD 儿童最近发展区的个别化干预方案与评估干预效果提供参考。

方法: 根据美国《精神障碍诊断与统计手册》(第五版) 初定问卷维度。基于对 19 位家长访谈、13 位家长日常观察和 ASD 干预视频分析, 并参考 3-6 岁儿童发展指南、0-6 岁儿童发展里程碑、经典的自闭症评估问卷编制题项。以社会融入为目标, 症状减轻为核心, 遵循从熟悉到陌生、简单到复杂、个体到集体原则设计进阶。初步编制《自闭症症状干预进阶评估问卷》。按照 15 位 ASD 研究者, 7 位 ASD 干预教练和医生、6 位 ASD 儿童家长的建议逐一修订题项和进阶。对 58 名 ASD 儿童, 76 名非 ASD 儿童测评结果进行项目分析和信效度检验。**结果:** 《自闭症症状干预进阶评估问卷》包括《社交进阶评估问卷》、《受限和重复的行为干预评估问卷》。社交与受限、重复的行为维度的内部一致性信度分别为: 0.893, 0.881。社交与受限、重复的行为维度得分相关 ($r=0.538$, $P<0.05$) 低于二者与总问卷得分的相关 ($r=0.940$ 、 $r=0.793$, $P<0.05$)。社交与受限、重复的行为维度得分、总问卷得分均与《自闭症治疗评价问卷》得分呈显著相关 ($r=-0.595$ 、 -0.517 、 -0.756 ; $P<0.05$)。非 ASD 儿童在社交与受限、重复的行为维度得分和总问卷得分 (55.63 ± 7.85 、 46.20 ± 6.77 、 101.83 ± 11.86) 均高于 ASD 儿童 (28.09 ± 10.25 、 36.29 ± 8.82 、 64.38 ± 14.11), 差异显著 ($P<0.05$)。**结论:** 《自闭症症状干预进阶评估问卷》内部一致性信度、结构效度、校标效度和区分效度良好, 能考察 ASD 儿童核心症状所处等级和改善状况。

关键词 自闭症, 进阶评估问卷, 社交, 重复刻板, 感觉异常

Development of Progressive Assessment Questionnaire for Autism Symptom Intervention

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Abstract: Objective: To develop Progressive Assessment Questionnaire for Autism Symptom Intervention for providing a reference for investigating the stages of core symptoms in children with Autism Spectrum Disorder(ASD), designing individualized intervention programs to meet the nearest developmental zone of children with ASD, and

evaluating the effectiveness of interventions Methods: The dimensions of questionnaires were initially determined according to the US Diagnostic and Statistical Manual of Mental Disorders (Fifth Edition). Based on interviews with 19 parents, daily observations of 13 parents, and video analysis of ASD interventions, and referring to the development guidelines for children aged 3-6, developmental milestones for children aged 0-6, and classic autism assessment questionnaires, items were prepared. With social integration as the goal and symptom reduction as the core, the progression was designed following the principles from familiar to unfamiliar, simple to complex, and individual to collective. Progressive Assessment Questionnaire for Autism Symptom Intervention was developed. The items and levels were revised one by one as suggested by 15 ASD researchers, 7 ASD intervention coaches and physicians, and 6 parents of children with ASD. The Progressive Assessment Questionnaire for Autism Symptom Intervention includes the Progressive Evaluation Questionnaire of Sociality, Progressive Evaluation Questionnaire of Restricted and Repetitive Behavior. Results: The internal consistency reliability of social and restricted, repetitive behaviors dimensions were 0.893 and 0.881, respectively. The scores of social and restricted, repetitive behavior dimensions and total scores of the questionnaire were significantly correlated with the autism treatment evaluation questionnaire ($r = -0.595, -0.517, -0.756; P < 0.05$). The scores of social and restricted, repetitive behaviors dimensions and total scores of the questionnaire of non-autistic children ($55.63 \pm 7.85, 46.20 \pm 6.77, 101.83 \pm 1.8$) were higher than those of ASD children ($28.09 \pm 10.25, 36.29 \pm 8.82, 64.38 \pm 14.11$), the difference was statistically significant ($P < 0.05$). Conclusion: The Progressive Assessment Questionnaire for Autism Symptom Intervention has good internal consistency reliability, structural validity, calibration validity and discrimination validity and can investigate the level and improvement of the core symptoms of ASD children.

Keywords: Autism, progression questionnaire, socialization, repetitive stereotypes, sensory abnormalities

基于 SOME 模型的共情大社交干预对自闭症谱系障碍儿童的改善

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摘要 SOME 模型(The self to other model of empathy)在已有理论和证据的基础上提供了一个理解自闭症谱系障碍个体共情机制的整合式框架, 可以用来指导自闭症儿童共情和社交干预的实践, 但具体训练方法仍待探索。本研究以 SOME 模型为理论基础, 以模型中的情境情绪理解、观点采择与意图归因和情感表达与反应评估 3 个子系统为课程的基本构成要素, 首次设计以改善 ASD 儿童多种典型症状为目标的共情团体大社交干预项目并实施干预。49 名 4~10 岁自闭症谱系障碍(ASD)儿童被随机分为干预组和对照组, 两组同时接受常规康复训练, 干预组在此基础上给予每周 3 次, 每次 1.5 小时, 共计 18 次的共情团体大社交训练, 采用《社交反应量表》、《自闭症治疗评估量表》和《格里菲斯共情测验(父母版)》对干预效果进行即时和短期追踪评估。结果发现: (1)在即时效果方面, 干预组社交反应症状后测得分显著低于前测, 后测的共情能力显著高于前测, ASD 症状表现显著低于前测, 对照组差异不显著; (2)在延迟效果方面, 干预组的社交能力得到提升, 在社交沟通和 ASD 行为方式上, 追踪阶段还有进步。干预组的共情能力和 ASD 症状表现的追踪测结果总体上与后测差异不显著, 说明干预效果至少可以持续 1 个月, 特别在认知维度的症状表现上, 追踪阶段仍有改善。研究表明, 基于 SOME 模型的共情大社交干预可以在一定程度上提升 ASD 儿童的社交能力和共情能力, 改善其症状表现。

关键词 自闭症谱系障碍儿童; 共情团体大社交干预; SOME 模型; 社交能力; 共情能力

Empathy-social Group Intervention and Improvement in Children with Autism Spectrum Disorder Based on SOME Model

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Abstract: Based on previous theories and evidences, SOME Model (The Self to other model of empathy) provides an integrated framework for understanding the empathy mechanism of individuals with autism spectrum disorder (ASD). It can be used to guide intervention practices, but the relevant methods remain to be explored. The present study, which based on SOME model, first designed an empathy-social group intervention program aiming at improving typical symptoms of children with ASD. Our study attempted to use a 2 (group: SOME empathy-social training vs regular training) $\times$ 3 (test time: pre vs 6-week post vs 11-week post) between-and within-subjects design to investigate the effect of SOME empathy-social training on improving 4-to-10-year-old ASD children's empathy ability and presentation of symptoms. The SOME empathy-social training consisted of 18 sessions, 90 minutes per session, and three sessions per week for about 2 months. ASD children were assigned to two groups, SOME empathy-social training group (N=26) and control group (N=23). In the empathy-social training group, the instructor guided children to perform activities of empathy, while both groups received routine training. In this intervention project, each structured intervention course contains three key training elements: situational emotion understanding, viewpoint selection and intention attribution, emotion expression and response assessment. ASD children's empathy ability and presentation of symptoms were measured before and after training and 1 month after training using the Social Responsiveness Scale (SRS) and the Griffith Empathy Measure Parent Ratings (GEM-PR) and the Chinese version of Autism Treatment Evaluation Checklist (ATEC) (e.g. Inhibition Control: Age, Gender, Verbal IQ: PPVT, Raven's IQ: CRT, Educational level of parents and Household income). To investigate whether SOME empathy-social training can enhance children's ability of empathy and improve their symptoms, we performed 2 (group: SOME empathy-social training vs regular training) $\times$ 3 (test time: pre vs 6-week post vs 11-week post) repeated measures ANOVA. The results revealed that the GEM-PR and the SRS scores of the SOME empathy-social training group at week 6 and week 11 were significantly higher than baseline while the ATEC scores of this group at week 6 and week 11 were significantly lower than baseline. The total scores of the intervention group on these two questionnaires at week 6 and week 11 had no significant differences. However, in terms of social communication and ASD behavior of SRS and terms of Cognitive symptoms of ATEC, the week 11 test was significantly better than the test at week 6. For the control group, no significant differences were found among the scores of before, week 6 and week 11. In conclusion, these results suggested that the positive effects of this interventional approach on social skills, empathy and ASD symptoms in 4-to-10-year-old ASD children and these effects last for at least 1 month. The training program can be tried and extended to children with ASD, and its intervention methods and long-term effects need to be further tested in future studies.

Keywords: ASD children; empathy-social group intervention; Self to other model of empathy; social skills; empathy ability

自闭症儿童 N170 的特异性及作为干预效果评估生物标志物的可靠性

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摘要 研究目的: 探索自闭症儿童情绪面孔加工诱发 N170 的特异性, 以及作为干预效果评估的生物标志物的可靠性。研究过程: 对 12 名自闭症儿童进行为期 1 个月, 共 18 次的感觉统合团体训练。参与者需在干预训练前和干预训练后分别在电脑上完成面孔加工任务, 同时记录脑电, 离线分析面孔加工任务诱发的 N170 成分特征。同期有 10 名正常发展儿童完成相同面孔加工任务作为对照。研究结果: 经过感觉统合团体训练后,

自闭症儿童的行为指标得到显著改善。N170 的潜伏期和波幅的分析结果如下：（1）对 N170 的潜伏期进行 2（前测、后测）*4（负性面孔、正性面孔、中性面孔、非面孔）*3（额区、中央区、顶区）的重复测量方差分析，发现前后测 N170 的潜伏期差异显著（ $p < 0.01$, $\eta_p^2 = 0.528$ ），后测 N170 的潜伏期显著短于前测。位置主效应显著（ $p < 0.001$, $\eta_p^2 = 0.632$ ），额区和中央区的潜伏期显著短于顶区（ $p < 0.01$, $p < 0.001$ ）。（2）对 N170 的波幅进行 2*4*3 的重复测量方差分析，发现前后测、图片类型主效应不显著。位置主效应显著（ $p < 0.001$, $\eta_p^2 = 0.757$ ），额区和顶区大于中央区（ $p < 0.05$, $p < 0.001$ ）。（3）对自闭症前测与对照组的潜伏期进行重复测量方差分析，发现被试间差异显著（ $p < 0.05$, $\eta_p^2 = 0.242$ ），前测潜伏期显著长于对照组。（4）对自闭症组前测与对照组的波幅进行重复测量方差分析，发现被试间差异不显著。（5）对自闭症组后测与对照组的潜伏期进行重复测量方差分析，发现被试间差异不显著。（6）对自闭症组后测与对照组的波幅进行重复测量方差分析，发现被试间差异不显著。研究结论：经过感觉统合团体训练，自闭症儿童行为指标有显著改善，情绪面孔加工诱发的 N170 潜伏期显著缩短。表明自闭症儿童情绪面孔加工的神经机制具有可塑性，情绪面孔加工的 N170 的潜伏期可以作为自闭症干预训练效果的生物标志物，具有一定可靠性。

关键词 自闭症，感觉统合训练；N170 的潜伏期，生物标志物

Atypicality of the N170 in children with autism and its reliability as a biomarker for evaluating intervention effects

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Abstract: Research purpose: To explore the atypicality of N170 induced by emotional face processing in children with autism and its reliability as a biomarker for evaluating intervention effects. Research process: A total of 18 times sensory integration group trainings were conducted on 12 children with autism for 1 month. Participants are required to complete face processing tasks before and after intervention training on computer, record EEG, and analyze the N170 ERP components induced by face processing tasks. During the same period, 10 children with typical development completed the same face processing tasks as a control group. Research results: After sensory integration group training, the behavioral indicators of children with autism have been significantly improved. The analysis results of the latency and amplitude of N170 ERP component are as follows: (1) A repeated measurement analysis of variance of the latencies were conducted, 2 (pre-test, post-test) *4 (negative face, positive face, neutral face, non-face) *3 (frontal, central, parietal), the results show the difference in the latencies of N170 before and after the training were significantly different ($p < 0.01$, $\eta_p^2 = 0.528$), the latencies of the N170 in the post-test was significantly shorter than that in the pre-test. For N170 latency, there was a main effect of electrode positions ($p < 0.001$, $\eta_p^2 = 0.632$), the N170 latencies of the frontal area and central area were significantly shorter than that of the parietal area ($p < 0.01$, $p < 0.001$). (2) A 2*4*3 repeated measurement analysis of variance was performed on the amplitudes of N170, there were no main effect of pre-post test and picture type. The difference between positions was significant ($p < 0.001$, $\eta_p^2 = 0.757$), such that the frontal area and the parietal area had larger N170 amplitudes than the central area ($p < 0.05$, $p < 0.001$). (3) Repeated measures analysis of variance was performed on the latencies of the pre-test of ASD group and the control group. For N170 latency, there was a main effect of groups ($p < 0.05$, $\eta_p^2 = 0.242$), such that the pre-test of ASD group had a longer latency. (4) Repeated-measure analysis of variance was performed on the

amplitudes of the pre-test of ASD group and the control group, there was no main effect of groups. (5) Repeated-measure analysis of variance was performed on the latencies of the post-test of ASD group and the control group, there was no main effect of groups. (6) Repeated-measure analysis of variance was performed on the amplitude of the post-test of ASD group and the control group, there was no main effect of groups. Research conclusion: After sensory integration group training, the behavioral indicators of autistic children are significantly improved, and the latency of N170 induced by emotional face processing become shorter, indicating that the neural mechanism of emotional face processing in autism is plastic, and the latency of N170 ERP component is reliable as a biomarker for evaluating intervention effects.

Keywords: Autism Spectrum Disorder, Sensory Integration Training; Latency of the N170, Biomarker

自闭症儿童尿液汞含量与团体运动进阶干预的关系

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摘要 已有研究对自闭症儿童进行有效的运动干预, 但未采取团体进阶设计; 发现汞含量与自闭症状正相关, 但未考察与干预效果的关系。因此本研究建立团体运动进阶干预模式, 考察尿液汞含量与自闭症状和干预效果的关系。实验组 and 对照组分别为自闭症儿童 14 人和 11 人。两组年龄 ($M \pm SD = 6.11 \pm 1.60, 7.05 \pm 3.52$)、自闭症 ABC 总分和各维度得分差异都不显著, $P_s > 0.05$ 。实验组团体运动进阶干预 15 次, 每周 3 次, 每次 1 小时。每次干预由单人运动进阶到两人互动运动, 再进阶到团体情境运动。整个干预前中后期, 认知复杂性和社交情境性逐步增加, 前中后期也形成进阶关系。采用自闭症状 ABC 量表进行前中后测和延迟后测。实验组在整个干预前后各采集一次尿液, 依据 WS/T 26-1996, 采用 AFS-8520 型原子荧光光度计检测汞含量, 检测室温度 24.0°C, 湿度 48.0%。对照组不进行运动进阶干预, 只接受日常学习和其它干预。发现: (1) 干预效果。自闭症状 ABC 总分的中、后、延迟后测显著小于前测 ($p_s < 0.05$); 运动、自理、语言、交往症状的中、后和延迟后测显著小于前测 ($p_s < 0.05$); 自理症状延迟后测显著小于中测 ($p < 0.05$)。对照组 ABC 总分及各维度前后测差异不显著。表明团体运动进阶干预减轻了自闭症状。(2) 损害效应。尿液汞含量前测 ($M \pm SD = 0.0172 \pm 0.0165, \text{ug/L}$) 与后测 ($M \pm SD = 0.0177 \pm 0.0178$) 差异不显著, 表明运动进阶干预不能改变尿液汞含量。但尿液汞含量前后测, 与自闭症状 ABC 总分、交往症状前后测、自理症状前测显著正相关 ($r = 0.56-0.70$ 之间, $p_s < 0.05$), 表明尿液汞含量可作为自闭症状标记物。尿液汞含量对自闭症儿童有损害效应, 尿液汞含量越大, 自闭症状越严重。(3) 基线效应。尿液汞含量前后测及其差值(前减后, $M \pm SD = -0.0005 \pm 0.0082$), 与自闭症状干预效果大部分正相关, 少部分负相关, 表明尿液汞含量影响干预效果。尿液汞含量对干预效果有基线效应, 尿液汞含量越大, 自闭症状越严重, 干预效果却越好, 反映对汞的代谢排泄能力。本研究开发的团体运动进阶干预模式对中、重度自闭症儿童效果更好。

关键词 自闭症儿童, 团体运动进阶干预, 干预效果, 尿液汞含量, 损害效应, 基线效应

Relationship between urinary mercury content and advanced group motor intervention in children with autism

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Abstract: Some studies have conducted effective motor intervention for children with autism, but have not adopted group advanced design. Mercury content was found to be positively correlated with autism, but the relationship with intervention effect was not examined. Therefore, this study established a progressive intervention model of group movement, and investigated the relationship between urine mercury content and autism symptoms and intervention

effect. Fourteen children with autism were selected in the experimental group and 11 in the control group. There were no significant differences between the two groups in age ($M \pm SD = 6.11 \pm 1.60, 7.05 \pm 3.52$), ABC total score and scores of all dimensions ($P > 0.05$). The experimental group received 15 advanced group exercise interventions, 3 times a week, for 1 hour each time. Each intervention progressed from single movement to two people interactive movement, and then to group situational movement. The cognitive complexity and social contextuality increased gradually in the whole period before, during and after intervention, and a progressive relationship was formed in the period before, during and after intervention. The ABC scale was used for pre -, medium - and posttest. The urine of the experimental group was collected once before and after the intervention, and the mercury content was detected by AFS-8520 atomic fluorescence spectrophotometer according to WS/T 26-1996. The temperature in the test room was 24.0C, and the humidity was 48.0%. The control group received only daily learning and other interventions without exercise progression intervention. Findings: (1) Intervention effect. The ABC total score in posttest, posttest and posttest was significantly lower than that in pretest ($P < 0.05$). The posttest, posttest and delayed posttest were significantly lower than those of pretest ($P < 0.05$). The posttest of self-care symptoms was significantly lower than the median test ($P < 0.05$). There was no significant difference in ABC total score and all dimensions in control group. It showed that advanced intervention of group exercise alleviated autism symptoms. (2) Damage effect. There was no significant difference in urine mercury content between pretest ($M \pm SD = 0.0172 \pm 0.0165, \text{ug/L}$) and posttest ($M \pm SD = 0.0177 \pm 0.0178$), indicating that advanced exercise intervention could not change urine mercury content. However, there was a significant positive correlation between the urine mercury content before and after measurement and the total ABC score of ASD, before and after measurement of social symptoms, and before and after measurement of self-care symptoms ($r = 0.56-0.70, P < 0.05$), indicating that the urine mercury content could be used as a marker of ASD. The higher the urine mercury content, the more severe the autism. (3) Baseline effect. The difference of urine mercury content between before and after measurement ($M \pm SD = -0.0005 \pm 0.0082$) was positively correlated with the intervention effect of autism, while a small part was negatively correlated, indicating that urine mercury content affected the intervention effect. The urine mercury content had a baseline effect on the intervention effect. The higher the urine mercury content, the more severe the autism, the better the intervention effect, reflecting the metabolic and excretion ability of mercury. The group movement progressive intervention model developed in this study has a better effect on children with moderate and severe autism.

Keywords : Children with autism, Advanced group motor intervention model, intervention effect, urine mercury content, impairment effect, baseline effect

2.2 “发展心理专业委员会”专题研讨会

(1) “发展心理专业委员会”专题研讨会 1

父母严厉管教与青少年焦虑的双向关系： 基于交叉滞后与随机截距交叉滞后模型的分析

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摘 要 双向亲子关系理论强调父母与儿童之间存在相互影响。但以往关于父母严厉管教与儿童焦虑的研究较多关注父母驱动效应, 即父母严厉管教对儿童焦虑的影响, 较少关注儿童驱动效应, 即儿童焦虑对父母严厉管教的影响。基于此, 本研究以 610 名青少年及其父母为被试, 采用从初一到初三连续三年、间隔一年的追踪研究设计, 通过构建交叉滞后模型(cross-lagged panel model, CLPM)和随机截距交叉滞后模型(random intercept cross-lagged panel model, RI-CLPM)来考察父亲、母亲严厉管教(包括体罚和心理攻击)与青少年焦虑的双向关系。结果发现: 在 CLPM 模型中, 儿童驱动效应显著。具体表现为 T1、T2 的青少年焦虑正向预测一年后青少年报告的父母心理攻击和母亲体罚, T1 青少年焦虑正向预测一年后青少年报告的父亲体罚、父亲报告的父亲心理攻击和体罚, 以及母亲报告的母亲心理攻击; 在父母驱动效应方面, 仅发现 T2 时父亲报告的父亲心理攻击正向预测一年后的青少年焦虑。在 RI-CLPM 模型中, 在家庭内水平上, 仅发现 T2 时青少年焦虑的增加显著预测一年后母亲报告的母亲心理攻击的减少。在家庭间水平上, 与焦虑水平较低的青少年相比, 焦虑水平较高的青少年报告了更多的父母心理攻击和体罚, 其父母也报告了更多的心理攻击。多群组分析未发现父母严厉管教与青少年焦虑的双向关系中存在性别差异。结论: 综合 CLPM 与 RI-CLPM 的结果, 父母严厉管教与青少年焦虑的关系主要表现为儿童驱动效应, 且这一效应更多源于稳定的家庭间差异, 而非家庭内的动态变化。此外, 在家庭内水平上, 本研究发现青少年焦虑的增加显著预测一年后母亲报告的心理攻击的减少, 但并未显著预测青少年报告的母亲严厉管教的变化, 这一结果也在一定程度上体现了青少年和母亲对母亲教养的不同认知。本研究结果强调了区分家庭间差异和家庭内动态变化的重要性, 而且干预研究和儿童保护机构应高度关注高焦虑青少年家庭并对其父母的教养方式给予恰当指导和帮助。

关键词 父母严厉管教, 青少年焦虑, 家庭间关系, 家庭内关系

Reciprocal Relations between Parental Harsh Discipline and Adolescents' Anxiety: Based on the Cross-Lagged Panel Model and the Random Intercept Cross-Lagged Panel Model Analysis

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Abstract: The bidirectional theory of parent-child relations emphasizes the transactional influence between parents and children. Notably, prior research on the relations between parental harsh discipline and adolescents' anxiety primarily focused on the effects of parental harsh discipline on children's anxiety (i.e., parent-driven effects), and there is a dearth of literature examining the effects of children's anxiety on parental harsh discipline (i.e., child-driven effects). To address above gaps, present study followed 610 children and their parents across three time points (from Grade 1 to Grade 3 in junior high school; one year apart), and examined the reciprocal relations between both father's and mother's harsh discipline (including psychological aggression and corporal punishment) and adolescent's anxiety using the cross-lagged panel model and the random intercept cross-lagged panel model. The results of CLPM

indicated significant child-driven effects. Specifically, adolescent's anxiety at T1 and T2 positively predicted adolescent-reported parental psychological aggression and maternal corporal punishment one year later; Adolescent's anxiety at T1 positively predicted adolescent-reported paternal corporal punishment, father-reported their own psychological aggression and corporal punishment, as well as mother-reported their own psychological aggression one year later. As for parent-driven effects, father-reported psychological aggression at T2 positively predicted adolescent's anxiety one year later. According to the results of RI-CLPM, at the within-family level, increments in adolescent's anxiety at T2 predicted decrements in mother-reported their own psychological aggression one year later. At the between-family level, compared to the adolescents who reported lower anxiety, those adolescents who reported higher anxiety experienced more parental psychological aggression and corporal punishment. Finally, no adolescent gender differences were found in the above relations. To sum up, adolescent's anxiety in a given year positively predicted parental harsh discipline in the next year (child-driven effects), and these child-driven effects were primarily due to stable between-family differences instead of within-family fluctuations. Moreover, at the within-family level, the present study found that increments in adolescent's anxiety predicted decrements in mother-reported but not adolescent-reported maternal psychological aggression one year later, and these results reflected the discrepancy between mothers' and adolescents' perception of harsh parenting. Our findings illustrate the importance of distinguishing among between-family and within-family associations, and also highlight that adolescents with higher anxiety are more likely to suffer from parental harsh discipline. Therefore, intervention projects and child protective agencies should give adequate attention and timely support to these adolescents.

Keywords: parental harsh discipline, adolescent's anxiety, within-family effects, between-family effects

学龄前儿童执行功能与接受性语言的双向关系： 基于随机截距交叉滞后模型的分析

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摘要 高级认知调节能力与语言发展之间的关系一直以来是发展心理学研究者关注的热点问题之一。特别是在儿童早期，高级认知调节能力的重要成分之一执行功能与接受性语言均发生快速且显著的发展变化。基于 Fischer 等提出的动态技能理论，心理技能的发展并不是孤立的，而是彼此间会发生动态性的相互影响，并且这一影响还会随年龄与情境的变化而变化。基于该理论，作为学前期同时快速发展的两种重要的技能，研究者推测执行功能与接受性语言之间可能也会以动态互动的方式发展，而且一方对另一方的影响可能会随时间而发生变化。同时，考虑到执行功能与语言在发展早期表现出一定的儿童性别差异，两者间的双向影响中是否会存在性别差异也是本研究感兴趣的问题之一。因此，本研究拟聚焦于学前儿童，采用 3 个时间点追踪研究设计和随机截距交叉滞后模型从个体间与个体内层面上来揭示执行功能子成分与接受性语言之间的双向关系及其性别差异。研究被试为 320 名学前儿童，执行功能采用 Willoughby 编制的 EF Touch 程序任务进行调查，接受性语言采用 PPVT-4 进行调查。结果发现：在 T1 与 T2 时间点上，抑制控制和注意转移与接受性语言存在相互预测效应，但在 T2 与 T3 时间点上，仅抑制控制和注意转移对接受性语言的预测显著，而语言对两者的预测效应不再显著；在三个时间点上，工作记忆与接受性语言间存在稳定的个体内双向预测效应；多群组分析没有发现执行功能子成分与接受性语言的双向关系中存在儿童性别差异。结论：在学前阶段，执行功能与接受性语言的发展在个体内水平上存在双向影响，且这一影响因执行功能子成分的不同而异；研究结果在一定程度上强调了旨在提升接受性语言或执行功能的训练可以对两者起到相互促进的作用，同时包括 EF 与语言的早期多元指导干预策略可能比仅关注其中一方的干预策略效果更佳。

关键词 执行功能，接受性语言，双向关系，性别差异，随机截距交叉滞后模型

Reciprocal Relation between Executive Function and Receptive Vocabulary in Chinese Preschoolers: Based on the Random Intercept Cross-Lagged Panel Model Analysis

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Abstract : The relationship between high cognitive regulation and language skill has long been in the focus of theoretical and empirical research in developmental psychology. Preschool is a critical period of rapid growth and considerable individual variability in children's executive function and language skills. Within the dynamic skill theory framework, one child's development proceeds along a developmental web with multiple independent strands that branch and join, and the developing skills in one strand could inevitably influence developing skills in another. Accordingly, executive function and language skills may develop in dynamic interaction and the effects of one on the other may change over time. In addition, gender difference patterns in the development of executive function and receptive language during early childhood also inspired us to explore whether the reciprocal relations between EF and language skills would also differ for boys and girls. By using a three-time longitudinal design, the present study focused on three components of executive function (EF) respectively to examine whether the relation between EF and receptive vocabulary was reciprocal and whether the direction of the above relation would differ by EF components and child gender. A total of 320 Chinese preschool children were assessed when they enrolled in preschool the first year (T1), the second year (T2) and the third year (T3), respectively. Children's EF was assessed by six computerized tasks and receptive vocabulary was assessed by the Peabody Picture Vocabulary Test (PPVT-4). Data was analyzed in the random intercept cross-lagged panel model (RI-CLPM). Findings provided some support for within-person reciprocal relations between EF and receptive vocabulary, but the reciprocal patterns varied depending on EF components. In specific, inhibitory control/attention shift and receptive vocabulary were reciprocally predicted between T1 and T2, and inhibitory control/attention shift at T2 could significantly predict receptive vocabulary at T3, but not vice versa. Working memory and receptive vocabulary were reciprocally predicted between T1 and T2 and between T2 and T3. That is, after adjusting for any prior fluctuation in both EF and receptive vocabulary, when children's EF increased beyond their own typical levels at the beginning of preschool, they were more likely to display increases in their own typical levels of receptive vocabulary at the middle preschool, and likewise, when children's receptive vocabulary increased beyond their own typical levels at the beginning of preschool, they were also more likely to display increases in their own typical levels of EF one year later, but the changes of inhibitory control and attention shift can not promote the improvement of receptive language at least during late preschool. Finally, no child gender differences were found in the above relations. Our findings make an important contribution to our understanding of how two important skills dynamically relate across times and how reciprocal patterns vary according to EF components and child gender, and also implicate that the instructions and interventions integrating EF and language skills may be an important avenue for enhancing success across skills.

Keywords : executive function, receptive vocabulary, reciprocal relation, gender difference, random intercept cross-lagged panel model

父母心理控制与儿童获益解释、抑郁症状的关系： 一项时间变异效应模型分析

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摘要 心理控制这一教养方式往往会对儿童内心产生侵扰，不利于其社会情绪功能的发展。然而，心理控制与儿童发展之间的关系在不同年龄段存在怎样的差异目前研究关注的并不多。本研究采用时间变异效应模型（Time-Varying Effect Modeling, TVEM）考察了父母心理控制与儿童获益解释、抑郁症状发展关系的年龄差异，以及父母角色和儿童性别在其中的作用。研究选取 1204 名 3-7 年级学生（ $M_{age}=11.75$ 岁， $SD=1.53$ ）为研究对象，采用儿童报告和父母报告方式测量父母心理控制、儿童获益解释以及抑郁症状。研究结果表明，男孩父母报告和男孩知觉的心理控制在 8-14 岁之间呈上升趋势，且在此年龄段父母报告的心理控制可正向预测男孩的抑郁症状。女孩父母报告和女孩知觉的心理控制在 10-13 岁之间呈显著上升趋势，且在此年龄段父母报告的心理控制可正向预测女孩的抑郁症状。上述结果表明，青春期早期可能是一个关键时期，在此阶段，父母采取更多的心理控制尤其不利于儿童社会情绪功能的发展。

关键词 心理控制，获益解释，发展变化，青春期早期，时间变异效应模型

Age-Varying Associations between Psychologically Controlling Parenting, Chinese Children's Cognitive Appraisal and Depressive Symptoms

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Abstract: Psychologically controlling parenting has been found to be detrimental to children's social-emotional development across cultural contexts. However, the developmental changes of psychologically controlling parenting and its associations with child development across childhood and adolescence remain less well understood. The present study used time-varying effect modeling to examine the age-varying associations between parents' psychologically controlling parenting, children's cognitive appraisals of such parenting, and children's depressive symptoms in Chinese families and the roles of parent and child gender in these age-varying associations. Children ($N=1204$, $M_{age}=11.75$ years) in Shanghai, China, reported their perceived levels of psychological control from parents, their cognitive appraisals of how much their parents engaged in psychological control for children's own good, and depressive symptoms. Children's both parents reported their engagement in psychologically controlling parenting and demographic information. The results indicated that parent-reported and boy-perceived psychological control increased from 8 to 14, which overlapped the age range within which parent-reported psychological control was significantly associated with boys' depressive symptoms. Similarly, parent-reported and girl-perceived psychological control increased from 10 to 13, which overlapped the age range within which parent-reported psychological control was significantly associated with girls' depressive symptoms. Findings highlighted early adolescence as a risk period during which parents used more psychological control and such an increase in psychological control may be particularly detrimental to child development.

Keywords: psychological control, positive interpretation, depressive symptoms, developmental change, early adolescence, time-varying effect modeling

留守青少年抑郁的发展轨迹：亲子分离和亲子联结的作用

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摘要 父母外出务工所导致的亲子分离已经成为一种全球性现象，在极大程度上提升了留守青少年经历抑郁症状的概率。虽然与父母长期分离，但是留守青少年与父母之间依然存在情感上和行为上的联结（例如，远程沟通、父母回家探望时的面对面沟通等）。在这一背景下，亲子分离和亲子联结如何作用于留守青少年抑郁症状的发展，已经成为该领域研究中的一个热点问题。该问题的解决不仅有利于深入认识留守家庭中的亲子系统与个体抑郁发展之间的关系，而且对于留守青少年抑郁的预防和干预具有重要意义。然而，已有研究多采用横断设计，难以深入探究留守青少年抑郁的发展轨迹以及亲子分离、亲子联结对其发展轨迹的共同作用。本研究对 1549 名初一年级学生（426 名双亲外出青少年，681 名父亲外出青少年，442 名非留守青少年）进行了间隔 6 个月的 3 次追踪测量，通过潜变量增长模型考察了双亲外出、父亲外出、非留守青少年抑郁的发展轨迹，以及亲子分离（分离形式、分离年龄和分离时长）、亲子情感联结（父子亲合、母子亲合）和行为联结（亲子远程沟通、面对面沟通间隔）与其发展轨迹之间的关联。结果表明：（1）青少年的总体抑郁轨迹呈下降趋势，但是双亲外出青少年抑郁的初始水平显著高于父亲外出青少年，非留守青少年抑郁的下降速度显著快于父亲外出青少年；（2）亲子分离时间越长，留守青少年抑郁的初始水平越高，下降速度越快，但是这种关联仅存在于亲子远程沟通间隔较长的情况下；（3）母子亲合水平越高，留守青少年抑郁的初始水平越低，但是这种负向预测作用仅出现在双亲外出家庭中；在父亲外出家庭中，父子亲合水平越高，青少年抑郁的初始水平越低；（4）分离年龄越大，留守青少年抑郁的下降速度越快，但这种正向预测作用仅存在于母子亲合水平较低，或亲子远程沟通间隔较长的情况下。这表明，亲子分离特征和亲子联结是留守青少年抑郁发展轨迹的重要影响因素，且亲子间的情感联结和行为联结对于留守青少年抑郁发展轨迹的保护作用存在差异。

关键词 留守青少年，抑郁，发展轨迹，亲子分离，亲子联结

Developmental Trajectory of Depressive Symptoms among Left-Behind Adolescents: The Effects of Parent-Adolescent Separation and Parent-Adolescent Cohesion

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Abstract : The parent-adolescent separation as a result of parents' migration for work has become a global phenomenon, which increases left-behind adolescents' possibility of experiencing depressive symptoms to a great extent. Although left-behind adolescents have been separated from their parents for a long period of time, there is still bond between them in emotion and behavior (for example, long-distance communication, and face-to-face communication when parents go home for a visit). Under this background, how the parent-adolescent separation and parent-adolescent bond affect left-behind adolescents' development of depressive symptoms has become a hot issue in this field. The solution of the issue not only benefits the in-depth insight into the relation between parental system and adolescents' depression development, but also has important guiding meaning for the prevention and intervention of left-behind adolescents' depressive symptoms. However, the existing studies have mostly adopted cross-sectional design, making it difficult to investigate the developmental trajectory of depressive symptoms among left-behind adolescents, and the combined effect of parent-adolescent separation and parent-adolescent bond. A total of 1549 rural adolescents were recruited as the study sample, containing 426 from both-parent migrant families, 681 from father-only migrant families and 442 from non-parent migrant families. The data were collected at three time points during the period of a year with six months apart. Latent growth curve model was adopted to examine the developmental trajectory of depressive symptoms among both-parent migrant, father-only migrant and non-parent migrant families, and the trajectory's association with parent-adolescent separation (left-behind status, age of

separation and time of separation), parent-adolescent bond in emotion (father-adolescent cohesion, mother-adolescent cohesion) and parent-adolescent bond in behavior (the interval of long-distance and face-to-face communication). Results indicated that: (1) The general trajectory of depressive symptoms among left-behind adolescents showed a decreasing trend. But adolescents from both-parent migrant families showed significantly higher initial levels of depressive symptoms than adolescents from father-only migrant families; adolescents from non-parent migrant families showed significantly faster decreasing rate of depressive symptoms than adolescents from father-only migrant families. (2) Longer time of separation was associated with higher initial level and faster decreasing rate of depressive symptoms among left-behind adolescents, but the associations existed only when the interval of long-distance communication was long. (3) Higher level of mother-adolescent cohesion was associated with lower initial level of depressive symptoms among left-behind adolescents, but the negative prediction existed only in the both-parent migrant families; in the father-only migrant families, higher level of father-adolescent cohesion was associated with lower initial levels of depressive symptoms. (4) Greater age of separation was associated with faster decreasing rate of depressive symptoms among left-behind adolescents, but the positive prediction existed only when the level of mother-adolescent cohesion was low, or the interval of long-distance communication was long. This study indicated that the characteristics of parent-adolescent separation and parent-adolescent bond were important factors affecting the trajectory of depressive symptoms among left-behind adolescents, and there are differences between the protective effects of parent-adolescent bond in emotion and behavior to the trajectory of depressive symptoms among left-behind adolescents.

Keywords: Left-behind adolescents, depressive symptoms, developmental trajectory, parent-adolescent separation, parent-adolescent bond

青少年抑郁与同伴依恋的动态关系： 基于交叉滞后模型与随机截距交叉滞后模型的分析

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摘要 抑郁是青少年期常见的心理健康问题之一。以往横断研究表明同伴依恋作为保护性因素可以降低青少年抑郁, 但关注青少年抑郁与同伴依恋之间是否存在双向关系的研究较少且未区分个体间效应和个体内效应。随机截距交叉滞后模型 (RI-CLPM) 克服了传统交叉滞后模型 (CLPM) 无法分离个体间变异的不足, 能够真正地在个体内水平上揭示变量间的双向预测效应。鉴于此, 本研究以山东省某中学七年级学生为被试 ($N = 651$, $M_{\text{年龄}} = 12.22$, 47.6% 为女生) 开展为期两年 (共 3 个时间点) 的追踪调查, 并同时采用 CLPM 和 RI-CLPM 两种统计分析模型, 探讨并比较青少年抑郁与同伴依恋间的纵向双向关系并进一步对双向关系中可能存在的性别差异进行了挖掘。结果如下: 基于 CLPM 分析发现, 抑郁症状、同伴依恋的自回归路径均呈显著正向; T1 和 T2 抑郁症状均显著负向预测 T2 和 T3 同伴依恋; T2 同伴依恋能够显著负向预测 T3 抑郁症状, T1 同伴依恋对 T2 抑郁症状的预测作用则不显著。基于 RI-CLPM 分析发现, 与 CLPM 结果模式较为一致, 在个体内水平上, 抑郁症状和同伴依恋均表现出较高的稳定性; T1 和 T2 抑郁症状的增加能够显著预测 T2 和 T3 同伴依恋质量的下降; T2 同伴依恋质量的提升能够显著预测 T3 抑郁症状的下降, T1 同伴依恋的变化与 T2 抑郁症状的变化无显著预测关系。在个体间水平上, 相比于具有低抑郁症状的青少年, 高抑郁症状的青少年的同伴依恋质量更差。CLPM 和 RI-CLPM 多群组分析表明, 青少年抑郁与同伴依恋间的双向关系无显著性别差异。结论: 青少年抑郁与同伴依恋的双向影响在个体间水平与个体内水平上均存在, 有必要关注抑郁青少年的同伴关系质量, 并通过提升其同伴依恋质量帮助预防和改善青少年抑郁的发生。

关键词 抑郁, 同伴依恋, 青少年期, 交叉滞后模型, 随机截距交叉滞后模型

The Dynamic Associations between Depression Symptoms and Peer Attachment in Adolescence: Based on the Cross-Lagged Panel Model and the Random Intercept Cross-Lagged Panel Model Analysis

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Abstract: Depression is a common mental health problem in adolescence. Prior cross-sectional studies have indicated that peer attachment as a protective factor can reduce adolescents' depressive symptoms. However, research focusing on the longitudinal relationship between depressive symptoms and peer attachment in adolescence is limited and also fails to distinguish between- and within-person effects. Random intercept cross-lagged panel model (RI-CLPM) overcomes the shortage of traditional cross-lagged panel model (CLPM) and can clarify the bidirectional nature between variables at the within-person level. Given above, a sample of middle school students at Grade 7 in Shandong Province ($N = 651$, $M_{age} = 12.22$, 47.6% were girls) participated in a two-year longitudinal study (three time points in total), and CLPM and RI-CLPM were simultaneously used to examine the longitudinal relationship between adolescents' depressive symptoms and peer attachment and then multiple group analysis were further used to explore the potential gender differences underlying this bidirectional relationship. Results were as follows: The CLPM analyses indicated that there are significant positive autoregressive paths for depressive symptoms and peer attachment; Depressive symptoms at T1 and T2 negatively predicted peer attachment at T2 and T3; Peer attachment at T2 could negatively predict depressive symptoms at T3, but peer attachment at T1 did not predict depressive symptoms at T2. The RI-CLPM analyses indicated that at the within-person level, there were high carry-over stability effects for depressive symptoms and peer attachment; When adolescents' depressive symptoms increased beyond their own average levels at T1 and T2, they tended to display decreases in their own average level of peer attachment at T2 and T3; When adolescents' peer attachment increased beyond their own average levels at T2, they tended to display decreases in their own average level of depressive symptoms at T3, however, changes in peer attachment at T1 did not predict changes in depressive symptom at T2. At the between-person level, compared to children with lower level of depressive symptoms, those children with higher depressive symptoms had poorer peer attachment. In both CLPM and RI-CLPM, multiple group analyses suggested that the relations between depressive symptoms and peer attachment did not differ significantly for boys and girls. Conclusions: results confirm the bidirectional effects between depressive symptoms and peer attachment at both between-person and within-person levels. These findings also highlight the necessity of paying attention to the quality of peer relationships among depressive adolescents, and promoting the quality of peer attachment could be helpful for preventing and reducing adolescents' depression.

Keywords: depressive symptoms, peer attachment, adolescence, cross-lagged panel model, random intercept cross-lagged panel model

父母婚姻质量与儿童问题行为：家庭间和家庭内关系

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摘 要 认知-情境框架和情绪安全理论均强调, 低婚姻质量家庭中的儿童更易表现出问题行为。家庭系统理论进一步指出, 父母婚姻质量不仅是儿童问题行为产生的原因, 也可能是儿童问题行为导致的结果, 即二者间可能存在动态性相互影响。先前关于这一相互影响的研究大多是基于交叉滞后模型(cross-lagged panel model, CLPM)等传统分析方法, 该方法不能区分家庭间和家庭内关系, 无法真正揭示在家庭内部两者间动态影响的模式。因此, 本研究以 976 名小学一至三年级儿童及其父母为被试, 进行连续三年的追踪调查, 同时采用传

统的分析方法(CLPM)和能够区分家庭间和家庭内关系的分析方法(随机截距交叉滞后模型; random intercept cross-lagged panel model, RI-CLPM), 较为全面地考察父母婚姻质量和儿童问题行为的家庭间和家庭内关系。结果: CLPM 的结果发现, 父母婚姻质量显著负向预测一年后的儿童内化和外化问题行为, 但儿童内化和外化问题行为不能显著预测一年后的父母婚姻质量。RI-CLPM 的结果发现, 在家庭间水平上, 父母婚姻质量与儿童内化和外化问题行为呈显著负相关; 在家庭内水平上, 父母婚姻质量的变化不能显著预测一年后儿童内化和外化问题行为的变化, 但儿童内化问题行为的增加能够显著预测一年后父母婚姻质量的降低。结论: 尽管传统的 CLPM 发现, 低婚姻质量家庭中的儿童更容易出现内化和外化问题行为, 但 RI-CLPM 发现, 儿童内化问题行为的增多会导致父母婚姻质量的降低。这一结果提示了区分家庭间和家庭内关系的重要性, 也提示了要高度关注父母婚姻质量较低家庭以及通过降低儿童内化问题行为来改善父母婚姻质量的必要性和重要性。

关键词 父母婚姻质量, 儿童问题行为, 家庭间关系, 家庭内关系

Parental Marital Quality and Child Problem Behavior: Between- and Within-Family Associations

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Abstract: The cognitive-contextual framework and emotional security theory emphasize that lower marital quality is associated with more child problem behavior. Family systems theory further points that marital quality is likely both an antecedent and a consequence of child problem behavior. In this way, the association between marital quality and child problem behavior may reflect a process of dynamic interaction. Empirical support for this association is largely based on traditional analyses such as cross-lagged panel model (CLPM). These traditional analyses cannot disentangle the influence of between-family differences and within-family fluctuations, limiting the within-family associations that might be drawn. Based on three annual waves of survey data gathered from 976 families with Grade 1 to 3 children, we examine between- and within-family associations among marital quality and child problem behavior utilizing CLPM and random intercept cross-lagged panel model (RI-CLPM), the latter can disentangle between-family differences and within-family fluctuations. The findings of CLPMs showed that marital quality significantly and negatively predicted child internalizing and externalizing behaviors 1 year later, but both internalizing and externalizing behaviors had no effect on marital quality. As for RI-CLPMs, at the between-family level, marital quality was negatively associated with child internalizing and externalizing behaviors. At within-family level, changes in marital quality had no effect on changes in child internalizing and externalizing behaviors, but increases in child internalizing behavior predicted subsequent decreases in marital quality. In summary, although CLPMs indicated that lower marital quality predicted subsequent more child internalizing and externalizing behaviors, RI-CLPMs indicated that increases internalizing behavior predicted decreases in marital quality. These results shed light on the importance of distinguishing between- and within-family associations and the necessity and importance of focusing on families with lower marital quality and improving marital quality by reducing child internalizing behavior.

Keywords: parental marital quality, child problem behavior, between-family associations, within-family associations

师生关系和儿童问题行为的关系：一项追踪研究

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摘要 作为儿童社会关系的重要组成部分，师生关系与儿童发展密切相关。根据发展情境论，师生关系不仅受到儿童问题行为的影响，也对儿童的行为适应有重要作用。即师生关系与儿童发展之间存在动态双向影响。但以往探讨师生关系与儿童问题行为之间关系的纵向研究均采用传统的交叉滞后模型(CLPM)，这一方法的缺陷之一是无法区分个体间效应和个体内效应，这一方法分析师生关系和问题行为之间关系所得的研究结果可能并不能揭示两个变量在个体内的发展及相互影响过程。与之相比，随机截距交叉滞后模型(RI-CLPM)能够弥补上述缺陷，较好地个体内水平上来考察师生关系和儿童问题行为之间的纵向影响及这一影响随着时间的变化，进而为干预目标的确定和修正提供更具说服力的实证依据。基于此，本研究拟同时采用 CLPM 与 RI-CLPM 来探讨师生关系和儿童问题行为之间的双向关系，并进一步揭示两种分析方法所得到的两者间的关系是否会存在不同。以我国 640 名四、五年级小学生及其父母为被试，以师生关系问卷、儿童行为核查表(CBCL)和儿童自我报告表(YSR)为研究工具来调查小学生的师生关系与内外化问题行为，共进行 3 个时间点的追踪。结果：1)CLPM 的分析发现，在控制了儿童性别的影响后，师生亲密性和内、外化问题行为存在双向关系；师生冲突性与内化问题行为仅在前两个时间点存在双向关系，与儿童外化问题行为不存在双向影响，仅发现儿童外化问题行为对师生冲突性的正向预测作用；2)RI-CLPM 分析表明，在控制了儿童性别后，在个体间水平，仅发现师生亲密性和儿童外化问题行为呈显著负相关，师生亲密性和儿童内化问题行为以及师生冲突性与儿童内、外化问题行为相关均不显著。在个体内水平，师生亲密性和冲突性的变化对儿童内外化问题行为变化的纵向预测不显著，但儿童内、外化问题行为的增加能够预测后一时间点师生亲密性的下降和师生冲突性的上升。结论：尽管传统的 CLPM 模型发现了师生关系与儿童问题行为的双向影响，但 RI-CLPM 发现在个体内关系层面上，两者间的关系更多地体现在儿童问题行为对师生关系的预测，而师生关系对儿童问题行为的预测作用主要表现在个体间水平。

关键词 师生关系，问题行为，双向关系，随机截距交叉滞后模型

Relations between Teacher-Student Relationship and Children's Problem Behaviors: A Longitudinal Study

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Abstract: As an important part of children's social relationships, teacher-student relationship is closely related to the development of children. According to the developmental contextualism, children's behavior could affect the foundation of the relationships with teachers, and meanwhile teacher-student relationships also influences children's social adjustment, that is, there is reciprocal interactions between teacher-student relationship and children's problem behavior. However, most longitudinal studies examining the association between teacher-student relationship and children's problem behaviors typically used the cross-lagged panel model (CLPM), which has a major limitation that it does not separate between-person effects from within-person effects, and the results from CLPM have not precisely tested whether cross-lagged associations represent within-person associations. In this regard, the random intercept cross-lagged panel model (RI-CLPM) addressed this gap and permits estimates of the within-person processes underlying the pathways between teacher-student relationship and children's problem behaviors over time, and results from RI-CLPM could provide a more convincing empirical basis for the practical intervention. Therefore, the present study followed 640 children and their parents across three time points, and examined the reciprocal relations between

the teacher-student relationship and children's problem behaviors using both the CLPM and the RI-CLPM, and further examined whether the above relations would differ by two analysis techniques. The Chinese version of the Student-Teacher Relationships Scale (STRS), the Child Behavior Checklist (CBCL), and the Youth Self-Report Scale (YSR) were used as the main assessment tools. Results are as follows: 1) Based on CLPM, there are significant reciprocal relations between teacher-student closeness and children's problem behaviors (including externalizing and internalizing problem behaviors) after controlling child gender. Specifically, both externalizing and internalizing problem behaviors negatively predicted teacher-student closeness one year later, and teacher-student closeness negatively predicted two types of problem behaviors one year later; teacher-student conflict and children's internalizing problem behaviors were reciprocally predicted from T1 to T2; children's externalizing problem behaviors positively predicted teacher-student conflict one year later, but not vice versa. 2) The RI-CLPM showed that, after controlling child gender, at the between-person level, teacher-student closeness was negatively correlated with children's externalizing problem behaviors, and the relations between teacher-student closeness and children's internalizing problem behaviors, as well as the relations between teacher-student conflict and children's externalizing or internalizing problem behaviors were not significant; at the within-person level, only the increments in children's externalizing and internalizing problem behaviors predicted decrements in teacher-student closeness and increments in teacher-student conflict. Overall, although the results of CLPM indicated the reciprocal relations between teacher-student relationship and children's problem behaviors, the results of RI-CLPM indicated the effects of children's problem behaviors on teacher-student relationship mainly due to within-person fluctuations, and the effects of teacher-student relationship on children's problem behaviors mainly due to stable between-person differences.

Keywords: teacher-student relationship, problem behaviors, reciprocal relation, random intercept cross-lagged panel model

(2) “发展心理专业委员会”专题研讨会 2

“惩罚”还是“补偿”？

社会阶层对学前儿童第三方公平行为的影响

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摘 要 合作是人类社会生存与发展的基石。合作之所以能够产生和维持，一个很重要的原因在于人类具有公平的观念和维护公平的行为。人们不仅会拒绝与自身利益相关的不公平分配(第二方公平行为)，而且会不惜以牺牲自身利益为代价，也要维护他人之间的公平(第三方公平行为)。相比第二方公平行为，第三方公平行为更是一种亲社会行为。第三方公平行为有两种形式，即惩罚不公平的实施者（第三方惩罚）或补偿不公平的受害者（第三方补偿）。虽以往有大量研究考察了诸多社会情境因素（文化、内外群体身份等）对儿童第三方公平行为的影响，但未有研究考察宏观社会阶层因素对儿童第三方公平行为的影响。本研究旨在基于社会阶层文化群体视角考察城乡儿童第三方公平行为的影响。不仅如此，本研究旨在从具体的人际情境中考察社会阶层对儿童第三方公平行为的影响。研究 1 着重考察了在朋友或陌生人作为不公平实施者时城乡儿童在不公平感知和行为上的差异。采用 2(地区：城市、农村)×2(不公平实施者身份：陌生人、朋友)×3(年龄段：4 岁、5 岁、6 岁)×4(情境：1:1、2:1、3:1、4:1)混合实验设计。结果表明，在陌生人作为不公平的实施者时，城乡儿童感知到的不公平程度没有显著差异；但在朋友作为不公平的实施者时，农村儿童报告了更低的不公平感知。研究 2 着重考察了在朋友或陌生人作为不公平接受者时城乡儿童在不公平感知和行为上的差异。采用 2(地区：城市、农村)×2(不公平接受者身份：陌生人、朋友)×3(年龄段：4 岁、5 岁、6 岁)×4(情境：1:1、2:1、3:1、4:1)混合实验设计。结果表明，在陌生人作为不公平的接受者时，城乡儿童感知到的不公平程度没有显著差异；但在朋友作为不公平的接受者时，农村儿童报告了更高的不公平感知。本研究结果在理论上有利于从社会阶层文化视角考察阶层文化对儿童第三方公平行为发展的影响，促进城乡儿童道德发展具有重要

的现实意义。

关键词 城乡社会经济地位, 人际情境, 学前儿童, 第三方公平行为

"Punishment" or "compensation"? The influence of social class on the third-party fair behavior of preschool children

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Abstract: Cooperation is the cornerstone of the survival and development of human society. A very important reason why cooperation can be produced and maintained is that human beings have the concept of fairness and the behavior of maintaining fairness. People will not only refuse unfair distribution related to their own interests (fair behavior of the second party), Compared with the fair behavior of the second party, the fair behavior of the third party is a kind of pro-social behavior. There are two forms of fair third-party behavior, namely, punishing unfair perpetrators (third-party punishment) or compensating unfair victims (third-party compensation). Although a large number of previous studies have examined the influence of many social contextual factors (culture, internal and external group identity, etc.) on children's third-party fairness behavior, no research has examined the impact of macro social class factors on children's third-party fairness behavior. This research aims to investigate the influence of third-party fairness behaviors of urban and rural children based on the perspective of social class and cultural groups. Not only that, this research aims to examine the influence of social class on children's third-party fair behavior from specific interpersonal situations. Study 1 focuses on the differences in the perception and behavior of unfairness between urban and rural children when friends or strangers are the perpetrators of unfairness. Use 2 (region: urban, rural) $\times$ 2 (identity of unfair perpetrator: stranger, friend) $\times$ 3 (age group: 4 years old, 5 years old, 6 years old) $\times$ 4 (situation: 1:1, 2:1, 3:1, 4:1) mixed experimental design. The results show that there is no significant difference in the degree of unfairness perceived by urban and rural children when strangers act as perpetrators of unfairness; but when friends act as perpetrators of unfairness, rural children report lower perceptions of unfairness. Study 2 focuses on the differences in the perception and behavior of unfairness between urban and rural children when friends or strangers are recipients of unfairness. Use 2 (region: urban, rural) $\times$ 2 (identity of unfair recipient: stranger, friend) $\times$ 3 (age group: 4, 5, 6) $\times$ 4 (situation: 1:1, 2:1, 3:1, 4:1) Mixed experimental design. The results show that when strangers are unfair recipients, there is no significant difference in the degree of unfairness perceived by urban and rural children; but when friends are unfair recipients, rural children report higher perceptions of unfairness. The results of this study are theoretically helpful to investigate the influence of class culture on the development of children's third-party fair behavior from the perspective of social class culture, and it has important practical significance to promote the moral development of children in urban and rural areas.

Keywords: Urban and rural socio-economic status, Interpersonal situation, preschool children, third-party unfair behavior

社会阶层对学前儿童不公平厌恶的影响： 基于中国城乡差异的研究

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摘 要 人类天生具有一种不公平厌恶的倾向。不公平厌恶有两种形式：劣势不公平（为了避免接受比对方更少的东西）和优势不公平（为了避免接受比对方更多的东西）。以往大量研究考察了社会文化因素对儿童不公平厌恶的影响，然而鲜有研究考察社会阶层如何影响儿童的不公平厌恶。本研究基于中国城乡差异的社会背景，从阶层的群体文化视角考察社会阶层如何影响学前儿童的不公平厌恶。本研究假设城市儿童相比农村儿童对劣势不公平更加敏感，产生更多的不公平规避行为。研究 1 选取一所东部城市幼儿园和一所西部农

村幼儿园共 245 名儿童,通过不平等分配范式将儿童随机分配在公平、劣势不公平和优势不公平三种情境中,考察儿童在上述情境中的不公平感知、情绪体验以及行为反应。结果表明,相比农村儿童,城市儿童在劣势不公平情境中表现出了更强的不公平感知、更强烈的负性情绪体验以及更多的拒绝行为;在公平以及优势不公平条件下均无显著差异。研究 2a 采用与研究 1 大体一致的程序,在不同城乡儿童群体中重复验证了研究 1 的结果。研究 2b 旨在检验上述结果是否是由于农村儿童缺少公平观念所致。为检验该假设,实验中让儿童作为第三方,观察研究者给另外两名儿童进行不公平分配。结果表明,在作为无关第三方时,无论是城市儿童还是农村儿童,在面临他人遭受不公平时的不公平感知、情绪体验和反应均无差异。这一结果意味着农村儿童在面临不公平分配时更低的不公平厌恶并非是由于缺少公平观念。本研究结果丰富和深化了社会情境因素影响儿童不公平厌恶的研究,对于促进儿童社会性发展亦具有借鉴意义。

关键词 社会阶层,不公平厌恶,学前儿童,城乡差异

The influence of social class on preschool children's inequality aversion: A Study in the Context of Urban-rural differences in China

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Abstract: Human beings are born with a tendency of inequity aversion. Inequity aversion takes two forms Disadvantageous inequity aversion (DI) and Advantageous inequity aversion (AI). Recent work has demonstrated that sociocultural shape children's fairness. However, so far no study has examined to social class how influence children's inequity aversion. Based on the background of urban and rural in China, the purpose of this study is to explore how social class influences preschool children's inequity aversion from the perspective of sociocultural. We hypothesize that compared with rural children, urban children would have higher unfairness perception and unfairness avoidance behavior in disadvantage unfair condition. In total, 245 children from an Eastern Urban Kindergarten and a Western Rural Kindergarten were recruited in Study 1. By a Inequity Game, children are randomly assigned to three allocation conditions: fair condition, disadvantage unfair condition, and advantage unfair condition. Then children's perception of unfairness, their emotional response, and whether they would reject or accept condition were measured in the above conditions. Results showed that compared with rural children, urban children have higher perception of unfairness, higher negative emotional and more avoidance behavior. Study 2a replicated the findings in Study 1 by recruiting participants from different rural and urban areas by using the similar procedure to study 1. By a Third Party Game, Study 2b aimed to examine whether the above results were due to rural children's lack of fairness concept. The results suggests that no difference in unfair perception, emotional experience and behavioral response in urban children or rural children. This means that rural children's less inequality aversion is not due to a lack of fairness concept. The study enrich the research on the influence of sociocultural to children's inequity aversion, and also have reference for promoting children's social development.

Keywords: social class, inequity aversion, preschool children, rural-urban differences

贫困家庭儿童亲社会行为的发展轨迹：平均趋势与个体差异

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摘要 目的: 评估贫困家庭儿童亲社会行为的发展轨迹及其相关的影响因素。方法: 采用儿童长处与困难问卷(SDQ)中的亲社会行为分量表,家庭功能问卷(PAGAR)和青少年社会支持问卷(ASS),对814名贫困家庭儿童进行了历时两年的四次追踪调查。其中,小学阶段儿童485名,平均年龄 10.11 ± 1.45 岁($M \pm SD$),男生199人(41%),女生286人(59%);中学阶段儿童309名,平均年龄 14.44 ± 1.44 岁($M \pm SD$),男生127人(42%),女生182人(58%)。分别采用潜变量增长模型以及混合增长模型建模,从平均趋势和群体

异质性两个不同的角度分析贫困儿童在不同学段的亲社会行为发展轨迹。**结果：**（1）在整体平均趋势上，小学阶段的贫困家庭儿童亲社会行为的发展轨迹呈显著的线性下降趋势，而中学阶段的贫困家庭儿童亲社会行为的发展轨迹无显著变化；中学阶段男生的亲社会行为初始水平显著高于女生，但发展速度上不存在显著的性别差异。（2）在群体异质性上，贫困家庭儿童的亲社会行为发展轨迹在不同发展阶段上均表现出显著的个体差异。根据相关的统计学指标，小学阶段可以划分为3个潜在类别：急剧下降组、缓慢下降组和适度增长组；中学阶段可以划分为2个潜在类别：急剧下降组和适度增长组；（3）家庭功能和社会支持在两个阶段均可以缓冲儿童亲社会行为的下降趋势；中学阶段平稳上升组的家庭功能、社会支持总分、主观支持和支持利用度的得分更高。**结论：**小学阶段和中学阶段的贫困家庭儿童亲社会行为的发展轨迹有显著差异，且在两个发展阶段均存在显著的异质性，良好的家庭功能和社会支持可以缓冲贫困家庭儿童亲社会行为发展的整体下降趋势。

关键词 贫困家庭儿童，亲社会行为，发展轨迹，平均趋势，个体差异

Developmental Trajectory of Prosocial Behavior in Impoverished Children: The Average Tendency And Individual Differences

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Abstract: Objectives: This study aimed to longitudinally explore the developmental trajectory of impoverished children's prosocial behaviors and the predictive effects. Methods: The prosocial behavior subscale in the Strengths and Difficulties Questionnaire (SDQ), family APGAR and adolescent social support scale (ASS) were used to track the 815 impoverished children for four times in two years. A sample of 485 impoverished children in elementary school (mean age = 10.11 ± 1.45), 199 males and 268 females and 309 impoverished children in middle school (mean age = 14.44 ± 1.44 years old), 127 males and 182 females were investigated four times in two years. The average tendency and individual differences of prosocial behavior in impoverished children with latent growth modeling and latent growth mixture model analysis. Results: (1) The average tendency, impoverished children's prosocial behavior of the trajectory linear downward trend in elementary school, there no significant trajectory change in middle school, and the prosocial behavior of the boys initial is significantly higher than female in middle school, but the development speed of no significant gender differences. (2) With the analysis of the latent growth mixed growth model, found that there are significant individual differences in the development trajectory of prosocial behaviors of impoverished children in elementary and middle schools, and the impoverished children's prosocial behavior development trajectories can be divided into three heterogeneity categories in elementary school: the sharp decline group, the slow decline group and the moderate growth group. The impoverished children's prosocial behavior development trajectories can be divided into two heterogeneity categories in middle school: the steep decline group and the moderate increase group. (3) Family functioning and social support can relieve the decline speed of the impoverished children's average prosocial behavior of elementary and middle school; with high score of family functioning, social support, subjective support and support utilization degree of impoverished children are more likely in the middle school stage of the steady rise group. Conclusion: The developmental trajectory of prosocial behavior of impoverished children in primary and secondary schools is significantly different, and there is significant heterogeneity in both development stages. High family function and social support level can relieve the decline rate of prosocial behavior development of impoverished children.

Keywords: impoverished children, prosocial behavior, development trajectories, average tendency, individual differences

主观社会经济地位对成年早期幸福感的影响： 阶层流动信念和贫富差距归因的链式中介

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摘要 多项研究发现主观社会经济地位（SSS）对成年早期幸福感具有正向预测作用，高主观社会经济地位个体的主观幸福感显著高于低主观社会经济地位个体。同时，成年早期幸福感还可能受到童年期社会经济地位的影响。然而，对于两种社会经济地位影响成年早期幸福感的内在机制还不明确。本研究探讨了童年社会经济地位、主观社会经济地位与成年早期幸福感的关系，并考察了阶层流动信念和贫富差距归因的中介作用。本研究采用网络问卷进行调查，从湖南省抽取四所大学共 1120 名学生完成问卷调查，剔除无效数据，最终得到有效问卷 1059 份。采用童年社会经济地位量表、主观社会经济地位量表、阶层流动信念量表、贫富差距归因问卷、生活满意度量表和抑郁-焦虑-压力自评量表，对成年早期被试($M_{age}=20.15\pm1.62$ 岁)进行调查。结果发现：(1)童年社会经济地位、主观社会经济地位与阶层流动信念、贫富差距归因和生活满意度呈显著正相关，与抑郁-焦虑-压力负相关；(2)童年社会经济地位、主观社会经济地位不仅直接影响成年早期幸福感，还存在两条间接路径：阶层流动信念的单独中介作用；阶层流动信念和贫富差距归因的链式中介作用。结论：童年社会经济地位和主观社会经济地位均可以通过强化阶层流动信念进而增强贫富差距内归因倾向来增加成年早期个体的幸福感。应当注重引导成年早期个体增强阶层流动信念、训练内归因倾向，提高其幸福感水平。

关键词 主观社会经济地位，童年社会经济地位，阶层流动信念，贫富差距归因，幸福感

The impact of subjective socioeconomic status on well-being in early adulthood: The Serial mediating roles of perceived socioeconomic mobility and attribution for the gap between the rich and the poor

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Abstract: A number of studies have indicated that the subjective socioeconomic status (SSS) positively predicted the well-being in early adulthood, and the subjective well-being of individuals with high SSS is significantly higher than that of individuals with low SSS. Meanwhile, happiness in early adulthood may also be influenced by childhood socioeconomic status. However, the underlying mechanism by which the two socioeconomic status influences happiness in early adulthood is unclear. The present study explored the relationship between childhood socioeconomic status, subjective socioeconomic status and well-being in early adulthood, and examined the mediating role of perceived socioeconomic mobility and attribution for the gap between the rich and the poor. In this study, a total of 1120 students from four universities in Hunan Province were selected to complete the questionnaire. Invalid data were eliminated, and 1059 valid questionnaires were finally obtained. The childhood socioeconomic status scale, MacArthur scale of subjective socioeconomic status, Perceived socioeconomic mobility scale, Wealth gap attribution questionnaire, Satisfaction with life scale and Depression anxiety stress scales were used to investigate the individuals in early adulthood($M=20.15$). The results showed that: (1) Childhood socioeconomic status, subjective socioeconomic status were positively correlated with perceived socioeconomic mobility, attribution for the gap between the rich and the poor and life satisfaction, and negatively correlated with depression-anxiety-stress; (2) Childhood socioeconomic status, subjective socioeconomic status not only directly affect well-being in early adulthood, but also have two indirect pathways: the separate mediation effect of perceived socioeconomic mobility, and the chain mediation effect of perceived socioeconomic mobility and attribution for the gap between the rich and the poor. Conclusion: Perceived socioeconomic mobility and attribution for the gap between the rich and the poor exert a serial mediating effect on the relationship between childhood / subjective socioeconomic status and subjective well-being.

Keywords: Subjective socioeconomic status, Childhood socioeconomic status, Perceived socioeconomic mobility, Attribution for the gap between the rich and the poor, Subjective well-being

社会阶层影响小学生在道德情境下的亲社会行为： 基于中国城乡差异的研究

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摘要 以往研究表明，社会阶层会影响个体的亲社会行为，但研究结论不尽一致。有研究表明，高阶层个体更亲社会，但也有研究表明，低阶层个体更亲社会。导致以往研究结论不尽一致的一个重要原因在于忽略了特定的情境因素对个体亲社会行为的影响。本研究旨在考察不同道德情境下社会阶层与儿童亲社会行为的关系。具体而言，本研究旨在考察当他人做出道德行为和非道德行为并遭遇不幸时个体的亲社会行为，包括安慰、帮助分享行为。与以往研究不同，本研究基于中国城乡差异从阶层的群体文化视角来进行考察。研究1假设：高社会阶层儿童（城市儿童），相对于低社会阶层儿童（农村儿童），在他人做出不道德行为并遭遇不幸时会产生更少的亲社会行为，并且幸灾乐祸这一道德情绪在其中起着中介作用。分别选取309名农村儿童和524名城市儿童，采用故事场景呈现道德情景和非道德情境，随后儿童完成亲社会行为和道德情绪的测量。研究结果支持上述假设。研究2有两个目的，其一在于重复研究1的结果，其二目的在于进一步上述研究结果的产生机制，即城市儿童之所以产生更高的幸灾乐祸是由于更低的共情还是由于更高的应得性感知，亦或两种机制共同导致的结果。分别选取216名农村儿童和173名城市儿童，采用类似于研究1的实验程序进行考察。研究结果表明社会阶层通过影响应得性感知、到影响幸灾乐祸，进而影响儿童的亲社会行为；而共情反应在上述关系中并未起中介作用。这表明高阶层儿童是由于具有更高的应得性感知(并非更强的共情反应)，比低阶层儿童产生更强的幸灾乐祸，从而表现出更低的亲社会行为。本研究结果在理论上深化了对社会阶层对亲社会行为的研究，在实践上，对于有针对性地促进城乡儿童社会性发展具有借鉴意义。

关键词 社会阶层，亲社会行为，城乡差异，幸灾乐祸

Social Class and Children's Prosocial Behavior in Moral Situation: A Study in the Context of Urban-rural differences in China

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Abstract: Previous studies have shown that social class affects an individual's prosocial behavior, but the conclusions of research are inconsistent. Some studies have shown that lower class individuals are more prosocial than higher class individuals. However, others have shown that higher individuals are more prosocial than lower individuals. An important factor for the inconsistency of previous conclusions is the neglect of the influence of specific social context on individual's prosocial behavior. In more specific, the purpose of this research is to investigate the individual's prosocial behavior, when the other child pursues a morally positive /negative goal and suffers misfortune later, including comforting and helping sharing behaviors. Unlike previous research, this study investigates from the sociocultural perspective based on the differences between urban and rural areas in China. We hypothesized that: when actor pursues the morally negative goal and suffers misfortune later, higher class children experience higher schadenfreude than the lower class children, and therefore showing lower prosocial behavior to the actor (H1). In study 1, 309 rural children and 524 urban children were recruited respectively, using story scenes to present moral and non-moral context. Then schadenfreude, prosocial behavior towards the suffering child were assessed. The results support the above hypothesis. Study 2 has two purposes: one is to repeat the results of the study 1 and the other is to explore the possible mechanisms of the influence of social class on prosocial behavior in moral context. In more specific, we aimed to explore whether the higher schadenfreude of high class children than lower class children when the actor pursues the morally negative goal valence and suffers misfortune later, is driven by a weaker empathic

response to the misfortune, a higher sense of deservingness, or both. In study 2, 216 rural children and 173 urban children were recruited respectively, and the experimental procedure similar to study 1. Study 2 found that the relationship between social class and children's prosocial behavior is sequentially mediated by deservingness and schadenfreude. The results of the study 2 indicate that social class influences children's prosocial behavior through the deservedness and schadenfreude. Empathy does not play a mediating role in the above relationship. This research results theoretically deepen the understanding of how social class exerts its impact on prosocial behavior and provide theoretical guidance for promotion of the social development of urban and rural children.

Keywords: social class, schadenfreude, prosocial behavior, urban-rural differences

青少年早期贫困家庭儿童的情绪问题发展轨迹： 群体异质性及影响因素

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摘 要 贫困家庭儿童的情绪发展常落后于其他同龄儿童，且心理问题检出率更高。本研究关注贫困家庭儿童在青少年早期情绪问题的发展状况，并探讨影响其情绪问题发展轨迹的生态风险因素和积极心理资源。研究以 444 名在当地建档立卡的贫困家庭初中生为被试，参考以往研究收集了个体早期的生态风险和积极心理资源信息，采用困难与长处量表中情绪分量表测量了个体的情绪问题并进行了历时两年的 3 次追踪。运用潜变量混合增长模型(Latent Growth Mixture Model, LGMM)，以个体中心视角对其情绪问题的发展轨迹进行分析。模型拟合结果显示，贫困儿童在青少年早期存在情绪问题平稳组、上升组和缓解组三种发展轨迹。随后采用 logistics 回归的方法考察性别、年龄、生态风险、积极心理资源对情绪发展轨迹亚群组的影响。情绪问题发展各亚组间在累积风险上存在差异：情绪问题平稳组和缓解组高于情绪问题上升组；情绪问题缓解组的累积心理资源高于情绪问题上升组。此外，在控制性别、年龄和初始的情绪问题后，累积生态风险和累积心理资源对第三次测量的情绪问题的回归分析表明，累积心理资源能预测情绪问题上升组的情绪问题。研究结果表明，贫困家庭儿童在青少年早期的情绪问题发展存在异质性，遭遇风险较多的个体情绪问题也较高，拥有积极心理资源较多的个体情绪问题更可能减轻。

关键词 贫困儿童，青少年早期，情绪问题，群体异质性，风险和保护因素

The Development track of emotional problems of Children from needy families in early adolescence: group Heterogeneity and influencing factors

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Abstract: The emotional development of children from poor families often lags behind other children of the same age, and the detection rate of psychological problems is higher. This study focused on the development of emotional problems in children from poor families in early adolescence, and explored ecological risk factors and positive psychological resources that influenced the developmental trajectory of emotional problems. In this study, 444 junior high school students from poor families with local records were selected as the subjects. Based on previous studies, the ecological risk and positive psychological resources of individuals were collected, and the emotional problems of individuals were measured by the emotional problems subscale of the Strengths and Difficulties questionnaire, and followed for three times for two years. The Latent Growth Mixture Model (LGMM) was used to analyze the developmental trajectory of their emotional problems from an individual-centered perspective. The results of model fitting show that the needy children in early adolescence have three developmental trajectories: the stable group, the rising group and the recovering group. Then, the method of logistics regression was used to investigate the effects of gender, age, ecological risk, and positive psychological resources on the subgroups of emotional development

trajectory. There are differences in cumulative risk among the subgroups of emotional problem development: the emotional problem stable group and remission group are higher than the emotional problem rising group, and the cumulative psychological resources of the emotional problem remission group are higher than those of the emotional problem rising group. In addition, after controlling gender, age and initial emotional problems, the regression analysis of cumulative ecological risks and cumulative psychological resources to the emotional problems measured for the third time shows that cumulative psychological resources can predict the emotional problems of the rising group of emotional problems. The results show that there is heterogeneity in the development of emotional problems of children from poor families in early adolescence, and the emotional problems of individuals with more risk are also higher, and the emotional problems of individuals with more positive psychological resources are more likely to be alleviated.

Keywords: children living in poverty, early adolescents, emotional problems, group heterogeneity, risk and protective factors

(3) “发展心理专业委员会”专题研讨会 3

早期二语学习对个体认知发展的影响

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摘要 很多研究发现双语儿童比单语儿童在认知灵活性、抑制控制和工作记忆等方面都存在着一定的优势, 甚至有研究者提出了双语认知控制优势的观点。但是也有一些研究者认为双语认知控制优势并不存在。正因如此, 早期二语学习经验对个体认知发展的影响目前仍然是双语领域的研究热点之一。另外, 第二语言学习是否存在关键期, 不同的年龄阶段开始学习二语对个体的认知发展是否有不同, 这也是双语领域的一个研究热点。基于这些研究问题, 我们梳理了早期二语学习影响个体认知发展方面的研究成果, 并以 450 名初中生为研究对象, 考查了早期英语学习开始时间及学习经验对个体词汇通达能力和一般认知能力的影响。研究结果发现, 英语的始学年龄不仅对被试的词汇通达能力有影响, 对一般认知能力也有影响; 不同始学年龄的被试的词汇通达能力和一般认知能力存在显著差异, 其中 3 岁是个体英语学习的重要转折点, 3 岁开始学习英语的被试的词汇通达能力和一般认知能力是最高的; 英语学习兴趣和学习策略在其中有部分中介作用。该结果揭示了早期二语学习会对个体认知发展产生影响, 并且这种影响会随着二语始学年龄的变化而不同。本研究最后还进一步明确了该研究领域在未来研究中需要进一步解决的问题。

关键词 第二语言学习; 早期经验; 儿童; 认知发展; 词汇通达

Effects of Early-stage Second Language Learning on Individual Cognitive Development

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Abstract: Many studies found that bilingual children have certain advantages over monolingual children in cognitive flexibility, inhibitory control, working memory, and other aspects. Some researchers have proposed the theory of bilingual cognitive control advantages. However, others argue that the bilingual advantage in cognitive control does not exist. For this reason, the effects of early-stage second language learning on individual cognitive development are still interesting issues in the field of bilingualism. In addition, whether there is a critical period for second language learning, and whether the onset age and the experiences of second language learning have different effects on

cognitive development, which are also of strong interest for researchers. Therefore, we carried out a systematic review on the studies of early-stage second language learning at home and abroad. We randomly assigned 450 junior high school students as the subjects. The present study aimed to examine the effects of the onset age of second language learning on individual lexical-access ability and general cognitive abilities. Results showed that the onset age of second language learning not only affected the lexical-access ability, but also the general cognitive skills. There were significant differences in the lexical-access ability and general cognitive skills of the subjects of different onset ages. The age of 3 was an important turning point for English learning, because the lexical-access ability and general cognitive abilities were the highest for the subjects who started learning English at 3 years old. Results also showed that English learning interest and learning strategies played a partial mediating role. In summary, the present study revealed that early-stage second language learning would have effects on individual cognitive development, and the effects would vary with the onset age. Finally, the paper clarified the problems to be further solved in future research in this research field.

Keywords: Second language learning, early experience, children, cognitive development, lexical access

英语和音乐训练对汉语母语儿童英语字母-语音自动化的影响

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摘要 第二语言学习是一项极具挑战性的任务, 母语背景在二语学习中发挥着重要的作用。汉语和英语是两种差异巨大的语言。英语是拼音文字, 字母-语音整合是英语单词解码的关键。与此相对, 汉语是非拼音文字, 汉语阅读并不涉及字母-语音整合。已有研究发现, 母语背景限制了汉语母语者的英语字母-语音整合(Wang et al., 2018; Yang et al., 2016)。本研究旨在探讨英语和音乐训练对汉语母语者英语字母-语音整合的作用。我们将招募到的小学2-4年級的汉语儿童随机分为英语训练组($n = 53$)、音乐训练组($n = 40$)和控制组($n = 37$)。训练时长为每周2次, 每次1小时, 共50次, 持续一学年。结果发现, 在训练前, 三组儿童均无法整合英语字母-语音, 但是在经过一学年的训练后, 英语和音乐训练组儿童都可以自动化整合英语字母-语音, 而控制组依然无法整合。进一步, 本研究发现两种训练经验的加工机制存在不同, 音乐训练组可能采用自上而下的加工机制, 英语训练组可能采用自下而上的听觉-知觉加工和自上而下的认知加工相结合的机制。本研究揭示了英语和音乐训练均有助于汉语母语儿童克服母语背景的限制, 按照目标语言的要求建立起字母和语音间的自动化连接, 但两种训练经验的加工机制存在不同。

关键词 汉语母语者, 英语第二语言阅读, 字母-语音整合, 英语训练, 音乐训练

The effect of English and music training on English letter-sound integration for native Chinese-speaking children

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Abstract: Learning second language is challenging, and native language background plays an important role in second language learning. Chinese and English are two different language systems. English is an alphabetic language, letter-sound integration is critical for English word decoding. In contrast, Chinese is a non-alphabetic language, and Chinese character reading does not involve letter-sound integration. Studies found that native language background constraint native Chinese speakers' English letter-sound integration (Wang et al., 2018; Yang et al., 2016). The

present study aimed to investigate whether English and music training could help native Chinese speakers integrate English letter-sound successfully. We randomly assigned the grade 2 to 4 primary school children into English training group ($n = 53$), music training group ($n = 40$), and control groups ($n = 37$). The training period is twice a week, each time for one hour, totally 50 hours. Before training, three groups could not integrate English letter-sound. After training, both English and music training group could integrate English letter-sound successfully, while control group still could not integrate English letter-sound. We further explored the mechanisms of English and music training experience. The results found that music training group may use top-down cognitive modulation to integrate English letter-sound, while English training group may use both auditory-perceptual bottom-up processing and top-down cognitive modulation to integrate English letter-sound. In summary, the present study revealed that both English and music training could help native Chinese speakers build automatic integration of English letter-sound, but the mechanisms of English and music training are different.

Keywords: Native Chinese speakers, English second language reading, letter-sound integration, English training, music training

母语技能在我国儿童英语阅读中的作用：基于 SVR 模型的验证

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摘要 阅读 SVR 理论 (simple view of reading) 是当前理解阅读获得的重要理论。大量来自不同语言背景的研究都表明文字解码和语言理解可以解释不同年级儿童阅读理解的多数变异。来自二语/外语阅读研究的证据表明这一理论也适用于理解二语/外语阅读学习。然而多数已有研究只考察二语/外语技能的作用。由于外语阅读学习和母语阅读学习存在重要的内在联系, 因此, 在理解外语阅读学习的发展模式中必须回答一个重要问题: 母语阅读及其技能在外语阅读学习中起着什么样的作用? 尤其是在宏观语言环境不是目标语言的外语学习中。因此本研究通过横断和追踪的设计, 考察了汉字文字解码和语言理解在我国小学儿童英语阅读学习中的作用。研究 1a 基于横断数据 (198 名小学五、六年级儿童), 研究 1b 继续对其中 78 名小学五年级儿童进行了为期一年的追踪。研究结果都显示, 汉字认读、汉语听力理解对英语阅读理解的直接解释、预测作用不显著, 但汉字认读和汉语听力理解分别可以通过英语单词认读和英语听力理解间接地影响英语阅读理解, 且汉字认读对一年后英语阅读理解的间接作用也显著; 汉语阅读理解对英语文字解码和阅读理解的解释和预测作用均不显著。值得关注的是, 汉字认读对同时和后续英语单词认读都具有显著的独立解释、预测作用。这表明对于外语阅读初学者, 母语技能, 尤其是母语的文本解码能力在外语阅读学习中具有重要的支持作用。

关键词 SVR 理论 (simple view of reading), 文字解码, 言语理解, 外语学习

The role of native language skills in learning to read English for Chinese children: A verification based on SVR model

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Abstract: The simple view of reading (SVR) is the most influential model for understanding reading acquisition. Study 1 examined the roles of decoding and language comprehension in one's native language in second language reading based on SVR. One hundred ninety-eight native Chinese-speaking English learners were tested at Grades 5 and 6 (Study 1a), and 78 5th graders were also followed one year later (Study 1b). The results showed: a. Chinese

character reading and listening comprehension did not significantly predict English reading comprehension concurrently and longitudinally after English word reading and listening comprehension being controlled for; b. Chinese character reading and language comprehension had indirect effects on English reading comprehension via corresponding English components concurrently, Chinese character reading also had indirect effects on English reading comprehension via English word reading longitudinally; c. Chinese character reading accounted for unique variance of English word reading both concurrently and longitudinally. d. Chinese reading comprehension could not account for English word reading or reading comprehension significantly. These results suggested that native language skills, particularly decoding in one's native language may play important roles both in foreign language decoding and reading comprehension.

Keywords: Simple view of reading, decoding, linguistic comprehension, foreign language learning

左侧顶下小叶在儿童第二语言学习中的功能可塑性

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摘要 已有元分析发现左侧顶下小叶在第二语言阅读中起到了重要作用。一项有关第二语言学习的成人研究发现, 学习后左侧顶下小叶的激活会增加, 并且与阅读速度呈现正相关。但是还没有直接的证据表明儿童在进行二语学习的过程中, 左侧顶下小叶是如何发生变化的。在本研究中, 我们使用一种基于语音的训练方法(Fast ForWord), 对学习英语作为第二语言的中国儿童进行英语训练。训练持续 8 周, 在训练前和训练后对大脑进行功能性磁共振成像扫描。功能性磁共振成像的任务包括汉语语音任务, 英语正字法任务和英语语音任务。我们以先前元分析中发现的特异于二语加工的左侧顶下小叶为感兴趣区, 结果发现, 相比于汉语语音任务, 训练前左侧顶下小叶在英语语音任务中表现出更强的激活, 说明了左侧顶下小叶在二语加工中的特异性。接下来我们将儿童分为训练组和控制组, 进一步考察左侧顶下小叶在训练前后脑活动的变化。结果显示, 训练组的左侧顶下小叶激活有显著增强, 但是控制组没有相似发现, 全脑激活分析也印证了这一结果。此外, 我们对训练前和训练后的大脑激活模式进行了相关分析, 结果发现, 训练组训练前后左侧顶下小叶的激活模式差异越大, 儿童的成绩提高的就越多。除激活结果外, 我们还发现了训练效应体现在训练后左侧顶下小叶和左侧枕上回的功能连接有显著增强。总体来说, 这些结果说明了第二语言学习依赖于左侧顶下小叶自身的功能可塑性以及它和负责视觉正字法加工的脑区之间的连接。这些发现为我们理解大脑是如何学习一种新语言的提供了新的视角。

关键词 左侧顶下小叶, 儿童, 二语学习, 训练效应

Functional plasticity of the left inferior parietal lobule in children's second language learning

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Abstract: Previous meta-analyses showed that the left inferior parietal lobule (LIPL) plays a particularly important role in second language (L2) reading. An existing training study also reported increased activation in the LIPL and its positive correlation with reading speed during L2 learning in adults. However, direct investigation remains unclear how this brain region functionally changes during second language acquisition in child learners. Here, we addressed this issue by utilizing a phonological-based training program (the Fast ForWord program) to train the ability of the second language (English) in Chinese child learners. The training session lasted eight weeks, and brain images were acquired via functional magnetic resonance imaging before and after training. We found that the LIPL showed greater activation in the phonological task in L2 compared to L1 before training, confirming the specific role of the LIPL in second language processing. We then examined the brain activity of the LIPL before and after training and observed increased brain response in this region in the training group but not in the control group, which pattern was validated by a voxel-based whole brain analysis. To assess individual differences in brain plasticity, a multivariate spatial correlation analysis was conducted between pre-training patterns of brain activity and post-training patterns of brain activity. The results revealed that greater differences in activation patterns in the LIPL across time correspond to larger performance gains in the training group. Besides brain activation, we also observed a significant training effect on functional connectivity of the LIPL to the left superior occipital gyrus. Put together, these results suggest that second language acquisition heavily relies on the functional plasticity of LIPL and its connection with brain areas for visual-orthographic processing. The findings offer new insights as to how the brain adapts to a new language.

Keywords: Left inferior parietal lobule, children, L2 learning, training effects

英汉阅读困难的共发与分离： 汉语儿童英语阅读困难者的英汉阅读技能缺陷分析

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摘要 二语阅读往往建立在母语阅读基础上, 英汉阅读困难是否共发一直是二语研究关注的问题。本文对比了 402 名 4-6 年级的中国儿童在英汉阅读能力及英汉语音加工和正字法加工技能上的特点。结果显示: (1) 英语阅读困难儿童在英汉语语音意识和英汉快速命名技能和英语正字法意识上均显著低于英语阅读正常儿童, $F(3, 861) = 39.75, p < .001, \eta^2_p = .122$, 效应量为 0.56-1.43, 但是英语阅读困难组和正常组在汉语正字法意识上不存在显著差异。(2) 英语阅读困难者汉语语音意识缺陷的发生率为 34%, 数字快速命名的缺陷率为 31%, 显著高于英语阅读正常儿童, 但是汉语正字法意识缺陷跟正常儿童无显著差异。(3) 英语阅读困难者中英汉语语音意识、英汉快速命名缺陷均存在关联; 虽然英汉正字法意识缺陷同样存在关联, 但是汉语正字法意识缺陷率 (9%) 显著低于英语正字法意识缺陷率 (68%)。(4) 潜变量分析显示存在汉语阅读正常而英语阅读困难的学习者, 英语阅读困难者在英语语音意识、快速命名和正字法意识上存在显著缺陷, 同时也有部分英汉

阅读双重困难者，他们在英汉语音意识、语音记忆和快速命名上存在缺陷，但是正字法意识正常。上述结果提示，英语阅读困难在认知技能缺陷上的亚型不是汉语阅读能力或汉语认知技能的简单映射，汉语阅读能力和英语阅读困难认知技能缺陷亚型没有明显关联，英语阅读困难具有英语语言的独特性。

关键词 二语阅读困难，语音加工，正字法加工，技能缺陷

Coincidence and Separation of English and Chinese Reading Difficulty: Analysis of English and Chinese Reading Skills Deficits of Chinese Children with Poor English Reading

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Abstract: The acquisition of second language reading depends on first language reading. This research compared 402 fourth to sixth grades in English and Chinese phonological and orthographic skills. The results showed that (1) All the English reading difficulty subtypes were significantly worse than the typically developing children on English and Chinese word reading, phonological awareness, phonological memory and rapid digit naming and English orthographic awareness, $F(3, 861) = 39.75, p < .001, \eta_p^2 = .122, ds = 0.56-1.43$, but there was no significant difference on Chinese orthographic awareness. (2) The rate of Chinese phonological awareness deficit was 34 percent, Chinese rapid digit naming deficit was 31 percent, Chinese phonological memory deficit was 12 percent and Chinese orthographic awareness deficit was 9 percent. (3) The deficits of phonological memory and rapid naming in English and Chinese were significantly correlated, but the deficits of phonological awareness in English and Chinese were not significantly correlated. Although English and Chinese orthographic awareness deficits were significantly correlated, the rate of Chinese orthographic awareness (9 percent) was significantly lower than English counterpart (68 percent). (4) The latent profile analysis revealed that poor English readers had deficits in English phonological awareness, rapid naming and orthographic awareness. The readers with both English and Chinese reading difficulties had deficits in phonological processing skills but intact in orthographic awareness. The results suggested that the subtypes of English skill deficits were not the simple reflection of Chinese reading skills and there were no significant differences among the subtypes of English reading difficulties in Chinese reading. Thus, English reading difficulties have specific English skill deficits.

Keywords: Second language reading difficulty, phonological processing, orthographic processing, skills deficits

(4) “发展心理专业委员会”专题研讨会 4

模仿控制启动对心理状态推理中自我-他人区分的影响

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摘要 当人们同时处理自我和他人的信息时, 需要对自我和他人相关表征进行区分。已有证据表明, 不管是控制对他人动作的自动模仿(模仿控制)还是推理他人的心理状态(心理理论), 自我-他人区分可能是一个共通的加工过程。对自我-他人区分共通性的探讨有助于对心理状态推理个体差异及其加工机制的理解。研究旨在通过模仿控制启动来考察自我-他人区分对心理状态推理加工的影响。33名大学生($M_{age} = 19.5$ 岁, $SD = 0.98$)完成一个改编版错误信念任务, 被试根据线索提示推断自己的(自我指向)或他人的(他人指向)信念。在进行信念推理之前, 被试接受自我-他人区分降低、自我-他人区分增强和基线三种不同的启动条件。自

我-他人区分减弱条件下, 被试需要模仿他人的手指动作; 自我-他人区分增强条件下, 被试需要反模仿他人的手指动作; 基线条件下, 被试不做任何反应。结果发现, 模仿控制启动只影响他人指向的信念推理。具体来说, 自我-他人区分降低条件下, 被试进行他人指向信念推理的反应显著慢于其他两条件, 说明当自我-他人区分水平暂时降低时, 被试的对他人心理状态的推理会更困难。这提示心理状态推理有赖于对自我和他人相关表征的区分能力, 为构建有效的心理理论失调的干预方案提供了支撑。

关键词 模仿控制, 心理理论, 自我-他人区分, 心理状态推理

The Influence of Imitative Control Priming on Self-other Distinction in Mental State Reasoning

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Abstract: People need to distinguish between self- and other-related representations while concurrently processing the information of self and others. Prior evidence has suggested that the self-other distinction (SOD) may be a common process in both controlling automatic imitation of others' actions (i.e., imitative control) and reasoning about other people's mental states (i.e., theory of mind). Investigating the commonality of SOD would be helpful to understand the individual difference in mental state reasoning and its processing mechanism. This study aimed to investigate the effect of SOD on the processing of mental state reasoning through imitative control priming. Thirty-three college students ($M_{\text{age}} = 19.5$ years old, $SD = 0.98$; 20 females) completed a modified version of the false-belief task, in which participants were prompted with a cue to attribute a belief to either themselves (self-oriented) or another person (other-oriented). Participants accepted one of three priming conditions before belief attribution, namely SOD decreasing, SOD enhancing, and a baseline condition. In the SOD decreasing condition, participants were asked to imitate the finger movements of others; In the SOD enhancing condition, participants were asked to counter-imitate the finger movements of others; In the baseline condition, participants did not make any response. Our results showed that the imitative control priming only affected the other-oriented belief attribution. Specifically, the performance of other-oriented belief attribution in the SOD decreasing condition was significantly slower than that in the rest other two conditions, thus indicating that, when the level of SOD was temporarily reduced, it would be more difficult for participants to reason about other people's mental states. This suggests that mental state reasoning depends on the ability to distinguish between self-related and other-related representations, which provides support for building effective intervention programs on the disorders of theory of mind

Keywords: imitative control, theory of mind, self-other distinction, mental state reasoning

青少年灵活转换的发展及其与情绪调节策略的关系

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摘要 青少年的社会情绪系统与认知控制系统发展不同步, 不成熟的认知控制系统如果无法处理过高的情绪反应会带来情绪失调等问题。与在中性任务间转换(认知性灵活转换)相比, 在情绪任务和中性任务之间的转换(情绪性灵活转换)与情绪调节的关系更为密切。有效的情绪调节涉及到灵活地参与和脱离情绪信息, 而灵活转换的适应性又会受到情境的影响, 稳定性-灵活性失衡会导致僵化或者分心, 探究其在情绪情境中的平衡也有助于解释情绪信息在灵活转换中的作用。基于此, 研究考察认知性灵活转换与情绪性灵活转换在青少年中晚期的发展差异, 并探究其与情绪调节策略的关系。148名15~25岁的青少年完成了数字-字母转换任务和情绪-性别转换任务以及情绪调节问卷。结果发现数字-字母任务的转换代价(转换试次反应时与重复试次

反应时的差值)与年龄无显著相关,而情绪-性别任务的转换代价(从性别任务转换到情绪任务的反应时与重复情绪任务反应时的差值)与年龄呈显著非线性关系。这一结果表明认知性灵活转换能力在青少年中晚期已趋于稳定,而情绪性灵活转换能力在青少年中晚期先降低后升高,在20岁左右灵活转换能力最容易受到情绪信息的影响,即呈U型曲线关系。结果还发现从性别任务转换到情绪任务的转换代价与表达抑制策略倾向呈显著非线性关系,情绪性灵活转换能力中等时表达抑制策略倾向最低,即呈U型曲线关系;从情绪任务转换到性别任务的转换代价与女生的认知重评策略倾向呈显著非线性关系,情绪性灵活转换能力中等时女生的认知重评倾向最高,即呈倒U型曲线关系。这一结果提示中等情绪性灵活转换更具有适应性。认知性灵活转换与情绪性灵活转换的发展差异从灵活转换的角度为双系统模型提供了证据,情绪性灵活转换与情绪调节策略的非线性关系有助于理解情绪情景中的稳定性-灵活性平衡。

关键词 情绪性灵活转换, 认知性灵活转换, 情绪调节, 青少年

Development of Adolescent Switching Flexibility and Its Relationship with Emotion Regulation Strategies

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Abstract: Social emotional system and cognitive control system develops asynchronously during adolescence. Immature cognitive control system cannot deal with excessive emotional response might lead to emotional dysregulation and other problems. Compared to switching between neutral tasks flexibly (cognitive flexibility), switching between a neutral and an emotional task flexibly in the presence of affective information (affective flexibility) is more closely related to emotion regulation. Effective emotion regulation requires the flexible engagement and disengagement from affective information. The adaptability of flexibility is also vulnerable to context, dysregulation of stability-flexibility balance can result in overly rigid or overly distractible behavior, and exploring its balance in an emotional context can contribute to explaining the effect of affective information on switching flexibility. The current study investigated the developmental differences of cognitive flexibility and affective flexibility during middle and late adolescence as well as their relationships with emotion regulation strategies. Adolescents (15 ~ 25 years old) participated and completed the number-letter task, affective switching task and emotion regulation questionnaire. The results showed that there was no significant correlation between age and the switch costs of number-letter tasks (calculated by subtracting the mean response times for all repeat trials from the mean of all switch trials), while the switch costs of emotion-gender task (calculated by subtracting the mean response times for repeat trials on emotional tasks from the mean of all trials switching to emotional tasks) showed a non-linear relationship with age. These results indicated that the cognitive flexibility tended to be stable during middle and late adolescence, while the affective flexibility was firstly decreased and then increased, and the affective flexibility was most vulnerable to emotional information around 20 years old, indicating a U-shaped trajectory. The results also revealed that the switch cost from the gender task to the emotion task showed a non-linear relationship with suppression, indicating that the medium affective flexibility predicted the lowest suppression (U-shaped relationship). The switch cost from the emotion task to the gender task also showed a non-linear relationship with cognitive reappraisal among girls, indicating that the medium affective flexibility predicted the highest cognitive reappraisal among girls (inverted U-shaped relationship). These findings suggest that medium affective flexibility was more adaptive than overly high or low flexibility. The developmental difference of cognitive flexibility and affective flexibility contributed to the theoretical framework of dual systems model from the perspective of switching flexibility. The non-linear relationship between affective flexibility and emotion regulation strategies also provided a more comprehensive view of stability-flexibility balance in an emotional context.

Keywords: cognitive flexibility, affective flexibility, emotion regulation, adolescence

正常个体自闭特质与情感心理理论表现关系的元分析

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摘要 自闭特质是与自闭症谱系障碍相关行为特征、人格和认知特点的集合。以往的研究表明自闭特质在正常人群中呈量化分布, 且正常发育的高自闭特质个体可能表现出与自闭症相似的认知模式与行为特点。根据自闭症谱系障碍在基于眼中读心任务(Reading the Mind in the Eyes Test, REMT)的情感心理理论表现上存在缺陷, 许多研究推测正常个体中的自闭特质与情感心理理论能力存在关系, 但研究结果仍然存在争议。从检索文献中筛选出纳入元分析的 20 篇文献与 24 个独立效应量, 共包含 4589 名被试。根据异质性检验的结果确定选择随机效应模型是正确的, 并且为了避免发表偏差对元分析的影响, 使用剪粘法发现发表偏差不影响元分析的结果。通过随机效应模型的元分析表明, 自闭特质与眼中读心任务表现有显著的负相关($r = -0.182, 95\% \text{ CI} = [-0.232, -0.131], p < 0.0001$); 调节效应分析发现自闭特质的测量工具对自闭特质与情感心理理论的关系不存在影响。这说明, 正常发育人群中的自闭特质越高的个体可能在眼中读心任务的表现, 即情感心理理论上表现的越差, 并且高自闭特质的正常发育个体在情感心理理论表现上可能与自闭症谱系障碍有相似的特点。

关键词 自闭特质, 情感心理理论, 眼中读心任务

Association between Autistic Traits and Affective Theory of Mind in Typically Developing Population: A Meta-Analysis

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Abstract: Autistic traits are a set which tightly related to autism spectrum disorder in the aspects of behavioral features, personality and cognitive features. Previous research has presented that autistic traits are quantitative distribution in the normal population and the high autistic trait person may have a similar cognition style as well as behavioral features with autism spectrum disorder. According to the autism spectrum disorder have a worse performance than typically developing population in the affective theory of mind based on Reading the Mind in the Eyes Test (REMT), some researches predicted that autistic traits are associated with the performance affective theory of mind. However, the current research results are still controversial. Through literature retrieval and selection, in terms of the criteria for inclusion in the meta-analysis, 24 independent effect sizes (20 studies, 4589 participants) were picked out as meta-analysis unit. The test for heterogeneity illustrated that there was significant heterogeneity in 24 independent effect sizes, and also random effects model was an appropriate model for subsequent meta-analysis. The publication bias test indicated that the impact of publication bias was modest but the major finding remained still valid. The research revealed that a negative relationship between autistic traits and the performance of RMET ($r = -0.182$). The moderator analysis revealed that the measurements of autistic traits do not affect the relationship between autistic traits and affective theory of mind. The result suggested that individuals with higher autistic traits in typically developing population perform worse and have similar features with ASD on the affective theory of mind.

Keywords: Autistic traits, affective theory of mind, REMT

任务难度和完成结果对老年人情绪预测的影响

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摘要 有研究表明，任务难度和完成结果（成败）会影响年轻人的情绪预测。对老年人而言，一方面对任务难度的主观认知可能与年轻人不同；另一方面，根据社会情绪选择理论（SST），老年人更关注具有积极情绪意义的信息，回避具有消极情绪意义的信息，不同的成败结果对他们的影响可能也不同。因此，本研究通过两个实验试图考察任务难度和完成结果对老年人情绪预测的影响。实验1选取年轻人和老年人各120名，采用2（任务难度：高 vs. 低）×2（年龄：年轻人 vs. 老年人）的组间设计，要求被试预测任务成功完成后的情绪体验，或者在实际完成任务后评估此时的情绪状态。结果发现，在成功完成简单任务条件下，年轻人和老年人都表现为低估实际体验的积极情绪；成功完成困难任务条件下，年轻人能够准确预测完成后的情绪，而老年人仍表现为低估。实验2选取年轻人和老年人各240名，在难度的基础上加入了完成结果，采用2（任务难度：高 vs. 低）×2（年龄：年轻人 vs. 老年人）×2（完成结果：成功 vs. 失败）的组间设计，通过操控任务时间来操纵任务完成结果。结果发现，成功完成简单任务条件下，年轻人的表现与实验1相似，但老年人预测相对准确；成功完成困难任务条件下，年轻人表现出高估，而老年人则是低估；对于未完成任务，无论任务是简单还是困难，年轻人和老年人都会高估失败后的难过情绪。实验2时间限制的加入提升了被试感受到的任务难度，因此老年人在简单任务中，年轻人在困难任务中都提高了预期完成任务后的积极情绪。综上，对任务失败的情绪预测，老年人和年轻人在不同难度任务上的表现是相似的，他们都会高估自己失败后的难过程度。但对任务成功的情绪预测却出现了不同的模式：老年人会低估完成简单任务带来的快乐，在有时间限制时（难度增加）预测会比较准确，会低估完成困难任务后的积极情绪，而年轻人则会高估困难任务完成后的积极情绪。这可能是由于老年人觉得完成此类任务是不可能的，从而主观贬损成功完成后的积极体验。

关键词 情绪预测，任务难度，完成结果，老年人，年轻人

The Influence of Task Difficulty and Task Completion Outcome on Emotion Prediction of Older Adults

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Abstract: Studies have shown that young people's emotion prediction will be influenced by task difficulty and task completion outcome. For older adults, on the one hand, their subjective perception of task difficulty may be different from that of younger adults; on the other hand, according to Social Emotional Selection Theory (SST), older adults pay more attention to information with positive emotional significance and avoid negative information. So different outcomes (success or failure) may have different effects on them. Therefore, the present study attempted to examine the effects of task difficulty and task completion outcome on older adults' emotional predictions through two experiments. Experiment 1 selected 120 young and 120 older adults, and used a 2 (task difficulty: easy vs. difficult) × 2 (age: young vs. old) between-group design. We asked participants to predict the emotional experience after successful completion of the task or to assess the actual emotional state after completion of the task. The results showed that in the successful completion of the easy task condition, both young adults and older people showed underestimation of the actual experienced positive emotion. In the successful completion of the difficult task condition, young people were able to accurately predict the post-completion emotion, while older adults still showed underestimation. Experiment 2 selected 240 young and 240 older adults and added outcome variables. We used a 2 (task difficulty: easy vs. difficult) × 2 (age: young vs. older) × 2 (completion result: success vs. failure) between-group design, manipulating task completion results by limiting task time. The results showed that in the successful completion of the easy task condition, young people performed similarly as they did in Experiment 1. But older adults predicted relatively accurately. In the successful completion of the difficult task condition, young people

showed overestimation while older adults underestimated their feelings. For failure tasks, both young and older adults overestimated sadness after failure, whether the task was easy or difficult. The time limit in Experiment 2 made subjects feel more tense and improve the difficulty of the task. So older adults in the easy task and younger adults in the difficult task both increased the expected positive emotion after completing the task. In summary, emotional predictions of task failure are similar for older and younger adults on tasks of different difficulty: they both overestimate how sad they will be when they fail. However, different patterns emerge for the prediction of emotion after success: older adults underestimate the pleasure that comes from completing easy tasks, predict more accurately when there is a time limit, and underestimate the positive emotion after completing difficult tasks, whereas younger adults overestimate their feeling in this condition. This may be because older adults feel that completing such tasks is impossible, thus subjectively devaluing the positive experience of successful completion.

Keywords: Emotional Prediction, task difficulty, task completion outcome, older adults, young people

父母养育倦怠与青少年亲社会倾向的关系：共情的作用

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摘要 青少年的亲社会倾向与其主观幸福感、学业和社会适应等密切相关。已有研究关注亲子交流、父母教养方式等家庭因素对青少年亲社会倾向的作用。考虑到青少年阶段亲子冲突程度的加剧，养育倦怠（parental burnout）作为反映父母养育子女过程中对养育角色产生消极情绪或态度等综合表现的家庭环境因素，其对于青少年发展的消极影响不容忽视。父母自身的情绪状态可能影响其处理子女情绪的方式以及子女面对他人情绪时的行为模式，由此研究关注父母养育倦怠对于青少年子女亲社会倾向的影响及亲子双方的共情在其中的作用。通过亲子配对设计，纳入 488 名 12-19 岁青少年及其主要养育者（父亲或母亲），采用问卷法，由父母报告养育倦怠及其对子女的共情，由青少年子女报告其自身的共情和亲社会倾向。结果发现，父母养育倦怠程度越高，对子女的认知共情越低，青少年子女表现出更低的他人指向的共情能力（对他人情绪表现出较低的关注程度或难以理解情绪产生的原因），对其亲社会倾向产生负性作用。在控制了亲子双方的年龄、性别、社会赞许性等因素后，上述链式中介模型仍拟合良好， $\chi^2/df = 1.77$, $RMSEA = 0.04$, $SRMR = 0.02$, $CFI = 0.99$, $TLI = 0.99$ 。这一结果反映了养育中父母倦怠的情绪通过亲子双方的内表型，进而作用于子女的社会行为表现的过程。研究揭示了养育倦怠作为家庭环境因素对于父母养育行为和子女的社会性发展的负性作用，深化了对于情绪社会化理论的理解；在实践层面提示青少年亲社会行为的培养需要青少年自身及其家庭的共同参与。

关键词 父母养育倦怠，青少年，亲社会倾向，共情

Parental burnout and prosocial tendencies among adolescents:

The role of empathy

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Abstract: Adolescent prosocial tendencies not only relate to their subjective well-being, but also play important roles in their academic and social adjustment. The role of family environment factors on adolescents' prosocial tendencies cannot be ignored, and previous studies have mainly focused on the influence of family factors such as parent-child communication and parenting style. Considering the increase of parent-child conflict during adolescence, parental burnout, as a family environment factor characterized by parents' negative emotions or attitudes toward parenting role, should not be neglected in adolescent prosocial tendencies investigation. Given that parents' own emotional states and their patterns of dealing with their children's emotions may influence the way their children deal with the emotions of others, this study, thus, focused on the effects of parenting burnout on the pro-social tendencies of adolescents and the

role of parents' and adolescent empathy in this relationship. Adopting a parent-child matched design, the current study included 488 adolescents aged 12-19 years and their caregivers (fathers or mothers), and questionnaires were used in which parents reported parenting burnout and parental empathy towards their children, and adolescent reported their own empathy and prosocial tendencies. Results found that parents with higher parenting burnout showed lower cognitive empathy towards their children, which in turn negatively affected adolescents' other-oriented empathy (characterized by less attention to others' emotions and difficulty in understanding the cause of others' emotions) and then had a negative effect on adolescents' prosocial tendencies. The sequential mediated model fitted well after controlling for factors such as age, gender, and social desirability of both parents and adolescents, $\chi^2/df = 1.77$, RMSEA = 0.04, SRMR = 0.02, CFI = 0.99, TLI = 0.99. The sequential mediated process reflects the process in which burnout as a negative emotion state during parenting act on their children's social behavioral tendencies through parental and adolescent endophenotypes. This result brings the negative effect of parenting burnout both on parenting behavior and on children's social development to light, and deepens the understanding of emotional socialization theory. At the practical level, it suggests that cultivation of adolescents' prosociality requires the joint participation of adolescents themselves and their families.

Keywords: parental burnout, adolescent, prosocial tendencies, empathy

孤独症成年人心理理论的多重缺陷：一项元分析

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摘要 孤独症个体往往伴随着心理理论的缺陷, 心理理论是一种多方面的能力。已有研究中通常采用多种心理理论任务来测量和反应心理理论的不同方面。随着个体的发展, 认知能力是否会在一定程度上补偿心理理论的缺陷, 这在成年孤独症个体的研究中是存在争议的。从心理理论缺陷多样性的角度去探讨成年孤独症个体心理理论的表现, 有助于我们更好地了解成年孤独症个体心理理论的问题所在, 能够为制定具有针对性的临床干预措施提供依据。本研究中, 我们梳理了成年孤独症个体的心理理论研究中使用的任务, 根据这些任务的特点和形式, 将其划分阅读理解任务、知觉情景理解任务、综合情景理解任务和认知操纵任务这四种类别。使用随机效应模型, 对符合纳入标准的 122 项研究 (其中包括 2262 名成年孤独症个体和 2366 名成年典型发展个体) 进行元分析。结果发现, 在纠正了发表偏差后, 成年孤独症个体在四个任务类别中的表现都比成年典型发展个体差 ($g = -0.76$, 95% $CI [-0.85, -0.67]$, $z = -16.18$, $p < 0.001$), 并且这种表现在四种类别的任务之间不存在差异 ($z = -1.89$, $p = 0.058$)。未来研究建议采用多种心理理论测量方法来进一步解释成年孤独症个体在社会能力上的异质性。

关键词 孤独症谱系障碍, 心理理论, 成年人, 多重缺陷

A Meta-analysis to Examine Whether Autistic Adults Have Multiple-Deficits in Theory of Mind

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Abstract: Autistic individuals are often accompanied by the defects of theory of mind (ToM), a multifaceted ability. In previous studies, various tasks of ToM were often used to measure and reflect the characteristics of different aspects of ToM. With the development of individuals, whether cognitive ability will compensate for the defect of ToM to a certain extent is controversial in the study of adult autistic individuals. The performance of ToM in autistic adults is discussed from the perspective of diversity of defects of ToM, which will not only help us to better

understand where the problems are, but also provide a basis for the formulation of targeted clinical intervention measures. In this study, according to the characteristics and forms of the tasks, we sorted out tasks used in the ToM study of adult autistic individuals, and those tasks were divided into four categories: reading comprehension task, perceptual situational comprehension task, comprehensive situational comprehension task, and cognitive manipulation task. Then, a random-effects model was used to conduct a meta-analysis for 122 studies (including 2,262 autistic adults and 2,366 neurotypical adults) that met the inclusion criteria. After being corrected for publication bias, results showed that autistic adults have worse performance in all four ToM task categories compared to neurotypical adults ($g = -0.76$, 95% CI $[-0.85, -0.67]$, $z = -16.18$, $p < 0.001$), and there was no difference among the four categories of tasks ($z = -1.89$, $p = 0.058$). Future studies are suggested to adopt multiple ToM measures to further explain the heterogeneity in social ability among autistic adult individuals.

Keywords: Autism spectrum disorder, Theory of mind, Adult, Multiple-deficit

(5) “发展心理专业委员会”专题研讨会 5

环境线索对儿童作弊行为的影响

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摘要 作弊是全世界普遍存在的社会性问题, 然而到目前为止鲜有研究探讨了其在儿童时期的发生发展及其早期干预。本研究旨在考察细微的物理环境变化对学前儿童作弊行为的影响。研究者在幼儿园招募了 500 名 5-6 岁幼儿参加了无人监考的数学测试。在测试开始前, 研究者将答案放在离儿童有一定距离的另一张桌子上, 随后借故离开房间, 并告知其“不允许偷看答案”。儿童在整个测试过程中做出的偷看和抄袭答案的作弊行为, 由事先安装在房间内的隐形摄像机所记录。研究一 ($N = 200$) 通过改变儿童与答案之间的物理距离 (0.6 米、1 米、2 米和 3 米) 后发现, 随着距离的增加 (即 1 米、2 米和 3 米条件, 较之 0.6 米条件) 儿童作弊行为的发生率显著降低, 但两者呈现非线性关系 (即 1m, 2m, 3m 条件的作弊率两两不存在显著差异)。研究二、三通过分别操纵距离和答案的可见性, 来进一步探讨上述效应的潜在机制。研究二 ($N = 200$) 表明, 当答案的可见性保持一定时, 答案距离儿童的远近未对作弊率产生显著影响。研究三 ($N = 100$) 表明, 当答案与儿童的距离一定时, 答案高度可见条件下儿童的作弊率较不可见条件显著更高。上述结果表明, 答案的可见性, 而非答案与儿童之间的距离, 是导致儿童作弊行为随物理距离变化而改变的主要原因。更为重要地, 本研究结果启示, 儿童对物理环境线索十分敏感, 微小的环境改变可以显著减少其作弊行为。

关键词 儿童, 作弊行为, 物理环境, 接近性, 可见性

Effects of Environmental Cues on Young Children's Cheating Behavior

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Abstract: Cheating is a pervasive problem but little is known about its developmental origins, or how to prevent it before it becomes normalized. The present research investigated the effects of subtle environmental cues on young children's cheating behavior. Five- to six-year-old preschoolers took part in an unproctored challenging math test. Before starting the test, the experimenter placed an answer key to the test on the other table at certain distance away from the child, instructed the child not to peek at it, and then made an excuse to leave the room. Whether the child peeked at the answer key in the absence of the experimenter, which was recorded by a hidden camera, served as the primary dependent variable. In Study 1 ($N = 200$), we manipulated the distance between the table where the child sat and the table that held the answer key systematically (i.e., 0.6 m, 1 m, 2 m, and 3 m). We found a significant decrease

in cheating rate from 0.6 m to 1 m or greater, but no differences between any two of the 1m, 2m or 3m conditions. In Studies 2 and 3, we either manipulated proximity of the answer key to the child (i.e., the inter-table distance) or its visibility to further disengage the potential effects driven by these two factors. Study 2 ($N = 200$) showed that, when the answer key's visibility was made constant (either highly visible or not invisible), children's cheating rate did not change significantly with proximity. Study 3 ($N = 100$) showed that, when the answer key's proximity was made constant, the cheating rate decreased significantly when it was not visible than when it was highly visible. These results taken together showed that the visibility of the answer key was more important than its proximity to children to affect their cheating behavior. More importantly, our findings suggest that even young children are very sensitive to environmental cues, and subtle alternations in the physical environment can nudge them to cheat less.

Keywords: children, cheating behavior, physical environment, proximity, visibility

情绪对儿童亲社会行为的影响：共情的作用

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摘要 亲社会行为是个体社会适应性的一个重要指标，而情绪是影响亲社会行为的重要因素。然而，这种情绪效应如何从儿童时期发生发展，目前尚不明晰。本研究结合行为实验和问卷测量，探究了从学龄前儿童到青少年阶段情绪对亲社会行为的影响，以及共情在其中的作用。实验1采用行为实验，测量了学龄前儿童（ $n = 218$ ）的共情能力，并通过视频引发儿童的积极、消极或中性情绪，然后采用独裁者游戏测量儿童的分享行为。结果发现，消极情绪减少了低共情而不是高共情儿童的分享，积极情绪增加了高共情儿童的分享，说明共情能力可能缓冲了消极情绪对亲社会行为的削弱效应。实验2采用在线问卷测量的方式，测量了1到9年级的小学生和中学生（ $n = 3313$ ）的正负性情绪、共情能力、亲社会行为倾向。结果发现：总体而言，积极情绪与亲社会倾向正相关，消极情绪与亲社会倾向负相关，而共情在情绪与亲社会倾向这一关系中的调节作用随着年龄的增长而发生变化：与学龄前幼儿中的结果一致，对于小学1-3年级儿童，低共情个体中消极情绪对亲社会倾向的削弱效应比高共情个体显著更大，支持了共情能力的缓冲作用，然而该缓冲作用在小学4-6年级消失（高共情和低共情个体中情绪与亲社会倾向的关系没有差异）；到初中7-9年级，与之前共情的缓冲作用相反，高共情个体中消极情绪对亲社会倾向的削弱效应比低共情个体更大，表明了共情的“放大”作用。以上结果表明，总体来说积极情绪促进亲社会行为，消极情绪减弱亲社会行为，此效应受到共情能力的影响，并随着年龄增长而变化：学龄前阶段，共情减弱消极情绪对亲社会倾向的负向效应，呈现缓冲作用；这一作用不断减弱，在小学低年级仍然存在，但在小学高年级消失；初中阶段共情反而放大了消极情绪的负向效应，共情越高的个体越容易受到消极情绪的影响而减少亲社会倾向。研究揭示了共情在情绪与亲社会行为之间的不同调节作用，未来需进一步探讨为何会有此发展变化，为提高亲社会行为、促进社会适应提供实证研究依据。

关键词 情绪，共情，亲社会行为，儿童，青少年

The Influence of Emotions on Children's Prosocial Behaviors: The Role of Empathy

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Abstract: Prosocial behavior is an important indicator of social adaptability, and emotion significantly affects prosocial behavior. However, how this emotional effect develops from childhood remains unclear. Through behavioral experiments and questionnaire measurements, the current study explored the influence of emotions on prosocial behaviors from preschoolers to adolescents, and analyzed the role of empathy, a high-level emotional ability. Experiment 1 used behavioral experiments to measure the empathy ability of preschool children ($n = 218$), and used cartoons to induce children's positive, negative, or neutral emotions, and then used dictator games to measure

children's sharing behaviors. The results showed that negative emotions reduced the sharing of children with low empathy but not high empathy, and positive emotions increased the sharing of children with high empathy, indicating that empathy might buffer the weakening effect of negative emotions on prosocial behavior. Experiment 2 used online questionnaire measurements to measure the positive and negative emotions, empathy ability, and prosocial behavior tendency of pupils and middle school students ($n = 3313$) from grade 1 to grade 9. Results found that: overall, positive emotions are positively correlated with prosocial tendencies in grades 1-9, while negative emotions are negatively correlated with prosocial tendencies; furthermore, the moderating effect of empathy on the relationship between emotions and prosocial tendencies changes with age. Consistent with the results in preschool children, for primary school children in grades 1-3, negative emotions in low empathy individuals have a greater weakening effect on prosocial tendencies than high empathy individuals, but the buffering effect disappeared in grades 4-6 of elementary school; for students from 7-9 grades of junior high school, contrary to the buffering effect of empathy aforementioned, the weakening effect of negative emotions on prosocial tendencies among individuals with high empathy is greater than that of low-empathy individuals. The above results indicate that the relationship between emotion and prosocial behavior conforms to the "positive feedback loop", that is, positive emotion promotes prosocial behavior, and negative emotion weakens prosocial behavior; but this loop, especially the effect of negative emotion, is affected by empathy, and varies with age. In the preschool stage, empathy weakens the negative effect of negative emotions on prosocial tendencies, showing a buffering effect; this effect continues to weaken with age. Even though it exists in the lower grades of elementary school, it disappears in the upper grades of elementary school. Contrary to the buffering effect, in junior high school, empathy amplifies the negative effect of emotions, as individuals with higher empathy ability are more likely to be affected by negative emotions, thus reducing prosocial tendencies. Research reveals the developmental differences about moderating effects of empathy towards the emotional effect on prosocial behaviors. Future studies need to further explore why the effect of empathy differs with age, which will provide empirical evidence for improving prosocial behaviors and promoting social adaptation.

Keywords: emotion, empathy, prosocial behaviors, children, adolescence

抑制气质儿童的特质推理及其对社会适应的影响

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摘 要 儿童自出生以来就在情绪反应、活动水平等方面表现出了稳定的个体差异，即具有不同的气质类型。其中，在面对新颖刺激时表现出较多消极情绪和退缩行为的儿童被称为抑制气质儿童，他们更有可能表现出社会退缩，或发展出更多的内化情绪问题。为什么抑制型儿童会出现社会适应不良的情况？根据社会信息加工理论，在社会交互过程中，儿童对于社会信息的认知加工会影响儿童采取的社交行为。其中，儿童基于他人先前行为进行的特质推理就可能会影响儿童是否愿意与此人交往。因而，对陌生事物表现出消极回避的抑制气质儿童在特质推理上可能更为谨慎，而这种消极的特质推理最终可能会影响其社会适应。因此，特质推理或是抑制气质儿童出现社会适应不良问题的关键因素。本研究对抑制气质儿童特质推理的特点及其对社会适应的影响进行了探究。首先，我们通过一项横断研究（研究1）和一项纵向研究（研究2）探讨了抑制气质和特质推理之间的关系。接着，我们通过纵向追踪研究探讨了特质推理在早期抑制气质与后期社会适应中（研究3：内化情绪问题；研究4：信任倾向）的作用。最后，我们通过实验考察抑制气质儿童是否愿意与具有积极或消极行为线索的交互对象进行交往（研究5：社交行为）和是否愿意相信具有积极或消极行为线索的他人（研究6：信任倾向），从而探明特质推理如何影响抑制气质儿童的社会适应。结果表明，抑制气质儿童具有更加消极的特质推理倾向。此外，特质推理对抑制气质儿童的社会适应有中介和调节作用。中介分析发现，早期抑制气质可以预期后期更消极的特质推理，从而进一步导致儿童产生更多的内化情绪问题；调节分析发现，消极的特质推理会强化抑制气质儿童的内化情绪问题，并导致其对他人产生更多的不信任。实验研究也发现，抑制气质儿童对他人的消极行为线索更加敏感，从而更加谨慎地进行社

交或更难信任他人。本研究结果支持了社会信息加工理论,并为对基于儿童气质特点的因材施教具有指导意义。

关键词 抑制气质, 特质推理, 社会适应, 内化情绪问题, 社会信任

Trait Inference in Inhibited Children and Its Influence on Their Social Adaptation

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Abstract: Children show individual differences in emotional response, activity level and other characteristics since birth; that is, they have different temperamental types. Children who display more negative affect and withdrawal behaviors are considered as inhibited children, and they are more likely to display social withdrawal and experience an increased risk for internalizing behaviors. Why do inhibited children become socially maladjusted? According to the model of social information processing, children's processing of social information may influence the social behaviors they choose. Specially, children's trait inference based on the previous behaviors of others may influence their decisions whether to interact with others. Accordingly, we inferred that inhibited children, who show avoidance towards novel stimuli, may be more vigilant in trait inference, and such a negative bias of trait inference would finally influence inhibited children's social adaptation. Perhaps, trait inference is a key factor in inhibited children's social maladjustment. This study explored the characteristics of trait inference of inhibited children and its influence on their social adaptation. First, the relation between behavioral inhibition and trait inference was explored using a cross-sectional study (Experiment 1) and a longitudinal study (Experiment 2). Second, we explored the role of trait inference in relation between early temperamental inhibition and later social adaptation (Experiment 3: internalizing emotional problem; Experiment 4: trust propensity) using a longitudinal design. Finally, we explored how trait inference influences inhibited children's social adaptation by examining whether inhibited children were willing to interact with individuals with positive or negative behavioral cues (Experiment 5: social behavior), and whether they were willing to trust individuals with positive or negative behavioral cues (Experiment 6: trust propensity). Results suggested that inhibited children showed more negative trait inference than uninhibited children. Besides, trait inference had both mediating and moderating effects on inhibited children's social adaptation. The mediation analysis showed that early temperamental inhibition positively predicted negative trait inference, further resulting in more internalizing emotional problem. The moderation analyses showed that inhibited children showed an increased risk of internalizing emotional problem and low level of trust propensity when they had more negative trait inference. In the experiments, inhibited children were more sensitive to negative behavioral cues, and thereby were more cautious to socialize or to trust with others. The current study supported the model of social information processing, and provided with useful suggestions for the education of social adaptability in children with different temperament.

Keywords: behavioral Inhibition, trait inference, social adaptation, internalizing problem, trust behaviors

分析不同类型文本的阅读和写作： 高级心理理论与学龄期儿童读写能力有关吗？

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摘 要 阅读和写作是学龄期儿童书面语言发展的重要任务之一。前人研究发现, 心理理论与个体阅读理解和写作之间存在显著正相关。在学龄期, 儿童开始接触不同文体类型的阅读或写作, 例如记叙文, 说明文等。然而, 学龄期儿童的心理理论水平能否积极预测所有类型文本阅读或者写作, 或是心理理论只能对其中特定类型的文本有显著预测作用。这一问题还有待探明。为了解决这一问题, 本研究考察了学龄期儿童高级心理理论与不同类型文体的阅读理解和写作水平之间的关系。本研究对 262 名三至五年级儿童进行了调查。通过

调查儿童的高级心理理论（包括情感成分和认知成分），阅读理解（包括记叙文阅读、说明文阅读），写作（包括记叙文写作、说明文写作），流体智力以及当年两次语文成绩，探讨高级心理理论和不同文体类型读写能力的关系。结果发现：(1)当控制语文成绩和瑞文智力测验成绩，学龄期儿童在阅读识心任务或陌生故事任务中得分越高，其记叙文阅读得分就越高。然而，说明文阅读上两者没有显著相关。(2)当控制语文成绩和瑞文智力测验成绩，学龄期儿童在阅读识心任务中得分越高，其记叙文写作得分越高。然而，说明文写作上两者没有显著相关。此外，在陌生故事得分与记叙文写作或说明文写作均无显著相关。本研究结果表明，高级心理理论与记叙文读写有更强的关系。心理理论不同成分与读写能力之间关系存在一定程度的分离。

关键词 心理理论，阅读理解，写作，学龄期儿童

Exploring Reading and Writing Different Types of Texts: Is Advanced Theory of Mind Related to School-Age Children's Literacy Skills?

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Abstract: Reading and writing are important tasks for the written language development of school-age children. Previous studies have found that theory of mind (ToM) was significantly related to reading comprehension and writing. During school age, children are exposed to different genres of reading or writing, such as narrative and expository texts. However, it still remains to be explored whether the order of ToM among school-age children can positively predict all types of text reading or writing, or specific types of text. To address this challenge, the present study examined the relationship between advanced ToM and reading comprehension and writing levels for different types of texts among school-age children. This study recruited 262 children from third grade to fifth grade. The relationship between advanced ToM and literacy skills in different genres was explored by measuring children's advanced ToM (affective and cognitive components), reading comprehension (narrative and expository texts), writing (narrative and expository writing), fluid intelligence, and Chinese academic performance. Results revealed that (1) when controlling for Chinese performance and fluid intelligence, school-aged children, who perform better in reading eye task or strange story, had higher scores in narrative reading. However, there were no significant relationship between advanced ToM and expository reading. (2) When controlling for Chinese performance and fluid intelligence, the scores of the reading eye task was positively related to writing scores, but unrelated to expository writing scores. In addition, there was no significant correlation between scores on strange story and either narrative writing or expository writing. These findings suggested that advanced ToM has a stronger relationship with narrative reading and writing. There was a degree of separation in the relationship between the different components of ToM and literacy skills.

Keywords: advanced theory of mind, reading comprehension, writing, school-age children

坏人是否值得怜悯？

儿童和成人对不道德人物和中性人物的共情反应和帮助倾向

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摘要 共情对象的道德特征会影响个体的共情反应。前人研究发现，个体对不道德人物的共情显著少于对道德人物的共情，且更愿意去帮助道德人物而非不道德人物。然而，直接比较个体对不道德人物和道德人物的共情无法帮助我们确定这种差异是由个体对不道德人物的共情减少还是对道德人物的共情增加所带来的。为了解决这一问题，本研究考察了儿童和成人对不道德人物和中性人物的共情反应和帮助倾向，并探究了不幸类型在其中可能起到的作用。实验一比较了4-8岁儿童对不道德人物和中性人物的共情反应和帮助倾向，

首先向儿童呈现人物的道德行为，然后询问儿童对人物经历的不幸事件的共情反应和帮助倾向。实验采用 2（道德水平：不道德人物、中性人物） $\times$ 2（不幸类型：物理性不幸、社会性不幸）两因素混合实验设计，其中不幸类型为被试内变量，不道德人物组和中性人物组各有 30 名儿童。结果发现，儿童对物理性不幸的共情显著强于对社会性不幸的共情；和中性人物相比，儿童更不想去帮助不道德人物，但是对中性人物和不道德人物的共情没有显著差异。实验二采用了和实验一基本相同的任务，比较了成人对不道德人物和中性人物的共情反应和帮助倾向，不道德人物组有 32 名成人，中性人物组有 23 名成人。结果发现，和中性人物相比，成人更不想去帮助不道德人物，且对不道德人物的共情也更少。本研究的结果提示，4-8 岁的儿童表现出了共情反应和帮助倾向的分离，尽管尚未像成人一样表现出对不道德人物和中性人物的共情差异，但是会减少对不道德人物的帮助倾向。儿童对不道德人物和中性人物的共情差异可能在 8 岁之后才出现，有待未来研究进一步探究。

关键词 共情，道德评价，选择性帮助

Do Bad People Deserve Empathy? Children's and Adults' Empathetic Responses and Helping Tendencies Towards Immoral and Neutral Characters

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Abstract: Targets' moral characteristics can influence individuals' empathetic responses and helping behaviors. Previous studies found that individuals show significantly less empathy towards immoral characters than towards moral characters and are more willing to help moral characters rather than immoral characters. However, directly comparing individuals' empathy towards immoral and moral characters can not help us determine whether the differences are caused by the decrease of empathy towards immoral characters or the increase of empathy towards moral characters. To solve this question, this study examined children's and adults' empathetic responses and helping tendencies towards immoral characters and neutral characters, and also explored the possible influence of the type of misfortunes. Experiment 1 compared 4- to 8-year-old children's empathetic responses and helping tendencies towards an immoral character and a neutral character. We first showed children the character's moral behaviors and then asked their empathetic responses and helping tendencies towards the character's misfortunes. We adopted a mixed design with 2 (Moral level: immoral vs. neutral) $\times$ 2 (Misfortune type: physical vs. social), in which the misfortune type was the within-subject variable. Both immoral-character and neutral-character groups included 30 children. Children showed significantly more empathy towards physical misfortune than social misfortune. Children were less willing to help the immoral character than the neutral character but showed similar empathetic responses towards the immoral character and the neutral character. Experiment 2 compared adults' empathetic responses and helping tendencies towards an immoral character and a neutral character adopting a task similar to that in Experiment 1. The immoral-character group included 32 adults, and the neutral-character group included 23 adults. Adults were less willing to help the immoral character than the neutral character and showed less empathy towards the immoral character than the neutral character. These results suggest that 4- to 8-year-old children have separated empathetic responses and helping tendencies. Although they did not show different empathy towards the immoral character and the neutral character, they showed decreased tendency to help the immoral character. Children's varied empathy towards immoral characters and neutral characters might appear after 8 years of age, which warrants future studies.

Keywords: empathy, moral evaluation, selective help

两难情境中儿童的资源分配

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摘要 公平分配资源是维持合作稳定的重要机制。分配合作收益时只有让每个成员都满意, 合作才能维持。有不同的原则决定着资源如何分配, 但现实生活中, 不同原则间往往相互冲突, 这就构成了资源分配的两难情境。考察儿童如何在两难情境中分配资源, 能揭示儿童如何权衡不同的公平原则, 从而有助于理解公平行为的发展。我们在两种冲突情境中考察了儿童如何处理分配两难。首先, 是劳动贡献和社会关系的冲突。已有研究发现儿童在资源分配中既会考虑劳动贡献也会考虑社会关系。研究通过 3 个实验考察了 7 岁儿童 ($N=204$) 如何在和自己社会距离不同的两个体间 (好朋友 vs. 陌生人; 不喜欢的人 vs. 陌生人) 分配资源, 而好朋友/不喜欢的人要么和陌生人干的一样多 (实验 1), 要么比陌生人干的少 (实验 2a) 或者多 (实验 2b)。结果发现, 当好朋友和陌生人贡献相同时, 儿童分给好朋友更多; 好朋友比陌生人干的少时, 也可以得到和陌生人一样多; 但不喜欢的人即使比陌生人干的多, 也只能得到和陌生人一样。这些结果表明, 当劳动贡献和社会关系冲突时, 7 岁儿童主要根据社会关系进行资源分配。其次, 是避免不公平和避免浪费的冲突。已有研究发现, 西方儿童宁愿把无法公平分配的资源扔掉也不愿让一方多得。考虑到中国文化强调节俭, 中国儿童会如何在这两者间权衡? 研究通过 4 个实验考察了 7 岁儿童是否愿意扔掉 (vs. 收回) 无法公平分配的资源以避免不公平。结果发现在第三方 (实验 1, $N=83$) 和第一方任务中 (实验 2, $N=116$), 如果只有扔掉资源才能避免不公平, 儿童没有表现出对不公平的回避 (实验 1a, 实验 2); 而当扔掉资源变成收回资源时, 他们不仅避免另外两个个体间所得不公 (实验 1b,c), 更避免别人比自己得到的多/少 (实验 2)。这些结果表明, 在资源分配中, 避免浪费和避免不公平对中国儿童来说一样重要。两难情境中儿童资源分配的特点拓展了我们对儿童公平行为的理解, 提示对不同分配原则的不同排序可能是造成分配公平性个体和文化差异的一个重要原因。

关键词 社会关系, 贡献, 避免浪费, 避免不公平, 儿童

Children's resource allocation in the dilemma context

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Abstract: Fairness is a key mechanism stabilizing human cooperation. Only if every member gets satisfied with how the collaboratively acquired resources are distributed, they are motivated to sustain the cooperative relationships. There are different principles that determine how resources are allocated. However, in real life, different principles often conflict with each other, which constitutes a dilemma of resource allocation. The investigation of how children allocate resources in the dilemmas could uncover how children weigh the competing principles of fairness, which as a result contributes to our understanding of children's developing sense of fairness. Here, we examined how children allocated resources in two dilemma contexts. In the first context, social relationship was pitted against merit. Previous work has provided evidence that both merit and social relationships guide resource distribution in children. A series of three studies were conducted to assess how 7-year-old children ($N=204$) distributed rewards for work performed by two recipients who differed in social distance with the participant (child's friend vs. stranger; a disliked peer vs. stranger). Child's friend/disliked peer either have completed the same amount of work as the stranger did (Study 1), or have completed less (Study 2a) or more (Study 2b) work to deserve the rewards. Results showed that children gave more resources to their friend than to an equally deserving stranger (Study 1) and distributed resources equally when the friend was less deserving (Study 2a and Follow-Up combined). However, children distributed resources equally when the disliked peer was more deserving than the stranger (Study 2b). These findings suggest that, by 7 years of age, children resolve conflicts between social relationships and merit by basing resource allocation decisions on relationships, but they moderate those decisions depending on the recipients' merit. In the second context, inequity aversion was pitted against waste aversion. By middle childhood, children from Western cultures are even willing to discard resources to avoid inequity. Given that Chinese culture emphasizes the value of "Thrift" (i.e., waste aversion),

the question arises as to how Chinese children would balance between the competing considerations of inequity aversion and waste aversion. A series of four studies were conducted to assess whether 7-year-old children would rather discard (vs. withhold) a resource than distribute unequally. Results showed that, in third-party (Study 1, N = 83) and first-party (Study 2, N = 116) distributive interactions, children accepted inequity in the presence of waste (Study 1a, Study 2) but avoided inequity in the absence of waste (Study 1b, c; Study 2). These findings suggest that, in resource allocation, waste aversion may be at least as important as inequity aversion among Chinese children. How children allocate resources in the dilemma context expands our understanding regarding the development of fairness, and suggests that the individual and cross-cultural difference on distribute justice may result from the difference in ranking-order different consideration involved in resource allocation.

Keywords: social relationship, merit, waste aversion, inequity aversion, children

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注意缺陷多动障碍脑活动和结构异常在数据中心间的不一致性

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摘 要 多中心影像学队列研究为理解注意缺陷多动障碍 (ADHD) 的脑认知机制提供了证据。尽管这些研究发现了一些 ADHD 相关的异常脑活动和结构, 然而这些发现主要来自合并多中心数据的分析结果, 这些结果在不同中心间的一致性还不清楚。针对这一问题, 本团队基于 ADHD-200 多中心公共数据库, 采用三类影像学分析常用的指标, 即局部脑活动、功能连接、基于体素的形态学分析, 研究了 ADHD 脑功能活动和结构异常在不同中心间的一致性。我们发现合并多中心数据, 可以检测到 ADHD 异常的脑功能活动和脑结构, 然而这些结果在各中心间的一致性很低; 基于小波的低频振幅在敏感性和可重复性方面优于基于快速傅立叶变换的结果。进一步区分亚型以及排除共病患者可以提高结果在各中心之间的一致性。这些发现提示了 ADHD 脑活动和结构异常存在着较高的异质性。将来的研究, 需要考虑诊断的客观性、分型与共病、功能磁共振分析方法的敏感性和特异性等因素, 并且在多中心之间互相验证, 是 ADHD 脑影像机制研究的主要方向之一。

关键词 注意缺陷多动障碍、多中心队列研究、磁共振

Inconsistency in Abnormal Brain Activity and Structure across Multi-centers in Children with Attention Deficit Hyperactivity Disorder

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Abstract: Studies using multi-MRI datasets provide evidence for understanding the brain cognitive mechanism underlying attention deficit hyperactivity disorder (ADHD). Albeit abnormal brain activity and structure for children

with ADHD were determined, few studies illustrated that to what extent these findings were consistent across different datasets. The present study aimed to probing this issue by analyzing three widely used measures, i.e., local brain activity, functional connectivity and voxel-based morphometry across the datasets from a public-access ADHD datasets, namely, ADHD-200. We determined a high inconsistency of abnormal local activity, functional connectivity and voxel-based morphometry across individual datasets. Analysis on subtypes and excluding co-morbidity could improve this inconsistency. Wavelet-based ALFF showed more sensitivity and reproducibility than fast Fourier transform ALFF. These findings suggested a high heterogeneity of the abnormal brain activity and structure in ADHD. Future studies based on multi-site large-sample dataset should be conducted by focusing on the factors of objective assessment, subtypes and comorbidity, as well as new analytic methods with higher sensitivity and reproducibility.

Keywords: attention deficit hyperactivity disorder, multi-center cohort study, MRI

学龄儿童脑发育与学校适应北京队列：学龄儿童脑功能网络模块化成熟及其心智关联分析

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摘要 人脑功能网络模块化在学龄期如何发育, 如何与重要认知和非认知功能联系? 对这些问题的系统研究可深化对儿童脑智发育规律的理解, 并为科学评估和预测儿童适应提供重要依据。而人脑功能网络模块包括运动感知网络, 扣带回/岛盖网络, 听觉网络, 视觉网络, 默认网络, 额顶控制网络, 突显网络, 背侧和腹侧注意网络等不同的模块, 学龄期重要的适应功能包括注意、记忆、情绪、决策等多个方面。已有研究多基于小样本、横断设计、针对某一认知或非认知能力, 难以从整体的角度揭示儿童脑功能网络模块化的成熟及其如何支持认知与非认知能力发展的图景。因此, 针对学龄儿童的较大样本前瞻性队列研究, 通过对儿童脑发育和重要认知与非认知能力的系统追踪, 可以为探讨上述问题提供新的证据。2016年以来, 我们启动建设了学龄儿童脑发育与学校适应北京队列研究, 完成基线数据采集 800 例, 追踪超过 800 人次, 数据包括结构、静息与任务态 MRI 影像, 注意、记忆等认知能力、以及情绪与决策等非认知能力等。本研究以其中 404 个 6-12 岁学龄儿童的基线和追踪数据为基础, 以静息态和任务态 MRI 影像数据考察脑功能网络模块化特征, 并建立其与儿童注意、工作记忆、情绪识别、风险决策的预测模型。分析在静息和任务执行过程中脑功能模块内与模块间连接的变化, 结果显示, 无论认知或非认知行为发展主要受到特异性子网络模块化水平的预测, 特别是子网络中网络信息传递的全局效率提高是脑功能模块化的重要特征。在认知和非认知能力发展过程中, 脑功能网络模块化在拓扑属性上的优化来自模块内与模块间长连边的增强和短连边的削弱, 可能反映了神经修剪机制。

关键词 队列研究, 学龄儿童, 脑发育, 脑功能模块化, 认知和非认知能力

Beijing Cohort Study of School Functions and Child Brain Development: Functional Brain Network Modularity and Its Mind Association Studies in School Children

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Abstract: How does the modularity of the child brain functional networks develop and contribute to major cognitive and non-cognitive functions critical for schooling? Exploration in this area would deepen our understanding of child brain and mind development, and further help transform developmental assessments and predictive models for developmental risks. The human brain is functionally organized into multiple networks, such as the somatosensory-motor, cingulo-opercular, auditory, visual, default mode, fronto-parietal task control, salient, dorsal and ventral attention networks. Similar, school functions involves many componential skills, including attention,

working memory, emotion, decision making and so on. Despite of huge progresses, our understanding is significantly constrained by relatively small samples, cross-sectional designs, limited measures that may be observed in many existing studies. Thus, prospective cohort studies of larger samples may offer a broader perspective in terms of the roles of brain functional modularity in children's cognitive and non-cognitive functions. Since 2016, we have conducted a cohort study on brain development and school function in school children in Beijing. We have 800 children completed the baseline assessments, and have been following yearly. For each year, we collected structural, resting and functional MRI imaging data, attention, memory, emotion and decision-making, and etc.. Based on the baseline and follow-up data from 404 children aged 6-12 years, we examined the modularity of functional brain networks using resting and task functional MRI imaging data and predicted the development in attention, working memory, emotion recognition, and risk taking. Results showed that higher level of modularity of specific sub-networks, shown by the increased global efficiency of network information transfer in certain sub-networks, predicted higher cognitive and non-cognitive functions. The optimized topological properties of brain functional network modularity may result from the enhancing long connectivity edges and weakening short connectivity edges within and between modules, suggesting neural pruning may be one underlying mechanism.

Keywords: Cohort study, Cognitive and Non-cognitive Function, Child Brain Development, Modularity of functional network

彩巢计划“成长在中国”新进展：青春期启示录

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摘要 学龄期儿童与青少年（6-18岁）个体之间差异日益增加，发育神经影像队列是解析脑智发育个体差异的有力工具。通过建设“彩巢计划-成长在中国”的学龄期脑智发展研究型纵向加速队列，本团队聚焦生长发育曲线研究，开展了长期的测量方法学积累，绘制了中国学龄儿童青少年脑形态生长发育曲线，揭示了不同文化背景之间生长发育曲线的异同，发现：基础功能（如视觉和体感运动）区域，在中美学龄儿童中具有简单而平行的发育轨迹，联合功能（如认知控制和语言以及自我参照）区域，在中美学龄儿童青少年中则表现出复杂而不同的时空发育轨迹，空间上主要分布于左半球默认网络和右半球额顶网络，时间上则主要表现为青春期的前后；分年级的人脑功能连接梯度分析进一步为上述形态发育曲线差异提供了人脑动力学组织特性的证据，发现：人脑功能连接从小学阶段的基础功能网络为主导，在青春期（12-14岁）及以后快速转化为以高级认知为主的联合功能网络。上述个体差异是人类大脑在演化、遗传、环境和文化上的综合体现，提示了建设各国脑智发育队列的必要性，为理解人类青春期的起源和学龄期儿童青少年发育提供了新角度。

关键词 彩巢计划，脑网络，发育神经影像，青春期，个体差异

New Progresses of Color-Nest Project ‘Growing Up in China’ The Revelation of Puberty

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Abstract: Individual differences increasingly emerge in school-aged children and adolescents (6-18 years). Developmental neuroimaging cohorts are powerful tools for revealing these individual differences in brain and mind development. By building an accelerated longitudinal cohort, namely Chinese Color Nest Project (CCNP) ‘Growing Up in China’, the CCNP team focuses on growth charts research, and accumulates long-term knowledge on psychometric theory and methodology as well as delineates the developmental trajectories of Chinese brain

morphology and reveals their differences between different cultural backgrounds. Specifically, primary cortical (e.g., visual and somatomotor) areas exhibited simple and parallel trajectories between Chinese and American samples. In contrast, associative (e.g., cognitive control and default mode) areas showed complex and distinct trajectories between Chinese and American. These differences are distributed in the left default mode networks and the right fronto-parietal network spatially while reflected around the period of puberty temporally. Further grade-wide gradient analysis of the functional connectome provided evidence on the puberty-related changes in terms of human brain dynamical organization. It witnesses the shifting gradients of macroscale cortical organization marking the transition from childhood to adolescence, which is dominated by the primary networks during the primary school periods and by the high-order associative networks since the puberty (12-14 years old). These individual differences observed reflect potential evolutionary, genetic, environmental and cultural factors of the human brain, indicating the need of building nation-wise neurodevelopmental cohorts, and offering a new perspective for understanding the origin of puberty and school-aged pediatric development.

Keywords: Color-Nest project, Network, Developmental neuroimaging, Puberty, Individual differences

自然刺激下神经状态切分能力的儿童个体差异与认知发展

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摘要 为了理解不断变化的世界, 人们需要维持对当前情境的稳定的表征, 并在当前情境不适更新表征。这种维持和切分信息的能力具有认知发展层面上的重要意义。传统的任务切换范式与儿童的真实生活情境并不契合, 且儿童在任务中维持注意状态具有一定的困难。近期相关研究使用自然化实验材料和多体素神经模式的状态边界切分算法, 考查了神经状态边界与事件边界的一致性, 但尚不明确神经状态切分的表现是否能表征个体差异, 特别是一般性认知能力。通过磁共振影像学大队列研究, 我们考察儿童(6-8岁)观看定制卡通片的脑活动, 其中认知任务穿插在叙事情节中。使用神经状态切分算法, 我们发现一些脑网络中神经状态边界与电影中的状态边界相吻合。为了体现个体差异, 我们计算了一个神经模式分离指标来代表儿童的神经模式在多大程度上能区分相邻的电影状态。我们发现该分离指标在两次扫描中具有信度, 且与儿童的智商具有相关, 即儿童的神经模式状态切分能力越强, 则具有更高的智商。相比于与任务相关的单变量激活程度指标, 该分离指标与智商的相关更高。总体来说, 这些结果表明儿童的神经状态切分能力具有个体差异, 且该能力可能能够指示儿童的总体认知发展。同时这一方法可能具有更好的跨平台鲁棒性。

关键词 儿童发展、自然刺激、任务切换、多体素模式分析、神经状态切分

Individual differences in children's neural state segmentation ability are related to intelligence

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Abstract: To understand the ever-changing world, humans need to maintain a stable representation of the current context, and segregate the contextual information when it is no longer relevant. The ability to maintain and segment information is of developmental significance. Traditional task-switching tasks might not conform well with children's real-life context and may fail to catch children's attention. Using naturalistic materials as stimuli, studies have used neural state segmentation algorithms to identify state boundaries in neural activity patterns and found that neural state boundaries co-occur with movie event boundaries. However, it remains unknown whether the goodness of neural state segmentation might be indicative of individual differences in development of general cognitive abilities. Here, we scanned children (age: 6-8) watching a customized animation in which cognitive tasks and narrative events were interleaved. We found that neural state boundaries in several cortical networks align with movie state boundaries. To

index individual differences, we calculated a neural pattern differentiation score to represent how well children's neural patterns differentiate between consecutive movie states. We found that in the frontoparietal network, the differentiation score was reliable across two runs, and correlated with children's intelligence score such that higher neural state segmentation performance was associated with higher intelligence score. Moreover, this score based on neural pattern information outperformed univariate task-related neural response magnitude in predicting intelligence. Together, these results showed that there were meaningful individual differences in children's neural state segmentation abilities and such ability might be indicative of general cognitive development.

Keywords: children development, naturalistic materials, task switching, MVPA, neural state segmentation

儿童青少年脑智发育课题进展：双生子队列

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摘要 该课题是北京脑科学研究专项部署的“儿童学习及学习困难与脑网络发育的关系研究”项目的组成部分, 中国科学院心理研究所承担学龄期儿童与青少年(8-15岁)双生子群体的身、心、脑的发展规律和个体差异研究, 试图探讨这些变量随龄变化的发展趋势及其受遗传与环境影响程度。我们构建了这三方面的测量指标, 共包含2项身体指标(体质、听力)、6项心理行为指标(注意网络、颜色偏好、阅读相关技能、语义整合、情绪识别、社会决策)、和6项脑影像指标(定位像-T1加权结构像扫描-静息态功能像扫描-功能像扫描-T2加权结构像扫描-弥散张量成像扫描)。这三个方面分成三组模块进行施测, 每个模块1.5小时。计划目标的200人次数据采集仍在进行中, 对已有数据按年级分为三组(小学低年级1-3年级, 小学高年级4-6年级, 初中7-9年级)进行了初步分析, 发现: 1) 儿童青少年体质水平总体上呈现出随龄稳步增长的趋势, 体质水平存在性别差异, 并受遗传因素影响; 2) 在听觉与言语能力上, 初中生相对于小学生有显著提升, 与性别无关, 并受遗传因素影响; 3) 注意网络测试呈现随龄提升的趋势, 双生子间不存在显著相关; 4) 儿童青少年偏爱暖色及鲜艳色调, 而不喜欢冷色与灰暗色调; 偏爱原生色, 而不喜欢衍生色; 初中生比起小学生更加偏爱冷、暗色; 5) 阅读流畅性、阅读准确性以及其他阅读相关技能, 呈现随龄提升趋势, 并受遗传因素影响; 6) 言语理解方面, 所有被试都呈现语义整合效应, 能够在阅读过程中对句子深层语义进行加工。语义合理性效应随龄减小, 没有性别差异, 并受遗传因素影响; 7) 在情绪识别方面, 儿童青少年情绪识别能力随龄增长, 并受遗传因素影响; 8) 在社会决策方面, 社会合作率随龄增长, 女生显著高于男生, 双生子间不存在显著相关。

关键词 儿童青少年, 脑智发育, 双生子, 个体差异, 遗传

Progress on Child/Adolescent Brain/Mind Development: A Twin Cohort

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Abstract: This project is a part of the “Children's learning and learning disability, and its relationship with brain network development” funded by the Beijing Brain Initiative of Beijing Municipal Science & Technology Commission. We, at the Institute of Psychology, Chinese Academy of Sciences, aim to study the development of body, mind, and brain in twins. The goal is to investigate the developmental trajectory of these variables with age and how they are influenced by the interaction of genetics and environment. We constructed three sets of measurements in these three domains, including two for body, six for mind and behavior, and six for neuroimaging. Each set of

measures took about 1.5 hours to collect and was administered in modules. Data collection from the projected 200 subjects are still in progress. We analyzed the ongoing data and found the followings: 1) The physical fitness level of children and adolescents in general indicated a trend of steady increase with age, which showed gender differences and was affected by genetic factors. 2) Compared with primary school students, junior high school students had significant improvement in hearing and speech ability, which was independent of gender but influenced by genetic factors. 3) Attention Network Test (ANT) showed an increasing trend with age, but no significant correlation between twins. 4) Children and teenagers preferred warm and bright colors rather than cool and dark colors. They preferred for primary colors over derived colors. Junior high school students preferred cold and dark colors more than primary school students. 5) Reading fluency, reading accuracy and other reading-related skills showed an increasing trend with age and were affected by genetic factors. 6) For speech comprehension, all the subjects showed semantic integration effect and were able to process the deep semantic meaning of sentences during reading. The effect of semantic rationality decreased with age, showed no gender difference, and was affected by genetic factors. 7) For emotion recognition, the ability of emotion recognition of children and adolescents increased with age and was affected by genetic factors. 8) For social decision-making, the rate of social cooperation increased with age, and was significantly higher for girls than boys, but there was no significant correlation between twins.

Keywords: Children/Adolescents, Brain/Mind development, Twins, Individual differences, Genetics

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青少年早期情绪调节困难发展轨迹及其与自杀意念的动态关系

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摘 要 自杀是一个世界性的公共卫生问题。自杀行为在儿童时期比较少见,但随着年龄的增长,青少年自杀的发生率会越来越高。儿童期的自杀率仅约为 0.7/100000,而 15 至 19 岁的青少年自杀发生率骤升至 7.4/100000 左右。自杀意念,自杀企图和自杀尝试是自杀行为的三个阶段,其中自杀意念作为自杀行为形成的第一个阶段,是个体实施实际自杀行为的极其重要且最为敏感的预测因素。在我国,青少年自杀意念发生率一直处于一个较高水平,约为 12.1%至 29.9%。由此可见,探讨青少年自杀意念的影响因素对于后续研究和预防青少年自杀行为有重要意义。本研究在自杀的动机意志整合模型和人类发展的生态生物学模型的基础上,从发展心理学的角度,考察青少年早期情绪调节困难的基本特点、变化趋势及其与自杀意念的动态关系。本研究采用自杀意念/自杀企图问卷、情绪调节困难问卷,对 216 名初二年级学生进行总共三次,时间间隔为半年、为期一年的追踪调查。结果发现: (1) 青少年早期自杀意念随年龄不断增长,总体呈现递增趋势; (2) 青少年早期情绪调节困难水平亦随年龄不断增长,总体呈现递增趋势; (3) 青少年早期情绪调节困难与自杀意念之间存在共同发展轨迹,即情绪调节困难的初始水平越高,青少年意念初始水平越高,自杀意念发展变化趋势同情绪调节困难发展变化趋势存在显著正相关,情绪调节困难随时间变化增长越快,自杀意念水平增长越快。研究结果揭示了情绪调节困难在青少年早期自杀意念发展变化过程中的重要作用,发现了作为自杀意念影响因素的情绪调节困难在青少年阶段与自杀意念的发展变化存在相同发展趋势,有助于深入理解青少年自杀意念的发展及变化与其本身情绪调节能力缺陷之间的联系,丰富和发展现有的自杀理论,为后续青少年阶段自杀意念和自杀行为的预防提供了一定的理论基础。

关键词 情绪调节困难, 青少年, 自杀意念, 发展轨迹

The Dynamic Relationship between Developmental Trajectory of Early Adolescents' Difficulties in Emotional Regulation and Suicidal Ideation

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Abstract: Suicide is a worldwide public health problem. Suicidal behavior is relatively rare in childhood, but as the age increases, the incidence of suicide among teenagers will increase. The suicide rate in childhood is only about 0.7 per 100,000, while the suicide rate of 15 to 19-year-old teenagers soars to about 7.4 per 100,000. Suicide ideation, suicide attempt, and suicide attempt are three stages of suicide. Suicidal ideation, as the first stage of suicidal behavior, is an extremely important and most sensitive predictor of actual suicidal behavior. In China, the incidence of suicidal ideation among teenagers has been at a high level, about 12.1% to 29.9%. Therefore, it can be seen that exploring the influencing factors of adolescent suicidal ideation is of great significance for follow-up research and prevention of suicidal behavior among adolescents. Based on the integrated motivational– volitional model of suicidal behavior, and the process – person – context – time model, this study examines the basic characteristics, changing trends, and their dynamic relationship between difficulty in emotion regulation and suicidal ideation of early adolescents. This study used the Suicide Ideation/Suicide Attempt Questionnaire and the Difficulties in Emotion Regulation Scale to conduct a total of three follow-up surveys of 216 junior and second graders, with an interval of six months. The results showed that: (1) suicidal ideation of early adolescent continued to increase with age, showing an overall increasing trend; (2) the level of difficulties in emotion regulation also increased with age, and the overall trend was increasing; (3) there was a common development trajectory between difficulties in emotion regulation and suicidal ideation, that is, the higher the initial level of difficulties in emotion regulation, the higher the initial level of adolescents' suicidal ideation. The developmental trajectory of suicidal ideation and the developmental trajectory of difficulties in emotion regulation are significantly positively correlated, the faster the level of difficulties in emotion regulation increase over time, the faster the level of suicidal ideation increases. The results reveal the important role of emotional regulation difficulties in the development and change of suicidal ideation in the early stages of adolescents. It is found that difficulties in emotion regulation as an influencing factor of suicidal ideation have the same development trajectory as the development of suicidal ideation in the adolescent stage. It helps to deeply understand the connection between the development and changes of adolescent suicidal ideation and their own emotional regulation deficits. In addition, the results enrich and develop the existing suicide theories, and provide a certain theoretical basis for the prevention of suicidal ideation and suicidal behavior in adolescents.

Keywords: Difficulty in emotional regulation, Adolescent, Suicidal ideation, Developmental trajectory

青少年自伤与抑郁的共发性及产生机制

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摘 要 自伤青少年往往伴随抑郁情绪, 他们会报告更高的抑郁水平, 但也并非所有自伤个体均表现出抑郁情绪。为考察青少年自伤与抑郁的共发性及其产生机制, 本研究将采用两个研究分别进行探讨。研究一旨在考察青少年自伤与抑郁的共发率及转变情况, 对 989 名青少年 (平均年龄为 13.50 岁) 进行为期半年的追踪调查。研究发现: (1) 两次调查中, 青少年抑郁自伤共发组的比例分别为 24.6%和 30.9%, 单独抑郁组的比例分别为 32.4%和 27.8%, 单自伤组的比例分别为 7.0%和 6.9%, 无抑郁无自伤组的比例分别为 36.1%和 34.4%。

这说明青少年群体中抑郁和自伤具有一定共发性。(2) 对各组进行转变分析, 结果发现, T1 抑郁自伤共发组中有 63.0% 的青少年在 T2 仍同时具有抑郁和自伤行为; 有 19.8%、10.7%、6.6% 的青少年分别转变为单抑郁组、无抑郁无自伤组和单自伤组。此外, T1 的单自伤组、单抑郁组和无抑郁无自伤组均有可能转变为抑郁自伤共发组, 其转变比例依次为 44.9%、26.9% 和 10.1%。这说明抑郁和自伤的共发性具有较高稳定性, 但同时也具有一定变化性, 这既体现在抑郁和自伤共发组可能转变为其他组, 又体现在其他各组均有可能转变为自伤抑郁共发组。研究二从基因和环境交互作用的角度, 考察童年期负性经历和 THP2 基因 rs4570625 多态性对青少年抑郁与自伤共发的交互作用, 被试为 296 名青少年 (平均年龄为 12.80 岁)。结果发现: (1) 童年期负性经历能够显著增加青少年自伤与抑郁的共发几率: 以抑郁无自伤为参照组, OR=1.94, 95% CI 为 1.46~2.57; 以单自伤为参照组, OR=1.69, 95% CI 为 1.02~2.82。(2) THP2 基因 rs4570625 多态性显著调节童年期负性经历与自伤抑郁共发性的关系。具体而言, 对于 GG/GT 型基因携带者, 其经历童年期负性经历越多, 越可能表现为抑郁与自伤共发, 而非单抑郁或单自伤 (以单抑郁组为参照组, OR=1.34, 95% CI 为 1.07~1.68; 以单自伤组为参照组, OR=2.45, 95% CI 为 1.14~5.26); 对于 TT 型基因携带者, 童年期负性经历的数量与抑郁自伤的共发性不存在显著关系。本研究揭示了青少年自伤与抑郁的共发与转变情况, 并且对抑郁与自伤共发性的产生机制进行了初步探讨, 为后续研究提供了依据。

关键词 自伤行为, 抑郁, 共发性, 童年期负性经历, 基因-环境交互作用

The Co-occurrence and Mechanism of Non-suicidal Self-injury and Depression among Adolescents

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Abstract: Adolescent non-suicidal self-injury (NSSI) usually co-occurred with depression. However, not all NSSI adolescents would show depression symptoms. Using two studies, we aimed to explore the co-occurrence and mechanisms of NSSI and depression. Study 1: Two-wave longitudinal data over six months were collected from a total of 989 adolescents ($M_{age}=13.50$). Subgroups of the adolescents with different NSSI and depression symptoms were identified to describe the co-occurrence of NSSI and depression as well as the transitions between subgroups over the study period. Results showed that: (1) Four subgroups were identified: *NSSI with depression* ($T1=24.6\%$, $T2=30.9\%$), *depression only* ($T1=32.4\%$, $T2=27.8\%$), *NSSI only* ($T1=7.0\%$, $T2=6.9\%$), and *no NSSI and no depression* ($T1=36.1\%$, $T2=34.4\%$). The results suggested that NSSI and depression were co-occurring. (2) Transition analysis found that 63.0% of *NSSI with depression* subgroup in T1 remained in the *NSSI with depression* subgroup in T2, while 19.8%, 10.8%, and 6.6% changed to *depression only*, *no NSSI and no depression*, and *NSSI only* subgroups respectively. Besides, 44.9% of *NSSI only*, 26.9% of *depression only*, and 10.1% of *no NSSI and no depression* subgroups changed to *NSSI with depression* subgroup. The results suggested that the co-occurrence of depression and NSSI had both stability and variability. Study 2: Using a cross-sectional design, a total of 296 adolescents ($M_{age}=12.80$) were recruited to explore the role of adverse childhood experiences and TPH2 Gene rs4570625 polymorphism. Results showed that: (1) Adverse childhood experiences were significantly associated with higher probabilities in *NSSI with depression*. (2) TPH2 Gene rs4570625 polymorphism significantly interacted with adverse childhood experiences in predicting the co-occurrence of NSSI and depression. Particularly, among adolescents with GG/GT genotype, adverse childhood experiences were significantly associated with higher probabilities in *NSSI with depression* compared with *depression only* and *NSSI only*. Among adolescents with TT genotype, adverse childhood experiences were not associated with co-occurrence of NSSI and depression. This research revealed the subgroups and transition of co-occurrence of NSSI and depression, and preliminarily explored the gene $\times$ environment mechanism of co-occurrence of NSSI and depression, which provided a basis for future research.

Keywords: non-suicidal self-injury, depression, co-occurrence, adverse childhood experiences, gene $\times$ environment interaction

情绪表达冲突与青少年自伤的关系：一个纵向的中介调节模型

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摘要 非自杀性自伤（non-suicidal self-injury 简称自伤）是指个体在没有自杀意图的情况下，以不被社会认可的方式有意的直接的伤害自己身体的行为。近年来，青少年自伤的发生率不断升高，已经成为全球的公共卫生问题。情绪表达冲突是指个体处于既想要表达情绪，同时又担心表达真实情绪将导致消极后果的矛盾心理状态。以往大量研究表明，情绪表达冲突与心理症状（如心理痛苦、抑郁、焦虑）、非适应性行为（如进食障碍）呈正相关。青春期是一个闭锁性与开放性并存的时期，处于该时期的青少年可能经历更多的情绪表达冲突。然而，尚未有研究探讨情绪表达冲突与青少年自伤的关系及其相关机制。因此本研究采用纵向追踪设计，考察情绪表达冲突与青少年自伤的关系，同时探究焦虑的中介作用和拒绝自伤效能感的调节作用。本研究对广州一所中学的 1672 名学生（ $M_{age}=16.12$ 岁， $SD=1.56$ ）进行调查，其中男生 766 名，女生 906 名。调查共进行两次，间隔时间为 6 个月。研究采用 SPSS 的 PROCESS 插件检验中介调节效应，结果显示（1）情绪表达冲突与青少年自伤呈正相关；（2）在控制了性别和基线的自伤后，情绪表达冲突完全通过焦虑预测自伤；（3）拒绝自伤效能感的调节效应显著，当青少年的拒绝自伤效能感较高时，情绪表达冲突和焦虑对自伤预测不显著；反之，情绪表达冲突和焦虑均显著预测自伤。本研究首次探究了情绪表达冲突与青少年自伤的关系，并进一步揭示了其潜在作用机制，为今后的相关研究提供了一定的启示。

关键词 自伤，情绪表达冲突，焦虑，拒绝自伤效能感

The Relationship between Non-suicidal Self-injury and Ambivalence over Emotional Expression among Chinese adolescents: A Longitudinal Moderated Mediation Model

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Abstract: Non-suicidal self-injury (NSSI) is defined as the deliberate and direct damage of one's own body tissue in the absence of intent to die. NSSI has become a significant mental health concern for adolescents. Ambivalence over emotional expression refers to having the desire to express emotion but failing to do so. Previous empirical studies have showed that ambivalence over emotional expression is positively associated with psychological and behavioral problems. Adolescence is a stage where closedness and openness coexist, so adolescents may experience more ambivalence over emotional expression. However, there is no research to explore the relationship between ambivalence over emotional expression and NSSI among adolescents, let alone mechanisms. Therefore, this study used the longitudinal design to examine the relationship between ambivalence over emotional expression and NSSI among Chinese adolescents. Meanwhile, the current study also explored the mediating role of anxiety symptoms and the moderating role of NSSI refusal self-efficacy. In the current study, 1672 students ($M_{age}=16.12$ years, $SD=1.56$) in a middle school in Guangzhou were investigated, including 766 males and 906 females. The investigation was conducted twice, with an interval of 6 months. We examined the moderated mediating model in PROCESS macro. The results showed that (1) ambivalence over emotional expression is positively correlated with NSSI; (2) after controlling for gender and baseline NSSI, anxiety symptoms fully mediated the association between ambivalence over emotional expression and NSSI; (3) the association between ambivalence over emotional expression and NSSI was stronger when individuals reported lower NSSI-RSE, but weaker when individuals reported higher NSSI-RSE. Similarly, anxiety symptoms significantly and negatively predicted NSSI when NSSI refusal self-efficacy was lower, in contrast, anxiety symptoms were unrelated to NSSI when NSSI refusal self-efficacy was higher. This study is the first to explore the relationship between ambivalence over emotional expression and NSSI among adolescents, and further reveal its potential mechanism, which provides some enlightenment for future related research.

Keywords: Non-suicidal self-injury, ambivalence over emotional expression, anxiety symptoms, NSSI refusal

性少数污名对 LGB 群体非自杀性自伤的影响： 性取向隐瞒、自我批评、抑郁的中介作用

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摘要 自伤行为作为自杀的一个重要预测因素，在 LGB 群体（女同性恋者、男同性恋者和双性恋者）中的发生率大大高于异性恋群体。考虑到自伤的严重后果和 LGB 群体自伤行为的高发生率，探讨 LGB 群体自伤的发生机制是十分必要的。根据少数压力模型，性少数污名是影响 LGB 群体心理健康的重要因素。但是目前尚未有研究探讨性少数污名和自伤行为之间的潜在机制。因此本研究将考察性取向隐瞒、自我批评、抑郁在性少数污名和自伤行为之间的多重中介作用。采用同性恋污名量表、自我隐瞒量表、自我批评量表、简版抑郁焦虑量表的抑郁子量表和自伤行为评估问卷对 666 名 LGB 个体（64.0%男性， $M_{age} = 24.49$ 岁）进行问卷调查。研究结果表明：（1）性少数污名、性取向隐瞒、自我批评、抑郁和自伤之间均呈显著正相关；（2）性取向隐瞒、自我批评和抑郁分别在性少数污名和自伤行为之间起部分中介作用；（3）性取向隐瞒和自我批评、自我批评和抑郁在性少数污名和自伤行为之间的多重中介作用均显著，性取向隐瞒和抑郁在性少数污名和自伤行为之间的多重中介作用不显著；（4）性取向隐瞒、自我批评和抑郁在性少数污名和自伤行为之间的多重中介作用显著。研究进一步揭示了性少数群体 NSSI 的形成机制，理论上支持和完善了少数压力模型，为今后相关研究提供了理论支持；实践上有助于性少数群体自伤行为的预防和干预。

关键词 性少数污名，性取向隐瞒，自我批评，抑郁，非自杀性自伤

Sexual Minority Stigma and Non-suicidal Self-injury among LGB Populations: A Serial Mediation Model

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Abstract: Non-suicidal self-injury (NSSI), a significant predictor of suicide, is much more prevalent in LGB populations (i.e., lesbian, gay, and bisexual) than in heterosexual populations. Given the severe consequences of NSSI and high prevalence of NSSI in the LGB populations, it is very essential to explore the mechanisms of NSSI in LGB populations. The Minority Stress Model proposed that sexual minority stigma (SMS) is a distal stress faced by LGB populations and could affect their maladaptive behavior, including NSSI. However, the potential mechanism underlying the relationship between SMS and NSSI remains unclear. Therefore, the current study will examine the relationship between sexual minority stigma (SMS) and NSSI, and explore the serial mediation roles of sexual minority concealment (SOC), self-criticism, and depression. In this study, we recruited 666 individuals (64.0% male, $M_{age} = 24.49$ years) who self-identified as LGB populations to complete questionnaires. The findings indicated that (1) SMS, SOC, self-criticism, depression, and NSSI were positively correlated; (2) SOC, self-criticism, and depression respectively played partial mediation roles between SMS and NSSI; (3) SOC and self-criticism, self-criticism and depression respectively played serial mediating roles in the relationship between SMS and NSSI; (4) SOC, self-criticism and depression played serial mediating roles in the relationship between SMS and NSSI. The study theoretically supported the Minority Stress Model and practically contributed to the prevention and intervention of NSSI among LGB populations.

Keywords: sexual minority stigma, non-suicidal self-injury, sexual orientation concealment, self-criticism, depression

情绪反应性对青少年自杀意念的影响：一个纵向的链式中介模型

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摘要 自杀是一种有意结束自己生命的行为，近几年在我国青少年中的发生率越来越高，对家庭和社会造成了不可挽回的损失。自杀意念是自杀行为发生的必要条件，因此探讨自杀意念的影响因素对青少年自杀风险的识别与预防具有重要意义。以往研究发现，情绪反应性是自杀意念的有效预测因素，但是关于两者之间具体的影响机制知之甚少，有待进一步研究。相关理论和研究表明，痛苦不容忍和抑郁可能在情绪反应性和自杀意念之间扮演重要作用。因此，本研究试图探讨情绪反应性影响自杀意念的路径模型，并考察痛苦不容忍和抑郁在其中的中介作用。本次调查共 5,423 名青少年参与 ($M_{age} = 14.63$ 岁, $SD = 1.25$)，其中，女生占比 52.7%，男生占比 47.3%，分别完成了关于情绪反应、自杀意念、痛苦不容忍和抑郁的自我报告问卷。调查共进行了两个波段，每波段相隔 6 个月。研究发现：(1)情绪反应性、痛苦不容忍和抑郁均能显著正向预测自杀意念。(2)在控制了性别和基线自杀意念后，情绪反应性主要通过三条中介路径影响自杀意念（总中介效应=0.19, 95%CI=[0.16,0.21]）：痛苦不容忍和抑郁在情绪反应性和自杀意念之间的单独中介作用，痛苦不容忍和抑郁在情绪反应性和自杀意念之间的链式中介作用。研究揭示了情绪反应性到自杀意念的潜在机制，表明针对情绪反应性的干预措施可能是降低青少年产生自杀意念风险的有效方法。

关键词 情绪反应性，自杀意念，痛苦不容忍，抑郁

Emotion Reactivity and Suicide Ideation among Adolescents: A Longitudinal Serial Mediation Model

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Abstract: Suicide is an act of intentionally ending one's life. In recent years, the incidence of suicide among adolescents in our country keeps rising, causing irreparable damage to the family and society. Given that suicide ideation is an inevitable stage preceding individual's suicide, exploring risk factors for suicide ideation among adolescents is important to promote suicide prevention and intervention efforts. Previous studies have shown that emotion reactivity is an important predictive factor for suicide ideation. However, the mechanism underlying their relationship has remained largely unexplored. Theoretical and empirical studies indicated that distress intolerance and depressive symptoms may play important roles in the relation between emotion reactivity and suicide ideation. The current study aims to investigate the serial mediating roles of distress intolerance and depressive symptoms in the relationship between emotion reactivity and suicide ideation. A total of 5,423 Chinese adolescents (52.7% females, $M_{age} = 14.63$ years, $SD = 1.25$) completed self-report questionnaires regarding emotion reactivity, suicide ideation, distress intolerance, and depressive symptoms. Assessment was conducted for two waves, 6 months apart. In bivariate analyses, emotion reactivity, distress intolerance, and depressive symptoms were positively related to suicide ideation. In serial mediation analyses, there was a significant total effect of emotion reactivity on suicide ideation. After controlling for gender and baseline suicide ideation, distress intolerance and depressive symptoms independently and serially mediated the relationship between emotion reactivity and suicide ideation, with emotion reactivity influencing suicide ideation through three mediation pathways (total mediation effect = 0.19, 95% CI = [0.16, 0.21]). Findings of this study demonstrate a potential mechanism underlying the path from emotion reactivity to suicide ideation. Interventions that target emotion reactivity may be an effective way to reduce the risk of developing suicide ideation among adolescents.

Keywords: emotion reactivity, suicide ideation, distress intolerance, depressive symptoms

初中生自伤行为的发展趋势：友谊质量与亲子沟通的作用

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摘要 自伤是指那些不以自杀为目的，且不为社会文化所接纳的蓄意、反复伤害自己身体的行为。初中阶段是自伤行为发生的高峰期。本研究从发展的角度，采取纵向追踪设计和运用多层线性模型（HLM）考察初中生自伤行为的发展趋势，以及友谊质量和亲子沟通的作用。采用青少年自我伤害问卷、友谊质量问卷和亲子沟通问卷对 1134 名初一学生分别在 2018 年 12 月、2019 年 10 月和 2020 年 10 月进行 3 次施测，最后筛选出 3 次中至少有 1 次自伤行为的 595 名初中生进行分析。结果显示：（1）从初一上学期到初三上学期，初中生的自伤行为有越来越严重的趋势，初中生自伤的初始水平和发展趋势都存在显著的个体差异，而且初始水平越高，变严重的趋势越快；（2）友谊质量能够显著负向预测初中生自伤行为的发展趋势；（3）母子沟通显著负向预测初中生的自伤行为，同时对友谊质量与初中生自伤的关系有显著的正向调节作用，但对初中生自伤的发展趋势无显著影响，父子沟通对初中生自伤的初始水平、发展趋势以及友谊质量与初中生自伤之间关系的调节作用均不显著。研究表明，初中生的自伤行为在整个初中阶段有越来越严重的趋势，较高的友谊质量对初中生自伤行为的发展趋势有延缓作用，而良好的母子沟通有助于提高友谊质量的这种保护作用。

关键词 初中生，自伤，友谊质量，亲子沟通

Trajectories of Self-injury among Junior High School Students: The role of Friendship Quality and Parent-child communication

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Abstract: Self-injury is most commonly described as deliberate, repetitive, direct destruction or alteration of body tissue without conscious suicidal intent, which is deemed socially unacceptable. Non-suicidal self-injury is prevalent among junior high school students. From a development perspective, this study explored trajectories of self-injury among junior high school students and highlighted the role of friendship quality and parent-child communication by using the multilevel model (HLM). A total of 1134 seventh graders responded to questionnaires assessing self-injury, friendship quality, and parent-child communication three times, the first test was conducted in December 2018, and the second and third tests were conducted in October 2019 and October 2020 respectively. Finally, 595 junior high school students who have engaged in self-injury at least one time were selected for further analysis. The results indicated that: (1) From the seventh grade to the ninth grade, self-injury among junior high school students has a growing trend. There are significant individual differences in the initial level and the trend of self-injury of junior high school students. Also, high initial level of self-injury accelerates the tendency of self-injury; (2) Having high-quality friendships can lessen junior high school students' tendencies to self-injury; (3)

Mother-child communication can predict self-injury among junior high school students, and shows obviously positive regulating effect on the relationship between friendship quality and self-injury of junior high school students. It has no significant effect on the changing trend of self-injury among junior high school students. However, father-child communication has little influence on the initial level of self-injury and does not play a regulating role between friendship quality and self-injury. This study confirms that self-injury has a growing tendency throughout the junior high school stage. Having high-quality friendships can lessen junior high school students' tendencies to self-injury, and establishing good mother-child communication can improve the protective effects of friendship.

Keywords: junior high school students, non-suicidal self-injury, friendship quality, parent-child communication

(8) “发展心理专业委员会”专题研讨会 8

儿童社会适应的结构与内涵——基于访谈的质性研究

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摘要 结合已有的社会适应理论与实践成果, 本研究采用质性研究的方法, 选择儿童、家长、教师、校长和社区工作者共 88 人进行个体访谈, 采用主题分析法对访谈文本进行三个阶段的编码分析, 并据此提出了动态社会适应理论, 该理论认为儿童的社会适应是其与环境互动的动态过程与结果, 包括个体状态、适应过程、适应结果三个主要阶段, 个体状态会影响社会适应的过程, 从而影响适应结果, 社会适应结果又会重新调整个体状态。个体状态包括自我状态与情绪状态, 适应过程包括行为适应与认知适应, 适应结果包括学业适应、人际适应与规范适应。儿童的社会适应是一个循环动态的社会化过程。

关键词 社会适应; 动态社会适应理论; 质性研究; 儿童

The structure and connotation of children's social adaptation: an interview-based qualitative study

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Abstract: Combined with the existing theories and practical results of social adaptation, this study adopted the qualitative research method and selected 88 children, parents, teachers, principals and community workers to conduct individual interviews. Subject analysis method was used to conduct three-stage coding analysis of the interview text, and based on this, the dynamic social adaptation theory was proposed. According to this theory, children's social adaptation is a dynamic process and result of their interaction with the environment, including three main stages: individual state, adaptation process, and adaptation result. Individual state will affect the process of social adaptation, thus affecting the adaptation result, and the social adaptation result will readjust the individual state. The individual state includes self-state and emotional state, the adaptation process includes behavioral adaptation and cognitive adaptation, and the adaptation results include academic adaptation, interpersonal adaptation and normative adaptation. Children's social adaptation is a circular and dynamic socialization process.

Keywords: social adjustment, dynamic social adjustment theory, qualitative study, children

农村留守儿童人际关系不良的团体整合性沙盘游戏干预研究

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摘要 农村留守儿童是一个特殊群体, 他们数量巨大、分布广泛, 没有完整家庭的陪伴, 缺乏及时的沟通和关爱。独特的家庭环境导致了很多心理问题的产生, 人际关系不良比较常出现在中学生身上, 在农村留守儿童的身上体现的更为明显。人际关系不良会影响学生很多方面的发展, 在一个相对和谐、友好的环境中会激发学生更多的潜能, 而在一个人际关系不良的环境中则会对学生的学业、心理发展等造成不利影响。本研究运用团体整合性沙盘游戏疗法来对留守儿童的人际交往进行干预。整合性沙盘游戏治疗以分析心理学为理论主体, 整合了积极心理学、家庭治疗、短程焦点解决等多种理论和技术, 在被试制作沙盘的过程中, 内心想法外化, 更加清晰的看到自己的问题与不足, 促进被试的自愈, 从而实现治疗目的。首先, 本研究选取某农村中学初中部 86 名被试, 采用《人际关系综合诊断量表》进行测试(量表分为人际交谈、人际交友、待人接物、与异性交往四个维度, 分数越高表明该维度的问题越严重)。结果发现: 留守儿童和非留守儿童的人际关系状况的总均分存在着显著差异, 留守儿童得分显著高于非留守儿童。其次, 挑选留守儿童中问题严

重且愿意接受后续干预的学生组成干预组与对照组, 每组各 10 人。再次, 对干预组进行整合性沙盘游戏疗法干预, 对照组不干预。团体整合性沙盘干预共 10 次, 每周一次, 主题对照量表的几个维度, 分别为“我的一天”、“我的人际现状”、“我能做出什么样的努力”、“家庭情景中的礼节”“学校情境中的礼节”、“异性交往”等。干预后进行后测。第四, 通过对比被试干预前后的量性结果和质性分析, 结合沙盘作品的动态九宫格分析, 参考被试的自述感受, 证明了整合性沙盘游戏疗法对于留守儿童人际交往得分有显著降低作用。最后, 从实际出发, 提出了一些改善农村留守儿童人际关系的建议。

关键词 团体整合性沙盘游戏疗法, 留守儿童, 人际关系不良, 干预研究

Intervention Study of Integrated sandplay therapy in group for left-behind children's Poor Interpersonal Relationship in rural areas

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Abstract: The Left-behind children in China is a special group of people who are numerous and widely distributed, lack the company of a complete family, and lack timely communication and care. The unique family environment has led to a lot of psychological problems, interpersonal relationship is more often found in middle school students, in the Left-behind children in China body reflected more obvious. Bad interpersonal relationship will affect students' development in many aspects. In a relatively harmonious and friendly environment, it will stimulate students' more potential, however, in an environment of bad interpersonal relationship, students' study and psychological development will be adversely affected. In this study, group-integrated sandplay therapy was used to intervene left-behind children's interpersonal communication. Integrative sandplay therapy takes analytical psychology as the theoretical main body, integrates various theories and techniques such as positive psychology, family therapy, short-term focus solution, etc. . In the process of making sandplay, the subjects' inner thoughts are externalized, more clearly see their own problems and shortcomings, promote the self-healing subjects, so as to achieve treatment purposes. The first, in this study, 86 subjects from a rural Middle School were selected and the comprehensive interpersonal relationship diagnostic scale (irlds) was used as an experimental tool, the higher the score, the worse the problem. The results showed that there was a significant difference between left-behind children and non-left-behind children, and the scores of left-behind children were significantly higher than that of non-left-behind children. The second, the left-behind children who had serious problems and were willing to accept follow-up intervention were selected to form the intervention group and the control group, each group consisted of 10 students. The third, the intervention group was treated with integrated sandplay therapy for 10 times, once a week, on several dimensions of the thematic control scale, for my day, my interpersonal status, what efforts I can make, family situation in the etiquette, school situation in the etiquette, the opposite sex, and so on. The control group did not interfere, and then conducted a post-test. The fourth, through the quantitative results and qualitative analysis before and after the intervention, combined with the dynamic nine-grid analysis of sand table works, reference to the self-reported feelings of the participants, it is proved that the integrative sandplay therapy can significantly reduce the scores of left-behind children in interpersonal communication. Finally, the author puts forward some suggestions to improve the interpersonal relationship of Left-behind children in China.

Keywords: Integrated Sandplay Therapy in group, left-behind children, poor interpersonal relationship, intervention study

朝鲜族留守初中生积极心理品质与学习倦怠关系

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摘要 延边朝鲜族自治州作为朝鲜族人口集中居住的地区，每年都会有大量的年轻人进入韩国企业，这使延边州地区出现了大量的留守儿童。留守初中生作为朝鲜族留守儿童的主要群体，其心理问题较为复杂，这不仅会影响其积极心理的健康发展，也会使其学业成绩受到消极的影响。本文以朝鲜族留守初中生作为研究对象，探讨了积极心理品质、社会支持、以及学习倦怠之间的关系，并探索了社会支持在积极心理品质与学习倦怠之间的中介作用。本研究使用积极发展问卷、学习倦怠问卷、社会支持问卷对延吉市某三所初中的 400 名朝鲜族留守初中生进行了调查，得出以下结论：（1）朝鲜族留守初中生积极心理品质总平均分高于均值水平，总分在成绩排名、父母外出状况和父母文化程度上差异显著。（2）朝鲜族留守初中生社会支持水平略高于常模水平，即处在基本健康的状态。朝鲜族留守初中生的社会支持与成绩排名、父亲文化程度、以及母亲文化程度上呈现出显著的正相关。（3）朝鲜族留守初中生存在不同程度的学习倦怠情况。学习倦怠的各维度与学生年级、成绩排名、父母外出状况、父母外出时间呈现相关关系。（4）朝鲜族留守初中生积极心理品质与学习倦怠各维度之间也呈现显著的负相关，积极心理品质与社会支持各维度之间均呈现显著的正相关，社会支持与学习倦怠各维度之间均呈现出明显的负相关。（5）积极心理品质不仅对学习倦怠有直接的影响，并通过社会支持的部分中介作用对学习倦怠产生影响。根据以上结论提出以下教育建议：（1）关注与理解初中生不稳定的情绪特点，培养朝鲜族留守初中生积极心理品质。（2）提升朝鲜族留守初中生自我认知与评价能力，引导其通过积极的思维方式解决问题。（3）基于社会支持在积极心理品质与学习倦怠之间的中介作用，消除朝鲜族初中生学习倦怠。

关键词 朝鲜族，留守初中生，积极心理品质，学习倦怠，社会支持

多重依恋对农村留守儿童内外化问题的影响：个体为中心的视角

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摘要 随着个体的成长，个体不仅与家庭成员之间具有依恋关系，也慢慢地开始与家庭之外的重要他人建立长久的情感联结，即形成多重依恋（multiple attachment），并且个体的多重依恋关系会随着年龄的增长而表现出一致性，即可能会出现累积效应。对于处于中小学阶段的农村留守儿童，其多重依恋的对象主要为父母、主要照顾者、同伴及教师。从心理健康的角度来说，良好的多重依恋水平能够正向预测儿童及青少年的心理社会适应，减少内外化问题出现的风险，因而研究多重依恋非常有必要，尤其对于留守儿童来说。以往研究多关注农村留守儿童的亲子依恋状况，发现农村留守儿童由于长期的亲子分离，其亲子依恋水平往往低于非留守儿童；而农村留守儿童与主要照顾者、同伴和教师之间的依恋情况及其对内外化问题的影响缺乏充分研究。为探讨多重依恋对农村留守儿童内外化问题的影响，本研究采用问卷调查的方法，以个体为中心的视角，通过潜剖面分析对农村留守儿童的多重依恋进行分组，并通过多元逻辑回归考察了人口学变量（性别、年龄、社会经济地位、留守类型）对潜在剖面的影响。潜剖面分组后农村留守儿童的内外化问题水平差异也通过方差分析和事后检验进行了比较。研究被试为 1349 名农村留守儿童（688 名男生，660 名女生，1 名性别缺失；平均年龄 = 12.11， $SD = 1.60$ ），采用父母与同伴依恋量表（IPPA）测量了其多重依恋（包括母子依恋、父子依恋、照顾者依恋、同伴依恋和师生依恋）情况，抑郁焦虑压力量表（DASS）的抑郁和焦虑分量表测量了其内化问题，青少年品行问题行为倾向问卷（CPTIA）测量了其外化问题。结果发现：（1）农村留守儿童的多重依恋具有累积效应，表现为四个多重依恋潜在剖面：均低组（14.23%）、中等组（48.18%）、偏高组（26.69%）以及均高组（10.90%）；（2）女生、年龄大、社会经济水平高的农村留守儿童，越可能高水平多重依恋；而留守类型在潜在剖面分组上无显著差异；（3）对农村留守儿童的内化问题而言，所属潜在剖面的多重依恋水平越高，内外化问题越少。研究提示，减少农村留守儿童的内外化问题，可从提高其与多个重要他人之间的依恋关系入手，且尤其应多关注多重依恋属于均低组的农村留守儿童。

关键词 多重依恋，内外化问题，农村留守儿童

The Roles of Multiple Attachment in Rural Left-Behind Children' Internalizing and Externalizing Problems: A Person-Centered Perspective

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Abstract: As children grow up, they not only develop attachment relationships with family members, but also be able to form long-term emotional connections with significant others outside the family, that is, multiple attachment. The consistency of multiple attachment will increase with age, which have been described as a cumulative effect. Higher level of multiple attachment positively predicts greater psychosocial adaptation in children and adolescents, and reduce the risk of internalizing and externalizing problems. As for the rural left- behind children in primary and secondary school stages, their attachment figures are mainly parents, primary caregivers, peers and teachers. Previous studies paid much attention to the status of parent-child attachment in rural left-behind children. Due to long-term parent-child separation in rural left-behind children, it was found that the level of parent-child attachment in rural left-behind children was lower than that of non-left-behind children. The attachments in rural left-behind children with their primary caregivers, peers and teachers and the impact of multiple attachment on internalizing and externalizing problems are not fully studied. In order to explore the influence of multiple attachment on the internalizing and externalizing problems in rural left-behind children, the current study adopted a person-centered perspective by conducting the latent profile analysis to identify the best number of the potential multiple attachment profiles in rural left-behind children, and examined the influence of demographic variables (including gender, age, socio-economic status, and left-behind type) on the potential profiles by conducting multivariate logistic regression. The differences of internalizing and externalizing problems of rural left-behind children in each meaningful profile had also been analyzed by ANOVAs and post hoc tests (Bonferroni). Our sample included 1349 rural left-behind children (688 boys, 660 girls, 1 gender missing; $M_{age} = 12.11$, $SD = 1.60$). The multiple attachments (including mother-child attachment, father-child attachment, primary caregiver attachment, peer attachment and teacher-student attachment) were measured by the Inventory of Parent and Peer Attachment (IPPA). The internalizing problems were measured by the depression subscale and anxiety subscale of the Depression Anxiety Stress Scale (DASS), and the externalizing problems were measured by the Conduct Problem Tendency Inventory for Adolescents (CPTIA). The results found that: (1) Multiple attachment in rural left-behind children had cumulative effect, which identified four meaningful profiles: average low group (14.23%), medium group (48.18%), high group (26.69%) and average high group (10.90%); (2) Girls, older rural-left behind children with high SES level were more likely to be classified into average high group; left behind types had no significant effect on potential profiles; (3) For the internalizing and externalizing problems in rural left-behind children, children in potential profiles with higher level of multiple attachment indicated less internalizing and externalizing problems. The current study suggests that to reduce the level of internalizing and externalizing problems in rural left-behind children, we may start with improving their attachment relationships with significant others, and pay more attention to the rural left-behind children in potential profiles with low level of multiple attachment.

Keywords: multiple attachment, internalizing and externalizing problems, rural left-behind children

留守儿童人际敏感与攻击行为的关系： 留守类型和共情的调节作用

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摘要 攻击行为是儿童行为问题的主要外化表现，是指任何试图伤害他人的行为。人际敏感往往与攻击行为呈现正相关，与非留守儿童相比，留守儿童更容易产生攻击行为。留守儿童由于家庭结构的原因，更容易

产生情绪问题，不良的情绪调节与攻击行为有关。主要表现为低情感共情个体很难理解他人的情绪，并由于在反应决策上存在社会技能缺陷，无法准确处理社会信息，即共情水平较低的儿童面对模糊不清或敌对性较低的社交情景时，不能及时有效的感知对方的情感或心理状态，难以控制自己的攻击倾向，产生攻击行为。为探究导致留守儿童攻击行为较高的影响因素，本研究通过对 991 名留守儿童的问卷调查探讨留守儿童人际敏感与攻击行为之间的关系，以及留守类型和共情在其中的调节作用。本研究采用调节模型检验各变量间的关系，结果表明：（1）留守儿童人际敏感与攻击行为之间存在显著正相关（2）留守类型和共情均可负向调节人际敏感和攻击行为之间的关系，父外留守可抑制低人际敏感儿童的攻击行为，而高共情可抑制高人际敏感儿童的攻击行为。这表明，减少留守儿童攻击行为不仅需要降低儿童的人际敏感性，也可以通过采取父外留守和提高儿童共情水平的方式降低留守儿童的攻击性。这为减少留守儿童攻击行为提供了重要的教育实践启示。

关键词 留守儿童，人际敏感，攻击行为，留守类型，共情

The Relationship between Interpersonal Sensitivity and Aggressive Behavior of Left-Behind Children: The Moderating Role of Left-behind Type and Empathy

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Abstract: Aggressive behavior is the main externalization of children's behavioral problems, which refers to any behavior that tries to harm others. Interpersonal sensitivity is often positively correlated with aggressive behavior. Compared with non-left-behind children, left-behind children are more likely to have aggressive behavior. Left-behind children are more likely to have emotional problems due to family structure, and poor emotional regulation is related to aggressive behavior. The results showed that individuals with low affective empathy had difficulty in understanding the emotions of others and could not accurately process social information due to the deficiency of social skills in response decision-making. That is to say, when children with low level of empathy are faced with ambiguous or hostile social situations, they cannot timely and effectively perceive the emotion or psychological state of the other party, and it is difficult to control their aggressive tendency and produce aggressive behavior. In order to explore the influencing factors of left-behind children's higher aggressive behavior, this study investigated the relationship between interpersonal sensitivity and aggressive behavior through a questionnaire survey of 991 left-behind children, as well as the moderating effects of left-behind children's type and empathy. This research adopts the moderation model to examine the relationship between the variables, the results show that: (1) there is a significant positive correlation between interpersonal sensitivity and aggressive behavior among left-behind children; (2) both left-behind type and empathy can negatively moderate the relationship between interpersonal sensitivity and aggressive behavior. Father-left children can inhibit aggressive behavior of children with low interpersonal sensitivity, while high empathy can inhibit aggressive behavior of children with high interpersonal sensitivity. This suggests that reducing left-behind children's aggression not only requires reducing children's interpersonal sensitivity, but also can reduce children's aggression by taking measures such as father-left and improving children's level of empathy. This provides an important educational practice for reducing left-behind children's aggressive behavior.

Keywords: the left-behind children, interpersonal sensitivity, aggressive behavior, left-behind type, empathy

2.3 “理论心理和心理学史专业委员会”专题研讨会

(1) “理论心理和心理学史专业委员会”专题研讨会 1

大学生良心的团体干预研究

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摘要 目的: 本研究旨在考察团体干预对提升大学生良心水平的可行性与有效性, 以期为大学生的良心培育及道德教育提供参考。方法: 将 61 名低良心水平的大学生随机分配到干预组 (男 13 人, 女 17 人) 和对照组 (男 12 人, 女 19 人)。干预组被试接受为期 18 周的良心团体干预, 对照组被试不接受任何处理。干预涵盖良心的八个维度, 综合运用情境讨论、角色扮演、榜样示范、脑力激荡、善行记录、冥想等多种方式。采用过程评估与结果评估相结合、客观评估与主观评估相结合的方法, 综合考察团体干预的效果。过程评估在干预的第 9 周进行, 采用团体活动反馈表了解干预组被试对团体过程的感受; 结果评估包含四个方面: 一是干预组、对照组良心水平的前后测比较及 2 个月后的跟踪结果比较, 二是干预组被试对团体气氛进行评估, 三是干预组被试对团体辅导课程的满意度进行评价, 四是干预结束后让干预组被试撰写心得体会来评估团体干预的成效。结果: (1) 干预前干预组和对照组被试在良心问卷的总分及各维度分上差异不显著, 干预后干预组被试在良心问卷上的总分显著高于对照组 ($t=5.528, p<0.01$), 两个月后追踪结果中干预组的得分也显著高于对照组 ($t=5.484, p<0.01$)。 (2) 干预组成员对团体过程、团体气氛给予了积极评价, 对团体辅导课程的有效性、趣味性、启发性及价值性给予了充分肯定, 干预组成员干预后的主观反馈也表明团体干预收到了良好的效果。结论: 团体干预是提升大学生良心水平的有效途径; 团体干预不仅有效, 其效果还具有一定的持久性。

关键词 大学生, 良心, 团体干预

Group Intervention on College Students' Conscience

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Abstract: Objective: This study aims to investigate the feasibility and effectiveness of group intervention in improving the level of conscience of college students, so as to provide reference for the cultivation of conscience and moral education of college students. Methods: 61 college students with low conscience were randomly assigned to intervention group (13 males and 17 females) and control group (12 males and 19 females). The intervention group was subject to 18 weeks of conscience group intervention, and the control group was not treated. Intervention covers eight dimensions of conscience, which includes situation discussing, role playing, model demonstrating, brainstorming, good deeds recording, meditation and other ways. The results of group intervention were comprehensively investigated by the methods of process evaluation and result evaluation, objective evaluation and subjective evaluation. The process evaluation was conducted at the 9th week of intervention, and the group activity feedback form was used to understand the participants' feelings of group process; Results the evaluation includes four aspects: one is the comparison of the conscience level of the intervention group and the control group and the comparison of the follow-up results after two months; the second is the evaluation of the group atmosphere in the intervention group; the third is the satisfaction evaluation of the group counseling course in the intervention group; the fourth is to let the participants in the intervention group write their experience to evaluate the effectiveness of

group intervention. Results: (1) Before the intervention, there was no significant difference between the intervention group and the control group in the total score and each dimension score of the conscience questionnaire. After the intervention, the total score of the intervention group was significantly higher than that of the control group ($t = 5.528$, $P < 0.01$), and the score of the intervention group was significantly higher than that of the control group two months later ($t = 5.484$, $P < 0.01$). (2) The members of the intervention group gave positive evaluation to the group process and group atmosphere, and fully affirmed the usefulness, interest, inspiration and value of the group counseling course. The subjective feedback of the intervention group members also showed that the group intervention received good results. Conclusion: group intervention is an effective way to improve the level of conscience of college students; Group intervention is not only effective, but also has a certain persistence.

Keywords: college students, conscience, group intervention

良心的理论解读及其在青少年教育中的价值

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摘要 西方先哲对人性的探讨偏重知识或智慧视角, 中国先哲对人性的理解则偏道德层面。因此我们可以将西方的人性论称为知识人性论或智慧人性论, 而将中国的人性论称为道德人性论或伦理人性论; 前者是工商文明的产物, 后者则是农耕文明的产物。这种最初对人性论理解上的偏好又造成了中西方文化的差异。良心是中国儒家道德人性论的代表。良心是人们一种内在的有关正邪、善恶的理性判断和评价能力, 是正当与善的知觉, 义务与好恶的情感, 控制与抉择的意志, 持久的习惯和信念在个人意识中的综合统一, 是一套以辨别是非善恶为核心的避恶趋善的内在道德标准。“良心”及“良知”是中国先秦时期孟子在继承孔子“仁”学思想基础上所创建概念。这个概念一经产生就在中国大地不胫而走, 雅俗共赏, 对中国社会两千余年的道德心理产生了十分深远的影响。它几乎成为人们日常生活中道德与心理的代名词。如果说西方心理学是热衷于对人们知识之心的阐发, 那么中国儒家则执着于对人们道德之心, 即良心的经营。在儒家的视野中, 良心即人心, 即人区别于动物之心, 也即说在儒家看来, 有良心即是人, 就有人性, 无良心就是禽兽, 就没有或丧失了人性。在儒家看来, 探讨人心就是探讨良心, 离开良心就没有人心。所以良心人人皆有, 只是有些人的良心被邪恶迷惑、遮蔽无法显现出人性之本真。本研究运用文献法、问卷法、深度访谈法, 进行探索性因素分析和验证性因素分析等相关统计方法, 从青少年群体中提炼出良心的八个维度: 即当代中国青少年的良心是由: 是非心、羞耻心、恻隐心、宽恕心、孝敬心、诚信心、感恩心、责任心组成。青少年良心教育的价值在于: (一) 教育的目的就是不断提升良心的水平和层次。教育的基本要求就是让青少年成为“君子”, 而不能堕落为“小人”, 更高的标准则是成为贤人与圣人。(二) 良心是积极、健康之心。一个人缺乏良心, 道德不健康, 他的身心也不可能真正健康。(三) 良心是公心, 是利他之心。儒佛两家主张为他人奉献, 是“救人以难”, “有益于人”的, 而老庄学说, 只是用来明哲保身, 自私的。(四) 良心可提升认知功能、专注力及情感功能;(五) 良心有可能改善大脑的结构与功能;(六) 良心可助人克服恶念, 影响寿命。(七) 良心是立人或自立之本、强国之本、教育之本;(八) 良心是可以干预和培养的。

关键词 良心, 青少年, 恻隐心, 人性, 责任心

The Theoretical Interpretation of Conscience and Its Value in Youth Education

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Abstract: Philosophers in western countries focused on the perspective of knowledge or wisdom in the exploration of

human nature, while Chinese philosophers' used to be understanding of human nature was more on the moral level. Therefore, we can call the theory of human nature in western countries as intellectual theory or intelligent theory, and Chinese theory of human nature as moral theory or ethical theory; The former one is the product of industrial and commercial civilization, and the latter is the product of agricultural civilization. This initial preference for the understanding of the theory of human nature has caused the difference between Chinese and Western cultures. Conscience is the representative of Chinese Confucian theory of moral human nature. First, conscience is a kind of internal rational judgment and evaluation ability of people about righteousness and unrighteousness, good and evil. Secondly, it is also the perception of righteousness and good, the emotion of obligation, likes and dislikes, the will to control and make choices, and the comprehensive unity of lasting habits and beliefs in personal consciousness. Thirdly, conscience is a set of internal moral standards to promote good and suppress evil with distinguishing right from wrong, good from evil as the core. "Conscience" are concepts created by Mencius in Pre-Qin Dynasty of China on the basis of inheriting Confucius' "benevolence" thought. This concept spread all over China as soon as it came into being with appreciation of both the saint and ordinary people have had a profound impact on the moral psychology of the Chinese society for over 2000 years. And it has almost become synonymous with morality and psychology in people's daily life. Psychology in western countries is keen on elucidating people's intellectual aspect, while Chinese Confucianism is obsessed with the management of people's moral aspect which is conscience. From the perspective of Confucianism, they consider conscience as the nature difference between humans and animals, and conscience is people with humanity, and an unconscience is a beast without humanity. They also think there is no human mind without the conscience and explore the human mind through exploring the conscience. Therefore everyone has conscience, but some people's consciences are obscured by evil and unable to show the true nature of human nature. The current study uses the literature method, questionnaire method, in-depth interview method, via exploratory factor analysis and confirmatory factor analysis and other related statistical methods to extract an eight-dimensional structure of conscience from the youth group: shame, sympathy, right and wrong, forgiveness, filial piety, honesty and credibility, gratitude and responsibility. The value of conscience education lies in: (1) The purpose of education is to continuously improve the level of conscience. And the basic requirement of education is to let young people become "gentlemen" instead of "lousy mean person". What's more, the higher standard is to become wise men and saints. (2) Conscience is a positive and healthy quality. If one lacks of conscience, his body and mind cannot be truly healthy. (3) Conscience is public and altruistic. Confucianism and Buddhism advocate dedication to others, which is "saving people from difficulty" and "good for others", while the doctrine of Chuang-tzu and Lao-tzu's is only used to protect oneself and be selfish. (4) Conscience can improve cognitive function, concentration and emotional function; (5) Conscience may improve the structure and function of the brain; (6) Conscience can help people overcome evil thoughts and affect life span. (7) Conscience is the foundation to be human being or self-reliance, the foundation of a strong country, and the foundation of education; (8) Conscience can be intervened and cultivated.

Keywords: Conscience, youth, forgiveness, humanity, sense of responsibility

良心与情境的公开性对道德伪善影响的 ERP 研究

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摘 要 道德伪善(Moral hypocrisy)是个体出自非纯粹的社会动机, 向外倡导自己善的欲望, 使行为外表具有道德特征, 但又设法避免真实行善付出代价的行为倾向(Jordan & Sommers, 2020; Effron, Connor, Leroy, and Lucas, 2018; 寇戡等, 2015; Walkowitz et al., 2014; Baston, Rucker, & Petty, 2005)。道德伪善在日常生活中非常普遍, 常表现为“表里不一”、“说一套, 做一套”等, 表现为诱发强烈的认知冲突和情绪反应。根据前人的

研究,当决策情境的公开性(revelation)程度不同时,个体在道德伪善决策中的行为和神经反应不同,且不同良心水平的决策者,其在道德决策中的行为和神经反应不同。因此,本研究在总结前人研究的基础上,结合行为测量、主观报告和事件相关电位技术,考察情境公开性对道德伪善的影响,并探讨个体内在的良心特质在其中的调节机制。实验采用改编的独裁者游戏范式,先呈现决策的情境公开性程度(公开局 vs.秘密局),然后让被试完成决策分配任务,考察良心水平在情境公开性影响道德伪善决策影响中的调节作用。实验结果发现,与低良心水平个体相比,高良心水平个体做出了较少的伪善选择。高良心个体在秘密局中的非伪善选择显著高于公开局。且在秘密局中的决策时间更长,并分别在情绪反应和认知推理阶段诱发了更大波幅的P260和LPP(300-450ms),表现出情境抑制效应。然而,决策时间和神经反应上的这种差异在低良心水平下却消失了。研究结果表明高、低良心个体的伪善决策在行为选择、主观报告和神经反应上表现出了显著差异,受到了情境公开性的影响,高良心个体在公开局中的伪善决策消耗了更多的情绪和认知成本。

关键词 道德伪善,良心,情境公开性,ERP

Cognitive Mechanism of Influence of Conscience and Revelation of Situation on Moral Hypocrisy

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Abstract: Moral hypocrisy (MH) is the desire to behave morally while seeking opportunities to avoid adopting behaviors that actually result in morally good outcomes (Jordan & Sommers, 2020; Effron, Connor, Leroy, and Lucas, 2018; Kou Yu et al., 2015; Walkowitz et al., 2014; Baston, Rucker, & Petty, 2005). Moral hypocrisy is very common in daily life. MH has two manifestations. First, people adopt harsher and stricter standards of moral judgment for others than those they adopt for themselves (Valdesolo and DeSteno, 2008; Lammers et al., 2010), and this type of hypocrisy occurs at the intrapersonal level. Second, at the interpersonal level, hypocrisy is manifested in people's morality standards, which are inconsistent with their actual behavior; that is, their actual behavior fails to meet their claimed moral requirements of behavior (Watson and Sheikh, 2008; O'Connor et al., 2020). Which are manifested as inducing strong cognitive conflicts and emotional reactions. According to previous studies, when the decision-making situation is different (different revelation of the situation), the behavior and neural response of individuals in moral hypocritical decision-making are different, and the behavior and neural response of decision-makers with different levels of conscience in moral decision-making different. Therefore, on the basis of summarizing relevant research, the present study aimed to combine with behavioral measures, subjective reports and event-related potential technology, through one ERPs experiment to investigate influence of conscience and revelation on moral hypocrisy. The experiment adopts an adapted dictator game paradigm, first presents the degree of contextual publicity of decision-making (revealed vs. unrevealed), and then asked subjects to complete assignment tasks, and examines the influence of conscience and contextual publicity on moral hypocrisy. The results of the experiment found that compared with low conscience, participants with high conscience made fewer hypocritical choices. The non-hypocritical selection of individuals with high conscience in the unrevealed situation was significantly higher than that in the revealed situation. And the decision-making time in the unrevealed situation was longer. Moreover, compared within the revealed situation, MH decisions took longer times, and elicited larger P260 and LPP (300-450ms) in the unrevealed situation, showing a situational inhibitory effect. However, this difference in decision-making time and neural response disappeared in low level of conscience group. The results suggested that the behavioral responses, subjective reports and neural representations of MH were significant different between high and low conscience level individuals. Influenced by the revelation of the situation, compared to individuals with low conscience level, individuals with high conscience level made less hypocritical choices, but

consumed more emotional and cognitive costs to solve moral conflicts.

Keywords: Moral hypocrisy, conscience, revelation of the situation, ERP

童年期不良经历对中学生良心的影响及干预

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摘要 孟子、朱熹、陆九渊将良心视为本然之心,是一切道德发展之端绪。中学生正处于青少年期,该阶段是道德发展的重要时期,也是良心发展的重要时期。本研究以生物生态学理论和自我控制资源模型为理论框架,提取童年期不良经历(adverse childhood experiences, ACE)作为微观环境系统变量,特质自我控制和自我损耗作为个体水平变量,系统地探讨中学生良心形成和发展的机制,并基于该影响机制模型遵循仁爱冥想和叙事取向团体辅导的基本架构制定干预方案,考察这两种方式对高ACE中学生良心的干预效果,可为中学生良心培育和干预提供理论依据和实践借鉴。本研究共包括两部分:研究一采用整群取样法抽取湖南省7所城市7所中学初一到高三学生共3648名,使用ACE问卷、青少年良心问卷、特质自我控制量表和自我调节疲劳量表进行了问卷调查。结果发现:(1)ACE负向预测中学生良心;(2)特质自我控制和自我损耗在ACE和中学生良心间起部分中介作用;(3)特质自我控制和自我损耗在ACE和中学生良心间起链式中介作用;研究二将62名低良心/高ACE水平(ACE≥2)的中学生随机分配到仁爱组(21人)、叙事组(22人)和对照组(19人)。两个实验组被试均分别接受连续10周的团体干预,对照组被试不接受任何处理。3(组别:仁爱组/叙事组/对照组)×2(测试时间:前测/后测)重复测量方差分析的结果显示:(1)三组被试良心前测差异不显著,干预后两个实验组被试较对照组良心得分显著提升;(2)三组被试特质自我控制和自我损耗前测差异不显著,干预后两个实验组被试认知损耗得分均显著低于对照组,其中仁爱组被试冲动控制得分较对照组有显著提升。研究结果表明,ACE不仅是影响中学生良心的重要外部因素,还会通过影响特质自我控制和经由自我损耗对中学生良心产生间接作用;以特质自我控制和自我损耗为切入点进行的仁爱冥想和叙事取向团体辅导,可有效提升高ACE中学生的良心水平。

关键词 童年期不良经历;良心;特质自我控制;自我损耗;中学生

The Impact of Adverse Childhood Experiences on Conscience among Middle School Students and Its Intervention Study

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Abstract: Mencius, Zhu Xi and Lu Jiuyuan all regard conscience as the original heart and the thread of all moral development. Middle school students are in adolescence, which is an important period of moral development, and also an important period of conscience development. This study took the theory of bioecology and the model of self-control resource as the theoretical framework, systematically discussed the mechanism of the formation and development of middle school students' conscience by extracting the adverse childhood experiences (ACE) as a micro environment system variable and trait self-control and ego-depletion as individual level variables. Based on the mechanism model of the influence of ACE on the conscience of middle school students, the intervention programs were formulated and executed according to the basic framework of Loving-Kindness Meditation (LKM) and narrative orientation group counseling, and the intervention effects of these two methods on the conscience of high ACE middle school students were investigated, which could provide theoretical basis and practical reference for the cultivation and intervention of middle school students' conscience. This study consists of two parts. In study 1,

cluster sampling method was used to select 3648 students from 7 middle schools in 7 cities of Hunan Province. ACE questionnaire, adolescent conscience questionnaire, trait self-control scale and self-regulation fatigue scale were used to investigate. The results showed that: (1) ACE negatively predicted the conscience of middle school students; (2) Trait self-control and self-depletion played a partial mediating role between ACE and middle school students' conscience; (3) trait self-control and self-depletion played a chain mediating role between ACE and middle school students' conscience. In study 2, sixty-two middle school students with low level of conscience/high adversity ($ACE \geq 2$) were randomly assigned to LKM group (21 people), narrative group (22 people) and control group (19 people). Participants in the LKM group and the narrative group received group intervention for 10 consecutive weeks, and the control group did not accept any treatment. Three groups of subjects were pre-tested and post-tested using all the questionnaires of Study 2. The results of 3 (group: LKM /narrative/ control group) $\times$ 2 (test time: pre-test / post-test) repeated measurement analysis of variance showed that: (1) There was no significant difference in the pre-test results of conscience among the three groups. After the intervention, compared with the control group, the level of conscience of two experimental groups was significantly improved; (2) There was no significant difference in the pre-test results of trait self-control and self-depletion among the three groups. The cognitive depletion scores of the two experimental groups were significantly lower than those of the control group in the post-test scores. Compared with the control group, the impulse control score of the LKM group was significantly improved after intervention. The results show that ACE is not only an important external factor affecting middle school students' conscience, but also has an indirect effect on middle school students' conscience through influencing trait self-control and self-depletion. LKM and narrative oriented group counseling based on trait self-control and self-depletion can effectively improve the conscience level of high ACE middle school students.

Keywords: adverse childhood experiences; self-control trait; ego-depletion; conscience; middle school students; loving-kindness meditation, narrative orientation group counseling

自我损耗情境下，良心对欺骗行为的影响

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摘要 背景: 良心是具有中国传统文化特色的道德概念, 是以辨别是非善恶为核心的一套扬善抑恶的内在道德标准, 它贯穿于个体的知情意三大心理过程, 既可以是理性的道德判断, 也可以是义务与好(hào)恶的情感, 还可以是控制与选择的意志。自我损耗是一种自我控制资源消耗引发的自我控制失败的现象, 两者都对欺骗行为产生影响。而公平又与良心关系密切。目的: 本研究意在考察在自我损耗和公平/不公平情境下, 良心对欺骗行为的影响以及放松对高良心者在高自我损耗和遭遇不公平情境后的欺骗行为的恢复作用。方法: 实验一以 135 名大学生为被试, 采用双因素被试间设计, 自变量为自我损耗(高损耗、低损耗)和良心(高良心、低良心), 因变量为欺骗行为(点游戏任务的欺骗反应正确率)。实验二以 98 名高良心组为被试, 采用单因素被试间设计, 自变量为公平感(公平感组、不公平感组、对照组), 因变量同实验一。实验三, 以 60 名高良心组为被试, 采用单因素被试间实验设计, 自变量为放松(放松组, 对照组), 因变量同实验一。结果: 实验一结果显示自我损耗和良心主效应显著, 两者交互作用显著, 高自我损耗后高良心组欺骗反应正确率没有降低; 实验二结果显示高自我损耗后, 不公平感会增加欺骗行为, 公平感不会减少欺骗行为。实验三结果发现, 放松组的欺骗行为反应正确率显著低于对照组。结论: 良心具有抑恶功能, 能抑制个体的欺骗行为, 自我损耗会增加欺骗行为, 良心的抑制作用比自我损耗的增进作用更强, 但这种抑制作用也无法抵御不公平情境带来的冲突, 放松能有效克服自我损耗, 抵消不公平, 减少欺骗行为, 恢复良心的抑恶功能。

关键词 良心; 欺骗行为; 自我损耗; 公平; 放松

The influence of conscience on deceptive behavior under ego depletion

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Abstract: Background: Conscience is a moral concept with the characteristics of Chinese traditional culture. It is a set of internal moral standards to promote good and suppress evil with distinguishing right from wrong, good from evil as the core. It runs through the three psychological processes of one's cognition, emotions and will, which can be rational moral judgment, emotion of obligation and likes and dislikes, as well as the will to control and choose. Ego depletion is a phenomenon of self-control failure caused by the consumption of self-control resources. Deceptive behavior are influenced by both conscience and ego depletion. And fairness is also related to conscience. Object: This study aimed to discuss the influence of conscience on deceptive behavior under ego depletion and fairness/unfairness, and explore the recovery effect of relaxation on deceptive behavior of high conscience people after high self depletion and unfair situation. Methods: The first experiment is 2×2 complete randomalized multifactors experimental design with ego depletion(high, low) and conscience (high score,low score) as independent variables and deceptive behavior as dependent variable. The second experiment is randomalized single-factor design with sense of fairness(high group, low group, control group) as the independent variables and deceptive behavior as dependent variable. The third experiment is randomalized single-factor design with relaxation (relaxation group, control group) as the independent variables and deceptive behavior as dependent variable. Results: The first experiment had found that the main effect of ego depletion and conscience on deceptive behavior and the interaction between them were significant. The deceptive behavior of high scored conscience was not affected by ego depletion. The second experiment had found that fairness had no effect on deceptive behavior, while unfairness had increased deceptive behavior. The third experiment found that the correct rate of deception reaction of the relaxation group was significantly lower than that of the control group. Conclusion: Conscience has a function of restraining evil(inhibiting deceptive behavior) which was not affected by ego depletion ,But it does not work after suffering from unfairness. Relaxation can effectively overcome self depletion, offset injustice, reduce deception and restore the function of suppressing evil of conscience.

Keywords: Conscience, Deceptive behavior, Ego depletion, Fairness, Relaxation

Influence of Conscience on Trust Violation and Repair in Real and Virtual Scenarios

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Abstract: Trust is a psychological state that is based on positive expectations toward the intentions or behaviors of others, and informs the willingness to commit to a relationship or cooperate with others (Rousseau et al., 1998; Bock, Lee, Kuan, & Kim, 2012; Bozic et al., 2018). Trust critically influences human interaction and as a crucial social capital, it is a prerequisite for establishing good relationships between people in society, fosters special attachment relationships, and is a major factor in the development and maintenance of happiness and well-functioning interpersonal relationships (Chen, Wu, & Chang, 1991; Chaudhuri & Gangadharan, 2002; Bozic, Siebert, & Martin, 2018). However, trust is fragile and easily threatened or broken. Trust is a fundamental component of social

relationships and a prerequisite for smooth and efficient interactions. However, trust is fragile and easily threatened or broken. Recovering trust as quickly and effectively as possible is a top priority. The current study examined how individuals' moral conscience and certain scenarios influenced trust violation and repair strategies. By conducting three experiments (N = 1026), we demonstrated the effect of moral conscience on the degree of trust violation and also the following repair strategies used in scenarios in which the trust violation occurs. We demonstrated that conscience can either increase or reduce interpersonal trust and influence repair strategies depending on the scenarios in which the trust violation occurs. Specifically, moral conscience elicited trusting behavior after trust violation (Experiment 1), in the real scenario, participants with low conscience levels perceived more serious breaches of trust than did those with high conscience levels; in the virtual scenario, no difference was observed between the trust violation perceptions of participants with high and low conscience (Experiment 2). The results of Experiment 3 revealed that in the real scenario, trust repair strategies were more effective for participants with high conscience levels than for those with low conscience levels, whereas in the virtual scenario, no significant difference was observed in the effectiveness of strategies between the high- and low-conscience groups. Participants with high conscience levels were concerned with whether the trustee used the apology strategy for trust repair, but those with low conscience levels were concerned with the use of the financial compensation and besides, participants favored the financial compensation strategy for trust repair in the real scenario but preferred the apology strategy in the virtual scenario. Together, moral conscience mattered: higher conscience level diminished the breaches of trust violation perceptions and made trust restoration easier, furthermore, the authenticity of scenario has played a positive role in the influence of moral conscience on trust violation and restoration, and it also predicted the effectiveness of different restoration strategies. On the basis of the findings of our three experiments, we can draw the following conclusions: First, participants with low conscience levels perceived the trust violations to be more serious than did those with high conscience levels only in the real scenario; however, only participants with high conscience levels were more likely to trust others when trust violation occurred, regardless of whether in the virtual or real scenarios. Second, participants with high conscience levels took more effective trust repair strategies (i.e., apology) and thus had a more positive effect on trust recovery after violations compared to those with low conscience levels in the real scenarios. However, in the virtual scenario, the difference in the effectiveness of the trust repair strategies between the high- and low-conscience groups was not significant. Third, participants favored the financial compensation strategy for trust repair in the real scenario but preferred the apology strategy in the virtual scenario. This study's theoretical and practical implications go beyond a specific assessment procedure and apply to a broad array of assessment and dealing strategies that rely on scenarios.

Keywords: trust violation, trust repair, conscience, real scenario, virtual scenario

(2) “理论心理和心理学史专业委员会”专题研讨会 2

家庭给予幸福，何以可能？儒家文化视域下的理论探讨

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摘 要 家庭形成的情感圈如水中的波纹不断向外拓展，并逐渐形成由家庭走向家族，最后形成家国一体的格局。循此逻辑，研究如何促进家庭幸福感是实现幸福中国的有效路径。家庭先于个体而存在，个体与家庭处于共生共存的状态，研究人类精神世界应回到家庭本身。家庭的发展是一种“类生命”的过程，本文在梳理家庭发展史的基础上，分析家庭基本功能，并提出“集体性、组织性、生活性、社会性及宗教性”五位一体的家庭结构逻辑体系，旨在剖析影响家庭幸福感的诸多影响因素。一旦找到影响家庭幸福感的基本因素，就可据此促进家庭幸福感，研究家庭幸福感对于促进国家幸福感具有重大意义。

关键词 家庭,家庭幸福感，五位一体

How is it possible for families to give happiness?

A Theoretical Discussion in the Perspective of Confucian Culture

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Abstract: The emotional circle formed by the family is like a ripple in the water expanding outward, and gradually forming a pattern from the family to the clan, and finally forming the family and the state as one. Following this logic, studying how to promote family happiness is an effective way to achieve a happy China. The family exists before the individual, and the individual and the family are in a state of symbiosis and coexistence, so the study of the human spiritual world should return to the family itself. The development of family is a "life-like" process. Based on the history of family development, this paper analyzes the basic functions of family and proposes a logical system of family structure with five elements: collective, organizational, living, social and religious, aiming to analyze the many factors influencing family happiness. Once the basic factors affecting family well-being are identified, family well-being can be promoted accordingly, and the study of family well-being is of great significance to the promotion of national well-being.

Keywords: family, family happiness, five-in-one

新时代学校良心教育论析

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摘要 良心教育应成为道德教育的核心, 新时代的学校良心教育可以从羞耻心、宽容心、孝敬心、诚信心、责任心、是非心、感恩心、恻隐心等八个方面展开。教学理念的主旨既要遵循西方良心心理学理论, 也要崇尚中国传统文化精神, 教育过程的实施既要加强社会主义核心价值观的培育和践行, 也要依据学生成长成才的规律, 精准设计有针对性的、生动的、与时俱进的、学以致用良心教育内容和教育方式, 注重在课堂上的审问、慎思、明辨, 注重在生活情境中体验、感悟、笃行, 最终由外至内发展和滋养学生的良心。

关键词 道德; 良心; 良心教育

On Conscience Education in schools in the New Era

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Abstract: Conscience education should be the core of moral education. In the new era, school conscience education can be carried out from eight aspects: shame, forgiveness, filial piety, honesty and integrity, responsibility, right and wrong, gratefulness and compassion. The main idea of teaching should not only follow the theory of western psychology of conscience, but also advocate the spirit of Chinese traditional culture. At the same time, in the process of carrying out the educational process, we should not only strengthen the cultivation and practice of socialist core values, but also set targeted, vivid, updated conscience education contents and methods according to the law of students' growth and talents. We should pay attention to the interrogation, careful thinking and discerning in class, and lay emphasis on the experience, perception and earnest action in the life situation, so as to ultimately develop and nourish students' conscience from outside to inside.

Keywords: morality; conscience; conscience education

基于阳明心学的心理咨询本土化研究

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摘要 物质生活的不断丰富, 现代化进程的不断加快导致人们的人生目标和价值取向发生了显著变化, 使得人们对生活的追求从满足生存需要逐步转变为更高级的个性化需求。如何使来访者克服生命空虚感、获得生命意义感, 已经成为现代心理咨询的重要内容之一。表面上看, 神经症、精神焦虑等心理问题是意识和行为方面的问题, 但是其产生的更深层次的原因在于文化, 在于不健康的生活方式。回归中国传统文化, 挖掘传统文化中的心理学资源, 发展创造本土心理咨询的模式方法, 已经成为近年来许多学者的共识。阳明心学是优秀传统文化的重要组成, 也是现代心理咨询发展壮大的重要文化资源。研读王阳明心学思想, 挖掘阐释其心学思想中内含的心理咨询价值不仅对心理咨询的理论发展和实践操作有重要意义, 而且对提升现代心理健康水平具有重要价值。本研究着重从咨询目标、咨询关系、咨询技术、咨询过程四个方面对心学心理咨询价值进行全新的理解与阐释。

关键词 心学, 王阳明, 心理咨询, 本土化

Research on the Localization of Psychological Counseling Based on Yangming's Theory of Mind

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Abstract: The continuous enrichment of material life and the continuous acceleration of the modernization process have led to significant changes in people's life goals and value orientations, making people's pursuit of life gradually change from satisfying survival needs to more advanced individual needs. How to enable visitors to overcome the emptiness of life and gain a sense of meaning in life has become one of the important contents of modern psychological counseling. On the surface, mental problems such as neurosis and mental anxiety are problems of consciousness and behavior, but the deeper reason for them lies in culture and unhealthy lifestyle. Returning to traditional Chinese culture, digging out psychological resources in traditional culture, and developing models and methods for creating local psychological counseling have become the consensus of many scholars in recent years. Yangming Xinxue is an important component of excellent traditional culture and an important cultural resource for the development and growth of modern psychological counseling. Studying Wang Yangming's thoughts of the mind and exploring and explaining the value of psychological consultation contained in his mind is not only of great significance to the theoretical development and practical operation of psychological consultation, but also of great value to the improvement of the level of modern people's mental health. This research focuses on a new understanding and interpretation of the value of psychological counseling from four aspects: counseling goal, counseling relationship, counseling technology, and counseling process.

Keywords: Yangming's Theory of Mind, Wang Yangming, psychological counseling, localization

新儒学李二曲《悔过自新说》的心理分析初探

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摘要 李二曲, 又名李颀, 他不仅是关学大儒, 亦是清初三大学之一。“悔过自新”说是李二曲工夫论的基石, 该学说以人性本善和“人皆有过的”作为“悔过自新”之可能和必要的形上根据赋予了“过”以普遍和形上的内涵, 这与《道德经》七十一章的“病”有共通之意; 并将消极意义的“悔”改造为积极的修养方法, 发挥了人的主观能动性, 这与心理分析的“积极想象”和积极心理学的“积极”中的 active 不谋而合。本文将从心理分析的角度对悔过自新进行探索, 去发现《悔过自新说》对于每一个平常人达到“天人合一”、“内圣外王”的“成为自己”的可能性, 对于个体的意义, 以及对中国人集体心灵的意义: 悔, 作为一种态度和情绪; 过, 作为一种状

态和对状态的认知；自，作为一种本体和原型；新，作为一种目标；悔过又作为一种行为，自新又成为一种追求或意念；这构成了人类的基本心理活动，也在这“实修”之上，使得平常之人在“日用常行”中躬行践履，在“起心动念”处下工夫实现内圣心灵的追求，这与分析心理学中“自性化”-成为自己的历程又有共通之处；它是对儒家学说精髓的发挥，也是二曲先生毕生追求的目标，它对培养和增强现代人的道德意识、弘扬现代人的主体精神、自我价值感、独立意识、态度的开放性以及探寻现代人的终极关怀等问题具有其不可忽视的现代价值，值得我们深入研究和探讨。

关键词 悔过自新，心理，分析

On the New Confucianism Representative Li Erqu's Work-The Psychological Analysis of "Repentance and Renewal Theory"

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Abstract: Li Erqu, also known as Li Yong, is not only a great Confucian in Guan Xue, but also one of the three Confucianists in the early Qing Dynasty. The theory of "repenting and renewing" is the cornerstone of Li Erqu's gongfu theory. This theory uses human nature and "everyone has a fault" as the possible and necessary metaphysical basis for "repenting and renewing". The connotation of the above, which has the same meaning as the "illness" in Chapter 71 of the Tao Te Ching; transforming the negative meaning of "repentance" into a positive cultivation method, and exerting people's subjective initiative. "Positive imagination" coincides with the "active" in positive psychology. This article will explore the repentance and self-renewal from the perspective of psychological analysis, to discover the possibility of "repentance and self-renewal" for every ordinary person to achieve "the unity of heaven and man" and "internal sage and external king". The meaning of the individual and the meaning of the Chinese collective mind: regret, as an attitude and emotion; passing, as a state and cognition of the state; self, as a noumenon and archetype; new, as a kind of Goal; repentance is once again an act, and renewal becomes a desire; this constitutes the basic human mental activity, and is also on top of this "practical practice", allowing ordinary people to practice in "daily use" Practicing, working hard to realize the desire of the inner sacred soul in the "inspiring thoughts", this has something in common with the process of "individuation"-becoming oneself in analytical psychology; it is an expression of the essence of Confucianism, and The goal that Mr. Erqu has pursued throughout his life is to cultivate and enhance modern people's moral consciousness, promote modern people's subjective spirit, self-worth, independent consciousness, openness of attitude, and explore the ultimate concern of modern people. Its modern value is worthy of our in-depth study and discussion.

Keywords: Repentance and Renewal , psychology, analysis

情绪的迷失：中国人抑郁症的儒家文化解读

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摘要 不管是古希腊人，还是古罗马人，都乐观地相信人类是理性的，自然而然地就能与他人共存，建立一个公正、和谐的社会。他们认为“人是一种介于动物和神之间的生物”，理性被认为是人类生活的重要品质，能控制个人主义的激情，包括过度膨胀的自傲和野心，来维持人格内部的一种关键平衡。到了中世纪，宗教强烈反驳了这一观点，他们肯定人类如果没有信仰的帮助和恩典的从中协助，就无法引导个人的激情，行使自己在社会上的职责。从此，宗教信仰，加上后来的科学文化、经济理性，逐渐形成调节个人主义激情的西方文化“三角”。儒家从周公开始成型，历经孔孟到理学的变迁，成为三千多年中国文化的传统与主流。在对个人情绪的调控方面，儒家直接跳过外在宗教的环节，“完全信赖人类自己”（梁漱溟），以伦理道德代替宗教信仰，加上礼乐文化及专制政治，形成中国人“习惯性无我”或“集体人格优势”的儒家文化“三角”。从1840年以来，古老的儒家文化一直处于现代化的转型之中，历经坎坷，几千年的资产不断贬值，甚至呈现“内卷化”

的不利趋势，给我们的心理健康带来潜在的威胁。人的情绪情感的体验和表达是受文化控制的，中国人在儒家集体主义价值观要求下的个人情绪和体验，往往是改头换面的。中国人的抑郁症表征，最早是说成神经衰弱，后来就说成是躯体化，现在可以表达为抑郁症了，但是我们个人的情绪体验或表达并不成熟，甚至没有能力，这会不会导致我们抑郁症严重，甚至自杀率比较高呢？

关键词 西方文化，儒家文化，内卷化，抑郁症

Emotional Loss: A Confucian Cultural Interpretation of Chinese Depression

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Abstract: Whether the ancient Greeks or the ancient Romans were optimistic to believe that human beings are rational and can naturally coexist with others and build a just and harmonious society. They believe that "man is a creature between animals and gods." Reason is considered to be an important quality of human life. It can control the passions of individualism, including over-inflated pride and ambition, to maintain a critical balance in internal personality. In the Middle Ages, religions strongly refuted this view. They affirmed that without the help of faith and the assistance of grace, human beings would not be able to direct an individual's passion to exercise his / her social duties. Since then, religious beliefs, together with later scientific culture and economic rationality, have gradually formed a Western cultural "triangle" that regulates individualistic passions. Confucianism began to be shaped by Zhongong and went through the changes from Confucius and Mencius to Neo-Confucianism, becoming the tradition and mainstream of Chinese culture for more than three thousand years. Regarding the regulation of personal emotions, Confucianism skipped the external religious link, "completely trusting in human beings" (Liang Shuming), replacing religious beliefs with ethics and morality, together with ritual music culture and despotism, forming the Confucian culture "triangle" of "habitual selflessness" or "collective personality advantage". Since 1840, the ancient Confucian culture has been undergoing a modern transformation. After ups and downs, the assets of thousands of years have been continuously devalued, and even show an unfavorable trend of "involution", which has brought potential threats to our mental health. The experience and expression of human emotions are controlled by culture. The personal emotions and experiences of Chinese people under the requirements of Confucian collectivist values are often changed. The symptoms of depression in the Chinese were first described as neurasthenia, and later as somatization, and now it is expressed as depression. However, our personal emotional experience or expression is immature, or even it is hard to express. Will it cause severe depression or even a relatively high suicide rate?

Keywords: Western culture, Confucian culture, involution, depression

（3）“理论心理和心理学史专业委员会”专题研讨会 3

皮亚杰的创造性思维理论及其教育应用

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摘要 在皮亚杰的理论体系中，创造性居于极为重要的地位。首先，他认为创造是发展不可缺少的过程，“新颖性，如创造，是一直介入发展过程的”（Piaget, 1971, p.5）；其次，他强调知识是通过个人建构而创造意义的结果，“理解即创造”（To Understand is to Invent, 1973）；再次，他认为创造性思维是通过反思抽象来实现的，创造性思维本质上是从低级图式和概念中构建出高级图式（Piaget, 1981, p. 225）。因循皮亚杰的理论思路，费德曼在“平衡”概念的基础上增加了“转变”（transformation）概念，认为创造是在平衡状态下能够带来新

知识的一种转变活动(Feldman, 1989);伦克和贝加托等则提出了个人创造(personal creativity)和微创造(mini creativity)概念,认为个人创造或微创造本质上是一种个人意义的建构,是一种个性化的解释(Runco, 2003; Beghetto & Kaufman, 2007),它们是一切创造活动的基础。皮亚杰的创造性思维理论对当今教育至少具有两方面重要含义:其一,对知识进行个性化解释和建构是学生创造性思维发展的基础;其二,引导学生对概念进行抽象和综合是一种重要的创造性教学策略。

皮亚杰理论重要概念中文翻译的旨趣

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摘要 皮亚杰的理论体系可以用“纷繁复杂”来形容,首先是涉及的领域广,包括生物学、物理学、哲学、心理学等重要的知识部类;其次是理论建构的层次复杂,有跨领域的类比研究、经验层面上的实证研究,还有认识论层面上的精密的推论。当我们在阅读皮亚杰的论著时,一定会被他的旁征博引所折服,也常常会因为他在各个认识层面上自由切换而又不失精确性的理论思考而感到眩晕。皮亚杰的著作中,包含的许多关键性概念,诸如:结构、平衡化、逻辑、格式、协调……等等,其中许多都是皮亚杰为了自己的理论建构而创造性地整合了前人的概念而设计出来的,有的甚至是创造了全新的概念。为了准确理解皮亚杰的理论体系,我们除了要仔细辨析这些概念在皮亚杰理论体系中的特别意义之外,似乎还应该厘清这些概念之间的逻辑关系。但是,对这些概念之间逻辑关系的探索工作常常令读者无所适从,因为我们很难从皮亚杰的著述中梳理出一条清晰的 $A \rightarrow B \rightarrow C \rightarrow D \dots$ (A 蕴含 B 蕴含 C 蕴含 D……)逻辑线索。应对这个问题的关键是我们需要先匡正对皮亚杰的“发生”观念的理解。值得注意的是,皮亚杰用来 genetic 这个词来形容儿童心理的起源。发生认识论的英语表达是 genetic epistemology 法语则是 l'épistémologie génétique。其中, genetic 或 genetical(或者法语的 génétique)这个词通常被翻译为“基因的”或“遗传的”。如果在这个意义上,儿童的心理结构是先天地获得的,或者说是通过遗传而获得的,这就暗合了康德的先验范畴学说。但是,皮亚杰虽然承袭了康德的认识论架构,但是他并不认可将认识的起点归因于某种先天因素的形而上学进路(熊哲宏:《皮亚杰发生认识论的康德哲学框架》,2000;皮亚杰,《哲学的洞察与错觉》)。皮亚杰在使用 genetic 这个词时,并不是在使用它的遗传的、或基因的这一层含义。因为这些意义都不可避免地儿童心理的起源引向了先天论的解释。从词源上分析, genetic 是 gene 的衍生词,根据韦氏词典的释义, genetic 或 genetical 有两个含义。第一个含义是指“决定事物的起源、发展的,或对此有因果性前提性的,或与之相关的(属性)”(relating to of determined by the origin, development, or causal antecedents of something);第二个含义才是指“基因的、与基因相关的,由基因引起的或控制的(属性)”(of, relating to, caused by, or controlled by genes)。可以看出, genetic 这个词一方面表达了“有机体受先天性的条件,以及基因的决定性特征”;另一方面还表达了“某些内容的起源、生成或发展性特征”。如果我们以儿童的出生作为界线, genetic 所形容的过程可以分成两个部分,第一是儿童出生前已经具备的“前提”,第二是“前提”在出生后的表达或事实性生成。汉语“遗传的”对应地翻译了第一部分的含义,“发生的”则对应翻译了第二部分的含义。

源起与回归:皮亚杰与当代道德心理学研究

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摘要 皮亚杰肇始了当代的道德发展心理学研究。他从个人主义、集体主义与关系主义,遵守规则与形成规则,道德实在论与主观责任,说真话与关系,以及合作、有意识实现与发展公正观念等方面构建了自己的道德认知发展理论,并提出了从他律到自律的道德发展规律。皮亚杰极大影响了科尔伯格等对道德发展的研究:康德理性主义的哲学基础、实证研究方法、道德发展的阶段论以及跨文化一致性等。后科尔伯格时代的道德心理学研究在内容上,新主题不断出现且可大体分为“认知之后”和“认知之外”两类;在方法上,访谈法和问卷法逐步让位于实验法和认知神经科学方法;在观点上,由强调认知、到关注情感、到知情并重、再到重情轻知。这些变化既适应了当代心理学理论发展和研究方法的科学化趋势,又与西方美德伦理学的复兴密不可分。在看到当代道德心理学研究的丰硕成果时,人们也应反思已有研究远离“心理”、脱离“生活”的不足。

对于如何深入剖析道德心理现象和揭示道德发展规律,皮亚杰至少可以从以下三个方面提供有益借鉴:关注儿童实际的道德生活,而非将个体看作抽象的理念意义上的人;采用建构主义方法,提高道德研究的生态效度;强调个体建构与社会互动并重,在道德认知能力提升与良好氛围营造的结合中推进个体的道德发展。

关键词 皮亚杰, 科尔伯格, 道德心理学, 建构主义, 社会互动

Origin and return: Piaget and contemporary moral psychology

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Abstract: Piaget initiated the study of contemporary moral development psychology. He constructed his own moral cognitive development theory from the aspects of individualism, collectivism and relationism, abiding by rules and forming rules, moral realism and subjective responsibility, telling the truth and relations, as well as cooperation, conscious realization and development of the concept of justice, and put forward the law of moral development from heteronomy to autonomy. In the content of moral psychology research in the post Kohlberg era, new themes continue to appear, and can be roughly divided into "after cognition" and "outside cognition"; in terms of methods, interview method and questionnaire method gradually give way to experimental method and cognitive neuroscience method; on the conclusion, from emphasizing cognition to paying attention to emotion, to paying equal attention to cognition, and then to paying more attention to emotion than cognition. These changes not only adapt to the scientific trend of the development of contemporary psychological theory and research methods, but also are inseparable from the revival of western virtue ethics. When seeing the fruitful results of contemporary moral psychology research, people should also reflect on the shortcomings of existing research away from "psychology" and "life". Piaget can provide useful reference on how to deeply analyze moral psychological phenomena and reveal the law of moral development from at least the following three aspects: paying attention to children's actual moral life rather than seeing individuals as people in the sense of abstract ideas; adopt constructivism to improve the ecological validity of moral research; emphasize both individual construction and social interaction, and promote individual moral development in the combination of improving moral cognitive ability and creating a good atmosphere.

Keywords: Piaget, Kohlberg, moral psychology, constructivism, social interaction

从物理量到因果性的个体发生

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摘要 发生认识论是认识人类自身成长的重要工具, 对发生认识论的深入研究必然要求回归其研究主题。

《皮亚杰文集》第八卷涵盖了皮亚杰发生认识论范畴的个体发生研究著作 7 册和论文集 1 部, 从儿童的数概念、基本科学概念、力概念、因果概念四个方面展示了皮亚杰在范畴的个体发生领域的原创性工作。具体包括: (1) 《儿童的数概念》(*The Child's Conception of Number*) 和《儿童对物理量的建构和发展——守恒和原子论》(*The Child's Construction of Quantities: Conservation and Atomism*) 通过数概念、物质数量、重量和体积的个体发生探讨思维产生的机制, 研究儿童如何将实际生活中的感知——运动组织进运算系统, 这些运算产生了数、连续的量等范畴。(2) 《儿童的运动和速度概念》(*The Child's Conception of Movement and Speed*) 是儿童发展系列研究的一部分, 并与《儿童时间概念的形成》(*The Child's Conception of Time*)、《儿童的空间概念》(*The Child's Conception of Space*) 等共同构成了皮亚杰有关基本科学概念发展的研究系列。时间、运动和速度三个概念相互联系, 密切相关, 运动和速度是时间概念的后续研究。(3) 《力观念的形成》(*La Formation de la Notion de Force*) 和《力的组合与向量问题》(*La Composition des Forces et le Problème des Vecteurs*) 均于 1973 年以法文形式出版。借由这两本书, 我们得以了解儿童关于力的概念的形成过程。(4)

《儿童的物理因果性概念》（*The Child's Conception of Physical Causality*）与《理解因果性》（*Understanding Causality*）阐述因果性的个体发生。皮亚杰认为动作或活动是理解因果关系的起点，因果概念是主客体在活动的过程中逐渐建构起来，他认为人的认识“从来就没有什么绝对的开端”而是必然经历从较贫乏的认识向较丰富的认识的过渡。总之，《皮亚杰文集》第八卷从物理量到因果性，带领我们重新认识皮亚杰发生认识论中的范畴及其个体发生，这对于我们理解皮亚杰学术思想的“纯粹之处”及其对整个发展心理学的意义提供了有益的知识图谱；同时，关于数概念、基本科学概念、力概念、因果概念的个体发生研究可以为物理、数学及其它通识课教学提供科学指导。

关键词 皮亚杰，数概念，物理量，因果性，个体发生

The Ontogenesis from Quantities to Causality

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Abstract: Genetic epistemology serves as an important tool to learn and understand human growth, and it's of necessity to draw back to the research theme for the elaboration of genetic epistemology. The eighth volume of *Piaget's Anthology* covers seven volumes and one collection of papers on the ontogenesis of Piaget's category of genetic epistemology, all of which demonstrate Piaget's original work in the ontogenesis field from four aspects, namely, child's number conception, basic scientific conception, force conception, and causality conception. These four aspects can be elaborated in the following details. (1) *The Child's Conception of Number*, and *The Child's Construction of Quantities: Conservation and Atomism* explore the generated mechanism of thinking through the ontogenesis of number conception, quantities, weight, volume. They study how children organize the perception-movement from real life into the operation system and thus these operations can generate categories such as numbers, continuous quantities. (2) *The Child's Conception of Movement and Speed*, as a part of a series of studies on child development, together with *The Child's Conception of Time*, and *The Child's Conception of Space*, consist of the Piaget's research series about the development of basic scientific conception. The conception of time, motion, and speed are closely related to each other, and the latter two are the follow-up studies of the conception of time. (3) *La Formation de la Notion de Force*, and *La Composition des Forces et le Problème des Vecteurs*, both published in French in 1973, help us to understand the construction of child's conception of force. (4) *The Child's Conception of Physical Causality*, and *Understanding Causality* explore the ontogenesis of Causality, in which Piaget believed that action or activity is the starting point of understanding causality, and the conception of causality is constructed gradually in the process of activity of subjects and objects. He also believed that human knowledge "never has any absolute beginning", but always experiences a transition from poor knowledge to rich knowledge. To conclude, the eighth volume of *Piaget's Anthology*, from quantities to causality, leads us to restudy the categories and ontogenesis in Piaget's epistemology of genesis, which provides an instructive mind map for us to understand the "pureness" of Piaget's thought and its implications for developmental psychology as a whole. In the meanwhile, the studies of child's number conception, basic scientific conception, force conception, and causality conception provide scientific and pedagogical references physics, mathematics and other general courses.

Keywords: Piaget, Number Conception, Quantities, Causality, Ontogenesis

皮亚杰的函数心理研究溯源

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摘要 为了探索儿童的思维是如何从前运算阶段发展到具体运算阶段的, 皮亚杰在晚期引入了函数这一概念。他区分了构成性函数和构成化函数, 并假定构成性函数可以描述儿童在前运算阶段的思维特征, 而构成化函数则对应于具体运算阶段。皮亚杰认为, 构成性函数可以很好地描述前运算阶段的思维特点, 比如看重顺序、单向结构、定性比较等。借助于构成性函数, 儿童逐步理解了共变规律, 动作格式的协调也变得概括化。皮亚杰一直强调, 函数起源于动作格式, 产生于动作格式的同化, 即动作格式在客体中的应用。而构成性函数是处于前逻辑水平的儿童所使用的一种推理形式, 由于它是单向的关系, 具有方向性和顺序, 尚缺乏可逆和补偿, 所以这种单向关系只构成一种半逻辑。直到运算思维水平, 儿童才建构出符合数学规范的量化函数, 即构成化函数。在皮亚杰看来, 构成性函数在感知运动动作和逻辑运算之间, 架起了一座不可或缺的桥梁。构成性函数可以精准地描述前运算水平儿童的推理活动, 尤其是儿童犯错或者做不到的事情, 比如不可逆、缺乏协调及其概括化等。构成性函数所包含的双项结构, 是一种非常基础、非常典型的思维结构, 它是构成化函数(可逆运算)的前提。不过后来, 皮亚杰在关于态射与范畴的研究中, 重新界定了构成性函数, 将其定义为“内态射水平的对应”。对皮亚杰关于函数心理的研究追根溯源, 具有重要的理论意义和历史价值。

关键词 皮亚杰, 构成性函数, 构成化函数, 发生认识论

皮亚杰与维果茨基：两种平行的建构主义

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摘要 皮亚杰与维果茨基是发展心理学领域的两位大师, 他们关于学习的观点影响了上个世纪甚至当代的教学观。皮亚杰的发生认识论聚焦于学习中的个体, 维果茨基的文化历史理论关注了学习中的社会因素。他们共同描绘了学习的完整图景, 分别融入了个体建构主义与社会建构主义, 在当代的发展心理学领域焕发出了盎然生机。面对类似的科学问题, 皮亚杰与维果茨基选择了两条不同的道路。两人的生活与工作存在着不少类似之处, 同时, 其科学观点存在着显著差异, 他们从同样的原点出发, 如承认语言在认知形成过程以及人类文化价值同化过程中的作用, 儿童的自我中心言语是发展中的一个阶段等, 选择了有关认知和言语发展过程的不同取向, 形成了心理与学习发展的不同观点。皮亚杰认为, 人的心理是自然进化的结果, 它有助于在环境中寻求平衡, 帮助人们适应不同的生活条件, 因此, 心智的发展是一种生物过程, 它具有自己独特的源泉与规则(如发展阶段与顺序等), 其发展是持续不断变化的结果, 体现了自然与生物机制的社会化。社会化是心理机能发展的基础。维果茨基认为, 心智自身及其发展不是生物进化的结果, 而是儿童通过与成年人的交往接受人类文化历史经验的结果, 儿童的心智一开始就是由社会因素以及内化的社会因素决定的, 作为一种心理机制调节儿童的行为, 相应的, 教育不仅仅是一种影响因素, 而且是一种发展的本质形式。两位心理学家观点的最明显分歧体现为对待儿童自我中心言语的看法。皮亚杰认为, 自我中心言语是自然的个体言语向社会言语转变的一个阶段, 也就是说是一种社会化的形式, 是言语发展中较为低级的形式。维果茨基认为, 内部言语是一种原发形式, 很早就作为内部对话开始发展。儿童言语的发展并非始于内部言语而是源于与成人相关联的言语。维果茨基认为, 言语的形成过程是从社会言语转变为内部言语, 内部言语作为调节心智的内部心理工具是儿童思维发展的最重要阶段。

关键词 皮亚杰, 维果茨基, 建构主义

Piaget and Vygotsky: Parallel Paths to Constructivism

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Abstract: Piaget and Vygotsky are two masters in the field of developmental psychology, and their views on learning influenced the teaching view of the last century and even the contemporary world. Piaget's epistemology focuses on

individuals in learning, and Vygotsky's theory of cultural history focuses on social factors in learning. Together, they paint a complete picture of learning, integrate individual constructivism and social constructivism, and give full vitality to the field of contemporary development psychology. Faced with similar scientific problems, Piaget and Vygotsky chose two different paths. There are many similarities between two people's life and work, at the same time, there are significant differences in their scientific views, they start from the same origin, such as recognition of the role of language in the cognitive formation process and the process of assimilation of human cultural values, children's egocentric speech is a stage of development, choose the cognitive and speech development process of different orientations, forming a different view of psychological and learning development. Piaget believes that the human mind is the result of natural evolution, it helps to find balance in the environment, help people adapt to different living conditions, therefore, the development of the mind is a biological process, it has its own unique sources and rules (such as stages and sequence of development, etc.), its development is the result of continuous change, reflecting the socialization of natural and biological mechanisms. Socialization is the basis of the development of psychological function. Vygotsky believes that the mind itself and its development is not the result of biological evolution, but the result of children's acceptance of human cultural and historical experience through interaction with adults, children's minds are determined from the beginning by social factors and internalized social factors, as a psychological mechanism to regulate children's behavior, correspondingly, education is not only an influence factor, but also an essential form of development. The most obvious difference between the views of the two psychologists is the perception of egocentric speech in children. Piaget believes that egocentric speech is a stage of natural individual speech transition to social speech, that is to say, a form of socialization, is a lower form of speech development. Vygotsky believes that internal speech is a form of origin and began to develop early as an internal dialogue. The development of children's speech does not begin with internal speech but with speech associated with adults. Vygotsky believes that the formation process of speech is changed from social speech to internal speech, and internal speech as an internal psychological tool to regulate the mind is the most important stage of children's thinking development.

Keywords: Piaget, Vygotsky, constructivism

(4) “理论心理和心理学史专业委员会”专题研讨会 4

语言的具身性：手部动作与语言进化的关系

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摘 要 手部动作和语言具有紧密复杂的关系。虽然在日常生活中开口说话是最常见的交流方式，可声音并不是人们交谈时唯一的信息传输媒介，手势是一种普遍存在的辅助沟通手段。手部动作与语言机制间是否具有更深层次的关系？语言起源的镜像系统假说认为，识别动作的镜像系统为语言进化提供了基础，而手势语则是人类语言的前驱。正是镜像系统的存在，人类祖先才可以使用手部动作对具体的物品、行为或想法进行表征，进而导致人类逐渐形成了使用手势进行复杂交流的能力。现代人所使用的成熟语言源于手势语，而镜像系统中与执行、识别和模仿手部动作有关的神经回路，为大脑的语言功能进化提供了基础架构。关于手语的研究发现，手语与口语具有许多共同特征：手语可以像任何一门语言一样表达出丰富复杂的涵义；在学习机制上，手语学习与口语学习规律并不存在显著差异。认知神经科学研究证明，手部运动和语言加工具有部分共享神经机制。发展心理学研究则表明，婴幼儿运用手势的能力可以显著预测他们今后的语言发展水平。手势起源假说必须要解答的问题是，如果语言最早源于手势，为什么后来在进化过程中会转向“语音”这种有声表达模式。既然手势语也可以具有完善的语法规则、语言结构以及丰富的表达性，为什么口语会取代手语，成为最通用的语言形式？另外，其他灵长目动物也具有用手势进行交流及识别其他个体动作意图的能力，但为什么其他猿类没有在这些能力的基础上发展出像人类一样复杂完备的语言？

关键词 手部动作; 手势; 镜像系统; 语言; 进化

预测加工：走出两代认知科学的历史僵局

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摘要 表征-计算观与具身行动观对认知的本质几乎做了截然相反的强调。近年来, 预测加工理论的发展为统一两代认知科学提供了契机。预测加工是层级预测加工与主动预测加工这两大理论部件的合称, 前一部分主要继承了第一代认知科学中的层级计算加工进路, 后一部分则发扬了第二代认知科学中与行动有关的理论, 这两大理论部件被视为同一个统一整合理论的两个不同方面。在当代, 预测加工被认为有望成为未来认知科学的新范式。层级预测加工的基本加工方式为: 上行预测-下行预测误差权衡。基于适应性原则, 上行预测与下行预测误差之间始终存在着权衡。一般而言, 上行预测信号是抑制性的, 下行预测误差信号是兴奋性的。主动推断是与自由能原理互补的行动决策理论部件, 其基本理念为: 预测模型通过对不同行动策略赋值, 从而使认知主体基于贝叶斯模型均值尽可能给出行动选择的最优解, 最终实施行动。通过比较, 预测加工可能给出了第三种新范式。一般而言, 表征-计算观的目标是产生内部表征, 加工方式是抽象算法匹配, 最终获得的知觉对象被认为是关于世界“如其所是”的精细的、不变的表征; 具身行动观的目标是实施行动, 加工方式是身体与环境之间的动力学耦合, 该范式的激进立场反对头脑中存在关于外部世界的内部表征。预测加工范式大致体现出对前两种范式的融合态势, 它的目标是实现知觉-行动循环, 加工方式是基于层级神经网络的上行预测-下行预测误差权衡。

关键词 预测加工, 层级预测编码, 自由能原理, 主动推断

A Predictive Processing:

Breaking the Impasse of Two Generations of Cognitive Science

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Abstract: Nowadays, quarrels and fights between two generations of cognitive science almost result in an inevitable impasse. For instance, a deep theoretical relations between J. J. Gibson and David Marr has been carved off, and of which two theories each other have been pushed toward the opposite side; which could be viewed as a portrayal of these overt states of affairs. The central tenet of the First-Generation Cognitive Science summarizes as: The Representational-Computational Approach; and the central tenet of the Second-Generation Cognitive Science: The Embodied Action Approach. What is the nature of “mind” at all? These two approaches conflict each other; and the either/or choice seems the only game in the town. In recent years, researchers attempt to integrate both strains of sources, hoping to provide a unified framework, thus of which could be viewed as prospectively break the impasse of two generations of cognitive science in the near future. It calls “Predictive Processing”. This approach apparently originates in hierarchal predictive coding of visual& auditory studies (since 1980s), and thereby has been modified substantively by the neuroscientist Karl Friston, et al., into a mode of action-oriented. Predictive Processing combines with two indispensable components: Hierarchical Predictive Processing and Active Predictive Processing. In rough, the Hierarchical Predictive Processing mainly inherits from hierarchical predictive coding theories of the First-Generation Cognitive Science(e.g., Marr’s multi-level computational theory of vision, hierarchical neural networks, etc.); and the Active Predictive Processing somehow advocates various versions of theories of the Second-Generation Cognitive Science relating with action(e.g., Gibson’s affordances theory, enactive cognition, etc.). Both components which could be viewed as dual aspect of a single unified theory. In Predictive Processing, the Free Energy Principle views adaptivity as the fundamental principle of the theory construction of neural & cognitive systems, and until—self-organizing adaptive systems. The overall aim of Hierarchical Predictive Processing is to make the cognitive agency adaptable and sustainable as much as possible. Next, the optimization problem of

adaptation turns into problems of surprises minimization or “prediction errors minimization” by means of Bayesian inference & Bayesian statistics. The basic working mechanism of Hierarchical Predictive Processing: ascending prediction-descending prediction errors tradeoffs. The so-called “Active Inference” which is the complementary component of Free Energy Principle; and which be seen by Paul Cisek et al., is confirmed with multiple affordances competition mechanism. The Active Predictive Processing shows perception-action tradeoffs, or “epistemic-pragmatic tradeoffs”. Both perception (epistemic value) and action (pragmatic value) ultimately serves for adaptivity (adaptive value). Perception-action cycle of Predictive Processing which could be regarded as a second-order cycle based on first-order embodied reflex arc (in Deweyan sense); which could also be seen as an internalized closed loop within the corporal brain. Thus on the nature of cognition, contrasting with past two generations of cognitive science, Predictive Processing may has made revolutionary breakthrough at all. Cognition as the systemic function of general adaptive system complies with the fundamental adaptivity principle. The conventional object-invariants analysis beneath paradigms of two generations of cognitive science, thus ought to give way to mind-world adaptivity analysis underlying the Predictive Processing paradigm. Philosophically speaking, Predictive Processing seems be consistent with a process theory. In the end, on the basis of the currents and trends of Predictive Processing, we attempt to propose an integrated view. In our view, the pressing contemporary task of Predictive Processing is trying to integrate two generations of cognitive science—Representational-Computational Approach and Embodied Action Approach.

Keywords: predictive processing, hierarchical predictive coding, free energy principle, active inference

内感受具身认知：迈向一种身心对话的构成性理论框架

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摘要 具身认知的支持者强调，心灵根植于身体，身体体验对认知过程有重要影响。然而，身体和大脑之间的交流是如何发生的，或者在什么条件下发生的，还没有得到充分的描述。近年来，越来越多的证据表明，内感受与具身感、具身情感、具身自我和具身社会认知密切相关。我们假设具身认知是构成性的，而不是因果性的，提出了内感受性具身认知假说。在这个假说中，内感受性充当了具身心理内部和外部成分之间的重要桥梁，为身心交流提供了一个建设性的理论框架。系统地探讨内感受的起源和具身心灵的构成要素有助于揭示身心沟通的不确定性。

关键词 内感受，具身认知，具身感，多元感官整合，构成解释

Interoceptive Embodied Cognition: Toward a Constitutive Theoretical Framework for Communication between the Body and Mind

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Abstract: Proponents of embodied cognition emphasize that the mind is rooted in the body and that physical experiences have an important impact on cognitive processes. However, how the communication between body and mind occurs, or under what conditions it takes place, has not been fully described. In recent years, increasing evidence has shown that interoception is closely related to sense of embodiment, embodied emotion, embodied self, and embodied social cognition. Assuming a constitutive rather than a causal-account of embodied cognition, we propose the interoceptive embodied cognition hypothesis, in which interoception serves as an important bridge

between the internal and external components of the embodied mind, to provide a constructive theoretical framework for the communication between mind and body. The systematic exploration of the origin of interoception and the constitutive components of the embodied mind helps reveal the uncertainties around communication between the body and mind.

Keywords: interoception; embodied cognition; sense of embodiment; multi-sensory integration; constitutive account

具身模拟论的直接社会感知困境与出路

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摘要 认知的具身化运动使得他心问题他心的身体转向, 镜像神经元的发现和具身模拟论的提出为此转向提供了大量的理论和实验证据。近年来, 他心感知的具身模拟论进路除了向纵深发展以外, 也开始向其它学科扩展并取得了丰硕成果。以具身模拟论的纵深研究为纵轴, 跨学科应用为横轴全面论述当前具身模拟论的走向, 并通过阐述具身模拟论、心智理论和现象学的关系探析具身模拟论所面临的困境, 最后建议具身模拟论从融合社交、强具身认知、动态交互性等三个方面进行视域转换, 以此来完善他心直接感知的具身模拟论路径, 从而增强此理论的解释力。

关键词 他心直接感知; 具身模拟论; 镜像神经元; 困境和出路

The Challenge and Outlet: A Study on the Embodied Simulation Approach to Direct Social Perception

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Abstract: Along with the emergence of the embodied cognition, the study of social cognition also appears the body turning. The discovery of the mirror neurons and the proposal of embodied simulation theory provides a great deal of theoretical and experimental evidence for this turning. In recent years, in addition to its in-depth development, the study of embodied imitation theory has begun to expand to other subjects of humanities and social sciences, which has gained fruitful results. As the vertical axis on the study of embodied simulation theory, and interdisciplinary application as the horizontal axis, we comprehensively discuss the research direction of embodied simulation theory. By analyzing the relationship between embodied simulation theory, theory of mind and phenomenology, lastly, embodied simulation theory is suggested to make up for the shortcomings from the perspective of philosophical foundation, cognitive foundation, interactive theory.

Keywords: direct perception; embodied simulation theory; mirror neurons; Neurophenomenology; challenge and outlet

具身机制的认知边界：一项具身认知新探

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摘要 具身认知研究在最近几年已经出现许多新的研究范式, 特别是自延展认知 (extended cognition) 之后, 许多学者都在试图解释心灵与世界之间的重新划界问题 (The Problem of Re-demarcation)。旧的认知边界理论存在三种理论: 第一种还原主义 (reductionism) 进路试图将认知的边界与生理边界重合进行解释; 第二种进路为概念论 (conceptualism) 进路, 即认为认知的边界是将符合认知特性的认知现象划入的概念特征 (conceptual marks); 第三种进路是延续计算的功能主义的认知边界 (computationalism), 即认为认知的边界即计算的边界。本文试图在第三种进路的基础上提出一种新的认知边界概念, 即具身机制的认知边界。具

身机制的认知边界认为，人类的认知边界是伴随着一系列认知活动而成为可塑的（plasticible）和可延展的（malleable）。本文认为，具身机制的认知边界不仅可以弥合笛卡尔式二元论认知鸿沟，还可为试图阐明颅内与颅外信息回路的科学解释提供新的理论工具。

关键词 认知边界，具身认知，机制的边界，延展认知

The Cognitive Boundary of Embodied Mechanism: An Exploratory from Embodied Cognition

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Abstract: Over the last few years, the research of embodied cognition has transformed many new paradigms. Since the hypothesis of extended cognition, many psychologists and philosophers have tried to provide new approach on the re-demarcation problem between mind and the world. Traditionally, psychologists believe in three approaches on cognitive boundary: reductionism, conceptualism and computationalism. Reductionists believe that cognitive boundary is overlapped with our skin and skull (biological boundary). Furthermore, conceptualists assert that cognitive boundary is conceptualizing with cognitive marks for discriminating that behaviors are cognitive or not. The last but not least, computationalists believe that cognitive boundary is the boundary where computation happens. In this thesis, I will along with the computational view with a new explanation, the cognitive boundary of embodied mechanism (CBEM). CBEM insists that human cognitive boundary functions with tremendous cognitive events that establish such CBEM to be pasticible and malleable with the environment. We believe that CBEM will collapse with the gap of Cartesian dualism and provide new theoretical forms for the scientific explanation of intracranial and extracranial information loops.

Keywords: Cognitive boundary, Embodied Cognition, mechanical boundary, Extended mind

感知觉系统中的预测与渗透

郁锋

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摘要 知觉系统的目标是促使生物体对生态中的相关刺激做出适应性反应。由于知觉信息的输入是模糊而不确定的，知觉系统需要依赖在进化中积累的先验信息将感觉能量转化为有效引导行动的信息。然而，感知觉是被锁定在一个认知无法渗透的模块中还是会受到认知状态的影响，这一问题仍然存在着巨大争议。已有研究显示，期望、先验信息和情境任务可以在多个层次上塑造感知觉。本文将从层级的预测加工和预测误差最小化的理论框架(Clark 2013, 2015)出发来阐释感知觉普遍的认知渗透性。在层级化的预测系统中，当用更高层次的信息来约束较低层次的过程以最小化全局预测误差时，认知的渗透就是必不可少的。高层的状态可以导致更准确的下层预测，它们会影响相应的下层预测加工。自下而上的感觉材料与自上而下的预测不匹配可以在较高层上有效地解决，而较低层次的表征受到的影响较小。本文还将试图回应批评感知的认知渗透性的各种观点(Fodor 1988)。最后，文章认为感知的认知渗透性是其适应性的重要表现，因为这样的感知系统在瞬息万变且可预测的世界中才能更适切地引导行为。

关键词 知觉系统；预测心灵；认知渗透性；具身认知

Prediction and Penetration in Perceptual System

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Abstract: The aim of the perceptual system is to make organisms respond adaptively to relevant stimuli in the ecology. Since the input of perceptual information is vague and uncertain, the perceptual system needs to rely on the prior information accumulated in the evolution to transform sensory energy into information that can effectively guide

actions. However, whether perception is locked in a cognitively impenetrable module or will be affected by the cognitive state is still a huge controversy. In this article, I argue that expectations, prior information, and situational tasks can shape perception on multiple levels. I will start from the theoretical framework of hierarchical prediction processing and prediction error minimization (Clark 2013, 2015) to explain the universal cognitive penetration of perception. In a hierarchical prediction system, when higher-level information is used to constrain lower-level processes to minimize global prediction errors, cognitive penetration is essential. The state of the higher layers can lead to more accurate lower layer predictions, and they will affect the corresponding lower layer prediction processing. The mismatch between bottom-up sensory data and top-down predictions can be effectively resolved at higher levels, while lower-level representations are less affected. I will also try to respond to various views criticizing the cognitive permeability of perception (Fodor 1988). Finally, I think that the cognitive penetration of perception is an important manifestation of its adaptability, because such a perception system can more appropriately guide behavior in a rapidly changing and predictable world.

Keywords: Perceptual system; Predictive mind; Cognitive permeability; Embodied cognition

2.4 “普通心理和实验心理专业委员会”专题研讨会

(1) “普通心理和实验心理专业委员会”专题研讨会 1

团体创造活动的超脑网络特征

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摘要 本研究旨在探讨团体创造活动背后的超脑神经网络特征。研究者共招募 230 名在校大学生, 并将其随机两两配对, 组成 115 组双人小组。在实验过程中, 受试者需要各完成一个创造力任务和一个非创造力的控制任务。前者为非常规用途任务, 后者为物体特征任务。在整个实验过程中, 研究者通过功能性近红外光谱成像技术同步记录每组内的两个个体的大脑活动。初步分析结果表明, 在右侧前额叶皮层和右侧颞顶联合区皮层之间的脑际功能连接上, 双人小组在创造力任务期间的连接值要高于非创造力任务期间的连接值。其次, 图论分析结果表明, 与非创造力任务相比, 双人小组的超脑网络在创造力任务期间的特征路径长度(characteristic path length)更短, 聚类系数(clustering coefficient)更低, 而全局效率(global efficiency)和局部效率(local efficiency)更高, 且前额叶皮层和颞中回皮层两个节点在超脑网络中的全局效率更高。脑与行为的相关分析结果表明, 非常规用途任务的观点流畅性与全局系数呈正相关, 而与特征路径长度呈负相关。上述发现表明前额叶皮层和右侧颞顶皮层可能在团体创造活动中起着非常重要的作用, 且创造活动背后的超脑网络具有如下特征: 高度的整合性、全局信息传输的高效性和对不合理信息整合的高容忍性。

关键词 团体创造力, 超扫描, 超脑网络, 近红外

The hyper-brain network underlying the group creative process

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Abstract: This study aimed to explore the hyper-brain network that underlies group creation. A total of 230 college students were recruited in this study. Participants were then randomly assigned to 115 dyads to solve one creativity

task (AUT, alternative uses task) and one control task (OCT, object characteristics task). Functional near-infrared spectroscopy (fNIRS)-based hyperscanning was used to simultaneously record the brain activities of each dyad. We observed higher interpersonal functional connectivity between the right prefrontal cortex and temporal-parietal junction during the AUT than the OCT. Network analysis showed that the characteristic path length (L_p) and clustering coefficient of the hyper-brain network was lower during the AUT than the OCT, whereas global (Eglob) and local efficiency were higher during the AUT than the OCT. Moreover, AUT fluency was positively correlated with Eglob but negatively correlated with L_p . We also found the prefrontal and middle temporal areas have higher Eglob in the network. These findings indicate the validity of using network analysis to unveil the neural correlate underlying verbal group creativity, namely a hyper-brain network with a high degree of integration, global information transfer efficiency and tolerance capacity for unreasonable information integration.

Keywords: Group creativity, hyperscanning, hyper-brain network, fNIRS

认知灵活性对顿悟问题解决的作用：心理定势打破的中介作用

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摘要 认知灵活性指个体认知活动中进行灵活转换的能力, 可以看作个体面临变化的环境时能够克服优势思维并调节思维以适应新的变化的环境的能力。有研究表明认知灵活性与创造性具有正相关关系, 在创造性思维中, 顿悟问题解决是一种代表形式。个体能否摆脱固有问题表征的限制打破心理定势是实现创造性顿悟问题解决的关键, 在这个过程中认知灵活性起着重要的作用。本研究开展了以下实验: 研究一在实验室条件下开发了基于汉字形声字规则性的心理定势打破任务, 实验一以声旁字拼音与组合字拼音一致的形声汉字(规则字)作为引导定势形成的刺激材料、以声旁字拼音同组合字拼音不一致的形声汉字(不规则字)作为定势打破的探测材料; 实验二以不规则字作为定势引导材料、规则字作为定势打破的探测材料, 通过两项实验验证了该任务可以有效诱发被试形成心理定势并探测定势打破效应。研究二使用任务转换任务训练被试的认知灵活性, 通过连续十天的训练, 发现认知灵活性训练能够有效提高个体的心理定势打破表现及顿悟问题解决能力。研究三采用研究一开发的定势打破任务, 探讨认知灵活性与顿悟问题解决的关系机制, 结果发现心理定势打破在认知灵活性和顿悟问题解决中起中介作用。

关键词 认知灵活性, 心理定势, 顿悟

The Role of Cognitive Flexibility in Insight Problem solving: the Mediating Role of Mental Set Breaking

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Abstract: Cognitive flexibility refers to the ability of an individual to perform flexible transformations in cognitive activities. It can be regarded as the ability of an individual to overcome dominant thinking and adjust thinking to adapt to a new and changing environment when facing a changing environment. Studies have shown that cognitive flexibility and creativity have a positive correlation, and insight problem solving is a representative form of creative thinking. Whether an individual can get rid of the limitations of inherent problem representations and break mental set is the key to achieve creative insight problem solving, and cognitive flexibility plays an important role in this process. The following experiments were carried out in this research: Study 1 developed a mental set-breaking task based on the regularity of the pictophonetic characters of Chinese characters under laboratory conditions. Experiment

1 uses the phonetic Chinese characters (regular characters) whose phonetic characters are consistent with the pinyin of the combined characters as the stimulus material to guide the formation of mental set, and the phonetic Chinese characters (irregular characters) whose phonetic characters are inconsistent with the pinyin of the combined characters are used as the mental set breaking detection material. In Experiment 2, irregular characters were used as guiding materials for the formation of mental set, and regular characters were used as the detection materials for mental set-breaking. These two experiments verify that this task can effectively induce participants to form mental set and detect mental set breaking effects. Study 2 used task switching tasks to train participants' cognitive flexibility. After ten consecutive days of training, it was found that cognitive flexibility training can effectively improve the individual's mental set breaking performance and insight problem solving ability. Study 3 uses the mental set-breaking task developed in Study 1 to explore the mechanism of the relationship between cognitive flexibility and insight problem solving. It turns out that mental set breaking plays a mediating role in cognitive flexibility and insight problem solving.

Keywords: Cognitive flexibility, Mental set, Insight

创造性思维中语义搜索过程

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摘要 创造性思维的语义搜索过程即长时记忆中的语义信息激活过程。先前研究指出, 该过程符合语义网络的激活扩散模型, 可能表现出负加速和聚类特征。不过与一般性语义激活不同的是, 创造性思维需要激活远距离的新颖信息, 因此会通过执行控制功能抑制优势反应信息, 避免就近搜索。本研究通过描绘发散性思维测验 (物品多用途, AUT) 中答案生成在累积函数和语义相似性等一系列参数上的量化特征, 揭示创造性思维的语义搜索过程。结果发现: (1) 新颖 AUT 任务中, 答案的新颖性与答案个数不存在显著相关, 说明创造性思维的语义搜索过程并非简单的由近及远的激活扩散过程。(2) 新颖 AUT 的序列答案与题目均具有较低的语义相似性, 且显著小于寻常 AUT 条件, 说明新颖性要求使个体在最初搜索时便开始摆脱题目的语义限制, 避免了就近搜索。(3) 新颖条件比寻常条件表现出显著更低的答案间聚类, 在寻常条件下, 与未聚类答案相比, 可聚类答案与题目的语义相似度更高, 新颖性更低, 而在新颖条件下, 可聚类答案与未聚类答案在与题目的语义相似度均较低, 且不存在显著差异, 二者在新颖性上也不存在显著差异。这说明, 创造性思维的语义搜索过程会避免在题目附近搜索, 但是在远离题目的语义场内可能会进行局部就近搜索。

关键词 创造性思维, 语义搜索, 聚类, 语义相似性

Sematic search process in creative thinking

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Abstract: The semantic search process of creative thinking is the activation process of semantic information in long-term memory. Previous studies have pointed out that this process conforms to the spreading activation mechanism of semantic network and may show negative acceleration and clustering. However, different from general semantic activation, creative thinking needs to activate novel and distant information, so it will suppress the dominant response information through executive control function to avoid nearby search. In this study, we described the quantitative characteristics of answer generation on a series of parameters such as cumulative function and semantic similarity in the Divergent Thinking Test (AUT) to reveal the semantic search process of creative thinking. The results showed that: (1) In the novel AUT task, there was no significant correlation between the novelty of answers and the number of answers, suggesting that the semantic search process of creative thinking was not a simple process

of spreading activation from near to far. (2) The sequential answers of the novel AUT and the items had a low semantic similarity, which was significantly lower than that of the normal AUT conditions, indicating that the novelty requirement made the individuals start to get rid of the semantic restriction of the questions at the initial search, and avoided the nearby search. (3) Compared with normal AUT, novel AUT showed a significantly lower clustering between the answers. In normal AUT, compared with non-clustering answers, the clustering answers had higher semantic similarity with the items, and their novelty was higher; while in novel AUT, both non-clustering and clustering answers showed low semantic similarity with the items, and they showed no significant difference in novelty. This indicated that the semantic search process of creative thinking avoided the search near the question, but in the semantic field far away from the topic might conduct local nearby search.

Keywords: creative thinking, semantic search, clustering, semantic similarity

知觉和语义组块对远距离联想过程的影响及其认知机制的探究

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摘要 基于联想理论提出的远距离联想任务(Remote Association Test, RAT)已被广泛应用于创造性思维过程的研究中。传统的 RAT 任务更多反映的是在没有其他因素影响下的自由联想过程,然而实际的远距离联想过程可能会受到知觉和语义加工等因素的干扰,但目前关于这方面的研究还比较缺乏,其加工过程和可能的认知机制也仍待探讨。鉴于此,本研究将知觉和语义组块引入 RAT 任务中,采用 ERP 技术,探讨两种组块类型对远距离联想过程的影响,并通过认知控制任务对其认知机制进行研究。行为结果显示,语义组块条件的正确率显著低于知觉组块和无组块条件,而知觉组块和无组块条件差异不显著。在反应时上只发现语义组块条件的反应时间显著长于无组块条件。同时,对三种条件的认知机制进行研究发现,分心物抑制控制效率越高,正确解答语义组块和无组块条件的速度越快。优势反应抑制控制效率越高,在知觉组块条件上的正确率越高。ERP 结果显示,在 P200 成分上语义组块条件的波幅显著大于知觉组块和无组块条件,反映出语义组块条件需要更多注意资源的投入。在 N400 成分上,无组块条件的波幅显著大于知觉组块和语义组块条件,显示出知觉组块和语义组块条件的联想过程受到了削弱。在 SPW(Slow Positive Wave)成分上,知觉组块和语义组块条件的波幅显著大于无组块条件,反映出知觉和语义组块条件需要更多的认知资源来完成对生成答案的评估。本研究揭示出知觉组块和语义组块对远距离联想过程的阻碍,并且发现这种影响可能来自前期注意力资源的较多占用。

关键词 远距离联想, 认知控制, 知觉组块, 语义组块。

The Influence of Perceptual and Semantic Chunking on Remote Association and Its Cognitive Mechanism

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Abstract: The Remote Association Test based on Association theory has been widely adopted in the study of creative thinking process. Traditional RAT test can just reflect the free association process in the absence of other factors influencing, the actual remote association process may be disturbed by factors such as perceptual or semantic processing. However, there is still a lack of research on this theme, and its time course and possible cognitive mechanisms are still to be explored. From this, present study introduces perceptual and semantic chunks into RAT test to investigate the cognitive mechanism and time course by adopted cognitive control task and Event-Related Potential (ERP) technology. The behavioral results showed that semantic chunk condition had lowest solving rate than other

two conditions, but other two conditions had not reach significant difference, moreover, only semantic chuck condition cost significant longer response time than non-chuck condition. The study of the cognitive mechanism of the three conditions found that the higher the efficiency of distraction inhibition control, the faster the correct answers to semantic and non-chuck conditions. The higher the control efficiency of the prepotent response inhibition, the higher the solving rate of the perceptual chuck conditions. And the ERP results showed that the semantic chuck condition elicited larger P200 amplitude than perceptual and non-chuck conditions, which reflected that semantic chuck condition need more attention resource. The non-chuck condition evoked larger N400 amplitude than other two conditions, which indicated that association process of semantic and perceptual chuck condition is weakened. And the semantic and perceptual chuck conditions elicited larger Slow Positive Wave (SPW) than non-chuck condition, which reflected that these two conditions need more cognitive resource to evaluate answer. From above all, presented study reveals that perceptual and semantic chunks hinder remote associations, and this effect may come from excessive investment in early attention resources.

Keywords: remote association, cognitive control, perceptual chunks, semantic chunks

爱会让人更有创造力吗？一项基于 fNIRS 的超扫描研究

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摘要 爱是人类永恒的话题，爱情和浪漫关系也是无数文学和艺术作品的灵感来源。俗话说身无彩凤双飞翼，心有灵犀一点通。处于热恋中的恋人是否真的心心相印，在处理任务的过程中有高度的默契呢？本研究探讨了恋人在创造性任务上相互协作的机制，以及他们的协作是否不同于陌生人或彼此没有浪漫关系的个体，首次从双人互动的视角考察了“爱”影响创造性问题解决的认知神经机制。被试分为恋人组和陌生男女组两组，要求他们完成团体创造力任务——现实问题解决任务（realistic presented problems, RPP），运用近红外光学脑成像（functional near-infrared spectroscopy, fNIRS）的超扫描技术，记录了情侣组和陌生男女组在任务过程中前额叶（prefrontal cortex, PFC）和右侧颞顶联合区（right temporal-parietal junction, r-TPJ）的大脑活动变化。研究结果发现，与陌生男女组相比，情侣组在创造力任务中的原创性和流畅性更好，合作指数也更高。fNIRS 数据显示，与陌生组相比，情侣组在创造力任务中脑间同步性（interpersonal brain synchronization, IBS）更高，且与合作指数呈显著正相关。以上结果说明了，坠入爱河或因爱合作可能为创造力开启了一扇大门。fNIRS 技术的使用为探讨情侣如何通过合作创造性解决问题的加工机制插上了一双翅膀，将恋人之间心有灵犀的奇妙过程外显化，成为将埋藏在内心深处的爱呈现给人们欣赏的绝佳工具。未来研究可以借助 fNIRS 技术进一步揭示团体合作和团体创造性行为的脑间互动机制，并考察不同亲密关系、不同亲密程度、不同人际互动模式和不同互动环境对团体创造力表现的影响及其潜在的认知神经机制。

关键词 爱，创造力，脑间同步性

Is the creativity of lovers better? A functional near-infrared spectroscopy hyperscanning study

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Abstract: Love is the eternal topic of human beings. Love and romantic relationships are the core inspiration for countless literary and artistic works. As the saying goes, even when the bodies of lovers are not fluttering side by side like phoenix wings, hearts are the thread from root to tip of the magic horn. Are lovers really heart to heart and have a high degree of tacit understanding in the process of handling tasks? This study explores the mechanisms of how lovers collaborate with each other on creative tasks and whether their collaboration differs from that of strangers or individuals without romantic relationships, providing the first examination of the cognitive neural mechanisms by

which "love" influences creative problem solving from the perspective of individual interactions. We divided participants into two combinations of unfamiliar male and female groups and heterosexual couples and asked them to complete the group creativity task-Realistic Presented Problems (RPP). Functional near-infrared spectroscopy (fNIRS) were used to record changes in brain activity in the prefrontal cortex (PFC) and right temporal-parietal junction (r-TPJ) during the task for two groups. The behavioral results found that originality and fluency in the lover dyads were significantly higher than in the stranger dyads. Moreover, compared to the stranger group, the behavioral index of cooperation was significantly higher in the lover dyads. Significantly increased interpersonal brain synchronization was observed when the lover group was solving the RPP task. Furthermore, in the lover group, interpersonal brain synchronization was positively correlated with cooperation performance and RPP originality. These data indicate that lovers had more advantages in interaction and cooperation, and this contributed to the solving of group creative problems. The use of fNIRS technology gives a pair of wings to explore the processing mechanism of how couples solve problems creatively through collaboration, externalizing the amazing process of heart-to-heart between lovers and becoming an excellent tool for examining the manifestation of love we hide in the heart. Future research should consider the use of fNIRS technology to clarify the inter-brain interaction mechanism and group creative behavior of participants, and further investigate people's group creativity performance and its underlying cognitive neural mechanisms in the perspective of different intimacy relationship, different degree of intimacy, different modes of interpersonal interaction, and different interaction environments.

Keywords: love, creativity, interpersonal brain synchronization

促发顿悟型广告创意的有意与无意加工及其认知后效

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摘要 广告在日常生活中无处不在, 在商业营销、品牌延伸甚至宣传方面都发挥着重要作用。研究表明, 广告引导着许多顾客的品牌选择和购买决策, 尽管大多数人没有表现出刻意的意愿去寻找广告或者在广告出现时抵制它。什么因素促使广告发挥作用? 现有研究证据表明, 广告促进购买意图, 品牌偏好和决策至少部分通过无意识的过程, 在观看广告, 即使观察者很少甚至不会刻意观看广告, 也许只给它一个短暂的一瞥或回眸。营销和广告中无意识加工的重要性也由三种常见的广告方法来说明, 它们被称为软广告 (如企业社会责任广告), 植入式广告 (如产品的标志或品牌植入电影) 和潜意识广告 (如。潜意识广告 (例如, 在播放电影时在屏幕上投影 "吃爆米花" 和 "喝可口可乐" 的字样), 所有这些都是为了吸引顾客和推广广告产品或品牌。自然, 作为一个功利行为, 广告的设计是为了达到最大的认知特别是营销效果 (如购买意向)。为了达到这样的效果, 虽然无意识和有意识的广告策略有时会被独立使用, 但更多的情况是它们被结合起来。在这个意义上, 许多广告的有效性是有意识和无意识元素的产物。换言之, 为了最大限度地提高营销效果, 许多有意识和无意识的元素被同时运用在广告活动中。然而, 人们对有意识和无意识过程对创意广告的认知有效性的各自的贡献知之甚少, 其中一些广告还可能诱发洞察力体验。为了量化商业广告中有意识和无意识过程在记忆有效性中的作用, 我们采用了一种双过程、信号检测技术来分离 80 个印刷广告所引起的有意识回忆和无意识辨别的贡献, 其中一半被认为是标准的, 另一半是创造性的。共有 51 名参与者完成了即时 (5 分钟后) 和延迟 (3 天后) 的记忆识别测试。与标准广告相比, 创意广告被发现能增强识别能力, 并在有意识和无意识的记忆中表现出优势, 这种优势在测试时间间隔内有所下降。进一步的分析表明, 由广告诱发的洞察力时刻, 无论它是标准的还是创造性的, 都能巩固无意识的记忆, 而没有诱发洞察力的广告则能改善有意识的记忆。本文讨论了这些发现的意义。

关键词 创意广告, 记忆, 无意记忆, 意识, 顿悟

Quantifying the Roles of Conscious and Unconscious Processing in Insight-Related Memory Effectiveness within Standard and Creative Advertising

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Abstract: Advertising pervades daily life, playing vital roles in commercial marketing, brand extension and even publicity propaganda. Research has indicated that advertising guides many customers' brand choices and purchase decisions, although most individuals show little deliberate willingness to either seek out advertising or to resist it when it is present. What makes advertising work? Accumulating evidence suggests that advertising facilitates purchase intentions, brand preferences and decision making at least in part through unconscious processes that arise during the viewing of an advertisement, even if the observer does not deliberately engage with the advertisement, perhaps only giving it a brief and transient glance. The importance of unconscious processing in marketing and advertising is also illustrated by three common advertising approaches, which are termed soft advertising (e.g., corporate social responsibility advertisements), implanted advertising (e.g., products' logos or brands implanted in movies) and subliminal advertising (e.g., subliminally projecting the words "eat popcorn" and "drink Coca-Cola" on the screen during showing movies), all of which have been developed to attract customers and promote the advertised product or brand. Naturally, as a utilitarian business, advertising is designed for maximum cognitive especially marketing effectiveness (e.g., purchase intent). To achieve such effectiveness, although unconscious and conscious advertising strategies are sometimes used in isolation, it is more often the case that they are combined. In this sense, the effectiveness of many advertisements is a product of both conscious and unconscious elements. In other words, to maximize marketing effectiveness many conscious and unconscious elements are simultaneously employed within campaign advertising. However, little is known about the individual contributions that conscious and unconscious processes make to the cognitive effectiveness of creative advertisements, some of which may also induce insight experiences. To quantify the roles of conscious and unconscious processes in memory effectiveness within commercial advertising, a dual-process, signal-detection technique was adopted to separate the contributions of conscious recollection and unconscious discrimination induced by 80 printed advertisements, among which half were considered standard and the other half creative. A total of 51 participants completed immediate (5 minutes later) and delayed (3 days later) memory recognition tests. In contrast to standard advertising, creative advertising was found to enhance recognition and to demonstrate advantages in both conscious and unconscious memory, which decreased across the test-time intervals. Further analyses showed that a moment of insight induced by an advertisement, regardless of whether it is standard or creative, can consolidate unconscious memory, whereas advertisements that do not induce insight improve conscious memory. The implications of these findings are discussed.

Keywords: creative advertising, memory, unconscious memory, consciousness, insight

(2) “普通心理和实验心理专业委员会”专题研讨会 2

面孔吸引力评价背景效应的连续转换趋势

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摘 要 以往研究表明目标面孔的吸引力评价受到背景面孔的影响, 产生同化或对比效应。但以往研究中对同化/对比效应的计算常常是对不同背景下目标面孔吸引力评分进行比较(相对标准定义), 并没有考虑目标面孔单独呈现时的初始吸引力水平, 因而可能是虚假的同化或对比效应。本文以单独呈现的目标面孔吸引力

评分作为基准值计算同化/对比效应（绝对标准定义），以目标与背景之间的相似性为切入点，考察了目标与背景面孔吸引力的不同差异对目标面孔吸引力评价的影响。实验1以低吸引力的面孔作为评价目标，中高吸引力的面孔作为背景，操纵目标与背景之间的吸引力差值，并采用绝对标准定义的计算方法验证同化/对比效应。结果发现，在中高吸引力背景面孔下，个体对低目标吸引力的评价会升高，出现同化效应。同时发现了同化向对比连续转换的趋势，即目标背景差异变大的条件下，个体对目标的评价变成低评，出现了往对比效应转换的趋势。实验2进一步让被试直接对实验1的目标和背景面孔进行分类判断，验证相似性影响分类进而影响到同化/对比效应的产生。结果发现，差异大的目标和背景面孔的确更容易被分为不同的类别，而差异较小的目标和背景面孔更容易归为一类；并且这种分类倾向与同化/对比效应大小显著相关。这些结果表明，面孔吸引力评价的背景效应是客观存在的，这种效应受到目标与背景之间吸引力相似性的调节，表现为同化向对比连续转换的趋势，并影响目标与背景的归类而导致不同的背景效应，即同化或对比效应的产生。

关键词 同化效应；对比效应；相似性；连续转换趋势

The Shift Trend of Contextual Effect of Facial Attractiveness Evaluation

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Abstract: Previous studies suggested that the attractiveness evaluation of a face was influenced by context face, resulting in assimilation or contrast effect. However, these results were usually based on the comparison among evaluations of the target faces under different attractiveness contexts, without considering the attractiveness of the target face in isolation (i.e., relative standard), and might lead to incorrect conclusion on the contextual influence on target evaluation. Base on the perspective of face categorization, this study investigated the influence of attractiveness difference between the target and the context faces on the evaluation of target face. The assimilation/contrast effect was measured with the attractiveness of the same face in isolation as a comparison value (i.e., absolute standard). In Experiment 1, the low-attractive faces were selected as the rating target, while medium and high attractive faces were selected as the context. We manipulated the attractiveness difference between the target and context and verified the assimilation/contrast effect by the calculation method defined by absolute standard. The results found that under the medium-high attractive background faces, individuals' evaluation of the attractiveness of the low target would increase, showing an assimilation effect. At the same time, a shift trend from assimilation to contrast was found, where a contrast effect appeared in the condition of largest attractiveness difference. In Experiment 2, participants were asked to classify the target and context faces in Experiment 1 to verify that how the target-context similarity influences the categorization and its relationship with assimilation/contrast effect. The results showed that the face pair with large attractiveness difference were indeed more likely to be categorized into different categories, while the faces with less difference were more likely to be categorized into a same category. In addition, the tendency of categorization was significantly related to the size of assimilation/contrast effect. These results indicated that the context effect of facial attractiveness evaluation is robust, and is moderated by the similarity between the target and the context, manifested in a shift trend from assimilation to contrast. The similarity also leads to different context effects, i.e. assimilation or contrast effect, via resulted different categorization of the target and the context.

Keywords: assimilation effect; contrast effect; similarity; shift effect

陌生关系的知觉者和被知觉者的人格特质 对面孔-人格知觉准确性的影响

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摘要 人格知觉是评价和判断被试人格特质的过程。判断他人和自我的特征是日常生活中普遍存在的一项重要活动。已有研究总结出影响人格知觉判断准确性的四个因素，即知觉对象的性质、被知觉的特征、判断所依据的信息（数量和质量）以及知觉者。然而，这四个因素对人格判断准确性的影响究竟有多大，目前尚不清楚。因此，本研究旨在探讨知觉者与目标人的人格特质如何影响基于目标人脸部照片的准确人格判断。在本研究中，我们招募了两组年轻人。一组为感知者，另一组是目标。这两组人间是陌生关系。我们收集了所有这些人的 16PF 自测数据，以及目标人的脸部照片。然后我们让这组感知者用 10 分的量表来判断目标人的 7 个特质。这 7 个特质是从 16PF 中选出的，考虑了它们的可观察性和可理解性。它们是聪慧性、独立性、紧张性、乐群性、幻想性、支配性和开放性。以知觉者的自我评价得分与目标者的自我评价得分之差作为人格判断的准确性指标。从知觉者的角度来看，知觉者的乐群性越高，人格知觉的整体准确度越低；知觉者聪慧性越高，人格知觉的整体准确性越高。其次，知觉者的聪慧性和自立性越高，其对聪慧性和自立性的知觉准确性也越高；感知者的乐群性越高，对乐群性的知觉准确度就越低。从被知觉者的角度看，被知觉者的乐群性越高，其人格被知觉的整体准确性越低；支配性越高，人格知觉的整体准确性越高。其次，被知觉者的幻想性和紧张性越高，其幻想性和紧张性的知觉准确性越低。虽然本研究评估了人格特质的可理解性和可观察性作为从 16PF 人格特质做出选择的依据，是否有一个更适合于面孔的人格知觉研究的特质表值得进一步探讨。另外，本文的研究结果是基于相关分析的。本文结果中的交叉特征关联过于复杂，尚未讨论。简而言之，这些相关性背后的原因需要更深入的探索。

关键词 面孔-人格知觉，人格特质，知觉准确性

The influence of the personality traits of the perceiver and the target in a strange relationship on the accuracy of face-personality perception

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Abstract: Personality perception is the process to evaluate and judge the personality traits of targets. Judging the traits of others and the self is a ubiquitous and consequential activity of daily life. It is summarized that there are four factors affecting the accuracy of personality judgment, which are properties of the target of judgment, the trait that is judged, the information upon which the judgment is based (its quantity and quality), and the individual who does the judging. However, it is still unclear about the details that the four factors contribute to the accuracy of personality judgment. Therefore, present study aims to investigate how the perceiver and the target person's personality affect the accuracy personality judgement based on the target person's face photo. In present study, we recruited two groups of young people. One group was arranged as the perceiver, the other group was the target. These two groups of people were strangers. We collected all these people's 16PF self-test data, and the target person's face photos. Then we asked the group of perceiver to judge the target person's 7 traits in 10 points scale. These 7 traits were chosen from the 16PF, considering their observability and comprehensibility. They were intelligent nature, self-Reliance, tension, warmth, abstractedness, dominance, and openness to change. We took the difference between the perceiver's rating and the target person's self-rate score as the accuracy index of the personality judgment. From the perspective of the perceiver, the higher warmth of the perceiver, the lower overall accuracy of personality perception; the more intelligent perceiver, the higher overall accuracy of personality perception. Secondly, the higher intelligent and self-reliance of the perceiver, the higher the accuracy of reasoning and self-reliance trait perception; the higher

warmth of the perceiver, the lower accuracy of the perception of warmth. From the perspective of the target, the higher warmth of the target, the lower the overall accuracy of the perception of personality; the higher dominance, the higher the overall accuracy of the perception of personality. Secondly, the higher the abstractedness and tension of the perceived person, the lower the perception accuracy of abstractedness and tension. Although this study evaluated the comprehensibility and observability of personality traits as a basis for making choices based on the 16PF personality traits. Whether there is a better fit for face-personality perception research is worth of further exploration. In addition, the results of this study are based on correlation analysis. The cross-characteristic correlations in the results of this article are too complicated and have not been discussed. In short, the reasons behind these correlations require more in-depth exploration.

Keywords: face-personality perception, personality trait, perception accuracy

不同视觉意识水平下面孔加工优势的分离效应

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摘要 与非面孔物体相比, 面孔具有明显的类别优势效应。面孔加工的优势从何而来? 依据前人研究结果, 一种可能的原因是整体构型加工优势: 与非面孔物体相比, 面孔更依赖于整体的构型加工。另一种可能性为局部特征加工优势: 面孔的局部特征(如眼睛、嘴巴、皮肤纹理等)提供了大量有关身份、情绪、意图等社会信息, 在视觉加工中具有高显著性。此外, 面孔的类别优势效应在客体不可见时依然存在。那么进一步的, 不同视觉意识水平下面孔优势的原因是否相同? 在日常生活中, 一些似脸的非面孔物体也能使人产生面孔的生动知觉。这些似脸物体具有与面孔类似的整体构型, 但局部的特征却都不是面孔, 从而可以巧妙分离面孔整体构型和局部特征的作用。本研究拟采用似脸的非面孔物体与真实面孔、普通物体进行比较, 并结合双眼竞争和视觉拥挤范式操控客体的视觉意识水平, 探究不同视觉意识水平下面孔加工优势的具体认知机制。实验一采用双眼竞争范式, 结果发现在受抑制阶段(多数时间处于不可见状态下), 似脸物体与真实面孔具有类似的竞争优势, 即比普通物体更快地突破抑制; 在主导阶段(多数时间处于可见状态下), 似脸物体与普通物体更类似, 而面孔刺激具有最长的主导时间, 体现出面孔独有的意识上双眼竞争优势。为了更好地控制反应偏向的影响, 实验二采用了视觉拥挤范式结合信号检测论的实验方法, 结果发现随着干扰物数量的增加, 真实面孔的知觉敏感性降低, 但似脸物体并不受影响。更有趣的是, 在干扰物最多的条件下(不可见程度最高), 真实面孔的知觉敏感性降至与似脸物体相似的水平。该结果暗示了面孔的加工优势来自于整体构型和局部特征两个方面, 并只有后者会受到视觉意识水平的调节作用。

综合实验一和实验二的结果表明, 不同视觉意识水平下面孔加工优势具有分离效应: 不可见条件下的面孔优势效应主要依赖面孔的整体构型, 而可见条件下的面孔优势效应离不开面孔独特的局部特征。最后我们对该效应可能的神经心理机制进行了讨论。

关键词 面孔优势, 视觉意识, 双眼竞争, 面孔错觉

Twofold advantages of face processing with or without visual awareness

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Abstract: The advantages of face processing over processing items in other object categories have been found in conditions both with and without visual awareness. This study examines the possible mechanisms underlying the advantages of processing visible and invisible faces. Specifically, contributions from face-like configurations and face-specific local attributes are evaluated by comparing perceptual processes of three image types: genuine faces, face-like objects and non-face-like objects. Illusory face perception induced from face-like objects largely depends on information from a global configuration level, with a high tolerance for variations in local features. Comparable

processing advantages for real faces and face-like objects are observed in invisible conditions using interocular rivalry and crowding paradigms. However, the visible face advantage seems to be exclusive to genuine faces. These results suggest that the face processing privilege is twofold: it is strongly triggered by global configuration without visual awareness, but with awareness it relies on facial local attributes.

Keywords: face superiority, visual awareness, binocular rivalry, crowding, pareidolia

基于面孔年龄、面孔情绪和面孔吸引力的可信度判断

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摘要 人们可以基于面部特征来判断对方是否值得信任, 但有关面孔年龄是否影响人际信任及如何影响人际信任还未能得到一致结果。本研究采用信任博弈范式, 探究面部年龄与面孔吸引力、面孔情绪在基于面孔的信任判断中的相互作用。在实验 1 和 2 中, 要求被试分别在 2000 毫秒和 33 毫秒的面孔呈现时间后对先前呈现的青年或老年面孔进行金额分配。结果显示, 相较青年面孔, 个体分配给老年面孔的金额数更多。同时, 面孔年龄和面孔吸引力之间也存在交互作用, 只有当低吸引水平下, 个体相较青年面孔分配给老年面孔的金额数更多。而面孔年龄与面孔情绪的交互作用则在两个实验中并不一致: 实验 1 中, 在快乐和悲伤水平下, 个体相较青年面孔分配给老年面孔的金额数更多; 实验 2 中, 仅在只在快乐水平下, 个体相较青年面孔分配给老年面孔的金额数更多。以上结果表明, 个体在接触不同年龄的陌生人时, 可能会根据多种面部线索进行可信度判断。

关键词 信任博弈, 可信度, 面孔年龄, 吸引力, 情绪表达

Perceiving the facial trustworthiness: facial age, emotional expression and attractiveness

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Abstract: People can make trustworthiness judgements based on facial characteristics. However, the previous findings regarding on whether facial age influences interpersonal trust are inconsistent. Using the trust game, the current study investigated the interactions of facial age with attractiveness and emotional expression in regarding to trustworthiness judgements. In experiments 1 & 2, younger participants were asked to invest in either younger or older faces that were shown for 2000 ms and 33 ms respectively. The results showed that people trust the faces of older people more than they do of younger people. There was also an interaction between facial age and attractiveness. The participants invested more money in older faces than in younger faces only when they perceived the faces to be less attractive. However, the interaction between facial age and emotional expression was inconsistent in the two experiments. The participants invested more money in older faces that were shown for 2000 ms when they perceived the happy and sad emotions, but they invested more money in older faces that were shown for 33 ms when they perceived the happy emotion. These results reveal that people make trustworthiness judgements based on multiple facial cues when they view strangers of different ages.

Keywords: trust game, trustworthiness, facial age, attractiveness, emotional expression

自我面孔诱发大小知觉错觉

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摘要 过去的大量研究表明自我面孔享有识别、注意、记忆等方面的加工优势。我们最近开展的一项研究发现自我面孔的这种加工优势能够影响基本的知觉过程从而诱发大小错觉。实验1采用大小辨别范式,发现与相同大小的他人面孔相比,自我面孔会被知觉得更大。为排除熟悉性因素的影响,实验2将他人面孔替换为被试高度熟悉的名人面孔,发现与相同大小的名人面孔相比,自我面孔同样会被知觉得更大,说明自我面孔诱发的大小错觉特异于自我面孔加工。为进一步排除面孔物理特征、熟悉性等因素对研究结果的混淆,实验3将大小辨别范式与联结匹配范式相结合,把两张不同的卡通面孔随机分配至自我面孔条件和他人面孔条件,两张卡通面孔便被赋予了自我面孔和他人面孔的具象意义,进而探究具有相同熟悉性的卡通面孔在联结匹配前后大小知觉的变化。实验结果发现,自我联结面孔比相同大小的他人联结面孔看起来更大,说明自我面孔诱发的大小高估错觉可以延伸至自我联结面孔。实验4将艾宾浩斯错觉范式的变式作为测量工具,考察自我面孔知觉优势加工是否可以调节情境中其他物体的大小知觉,结果表明当联结面孔作为情境刺激时,自我面孔优势加工还会进一步调节对其他物体的大小知觉,使得物体的大小被低估,产生类艾宾浩斯错觉。综上,该研究发现了一种新的自我面孔加工优势——自我面孔大小高估错觉,而且,这一错觉效应可以延伸至自我联结面孔,进而调节其他物体的大小知觉。当前的研究结果从大小知觉层面为自我面孔加工特异性提供了新的证据,并强调了自我意识在大小知觉中发挥的重要作用。

关键词 自我面孔, 自我优势, 大小错觉, 自我意识, 大小高估

My own face looks larger than yours: A self-induced illusory size perception

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Abstract: Size perception of visual objects is highly context dependent. Here we report a novel perceptual size illusion that the self-face, being a unique and distinctive self-referential stimulus, can enlarge its perceived size. By using a size discrimination paradigm, we found that the self-face was perceived as significantly larger than the other-face of the same size. This size overestimation effect was not due to the familiarity of the self-face, since it could be still observed when the self-face was directly compared with a famous face. More crucially, such illusion effect could be extended to a new cartoon face that was transiently associated with one's own face and could also exert further contextual influences on visual size perception of other objects. These findings together highlight the role of self-awareness in visual size perception and point to a special mechanism of size perception tuned to self-referential information.

Keywords: self-face, self-advantage, size illusion, self-awareness, size overestimation

瞳孔扩张与面孔信任判断准确度的关系

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摘要 准确区分陌生面孔的可信程度, 具有重要的社会效用研究发现, 基于面孔的信任判断具有群体一致性 (Rule et al., 2013), 例如, 面孔结构的宽-高比例 (width-to-height ratio FWHR) 可以预测信任判断, 宽-

高比例越小，信任度判断越高（Costa, Lio, Gomez, & Sirigu, 2017）。微笑表情的面孔可信度判断较高，而愤怒表情的面孔可信度判断较低（Dunn, & Schweitzer, 2005）。然而，在面孔可信度的研究中，研究者主要侧重群体主观判断的一致性，没有充分考量主观可信度判断是否符合客观可信度的标准。因此，本研究通过系统操作客观可信度这一自变量，并结合眼动加工指标，探究人们是否能够准确区分不同等级客观可信度的面孔，以及哪些视觉加工指标对可信度判断加工具有显著预测作用。本研究采用 2（警觉提示：无、有）× 6（客观可信度：1、3、5、7、9、11）混合实验设计，警觉提示为被试间变量，客观可信度为被试内变量。因变量为面孔呈现时的眼动指标（首次注视时间，瞳孔校正值，总注视时间）以及投资金额和投资反应时。从中国公安部颁发的通缉令中挑选 15 名男性和 15 名女性通缉犯证件照，用 FreeMorphing 软件将性别相同的通缉犯与普通面孔合成为每组包括 11 等级的面孔图片集合，共获得 30 组图片。在本实验中，挑选每组中 1、3、5、7、9、11 等级的面孔共 180 张，作为客观可信度的操作，等级越高，客观可信度越高。瞳孔校正值结果表明，客观可信度等级越低，瞳孔扩张越显著，而且 1、3、5、7 级都显著大于 11 级，达到显著水平。从首次注视时间来看，客观可信等级最低的面孔首次注视时间最长，瞳孔扩张及首视点的数据都表明，早期信息编码在面孔社会决策中发挥重要作用。客观可信度显著地影响投资金额，并且效应量较大（ $\eta^2 p = 0.56$ ），同时贝叶斯检验的结果， $BF_{10} > 1000$ ，这些结果表明可以在较高可信度水平上推测投资决策受到对面孔客观可信度判断的影响。鉴于瞳孔变化具有注意警觉性和非意识控制性的特点，本研究表明视觉加工能够在感知觉水平上准确区分客观可信度不同等级的面孔，且影响社会决策。

关键词 面孔信任 客观可信度 瞳孔扩张

Relationship Between Pupil Dilation and Accuracy of Face Trust Judgment

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Abstract Assessing trustworthiness of others accurately is a extremely important social skill. Researchers have investigated how people form consensual judgments of trustworthiness from facial features. However, previous studies tend to focus on the consistency of group subjective judgments, ignoring whether the results of subjective judgments meet the criteria of objective trustworthiness. The goal of this study was to investigate whether people could distinguish faces with different levels of objective trustworthiness accurately, and which visual processing indicators can predict the trustworthiness judgment. In this study, wanted criminal faces and ordinary faces with the same sex were combined into a set of 11 rated faces for each group using Morphing software. Faces at levels 1, 3, 5, 7, 9, 11 in each group were selected as the levels of objective trustworthiness. The higher the rating, the higher the objective trustworthiness. The experiment was 2(Alert Prompt: alert prompt, non-alert prompt) × 6(Objective Trustworthiness: 1, 3, 5, 7, 9, 11) mixed design. The Alert Prompt was a between-subjects variable, and the Objective Trustworthiness was a within-subjects variable. Three eye-movement indicators (Pupil calibration, First fixation duration, Total fixation duration), Investment amount and Investment response time were dependent variables. The experimental task was to invest in a group of venture capital recruiters. Before the task, participants were told that they had 1000 ¥ of virtual coins, and each time they could choose one of 0 ¥, 200 ¥, 400 ¥, 600 ¥, 800 ¥, 1000 ¥ to invest. And on each investment, the venture capitalist promised to give them four times the return on their investment. In the investment task, participants first saw the photos of the venture capitalist recruiter. After the photos disappeared, they chose the amount to be invested. Compared to the non-alert prompt group, the alert prompt group had the alert warning added to the instructions “Please note that 20% of these venture capitalists are fraudsters. Please be careful with your investments”. Given pupil dilation has the characteristics of involuntary control and attentional vigilance, which is better than other eye movement index in the aspect of reflecting non-controlled vigilance processing. Therefore, this study focused on the indicator of pupil dilation. The results showed that the increase of trust alert of pupils was consistent with the decrease of investment amount in investment judgments for objective trustworthiness

faces. The lower the objective trustworthiness rating was, the more significant the pupil dilation was, and the lower the investment amount was. This tendency was even more pronounced in the absence of alert prompt. And the faces with the lowest objective trustworthiness had the longest first fixation duration time. The total fixation duration time of the face with the highest objective trustworthiness was significantly higher than that of the faces with other objective trustworthiness levels. In conclusion, the degree of pupil dilation reflected trustworthy alertness, that is, objective trustworthiness can be distinguished by the visual perception of facial information. From the perspective of visual processing, this study proved the objective accuracy of face trustworthiness judgment and the significance of information processing of sensory perception to social decision-making.

Keywords : face trustworthiness; objective credibility; pupil dilation

2.5 “医学心理专业委员会”专题研讨会

新冠肺炎期间医护人员的心理需求及热线来电分析

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摘要 新冠肺炎疫情爆发以来，医护人员冲在抗疫第一线，是救治新冠肺炎患者的核心力量。但由于疾病的突发性、不确定性，一线的医护人员承受着巨大的心理压力。本研究通过自编的《心理需求量表》对 826 名一线医护的心理需求进行了调查，并根据教育部华中师范大学心理援助热线平台医护工作者的来电情况，对来电的 161 名医护人员的心理求助问题、具体表现和情绪状态随时间变化的趋势进行分析。结果显示：（1）心理需求调查结果表明，有较大心理压力的医护人员占比 60% 以上，其中压力非常大的医护有 21.7%，同时有一半以上的医护人员表示需要心理支持。在希望获得的心理帮助类型中，选择放松减压的人数最多，约占 77%；其次是情绪疏导，约占 52%。在希望获得的心理帮助方式中，选择放松活动的人数最多，约占 73%；其次是选择视频、音频、文字等自助材料，占比 40% 以上；而选择专业的心理咨询的比例相对较低，占比不到 20%。（2）心理援助热线平台医护人员来电数据显示，医护来电者面临的问题中，自我情绪问题最为突出，约占 44.6%，并在 6 月中旬达到了峰值；其次是人际关系问题，约占 38.7%，在 5 月中旬后出现增多，并在 6 月初和 6 月底达到了峰值，面临问题中除人际关系问题呈上升趋势外其他问题总体呈下降趋势。（3）医护人员来电者的具体表现以焦虑最为突出，约占 60.1%，并在 5 月初和 6 月上、中旬三次达到峰值；其次是抑郁和睡眠障碍，分别占比 20.4% 和 13.3%。具体表现中焦虑和睡眠障碍有下降趋势，但抑郁表现略有上升趋势。（4）医护人员来电者的情绪状态主要为担忧，约占 44.8%，在 6 月中旬达到峰值；其次是身心疲惫和压力骤增，分别占比 33.1% 和 29.6%。担忧情绪和压力骤增情绪在总体上略有上升趋势，其他各类情绪均呈下降趋势。本研究结果表明，有较大比例的医护心理压力较大，需要心理支持，专业人员要采取更加主动、灵活的方式为其提供心理服务。随着疫情的发展，医护面临的问题和情绪状态也会有所变化，为后疫情时期医护工作者的心理援助工作提供了参考。

关键词 新冠肺炎，医护工作者，心理需求，求助问题

Analysis of Psychological Needs and Hotline Cases Among Medical Staff during COVID-19

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Abstract: Since the outbreak of COVID-19, medical personnel have been worked on the front line to fight against the epidemic. Undoubtedly, they are the core force in the treatment of patients with COVID-19. However, due to the suddenness and uncertainty of the disease, the front-line medical staff are under tremendous psychological pressure. In this study, the psychological needs of 826 first-line medical personnel were investigated through the self-compiled "Psychological Needs Scale". According to the calls of medical personnel on the MOE-CCNU Mental Health Service Platform, psychological help-seeking problems, specific manifestations and trends of emotional state of the 161 medical personnel were analyzed. The results showed that: (1) The psychological needs survey showed that more than 60% of medical personnel had greater psychological pressure, of which 21.7% were very stressed. More than half of the medical personnel reported that they needed psychological support. In terms of type of psychological assistance that they wanted to get, a majority of medical personnel chose relaxing and reducing pressure, accounting for about 77%, followed by counseling for their emotion, accounting for about 52%. In terms of way of psychological

help that they wanted to get, relax activities was chosen by the most medical personnel, accounting for about 73%; followed by self-help materials such as videos, audios, and text, accounting for more than 40%; and the least medical personnel would choose professional psychological counseling, accounting for less than 20%. (2) According to the record of psychological assistance hotline platform, emotional problems of medical personnel were the most prominent, accounting for 44.6%, and reaching a peak in mid-June, followed by interpersonal relationship problems, accounting for about 38.7 %, which increased after mid-May, and reached a peak at the beginning of June and the end of June. The number of most problems were generally decline except the number of interpersonal relationship problems which were on the rise. (3) The specific manifestations of medical personnel were anxiety, accounting for 60.1%, and peaking three times in early May, early and mid-June, followed by depression and sleep disorders, accounting for 20.4% and 13.3% respectively. In the specific manifestations, anxiety and sleep disorders had a downward trend, but depression performance had a slight upward trend. (4) The emotional state of medical personnel callers was mainly worry, accounting for about 44.8%, reaching a peak in mid-June; followed by physical and mental exhaustion and a sudden increase in stress, accounting for 33.1% and 29.6% respectively. The mood of worry and the sudden increase in pressure showed a slight upward trend in general, and all other kinds of sentiments showed a downward trend. The results of this study showed that a large proportion of medical care workers were under greater psychological pressure and need psychological support. Professionals should take a more active and flexible way to provide psychological services for them. With the development of the epidemic, the problems and emotional states faced by medical staff will also change, providing a reference for the psychological assistance work of medical workers in the post-epidemic period.

Keywords: COVID-19, medical staff, psychological needs, hotline

新型冠状病毒肺炎抗疫一线医护人员的心理健康、应对及心理服务需求

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摘要 目的: 探讨新型冠状病毒肺炎病房一线医护人员的心理健康水平、应对及心理服务需求。方法: 采用方便取样的方法, 在疫情开始两周后, 向武汉收治新冠肺炎患者的某定点医院的一线医护人员 311 人发放了心理健康自评问卷 (SRQ-20) 和自编问卷。结果: 39% 的一线医护人员存在焦虑、抑郁等心理症状, 心理症状的严重程度与应对行为的频率显著负相关, 与使用的心理服务次数显著负相关。中介效应分析显示, 事件应对在医护人员面对感染风险和心理健康之间起到积极的中介作用。一线医护人员主要使用的心理服务方式有浏览心理学公众号和阅读心理学书籍 (61%, 57%), 10% 曾拨打心理服务热线; 在心理服务需求方面, 主要希望有放松安眠小程序和心理学知识链接推送的心理服务 (68%, 57%), 有近三分之一的医护人员希望有网络视频心理咨询或电话咨询服务。结论: 抗疫一线医护人员存在一定比例的焦虑抑郁心理症状, 积极的事件应对方式与症状的缓解有密切关系, 并且有较多的心理服务需求。

关键词 新型冠状病毒肺炎, 医护人员, 心理健康, 应对, 需求

Mental health, coping strategies and psychological service needs among front-line medical staff in fighting against COVID-19

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Abstract: Objective: To explore the mental health status, coping strategies and psychological service needs of

first-line health care workers in New Coronavirus pneumonia ward. *Methods:* Self-reporting questionnaire (SRQ-20) and self-designed questionnaire were distributed to 311 first-line health care workers in a designated hospital in Wuhan after two weeks of the outbreak. *Results:* The findings showed that 39% of the front-line medical staff had anxiety, depression or other psychological symptoms. The severity of psychological symptoms was negatively correlated with the frequency of coping behavior and the number of psychological services. The mediating effect analysis showed that event coping played a positive mediating role between infection risk and psychological symptoms. The main psychological services used by front-line medical staff are browse psychology official account and reading psychology book (61%, 57%), 10% have called psychological service hotline. In the aspect of psychological service demand, we mainly hope to have psychological service (68%, 57%) which is pushed by relaxing sleeping app and psychological knowledge link. Nearly one third of medical staff hope to have online video or telephone counseling service. *Conclusion:* there are a certain proportion of anxiety and depression symptoms in the front-line medical staff, positive event-related coping style is closely related to the relief of symptoms, and there are more psychological service needs.

Keywords: New Coronavirus pneumonia, health care workers, mental health, coping, needs

组织支持对抗疫一线医护人员创伤后应激反应的影响： 抗疫效能感和积极应对策略的链式中介作用

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摘要 目的：本研究旨在调查参与武汉新冠肺炎抗疫一线工作的医护人员在结束抗疫工作后的创伤后应激(PTSD)症状，检验组织支持感对一线医护人员 PTSD 症状的影响及相关机制；**方法：**采用短期纵向追踪研究方法，分别在 2020 年 3 月中（抗疫工作中）和 2020 年 4 月中（结束抗疫工作）对武汉一家新冠肺炎定点医院的医护人员进行两次网络问卷调查，共有 107 名医护人员同时参加了这两次调查。调查主要了解抗疫一线医护人员的组织支持感、抗疫效能感、抗疫应对策略和创伤后应激反应；**结果：**1) 样本中 59.8%一线医护人员无明显 PTSD 症状，35.5%一线医护人员有轻度 PTSD 症状，4.7%出现中度 PTSD 症状。本地医护人员的 PTSD 症状得分显著高于援鄂医疗队成员；2) 抗疫工作中的组织支持感对抗疫工作后的 PTSD 症状有显著负向预测作用；3) 抗疫效能感和疾病应对策略在这一关系中起到链式中介作用。**结论：**本研究结果提示，有相当比例的抗疫一线医护人员出现 PTSD 症状，应注意对相关人员的心理健康水平进行监测，并进行必要干预。组织支持感对降低一线医护人员的心理症状有重要作用，因此，在现阶段常态化抗疫工作以及今后的类似工作中，要注意从组织层面加强对一线医护人员的支持。

关键词 抗疫一线医护人员，PTSD 症状，组织支持，抗疫效能感，积极应对策略

Perceived Organizational Support and PTSD symptoms of the Frontline Healthcare Workers in the Outbreak of COVID-19 in Wuhan: The Mediating Effects of Efficacy to Overcome the Crisis and Positive Coping Strategies

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Abstract: Objective: the present study aimed to 1)investigate the PTSD symptoms among the frontline healthcare

workers during the COVID-19 outbreak in Wuhan; 2) examine the effect of organizational support on the PTSD symptoms of the frontline healthcare workers; 3) explore the underlying mechanism of organizational support and PTSD link by examining the mediating effects of efficacy to overcome the crisis and positive coping strategies. **Methods:** A short-term longitudinal study design was used. One hundred and seven medical staff participated in two waves of online survey conducted in March and April. The mental health status, efficacy to overcome the crisis, the positive coping strategies and perceived organizational support were reported at each wave. **Results:** 1) 59.8% healthcare workers were free of PTSD symptoms, 35.5% reported mild PTSD symptoms and 4.7% of them reported moderate PTSD symptoms. Local healthcare workers had greater risk of PTSD than the members of medical rescue teams; 2) Perceived organizational support had a significant negative effect on the PTSD symptoms among the frontline healthcare workers; 3) Efficacy to overcome the crisis and positive coping strategies fully mediated the association between perceived organizational support and PTSD symptoms. **Conclusion:** The findings highlight the needs for monitoring psychological adaptation of the frontline medical staff after the work combatting COVID-19 and providing interventions to those with significant PTSD symptoms. The results also emphasize the importance of organizational support in psychological protection of the frontline medical staff.

Keywords: frontline healthcare workers, PTSD symptoms, perceived organizational support, efficacy to overcome the crisis, positive coping strategies

巴林特小组对新冠疫情医务人员心理干预作用

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摘要 目的: 新冠疫情爆发时期医务人员面临巨大挑战和沉重压力, 承担了高强度和高应激的工作, 产生一系列心理应激反应, 严重影响医务人员的心身健康, 妨碍抗疫效率。本研究旨在评估巴林特小组在新冠疫情期间对医务人员心理压力反应的干预作用。**方法:** 采用前后自身对照实验设计, 为方便取样。在发热门诊及隔离病房工作的 14 名执业护士为干预对象, 女性 13 名, 男性 1 名。使用生活总体感受量表 (FS)、情绪温度计 (ET) 和创伤后成长问卷 (PTGI) 在干预前后评估护士的情绪状态和创伤后成长水平的改善程度。**结果:** 干预后, 在生活总体感受量表得分显著上升 ($t=-2.82, p=.014$); 在情绪温度计中, 在苦恼、焦虑、愤怒三个维度上, 分数下降但是尚未达到显著水平 ($t=2.03, p=.063, t=1.94, p=.075, t=1.82, p=.092$); 在创伤后成长量表中, 欣赏生活因子得分显著上升 ($t=-2.86, p=.013$), 在新可能性、精神改变两个分量表以及总分中, 分数上升但未达到显著水平 ($t=-1.95, p=.074, t=-2.02, p=.065, t=-1.92, p=.077$)。**结论:** 巴林特小组活动改善了新冠疫情一线医务人员的情绪状态, 促进了自身创伤后心理成长, 具有较好的推广应用价值。

关键词 巴林特小组, 心理干预, 医务人员, 行为研究, 新型冠状病毒

The Effectiveness of Psychological Intervention of Balint Group among Medical Staff during COVID-19 Outbreak

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Abstract: Purpose During the COVID-19 outbreak, medical staff faced great challenges and heavy pressure, and undertook the intensive and stressful work, resulting in a series of psychological stress reactions, which seriously affected the physical and mental health of medical staff and decreased the efficiency of fighting against COVID-19. The study aimed to assess the effectiveness of psychological interventions of Balint group among the medical staff during COVID-19. **Method** A quasi-experimental design with convenient sampling comparing pre- and

post-intervention was used. Fourteen registered nurse participators working in fever clinics and isolation wards were targeted for intervention, 13 female and 1 male. The nurses' emotional state and posttraumatic growth level were evaluated using the Delighted-Terrible Faces Scale (FS), Emotional Thermometer (ET) and Posttraumatic Growth Inventory (PTGI) prior to group intervention and again post-intervention. **Results:** The overall feeling of life scores increased significantly ($t=-2.82, p=.014$) after the intervention. In the three dimensions of distress, anxiety and angry, the score has dropped but has not yet reached a significant level ($t=2.03, p=.063, t=1.94, p=.075, t=1.82, p=.092$); In the Posttraumatic Growth Inventory, scores of appreciation of life raised significantly ($t=-2.86, p=.013$), two subscales of new possibility, spiritual change, and the total scores also increased but not reaching a significant level ($t=-1.95, p=.074, t=-2.02, p=.065, t=-1.92, p=.077$). **Conclusion:** The Balint group activities have improved their emotional state, further promoted the posttraumatic growth of frontline medical staff during the COVID-19, are propagable and applicative for mental health of nurses.

Keywords: Balint group, psychological intervention, medical staff, action research, COVID-19

新冠病毒爆发期间民众抑郁焦虑患病率及影响因素

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摘要 目的: 本研究旨在探讨新型冠状病毒感染的肺炎爆发 (Covid-19) 背景下普通人群抑郁和焦虑的患病率及其影响因素。方法: 本研究自 2020 年 2 月 9 日开始, 采用方便取样, 问卷星发放问卷, 横断面自我报告调查法, 从 6130 名中国公民中收集数据。采用自编问卷、焦虑和抑郁水平分别采用广泛性焦虑症 7 项量表和患者健康问卷 9 项量表进行自我报告。结果: 在 6130 名中国公民中, 焦虑和抑郁的患病率分别为 7.1% 和 12%。多元 logistic 回归分析显示, 担心 covid19 治愈后后遗症发生的可能性、每日上网时间、NCIP 相关信息来源、NCIP 相关信息的接收频率、社交媒体引发的负面情绪有关。结论: 官方需要发出一致的信息, 以减少公众的恐慌和困惑, 并减少公众对持续负面信息的暴露。

关键词 抑郁, 焦虑, 新型冠状病毒, 危险因素, 患病率

The factors related to depression and anxiety of Chinese citizens during the COVID-19 outbreak

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Abstract: Objective: The purpose of this study was to investigate the prevalence and influencing factors of depression and anxiety in the general population in the context of Covid-19. Methods: This study collected data from 6,130 Chinese citizens by means of convenient sampling. A cross-sectional and self-report survey was conducted by using an online questionnaire. Anxiety and depression levels was estimated by using the 7-item generalized anxiety disorder (GAD) scale and the 9-item patient health questionnaire. Results: The prevalence of anxiety and depression was 7.1% and 12%, respectively, among 6,130 Chinese citizens. Multiple logistic regression analysis showed that psychological disorders were related to the possibility of sequela after NCIP treatment, daily online time, sources of NCIP related information, frequency of receiving NCIP related information, and negative emotions caused by social media. Conclusion: The government and social media need to send a consistent message to reduce public panic and confusion, and to reduce public exposure to persistent negative information.

Keywords: depression, anxiety, novel coronavirus, risk factors, prevalence

2.6 “生理心理专业委员会”专题研讨会

冰毒成瘾者的亲社会决策特征

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摘要 冰毒成瘾者在日常交往中会表现出社会功能的异常。探索冰毒成瘾者的亲社会行为有助于了解冰毒成瘾对个体社会功能的影响、帮助改善冰毒成瘾者的社会适应性。本研究通过两个实验, 比较了冰毒成瘾者和健康被试在一个独裁者博弈变式任务中的表现。实验1招募了55名冰毒成瘾被试和34名健康被试, 实验任务是一系列的选择, 每次选择包含两个金钱分配方案, 每个方案是给自己和一个陌生人分配一定数额的金钱, 被试需要在两个金钱分配方案之间做出选择。实验2招募了62名冰毒成瘾被试和31名健康被试, 实验任务与实验1相同。但是, 每次在被试看到分配方案之前, 会先看到与冰毒相关的图片。两个实验结果一致发现, 当分配方案对自己不利时, 冰毒成瘾被试比健康被试做出更少的亲社会选择。使用漂移扩散模型 (Drift-diffusion model) 对数据进行拟合的结果表明, 相比于健康被试, 冰毒成瘾被试较低的亲社会水平是由于他们给他人的收益赋予了更低的权重。模型拟合的结果还发现, 在看到冰毒图片后, 冰毒成瘾被试在做决策时比健康被试更加不谨慎、编码和行动速度也更慢。此外, 冰毒使用年限越长, 在看到冰毒图片后, 决策时就越不谨慎。揭示冰毒成瘾者与健康人亲社会行为的差异及心理机制对诊断和治疗冰毒成瘾有重要意义。

关键词 冰毒, 社会决策, 扩散模型, 亲社会, 计算建模

Context dependency of decreased prosociality in methamphetamine dependents and its computational mechanisms

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Abstract: Methamphetamine (MA) dependents commonly exhibit socially problematic behaviors. Investigating the prosocial decision making of MA dependents could enable a better understanding of the impact of MA use on social functioning and help improve their social relationships. We conducted two studies to examine the performance of MA dependents and healthy controls on a modified dictator game. In Study 1, 55 MA-dependent and 34 healthy male participants made a series of choices between two pairs of monetary prizes for themselves and for others. In Study 2, we integrated MA-related pictures into the task, with 62 MA-dependent and 31 healthy male participants making the same choices as in Study 1 after a short exposure to MA-related pictures. In both studies, we consistently found context dependency of decreased prosociality in MA dependents. That is, MA dependents made fewer prosocial choices than healthy people in disadvantageous contexts (but not advantageous contexts). The computational model results suggested that the lower prosociality of MA dependents in disadvantageous contexts was attributed to the lower weight placed on others' benefits. Moreover, when exposed to MA-related pictures, MA dependents showed less caution and slower encoding/motor speed than healthy people, and MA dependents with a longer history of MA

use tended to respond less cautiously. Our findings provide evidence that MA dependents in disadvantageous contexts showed reduced prosociality and less consideration of others' benefits. Identifying the origin of the alterations in prosocial decision making has implications for diagnosis and treatments.

Keywords: Methamphetamine, Social decision making, Drift-diffusion model, Prosociality, Computational modeling

孤束核到基底外侧杏仁核投射 在吗啡相关记忆再巩固的诱发中的作用

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摘要 成瘾药物相关的记忆是导致复吸的重要因素。在记忆提取后, 记忆变得不稳定, 即为再巩固过程。但是诱发再巩固的神经通路尚不清楚。本研究应用大鼠自给药行为模型, 探索投射到基底外侧杏仁核 (basolateral amygdala, BLA) 的神经通路在吗啡相关记忆再巩固的诱发中的作用。结果表明, 吗啡 (非条件性刺激, US) 和伴随吗啡的线索 (条件性刺激, CS) 共同暴露可以诱发吗啡自给药记忆的再巩固, 单独 CS 暴露则不能诱发再巩固, 并且与 CS 暴露相比, US 和 CS 共同暴露可以激活更多的 BLA 以及孤束核 (nucleus tractus solitarius, NTS) 中的神经元, 但是蓝斑 (locus coeruleus, LC) 中激活的神经元数目没有明显增加。随后, 我们应用化学遗传学方法, 分别失活或者激活 NTS-BLA 或 LC-BLA 神经通路, 检测对再巩固的影响。发现在 US 和 CS 共同暴露的同时, 失活 NTS-BLA 通路可以抑制再巩固的诱发, 相反, 在 CS 单独暴露的同时, 激活 NTS-BLA 通路可以促进再巩固的诱发。这两个条件下失活或激活 LC-BLA 对诱发再巩固没有影响。我们的结果找到了一条可能在阿片类药物相关记忆的再巩固中发挥重要作用的神经通路。

关键词 记忆再巩固, 孤束核, 基底外侧杏仁核, 吗啡, 自给药

Role of nucleus tractus solitarius projections to basolateral amygdala in the induction of morphine-associated memory reconsolidation

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Abstract: Drug related memory contributes to the chronic relapse problem. This persistent memory can be transiently destabilized by memory retrieval, after which memories are reconsolidated. However, the specific neural circuits underlying this induction of reconsolidation remain essentially unknown. Here we studied the role of afferent projections into the basolateral amygdala (BLA) in the induction of morphine self-administration memory reconsolidation in male rats. We first showed that morphine (unconditioned stimulus, US) + morphine-associated conditioned stimuli (CS) exposure, rather than CS exposure, induced reconsolidation of morphine self-administration memory. Then, we measured projection-specific activation after US + CS or CS retrieval test, by using Fos (activity marker)-labeling in projection areas. We found that compared with CS exposure, US + CS exposure induced more neurons activation in the BLA and the nucleus tractus solitarius (NTS), but not in the locus coeruleus (LC). Next, we determined the effects of chemogenetic inactivation or activation of NTS or LC projections to BLA (NTS-BLA or LC-BLA) on the reconsolidation. We found that NTS-BLA but not LC-BLA inactivation during US + CS exposure prevented induction of reconsolidation. Furthermore, NTS-BLA but not LC-BLA activation during CS retrieval induced reconsolidation. Taken together, our results identify a specific neural circuit underlie the transformation of a stable opiate related memory into an unstable memory.

Keywords: memory reconsolidation, nucleus tractus solitarius, basolateral amygdala, morphine, self-administration

药物成瘾戒断中的冲动性与电生理标记物

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摘要 药物成瘾者的行为会随着戒断时间的长短而变化。临床前研究发现: 在戒断初期, 成瘾者渴求感随戒断时间而增强(孵化效应)。在该横断面研究中, 156 名戒断期不同(少于 1 个月, 1-3 个月, 3-6 个月, 6-12 个月, 和 12-24 个月)的甲基苯丙胺成瘾者完成渴求, 冲动性, 睡眠, 抑郁, 焦虑的测量, 同时使用 128 导高密度脑电测试成瘾者的静息态脑电。结果显示: (1) 渴求和睡眠症状在戒断期前三个月逐渐增强(孵化效应), 之后减弱。冲动性和其他生理心理症状在戒断期 3 个月后逐渐减弱。(2) 和其他戒断期的成瘾者相比, 戒断期 1-3 个月的病人表现出 theta (4-8Hz) 和 Alpha (8-13Hz) 相对波段功率的降低, Beta (13-30Hz) 相对波段功率的增加, 差异主要集中在中部电极上。成瘾者的症状与 theta 和 beta 的相对波段功率均相关。(3) 全脑电极群-置换检验发现: 五组戒断期不同的成瘾者 Theta 和 Beta 功率比值的差异集中在额叶的电极上, 并与渴求, 冲动, 睡眠, 抑郁和焦虑呈负相关。(4) 分层回归模型显示额叶 Theta 和 Beta 功率比值能解释渴求变化的 8% 的效应, 整体模型能解释 78.7% 的渴求变化。结果揭示: 甲基苯丙胺成瘾者渴求感和睡眠在戒断期 3 月以下时随戒断时间增强(孵化效应), 前额叶 Theta 和 Beta 功率比值可以作为渴求变化的电生理标记物。
关键词 甲基苯丙胺成瘾, 渴求, 冲动性, 脑电标记物

Abstinence associated changes in craving, impulsivity and electroencephalogram signatures in methamphetamine use disorder

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Abstract: Abstinence induces dynamic changes in behavior of drug use disorder. Previous preclinical research has indicated incubation effect of cue induced drug seeking in initial period. 156 male methamphetamine dependents (MAs) dependents with varying duration of abstinence (i.e. less than 1 month, 1~3 months, 3~6 months, 6~12 month, 12~24 month) participated in this cross-sectional study. Participants completed ratings of self-reported impulsivity, anxiety, depression, sleep quality, craving. Resting-state, eye-closed 128 channel EEG signals were used to track physiological signature across different abstinent individuals. MA patients' rating of cued craving and sleep symptoms increased until 3 months of abstinence and decreased after 3 months. Self-reported impulsivity and other mood symptoms improved after 3 months from MA. Moreover, MAs in 1~3 months group exhibited decreased theta band (4-8 Hz) and alpha band (8-13Hz), and increased in beta band (13-30 Hz), primarily across central regions. The results also showed decreasing trend for cued-craving and increased frontal theta/beta power ratio (TBR) after 3 months of abstinence. The dynamic changes of frontal TBR measured during the abstinence were associated with craving and other neuropsychological functions. A multiple hierarchical regression model was used to examine the predictive value of frontal TBR while controlling the severity of other neuropsychological symptoms. Frontal TBR explained additional 8% of the variance of craving, explained a total of 78.7% of the variance in the prediction of drug-seeking behavior. The current findings indicate incubation of cued craving and sleep symptoms during 1~3 month of abstinence. These results suggest that frontal TBR might be regarded as biomarker to identify patients who are at risk of relapse.

Keywords: methamphetamine, impulsivity, craving, EEG biomarker

药物成瘾记忆的操纵

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摘要 记忆再巩固更新理论提出条件性刺激 (conditioned stimulus, CS) 可诱导记忆进入再巩固更新状态, 这一假说为消除病理性记忆提供了契机。在既往的工作中, 我们课题组基于记忆的更新理论, 提出“条件性刺激唤起-消退”行为学范式用于消除病理性记忆, 即利用环境线索短期暴露 (CS 唤起) 后记忆不稳定的特点进行消退训练; 在多种成瘾动物模型以及海洛因成瘾者中均发现该范式可持续降低心理渴求。在既往研究的基础上, 课题组根据一个非条件性刺激 (unconditioned stimulus, US) 可以和多个 CS 形成关联记忆这一基本神经原理, 又提出—靶向干预 US 诱导的记忆再巩固过程—这一新的理论策略, 即和传统理论策略不同的是, 通过 US 而非 CS 进行记忆激活, 可诱导多种成瘾记忆印记进入不稳定状态, 再进行药理学和非药理学干预, 发现①在可卡因成瘾动物模型中 US 唤起记忆后进行消退训练能够抑制所有记忆线索诱导的觅药行为, 表明这种范式可以更全面彻底地消除成瘾记忆; ②应用临床用药—利他灵—代替可卡因进行记忆唤起, 然后联合消退训练, 同样可以消除多个成瘾记忆, 从而为靶向干预 US 诱导的记忆再巩固理论策略的临床转化提供了依据; 该模式在海洛因成瘾记忆模型中同样适用, 而且该范式不仅可以消除新的成瘾记忆, 对陈旧的、久远的成瘾记忆同样具有效果。我们课题组还将靶向干预 US 诱导的记忆不稳定状态和再巩固过程转化应用于成瘾人群。研究发现在尼古丁成瘾记忆动物模型和吸烟者中, 利用①小剂量的尼古丁作为 US 唤起记忆后, 给予肾上腺素受体阻滞剂普萘洛尔, 能够破坏所有与尼古丁关联的记忆, 包括新获得的尼古丁成瘾记忆和已经形成多年、陈旧的记忆, 降低多个吸烟相关线索 (如打火机等) 诱导的心理渴求。这些研究深化了病理性记忆理论, 也为基于记忆更新理论和记忆编辑策略的临床转化提供了新证据。

关键词 物质成瘾, 病理性记忆, 记忆更新, 记忆编辑

The modulation of drug memories

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Abstract: The theory of memory reconsolidation and updating suggests that conditioned stimulus (CS) can induce memory to enter a state of reconsolidation and updating, and this hypothesis provides an opportunity to eliminate pathological memory. In the previous work of our group, based on the theory of memory updating, we proposed the behavioral paradigm of "conditioned stimulus retrieval-extinction" for the erasure of pathological memory, namely, to make use of the instability of memory after short-term exposure to environmental cues (CS retrieval) to conduct extinction training. In multiple animal models of addiction and human individuals with heroin addiction, we observed that this paradigm can sustainably reduce psychological craving. On the basis of previous research, according to the basic neural principle that an unconditioned stimulus (US) can form an associated memory with multiple CSs, our group proposed a new theoretical strategy: a targeted intervention for the US-induced memory reconsolidation process. Unlike traditional theoretical strategies, before pharmacological and non-pharmacological interventions, multiple drug memory traces was destabilized by memory activation via US rather than CS, and it was found that ① in animal models of cocaine addiction, extinction training following US memory retrieval was able to inhibit all memory cue-induced drug-seeking behaviors, suggesting that this paradigm can eliminate drug memories more fully and thoroughly; ② The drug that has been approved for clinical use, Ritalin, was used as a replacement for cocaine to retrieve memory, followed by combined extinction training, also eliminated multiple drug memories, thus providing the basis for the clinical translation of the theoretical strategy of targeted intervention for US-induced memory reconsolidation; the paradigm is equally applicable in the heroin drug memory model, and it not only eliminated new drug memory, but was equally effective for stale, long-standing drug memory as well. Our group has also translated the targeted intervention for US-induced memory instability and reconsolidation process to addicted populations. It was found that in animal models of nicotine drug memory and in smokers, US memory retrieval with a

small dose of nicotine followed by adrenergic receptor blocker, propranolol, was able to disrupt all nicotine-associated memories, including newly acquired nicotine drug memories and memories that had been formed for years and were stale, and reduce psychological craving induced by multiple smoking-related cues (e.g., lighters). These studies deepen the theory of pathological memory and provide new evidence for clinical translation based on memory updating theory and memory editing strategies.

Keywords: Substance addiction, pathological memory, memory updating, memory editing

酒精成瘾的皮层功能机制

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摘要 GABAB 受体激动剂 Baclofen 已被用于治疗酒精成瘾与其他多种物质滥用。但是目前 Baclofen 的药效作用机制尚不明确。本研究拟通过研究慢性酒精暴露后皮层中 GABAB 受体的动态变化来阐明其可能的神经机制。离体脑片的结果显示慢性酒精暴露后, 皮层中 GABAB 介导的电流显著降低。另外皮层中的 GABAB1/2 受体与下游的 GIRK2 蛋白表达均显著降低。这一皮层功能的改变, 有可能是 GABAB2 受体亚基上 ser-783 位点的去磷酸化影响了 GABAB 受体的膜表达而引起的。在成瘾患者中, 配对经颅电刺激(TMS)研究结果进一步证实了 GABAB 受体介导的皮层抑制的发生。药理学研究证实了 Baclofen 可以通过调控 GABAB 系统功能来缓解皮层抑制。我们的研究结果首次提出了慢性酒精暴露伴随着皮层中 GABAB 受体功能损伤, 同时阐明了 Baclofen 的可能作用机制。

关键词 酒精, GABA_B, Baclofen; 皮层抑制; 蛋白磷酸化

Reduced cortical functioning following chronic alcohol exposure

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Abstract: The GABAB receptor (GABABR) agonist, Baclofen, has been used to treat alcohol use disorder and several other types of substance abuse; yet the neural mechanism underlying its clinical efficacy remains to be elucidated. The present study aims to investigate cortical GABABR dynamics following chronic alcohol exposure. Ex vivo brain slice recording from animal model of chronic alcohol exposure revealed decreased GABAB receptor mediated currents, together with reduced GABAB1/2 and GIRK2 expression levels in cortex. This is likely to be mediated by dephosphorylation of serine 783 (ser-783) in GABAB2 subunit, which regulates GABABR surface expression. In human alcoholics, paired transcranial magnetic stimulation (TMS) study further confirmed the reduced GABAB receptor mediated cortical inhibition. The results provide the first cortical evidence that chronic alcohol exposure associates with impaired GABABR functioning, which might therefore rationalize the therapeutic effects of Baclofen as re-potential of the GABABR system.

Keywords: Alcohol; GABA_B; Baclofen; cortical inhibition; phosphorylation

早期致幻剂使用对成年期社会功能的影响

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摘要 青春期是致幻剂滥用的高发年龄段, 可导致性格和社交能力的长期改变。本研究通过使用青春大鼠慢性暴露五羟色胺类致幻剂模型, 测试其行为学、多脑区间神经振荡及功能耦合改变, 试图阐明早期致幻剂使用对成年期社会功能影响的神经环路机制。青春期慢性致幻剂暴露动物存在着显著的社会等级下降和社交意愿的提升, 且两者呈负相关。致幻剂暴露组动物从海马 CA1 脑区至眶额叶皮层 (orbital frontal cortex, Orb) 场电位间 θ 波 (6-10Hz) 频率相干性较对照组动物显著降低。在社交状态下, 对照组动物 CA1-Orb 之间 θ 波频率相干性显著增强, 而致幻剂暴露组动物无显著变化。以上结果提示青春期慢性致幻剂暴露会造成的社会功能改变与异常的 CA1-Orb 间 θ 波频率相干性相关。

关键词 致幻剂, 社会等级, 社交意愿, 局部场电位, 频率相干性

The effect of early psychedelic use on social function in adulthood

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Abstract: The prevalence of hallucinogen abuse is high during adolescence, which may lead to long-term changes in personality and social function. To clarify the neural circuit mechanism of early psychedelic use on social function in adulthood, we investigated the interhemispheric neural oscillations and functional coupling in adult rats which chronically exposed to serotonergic psychedelic during adolescence. Psychedelic-exposed animals during adolescence showed a significant decline in social rank and an increase in social willingness. Coherence of theta waves (6-10Hz) from the hippocampal CA1 to the orbital frontal cortex (Orb) was significantly reduced in the psychedelic-exposed animals compared to the control animals. During the social task, the coherence of theta waves between CA1 and Orb was significantly enhanced in the control animals, but not in the psychedelic-exposed animals. These results suggest that the altered social function caused by chronic psychedelic exposure during adolescence is associated with abnormal CA1-Orb theta-wave coherence.

Keywords: psychedelic, social rank, social willingness, neural oscillation, frequency coherence

2.7 “法律心理专业委员会”专题研讨会

鉴谎与微表情自动分析技术

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摘要 微表情是人类在抑制自身情感时产生的表情泄露, 具有时间短、强度弱、不易被察觉的特点。由于微表情对应着真实的人类情感, 因此微表情分析在侦查讯问、商业背景调查、真实意图判断等领域具有潜在的应用价值。微表情分析技术首先在长段的视频中检测出微表情发生的短暂时刻, 然后进一步判断该微表情所属的类别。本文介绍微表情自动分析的原理与最新研究进展, 包括基于深度学习的微表情检测与识别, 基于权重自适应分配的微表情识别, 通过滑动窗技术排除眨眼等微小动作影响的微表情自动检测; 通过真实案例说明微表情分析技术在谎言识别领域的优势与挑战。案例场景包括讯问、商业贷款人可信度分析、人物的真实意图分析等。在讯问过程中, 微表情分析技术的优势在于非接触式的采集方式和结果的准确性, 其可以运用到讯问前的谈话和实际心理测试的全过程, 能够与传统的心测技术相辅相成, 相互验证和矫正。在商业贷款人可信度分析过程中, 微表情分析可以提供更加不受身体晃动影响的非接触式分析手段, 并能给出可用

于真实场景的检测结果。在人物的真实意图分析中，我们给出运用微表情分析技术分析国外政要的公开电视访谈给出人物的内在真实意图和想法的实例。通过以上案例总结微表情自动分析技术用于谎言识别的未来研究与应用方向。

关键词 微表情分析，谎言识别，人工智能，模式识别，心理测试

Lie detection and automatic analysis of micro-expression

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Abstract: Micro-expression happens when a person fails to hide his/her emotion. It features short duration, low intensity, and hard to be detected. Because the time of micro-expression happening corresponds to the time of real emotion induced, the analysis of micro-expression has potential application in interrogating, commercial background investigation, real intent detection. This report introduces the theory and research progress of automatic analysis of micro-expression, including the recognition and spotting of micro-expression based on deep learning, micro-expression recognition based on automatically feature weight allocation, micro-expression spotting robust to the eye blinking based on sliding window methods. The report also highlights the advantages and challenges of micro-expression analysis in lie detection through real applications. In the application of interrogating, the micro-expression analysis features in non-contact data obtaining and fairly high accuracy of analysis results. It can be applied in both pre-interrogating talk and real interrogating. The results of the analysis can be a reference to the results of polygraph and help to make the final decision. In the application of credit investigation of borrower, the analysis can provide non-contact method robust to body movement and produce high enough spotting accuracy for the real application. In the intent analysis, we demonstrate the results of analyzing the video of television interview of politicians. The reports concludes the future research and application direction of micro-expression analysis towards lie detection.

Keywords: micro-expression analysis, lie detection, artificial intelligence, pattern recognition, psychometric techniques

基于大数据的智能化罪犯危险性评估体系研究

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摘要 罪犯危险性评估按照性质分为再犯危险性评估和狱内危险性评估。国外可应用的再犯危险性评估工具已发展至第四代，专门针对狱内风险评估的研究较少。传统的危险性评估主要采用量表自评或专家通过访谈后进行他评，上述方法难以避免由于社会赞许性带来的结果失真问题，且由于评估工具中预测因子数量有限，并不能全面真实地反映服刑人员的危险性水平。随着人工智能技术的全面发展，智能化分析技术能够综合已知的海量数据对于未来情况做出预测，本研究聚焦于探索该种可结合大量动静态预测因子对罪犯危险性程度进行预测的智能化评估体系。具体做法是利用人工智能技术对已有的标签数据进行深度学习，将大量“预测值”进行组合建立模型，预测个体的狱内、再犯危险性程度。模型建立后可叠加历史静态数据和动态数据进行分析，对服刑人员的风险程度进行实时计算，实现服刑人员风险的精准评估。这种基于大数据评估罪犯危险性的方法可以做到数据直观，将模糊的风险数值化，为监狱实时整体风险防控提供全新的途径。本文将对基于人工智能技术下的罪犯危险性评估理论依据、国内外发展应用现状、体系构建设想等进行介绍，并提出人工智能技术在罪犯心理测评中的应用前景。

关键词 大数据，人工智能，罪犯危险性评估

Research of intelligent criminal risk assessment system based on big data

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Abstract: The risk assessment of criminals can be divided into recidivism risk assessment and prison risk assessment according to the nature. The recidivism risk assessment tools available abroad have been developed to the fourth generation, but few studies have specifically focused on risk assessment in prison. Traditional risk assessment mainly adopts self-rating scale or assessment by experts after interviews. These above methods can't avoid the distortion of results caused by social desirability. Moreover, due to the limited number of predictors in the assessment tools, the risk level of criminals cannot be fully and truly reflected. With the comprehensive development of artificial intelligence technology, intelligent analysis technology can predict the future situation based on the known massive data. This study focuses on exploring an intelligent risk assessment system that can predict the risk degree of criminals by combining a large number of dynamic and static predictors. The specific approach is to use the artificial intelligence technology to conduct deep learning on the existing label data, and build a model from the combination of a large number of "predicted values", so as to predict the risk degree of the individual in prison and recidivism. After the model is established, historical static data and dynamic data can be superimposed for analysis, and the risk degree of criminals can be calculated in time, so as to achieve accurate risk assessment of criminals. This method, which is based on big data to evaluate the risk level, can make the data intuitive, numerical value the fuzzy risk, and provide a new way for the real-time overall risk prevention and control of prisons. This paper will introduce the theoretical basis, domestic and foreign development and application status, system construction assumption of the criminal risk assessment based on artificial intelligence technology, and put forward the application prospect of artificial intelligence technology in the criminal psychological assessment.

Keywords: big data, artificial intelligence, criminal risk assessment

心测技术的科学、有效方法——认知综合测试法

范刚

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摘要 传统的以 Polygraph 为指代的多导心理生理测试(“测谎”)技术,经过近百年的发展已由以准绳问题测试法(CQT)为代表的测试被测人是否说谎的“测谎”,发展为以隐藏信息测试法(CIT)为代表的检测被测人是否有相关认知经历的“测真”。我们在大量实案测试和实验室研究的基础上创新形成的认知综合测试法(CCT),是对隐藏信息测试法的创新和发展。其坚持以心理科学理论为指导,编题中严格遵循案件发生发展的逻辑顺序和涉案人心理活动的规律,不仅有犯罪情节测试题,而且增加了自我认知测试题,以检测被测人对作案人自传体信息有无相应的认知。同时加入了探查涉案人作案过程中和测试时心理活动的即时心态测试题,以唤起和检测涉案人在作案过程中及测试时的情绪状态等心理活动。保证了所编制的目标问题系涉案人认知清晰、体验深刻、记忆良好的问题。确保了编制的测试题能够有效地唤醒涉案人对案件相关信息的记忆等心理活动,并且扩充了目标题目的数量,改善了隐藏信息测试法目标题数量不足的问题。从而提高了编题的质量和效度及其测试的准确性和有效性,为判定被测人与案件的关系及案件相关情况开创了新的方法。经过大量实案测试的检验和实验室研究的验证,与国内外现有其它方法相比,认知综合测试法更具科学性和有效性。其不仅能准确地甄别被测人与案(事)件的关系,而且能为案(事)件的调查审理提供更多的信息和支撑,已在各类疑难案件的侦破中发挥了显著的作用,是心理测试技术的创新和发展。

关键词 心理测试技术, 认知综合测试法, 研究与应用

The scientific and effective method of psychometric technology-- cognitive comprehensive test method

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Abstract: Traditionally, people refer to multimodal psychophysiological testing technique as polygraph test ("lie detection") technology, the development of the past hundred years has been tested by the control question test (CQT) represented by the test measured one is lying "lie detection", for the development of testing method to concealed information (CIT) is a representative of testing has tested whether cognitive experience of "true". Based on a large number of practical tests and laboratory studies, CCT is an innovation and development of concealed information testing method. Guided by the theory of psychological science, it strictly follows the logical sequence of the occurrence and development of the case and the law of the psychological activities of the person involved in the case in compiling the questions. It not only has the crime scenario test questions, but also adds the self-cognition test questions to test whether the person tested has the corresponding cognition of the autobiographical information of the person involved. At the same time, an instant mental state test for investigating the criminal's psychological activities during the crime and during the test was added to arouse and detect the criminal's emotional state and other psychological activities during the crime and the test. It ensures that the compiled target problems are those involving clear cognition, deep experience and good memory. It ensures that the test questions prepared can effectively arouse the mental activities such as the memory of information related to the case, expand the number of target questions, and improve the problem of insufficient number of target questions in the hidden information test. Thus, it improves the quality and validity of the question preparation and the accuracy and validity of the test, and creates a new method for determining the relationship between the tested person and the case and the relevant situation of the case. Compared with other methods at home and abroad, the cognitive synthesis test is more scientific and effective. It can not only accurately identify the relationship between the tested person and the case (incident), but also provide more information and support for the investigation and trial of the case (incident). It has played a significant role in the detection of all kinds of difficult cases, and is the innovation and development of psychological testing technology.

Keywords: polygraph, cognitive comprehensive test, research and application

2.8 “学校心理专业委员会”专题研讨会

青少年获得感的心理机制：个体和群体获得感的作用

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摘要 基于自适应潜能循环增长模型,我们构建了一个青少年个体/群体获得感与成长思维、学校适应的自适应假设模型。为了验证假设模型,本研究调查45所中职学校学生33167人(T1,年龄13-19岁,男性占58.3%),一年后有24307人完成了第二次测试(T2,男性占56.9%),测试内容包括性别等背景变量、获得感(财富获得、健康获得、学业获得、机会获得、满足感获得、认同感获得)、成长思维以及学校适应变量(推理能力、阅读能力、学校心理环境感知、心理适应)。结果显示:(1)除了财富获得对推理能力、阅读能力的预测作用不显著,学业获得对“安全与秩序”、注意问题的预测作用不显著。获得感的其他维度或所有维度对学校适应各变量的预测作用均显著。(2)成长思维在健康获得、学业获得、认同感获得与学校适应各变量(推理能力、阅读能力、学校心理环境感知、心理适应)关系中的部分中介作用显著,中介效应占总效应的19.16%-36.13%。(3)群体学业获得和群体机会获得增强了成长思维对推理能力的预测作用;群体健康获得

和群体认同感获得增强了成长思维对阅读能力、“安全与秩序”“公平与公正”的预测作用；群体满足感获得减弱了成长思维对执行问题的负向预测作用，群体财富获得减弱了成长思维对注意问题的负向预测作用，对亲社会行为的正向预测作用。这说明，对于青少年个体/群体获得感与成长思维、学校适应的关系，构建的多水平有调节的中介模型假设能构成立。

关键词 青少年，获得感，学校适应，成长思维

Psychological Mechanism of Adolescent Sense of Gain: The Role of Individual and Group Sense of Gain

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Abstract: Based on the cycle of adaptive potential model, we construct an adaptive hypothesis model of adolescents' individual/group sense of gain and growth mindset, and school adaptation. To verify the hypothesis model, this study surveyed 33,167 students (T1, age 13-19 years, male 58.3%) from 45 secondary vocational schools, and 24,307 completed the second test one year later (T2, male 56.9%). The content of the test included gender and other background variables, sense of gain (wealth gain, health gain, academic gain, opportunity gain, satisfaction gain, identity gain), growth mindset and school adaptation variables (reasoning ability, reading ability, perception of school psychological environment, psychological adjustment). The results showed that : (1) Except that wealth Gain had no significant predictive effect on reasoning ability and reading ability, academic Gain had no significant predictive effect on "safety and order" and attention problems. Other dimensions or all dimensions of sense of gain had significant predictive effects on the variables of school adaptation. (2) Growth mindset has a significant mediating effect on the relationship between health Gain, academic Gain, identity Gain and various variables of school adaptation (reasoning ability, reading ability, school psychological environment perception, psychological adaptation), and the mediating effect accounts for 19.16%-36.13% of the total effect. (3) Group academic Gain and group opportunity Gain enhanced the predictive effect of growth mindset on reasoning ability; Group health Gain and group identity Gain enhanced the predictive effect of growth mindset on reading ability, "safety and order", "fairness and justice"; The Gain of group satisfaction weakens the negative predictive effect of growth mindset on executive problem, the Gain of group wealth weakens the negative predictive effect of growth mindset on attention problem, and the positive predictive effect of prosocial behavior. These results indicate that the hypothesis of multi-level mediated model can be established for the relationship between adolescent's individual/group sense of gain and growth mindset and school adaptation.

Keywords: adolescents, sense of gain, school adaptation, growth mindset

社会规范与欺凌类型对欺凌情境下旁观者保护行为的影响

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摘要 欺凌情境下旁观者对受欺凌者的保护行为可以有效地阻止欺凌事件的发生和发展。但由于受到同伴群体行为和具体情境因素的影响，旁观者不一定会在欺凌情境下出现保护行为。为了探究群体因素社会规范和情境因素欺凌类型对旁观者保护行为的影响，本研究采用4（社会规范：描述性、命令性、描述命令、无规范）×4（欺凌类型：身体、言语、关系、网络）二因素混合设计对325名高中生进行了考察。其中，社会规范为被试间变量，欺凌类型为被试内变量，因变量为欺凌情境中的保护行为。社会规范分为描述性规范和命令性规范，研究通过向被试呈现大多数人都认为欺凌情境中采取了保护行为（描述性规范）或大多数人都认为应该采取保护行为（命令性规范）的比例图来对不同的社会规范进行控制。通过文字描述设置了不同的欺凌类型情境，让被试分别在身体、言语、关系和网络欺凌情境中结合所呈现的规范信息，对每个情境下列出

的保护行为与自己的符合程度进行评分。结果发现：社会规范主效应不显著；欺凌类型主效应显著，言语欺凌情境下的保护行为水平显著高于身体欺凌和关系欺凌。社会规范和欺凌类型的交互效应显著，只有在描述性规范和命令性规范同时呈现时，言语欺凌情境下的保护行为显著高于身体欺凌，同时网络欺凌情境下的保护行为也会显著高于身体欺凌。这些结果说明社会规范和欺凌类型会共同影响旁观者的保护行为，对于揭示欺凌旁观者保护行为的产生机制和如何提高旁观者保护行为具有一定的启示意义。在今后的欺凌干预中可以发挥描述性和命令性规范对于低风险欺凌情境（言语和网络）中保护行为的共同促进作用。另外，干预者也应加强旁观者在身体欺凌和其他欺凌情境中采取安全且有效保护行为的指导。

关键词 校园欺凌，社会规范，欺凌类型，保护行为，旁观者

The Influence of Social Norms and Bullying Types on Bystanders' Defending Behavior in Bullying Situations

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Abstract: The defending behavior of bystanders to the bullied in the bullying situations can effectively prevent the occurrence and development of the bullying incident. However, due to the influence of peer group behavior and specific situational factors, bystanders may not necessarily exhibit defending behavior in bullying situations. In order to explore the influence of social norms (group factor) and bullying types (situational factor) on bystanders' defending behavior, a 4 (social norms: descriptive, injunctive, descriptive and injunctive, no norms) $\times$ 4 (bullying types: physical, verbal, relational, cyber) tow-factor mixed design was used to investigate 325 senior high school students. Social norm was between-subjects variable; bullying type was within-subjects variable and defending behavior in bullying situations was dependent variable. Social norms include descriptive norms and injunctive norms. This study manipulated different social norms through showing to the subjects the proportion chart of most people adopting defending behavior (descriptive norms) or most people thinking they should adopt defending behavior (injunctive norms) in the bullying situations. Different situations of bullying types (physical, verbal, relational, cyber) were set up using text description. Participants were asked to rate the degree of conformity between the defending behaviors listed in each situation and their own combining with the presented normative information. The results showed that the main effect of social norms was not significant; the main effect of bullying types was significant, and the level of defending behavior in verbal bullying was significantly higher than that in physical and relational bullying. The interaction effect between social norms and bullying types was significant. Only when descriptive norms and injunctive norms were presented at the same time, the level of defending behavior in verbal and cyber bullying was significantly higher than that in physical bullying. These results indicated that social norms and bullying types would jointly affect the bystanders' defending behavior, which had certain enlightenment significance for revealing the mechanism of the bystanders' defending behavior in bullying and how to improve the defending behavior. In the future bullying intervention, descriptive and injunctive norms can play important roles in promoting defending behavior in low-risk bullying situations (verbal and cyber) jointly. In addition, interveners should also strengthen the guidance of bystanders to take safe and effective defending behaviors in physical and other bullying situations.

Keywords: school bullying, social norms, bullying types, defending behavior, bystanders

青少年创伤后应激障碍与抑郁的关系：一项交叉滞后的网络分析

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摘要 背景：地震等重大创伤性事件可能会引发多中消极心理反应，如抑郁和创伤后应激障碍(PTSD)等，这些消极心理反应可能存在共病现象。其中，网络模型的广泛应用，一定能够程度上揭示了症状间的相互作用

用。然而，以往的网络模型研究主要关注于症状之间的横断关系，而难以揭示症状间的因果关系。因此，本研究采用交叉滞后网络模型探究 PTSD 和抑郁症状间的影响作用，以期发掘维系症状网络的内在因素，为心理干预提供依据。方法：本研究采用 DSM-5 PTSD 量表和流调中心用抑郁量表，在九寨沟地震发生后的 12 个月(T1), 21 个月(T2), 27 个月(T3)中对 386 名中学生进行施测。采用交叉滞后网络分析 T1-T2 和 T2-T3 时间段内 PTSD 和抑郁共病的症状网络特征。结果：在 T1-T2 的网络中，抑郁中的开心(Was happy)、有好事要发生(Something good going to happen)和 PTSD 中的闪回(Flashbacks)对其他症状的预测效果较强，PTSD 中的易怒(Irritability)最容易受到其他症状的预测。在 T2-T3 的网络中，抑郁中的悲伤(Felt sad)、觉得人们不喜欢我(Felt people dislike me)和 PTSD 中的侵入性想法(Intrusive thoughts)对其他症状的预测效果较强，PTSD 中易怒(Irritability)和分离(Detachment)更容易受到其他症状的预测。结论：研究结果显示了 PTSD 和抑郁的症状之间存在预测作用。但不同时间段的交叉之后网络特征存在差异。在 T1-T2 时，T1 时积极的情绪因素有助于减轻抑郁和 PTSD 症状，而闪回可能会加重共病症状。在 T2-T3 时，T2 时消极的情绪因素和侵入性症状可能会加重 PTSD 和抑郁症状。因此，在创伤后不同时期内，心理干预所重点关注的靶点症状也应是不同的。

关键词 创伤后应激障碍，抑郁，共病，交叉滞后网络分析

Comorbidity of post-traumatic stress disorder and depression in adolescents: A cross-lagged network analysis

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Abstract : Background: Major traumatic events such as earthquakes may trigger many negative psychological reactions, such as depression and posttraumatic stress disorder (PTSD), which may have comorbidities. Among them, the wide application of the network model should be able to reveal the interaction between symptoms to a certain extent. However, the previous network model research mainly focused on the cross-sectional relationship between symptoms, and it is difficult to reveal the causal relationship between symptoms. Therefore, this study uses the cross-lag network model to explore the influence of PTSD and depressive symptoms, in order to explore the internal factors that maintain the symptom network and provide a basis for psychological intervention. Methods: In this study, 386 middle school students were measured at 12 months (T1), 21 months (T2), and 27 months (T3) after the Jiuzhaigou earthquake, using the DSM-5 PTSD scale and center for epidemiologic studies depression scale. The cross-lagged network analysis was used to present the symptom network characteristics of PTSD and depression comorbidities in the T1-T2 and T2-T3 time periods. Results: In the T1-T2 network, *was happy* and *something good going to happen* in depression, and *flashbacks* in PTSD have a strong predictive effect on other symptoms, while in PTSD *irritability* is most predictable for other symptoms. In the T2-T3 network, *felt sad* and *felt people dislike me* in depression, and *intrusive thoughts* in PTSD have a strong predictive effect on other symptoms. *Irritability* and *detachment* in PTSD are more likely to be predicted by other symptoms. Conclusion: The findings demonstrated a predictive effect between symptoms of PTSD and depression, but the network characteristics differed over time periods. At T1-T2, positive emotional factors at T1 contribute to the reduction of symptoms of depression and PTSD, while flashback may exacerbate comorbidities. At T2-T3, negative emotional factors and invasive symptoms at T2 may exacerbate symptoms of PTSD and depression. Therefore, psychological interventions should focus on different symptoms at different periods of post-traumatic stress.

Keywords: Posttraumatic stress disorder, depression, comorbidity, network analysis

青少年公正世界信念对生活满意度的影响：同伴关系的中介作用

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摘要 青少年时期是个体成长过程中重要的转折期, 是心理发展显著变化的阶段。青少年群体的身心健康一直是我国社会各界的关注热点。然而, 近年来我国儿童青少年心理行为问题发生率和精神障碍患病率仍呈现逐渐上升趋势。生活满意度作为心理健康的指标之一, 以往学者对青少年生活满意度的影响因素有很多的探索, 但对公正世界信念对生活满意度影响机制的探索却显得不够重视。为了探讨青少年公正世界信念对生活满意度的影响以及同伴关系在二者之间的作用机制, 该研究采用公正世界信念量表、生活满意度量表、同伴关系量表, 对 1059 名青少年 ($M=17.48$ 岁, $SD=1.72$) 进行调查。使用 SPSS23.0 进行统计分析与处理, 并使用依次回归的方法来检验同伴关系的中介作用。结果表明: 男女青少年在公正世界信念上存在着显著性差异 ($p<0.05$), 女性的一般公正世界信念和个人公正世界信念得分均高于男性。高三年级学生生活满意度水平最高, 高一年级学生最低。生活满意度与一般公正世界信念、个人公正世界信念和同伴关系之间呈现显著正相关 ($p<0.001$)。中介效应检验结果显示, 公正世界信念对同伴关系有显著的预测作用 ($\beta=0.26$, $p<0.001$), 公正世界信念对生活满意度有显著的预测作用 ($\beta=0.54$, $p<0.001$), 同伴关系对生活满意度同样有显著的预测作用 ($\beta=0.43$, $p<0.001$) 即, 同伴关系在青少年公正世界信念与生活满意度之间起部分中介作用, 中介效应占总效应的 7.1%。基于以上研究结果, 本研究得出结论 (1) 女性青少年的公正世界信念显著高于男性; (2) 青少年公正世界信念对生活满意度有显著影响; (3) 同伴关系在青少年公正世界信念与生活满意度之间起部分中介作用。

关键词 青少年, 公正世界信念, 生活满意度, 同伴关系, 中介作用

The Effect of adolescent's belief in a just world on life satisfaction: the mediating role of peer relationship

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Abstract: Adolescence is an important turning point in the process of individual growth and a stage of significant changes in psychological development. The physical and mental health of the youth group has always been the focus of attention in all sectors of our society. However, in recent years, the incidence of mental and behavioral problems and the prevalence of mental disorders in children and adolescents in our country still show a gradual upward trend. Life satisfaction is one of the indicators of mental health. In the past, scholars have explored the influencing factors of adolescents' life satisfaction, but the exploration of the mechanism of the impact of justice world belief on life satisfaction seems to be insufficient. In order to explore the impact of adolescent justice world belief on life satisfaction and the mechanism of peer relationship between the two, the study used the justice world belief scale, life satisfaction scale, peer relationship scale, for 1059 adolescents ($M=17.48$ years old, $SD=1.72$) conducted an investigation. Use SPSS23.0 for statistical analysis and processing, and use the method of sequential regression to test the mediation effect of peer relationship. The results show that there are significant differences between male and female adolescents in the belief in a just world ($p<0.05$). Women's general just world belief and individual just world belief scores are higher than men's. The third grade high school students have the highest level of life satisfaction, and the first grade high school students have the lowest. There was a significant positive correlation between life satisfaction and general just world beliefs, personal just world beliefs and peer relationships ($p<0.001$). The test results of the mediation effect show that the just world belief has a significant predictive effect on peer relationship ($\beta=0.26$, $p<0.001$), and the just world belief has a significant predictive effect on life satisfaction ($\beta=0.54$, $p<0.001$). Peer relationship also has a significant predictive effect on life satisfaction ($\beta=0.43$, $p<0.001$). That is, peer

relationship plays a partial mediating role between adolescents' just world beliefs and life satisfaction. The mediating effect accounts for 7.1% of the total effect. Based on the above research results, this study concludes that (1) female adolescents' just world beliefs are significantly higher than males; (2) adolescents' just world beliefs have a significant impact on life satisfaction; (3) Peer relationship plays a part of the mediating role between adolescents' just world belief and life satisfaction.

Keywords: adolescents, belief in a just world, life satisfaction, peer relations, mediating role

新冠疫情下中小学教师急性应激症状对职业倦怠的影响： 控制感的调节作用

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摘 要 新型冠状病毒肺炎在给人们带来身体创伤的同时，也可能导致人们出现各种心理健康问题，急性症状（ASS）是其中常见的一种。中小学教师是新冠疫情下的一个特殊群体，他们不仅需要调节新冠肺炎对其自身带来的心理健康压力，还承担着缓解学生心理健康问题的责任和教学压力。如果教师产生较强的急性应激症状，可能会导致其无法承担教学工作，产生职业倦怠。不过也有研究发现，急性应激症状程度相似的教师，其职业倦怠程度可能存在差异。一个可能的原因是急性应激症状对职业倦怠的作用受到其他调节变量的影响，确定控制感可能是其中的一个重要的调节变量。为探究新冠疫情下教师急性应激症状对职业倦怠的影响以及控制感在其中的作用，本研究采用急性应激症状量表、职业倦怠量表和确定控制感量表对 751 名中小学教师进行调查。结果表明，急性应激症状对职业倦怠中的情绪衰竭和非人性化具有显著的正向预测作用，对低成就感的直接预测作用不显著。确定控制感在急性应激症状与情绪衰竭和非人性化的关系之间不起调节作用，但确定控制感在急性应激症状与低成就感的关系之间起调节作用，即在教师确定控制感的高水平条件下，急性应激症状对低成就感产生显著的正向预测作用；在教师确定控制感的低水平条件下，急性应激症状对低成就感产生显著的负向预测作用。

关键词 急性应激症状，职业倦怠，控制感，中小学教师

The Relation between Acute Stress Symptoms and Job Burnout: Moderating Role of Sense of Control

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Abstract: The COVID-19 not only caused physical trauma to people, but also negatively impacted people's mental health, including stress, anxiety, fear and other acute stress symptoms. Primary and secondary school teachers are a special group during the COVID-19 epidemic. They not only need to regulate their own psychological pressure brought by COVID-19, but also need to help students solve psychological problems and undertake the task of teaching. Acute stress symptoms may cause teachers to be unable to carry on teaching work and produce job burnout. The stronger the teachers' acute stress symptoms, the stronger their job burnout may be. However, the study found that there are differences in the degree of job burnout among teachers with similar acute stress symptoms. One possible reason was that the relation between acute stress symptoms and job burnout might be moderated by some variables, and teachers' sense of control may be one of the important moderating variables. In order to explore the effect of teachers' acute stress symptoms on job burnout and the role of sense of control during the COVID-19 epidemic, 751 primary and secondary school teachers were investigated with acute stress symptoms scale, job burnout scale and sense of control scale. The results showed that acute stress symptoms could positive predicted emotional exhaustion and depersonalization in job burnout, but acute stress symptoms could not predict the reduced personal accomplishment. The sense of control did not moderate the relations between acute stress symptoms and emotional exhaustion and depersonalization, but the sense of control played moderating role in the relation between

acute stress symptoms and reduced personal accomplishment. Specifically, under the condition of high sense of control, acute stress symptoms positive predicted reduced personal accomplishment; under the condition of low sense of control, acute stress symptoms negative predicted reduced personal accomplishment.

Keywords: ASS, Job Burnout, Sense of Control, Primary and secondary school teachers

加强疫后青少年学生心理健康教育的政策探讨

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摘要 基于广大青少年学生新冠肺炎疫情时期产生的大量心理问题, 以及疫情结束后可能演化为更严重的心理和精神疾病, 如创伤后应激障碍(PTSD), 全社会应高度重视, 积极应对, 注重顶层设计, 加强政策支持, 有效开展疫后心理辅导和干预, 全面推进疫后青少年学生心理健康教育工作, 提高他们面对灾难和挫折的心理复原力, 培育自尊自信、理性平和、积极向上的社会心态。为此应从建立工作机制、健全法律体系、制定相关政策、开展舆论引导、建设专业队伍、加强科学研究、完善信息系统等方面着力推进。

关键词 疫情后 青少年学生 心理健康教育 政策建议

Policy discussion on strengthening Mental Health Education of Adolescent students after COVID-19 epidemic

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Abstract: Based on a large number of psychological and behavioral problems of young students during the COVID-19 epidemic period, and after the end of the epidemic may evolve into more serious psychological and mental illness, such as post-traumatic stress disorder (PTSD), the whole society should attach great importance to it, actively deal with it, pay attention to top-level design, strengthen policy support, and effectively carry out post-epidemic psychological counseling and intervention. Comprehensively promote the mental health education of young students after the epidemic, improve their psychological resilience in the face of disasters and setbacks, and cultivate self-esteem, self-confidence, rational peace, and positive social mentality. To this end, efforts should be made to promote it from the aspects of establishing the working mechanism, perfecting the legal system, formulating relevant policies, guiding public opinion, building a professional team, strengthening scientific research, perfecting the information system, and so on.

Keywords: COVID-19 epidemic; Adolescent students; Mental Health Education; Policy suggestion

2.9 “社会心理学专业委员会”专题研讨会

(1) “社会心理学专业委员会”专题研讨会 1

接纳变化量表的编制和效度验证

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摘要 人们生活在常变的情境中, 也因此, 古希腊哲学家赫拉克利特说“世界上唯一不变的就是变化”。应对变化自然是人们日常生活中必有的构成部分, 理解和接受变化对于个体成长至关重要。但对于很多人来说

接纳变化并非易事，人们似乎更倾向于抗拒变化(拒变)甚至惧怕变化(惧变)，尤其当出现类似新冠肺炎疫情这样的巨变时，不少人会出现适应问题。可见，对变化的接纳是有效应对变化的重要基础，是弹性成长的重要心理资源。通过文献查阅发现，心理学虽在抗拒变化方面的研究有一定积累，将拒变视为一种心理防卫机制，但在变化接纳方面却探讨得不够，仅有一篇西方文献主要基于组织背景研究变化接纳并研制了一个 20 题的测量工具(Di Fabio & Gori, 2016)，尚未见到基于更广泛生活情境的接纳变化评估量表。本研究基于中国“顺变”和“抱一”思想，结合积极心理学的“超越”观(比如 Huta, 2017)，编制出一个 5 题 5 点 Likert 计分的接纳变化量表(CACS)。探索性因素分析(EFA)表明其为单一维度(样本 1, $n = 411$, KMO = 0.89, Bartlett 球形检查 $\chi^2 = 1860.40$, $p < 0.0001$, 特征值 4.05, 解释了 81.06% 的总体方差), 内部一致性信度系数 Cronbach's $\alpha = 0.94$; 验证性因素分析(CFA)提示其具有良好的结构效度(样本 2, $n = 750$, $\chi^2/df = 3.77$, $p = 0.002$, CFI = 0.996, TLI = 0.993, SRMR = 0.008, RMSEA = 0.061, 标准因素载荷 0.86 ~ 0.91); 接纳变化量表总分与主动求助显著相关(样本 2, $r = 0.50$, $p < 0.001$), 与心理弹性、积极社会心态、应对认知、应对能力显著正相关(样本 3, $n = 4925$, $r = 0.42 \sim 0.61$, $ps < 0.001$), 与心理资本显著正相关(样本 4, $n = 659$, $r = 0.33$, $p < 0.001$), 提示其具有良好的准则关联效度。总之, 该量表不仅心理测量属性良好且简短易测, 方便用于对常变情境中人们变化接纳程度的评估。

关键词 接纳变化, 量表编制, 效度验证

Development and Psychometric Validity of a Chinese Scale for Assessing Acceptance of Change

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Abstract: People live in ever-changing situations. Therefore, Heraclitus, the ancient Greek philosopher, maintained that there is nothing permanent except change. Naturally, coping with change is an essential part of people's daily life, in fact, understanding and accepting change is crucial for individual growth. However, people are more inclined to resist change or even fear change, for many persons, accepting change is definitely no easy in daily life and even harder when facing acute change like COVID-19 pandemic, which will cause adaptation difficulties. In this sense, acceptance of change is an important basis for effective response to change and an important psychological resource for resilience. Through literature review, we found that although resistance to change with considering it a defense mechanism has been well documented in psychology, whereas literature on acceptance of change is sparse. We searched online and found only one article on development of an instrument for assessing acceptance of change in settings of organizations. In their article, Di Fabio and Gori (2016) reported a 20-item scale for assessing acceptance of change. Unfortunately, we did not find a scale assessing acceptance change based on broader life situations. Adopting Chinese traditional ideology about contingency (顺变) and oneness (抱一), and meta-thinking from some positive psychologist (e.g., Huta, 2017), we developed a self-report Chinese measure for assessing acceptance of change. This Chinese Acceptance of Change Scale (CACS) uses a 5-point Likert-type scale that consists of 5 items. The results of exploratory factor analysis (EFA) indicated a unidimensional structure (sample 1, $n = 411$; KMO = 0.89, and the Bartlett's test of sphericity $\chi^2 = 1860.40$, $p < 0.0001$; the single factor had an eigenvalue of 4.05 and accounted for 81.06% of the total variance explained) with an excellent internal consistency reliability coefficient Cronbach's $\alpha = 0.94$ and confirmatory factor analysis (CFA) goodness of fit indices indicated a good fit of the model to data (sample 2, $n = 750$, $\chi^2/df = 3.77$, $p = 0.002$, CFI = 0.996, TLI = 0.993, SRMR = 0.008, RMSEA = 0.061, standardized factor loadings were from 0.86 to 0.91); the total score of the CACS was found significantly correlated with that of the Active Help-Seeking scale (sample 2, $r = 0.50$, $p < 0.001$), the brief version of the Connor-Davidson Resilience Scale (CD-RISC), the Positive Social Mentality Subscale, and two coping efficacy subscales (the Coping

Cognition Subscale and the Coping Competence Subscale) (sample 3, $n = 4925$, $r = 0.42 \sim 0.61$, $p < 0.001$) and that of Compound PsyCap Scale (CPC-12) (sample 4, $n = 659$, $r = 0.33$, $p < 0.001$), demonstrating good criteria-related validity. In general, the CACS is a brief and easily administered tool with good reliability and validity for assessing acceptance of change among people in ever-changing situations.

Keywords: acceptance of change, scale development, validity

基于 PERMA 模型的积极心理品质团体辅导：过程及效果

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摘要 积极心理品质是一种相对稳定的正向心理特质，是个体应对外界压力的调节和缓冲机制。积极心理品质与心理健康之间有着密切的关系，提升积极心理品质可以促进心理健康发展，并能提升幸福感水平。因此对积极心理品质进行干预具有一定的现实意义和价值。本研究采用以积极心理学幸福理论 PERMA 模型为理论架构设计的团体辅导干预方案，旨在探讨积极心理取向的团体辅导对研究生积极心理品质干预的有效性。研究随机选取某高校 31 名研究生为实验组，采用方便抽样方法抽取 31 名研究生组成对照组。其中实验组接受每周一次的团体辅导干预，共计 15 次，对照组不进行任何干预。采用一般健康问卷（GHQ-20）和大学生积极心理品质量表对两组被试实施前测、后测以及 1 个月追踪测，收集数据以检验团体干预的有效性。研究结果表明，实验组 GHQ-20 的后测和追踪测得分显著低于前测，实验组的后测得分显著低于对照组。同时，实验组大学生积极心理品质量表的后测得分显著高于前测，并且显著高于对照组后测得分。综上所述，PERMA 框架下的团体辅导能够显著提升研究生的积极心理品质和心理健康水平，并具有一定的持续作用。

关键词 PERMA 模型，积极心理品质，团体辅导，过程，效果

The Process and Effect of Group Guidance on Positive Psychological Quality of Postgraduates Based on PERMA Model

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Abstract: Positive psychological quality is a relatively stable positive psychological characteristic which can help the individual adjust and buffer the external pressure. There is a close relationship between positive psychological quality and mental health and subjective well-being, improving positive psychological quality can promote the level of mental health and well-being. Therefore, it is of certain significance and value to intervene the positive psychological quality. Based on the PERMA model of positive psychology, this study designed a group guidance. The purpose of this study is to explore the effectiveness of PERMA model-based group guidance on the intervention of postgraduates' positive psychological quality. In this study, 31 graduate students from a certain university were randomly selected as the intervention group, and the same number students were selected as the control group by convenient sampling method. The intervention group received group guidance intervention once a week for a total of 15 times while the control group did not conduct any intervention. The study used the General Health Questionnaire (GHQ-20) and College Students' Positive Psychological Quality Questionnaire to conduct pre-test, post-test and follow-up tests in one month. The results of the study showed that the GHQ-20 scores of the post and follow-up tests were significantly lower than the scores of the pre-test. The post-test scores of the intervention group were significantly lower than those of the control group. At the same time, the post-test scores of the College Students' Positive Psychological Quality Questionnaire of the intervention group were significantly higher than those of the pre-test, and the post-test scores of the intervention group were significantly higher than those of the control group. Studies have shown that group guidance based on the PERMA model can significantly improve the positive psychological quality and mental health of graduate students, and has a certain sustained effect.

两岸四地大学生幸福感及相关因素：我的研究与思考

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摘要 本报告分三部分，研究1调查了北京大学、南京大学、清华大学601名大学生的幸福感现况与其相关的个人因素，主要发现有：1.在三校中，清华大学的大学生的幸福感、乐观感、自尊、感恩心、创造力、正义感、亲和型幽默、自强型幽默、复原力、生活意义均排位最高；此外，清华大学的大学生于所有满意度的比较中均排位最高；2.南京大学的大学生的抑郁程度、攻击型幽默及自贬型幽默排位最高；3.学校排名高低和幸福感有直接关系，学校排名越高的学生幸福感比学校排名低的学生高。研究2调查了中国广州、香港、澳门和台湾812多名大学生的幸福感现况与其相关的个人因素（中山大学177名、香港城市大学267名，澳门科技大学182名，台湾静宜大学186名）。主要发现有：1.香港大学生的幸福感、感恩心和创造力均排位最低；2.广州大学生的幸福感排位最高，其抑郁程度亦排位最低；3.台湾大学生的宽恕、乐观和自尊排位最低，抑郁程度排位最高；4.澳门大学生的正义感和攻击性幽默排位最高；5.女生在心理层面都有“双高、双低”的现象，即，女生同时具有高幸福感和高抑郁感，而男生则反之；6.学校排名高低和幸福感并没有直接关系，学校排名略低的学生幸福感反而比学校排名高的学生高。研究3访问了5000多名中国大学生，就个人幸福感与其相关因素有下列发现：1.个人的年龄、年级、学校类别、家庭收入、兄弟姐妹数目和宗教信仰均与幸福感相关甚低；2.个人因素例如外向性、开放性、亲和性、责任心和社会支持等均与幸福感有中度相关性；3.乐观态度、自尊感、生活满意度和低抑郁症状与幸福感密切相关。4.学校排名高低和幸福感并没有直接关系，学校排名中位的学生幸福感反而比学校排名很高与很低的学生高。总之，本研究发现（1）幸福感较高的学生，其抑郁程度和不宽恕感亦会相对较低；（2）学校的排名高低和幸福感高低无直接关系，学校排名略低的学生更具幸福感；（3）女生比男生更容易发现生活中的开心事件。

关键词 幸福感，大学生，两岸四地

Happiness and its related factors among university students: My studies and reflections

Abstract: This report includes findings of three studies. Study 1 examined 601 university students' subjective happiness at Peking University, Nanjing University and Tsinghua University and its related factors. The major findings include: 1. Among the three universities, Tsinghua university students ranked the highest in terms of happiness, optimism, self-esteem, gratitude, creativity, sense of justice, affinity humor, self-improvement humor, resilience, and meaning of life; in addition, Tsinghua university students ranked the highest in all satisfaction comparisons; 2. Nanjing University students ranked the highest in terms of depression, aggressive humor and self-defeating humor; 3. The higher the school ranking is, the higher the happiness is. Study 2 examined 812 university students from Guangzhou, Hong Kong, Macao, and Taiwan for their subjective happiness and related factors. The major findings include: 1. Hong Kong university students ranked the lowest in terms of happiness, gratitude and creativity; 2. Guangzhou university students ranked the highest in terms of subjective happiness and the lowest in depression; 3. Taiwan university students ranked the lowest in forgiveness, optimism and self-esteem, and the highest in depression; 4. Macao University Students' sense of justice and aggressive humor ranked the highest; 5. Female students have "double high, double low" phenomenon in psychological level, that is, girls have high happiness and high depression, while boys have the opposite; 6. There is no direct relationship between school ranking and subjective happiness. Students with lower school ranking have higher happiness than those with higher school ranking. Study 3 examined over 5000 Chinese university students in terms of their subjective happiness and its related factors, with the following major findings: 1. Age, grade, school type, family income, number of siblings, and religious belief are significantly correlated with subjective happiness; 2. Extroversion, openness, affinity,

responsibility and social support are moderately correlated with subjective happiness; 3. Optimism, self-esteem, life satisfaction, and low depression are closely related to subjective happiness; 4. There is no direct relationship between school ranking and subjective happiness. Students in the middle of school ranking have higher happiness than those with high and low school ranking. In conclusion, these studies found that: (1) the students with higher subjective happiness had a lower level of depression and unforgiving; (2) there was no direct relationship between the ranking of schools and the level of happiness, and the students with lower school ranking were more happy; (3) girls were more likely to find happy events in life than boys.

Keywords: subjective happiness, university students, China

(2) “社会心理学专业委员会”专题研讨会 2

青年生活压力与国家认同：一个有调节的中介模型

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摘要 习近平总书记在党的十九大报告中提出, 要“筑牢中华民族共同体意识”。在新时代背景下, 中华民族共同体意识的主要表现之一即是国家认同。国家认同是国家内的公民对其所属国家文化、制度、主权、道德价值观等的认可和感情依附。根据认同理论的观点, 国家认同的核心在于建构自我与国家社会的关系, 但纵观以往关于国家认同影响因素的研究, 多集中于探讨经济、社会结构或文化等宏观因素, 忽视了对日常生活等个人微观因素的考察。因此, 本研究聚焦于生活压力这一因素, 对 4997 名青年 (不包含在读学生) 进行问卷调查, 考察生活压力与青年国家认同的关系, 同时探讨社会公平感的中介作用以及党员身份的调节作用。在控制了性别、教育、收入后, 结果显示: (1) 生活压力与青年国家认同、社会公平感呈显著负相关关系, 社会公平感与国家认同呈显著正相关关系; (2) 社会公平感在生活压力与国家认同的关系间起中介作用; (3) 党员身份对生活压力与国家认同的中介过程起调节作用, 与群众相比, 党员社会公平感对国家认同的预测作用更加显著。研究结果不仅启示相关部门应关注青年的生活压力问题, 通过提升其社会公平感进而增强国家认同; 同时也应重视青年群体中党员干部队伍的培养, 发挥其模范作用, 带动民众的国家认同。

关键词 生活压力, 国家认同, 社会公平感, 党员身份, 青年

Life Stress and National Identity of youth:

A Moderated Mediation Model

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Abstract: The report of the 19th National Congress of the Communist Party of China stated that it is necessary to “consolidate the sense of community of the Chinese nation.” In the context of the new era, one of its main manifestations is national identity. National identity refers to the recognition and emotional attachment of citizens to the culture, system, sovereignty and values of their country. According to the viewpoint of identity theory, the core of national identity lies in constructing the relationship between self and national society. However, previous studies on the influencing factors of national identity mostly focused on macro factors such as economy, social structure or culture, but neglected the investigation of micro factors such as daily life. Therefore, this study focused on the factor of life stress. A questionnaire survey was conducted among 4997 young people (excluding current students) to investigate the relationship between life stress and national identity, and to explore the mediating role of social justice

and the moderating role of Party membership. After controlling for gender, education and income, the results showed that : (1) life stress was negatively correlated with national identity and social justice of young people, while social justice was positively correlated with national identity; (2) social justice played a mediating role between life stress and national identity; (3) Party membership could significantly moderate the relationship between social justice and national identity. These findings suggest that relevant departments should pay attention to the life stress of young people and enhance their national identity by maintaining their social justice. At the same time, the state should also attach importance to the training of young Party members to promote the national identity of the people.

Keywords: life stress, national identity, social justice, Party membership, youth

当代青年隐私关注对其隐私保护行为的影响： 信息过度收集与隐私担忧的多重中介作用

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摘要 数字社会带来了多样化的个人信息使用, 也引起了人们对数字隐私的空前关注。各类手机 App 对权限的过度申请、获取信息的起止时间、内容、使用目的、所获信息去向等完全不透明, 甚至有些 App 存在违规窃取用户敏感信息的情况, 加之近些年层出不穷的个人信心泄露事件, 让民众担忧隐私安全的神经紧绷。看似无偿的“个人信息换取服务”不过是一场“浮士德”式的交易, 人们愈发意识到隐私保护的重要性和必要性。研究从社会治理角度出发, 基于“中国社会科学院社会学研究所社会心理学研究中心 2019 年社会心态调查数据”, 以青年群体为研究对象, 选取“隐私关注”“信息过度收集”“隐私担忧”以及“隐私保护行为”等条目, 考察青年信息过度收集与隐私担忧在隐私关注于隐私保护行为之间的中介作用。研究结果显示: 青年的隐私关注不仅直接影响了其隐私保护行为倾向, 同时通过信息过度收集和隐私担忧间接影响青年的隐私保护行为, 信息过度收集与隐私担忧在隐私关注与隐私保护行为之间起多重中介的作用。研究结论: 数字社会中的个人信息具有无限的创造性价值, 但让这些价值能够真实落地实施的前提, 需要严格按照合理适度的收集为基础, 避免因过度收集而引起民众的过度担忧, 进而导致极端的隐私保护, 得不偿失。

关键词 隐私关注, 隐私保护, 过度收集, 隐私担忧, 青年

The influence of Contemporary Youth Privacy Concern on their Privacy Protection Behavior: Multiple mediating effects of Excessive Information Collection and Privacy Concerns

Abstract: The digital society has brought about diversified use of personal information and aroused unprecedented attention to digital privacy. The over-application of permissions, the starting and ending time, content, purpose of use and the destination of information obtained by various mobile apps are completely opaque. Some apps even illegally steal users' sensitive information. In addition, in recent years, there have been numerous personal confidence leakage events, which make the public nervous about privacy security tense. The seemingly gratuitous exchange of personal information for service is just a Faustian transaction, and people are increasingly aware of the importance and necessity of privacy protection. Research from the perspective of social governance, based on the data of Chinese Academy of Social Sciences Institute of Sociology and Social Psychology Research Center Social Mentality Survey 2019", to the youth group as the research object, select 'Privacy Concern' 'Excessive Information Collection' 'Privacy Concerns' and 'Privacy Protection Behavior' items, to investigate the mediating effect of excessive information collection and privacy concerns on privacy protection behaviors of young people. The results show that privacy concern of young people not only directly affect their tendency of privacy protection behaviors, but also indirectly affect their privacy protection behaviors through excessive information collection and privacy concerns. Excessive information collection and privacy concerns act as multiple intermediaries between privacy concern and

privacy protection behaviors. Research conclusion: Personal information in the digital society has unlimited creative value, but the premise for the implementation of these values should be strictly based on reasonable and moderate collection, so as to avoid excessive collection of public concerns, which will lead to extreme privacy protection.

Keywords: Privacy Concern, Privacy Protection, Excessive Information Collection, Privacy Concerns, Youth

后疫情时期不同群体的需求满足感及其与防护行为的关系： 社会信任和风险感知的链式中介作用

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摘要 目的：后疫情时期，疫情基本得到控制但仍有反复，不能完全松懈；与此同时，人们的生活因疫情的冲击而面临困难，使得某些需求无法得到满足。因此，本研究考察了后疫情时期人们的需求满足感及其与防护行为的关系，并希望通过探讨社会信任和风险感知在其中的链式中介作用，以发现促进后疫情时间人们防护行为的方式。**方法：**本研究将需求分成三类：防护需求、发展需求和生活需求；并将防护行为分成合理防护行为（如佩戴口罩）和不合理防护行为（如服用抗生素）两类。采用自编问卷在问卷宝平台发放，共回收问卷 8720 份，剔除非正常作答问卷和异常数据后，得到有效问卷 8306 份，有效率为 95.3%。被试年龄为 18~70 岁($M = 28.9$; $SD = 8.8$)，其中男性 4646 人(55.9%)。**结果：**1) 后疫情时期人们的生活需求较为满足，但防护需求和发展需求满足感一般。2) 没有固定工作、长期居住地在农村、社会等级更低、经历过 SARS、有疫情相关感染或隔离经历的被试，感到三类需求更没有得到满足。3) 发展需求和生活需求未满足的被试更容易产生补偿性的防护行为，合理和不合理的防护行为都更多，但防护需求对防护行为的影响不显著。4) 需求满足感与社会信任呈正相关，而与风险感知呈负相关；社会信任与合理和不合理的防护行为均呈显著正相关，而风险感知仅与不合理防护行为呈显著负相关，与合理防护行为没有显著相关。5) 社会信任和风险感知在防护需求与不合理防护行为间起完全中介作用，在发展需求和不合理防护行为（占总效应的 35.1%）、生活需求和不合理防护行为间（占总效应的 26.2%）起部分中介作用；仅社会信任在防护需求和防护行为间起完全中介作用，在发展需求和合理防护行为（占总效应的 19.6%）、生活需求和合理防护行为间（占总效应的 25.8%）起部分中介作用。**结论：**后疫情期间应更关注社会底层、有疫情相关感染或隔离经历群体的防护、发展和生活需求，并通过增加社会信任来提高人们的防护行为，但通过强调风险严重程度来增加民众的风险感知仅能提高不合理防护行为。

关键词 后疫情时间，需求满足感，防护行为，社会信任

Need Satisfaction of Different Groups in the Post-COVID-19 Era and its Relationship with Protecting Behaviors: Multiple Mediating Role of Social Trust and Risk Perception

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Abstract: Objectives: In the post-COVID-19 era, the epidemic was under control basically but recurrent from time to time; and people could not take no protecting behaviors. At the same time, life was stricken by the epidemic leading to some needs dissatisfied. Thus, the study aimed to explore the relationship between need satisfaction and protecting behaviors in the post-COVID-19 era, and find out ways to increase protecting behaviors by studying the multiple mediating role of social trust and risk perception. **Methods:** The study divided needs into three kinds - protecting, developing, and living need, and divided protecting behaviors into two kinds - rational (e.g., wearing masks) and irrational (e.g., taking antibiotic drugs). A total of 8,720 questionnaires were distributed and collected online. After eliminating abnormal responses and data, 8,306 questionnaires were obtained, with an effective rate of 95.3%. Participants were aged from 18 to 70 years old ($M = 28.9$; $SD = 8.8$), including 4,646 men (55.9%). **Results:** 1) In the post-COVID-19 era, living needs were relatively satisfied, but the protecting and developing needs were average

satisfied. 2) Participants without permanent jobs, living in rural areas, with lower social class, having SARS experiences, having infection or isolation experiences of COVID-19, felt that the three needs were less satisfied. 3) Participants whose developing and living needs were less satisfied were more likely to have compensatory behaviors, with more rational and irrational protecting behaviors; however, the impact of protecting needs on protecting behaviors was not significant. 4) Need satisfaction is positively correlated with social trust, but negatively correlated with risk perception; social trust is significantly positively correlated with both rational and irrational protecting behaviors, while risk perception is only significantly negatively correlated with irrational protecting behaviors, but not rational protecting behaviors. 5) Social trust and risk perception played a complete mediating role between protecting need satisfaction and irrational protecting behaviors, and played a partial mediating role between developing need satisfaction and irrational protecting behaviors (35.1% of the total effect) and living need satisfaction and irrational protecting behaviors (26.2% of the total effect). Only social trust played a complete mediating role between protecting need satisfaction and rational protecting behaviors, and played a partial mediating role between developing need satisfaction and rational protecting behaviors (19.6% of the total effect) and living need satisfaction and rational protecting behaviors (25.8% of the total effect). **Conclusion:** In the post-COVID-19 era, more attention should be paid to the protecting, developing, and living needs of people at the bottom of society and people who have epidemic experiences. We should also try to improve social trust to increase protecting behaviors, but increasing risk perception by emphasizing the severity of epidemic can only increase irrational protecting behaviors.

Keywords: post-COVID-19 era, need satisfaction, protecting behaviors, social trust, risk perception

基于社会心态的城市治理途径与方法

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摘要 快速城镇化给城市治理带来一系列挑战,“人”在城市治理过程的作用越来越突出,要达到治理成效必须了解市民的社会心态。社会心态在城市治理中起着调节阀、缓冲器的作用。在社会心态指标体系框架中,社会认知、社会情绪、社会价值、社会行为倾向分别与城市吸引力治理、城市幸福治理、城市精神治理、与城市文化融合相对应。基于这些指标与城市治理维度的关联,利用提供公共场域、完善制度政策、探索社区治理模式、健全社会心理服务体系的途径和方法培育良好的社会心态,可提高城市的弹性与韧性,推动城镇化朝更健康方向发展。

关键词 社会心态;城市治理;城镇化

Approaches and Methods of Urban Governance Based on Social Mentality

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Abstract: Rapid urbanization has brought a series of challenges to urban governance. The role of "people" in the urban governance process is becoming more and more prominent. To achieve governance results, it is necessary to understand the citizens' social mentality. The social mentality plays a role as a regulating valve and a buffer in urban governance. In the framework of the social mentality index system, social cognition, social emotions, social values, and social behavior tendencies respectively correspond to urban attractiveness, urban happiness, urban spirit, and urban culture. Based on the correlation between these indicators and the dimensions of urban governance, providing public venues, improving institutional policies, exploring community governance, and improving the social psychological service system can cultivate a good social mentality, improve the resilience of cities, and promote urbanization towards a healthier direction.

Keywords: social mentality; urban governance; urbanization

不同强度的高兴表情对面孔社会知觉的影响

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摘要 面孔社会知觉指知觉者基于面孔所有者的面孔信息对面孔所有者的人格特质等进行知觉推断的过程。表情是人们进行面孔社会知觉的关键线索之一。本研究的目的是探究不同强度高兴表情对面孔社会知觉的影响。通过广告招募 32 名大学生, 根据对不同强度的高兴表情面孔图片的观察, 就 11 项人格特质(可信度、尽责性、吸引力、善交际、自信心、聪颖度、攻击性、支配性、能力、温暖度、坚韧性)进行 7 点评价(1 为“非常不××”, 7 为“非常××”), 以各人格特质评分为因变量进行 2(高兴表情强度)×2(图片性别)×11(人格特质类型)的重复测量方差分析。结果显示, 同一种高兴表情, 会因其强度不同而对面孔社会知觉的影响不同, 具体来说, 在善交际、温暖度的评价上, 高强度高兴表情比低强度高兴表情面孔的得分高; 在支配性、攻击性、聪颖度、胜任力的评价上, 低强度高兴表情比高强度高兴表情面孔的得分高; 在可信度、吸引力、尽责性、自信心、坚韧性上两者无显著差异。由此, 我们可以得出以下结论: 高强度与低强度高兴表情对面孔社会知觉的促进效应受人格特质类型的影响。低强度比高强度高兴表情面孔在能力维度(支配性、攻击性、能力、聪颖度)上的评价更高, 但在热情维度(善交际、温暖度)方面评价更低, 可信度、吸引力、尽责性、自信心和坚韧性的知觉结果不随高兴表情强度的变化而变化。

关键词 高兴表情, 强度, 面孔社会知觉

The Effect of Smile Intensity on Social Perceptions of Face

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Abstract: Social perception of face is a process in which the perceiver makes perceptual inferences about the personality traits of the face owner based on the face information of the face owner. Facial expression is one of the key cues for Social perception of face. The purpose of this study is to compare the influence of high-intensity and low-intensity happy expression on social perception of face. Thirty-two college students were recruited through advertisements to watch a series of face pictures of high-intensity or low-intensity happy expression and rate their 11 personality traits (trustworthiness, responsibility, attractiveness, sociability, confidence, intelligence, aggressiveness, dominance, competence, warmth, tenacity) on seven points (1 was "very not ××", 7 was "very ××") scales. The score of each personality trait evaluation was taken as the dependent variables to conduct the repeated measurement ANOVA with happy expression intensity, picture gender and personality trait type as within independent variables. The results showed that the happy expression has different effects on the social perception of face due to its different intensity. Specifically, the high-intensity happy expression got higher scores than the low-intensity happy expression in sociability and warmth. As for dominance, aggressiveness, intelligence and competence, the high-intensity happy expression got lower scores than the low-intensity happy expression; there was no significant difference in the scores of trustworthiness, attractiveness, responsibility, confidence and tenacity. From this, we can draw the following conclusions: The stimulative effect of high and low intensity happy expression on social perception of face is influenced by personality type. Compared with the low-intensity happy expression, the high-intensity happy expression will lead to the perceptual outcome of the personality traits related to the warmth(sociability, warmth), and reduce the perceptual outcome of personality traits related to the competence(dominance, aggressiveness, competence and intelligence), and have no effect on trustworthiness, attractiveness, responsibility, confidence and tenacity.

Key words: happy expression, Social perception of face, intensity

互依型自我构念对文化依恋的影响： 民族本质论的中介作用

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摘要: 文化依恋是个体与特定文化之间形成的一种具有积极认知性和情感性的心理联结, 并由此导致的对该文化的热爱、接近及依赖倾向。“心理联结”表现为个体对该文化的信赖感和归属感, 以及个体从该文化中获得的安全感和支持感。本研究根据该内涵构建了文化依恋的理论结构, 即包括文化-自我关联度、文化情感联结和文化亲近行为 3 个因子, 在此基础上编制了具有较高信效度, 符合心理测量学要求的文化依恋量表, 并运用该量表采用问卷调查法, 使用一般自我构念量表和民族本质论量表, 以内蒙古自治区、北京市、江苏省、湖北省、四川省、陕西省的 10 所大学的 2442 名大学生作为调查样本, 考察了个体的自我构念、民族本质论对文化依恋的影响以及民族本质论在个体自我构念和对本民族文化的文化依恋之间的中介作用。结果表明: 自我构念中的互依型自我构念和民族本质论可以预测个体的文化依恋; 民族本质论在个体互依型自我构念和对本民族文化的文化依恋关系中有中介作用。

关键词: 文化依恋, 互依型自我构念, 民族本质论, 中介

The influence of Interdependent Self Construction on Cultural Attachment: The Mediating Role of Psychological Essentialism of Ethnicity

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Abstract: Cultural attachment is a positive cognitive and emotional psychological connection between an individual and a specific culture, which leads to the tendency of loving, approaching and depending on the culture. "Psychological connection" refers to the sense of trust and belonging to the culture, as well as the sense of security and support from the culture. According to this connotation, this study constructs the theoretical structure of cultural attachment, which includes three factors: cultural-self correlation, cultural emotional connection and cultural closeness behavior. On this basis, a cultural attachment scale with high reliability and validity and in line with psychometric requirements is developed. The scale is used to conduct questionnaire survey, general self-construction scale and national essentialism scale, 2442 college students from 10 universities in Inner Mongolia Autonomous Region, Beijing, Jiangsu, Hubei, Sichuan and Shaanxi provinces were selected as research samples to investigate the influence of individual self-construction, national essentialism on cultural attachment, and the mediating role of national essentialism between individual self-construction and cultural attachment to national culture. The results show that: the interdependent self-construction and national essentialism in self-construction can predict the individual's cultural attachment; the national essentialism plays a mediating role in the relationship between individual interdependent self construction and cultural attachment to the national culture.

Keywords: cultural attachment, interdependent self-construction, psychological essentialism of ethnicity, mediation

(3) “社会心理学专业委员会”专题研讨会 3

发现游戏中的欺骗：来自恐惧表情自动编码的证据

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摘要 根据 Ekman 的泄露理论, 欺骗时人们一般都会害怕欺骗被发现, 特别是当欺骗被发现有着较严重的后果的时候。欺骗的泄露理论预测高度利益攸关的情境下欺骗者会无法控制的泄露出内心体验到的情绪, 或恐惧或高兴(欺骗愚弄他人的快感), 因此通过分析恐惧表情可以揭露可能存在的欺骗。人工检测和分析细微的恐惧表情是一个巨大的挑战, 采用计算机视觉技术, 加上机器学习来进行分类可以有效的弥补人工分析的不足。我们用计算机视觉开源软件 OpenFace 分析了一个真人游戏节目“The moment of truth”中人物在说谎和说真话时的恐惧表情的面部动作单元, 将软件的输出用机器学习软件 WEKA 进行分类。结果发现单纯利用恐惧表情的面部动作单元机器能达到 80%以上分类正确率, 而综合考虑其他指标(如瞳孔大小)后机器的分类正确率可以到达 99%以上。同时, 我们也分析了诚实和欺骗条件下人物表情动作单元(AU20)的持续时间, 发现欺骗条件下的表情持续时间显著短于诚实条件下的表情持续时间; 进一步的分析表明之所以欺骗条件下持续时间短是因为从表情最大幅度到消失的时间更短。对诚实和欺骗条件下人物左右面部表情动作(眼周)的对称性进行分析发现欺骗条件下对称性显著差于诚实条件。以上结果表明: 存在可以区分诚实和欺骗的面部线索, 且欺骗可以利用恐惧表情进行区分。

关键词 欺骗, 恐惧, 泄露理论, 机器学习

Discovering deception: evidence from the automatic analysis of fear

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Abstract: The leakage theory in the field of deception detection claimed that the liar could not repress the leaked felt emotions (fear or delight). Based on the theory of leakage, we can predict that people who is lying will feel fear (to be discovered), especially under the high-stake situations. Therefore, we can reveal deceits through analyzing the fear facial expressions. Detecting and analyzing the subtle leaked fear facial expressions is a challenging task for naïve people. It is, however, a relatively easy job for computer vision and machine learning. To test the prediction, we analyzed video clips from a game show “The moment of truth” by using the OpenFace (for outputting the Action Units of fear and face landmarks) and WEKA (for classifying the video clips in which the players was lying or telling the truth). The results showed that some algorithms could achieve an accuracy over 80% merely using AUs of fear; we could get an accuracy over 99% while adding more indicators (such as size of pupil and AUs of happiness). Besides, we compared the durations of AU 20 of fear and found that the duration of fear under the deception condition was significant less than that under the truth-telling condition. And the cause was that the duration from peak to offset of AU20 under the lying condition was less than that under the truth-telling condition. The results also showed that the symmetry of facial movements (around the eyes) was different between the truth-telling and lying, it was more symmetrical while telling the truth. The results suggested that there do exist facial clues to deception, and fear could distinguish lying from truth-telling.

表情识别与背腹侧通路

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摘要 表情识别是人类社会交互过程中理解他人情绪的重要能力, 这一过程依赖于枕叶皮层、颞叶皮层及前额叶皮层等的共同参与。其中, 腹侧与背侧两条神经通路在表情识别中的作用一直是研究者关心的问题。以往研究发现背侧通路如颞上沟负责表情识别, 而腹侧通路如梭状回负责面孔身份加工, 关于这一问题却有争论。本研究采用元分析的方法, 通过脑成像的荟萃结果探究了表情处理网络中的腹侧背侧通路的参与程度。元分析选用了 GingerALE 提供的激活似然性评估(ALE)算法, 将 92 篇正常成年被试进行面部感知任务且报告全脑激活坐标的 fMRI 与 PET 研究纳入元分析。情绪面孔与中性面孔的比较结果显示, 腹侧通路主要参与面孔表情感知中的情绪加工部分; 通过比较研究范式, 外显识别(被试识别情绪)、内隐识别(被试判断性别、年龄等)、自然观看的结果, 研究发现自然观看比外显、内隐范式显著激活视觉皮层区域, 三类范式共同激活杏仁核。

关键词 面部表情识别, 背侧腹侧通路, 元分析

Facial expression recognition with dorsal and ventral pathways

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Abstract: Facial expression recognition is an essential ability to comprehend the emotion of others in social interactions. This process relies on the participation of the occipital cortex, temporal cortex and prefrontal cortex, among which, the roles of the ventral and dorsal pathways in facial expression perception have gained considerable attention by researchers. It is still a matter of debate whether the dorsal or ventral pathway is responsible for the perception of facial expression. Utilizing activation likelihood estimate (ALE) meta-analysis, we explored the involvement of ventral and dorsal pathways in the facial expression. Ninety-two fMRI and PET studies employing facial perception tasks to healthy adults and reporting results of whole-brain analyses were included. For the contrast of emotional faces versus neutral faces, results showed that the ventral pathway is mainly responsible for the emotional processing part of facial expression perception. By comparing the studies using different paradigms, explicit (participants were asked to indicate emotions through paradigms such as choice-from-array tasks or matching tasks), implicit (participants indicated gender or age) and passively viewing tasks, we found that passively viewing tasks triggered more activation in the occipital cortex than the explicit and implicit tasks; the results of conjunction analyses revealed their consistent activation in amygdala.

Keywords: facial expression recognition, dorsal and ventral pathways, meta-analysis

情感的非接触识别：优势与挑战

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摘要 目前计算机具有强大的逻辑智能, 但还不具备情感智能。计算机的情感智能是指使得计算机能够识别、理解和产生人类情感。这也是情感计算领域的终极目标。正确识别人类情感是实现情感智能的第一步。情感的非接触识别通过各种成像手段非接触地采集各种生理信号和面部视频信号, 使得情感的识别过程更加自然和隐蔽。本文介绍情感识别的原理与最新研究进展, 包括基于面部组织血氧的情感识别, 基于外周生理信号的情感识别, 微表情检测与识别。通过真实案例(包括讯问、面试人可信度分析、人物的真实意图分析)

说明情感非接触识别技术的优势与挑战，并总结情感非接触识别的未来研究与应用方向。

关键词 微表情分析，面部血氧，生理信号，情感非接触识别，人工智能

Non-contact Recognition of Affective States: Advantages and Challenges

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Abstract Nowadays computers have high level logic intelligence, but less affective intelligence. The aim of affective intelligence is to equip the computers the ability to recognize, understand and even have affective states or emotion, which is also the final object of affective computing. To accurately recognize emotion is the first step of achieving affective intelligence. The non-contact recognition of affective states relies on the non-contact sensing of physiological signals and facial expressions, and makes the recognition more naturally and concealed. This report introduces the theory and latest development of non-contact recognition of affective states, including the recognition based on facial tissue oxygen saturation (StO₂), the recognition based on physiological signals, and spotting and recognition of micro-expression. Through real applications, including interrogating, credit investigation of interviewers, and intent analysis, this report highlights the advantages and challenges of non-contact recognition of affective states, and concludes the direction of future research and application.

基于视频中日常行为分析的心理生态化感知技术研究

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摘要 我们的日常生活已经和网络有深度的融合，在国内像抖音、快手这样的短视频平台包含着用户丰富的多模态行为数据，比如视频中的面部、肢体动作和语音，这些数据可以被远程、生态化、长期纵向的捕捉和记录，构成庞大复杂的网络数据空间。已有大量研究提出了心理指标和行为线索之间的相关性，我们在前人研究的基础上，通过计算机手段获取和量化视频中个体面部和步态行为的变化，利用数据挖掘技术将行为线索和心理指标间的映射关系进行科学的数字量化，从而实现基于行为分析的心理生态化感知模型，实现对人格、情绪及心理健康指标的有效识别，给心理学研究应用带来巨大的影响，同时对人工智能领域的发展起到重大的推动作用。

关键词 心理感知，面部行为，步态分析，数据挖掘

Research on Psychological Ecological Perception Technology Based on Daily Behavior Analysis in Video

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Abstract: Our daily life has been deeply integrated with the Internet. In China, some short video platforms like “TikTok” and “SnackVideo” contain rich multi-modality behavioral data, such as face, body movements and voice in video, which can be captured and recorded remotely, ecologically and in long-term, forming huge and complex network data space. Many studies have proposed the correlation between psychological indicators and behavioral cues. Based on previous studies, we obtain and quantify the changes of individual's face and gait behavior in video by computer means, and quantify the mapping relationship between behavior cues and psychological indicators scientifically using data mining algorithm, so as to realize the psychological recognition based on behavior. In our

study, the psychological recognition model can effectively identify personality, emotion and several mental health indicators, has a great impact on the psychological research and application, and plays a significant role in promoting the development of artificial intelligence.

Keywords: Psychological perception, Facial behavior, Gait analysis, Data mining

基于步态的时频特征情绪识别

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摘要 情绪是由外界环境和认知评估产生的生理和心理状态, 自动、高效的情绪识别技术对于人机交互、心理健康和心理疾病的预防等研究具有重要作用。人体步态信息是一种重要的用于识别情绪的模式。在现有的基于步态的研究中, 大多主要关注运动特征, 如: 速度、步幅等。这些运动特征并不能完全表达步态信息, 也不能有效的应用于情绪识别。本研究利用信号处理中时频分析技术, 针对 Kinect 采集到的非接触步态信息, 分别在时域和频域提取与人类情绪紧密相关的特征, 并利用机器学习的方法建立情绪识别模型。实验结果表明, 这些时频步态特征能有效的表示出人类的不同情绪。

关键词 情绪识别, 步态, 时频分析, 心理健康

Emotion Recognition based on Gait Time-frequency Features

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Abstract: Emotion is the physical and psychological state produced by the external environment and cognitive evaluation. Automatic and efficient emotion recognition technology plays an important role in the research of human-computer interaction, mental health and the prevention of mental illness. Human gait information is an important pattern used to recognize emotions. In the existing gait-based research, most of them mainly focus on movement characteristics, such as speed, stride, etc. These motion characteristics cannot fully express gait information, nor can they be effectively applied to emotion recognition. In this study, the time-frequency analysis technology in signal processing was used to extract features closely related to human emotions in the time domain and frequency domain for the non-contact gait information collected by Kinect, and the emotion recognition model was established using machine learning methods. Experimental results show that these time-frequency gait features can effectively express different human emotions.

Keywords: Emotion Recognition, Gait, Time-frequency analysis, Mental health

2.10 “临床与咨询心理学专业委员会”专题研讨会

(1) “临床与咨询心理学专业委员会”专题研讨会 1

青少年创伤后应激症状的代际影响：一个多重中介效应的检验

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摘要 创伤后应激障碍（PTSD）是普遍存在于创伤后人群中的典型消极心理反应，目前的研究主要关注成年人/青少年个体的 PTSD 状况及其发生机制，忽略从家庭系统视角探究 PTSD 的发生机制并实施干预，以致灾后长时间内青少年的 PTSD 依旧持续存在。在模糊角色理论和情绪传染理论看来，父母的 PTSD 势必会诱

发其孩子出现类似的症状，甚至加剧孩子 PTSD 的严重性，导致创伤的代际影响，造成青少年 PTSD 的持久性。为了从家庭系统视角对自然灾害后青少年 PTSD 进行有针对性的干预，有必要明确不同 PTSD 症状簇的代际影响及其深层机制。为此，本研究采用纵向配对数据来检验经历台风利奇马后父母 PTSD 不同症状簇对孩子 PTSD 症状簇的长期影响，以及孩子的感知家庭支持、安全感和灾难化情绪调节策略的中介作用。研究采用自陈量表获取父母和子女纵向配对数据 495 对，其中父母（24.4%为父亲； $M_{\text{年龄}} = 40.11$ 岁， $SD = 5.42$ ）报告了他们在台风后 3 个月（T1）的创伤后应激症状（PTSS），青少年（42.2%为男生； $M_{\text{年龄}} = 15.44$ 岁， $SD = 1.22$ ）报告了他们在台风后 15 个月（T2）的 PTSS、家庭支持、安全感和灾难化的情绪调节策略。结果发现在控制父母和孩子的创伤暴露后，只有母亲 T1 的侵入性症状能够显著正向预测女儿 T2 的侵入、回避、负性认知和情绪改变（NCEA）以及高警觉四个症状；父亲和母亲 T1 的 PTSS 对儿子 T2 的 PTSS 以及父亲 T1 的 PTSS 对女儿 T2 的 PTSS 的影响作用均不显著。女儿 T2 感知的家庭支持、安全感和灾难化在母亲 T1 的侵入症状对女儿 T2 的四个症状簇的正向预测中起多重中介作用，具体表现在母亲 T1 的侵入症状可以通过 T2 女儿感知的家庭支持间接地正向预测 T2 女儿的 NCEA 症状，也可以通过 T2 女儿感知的家庭支持经安全感间接地正向预测 T2 女儿的侵入、NCEA 和高警觉症状，还可以通过 T2 女儿感知的家庭支持经安全感由灾难化间接地正向预测 T2 女儿的侵入、回避、NCEA 和高警觉症状。这些结果说明台风后 PTSS 在女性同性别中存在着长期的代际影响，其中侵入性症状为主要的受影响症状。该结果提示临床工作者在对自然灾害后青少年 PTSS 进行家庭干预时应关注母亲对女儿的影响，重点改善母亲的侵入性症状，并提升来自家庭的支持以缓解女儿的不安全感和灾难化的情绪调节方式，从而缓解其 PTSS。

关键词 创伤后应激症状，代际影响，家庭支持，安全感，灾难化

Long-term intergenerational effect of PTSS among parents and their offspring following super typhoon Lekima: An analysis of multiple mediation model

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Abstract: Posttraumatic stress disorder (PTSD) is considered as one common negative reaction among adolescents following nature disasters. The literature of PTSD mainly focused on its prevalence and mechanism from individual perspective, and ignored exploring its mechanism and related intervention from family perspective, which may lead to the long-term PTSD for traumatized adolescents. Based on the role ambiguity theory and emotional contagion theory, parental PTSD would induce in their children's similar symptoms inevitably, and even aggravate children's more PTSD, resulting in the intergenerational effect of PTSD. Therefore, in order to intervene adolescents' PTSD effectively from the family perspective, it is necessary to clarify the underlying mechanism of distinct PTSD symptoms intergenerational effect. In the current study, longitudinal dyads data was used to examine the long-term influence of parental PTSD symptoms on children's PTSD symptoms, and the mediating effect of children's family support, sense of security, and catastrophizing. A total of 495 longitudinal parent-child dyads were collected using self-report scale. Parents (24.4% were fathers; $M_{\text{age}} = 40.11$ years old, $SD = 5.42$) reported their PTSD symptoms 3 months after typhoon (T1), and children (42.2% were boys; $M_{\text{age}} = 15.44$ years old, $SD = 1.22$) reported their PTSD symptoms, family support, sense of security, and catastrophizing 15 months after typhoon (T2). The results found that after controlled for parental and children's trauma exposure, only maternal intrusion symptom at T1 could significantly positively predicted daughters' intrusion, avoidance, negative cognition and emotional alternation (NCEA), and hyperarousal symptoms at T2. The influence of parental PTSD symptoms at T1 on sons' PTSD symptoms at T2, and the predication from paternal PTSD symptoms at T1 to daughters' PTSD symptoms at T2 were not significant. Daughters' family support, sense of security, and catastrophizing at T2 played the mediating role in the relationship from maternal intrusion symptom at T1 to daughters' intrusion, avoidance, NCEA, and hyperarousal symptoms at T2. To be specific, maternal intrusion symptom at T1 showed indirectly positive relationship to

daughters' NCEA symptoms at T2 via daughters' family support at T2, positively predicted daughters' intrusion, NCEA, and hyperarousal symptoms at T2 via the path from daughters' family support to sense of security at T2, and positively predicted daughters' intrusion, avoidance, NCEA, and hyperarousal symptoms at T2 via the path from daughters' family support to sense of security to catastrophizing at T2. The results indicated that PTSS has long-term intergenerational effects between the same sex among females after typhoon, and intrusion symptom was the key influencing symptom. That advises clinical workers paying more attention to the influence from mothers to daughters after natural disaster, and focusing on improving mothers' intrusive symptom as well as enhancing family support to alleviate daughters' sense of insecurity and catastrophizing, in order to alleviate daughters' PTSD symptoms.

Keywords: PTSD symptoms, intergenerational effect, family support, sense of security, catastrophizing

震后青少年自我同情与非自杀性自伤的关系: 感恩与创伤后成长的中介作用及其性别差异

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摘要 采用自我同情量表、感恩问卷、创伤后成长问卷和非自杀性自伤问卷在九寨沟地震 1.5 年后对 597 名经历过地震的青少年进行问卷调查。考察自我同情对非自杀性自伤(NSSI)的影响, 并检验感恩和创伤后成长(PTG)在其间的中介作用及其性别差异。结果发现, 在整体样本中, 积极的自我同情对 NSSI 有负向预测作用, 而消极的自我同情对 NSSI 有正向预测作用。此外, 感恩和 PTG 在自我同情和 NSSI 之间发挥了显著的链式中介作用。多群组分析结果显示, 在男性群体中, 感恩和 PTG 在自我同情与 NSSI 之间的中介作用均显著; 但在女性群体中, 只有感恩发挥了显著的中介作用。积极的自我同情可以降低青少年的 NSSI 风险, 而消极的自我同情会提高青少年 NSSI 风险。感恩和 PTG 是自我同情与 NSSI 之间的重要机制, 但二者的作用因性别不同而表现出显著的差异。

关键词 自我同情, 感恩, 创伤后成长(PTG), 非自杀性自伤(NSSI), 青少年

Exploring the Relationship between Adolescents' Self-Compassion and Non-Suicidal Self-Injury after Earthquake: Gender Differences in the Mediating Roles of Gratitude and Posttraumatic Growth

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Abstract: Previous research has found that self-compassion is associated with adolescent's non-suicidal self-injurious (NSSI) behaviors. However, few studies have explored the underlying mechanisms of the relationship between self-compassion and NSSI from a positive perspective or factors that might strengthen or weaken these processes. This study examined the moderating role of gender and the mediating roles of gratitude and posttraumatic growth (PTG) in the association between self-compassion and NSSI among Chinese adolescents after the Jiuzhaigou earthquake. A total of 597 adolescents who had experienced the Jiuzhaigou earthquake volunteered to complete the Self-Compassion Scale, Gratitude Questionnaire, Posttraumatic Growth Inventory, and Inventory of Statements about Self-Injury. The mean age of the participants in the current study was 13.89 ($SD = 1.20$) for male ($N=305$) and 13.54 ($SD = 1.19$) for female students ($N = 282$). In the entire sample, positive self-compassion had a negative effect on NSSI, and negative self-compassion had a positive effect on NSSI. In addition, gratitude and PTG played significant mediating roles between self-compassion and NSSI, as well as the multiple mediating paths from gratitude to PTG. In the multiple-group comparison analysis, the mediating roles of gratitude PTG in the correlation between self-compassion and NSSI were significant in the male group. But in the female group, only gratitude had a significant mediating effect. Positive self-compassion was associated with lower levels of NSSI in adolescents, while

negative self-compassion was associated with higher levels of NSSI. The mediating effects of gratitude and PTG on the relationship between self-compassion and NSSI were different by gender.

Keywords: Self-compassion; Gratitude; PTG; NSSI; Gender difference; Adolescents

台风后儿童青少年 PTSD 的症状结构：一项交叉滞后的网络分析

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摘要 自然灾害不仅威胁到了人们的生命，还给人带来了一系列消极的心理反应，其中创伤后应激障碍（PTSD）就是较为常见的一种。近年来，研究者开始使用网络分析的方法，从新的角度理解 PTSD 的症状结构。根据网络理论，心理障碍并非由潜在的共同因素导致，而是通过症状之间的相互作用来建构的。每个症状都有其独特的作用。随着网络分析方法逐渐兴起，探索 PTSD 症状结构的研究数量快速增加。但现有研究大多利用横断数据进行网络估计，不能确定 PTSD 症状间的因果关系。基于此，本研究采用了交叉滞后网络分析方法，利用纵向数据考察 PTSD 症状之间的相互影响。研究采用问卷法，以经历利奇马台风的 1570 名中小學生为研究对象，在灾后 3 个月，15 个月分别对其 PTSD 症状进行测量。控制了台风暴露和疫情暴露的影响后，结果表明闪回和注意力问题是最具影响力的症状，而高警觉症状容易受到其他症状的影响。网络内的强连接主要从侵入性症状和唤醒性症状发出（例如，闪回 → 回避外部线索；注意力问题 → 消极信念），指向回避性症状和负性认知和情绪改变症状。这一研究首次采用纵向的视角，考察了自然灾害后青少年的 PTSD 症状结构，研究结果拓展了现有的 PTSD 症状网络结果，揭示出不同症状簇在 PTSD 发生发展中可能发挥着不同的作用。针对儿童青少年的灾后心理干预应以预防和缓解闪回症状为重点，并重视注意力问题。

关键词：创伤后应激障碍，儿童青少年，网络分析

PTSD in children and adolescents: A cross-lagged panel network analysis

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Abstract: The natural disaster not only threatened people's physical health, but also brought a series of negative psychological reactions to the survivors, among which posttraumatic stress disorder (PTSD) was one of the most common psychopathologies. Recently, network analysis emerged as a popular way to investigate the PTSD structure. It provided a new perspective on the development of mental disorder. According to network theory, disorders were constructed based on the causal relationships between symptoms, and each symptom has its own function. Despite the increasing literature on cross-sectional PTSD network, the direction of these interactions were missing. In light of this, we used to cross-lag panel network analysis to identify the temporal relationships between the PTSD symptoms. The longitudinal data were collected 3 and 15 months after the Typhoon Lekima respectively. After controlling the typhoon exposure and pandemic exposure, flashbacks and concentration problems appeared as the most influential symptoms. In contrast, hypervigilance was easily affected by other symptoms inside and even outside the symptom cluster. Strong edges mainly started from intrusive and arousal symptoms (e.g., flashbacks → avoidance of external reminders, concentration problems → negative beliefs). This is the first study assessed the PTSD network of children and adolescents from a longitudinal perspective. These findings extended the contents of PTSD structure, suggesting the shifting roles of the symptoms in PTSD. Targeted treatment for children and adolescents with PTSD should focus on the prevention of flashbacks, and pay attention to concentration problems as it might be a unique core symptom of PTSD in the youths.

Keywords: Posttraumatic stress disorder, children and adolescents, cross-lagged panel network analysis

新冠疫情下青少年基本心理需要满足与抑郁的关系： 安全感与反刍的中介作用

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摘要 新冠疫情不仅对人们的生命健康产生巨大威胁, 还对其心理产生消极的影响, 导致诸如焦虑、抑郁、创伤后应激反应等症状的出现。其中, 抑郁是青少年疫情期间出现的一种常见心理问题。不过并非经历此次疫情的青少年都会出现抑郁, 基于自我决定理论(Deci & Ryan, 2000)和反应风格理论(Nolen-Hoeksema, 1991), 疫情下青少年的基本心理需要能否得到满足、其出现反刍思维的程度均有可能影响其抑郁情绪的出现。同时, 青少年感知到的安全感对其是否产生抑郁情绪也至关重要。基于以往研究, 我们推测疫情下基本心理需要满足在影响青少年抑郁情绪的过程中也会与其安全感、反刍产生重要关联, 但目前较少有研究将这些因素整合起来探讨具体的影响机制。为此, 本研究采用自陈式问卷对新冠疫情期间湖北某地的 683 名中学生进行了施测, 通过建立结构方程模型对疫情下青少年的基本心理需要满足、安全感、反刍与抑郁之间的关系进行考察, 同时比较自主、关系和胜任需要满足对于抑郁的独特影响机制。结果发现: 在控制了疫情暴露之后, 自主、胜任和关系需要满足不仅可以直接负向预测抑郁, 也能通过安全感来负向预测抑郁, 但是不能通过反刍对抑郁发挥显著的预测作用; 自主和关系需要满足可以通过安全感经反刍的多重中介作用来负向预测抑郁, 胜任需要满足影响抑郁的这一多重中介作用不显著。这些结果说明心理需要满足是增加疫情期间青少年安全感、降低消极认知、缓解抑郁的重要因子; 自主、胜任和关系需要满足通过安全感和反刍来影响抑郁的机制之间既有相同点也有不同之处。

关键词 新冠疫情, 基本心理需要满足, 安全感, 反刍, 抑郁

Basic Psychological Need Satisfaction and Depression in Adolescents during the COVID-19 Pandemic:

The Mediating Roles of Feelings of Safety and Rumination

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Abstract: The COVID-19 pandemic has not only been a threat to people's lives and health, but has also had a negative effect on their mental health, leading to symptoms such as anxiety, depression, and post-traumatic stress responses. Depression is one of the most common psychological problems in adolescents during the pandemic. However, not all adolescents who have experienced this pandemic will suffer from depression. According to the self-determination theory (Deci & Ryan, 2000) and response styles theory (Nolen-Hoeksema, 1991), whether adolescents' basic psychological needs are satisfied and the degree of their rumination may account for whether they experience depression. At the same time, feelings of safety are crucial to their depression experience. Based on previous research, we speculate that basic psychological need satisfaction will also have important relations with adolescents' feelings of safety and rumination in the process of affecting adolescents' depression during the pandemic. But limited studies have integrated these factors to explore the specific influencing mechanisms. Therefore, self-report questionnaires were distributed to 683 middle school students from Hubei province in China, structural equation modelling was used to investigate the relations among basic psychological need satisfaction, feelings of safety, rumination, and depression. The influencing mechanisms of autonomy, competence, and relatedness need satisfaction on depression were compared. The results found that after controlling for pandemic exposure, autonomy, competence, and relatedness need satisfaction not only had direct and negative effects on depression, but also had indirect negative effects on depression via feelings of safety. However, need satisfaction did not have a significant

effect on depression through rumination. Autonomy and relatedness, but not competence need satisfaction, had multiple indirect and negative effects on depression via feelings of safety through rumination. These findings indicate satisfaction of basic psychological needs is important in increasing adolescents' feelings of safety, reducing negative cognitions, and alleviating their depression level during the pandemic. There were both similarities and differences in the ways that autonomy, competence, and relatedness need satisfaction affected depression via feelings of safety and rumination.

Keywords: COVID-19 pandemic, basic psychological need satisfaction, feelings of safety, rumination, depression

人际暴力循环：中国文化背景下父母虐待与儿童欺凌的双向关系

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摘要 校园欺凌是一种最常见的校园暴力现象，它危害着学生的身心健康。欺凌行为具有故意伤害、反复发生和双方力量不均衡的特征。作为家庭中的一种人际暴力，父母虐待与欺凌行为具有相似特征，因而可能影响儿童在学校中的人际暴力——导致欺凌行为。但在中国文化背景下盛行着“打是亲骂是爱”“不打不成器”等观念，因此父母虐待很可能被解释为是父母关爱和管教孩子的体现。因此两种人际暴力之间的传递关系可能在一定程度上被遮掩。此外，中国人认为“养不教父之过”。当孩子欺凌别人，父母可能因为管教不力而受到社会舆论的责备。因此，儿童的欺凌行为也可能引起父母随后更严厉的管教。综上，本研究旨在考察中国文化背景下父母虐待与儿童欺凌之间跨时间的暴力循环关系及其发生机制。研究采用童年创伤量表和Olweus欺负问卷对安徽省897名8-11岁儿童进行三次追踪调查。结果表明：(1)父母身体虐待稳定预测随后的儿童欺凌行为，父母心理虐待对欺凌行为的预测作用不显著；(2)儿童欺凌行为稳定预测随后的父母身体虐待、心理虐待；(3)父母虐待与儿童欺凌之间存在跨时间的暴力循环关系；(4)身体虐待与男生欺凌行为紧密相关，心理虐待与女生欺凌行为紧密相关。本研究揭示了中国文化背景下父母虐待与儿童欺凌行为的暴力循环关系，为提高中国父母对虐待消极后果的认识提供了依据。此外，父母虐待与儿童欺凌行为的暴力循环警示中国父母应当学习科学的家庭教育知识和应对欺凌的策略，从根本上打破这种暴力循环。这种暴露循环的机制也提示校园欺凌的相关干预工作需要家庭的参与。最后，暴力循环的性别差异强调家庭教育需要关注儿童的性别特征，针对不同性别的儿童采取差异化教养。

关键词 中国文化，父母虐待，欺凌，暴力循环

Cycle of interpersonal violence: Bidirectional relationship between parental maltreatment and children's bullying in the context of Chinese culture

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Abstract: School bullying is a most common phenomenon of school violence, which endangers the physical and mental health of students. Bullying has the characteristics of deliberate injury, repeated occurrence, and imbalance in the strength between bullies and victims. As a kind of interpersonal violence in the family, parental maltreatment has similar characteristics with bullying, which may affect children's interpersonal violence in school, leading to bullying. However, in the context of Chinese culture, concepts such as "beating is caring, and scolding is loving" and "spare the rod, and spoil the child" are prevailing. Therefore, parental maltreatment is likely to be interpreted as parent's care and discipline for their children. Therefore, the transmission relationship between the two kinds of interpersonal violence may be concealed to a certain extent. In addition, the Chinese believe that "parents are to blame for their child's faults." When children bully others, parents may be blamed by the public for poor discipline. Therefore, children's bullying may also result in parent's harsh discipline. In summary, this study aimed to investigate the cycle

of interpersonal violence between parental maltreatment and children's bullying over time in the context of Chinese culture, and its mechanisms. 897 children aged 8-11 years in Anhui Province were recruited to complete the Childhood Trauma Questionnaire and Olweus Bullying Questionnaire at three time points. The results showed that: (1) Parental physical maltreatment stably predicted subsequent children's bullying, and parental psychological maltreatment did not have a significant predictive effect on children's bullying; (2) Children's bullying stably predicted subsequent parental physical maltreatment and psychological maltreatment; (3) The cycle of interpersonal violence between parental maltreatment and children's bullying has been found; (4) Physical maltreatment was closely related to boys' bullying, whereas psychological maltreatment was closely related to girls' bullying. This study reveals the cycle of interpersonal violence between parental maltreatment and children's bullying under the Chinese cultural background, and provides a basis for raising Chinese parents' awareness of the negative consequences of maltreatment. In addition, the cycle of violence between parental maltreatment and children's bullying warns that Chinese parents should learn scientific knowledge of family education and strategies to cope with bullying, which helps to fundamentally break such cycle of violence. This mechanism of the cycle also suggests that the intervention of school bullying needs the participation of families. Finally, the gender difference in the cycle of violence emphasizes that family education needs to pay attention to the gender characteristics of children and adopt differentiated upbringing for children of different genders.

Keywords: Chinese culture, parental maltreatment, bullying, cycle of violence

新冠疫情期间儿童焦虑的发展轨迹及其亚类型

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摘要 背景: 2020年新冠疫情肆虐全球, 儿童作为危机的易感人群, 在疫情期间因隔离、网课等容易产生焦虑、抑郁等负性情绪, 而家庭抗逆力作为家庭整体应对危机的能力可以支持减轻儿童的负面情绪, 对儿童的心理适应具有积极作用。本研究旨在考察疫情期间儿童最为常发的焦虑情绪的发展轨迹及其亚类型, 并探究性别、家庭抗逆力对焦虑发展亚类型的预测作用。**方法:** 选取江苏省四所中小学的883名学生(男生452人, 女生431人, 平均年龄 11.41 ± 2.27 岁), 使用自编人口学量表、焦虑自评量表(SAS)和儿童家庭抗逆力量表(FRAS-CR)于2020年2月29日、3月14日、3月28日进行三个时间点的追踪测评, 并采用潜变量混合增长模型和多元逻辑回归模型进行数据分析。**结果:** 疫情发生(2020年2月至3月)期间, 儿童焦虑情绪的发展轨迹存在3个亚类型, 分别是持续稳定组(87.9%)、动态上升组(6.8%)和先高后低组(5.3%); 性别、家庭抗逆力对儿童焦虑情绪轨迹的预测作用显著($p < 0.05$), 与持续稳定组相比, 女生有更高的概率属于动态上升组; 同时, 家庭抗逆力总分并不能预测焦虑的轨迹, 但是其分维度(家庭沟通和问题解决维度)得分更低的儿童更有可能属于动态上升组。**结论:** 儿童焦虑情绪的发展轨迹具有群体异质性, 存在不同类别的发展趋势, 性别和家庭抗逆力对儿童焦虑情绪的发展轨迹存在显著预测效应。本研究对分类识别和支持危机中儿童焦虑情绪有着一定的临床价值, 以及通过促进父母与儿童的沟通交流和问题协商解决, 可以缓解儿童在危机中焦虑的上升趋势。

关键词 焦虑情绪, 发展轨迹, 家庭抗逆力, 潜变量混合增长模型

Developmental Trajectory of Anxiety among Children during the early stage of COVID-19: A Latent growth mixture model

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Abstract: Background: The COVID-19 outbreak is spreading around the world during 2020. Children, as a vulnerable group of the crisis, are especially easy to be affected by crisis events such as quarantine and online classes during the pandemic, which may lead to negative emotions such as anxiety and depression. Moreover, family

resilience, functioning as the ability of the family as a whole to cope with the crisis, supports the decrease of children's negative emotions and plays an important role in the psychological adaptation of children. This study examines the dynamic developmental trajectories and subgroups of the most common symptom anxiety in children during the pandemic, and explores the predictive effect of gender and children's family resilience on latent trajectories of anxiety. **Methods:** A total of 883 students (452 boys, 431 girls, average age 11.41 ± 2.27 years) were selected in four primary and secondary schools in Jiangsu Province. They were assessed with a self-designed demographic scales, the Self-Rating Anxiety Scale (SAS), and the shortened Chinese version of the Family Resilience Assessment Scale (FRAS-CR), and tracked on three time points, respectively February 29, March 14, and March 28, 2020. Latent mixture growth model (LGMM) and a multi-logistic regression model were used for data analysis. **Results:** During the severest period of COVID-19 (from February to March, 2020), there were three anxiety subgroups in children, namely, the low stable group (87.9%), the dynamic increasing group (6.8%) and the moderate decreasing group (5.3%). The general anxiety level of the children showed a relatively stable state over time. The low stable group and the moderate decreasing group showed a decreasing trend over time, while the anxiety level of the dynamic rising group showed an obvious upward trend. The predictive effect of gender and family resilience were both significant ($p < 0.05$) on children's anxiety trajectories. The girls had a higher probability of belonging to the dynamic increasing group than the low stable group; additionally, although the total score of family resilience has no significant effect on the trajectories of anxiety, the children with lower scores in the dimension, family communication and problem solving in family resilience, were more likely to be in the dynamic increasing group. **Conclusion:** Showing group heterogeneity, the trajectories of children's anxiety performed different types of development trends. Gender and family resilience can significantly predict the trajectories of children's anxiety. This study has certain clinical value to classify, identify and intervene children's anxiety in crisis, and promote parents to communicate and solve problems in a consultative manner, consequently alleviate the increasing trend of anxiety among children in crisis.

Keywords: Anxiety, Developmental trajectory, Family resilience, Latent growth mixture model

(2) “临床与咨询心理学专业委员会”专题研讨会 2

新冠疫情相关的创伤后应激障碍症状分类：潜在剖面分析

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摘要 2019 新型冠状病毒（COVID-19）的爆发给公众的身心健康造成了严重的影响，其中创伤后应激障碍症状（posttraumatic stress disorder symptoms, PTSS）极具破坏性，而探索 COVID-19 背景下的 PTSS 的异质性和分类，有助于有针对性地制定干预策略。本研究旨在探索中国公众 COVID-19 相关的 PTSS 的不同亚组。采取横断面调查的方式，收集参与者的人口学变量，PTSS，焦虑，抑郁，生活质量的信息。最终纳入 1407 例样本，对 PTSS 进行潜在剖面分析，并以多项式 logistic 回归探索人口学变量对 PTSS 的预测作用，并比较不同亚组在抑郁、焦虑、生活质量方面的差异。潜在剖面分析确定了 PTSS 的 5 个亚组，分别为低症状组(42.89%的样本)，低症状伴高认知和情绪的负性改变和警觉组(25.80%)、中度症状组(14.8%)、低再体验和回避伴高认知和情绪的负性改变和警觉组(10.31%)和严重症状组(6.25%)。多项 logistic 回归分析发现，年龄、性别、地区、教育程度、婚姻状况和就业状况可以区分这五种人群。五组在抑郁、焦虑和生活质量方面存在显著差异。本研究结果表明新冠疫情影响下的创伤后应激障碍有不同与其他创伤时间下创伤后应激障碍症状的独特性。应针对 PTSS 的不同类型制定针对性的干预策略。

关键词 创伤后应激障碍，心理状态，潜在剖面分析，新冠肺炎疫情

Patterns of COVID-19 related posttraumatic stress disorder symptoms among general population in China: A latent profile analysis

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Abstract: This study aimed to distinguish subgroups of general population exposed to COVID-19 based on posttraumatic stress disorder symptoms (PTSS). An anonymous web-based cross-sectional survey was conducted. A sample of 1407 participants (M age = 25.36 years, SD = 9.96) was analyzed with latent profile analysis. A three-step approach was used to explore predictors of latent profiles, and membership differences on several self-reported measures. A 5-profile model yielded the best fit to the data, and each profile was respectively labelled as Low symptom group (42.89% of the sample), Low symptom with High Negative Alterations in Cognitions and Mood (NACM) and Hyperarousal (HA) group (25.80%), Moderate symptom group (14.8%), Low Reexperience and Avoidance with High NACM and HA group (10.31%), and Severe symptom group (6.25%). Multinomial logistic regression found that age, gender, region, educational level, marital status, and employment status can differentiate the five groups. And there were significant differences on depression, anxiety, and quality of life across the five groups. Individuals exposed to COVID-19 exhibited heterogeneous PTSS patterns. Risk factors of PTSS were identified.

Keywords: Posttraumatic Stress Disorder; Mental Health; Latent Profile Analysis; COVID-19

公共卫生危机形势下公安干警的心理状态、焦虑、抑郁特点

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摘要 本研究选取抗疫公安干警 9631 人, 采用自编的疫情心态调查问卷、GAD-7 问卷、抑郁自评量表 SDS 作为研究工具, 进行在线调查与 EEP 在线心理干预。结果显示: 1 疫情下公安干警心态状况特点 (1) 性别: 相比于女性干警, 男性干警更容易“自觉不健康”, 认为疫情对自己“很有影响”与“非常有影响”, 更容易寻求专业帮助, 更不容易得到家人的支持, 并容易发生家庭冲突。(2) 年龄: 41-50 岁干警“自觉不健康”与“家人能支持理解但偶有矛盾”选项占比最高, 51 岁以上干警受疫情影响最大, 在家人支持各选项中占比均不是最高, 且这 2 个年龄组均更愿意选择“自我忍受”与“自我宣泄”的压力调节方式; 值得注意的是 31-40 岁干警在压力调节各选项中占比均低于其他年龄组, 且在“家人不理解, 常冲突, 能缓解与不能化解”选项中占比最高。(3) 单位: 基层派出所与一线业务大队“自觉不健康”与受疫情影响占比最高, 且更愿意选择“自我忍受”与“自我宣泄”的压力调节方式; 一线业务大队在“家人不理解支持, 常冲突, 能化解”选项占比最高; 基层派出所所在“家人不理解支持, 常冲突且难化解”与“理解支持偶有冲突”选项占比均为最高。(4) 编制: 公务员群组“自觉不健康”与受疫情影响的占比均为最高, 且都选择了“自我忍受”、“自我宣泄”的压力调节方式, 在“家人不理解支持, 常冲突, 能化解”与“理解支持偶有冲突”选项占比最高。2 疫情下公安干警抑郁特点 (1) 公安干警的抑郁发病率为 29.1%。(2) 男性干警的抑郁发生率与严重程度均明显高于女性干警。(3) 抑郁发病率随着年龄增长, 30-60 岁四个年龄组干警的抑郁发病率依次为 26.7%, 28.4%, 30.3% 与 32.8%。3 疫情下公安干警焦虑特点 (1) 公安干警的焦虑发病率为 43.4%。(2) 男性干警的焦虑发生率与严重程度均明显高于女性干警。(3) 干警焦虑发病率随着年龄增长呈倒 U 曲线, 41-50 岁干警焦虑发病率最高, 四个年龄段发病率依次为 35%, 44%, 48.9% 与 47.7%。4 经过连续 6 个月的公安干警“心灵成长阳光工程”EEP 在线心理干预, 效果显著。

关键词 公共卫生危机, 公安干警, 抑郁, 焦虑, EEP 在线心理服务

Psychological state, anxiety and depression characteristics of the public security police under the public health emergency and EEP online psychological service

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Abstract: In order to explore the mental health status of the public security police with high work pressure under the public health emergency, the 9631 anti-epidemic public security police were selected as the research objects. Self-compiled epidemic mentality questionnaire, GAD-7 questionnaire and Self-Rating Depression Scale were used as research tools to conduct online survey. Furthermore, EEP online was carried out. The result show that: 1. Characteristics of mentality of the public security police under pandemic (1) Gender: Compared with women, male police are more likely to "perceive unhealthy", thinking the epidemic has a "great impact" or "exceedingly impact" on them, seeking professional assistance more easily, getting supports from families less easily. Equally, they are more likely to exist family conflicts. (2) Age: Policemen aged 41-50 have the highest proportion of "perceive unhealthy" and "families can support and understand them, but occasionally have conflicts between them and their families". Policemen over the age of 51 are the most affected by the pandemic" and "families understand them and support, but occasionally conflict with them" are the highest. (3) Department: Grassroots police stations and front-line service groups are the most affected by the pandemic, and they are the most likely to report "perceive unhealthy". Likewise, they are more willing to choose the stress regulation methods of "self tolerance" and "self-catharsis". For front-line service groups, the option of "families do not understand them and support often conflicting with them, conflict can be resolved" was chosen in the highest proportion. For grass-roots police stations, the proportions of "families do not understand them and support, often conflicting with them, conflict can be resolved but difficult" and "families understand them and support, but occasionally conflict with them" are the highest. (4) Authorized strength: Civil servants are the most affected by the pandemic, and they are the most likely to report "perceive unhealthy". At the same time, they all chose the stress regulation methods of "self-tolerance" and "self-catharsis". Options of "families do not understand them and support, often conflicting with them, conflict can be resolved" and "families understand them and support, but occasionally conflict with them" were chosen in the highest proportion among civil servants. 2. Depression characteristics of the public security police under pandemic (1) The incidence of depression among the public security police is 29.1%. (2) The incidence and severity of depression in male police are significantly higher than that in female police. (3) The incidence of depression increases with age. The incidences of depression in the public security police aged 30-60 years are 26.7%, 28.4%, 30.3% and 32.8%. 3. Anxiety characteristics of the public security police under the pandemic (1) The anxiety incidence rate of the public security police is 43.4%. (2) The incidence and severity of anxiety of male police are significantly higher than that of female police. (3) The incidence of police anxiety shows an inverted U curve with the increase of age. The incidence of police anxiety is the highest among policemen aged 41-50, and the incidences are 35%, 44%, 48.9% and 47.7% in the four age groups. 4. After 6 months of "Spiritual growth sunshine Project" online psychological service for public security police, the results show that the effect of intervention is significant.

Keywords: the public health emergency, the public security police, depression, anxiety, EEP online psychological service

疫情下羞耻对孤独感的影响：自我表露与社会支持的多重中介效应

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摘 要 COVID-19 疫情是公共卫生领域的创伤事件，围创期羞耻感普遍存在。居家隔离措施客观上造成了人际疏离，使孤独感成为重要的一种情绪体验。在情绪理论中，羞耻感是在社会威胁或应激下所产生的一种非常典型的负性感受，会增强退缩和抑制行为（如渴望逃离、躲藏和回避），引发更强烈的孤独感，影响心理健康。本研究在积极心理学视角下，关注潜在的心理复原因素，考察疫情期间孤独感的影响因素并进行路径分析，为研发团体心理干预方法提供理论支持。方法：采用领悟社会支持量表、UCLA 孤独感量表、羞耻感量表和痛苦表露指数问卷，对不同地域不同专业的 621 人进行线上调查。有效数据 619 份，其中男性 167 人。结果表明：（1）领悟社会支持，孤独感，羞耻感和自我表露之间两两显著相关，且羞耻感显著正向预测孤独感；（2）自我表露和领悟社会支持在羞耻与孤独之间起显著的中介作用，且领悟社会支持的中介作用显著高于自我表露。模型总效应为 0.52，中介效应占总效应的比例为 35.32%，两个间接效应占总效应的比值分别为 10.87% 和 24.43%。结论：羞耻感既可以对孤独产生直接的影响，也可以通过自我表露和领悟社会支持间接影响孤独感；自我表露与领悟社会支持减弱了羞耻感对孤独的负向影响，对心理健康起到了保护作用。团体心理干预方法的研发可通过设计不同环节，营造团体氛围，促进成员的自我表露，提供社会支持，来降低疫情期间的情绪反应。

关键词 羞耻感，自我表露，社会支持，孤独感

The Relationship between Shame and Loneliness during the Pandemic: A Chain Mediating Effect of Self-disclosure and Perceived Social Support

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Abstract: COVID-19 pandemic is a traumatic event in the field of public health, shame is widespread in the peri-traumatic period. “Home self-quarantine” objectively cause interpersonal alienation and make loneliness a prominent emotion. In emotional theory, shame is a very typical negative feeling under social threat, which will cause withdrawal and inhibition behaviors (such as longing to escape, hide and evade), so to enhance loneliness and affect mental health. From the perspective of positive psychology, this study focuses on the potential psychological recovery factors, explore the influencing factors and path analysis of loneliness during the pandemic, with hope to provides theoretical support to innovate group psychological intervention methods. Methods: A total of 621 people from different regions and majors were investigated online with Perceived Social Support Scale, UCLA Loneliness Scale, Experience of Shame Scale and Distress Disclosure Index Questionnaire. There are 619 valid data, including 167 males. The results show that: (1) Perceived social support, loneliness, shame and self-disclosure are significantly correlated in pairs, and shame significantly positively predicts loneliness; (2) Self-disclosure and perceived social support play a significant mediating role between shame and loneliness, and the mediating role of perceived social support is significantly higher than self-disclosure. The total effect of the model is 0.52, the ratio of intermediate effect to total effect is 35.32%, and the ratio of two indirect effects to total effect is 10.87% and 24.43%, respectively. Conclusion: Shame can not only directly affect loneliness, but also indirectly affect loneliness through self-disclosure and perceived social support. Self-disclosure and perceived social support weaken the negative influence of shame on

loneliness and protect mental health. Group psychological intervention can reduce the emotional reaction during the pandemic by designing different activities, to create a secure climate, to promote members' self-disclosure and provide social support.

Keywords: Shame, Self-disclosure, Social-support, Loneliness

突发公共卫生事件下大学生网络减压团体效果的质性研究

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摘要 目的: 探索突发公共卫生事件下大学生网络减压团体的效果及其有效因素。方法: 2020年3月, 在南京两所高校通过网络公开招聘大学生23人, 分3批进行抗疫减压网络团体辅导。选取自愿参与访谈的团体成员17人作为研究对象, 在干预后48小时内进行一对一的半结构式访谈, 通过共识性质性研究方法分析访谈资料。结果: (1) 新冠肺炎疫情中大学生网络减压团体干预效果涉及成员收获1个主题, 包括改善情绪感受、调整认知反思、习得行为技能、扩展人际交往4个类别, 这些类别在个案上的代表性都为“典型”。(2) 通过分析成员参加网络团体的经历, 特别是有帮助的、印象深刻的事件, 提取网络减压团体的有效因素, 包括团体动力、成员互动、带领者带领、网络环境四个主题10个类别。其中, 气氛融洽、包容互助、倾诉宣泄、了解他人、发现普遍性、帮助他人、带领者态度行为因素在个案中具有典型性。(3) 网络环境对团体效果的影响表现在影响自我揭露、影响互动交流两个方面, 不同成员对于网络影响的感受并不一致。成员的个性特质和参与度、带领者的专业胜任力在其中起中介作用。结论: (1) 突发公共卫生事件下, 网络减压团体干预对大学生心理健康具有积极作用; (2) 网络减压团体具有线下团体类似的有效因素; (3) 网络环境对团体效果有利有弊且因人而异。

关键词 网络团体辅导, 突发公共卫生事件, 大学生, 效果, 质性研究

Qualitative research on the effect of online group counseling on college students' stress reduction under the public health emergencies

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Abstract: Objective: To investigate the effects and the effective factors of online group counseling on college students' stress reduction under the public health emergencies. Methods: In March 2020, 23 college students were recruited through the Internet in two universities in Nanjing, and they were divided into three groups to join the online group counseling. 17 group members who voluntarily participated in the interview were selected as the research objects. They received one-to-one semi-structured interviews within 48 hours after the intervention. The data were analyzed through the consensual qualitative research (CQR) methods. Results: (1) The effect of the online group counseling was shown in four categories: improving emotion, adjusting cognitive and reflection, acquiring behavioral skills, and expanding interpersonal communication. The representativeness of all these categories among the cases was "typical". (2) By analyzing the members' experiences participating in the online group, especially the helpful and impressive events, the effective factors of the online group were found in four themes and 10 categories, including group dynamics, member interaction, leader's leadership, and network environment. Among them, the harmony group atmosphere, tolerance and mutual assistance among members, talking and venting emotions, understanding

others, discovering the universality, helping others, and the leader's attitude and behavior were typical factors in the cases. (3) The influence of the network environment on the group effect was manifested in two aspects: self-disclosure and interactive communication. Different members had different feelings about the influence of the network. The personality traits and participation of the members, and the professional competence of the leader played an intermediary role. Conclusions: (1) Under the public health emergencies, online group counseling is effective for the mental health of college students. (2) Online group counseling has similar effective factors to face-to-face group counseling. (3) The network environment has both advantages and disadvantages for the effect of online group counseling, and the influence of the network varies from person to person.

Keywords: online group counseling; public health emergencies; college students; effect; qualitative research.

新冠肺炎风险感知与排外反应：有调节的中介效应分析

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摘要 排外反应是指个体对外来者态度、情感与行为上的偏见。从本质上而言, 排外表示的是对视为威胁的外群体成员的消极态度。近些年的研究发现, 在疾病威胁(特别是传染性疾病)背景下, 个体倾向于对外群体成员(如主要疫区群体)表现出排外反应。虽然现有研究发现, 疾病威胁与排外反应密切相关, 但很少有研究探讨疾病威胁下排外反应的发生机制。基于此, 本研究拟在当前新冠肺炎疫情背景下, 探讨疾病风险感知影响排斥反应的心理机制, 以期能够为疫情下排外现象的社会治理提供一些参考依据。本研究基于整合威胁理论(Integrated Threat Theory, ITT)及相关实证研究, 在当前 COVID-19 威胁的背景下, 考察了疾病威胁和排外反应之间关系中负面情绪的中介作用和共情反应的调节作用。其中, 排外反应被操作化定义为国内其他地区民众对武汉群体的偏见态度。研究采用网络问卷形式, 对 1697 名全国样本施测了新冠肺炎风险感知问卷(测量疾病威胁)、保护效能问卷、消极情绪体验问卷和排外量表。研究结果显示, 负性情绪在 COVID-19 威胁与排外反应之间起到完全中介作用。然而, 与我们的预期相反, 共情反应并没有缓解疾病威胁与排外反应之间的关系。相反, 共情反应加剧了这种关系。具体来说, 使用越多共情反应来应对 COVID-19 威胁的个体更可能对外群体(如武汉人)表现出排外反应。本研究为疾病威胁如何以及何时转化为排外反应提供了新的视角, 研究结果具有重要的理论和实践意义。

关键词 新冠肺炎风险感知, 疾病威胁, 负性情绪, 共情反应, 排外

COVID-19 Threat and Xenophobia: A Moderated Mediation Model of Empathic Responding and Negative Emotions

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Abstract: Studies have suggested that disease threat was linked to increased xenophobia; however, less is known about the underlying process that may shape this relationship. Based on the potential model of intergroup threat and existing researches, we examined the mediating effects of negative emotions and moderating effects of empathic responding in the relationship between disease threat and xenophobia in the context of the COVID-19 threat in China. A large sample with 1697 Chinese participants completed a survey, indicating their perceptions of risk to COVID-19, negative emotions experienced and xenophobic tendencies. As expected, the results show that the negative emotions fully mediated the relationship between perceived COVID-19 threat and xenophobia. However, contrary to our expectation, the empathic responding did not weaken the relation between perceived COVID-19 threat and xenophobia; instead, it exacerbated the relationship. Specifically, using more empathic responding for coping with

COVID-19 was related to greater xenophobia response toward outgroup (e.g., Wuhan people). Our findings provide new insight into the underlying mechanism on how and when disease threat is translated into xenophobia bearing important theoretical and practice implications.

Keywords: empathy, disease threat, xenophobia, COVID-19, risk perception, negative emotions

健康焦虑者对威胁相关刺激的注意偏向：一项多水平元分析

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摘要 背景: 在病毒爆发或大流行的背景下, 高度健康焦虑者容易将无害的身体感觉和变化误解为被感染的证据。健康焦虑发展和维持的主要因素之一是对健康威胁相关刺激的注意偏向。然而, 已有研究对于健康焦虑者对威胁相关刺激是否表现出注意偏向的回答并不完全一致。为此, 本研究试图通过元分析, 以综合效应探索健康焦虑者对威胁相关刺激的注意偏向, 以及注意偏向发生的条件。方法: 为了充分利用已有研究的效应量信息, 增强统计检验力, 本研究运用多水平元分析方法, 考察健康焦虑者对威胁相关刺激的注意偏向的组间(健康焦虑组与对照组)及组内(威胁相关刺激与中性刺激)效应。结果: 组间效应分析共纳入 20 项研究, 57 个效应量; 健康焦虑组的组内效应分析共纳入 7 项研究, 17 个效应量; 对照组的组内效应分析共纳入 5 项研究, 13 个效应量。结果发现: (1) 与对照组相比, 健康焦虑组对威胁相关刺激表现出显著的更大的注意偏向($g = 0.321$)。 (2) 与中性刺激相比, 健康焦虑组对威胁相关刺激表现出显著的更大的注意偏向($g = 0.193$), 且显著大于对照组($g = 0.139$)。 (3) 与对照组相比, 在情绪 Stroop 范式、症状词刺激、疾病词刺激条件下, 健康焦虑组对威胁相关刺激表现出显著的更大的注意偏向。 (4) 与对照组相比, 健康焦虑组对威胁相关刺激表现出显著的注意警觉($g = 0.323$)。结论: 健康焦虑者对威胁相关刺激存在真实的注意偏向; 以往研究结果的不一致, 可能源于研究范式、刺激类型的影响。

关键词 健康焦虑, 注意偏向, 多水平元分析

Attentional bias towards threat-related stimuli in health anxiety: A three-level meta-analysis

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Abstract: Background: In the context of a virus outbreak or pandemic, people with high health anxiety are prone to misinterpret harmless bodily sensations and changes as evidence of infection. An attentional bias towards health-threat related stimuli has been proposed as one of the main factors for the development and maintenance of health anxiety. However, previous studies have not been entirely consistent in whether an attention bias towards threat-related stimuli is shown in health anxiety. Thus, this meta-analysis aims to explore the attention bias towards threat-related stimuli in health anxiety and examine potential moderators. **Methods:** To fully extract effect sizes from extant studies and strengthen the statistical power of the tests, a multilevel meta-analysis was used to investigate the between-group (health anxiety vs. control) differences in the attention bias towards threat-related stimuli and within-group (threat-related stimuli vs. neutral stimuli) differences. **Results:** 57 effect sizes were computed from 20 studies included in the between-group meta-analysis, 17 effect sizes from 7 studies included in the within-health-anxiety-group analysis, and 13 effect sizes from 5 studies included in the within-control-group analysis. We found that: 1) compared with the control group, the health anxiety group showed a significantly greater attentional bias to threat-related stimuli ($g = 0.321$). 2) compared with neutral stimuli, the health anxiety group showed a significantly greater attentional bias to threat-related stimuli ($g = 0.193$), which was significantly greater

than that of the control group ($g = 0.139$). 3) compared with the control group, the health anxiety group showed a significantly greater attentional bias to threat-related stimuli under the condition of emotional Stroop paradigm, symptom word, and illness word stimuli. 4) compared with the control group, the health anxiety group showed significant attentional vigilance towards threat-related stimuli ($g = 0.323$). **Conclusions:** People with high health anxiety have a true attentional bias to threat-related stimuli. Inconsistencies in the results of previous studies may come from diverse types of paradigm and stimulus.

Keywords: health anxiety, attentional bias, multilevel meta-analysis

(3) “临床与咨询心理学专业委员会”专题研讨会 3

疫情下大学生手机依赖、焦虑与大五人格的关系 及在线正念冥想训练研究

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摘 要 目前手机已经成为人们必不可少的工具,在人们的沟通交流以及信息获取中发挥着重要作用。尤其在疫情期间,在国家停课不停学的政策之下,大学生群体的手机使用率显著提高。根据中国工信部门的统计,到2015年2月,已有12.9亿人民使用移动电话,其中大学生用户占很大一部分。据调查,我国15%~30%的大学生会表现出手机依赖的倾向,国外的大学生手机依赖率也在28%左右。除外部因素之外还有哪些因素影响大学生手机依赖,这一问题值得我们去深入研究。近年来有大量学者开始逐步探索大五人格和手机依赖的内在联系,试图以大五人格为突破口寻找手机依赖的内在原因,并且有了一些实质性的进展。本研究为探讨大学生手机依赖、焦虑与大五人格的关系,以及焦虑是否在手机依赖与大五人格间起到中介作用,从辽宁省内大学本科生中选取396人为被试;采用《大学生智能手机依赖问卷》、《焦虑自评量表》以及《大五人格问卷》作为研究工具,进行在线调研与针对性在线正念冥想干预。结果显示:(1)疫情下大学生手机依赖在性别、年级上存在显著差异,女生手机依赖程度显著高于男生,年级与手机依赖呈正相关。(2)疫情下大学生焦虑水平偏高,焦虑在性别上存在显著差异,男生焦虑程度显著高于女生。(3)疫情下大学生大五人格五个维度均与手机依赖呈正相关;焦虑与手机依赖呈正相关;大五人格中神经质与焦虑呈正相关,严谨性、宜人性、外向性、开放性与焦虑呈负相关。(4)疫情下大学生大五人格、焦虑对手机依赖有预测作用,焦虑在严谨性、宜人性、外向性和手机依赖之间起中介作用。(5)在线正念冥想可显著缓解大学生焦虑与手机依赖,女生效果优于男生,个体冥想的干预效果优于团体冥想。

关键词 大学生, 大五人格, 焦虑, 手机依赖, 在线正念冥想

The relationship between mobile phone dependence, anxiety and Big Five Personality of undergraduate students and Online mindfulness meditation training under the epidemic situation

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Abstract: At present, mobile phone has become an essential tool for people. It plays an important role in people's communication and information acquisition. Especially during the outbreak, under the national policy of suspension of classes and non-stop schooling, the mobile phone usage rate of undergraduate students increased significantly. According to the statistics of the Ministry of industry and information technology of China, by February 2015, 1.29 billion people had used mobile phones. Among them, undergraduate students account for a large part. According to the survey, 15%-30% of undergraduate students in China tend to rely on mobile phones, foreign undergraduate

students' mobile phone dependence rate is also around 28%. Besides external factors, what other factors affect undergraduate students' mobile phone dependence. This problem is worthy of our in-depth study. In recent years, a large number of scholars began to gradually explore the internal relationship between Big Five Personality and mobile phone dependence. Want to take big five as a breakthrough to find the internal reason of mobile phone dependence, and there has been some substantial progress. In order to explore the relationship between mobile phone dependence, anxiety and big five personality of undergraduate students, and whether anxiety played a mediating role between mobile phone dependence and big five personality. 396 people were selected as subjects from undergraduates in Liaoning Province. We used undergraduate students' mobile phone dependence questionnaire, self-rating anxiety scale and NEO Personality Inventory (NEO-PI-R) as research tools, and conduct online research and targeted online mindfulness meditation intervention. The results showed that: (1) Under the epidemic situation, there were significant differences in gender and grade in the dependence of undergraduate students on mobile phones: compared to male students, the degree of mobile phone dependence of female students was significantly higher; there is a positive correlation between grade and mobile phone dependence. (2) Under the epidemic situation, the anxiety level of undergraduate students was high, and the anxiety had significant differences in gender: compared to female students, the anxiety degree of male students is significantly higher. (3) Under the epidemic situation, the five dimensions of undergraduate students' personality were positively correlated with mobile phone dependence; Anxiety was positively correlated with mobile phone dependence; Neuroticism was positively correlated with anxiety, conscientiousness, agreeableness, extroversion, and openness were negatively correlated with anxiety. (4) Under the epidemic situation, undergraduate students' Big Five and anxiety had a predictive effect on mobile phone dependence, anxiety played a partial mediating role in the three dimensions of conscientiousness, agreeableness, extroversion and mobile phone dependence. (5) Anxiety and mobile phone dependence among undergraduate students can be relieved significantly by online mindfulness meditation. The effect of female is better than that of male, and individual meditation is better than group meditation.

Keywords: the epidemic situation, undergraduate students, Big Five Personality, mobile phone dependence, Online mindfulness meditation training

新冠肺炎疫情大流行期间中国大学生自杀意念的发生率及影响因素： 一项三波次重复调查研究

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摘要 背景: 新冠肺炎疫情 (COVID-19) 大流行是一场重大的公共危机, 给个体的心理健康带来负面影响。本研究旨在检验中国大学生在 COVID-19 大流行的不同阶段自杀意念的发生率和相关影响因素。**方法:** 采用重复的横断面调查设计, 对广东省 22 所高校的大学生进行了三波次在线调查: 暴发期 (T1: 2020 年 2 月 3 日至 2 月 10 日, N=164101)、缓解期 (T2: 2020 年 3 月 24 日至 4 月 3 日, N=148384) 和常态化防控期 (T3: 2020 年 6 月 1 日至 15 日, N=159187)。采用 PHQ-9 问卷的第九项对自杀意念进行测量, 使用多元逻辑回归分析方法对社会人口学特征、抑郁、焦虑、失眠、先前存在的心理健康问题和 COVID-19 相关因素与自杀意念的关系进行了评估。**结果:** T1、T2 和 T3 的自杀意念发生率分别为 8.5%、11.0% 和 12.6%。男性 (aOR: 1.35-1.44, $P < 0.001$), 自我感觉心理状况不佳 (aOR: 2.25-2.81, $P < 0.001$), 精神疾病 (aOR: 1.52-2.09, $P < 0.001$), 有心理咨询经历 (aOR: 1.23-1.37, $P < 0.01$), 对 COVID-19 流行风险持负面认知 (aOR: 1.14-1.36, $P < 0.001$), 抑郁症状 (aOR: 2.51-3.03, $P < 0.001$) 和焦虑症状 (aOR: 1.62-101.11, $P < 0.001$) 与自杀意念增加有关。**结论:** 新冠肺炎疫情大流行期间, 中国大学生的自杀意念发生率呈增加趋势。多种因素, 尤其是心理健康问题, 与自杀意念密切相关。在 COVID-19 大流行期间和之后均应密切监测大学生的自杀意念状况, 并提供及时心理社会干预, 以降低自杀风险。

关键词: 自杀意念, 危险因素, 发生率, 新冠肺炎疫情, 大学生

Prevalence and associated factors of suicidal ideation among college students during the COVID-19 pandemic in China: A 3-wave repeated survey

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Abstract: Objective: The coronavirus disease 2019 (COVID-19) pandemic, a major public crisis, has negative impact on individuals' mental health. This 3-waves repeated survey aimed to examine the prevalence and correlates of suicidal ideation at different stages of the COVID-19 pandemic in a large sample of college students in China. **Methods:** Using a repeated cross-sectional survey design, we conducted 3 online surveys of college students during the COVID-19 pandemic in 22 universities in Guangdong, China. The 3 surveys were conducted during the outbreak period (T1: 3 February to 10 February 2020, N=164101), remission period (T2: 24 March to 3 April 2020, N=148384), and normalized prevention and control period (T3: 1 June to 15 June 2020, N=159187), respectively. Suicidal ideation was measured by the ninth item of the Patient Health Questionnaire-9. A range of suicide-related factors were assessed, including sociodemographic characteristics, depression, anxiety, insomnia, pre-existing mental health problems, and COVID-19-related factors. **Results:** The prevalence of suicidal ideation were 8.5%, 11.0% and 12.6% at T1, T2, and T3, respectively. Male sex (aOR: 1.35-1.44, Ps<0.001), poor self-perceived mental health (aOR: 2.25-2.81, Ps<0.001), mental diseases (aOR: 1.52-2.09, P<0.001), prior psychological counseling (aOR: 1.23-1.37, Ps<0.01), negative perception of the risk of the COVID-19 epidemic (aOR: 1.14-1.36, Ps<0.001), depressive symptoms (aOR: 2.51-3.03, Ps<0.001) and anxiety symptoms (aOR: 1.62-101.11, Ps<0.001) were associated with increased risk of suicidal ideation. **Conclusion:** Suicidal ideation appears to increase during the COVID-19 pandemic remission period among college students in China. Multiple factors, especially mental health problems, are associated with suicidal ideation. Psychosocial interventions should be implemented during and after the COVID-19 pandemic to reduce suicide risk among college students.

Keywords: Suicidal ideation, Risk factors, Prevalence, COVID-19 pandemic, College students

新型冠状病毒肺炎流行期间 大学生多重心理健康问题与自杀意念的纵向关系

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摘要 目的: 最近的研究表明, COVID-19 相关的多重心理健康问题可能诱发自杀意念, 然而, 鲜少研究探讨大学生群体中多重心理健康问题与自杀意念的关系。本研究旨在探讨 COVID-19 爆发期和缓解期多种心理健康问题与自杀意念之间的关系。**方法:** 本研究共有 68685 名大学生参与疫情爆发期和缓解期的调查。本研究主要在疫情爆发期评估了多重心理健康问题(急性应激、抑郁、焦虑、失眠、强迫症、自杀意念)和社会人口学特征, 并在疫情缓解期再次评估了自杀意念。基于 SPSS25.0 通过分层回归分析分别探究多种心理健康问题对疫情爆发期和缓解期自杀意念的影响。**结果:** 大学生的自杀意念从 COVID-19 爆发期的 7.6% 上升到 COVID-19 缓解期的 10.0%。随着心理健康问题数量的增加, 在疫情爆发期自杀意念呈二次曲线增长, 在疫情

缓解期自杀意念呈稳定增长。此外，男生在疫情爆发期和缓解期着两个阶段的自杀意念都比女性有更快、更显著的上升。**结论：**在 COVID-19 大流行期间，应实施公共卫生干预措施降低与 COVID-19 相关的急性压力、抑郁、焦虑、失眠、强迫等心理健康问题。

关键词 新型冠状病毒肺炎，纵向关系，大学生，多重心理健康问题，自杀意念

Longitudinal associations between multiple mental health symptoms and suicidal ideation among college students during the COVID-19 pandemic

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Abstract: **Objectives:** Recent research suggests that the COVID-19-related multiple mental health problems can be associated with increased risk for suicidal ideation (SI), but population-based data on these associations are scarce. This study aimed to examine the association between multiple mental health symptoms during the outbreak and SI at outbreak (T1) and remission (T2) of the COVID-19. **Methods:** A total of 68,685 college students in China participated in the survey at two phases of the pandemic (T1 and T2). Mental symptoms (acute stress, depression, anxiety, insomnia, obsessive-compulsive symptoms) and socio-demographic characteristics were measured at T1, and SI was assessed at T1 and T2. Hierarchical regression analysis was used to investigate the combined effect of multiple mental health problems on SI at T1 and T2. **Results:** The prevalence of SI among college students in China increased from the COVID-19 outbreak (7.6%) to the COVID-19 remission stage (10.0%). With the rising number of mental health problems, there was a dramatic growth of SI in a quadratic fashion at T1 and a reasonably steady increase of SI at T2. Moreover, male participants' SI at both T1 and T2 witnessed faster and more significant rise compared with females', as shown by the accumulation of their psychological distresses. **Conclusion:** Public health interventions to decrease risk of SI during the COVID-19 pandemic should address pandemic-related acute stress, depression, anxiety, insomnia, obsessive-compulsive symptoms, especially male students who has several mental health symptoms at the same time.

Keywords : COVID-19, longitudinal associations, multiple mental health symptoms, suicidal ideation, college students

新型冠状病毒肺炎疫情下中国大学生心理健康状况的变化轨迹： 一项 2 波次追踪研究

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摘要 研究背景 大量证据表明，新型冠状病毒肺炎（COVID-19）大流行对心理健康具有重要影响。然而 COVID-19 不同发展阶段下青年人群心理问题的发展变化如何，相关纵向研究少见。**研究目的** 比较 COVID-19 两个不同发展阶段（爆发期与控制转折期），中国大学生群体三项心理问题（急性应激，焦虑和抑郁症状）的检出率与相关影响因素。**研究方法** 本项基于网络问卷调查的 2 波次大样本研究，于 2020 年 2 月 3 日至 4 月 3 日期间，在广东省各高校进行。研究被试为广东省高校大学生，其地域分布涉及中国 34 个省、市、自治区，其所在高校涉及广东省高校的各个层次及理工农医艺体综合等高校类别。分别采用事件影响量表 (IES-6)、

抑郁症状筛查量表（PHQ-9）和广泛性焦虑量表（GAD-7）对被试在疫情不同发展阶段的急性应激、焦虑、抑郁症状进行测量。采用无序多分类 Logistic 回归模型对被试在人口学变量、健康行为、COVID-19 相关因素以及心理社会方面的预测因素进行分析。**研究结果** 在 2020 年 2 月 3 日至 10 日之间（T1：爆发期），参与第一波调查的 164101 名大学生中，有 68685 人（41.9%）参与了自 2020 年 3 月 24 日至 4 月 3 日期间的第二波调查（T2：转折控制期）。第二次调查中，疫情急性应激反应较第一次显著下降（T1：34.6%； T2：16.4%）；而抑郁症状（T1：21.6%； T2：26.3%）和焦虑症状的检出率（T1：11.4%； T2：14.7%）显著升高。分析疫情发展不同时期大学生心理问题的影响因素，结果发现：高年级学生、居住社区有感染或疑似病例者、COVID-19 相关担忧，与两次调查中至少一波次出现心理问题显著相关（AORs> 1.20, $ps < 0.001$ ）。体育运动较少，低社会支持以及家庭功能失调也是大学生各类心理问题持续存在的重要预测因素。**研究结论** 在 COVID-19 流行期间，大学生中急性应激，焦虑和抑郁症状普遍存在，并且从疫情爆发到控制期，大学生焦虑、抑郁症状呈“逆向增长”趋势。部分大学生，特别是具有上述危险因素的大学生，表现出持续性或迟发性心理问题。应密切注意高风险的学生，并立即有针对性地采取措施消除学生疫情防控期间新增的或加剧的各种风险因素。

关键词 新型冠状病毒肺炎，大学生，心理健康，追踪研究

Changes in Mental Health Among College Students During the COVID-19 Pandemic in China: A 2-Wave Longitudinal Survey

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Abstract : IMPORTANCE Growing evidence supports a clear association between the COVID-19 pandemic and mental health. However, little is known about the longitudinal course of psychopathology in young adults at different stages of the pandemic. **OBJECTIVE** To compare the prevalence of three mental health problems (acute stress, anxiety, and depressive symptoms) at two phases of the pandemic (early vs under-control) and identify correlates of these patterns among a large sample of college students in China. **METHODS** This large-scale, 2-wave longitudinal, population-based, online survey was conducted in China from February 3 to April 3, 2020. It involved students from all 34 province-level regions in China and at each level of college and university. The rates of acute stress, depressive and anxiety symptoms, and their change patterns across two time points were measured using the Impact of Event Scale-6, Patient Health Questionnaire-9, and Generalized Anxiety Disorder-7. Predictors of changes in mental health symptoms were examined via multivariate regression and examined demographics, health behavior, COVID-19 related and psychosocial factors. **RESULTS** Among the 164,101 college students who participated in the first wave survey between 2/3-10/2020 (T1=during onset of outbreak), 68,685 (41.9%) completed a follow-up survey between 3/24 and 4/3/2020 (T2=during remission). The prevalence of probable acute stress (T1: 34.6%; T2: 16.4%) decreased, while the rates of depressive (T1: 21.6%; T2: 26.3%) and anxiety symptoms (T1: 11.4%; T2: 14.7%) were increased during the follow-up. Senior students, having infected or suspected cases in their community, COVID-19 related worries (all AORs > 1.20, $ps < 0.001$) were related to higher risk of developing mental health problems in at least one wave. Less physical exercise, low perceived social support, and having a dysfunctional family were also common predictors for not developing resistance or abated symptoms. **CONCLUSIONS AND RELEVANCE** Acute stress, anxiety, and depressive symptoms are prevalent among college students during the COVID-19 epidemic, and showed

significant increase after the initial stage of the outbreak. Some college students, especially those with the risk factors noted above, exhibit persistent or delayed symptoms. Close attention should be paid to the students at higher risk.

Keywords: COVID-19, college students, mental health, longitudinal study

大学生焦虑和与新型冠状病毒肺炎相关的恐慌的纵向变化关系： 为期 1 年的追踪研究

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摘要 目的: 越来越多的证据表明在新冠肺炎疫情期间, 与新冠疫情相关的恐慌和焦虑是不断上升的。然而, 随着疫情防控常态化, 恐慌和焦虑的纵向变化及其相关因素仍需关注和探索。**方法:** 共同参与两次调查的大学生总计 22,578 名。参与者在常态化防控阶段 (T1, 2020 年 6 月 1—15 日) 和广州本土新增病例阶段 (T2, 2021 年 6 月 10—18 日) 完成在线调查。采用多元线性回归分析人口学变量与预测未来的恐慌和焦虑的关系。**结果:** 与新冠疫情相关的恐慌在 T2 时显著降低 ($t = 66.64, p < 0.001$), 但焦虑在 T2 时显著上升 ($t = -5.03, p < 0.001$)。日常生活的变化 (如经济问题和学业问题) 和对新冠疫情的关注与 T1、T2 的恐慌以及恐慌的变化显著相关, 而这三个因素与焦虑的变化无关。然而, 日常生活的变化 (如社会关系问题) 与 T1、T2 的焦虑和焦虑的变化显著相关, 而与恐慌的变化无显著相关 (所有 $p < 0.001$)。**结论:** 这些结果表明, 随着新冠肺炎疫情的出现, 焦虑 (恶化) 和恐慌 (缓解) 发生了不同的变化。并且, 恐慌和焦虑变化的相关因素也不同。这些发现对于未来规划心理健康危机以及此次新冠肺炎疫情之后的长期影响具有重要意义。

关键词 新型冠状病毒肺炎, 恐慌, 焦虑, 大学生, 纵向研究

Longitudinal Changes in Fear Related to COVID-19 and Anxiety among College Students: a 1-year follow-up study

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Abstract: Background: Growing evidence supports that fear related to COVID-19 and anxiety have increased during the COVID-19 pandemic. However, with regular epidemic prevention and control measures, the longitudinal changes and associated factors in fear and anxiety were needed to be explored. **Methods:** Participants in both two wave studies included 22,578 college students. Participants completed online surveys at normalization prevention stage (T1, from June 1 to 15, 2020) and the new locally transmitted in the Guangdong Province (T2, from June 10 to 18, 2021). Multiple linear regressions were used to examine predict later fear and anxiety from demographic characteristics. **Results:** Fear related to COVID-19 was significantly decreased at T2 ($t = 66.64, p < 0.001$), however, anxiety was significantly increased at T2 ($t = -5.03, p < 0.001$). Change in daily life (i.e., financial concern and academic concern) and pay attention to COVID-19 was positively associated with fear related to COVID-19 at T1, T2 and change in fear (all $p < 0.001$), while these three factors were insignificantly associated with change in anxiety. However, change in daily life (i.e., social relationship concern) was positively associated with anxiety at T1, T2 and change in anxiety, while was insignificantly associated with change in fear (all $p < 0.001$). **Conclusions:** These results suggest a different change in anxiety (deterioration) and fear (mitigation) occurred as the COVID-19 pandemic emerged. Meanwhile, related factors for the changes of fear and anxiety were also different. These findings have implications for planning mental health crisis provisions and for long-term impact beyond this pandemic.

Keywords: COVID-19, Fear, Anxiety, College students, Longitudinal

疫情下中国大学生抑郁症状和焦虑的轨迹:16 个月的随访研究

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摘要 背景: 新冠肺炎疫情期间大学生心理健康问题的前期研究结果存在不一致。本研究试图使用异质性视角, 通过潜增长混合模型, 从疫情开始, 到随后的解封, 再到充满不确定性常态化防控阶段, 估计中国大学生心理健康问题的不同发展轨迹, 并找出与之相关的因素。**方法:** 本研究在中国广东省 22 所高校的大学生中进行了大样本调查。研究分五个调查时段进行: 2020 年 2 月 3 日至 10 日(T1); 2020 年 3 月 24 日至 4 月 3 日(T2); 2020 年 6 月 1 日至 15 日(T3); 2020 年 9 月 10 日至 10 月 17 日(T4); 2021 年 6 月 10 日至 18 日(T5)。共有 8118 名学生参与。抑郁症状采用患者健康问卷(PHQ-9)测量, 焦虑症状采用广泛性焦虑障碍量表(GAD-7)测量。使用潜增长混合模型来识别在抑郁症状和焦虑中有不同变化轨迹的个体亚组。采用有序 logistic 回归模型识别不同轨迹组相关的变量。**结果:** 研究发现了抑郁症状和焦虑的三个轨迹组: 无影响组(69%), 中度增加组(29%)和脆弱组(2%)。与轨迹组相关的因素为女性($p<0.001$)、心理健康状况(服用精神药物, $p<0.01$, 心理咨询经历, $p<0.001$)、生活方式(饮酒, $p<0.001$, 饮食不规律, $p<0.001$)和对 COVID-19 的负面认知和行为($ps<0.05$)。**结论:** 多数调查对象情绪稳定, 少部分学生在疫情期间心理健康状况恶化。这些学生可能需要来自大学心理健康中心的额外支持, 以促进他们的健康。

关键词 抑郁, 焦虑, 轨迹, 大学生, 潜增长混合模型

Trajectories of Depressive Symptom and Anxiety of College Students in China during the COVID-19 Pandemic: a 16 Month Follow up Study

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Abstract : Background. Previous research on mental health problems of college students during the COVID-19 pandemic had unclear results. The current study tries to use a heterogeneity point of view to estimate the different trajectories of mental health problems during the start and subsequent easing of lockdown restrictions and the follow up regular prevention full of uncertainty within China, and find what factors may be associated with the diverse trajectories. **Methods.** This study was conducted on a large sample of college students from 22 colleges and universities in the Guangdong Province of China. The study was carried out in five survey periods: February 3--10, 2020 (T1); March 24 to April 3, 2020 (T2); June 1--15, 2020 (T3); September 10 to October 17, 2020 (T4), and June 10--18, 2021 (T5). A total 8,118 students participated. Depressive symptom was measured using the Patient Health Questionnaire (PHQ-9), Anxiety was measured using Generalized Anxiety Disorder Scale (GAD-7). Changes in mental health outcomes were modelled across the five waves. The growth mixture model was used to identify subgroups of individuals with different trajectories of change in depressive symptom and anxiety. The ordinal logistic regression model was used to identify variables associated with different trajectory groups. **Results.** Three trajectory

groups of depressive symptom and anxiety were identified: Resilient (69%), moderate-increased (29%), and vulnerable (2%). The factors associated with trajectory groups were female ($p<0.001$), mental health condition (take psychiatric medication, $p<0.01$, psychological counseling experience, $p<0.001$), living style (drinking, $p<0.001$, eating irregularly, $p<0.001$), negative cognition and behavior towards COVID-19 ($ps<0.05$). **Conclusions.** Most participants showed stable emotional status; however, some participants experienced deteriorating mental health during the pandemic. These students may need additional support from mental health providers of college to promote their wellbeing.

Keywords: depression; anxiety; trajectories; college students; latent growth mixture

(4) “临床与咨询心理学专业委员会”专题研讨会 4

对团体带领者进行督导的实践模式——来自中国的经验

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摘要 团体心理工作是指在团体的环境中所给予的专业帮助，它涉及到一位具有专业胜任力的团体带领者，应用与团体有关的心理学理论和方法，帮助一群有共同困惑的团体成员，达到提升心理健康，增进社会适应的目标。团体心理工作包括具有心理教育意义和培养技能团体辅导，解决人际问题的团体咨询，以及人格重建的团体治疗。团体带领者（Group Leader）也称团体领导者，是指在团体运作过程中负责带领和指引团体走向的专业人员，包括带领团体心理辅导、团体心理咨询或团体心理治疗的社会工作者、医护人员、教育工作者或心理咨询与心理治疗师。随着我国心理健康服务的需求越来越强烈，团体工作的优势和价值日益凸显，培养具有胜任力的团体带领者成为专业人才培养的重要议题。督导是咨询师专业成长不可或缺的培养环节，目前国内还没有对团体带领者进行督导的相关研究和讨论。本报告依据成为有效团体带领者的必要条件，从清华大学心理学系建构的团体带领者系统的专业训练入手，描述了一般团体带领者养成的过程，探讨了对团体带领者进行督导的模式，重点阐述了团体督导对于团体带领者成长重要性，介绍了几种适合中国国情的团体带领者训练常用的团体督导模式。尤其是介绍了我们团队构建的团体带领者胜任力模型以及编制的团体带领者胜任力量表，作为督导师评价督导效果的评估工具。

关键词 团体带领者，督导模式，团体督导，中国经验

Practice Modes of Supervising Group Leaders: Experience from China

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Abstract: Group work refers to the professional help given in the group environment, which involves a group leader with professional competence applying the group-related theories and methods to help members with common confusion, so as to improve their mental health and social adaptation. Group work includes group guidance for psychological education and skills development, group counseling for solving interpersonal problems, and group therapy for personality reconstruction. Group leader refers to a professional who is responsible for leading and guiding the team during the group process, including a social worker, medical worker, educator, psychological counselor or psychotherapist who leads group guidance, group counseling or group therapy. With the increasing demand for mental health services in China, the advantages and values of group work have become increasingly prominent, and training competent group leaders has become an important issue in talent cultivation. Supervision is

an indispensable part of the professional growth of counselors. At present, there is no relevant research and discussion on the supervision of group leaders in China. Based on the necessary conditions for an effective group leader, this report introduced the professional training system created by the Department of Psychology, Tsinghua University, described the training process of general group leaders, discussed the mode of supervision of group leaders, focused on the importance of group supervision for the growth of group leaders, and introduced several group supervision modes which are frequently used and suitable for the training of group leaders in China. In particular, this report introduced the competency model of group leaders and the scale of group counselors' competency developed by our research team, which will serve as an effective evaluation tool for supervisors to evaluate the effectiveness of supervision.

Keywords: Group Leader, Supervision Mode, Group Supervision, Chinese Experience

“师门制”督导模式在临床与咨询心理学历教育中的应用

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摘要 “师门制”督导是指学历教育背景下在实验室导师总督导下, 专业博士对咨询与临床心理学专硕(MAP)的督导训练。该模式既为专博提供实习督导的训练机会, 也为专硕提供受督导的机会。师门制督导实行前, 专博与专硕通过一年的共学进行相互了解, 在此基础上双向选择。同时, 组建实习督导师团体, 综合 CBT 督导模型和胜任力督导模型制定师门制督导协议, 并与总督导共同确定实施方案。督导聚焦于毕业论文个案, 实习督导师全程参与。总督导师则定期对实习督导师进行督导之督导, 协助其觉察督导关系状态, 督导胜任力的变化以及提升个案概念化和策略实施之能力。在对师门制督导的反馈中发现, 实习督导师认为自己在督导和咨询胜任力上得到了双重提升, 对督导关系之觉察能力显著提高; 受督者则认为师门制督导帮助其将所学理论与实践贯通的同时, 提供了支持和安全感, 使其能更有信心地与来访者工作。同时, 师门制督导中存在的多重/多重督导关系和被评价压力值得觉察和反思。结论: 师门制督导有利于打破现有条件的限制, 建立易于落实和执行的督导体系, 在拓展专业发展路径和提高胜任力方面使督导双方受益。同时, 需要格外留意督导关系给双方带来的影响。总体而言, 师门制督导是对临床与咨询心理学历教育的一种有益尝试。

关键词: 师门制督导, 临床与咨询, 学历教育, 认知行为治疗

The Application of Mentor-Centered Supervision model in the academic education of clinical and counseling psychology

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Abstract: Mentor-Centered Supervision refers to the supervision training provided by the Professional Doctorate to the Master of Applied Psychology(MAP) under the supervision of the chief supervisor in the background of academic education. This model benefits both Doctorate and Master students by provided the training of supervision internship and the chance of being supervised. The Doctorate and Master students generally spend one whole year learning together in the lab to know each other better and make a two-way choice before the carrying out of Mentor-Centered Supervision. Meanwhile, the group of practice supervisor is built to integrate CBT supervision model and competency model to set out the protocol of Mentor-Centered Supervision and the implementation plan with the chief supervisor. The supervision focuses on the case of graduate paper, the practice supervisors participate in the whole procedure. The chief supervisor conducts regular supervision of the practice supervisors to assist them in being aware

of the supervisory relationship, changes in supervisory competence, and improving the competence of case conceptualization and strategy implementation. In their feedback about Mentor-Centered Supervision, the practice supervisors think that their competence in supervision and counseling has been enhanced, and their awareness of the supervisory relationship has been significantly improved. The supervisees think that Mentor-Centered Supervision helps them to integrate the theory and practice they have learned, at the same time, it provides them with support and sense of safety, so that they can work with clients with more confidence. Meanwhile, the dual/multiple supervisory relationship and the pressure of being evaluated in Mentor-Centered Supervision should be noticed and reflected upon. Conclusions: Mentor-Centered Supervision is conducive to breaking the limitations of existing conditions, establishing a supervisory system that is easy to implement and carry out, and benefiting both sides of supervision in terms of expanding professional development and improving competence. At the same time, extra attention should be paid to the impact of the supervisory relationship on both sides. In general, Mentor-Centered Supervision is a beneficial attempt to the degree program of clinical and counseling psychology.

Keywords: Mentor-Centered Supervision, clinical and counseling, academic education, Cognitive Behavior Therapy

中国心理学会注册系统督导体系的创建与发展 ——基于督导胜任力模型

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摘要 20 世纪 80 年代国内的心理咨询、心理治疗服务逐步开展, 但少有规范的学历教育培训, 更缺少相应地专业督导, 而督导是培养心理咨询与心理治疗专业人员的重要途径和专业活动。中国心理学会临床心理学注册工作委员会(同“临床与咨询心理学专业机构与专业人员注册系统”, 简称注册系统)于 2006 年成立之时, 注册了中国心理学会第一批注册督导师, 开始创建督导体系。基于督导师胜任力模型, 即督导师的胜任力包括知识、能力、态度三个方面, 注册系统在 2007 年于中国心理学报发布的《中国心理学会临床与咨询心理学专业机构与专业人员注册标准》中, 首次建立了注册督导师的注册标准, 并在同时发布的《临床与咨询心理学专业工作伦理守则》中, 制定了督导伦理的相关内容, 开启了中国心理咨询与治疗督导的重要实践。在注册系统 14 年的发展历程中, 督导体系在六个方面进行发展建设, 一是进一步完善注册督导师注册标准, 并在 2018 年发布的第二版注册标准中做了修订; 二是按照注册督导师注册标准扩大督导师队伍; 三是从 2012 年起在全国大部分省、直辖市、自治区建立督导点, 以督导点为平台组织持续、规范的专业督导; 四是注册督导师在全国各个领域为国内从事心理咨询、心理治疗的专业人员进行督导, 提升其专业胜任力; 五是参与学历教育培训方案的制定, 推动学历教育中督导制度的建设; 六是加强督导伦理培训。注册系统督导体系建设的实践有效的推动了国内督导专业工作的规范开展, 更促进了心理咨询与治疗专业人员的专业胜任力提升, 使接受心理咨询与治疗服务的来访者的利益得以保障。

关键词 注册系统, 督导, 胜任力模型, 注册标准, 注册督导师

The Establishment and Development of Supervision System Practiced by the Registration System of the Chinese Psychological Society

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Abstract: The psychological counseling and therapy gradually developed in the 1980s in China, but there were few standardized academic education and formal training, especially professional supervision, which was one of the professional activities and served as an important way to train professionals in psychological counseling and psychotherapy. The first registered supervisors of the Chinese Psychological Society were registered when the Clinical Psychology Registration Work Committee of the Chinese Psychological Society (also known as Professional

Registration System for Clinical and Counseling Psychology Organizations and Professionals of the Chinese Psychological Society, referred to the Registration System) was established in 2006, which indicated a beginning to establish the supervision system in China. Not long after that, the Registration System released *the Registration Criteria for Clinical and Counseling Psychology Organizations and Professionals the Chinese Psychological Society* in the *Acta Psychologica Sinica*, and the registration criteria for supervisors were included based on the competency model for supervision, namely the supervisor's competencies were composed by knowledge, abilities and attitudes/values. Besides, the supervision ethics were emphasized in *the Code of Ethics for Clinical and Counseling Psychology Organizations and Professionals the Chinese Psychological Society* published at the same time. These two documents represented the milestones for the supervision practices of clinical and psychological counseling. During the 14-year development of the Registration System, the supervision system has been constructed and developed in six major aspects: (1) The registration criteria for supervisors have been further improved and revised in the second edition of the registration criteria released in 2018; (2) To augment the registered supervisors according to the registration criteria; (3) Beginning in 2012, the Registration System has started building supervision stations all over China since 2012, serving as platforms for continuous and formal supervisions; (4) The registered supervisors in all areas of the country supervised the domestic psychological counselors and therapists to improve their competencies; (5) Actively participate in the establishment and adjustment of programs and promote the construction of supervision system in academic education; (6) strengthen the training of supervision ethics. The practices in constructing the supervision system of the Registration System effectively promote the orderly development of professional supervision in China, improved the professional competencies of psychological counselors and therapists, and the benefits of clients were protected.

Keywords: The Registration System, supervision, competency-based model, registration criteria, registered supervisors

教育部华中师大抗疫心理援助热线三层督导模式

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摘 要 2020 年新冠疫情期间，教育部依托华中师范大学已有工作资源，设立教育部华中师范大学心理援助热线平台，面向湖北及全国大众、海外华人华侨、留学生等提供 24 小时抗疫心理援助热线公益服务。该平台在高峰时有近 1700 名咨询师上线值班。鉴于多数咨询师并非出自学历教育、理论基础与实践操作技能可能存在不足，疫情心理热线有时间限制、文字咨询方式有难度，对咨询师挑战大，疫情期间咨询师本身也不能免于感染风险、更容易耗竭，咨询师需要及时提供督导；同样的，督导师也非出自学历教育，也需要定期提供督导的督导。平台因此设计了三层督导架构，第一层是咨询师，直接面向社会大众提供心理援助服务；第二层是督导师，定期为咨询师提供督导；第三层是资深督导师，定期为督导师提供督导的督导。注册系统湖北心理援助督导组全面负责教育部华中师大心理援助热线的督导管理与运行工作。为保障督导质量，提升专业性，督导组一方面注重质量控制，把好各类人员入选关，由专家工作组审定标准；审核各种专业工作方案；另一方面，规范过程管理，如督导前签署协议，督导中全程记录，督导后填写反馈，设立督导投诉信箱等。实践证明，该督导设计比较切合实际，运行效果良好。截止 7 月底，该平台累计完成各类督导超过 23000 人次；受督者对督导的满意度平均 9 分以上。

关键词 抗疫心理援助热线，督导模式，督导架构

A Three-Layer Supervision Model of MOE-CCNU Mental Health Service Platform

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Abstract: During the epidemic of COVID-19 in 2020, Ministry of Education, relying on the existing working resources of Central China Normal University, set up the MOE-CCNU Mental Health Service Platform to provide 24-hour anti-epidemic psychological hotline service voluntarily to the Hubei and the national public, overseas Chinese, international students and so on. The platform has nearly 1,700 counselors on duty at peak hours. Given the non-academic education of most counselors, their theoretical foundation and practical skills may be inadequate. Moreover, the counseling time of one-session psychological hotline is limit, text counseling is difficult and challenging for counselors, and the counselors themselves were at risk of infection during the epidemic. Therefore, they need supervision timely in order to avoid exhaustion. Similarly, supervisors who have not received academic educations also need regular supervision (supervision of supervisors). Therefore, the platform designed a three-layer supervision structure: the first layer is the counselor, who provides psychological assistance services directly to the public; the second layer is the supervisor, who provides regular supervision to the counselor; and the third layer is the senior supervisor, who provides regular supervision to the supervisor. The registered system Hubei psychological assistance supervision team is fully responsible for the supervision management and operation of the MOE-CCNU Mental Health Service Platform. In order to ensure the quality of supervision and enhance professionalism, on the one hand, the supervision team pays attention to quality control, ensuring the competence of all counselors through validating the standards and reviewing various professional work programs. On the other hand, the supervision team is responsible for standardizing process management, such as signing an agreement before supervision, keeping full records during supervision, filling in the feedback after supervision, establishing supervision complaints mailbox, and so on. It has been proved that the supervision structure is practical and works well. By the end of July, the platform has completed more than 23,000 person-times of various kinds of supervision and the supervisee's satisfaction with the supervision is above 9 points on average.

Keywords: Anti-epidemic psychological assistance hotline, supervision model, supervision structure

(5) “临床与咨询心理学专业委员会”专题研讨会 5

感知社会支持在中国消防队员特质正念与情绪调节关系中的调节作用：一项追踪研究

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摘要 情绪调节是个体对情绪困扰的反应和处理方式,有效的情绪调节策略有助于个体缓解各种心理问题,提高生活质量。在诸多群体中,消防员经常面临压力、创伤和危险等特殊群体特征决定了情绪调节能力在该类群体中的突出作用。从认知行为疗法来看,源自东方冥想的正念疗法被证明可有效减少情绪调节困难。现有为数不多的横断研究检验了特质正念和情绪调节之间的关系,但结果并不一致,可能原因是两者之间存在其他的调节变量。研究拟基于人与环境相互作用理论,探究在个体发展中起重要作用的环境因素——感知社会支持,是否在消防员特质正念与情绪调节中起调节作用。采用追踪调查,对江苏省某消防员培训中心的消防员通过两次问卷调查收集数据。共有 340 名消防员(男性 100%; Mage= 21.33 岁; SD = 1.55)在基线(T1)

和三个月后的随访（T2）中报告了其特质正念、情绪调节和感知社会支持水平。结果表明，在控制被试年龄、工作时间、创伤后应激症状以及抑郁的条件下，T1 感知社会支持可以显著调节 T1 特质正念与 T2 表达抑制（交互项 $\beta = -.12, p < .05$ ），但 T1 感知社会支持在 T1 特质正念和 T2 认知重评之间的调节作用不显著。研究表明，高感知社会支持水平可以加强正念对表达抑制的负向预测作用。感知社会支持较高的个体容易获得安全感和归属感，以及他人的理解、尊重和帮助。外部的社会支持和内部的积极认知活动共同作用，激励个体采取积极的方式应对困难，而不是抑制表达。研究结果揭示了正念与感知社会支持之间的作用对消防员情绪调节的重要影响，能够为后续针对紧急服务专业人员情绪调节能力干预提供科学依据。

关键词 消防员;正念;情绪调节;感知社会支持;追踪研究

正念水平与疫情创伤后应激症状：情绪弹性的中介效应

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摘要 2019 新型冠状病毒（COVID-19）大流行严重影响了公众的身心健康，甚至造成了部分民众的创伤后应激障碍（post-traumatic stress disorder, PTSD）。本研究在 2020 年 5 月 20 日至 6 月 20 日期间，测试了湖北省 522 名被试的正念水平、情绪弹性、正负情绪、PTSD 症状表现以及对于疫情的态度。比较高低正念水平、不同性别、亲友是否被感染对各项指标的影响，以及情绪弹性在正念水平与创伤后应激症状中的中介效应。研究结果发现：（1）高正念水平个体与低正念水平个体相比，情绪弹性得分更高，正性情绪得分更高，负性情绪得分更低，PTSD 各项指标得分更低。对新冠的恐惧程度更低。（2）男性与女性相比，情绪弹性得分更高，正性情绪得分更高，负性情绪得分更低。认为新冠病毒的死亡率更低，自己感染的可能性更低，恐惧程度更低。（3）亲友被感染的个体，认为自己被感染的可能性更高，PTSD 回避症状得分更高。（4）正念水平与情绪弹性、正性情绪成显著正相关关系，与 PTSD 症状得分成显著负相关关系；情绪弹性与正性情绪显著正相关，与负性情绪、PTSD 症状表现成显著负相关关系。（5）情绪弹性尤其是情绪恢复能力，在正念水平与 PTSD 症状之间起中介作用。以上结果表明性别影响个体疫情后的情绪反应以及对于疫情的态度；正念水平高低以及亲友是否被感染影响个体的 PTSD 症状表现；正念水平作用于情绪恢复能力，减少 PTSD 症状表现。

关键词 2019 新型冠状病毒，正念，情绪弹性，创伤后应激障碍

Effect of Mindfulness on Post-traumatic Stress Disorder: Emotional Resilience as a Mediator

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Abstract : The COVID-19 pandemic has greatly affected public health and well-being, and even induced post-traumatic stress disorder (PTSD). In this study, 522 subjects in Hubei province were tested for their levels of mindfulness, emotional resilience, positive and negative emotions, PTSD symptoms and attitudes toward the COVID-19 during May 20, 2020 - June 20, 2020. Different levels of mindfulness, genders, whether relatives or friends were infected were compared as the independent variables, and the mediating effects of emotional resilience on the levels of mindfulness and post-traumatic stress symptoms was also analyzed. Results showed that (1) individuals with high levels of mindfulness have higher scores for emotional resilience, positive emotions, but lower scores for negative emotions, and PTSD. They also have less fear of the COVID-19. (2) Men have higher score of emotional resilience and positive emotions, but lower score of negative emotions. Men tends to believe that the

COVID-19 have a lower mortality rate, a lower likelihood of infection, and have less fear. (3) Individuals whose relatives or friends were infected rated themselves as more likely to be infected, and scored higher on PTSD avoidance symptoms. (4) The level of mindfulness was significantly positively correlated with emotional resilience and positive emotions, and was significantly negatively correlated with PTSD symptoms. Emotional resilience was positively correlated with positive emotions, and negatively correlated with negative emotions and PTSD symptoms. (5) Emotional resilience, especially emotional resilience, plays a mediating role between mindfulness levels and PTSD symptoms. These results indicate that gender affects the emotional response and the attitude to the COVID-19. The level of mindfulness and whether a friend or relative was infected affected the individual's PTSD symptoms. Emotional resilience mediates the relationship between mindfulness and PTSD symptoms.

Keywords: COVID-19, mindfulness, emotional resilience, post-traumatic stress disorder

正念干预缓解情绪困扰机制初探：痛苦评估的纵向中介作用

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摘要 既往研究已表明正念干预可有效缓解个体情绪困扰, 然而其背后的干预作用机制尚待探明。鉴于现代以正念为基础的干预手段其核心理念在于改变个体与消极思维或情绪的相处方式而非消极思维或情绪本身, 痛苦忍受性, 即个体如何与痛苦相处可能是干预起效的重要机制变量。本研究通过对 129 名高情绪困扰成人进行的随机对照试验, 采用多时间点测量考察了为期八周的线上正念干预期间的正念水平、情绪困扰水平及痛苦忍受性的忍受、评估、沉浸和调节四个维度的发展趋势, 并对痛苦忍受性在正念干预与情绪困扰缓解间的纵向中介作用机制进行检验。被试共完成四次测量: 干预前 (3 月 20 日至 3 月 23 日)、第三周 (4 月 6 日至 4 月 14 日)、第六周 (4 月 27 日至 5 月 6 日)、干预后 (5 月 15 日至 5 月 24 日)。对前、后测进行的混合设计方差分析表明, 正念干预对情绪困扰的缓解作用再次得到验证, 对痛苦忍受性的干预效果则与前人发现不一致。考虑到新冠疫情的可能影响, 本研究仅对前三个处于疫情期间的时点进行建模。潜在增长模型显示, 组别显著预测正念观察、正念不反应和总体正念水平的增长速度, 显著预测个体痛苦忍受性中痛苦评估子维度的降低速度。纵向中介分析发现, 干预通过显著降低第三周时个体对痛苦的负性评估, 提升个体第六周的不反应水平, 与此同时对第六周的情绪困扰起到缓解作用。以上发现表明痛苦评估, 即个体将痛苦评估为负性, 可能是正念干预前期起效的重要机制变量, 对临床研究者与实践者的未来工作具有启发性。

关键词 正念干预, 情绪困扰, 痛苦忍受性, 痛苦评估, 纵向中介

How does Mindfulness-based Intervention lead to changes in emotional distress: Longitudinal mediating effect of distress appraisal

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Abstract: Mindfulness-based Intervention (MBI) has been shown a beneficial impact on alleviating emotional distress. It remains unclear how the desired effects could be achieved. The core concept of Modern MBI is to alter the way one interacts with negative thoughts or emotions, rather than directly targeting the latter. In this context, distress tolerance (i.e. the capacity to experience and withstand negative psychological states) might be an important mechanism variable of MBI. In the present study, 129 participants were randomized into MBI groups or waiting list group. Participants completed questionnaires over four time points: pretest, week 3, week 6, and posttest. Mindfulness and emotional distress were considered as outcome variables, and distress tolerance (tolerance, appraisal, absorption, and

regulation) as mediators. Mixed-designed ANOVA showed significant time by group interactions on mindfulness and emotional distress, but only a marginal interaction on distress appraisal. The developmental trajectories modeled by the latent growth curve modeling showed that the factor Group significantly predicted the slope of observation, non-reactivity, and overall mindfulness, as well as the slope of distress appraisal in the first six weeks. A longitudinal mediation analysis revealed that the effect of MBI on Non-reactivity at week 6 was fully mediated by distress appraisal at week 3. The distress appraisal could also significantly predict lower emotional distress at week 6. Our results indicated that distress appraisal might be an important mechanism of MBI, which might contribute to a more specified intervention program in the future.

Keywords: Mindfulness-based Intervention, Emotional Distress, Distress Tolerance, Distress Appraisal, Longitudinal Mediation

疫情严重程度与创伤后应激症状：正念的调节作用

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摘要 2020年一月,我国爆发新型冠状肺炎。作为国际公共卫生紧急事件,新冠传染性高,造成了大量确诊与死亡病例,因此易使个体感到生命被威胁,产生负性心理反应,其中创伤后应激症状(Posttraumatic Stress Symptom, PTSS)最为典型。PTSS的产生与发展受创伤暴露和个体对创伤感知的影响,在疫情的背景下表现为主客观疫情严重程度。但现实中大部分身处疫情重灾区的群众仍保持心理健康,可能得益于正念缓冲了疫情严重程度对PTSS的预测作用。因此,本研究分别探究主、客观疫情严重程度与PTSS的关系,以及状态、特质正念在其中的调节作用。本研究共招募107名被试(22.53%男性,平均年龄22.16岁,SD=2.16)。以被试所在省每日新增确诊人数作为客观疫情严重程度的指标;被试感知疫情严重程度作为主观疫情严重程度的指标。首先,动态研究为期7天的生态瞬时评估,主试每天登记被试所在省份的新增确诊人数作为客观疫情严重程度指标,并于每天11:00, 16:00及22:00通过微信调查被试在每个时间点上的主观疫情严重程度,PTSS与状态正念水平。纵向研究中,采用疫情期间各被试主客观疫情严重程度与正念的均值作为基线数据,并待两个月后疫情初步稳定时,采用问卷测量被试经历疫情后的PTSS水平。结果表明:(1)从动态层面讲,状态正念能调节主观疫情严重程度与PTSS间的正向关系,具体表现为当个体t时刻状态正念水平较低时,t-1时刻主观疫情严重程度正向预测t时刻的PTSS水平;然而当个体t时刻状态正念水平较高时,t-1时刻主观疫情严重程度负向预测t时刻的PTSS水平;(2)从特质层面讲,特质正念不能调节主、客观疫情严重程度与两月后PTSS的负向关系。上述结果表明,状态正念与特质正念在不同疫情严重程度与PTSS关系中的角色不同,体现了正念在动态与特质层面上的不同作用。

关键词 新型冠状肺炎, 正念, 疫情严重程度, 创伤后应激症状, 生态瞬时评估

The severity of the pandemic and Posttraumatic Stress Symptoms: the moderating role of state and trait mindfulness

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Abstract: In January 2020, Corona Virus Disease 2019 (COVID-19) broke out in China. As an international public health emergency, COVID-19 was highly infectious and caused a large number of confirmed and death cases. Therefore, it was easy for individuals to feel that their lives were in danger and have negative psychological reactions, among which the posttraumatic stress symptoms (PTSS) were the most typical. The generation and development of PTSS were affected by trauma exposure and personal perception of trauma. In the context of COVID-19, they were manifested as the subjective and objective severity of the pandemic. In fact, however, most people who were in the

severely affected areas still maintained good mental health, which might benefit from the buffering effect of mindfulness on reducing the predictive effect of the severity of the pandemic on PTSS. Therefore, this study explored the relationships between the subjective and objective severity of the pandemic and PTSS, as well as the moderating effects of state and trait mindfulness. A total of 107 participants were recruited (22.53% male, average age 22.16 years, $SD = 2.16$). The daily numbers of newly diagnosed cases in the province where the participants were located were used as the objective severity of the pandemic; the participant's perceptions of the severity of the pandemic were used as the subjective severity of the pandemic. First, the dynamic study was a 7-day Ecological Momentary Assessment (EMA) process. The researchers recorded the number of the newly diagnosed in the province where the participant was located each day as the objective severity of the pandemic, and conducted WeChat surveys on each participant at 11:00, 16:00 and 22:00 every day to measure the subjective severity of the pandemic, PTSS and state mindfulness levels. In the longitudinal study, the average values of subjective and objective severity of the pandemic and mindfulness of each participant during the EMA process were used as baseline data. When the pandemic situation was initially stable after two months, questionnaires were used to measure the PTSS levels. The results showed that: (1) From the momentary perspective, state mindfulness could moderate the association between the subjective severity of the pandemic situation and PTSS. Specifically, when participants were low in state mindfulness levels at t time point, their subjective severity of the pandemic at $t-1$ time point positively predicted the PTSS level at t time point; however, when participants were high in state mindfulness levels at t time point, their subjective severity of the pandemic at $t-1$ time point negatively predicted the PTSS level at t time point; (2) From the longitudinal perspective, trait mindfulness could not moderate the association between the subjective and objective severity of the pandemic and PTSS two months later. The results above showed that state and trait mindfulness played different roles in the relationship between different kinds of the severity of pandemic and PTSS, reflecting the distinct effects of state and trait mindfulness.

Keywords: Corona Virus Disease 2019, mindfulness, the severity of the pandemic, Disorder Symptom, Ecological Momentary Assessment

(6) “临床与咨询心理学专业委员会”专题研讨会 6

短期正念训练降低反应性攻击——接纳及愤怒的作用

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摘要 反应性攻击指行为者在受到外界因素的激惹后由愤怒情绪驱使而对他人采取的攻击行为, 正念训练已被证实可有效减少服刑人员、临床及非临床群体的攻击行为, 但正念效应的机制尚不明晰。本研究旨在探讨正念训练降低反应性攻击的内部原因。研究一以 107 名大学生为被试(平均年龄 19.52 ± 1.46 岁, 女性 59 人)采用费城正念量表及泰勒攻击范式探讨正念特质与反应性攻击的关系, 结果表明愤怒情绪及特质正念的接纳维度均与反应性攻击水平均存在显著负相关, 接纳在愤怒及反应性攻击之间起到调节作用, 随着愤怒情绪的升高, 高接纳水平被试的反应性攻击显现出下降的趋势, 而低接纳水平被试的反应性攻击显现出上升的趋势。研究二旨在探讨正念训练中的接纳及觉察因素分别对反应性攻击的影响, 189 名被试(平均年龄 20.03 ± 1.75 岁, 女性 105 人)随机分配到标准正念组、觉察训练组、放松训练组与控制组中, 四组被试均进行十五分钟的音频干预, 并测量干预后的反应性攻击水平。结果表明标准正念组经过包含接纳与觉察成分的干预后, 接纳水平显著高于其他三组。同时, 标准正念组在反应性攻击任务中表现出较其他三组更少的愤怒情绪与攻击水平。干预方式在愤怒情绪与反应性攻击之间存在调节效应, 控制组中愤怒情绪可以显著正向预测攻击水平, 而在标准正念组、觉察训练组与放松训练组中愤怒情绪与攻击水平之间不存在显著的关系。为探讨愤怒情绪

的改变是否在正念训练与反应性攻击之间起到中介作用, 研究三将被试随机分配到正念组与控制组, 均进行反应性攻击的前测与后测。结果表明愤怒水平的改变值在正念水平及反应性攻击的改变值之间起到部分中介作用: Indirect effect=[-.0581, -.0 020]。研究结果表明愤怒的改变及正念中的接纳维度均与反应性攻击存在密切联系, 正念中接纳维度的提升具有缓和愤怒和反应性攻击的作用, 正念训练在一定程度上通过降低愤怒情绪降低反应性攻击水平, 但愤怒情绪的降低可能并非正念训练降低反应性攻击水平的唯一路径。

关键词 正念训练, 觉察, 接纳, 愤怒, 反应性攻击

Brief mindfulness training attenuated reactive aggression—the effect of mindful acceptance and anger

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Abstract: Reactive aggression is an impulsive reaction motivated by anger to a perceived provocation or frustration. It has been confirmed that mindfulness training could attenuated aggression in previous studies, but the mechanisms of mindfulness is still not explicit. Therefore, the aim of our study is to clarify the reason why mindfulness training reduces reactive aggression based on Monitor and Acceptance Theory. In study 1 we examined the link between trait mindfulness and reactive aggression in 107 undergraduates (Mean age=19.52±1.46, female:59), results demonstrated that trait acceptance, but not trait awareness was negatively related with anger and reactive aggression. Moreover, Trait mindful acceptance moderated the association between anger and reactive aggression. Participants with higher acceptance showed decreased reactive aggression as anger rose, while those with lower acceptance showed increased reactive aggression as anger rose. In study 2 we were going to clarify the effect of state acceptance and state awareness improved by different training respectively on reactive aggression. 189 Participants (Mean age=20.03±1.75, female:105) were randomly assigned to Mindfulness Group, Awareness Group, Relaxation Group and Control Group. Results demonstrated that participants receiving mindfulness training which contained cultivation of mindful acceptance showed less angry and reactive aggression after provocation compared with other three groups in which contained no mindful acceptance. Moreover, the intensity of anger did not predict the intensity of reactive aggression in mindfulness group while the prediction of anger on reactive aggression was significant in Control group. In order to figure out if the change of anger intensity mediates the relationship between mindfulness and reactive aggression, the participants were allocated randomly in mindfulness group and control group and we measured the intensity of reactive aggression at both pre-test and post-test. Results demonstrated that the change of anger mediated between mindfulness and reactive aggression: Indirect effect=[-.0581, -.0 020]. Our findings provide evidence that mindful acceptance and anger play a key role in reducing reactive aggression. Mindful acceptance improved by training can reduce anger and reactive aggression. To some extent, mindfulness training can attenuate reactive aggression through mitigating anger, however there may exist another pathways between mindfulness and reactive aggression to be explored.

Keywords: mindfulness training, mindful awareness, mindful acceptance, anger, reactive aggression

基于正念的心身减压课程对医务人员焦虑抑郁的改善效果评价

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摘要 目的: 评价基于正念的心身减压课程对医务人员焦虑和抑郁情绪的改善效果, 并分析焦虑、抑郁情绪与正念水平的关系。**方法:** 在 2018 年 9 月至 2019 年 10 月期间, 采用干预研究的方法, 招募四川、河南、

陕西、广州、山东和浙江的医务人员接受基于正念的心身减压课程，包括 2 日团体学习和 21 日网络练习。分别于 2 日团体学习前、2 日团体学习后，以及 21 日网络练习后采用自评焦虑量表 (SAS)、自评抑郁量表 (SDS) 和五因素正念量表 (FFMQ) 进行前测、中测和后测。采用配对资料的 t 检验分析干预前后医务人员焦虑、抑郁和正念水平的改变。**结果：** 分别有 405 人、288 人和 386 人进行了前测、中测和后测。与前测相比，SAS 和 SDS 后测总分的下降均有统计学意义 (SAS: $t=5.97$, $P<0.0001$; SDS: $t=8.06$, $P<0.0001$)，FFMQ 后测总分和“观察”、“不行动”分维度得分的上升均有统计学意义 (FFMQ: $t=-7.86$, $P<0.0001$; “观察”: $t=-12.22$, $P<0.0001$; “不行动”: $t=-5.68$, $P<0.0001$)，“觉知的行动”分维度得分的下降有统计学意义 ($t=2.48$, $P=0.0136$)；中测“观察”和“觉知的行动”分维度得分的改变均有统计学意义 (“观察”: $t=-5.73$, $P<0.0001$; “觉知的行动”: $t=7.59$, $P<0.0001$)。此外，在前测中，SAS、SDS 总分与 FFMQ 总分均呈负相关关系 (SAS: $r=-0.63$, $P<0.0001$; SDS: $r=-0.62$, $P<0.0001$)。研究对象 100% 完成 2 日团体课程。85.43% 基本完成 21 日家中练习打卡 (练习天数 ≥ 20 次)。**结论：** 基于正念的心身减压课程在一定程度上可缓解医务人员的焦虑和抑郁情绪，提高正念水平。医务人员的焦虑抑郁情绪与正念水平呈负相关关系。

关键词 身心减压课程，正念，医务人员，焦虑，抑郁

Effect of Mindfulness based stress reduction courses on anxiety and depression among medical professionals

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Abstract: Objective: To evaluate the effect of mindfulness based stress reduction courses on anxiety and depression among medical professional, and explore the relationship between anxiety, depression and the level of mindfulness.

Methods: From September 2008 to October 2019, medical professionals from Sichuan, Henan, Shaanxi, Guangzhou, Shandong and Zhejiang were recruited in the intervention study of mindfulness based stress reduction courses, including, including 2-day group training and 21-day self-practice. Self-Anxiety Scale (SAS), Self-Depression Scale (SDS) and Five Facet Mindfulness Questionnaire (FFMQ) were used to assess the level of anxiety, depression and mindfulness before 2-day group training (1st assessment), after 2-day group training (2nd assessment), and after 21-day self-practice (3rd assessment) respectively. Paired t test was used to analyze the change of anxiety, depression and the level of mindfulness. **Results:** 405, 288 and 386 medical professionals were received 1st assessment, 2nd assessment and 3rd assessment respectively. Compared to 1st assessment, the total score of SAS and SDS in 3rd assessment were significantly reduced (SAS: $t=5.97$, $P<0.0001$; SDS: $t=8.06$, $P<0.0001$), and the total score of FFMQ and “Observation”, “No motion” score in 3rd assessment were significantly increased (FFMQ: $t=-7.86$, $P<0.0001$; “Observation”: $t=-12.22$, $P<0.0001$; “No motion”: $t=-5.68$, $P<0.0001$), and “conscious motion” reduced ($t=2.48$, $P=0.0136$). The change of “Observation” and “conscious motion” from 1st assessment to 2nd assessment were significant (“Observation”: $t=-5.73$, $P<0.0001$; “No motion”: $t=7.59$, $P<0.0001$). Besides, the scores of SAS and SDS are negatively related to FFMQ score (SAS: $r=-0.63$, $P<0.0001$; SDS: $r=-0.62$, $P<0.0001$). 100% medical professionals completed 2-day group training and 85.43% completed 21-day self-practice. **Conclusion:** Mindfulness-based stress reduction courses could improve anxiety, depression and level of mindfulness among medical professionals, and the level SAS and SDS are negatively related to the level of mindfulness.

Keywords: Stress Reduction Courses, Mindfulness, Medical Professionals, Depression, Anxiety

正念干预对中国孕产妇分娩恐惧影响的随机对照研究

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摘要 目的 评估正念干预对改善孕产妇分娩恐惧及抑郁、焦虑症状的干预效果, 探索孕产期心理保健新方法。方法 研究对象来自四川、山东、河南、河北省的符合入组标准自愿参加研究的孕产妇, 随机分为研究组 (n=67) 和对照组 (n=67), 干预组接受 2 天正念训练现场课程及 21 天正念训练加健康教育网络课程, 对照组在同期仅接受 21 天健康教育网络课程。采用分娩预期量表 (WDEQ-A)、正念五因素量表 (FFMQ)、焦虑自评量表 (SAS) 和爱丁堡产后抑郁量表 (EPDS) 对研究对象在干预前一周和干预后一周进行测评。结果 两组研究对象的人口学特征均衡可比。研究组的正念水平较干预前上升了 3.14 分 ($t=-2.046, P=0.045$), 分娩恐惧得分下降 9.4 分 ($t=3.939, P=0.000$), 抑郁得分下降了 2.49 ($t=4.349, P=0.000$), 焦虑得分下降 2.52 ($t=2.113, P=0.039$)。而对照组的正念水平较基线下降了 2.77 分, 其分娩恐惧、抑郁、焦虑得分较干预前有所降低, 但是差异无统计学意义。干预组和对照组之间的分娩恐惧得分也存在显著差异 (分别为 58.81 分和 63.22 分, $F=4.722, P=0.032$)。正念水平与分娩恐惧呈负相关 ($r=-0.314, P<0.05$)。结论 正念训练可提高孕妇的正念水平, 稳定情绪波动, 是降低分娩恐惧, 改善抑郁、焦虑情绪较为有效的保健方法。

关键字 正念训练、孕产妇、分娩恐惧、抑郁、焦虑

The influence of mindfulness on maternal fear of childbirth in China: A multicenter randomized controlled study

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Abstract: **Purpose** To evaluate the effect of mindfulness on improving fear of childbirth, depression and anxiety. The aim is explore new methods of maternal mental health care. **Methods** The pregnant women who conformed to the inclusion criteria and voluntarily participated in the study come from Sichuan, Shandong, Henan and Hebei province. They were randomly divided into intervention group (n=67) and control group (n=67). The intervention group received 2-day mindfulness training on-site and 21-day mindfulness training plus health education on the internet, while the control group only received 21-day health education on the internet in the same period. The study used Wijma Delivery Expectancy Questionnaire (WDEQ), Five Facet Mindfulness Questionnaire (FFMQ), Self-Rating Anxiety Scale (SAS), Self-Rating Depression Scale (SDS). Assessments were conducted at one week pre-intervention and one week post-intervention. **Results** The demographic characteristics of the two groups were balanced. The mindfulness level of the intervention group increased by 3.14 points ($t=-2.046, P=0.045$). The fear of childbirth score decreased by 9.4 points ($t=3.939, P=0.000$). The depression score decreased by 2.49 ($t=4.349, P=0.000$), and the anxiety score decreased by 2.52 ($t=2.113, P=0.039$). The mindfulness level of the control group decreased by 2.77 points compared with the baseline. The scores of fear of childbirth, depression and anxiety decreased but the difference was not statistically significant. There were also significant differences in the scores of fear of childbirth between the intervention group and the control group (58.81 points and 63.22 points respectively, $F=4.722, P=0.032$). The level of mindfulness was negatively correlated with fear of childbirth ($r=-0.314, P<0.05$). **Conclusion** Mindfulness training increased the mindfulness level and stabilized the mood swings of pregnant women. Mindfulness is an effective health care method to reduce the incidences of FOC, depression, and anxiety.

Keywords: Mindfulness, Pregnant woman, Fear of childbirth, depression, anxiety

八周网络视频、自助正念课程增强内感觉觉察、降低情绪困扰

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摘要 背景:已有大量研究表明正念训练能有效缓解抑郁、焦虑等情绪困扰，而内感觉觉察被认为是正念干预起效的机制之一。2020 年的新冠疫情下，通过网络开展的正念课程可成为缓解情绪困扰、促进心理健康的便捷、高性价比途径。本研究考察八周网络视频和自助正念课程提升高情绪困扰人群的内感觉觉察的效果。方法:受情绪困扰的被试 126 人（年龄 32.16 ± 9.25 ，女性 102 人，男性 24 人）被随机分入八周网络课程组（第 1 组，41 人）、自助课程组（第 2 组，43 人）、等待对照组（第 3 组，42 人）。在干预开始前、第 6 周课程前、干预后分别测量被试的情绪困扰、正念和内感觉觉察。情绪困扰测量使用 Kessler 情绪困扰量表（K10 量表）、中文版知觉压力量表（CPSS），使用多维度内在感受觉察（MAIA）测量内感受觉察。结果:线性混合模型分析表明，干预显著降低了情绪困扰，提升内感觉觉察，尤其 MAIA 专注力调适分维度分数。将两个干预组合并，是否进行训练作为自变量，MAIA 总分、分量表得分的前后测变化作为中介变量，情绪困扰或压力的前后测变化作为结果变量，进行简单中介分析，结果表明正念训练可以预测内感觉觉察的提升、情绪困扰/压力的缓解，并且内感觉觉察与情绪困扰/压力的缓解负相关，间接效应显著。此外，MAIA 第 3 周、第 6 周时相对于前测的变化在干预缓解情绪困扰/压力的效果中起中介作用。说明身体内感觉觉察的提升可能是正念训练降低情绪困扰和压力的可能机制。结论:正念干预提升内感觉觉察，这可能是干预缓解情绪困扰的可能机制。此外，本实验室开发的在线自助课程可以得到和八周训练同等的效果，为进一步开发便捷有效的正念干预项目奠定基础。

关键词 正念，随机对照试验，内感觉觉察，情绪困扰，网络干预

8-week online mindfulness intervention and self-help mindfulness improve interoceptive awareness and reduce psychological distress

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Abstract: Mindfulness-based interventions (MBIs) have been shown to alleviate psychological distress such as depression and anxiety. It has been proposed that improved interoceptive awareness is a potential mechanism of MBIs. Online MBIs can be a convenient and cost-effective way to relieve psychological distress and boost mental health, especially in the context of COVID-19 pandemic. The current study investigated the effect of 8-week online mindfulness intervention and self-help mindfulness on interoceptive awareness among individual with elevated psychological distress. Method: 126 psychologically distress participants (age 32.16 ± 9.25 , female 102, male 24) were randomly assigned to 8-week online mindfulness training (group 1; $N=41$), 8-week online self-help course (group 2; $N=43$) and waitlist control group (group 3; $N=42$). Psychological distress, perceived stress, interoceptive awareness were measured before, after the intervention and before the 6th week's intervention. Psychological distress was measured by the Kessler 10 (K10). Perceived stress was measured by the Chinese version of Perceived Stress Scale (CPSS). Interoceptive awareness was measured by Multidimensional Assessment of Interoceptive Awareness (MAIA). Linear mixed effect models showed that the intervention alleviated psychological distress and improved interoceptive awareness (specifically the Self-Regulation subscale). The two intervention groups were combined into a single intervention group for further mediation analysis, with the pre-post change of MAIA and its subscales' scores as mediators and change scores of psychological distress or perceived stress as the outcome variables. Results revealed significant indirect effects. The intervention significantly predicted increased interoceptive awareness and decreased psychological distress. Interoceptive awareness was negatively related to psychological distress. Furthermore, the 3rd week to baseline and the 6th week to baseline change score of MAIA mediated the effect of the intervention on psychological distress and stress. It suggested that interoceptive awareness could be a mechanism of mindfulness training effect on psychological distress. Conclusion: These findings provided evidence that mindfulness intervention

may ease psychological distress through increasing interoceptive awareness. In addition the online self-help course could produce identical treatment effect with the online course that required regular weekly class meeting. This finding paved the way for future development of cost-effective mindfulness intervention program.

Keywords: mindfulness, RCT, interoceptive awareness, psychological distress, online intervention

四周在线自助正念课程对情绪困扰人群的效果

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摘要 目标: 新冠病毒(COVID-19)的爆发, 可能激发或者恶化部分个体的情绪困扰。在线自助形式的正念课程是一个更灵活且可行的干预形式。本研究开发了针对情绪困扰人群的为期4周的在线自助正念课程, 并在疫情期间测试了干预的有效性, 以及正念水平和焦虑、抑郁、压力和情绪困扰之间的关系。方法: 本研究开展于2020年2月3日至2020年5月20日, 共招募682名情绪困扰得分高的非临床个体。正念干预组($n=358$)进行连续28天, 每天30~60分钟的自助正念课程; 等待组($n=324$)在28天等待后接受在线正念课程。在干预前后和干预期间对两组被试的正念水平、感知压力、情绪困扰、焦虑和抑郁水平共进行5次测量。结果: 线性混合模型分析发现, 在所有结果变量中有显著的时间和组别的交互作用。与等待组相比, 干预组的参与者在焦虑、抑郁、压力、情绪困扰和正念水平方面都有显著改善。对5个时间点的结果进行交叉滞后分析表明, 正念水平在所有时间点均可以反向预测下一个时间点的焦虑水平, 正念水平与抑郁、压力和情绪困扰在不同的时间点有相互的预测关系。讨论: 尽管这项研究有一定局限性, 包括没有随机分配参与者和缺乏长期随访, 本研究初步表明针对情绪困扰人群的4周自助在线正念干预的积极效果, 并表明正念水平的提升可能预测焦虑的降低, 正念水平的提升与抑郁、压力和情绪困扰的降低可能在干预期间相互作用, 这为正念水平和这些心理变量的时间性和因果性关系提供了部分实证支持。

关键词 正念, 在线干预, 自助课程, 情绪困扰

Effects of a 4-week Online Self-help Mindfulness Intervention on Mental Health Outcomes among Individuals with Emotional Distress

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Abstract: Objectives: The outbreak of coronavirus (COVID-19) may stimulate or worsen the emotional distress of some individuals. The online self-help mindfulness course is a more flexible and feasible intervention method. Current study developed a 4-week online self-help mindfulness course for people with emotional distress and tested the effectiveness of the intervention as well as the relationship between mindfulness skills and anxiety, depression, stress and emotional distress during the epidemic. Methods: This study was conducted from 3rd February 2020 to 20th May 2020 and a total of 682 non-clinical individuals with high emotional distress score was recruited. The mindfulness intervention group ($n=358$) engaged in the self-help mindfulness course which lasted 30 to 60 minutes per day for 28 consecutive days. The waiting-list group ($n=324$) received mindfulness course after 28 days of waiting. The levels of mindfulness skills, perceived stress, emotional distress, anxiety and depression were measured five times before, after, and during the intervention. Results: Using linear mixed models, significant group-by-time interactions in all outcome variables were found. Participants in intervention group exhibited significant

improvements in anxiety, depression, stress, emotional distress and mindfulness skills compared with the waiting-list group. The cross-lagged analysis of the results at five time points showed that mindfulness skills negatively predicted subsequent anxiety at all time points, and that mindfulness skills and depression, stress and emotional distress predicted each other at different time points. Discussion: Despite limitations of this study, including no random allocation of participants and lack of a long-term follow-up, this study preliminarily demonstrated the positive effects of a 4-week self-help online mindfulness intervention for people with emotional distress. It also suggested that changes in mindfulness skills may predict changes in anxiety, and that mindfulness skills and depression, stress and emotional distress may reciprocally influence each other during the intervention. We provided empirical support for the temporality and causality between mindfulness skills and other psychological outcomes.

Keywords: Mindfulness, online intervention, self-help intervention, emotional distress

2.11 “工程心理学专业委员会”专题研讨会

(1) “工程心理专业委员会”专题研讨会 1

眼动样例对学习引导作用：基于线索有效性的验证

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摘要 基于多媒体学习的信号原则(signaling principle)，突显学习材料的关键部分有利于学生对学习内容的注意加工，从而提高学生的学习效果（Mayer, 2021）。近期研究发现，基于眼动样例(EMME, Eye Movement Modeling Examples)的注意引导能够积极促进学习者的学习表现和注意加工(Wang, et al., 2020; Xie, et al., 2021)。本研究基于已有的信号原则，进一步关注两种基于信号原则的注意引导方式（传统视觉线索，EMME）对学生注意加工和学习成绩的影响。实验 1 招募 67 名大学生被试，以短时长的教学视频（2 分 11 秒）为实验材料，采用单因素 3 水平（EMME，传统视觉线索组，控制组）的实验设计探讨短时长条件下 EMME 与传统线索的有效性对比。结果发现，眼动样例和传统视觉线索对注意加工和保持、迁移成绩均有促进作用；相比于传统视觉线索，眼动样例的注意引导作用更强，但是这种更强的注意引导作用没有引起 EMME 组更优的学习表现。实验 2 进一步在长时长的教学视频（9 分 20 秒）中验证实验 1 的结果，使用了不同的学习材料，并且控制了材料难度。实验 2 的实验设计与实验 1 相同，共招募大学生被试 71 名。结果发现，眼动样例和传统视觉线索对注意加工和迁移成绩有促进作用，眼动样例对保持成绩有促进作用；眼动样例相比于传统线索有更强的注意引导作用，但两组在学习成绩上没有差异。综合两个实验结果，结论认为眼动样例与线索都可以促进学习，并没有发现眼动样例在学习效果上优于传统视觉线索，证实了 EMME 的积极作用主要来自于注意引导，与传统线索具有相同的作用(Mayer, 2021; Wang et al., 2020)。未来研究应进一步不同经验水平学习者的 EMME 对学习效果和注意引导的作用，以及学习者本身经验的影响作用。

关键词 眼动样例，传统视觉线索，视频学习，多媒体学习

Eye Movement Modeling Examples and Conventional Cues as Attention Guidance in Multimedia Learning

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Abstract: Based on the signaling principle, highlighting key parts of learning materials facilitates students' attention to the processing of learning content, thereby improving their learning outcomes (Mayer, 2021). The purpose of this study is to pay attention to the influence of two attention guidance methods (traditional visual cues, eye movement modeling example) on students' attention processing and academic performance. Experiment 1 took the short-term

teaching video (2 minutes and 11 seconds) as the experimental material, and used the experimental design of single-factor 3 level (eye movement modeling example group, traditional visual cues group, control group), and recruited a total of 67 college students to be tested. The results showed that EMME and traditional visual cues promoted attention processing, retention and transfer; compared with the traditional visual cues, EMME had stronger attention guidance, but this stronger attention guidance did not lead to better learning performance. Experiment 2 further verified the results of Experiment 1 in the long-term teaching video (9 minutes and 20 seconds), adopted the same experimental design as experiment 1, and recruited a total of 71 college students to be tested. The results show that the EMME and the traditional visual cue have the effect of promoting the attention processing and transfer results, and the EMME can promote the retention test; EMME have a stronger attention-guidance effect than traditional cues, but there is no difference in knowledge test between the two groups. In summary, this study found that EMME and traditional cue can promote learning, which validates the results of previous studies (Mayer, 2021; Wang et al., 2020), but this study did not find that EMME are better than traditional visual cues in learning effect. Future research should further explore the influence of different experience on the effect of EMME.

Keywords: eye movement modeling example, traditional visual cues, video learning, multimedia learning

基于意图推断的动态显控设计

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摘要 未来高度自主化的复杂人机系统中, 为了维持人在环路的任务绩效, 研究提出了人机界面透明化的设计原则, 以维持人在作业时的态势感知。然而, 透明化设计带来的信息量的增大, 会增加人信息过载的风险。要解决信息过载的问题, 人机界面需要从传统静态的、空分制设计转化到动态的、时分制设计。在这种动态显控设计下, 人机界面需要按照人和系统的实时需求实现显控信息的动态呈现。在复杂人机系统的人机界面设计实践中, 我们提出了基于操作者意图推断的动态显控设计框架, 以为新型智能人机界面设计提供理论和技术上的支撑。其中, 操作者意图的实时推断以任务-情境-操作者意图推断模型来实现。任务-情境-操作者意图推断模型的构建过程先针对特定人机系统, 采用认知工作分析的方法, 结合目标-计划-行动多层次的意图结构模型, 得出特定任务-情境下人的操作意图集合; 然后采用眼动追踪和神经生理计算等技术, 实现实时的特定意图识别。在人机界面层, 根据人的意图集合与特定意图, 可以采用区块推送、即点推送和视点推送等方法, 实现显控信息的按需显示。本报告将介绍基于操作者意图推断的动态显控设计框架, 并探讨这种人机界面设计思路如何能够应对复杂人机系统中的其他人因工程问题, 如注意隧道效应和人机决策偏差等。

关键词 认知工作分析, 意图推断, 眼动追踪, 人机界面, 认知增强

Human-Intention-Inference-based Dynamic Human-System Interface

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Abstract : To control the out-of-the-loop performance problem in highly automated systems, researchers have proposed the transparency principle for human-system interface (HSI) design. According to the transparency design principle, information regarding the current states of the automated system should be presented to the operator to maintain the operator's situation awareness. However, adding more information to the HSI may lead to information overload on the operator and result in reduced performance. One potential solution to this problem is to design a dynamic and proactive HSI, which presents information according to the needs of the operator and the system. To this end, we proposed a human-intention-inference-based HSI design framework. In this design framework, dynamic HSI is driven by a human intention inference (HII) model. The HII model for a human-machine system is built through a set of human factors engineering methods, including a modified cognitive work analysis which incorporates an intention analysis component, and physiological computing models to recognize human cognitive states and intention

under certain task contexts. In practice, combining the HII model and gaze-contingent display techniques, the HSI could optimize information display in real-time. In this talk, I will introduce the analysis and design process of the HII-based dynamic HSI, and also discuss how this design methodology can potentially be used to control human factors issues such as attentional tunneling and decision bias.

Keywords : Cognitive work analysis, intention inference, eye-tracking, human computer interface, augmented cognition

使用眼动追踪考察学龄前自闭症儿童的语言发展

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摘要 自闭症儿童的语言能力存在很大的变异性, 尤其是他们的产出性语言 (expressive language)。有的自闭症儿童的结构性语言技能 (句子的语法结构) 良好, 能够达到正常水平; 有的产出的句子有语法问题; 有的开口说话较晚, 但也能获得语言, 尽管他们最终的语言水平和典型儿童相比还存在差距; 有的虽然接受了语言干预, 但始终不能开口说话, 或者只有很少的语言。除了产出性语言差异外, 自闭症儿童的理解性语言 (receptive language) 也存在很大变异性。研究大多认为和产出性语言相比, 自闭症儿童的理解性语言受损的程度更大。但目前考察自闭症儿童语言理解的研究还远远不足, 对他们语言理解能力的了解还很不充分, 更缺少对他们语言理解背后相关机制的探讨。表面上看自闭症儿童在语言理解方面有严重的缺陷, 但这种表面上看起来严重的缺失可能更多地和他们缺乏社会性响应 (social responsiveness) 相关, 而非语言加工上的缺失。以往研究在考察自闭症儿童的语言理解能力时多采用离线 (offline) 实验任务, 如标准化测试和父母的报告。此类离线任务往往对互动和反馈有很高的要求, 而这样的互动和反馈对自闭症儿童来说是尤其困难的。他们自身的行为和症状特征经常会干扰他们完成相关实验任务, 从而掩盖他们真实的语言理解能力。在该报告中, 我们汇报使用眼动追踪的视觉-情境范式所采集的 3 到 5 岁汉语普通话自闭症儿童的在线语言理解数据, 并在此基础上探讨 (i) 自闭症儿童如何使用词汇语义、形态句法和韵律等不同信息理解句子语义, (ii) 他们的语言加工机制的特征以及与典型儿童相关能力比较的差异。我们也讨论眼动追踪的视觉-情境范式在检测学龄前典型与非典型儿童语言与认知能力发展中的优势。

关键词 自闭症儿童, 学龄前, 眼动追踪, 语言产出, 语言理解

Using eye-tracking to investigate language development in preschool children with autism spectrum disorder

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Abstract : There is enormous variability in the language profiles of children with autism spectrum disorder (ASD), especially in their expressive language. Some children with ASD never acquire functional spoken language; some have relatively good structural language, some exhibit deficits in both lexical and grammatical domains, and some demonstrate impaired grammar. In addition, their receptive language seems to be relatively more impaired than expressive language. Previous research seems to suggest that the language comprehension abilities of children with ASD might be particularly impaired. However, their poor language comprehension abilities are likely to be related more to these children's overall lack of social responsiveness than to language processing deficits. Much previous research that assessed the language comprehension abilities of children with ASD used offline tasks like standardized tests or caregiver reports. These offline tasks often require high response demands or interactions with the experimenters, which might pose particular difficulties for children with ASD, because children with ASD often exhibit various kinds of challenging behaviors or symptoms which might interact with the high task and communication demands, and thus frequently mask the comprehension abilities of these children. The present talk presents findings from a set of experiments that investigated the real-time language comprehension by 3- to

5-year-old Mandarin-speaking children with ASD using the visual world paradigm of eye-tracking. On the basis of these findings, we then discuss (i) how children with ASD use different types of linguistic cues in understanding sentence meanings, and (ii) the nature of their language comprehension mechanism in comparison with typically developing (TD) children. In addition, we discuss the advantages of the visual world paradigm for testing the language and cognitive development in preschool TD children and children with ASD.

Keywords: children with ASD, preschool, eye-tracking, language production, language comprehension

注意与眼动系统的耦合：来自 24 个空间线索任务的结果

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摘要 注意与眼动系统有密切关联。注意的“前运动理论”（premotor theory）认为空间注意与指向特定位置的运动编码的神经通路相同，行为实验也发现注意会在眼跳发生前转移到眼跳目标位置。线索范式是空间注意研究的经典实验任务。在该实验任务中，线索和目标刺激可以是呈现在中央视野但是指向一个目标位置的箭头，也可以是在边缘视野突现的视觉刺激。对于线索刺激，被试可以做出眼跳反应、按键反应，或者不做出任何反应；对于目标刺激，被试可以做出眼跳或者按键反应。因此，线索范式可能有 24 种不同的变式。以线索范式中经典的“返回抑制”效应为标记，本研究采用被试内设计对线索范式的 24 种可能的变式进行了系统的考查，以揭示注意与运动系统，特别是眼动系统的关系。本研究发现：(1) 有 22 种线索任务中有返回抑制效应；(2) 与 Taylor 和 Klein (2000) 的理论相左，返回抑制效应不能基于眼动系统的激活状态被划分为感觉和运动两类；(3) 在需要对线索做出眼跳反应的任务中，返回抑制效应整体更强。这些研究结果表明注意与眼动系统有紧密的耦合。

关键词 眼动，空间注意，眼动追踪，线索范式，注意的前运动理论

Tight coupling of attention and the oculomotor system: The results from 24 spatial cueing tasks

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Abstract: Attention is closely linked to the oculomotor system. The premotor theory speculates that spatial attention derives from the same circuits responsible for programming motor behavior toward specific spatial locations. In line with this theory, it has been shown that attention towards a saccade target preceeds the saccade itself. The cueing paradigm is a classic paradigm designed to probe spatial attention. In a cueing task, the cue and the target stimuli could be an arrow pointing to a location or an visual onset in the peripheral. The participant could respond to the cue by initiating a saccade or pressing a button towards the target, or simply ignore the cue. For the target stimuli, the participant could initiate a saccade or press a button. Consider the types of stimuli and response that could be used in a cueing task, a total of 24 possible cueing tasks can be used to probe spatial attention. An inhibitory aftereffect, frequently referred to as inhibition of return (IOR), is typically observed in cueing tasks. Using IOR as a behavioral marker for spatial attention, the present study adopted a within-subject design to examine all 24 possible cueing tasks, in an effort to reveal the link between attention and the motor systems, especially the oculomotor systems. The results revealed that: (a) IOR effects were seen in 22 out of the 24 possible cueing tasks; (b) contrary to the theory proposed by Taylor and Klein (2000), IOR effects cannot be categorized into sensory and motor ones based on the active involvement of the oculomotor system; (3) IOR effects were overall stronger in tasks that required saccadic responses than those that did not require saccadic responses. These findings suggest a tight coupling of attention and the oculomotor system.

Keywords: eye movements, spatial attention, cueing paradigm, the premotor theory of attention

基于摇杆隐喻的遥操作眼控交互 eye-stick 及其可用性研究

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摘要 (背景) 传统 GUI 交互以鼠标、键盘为主, 需要使用双手作为操作媒介, 以致使用环境存在较大局限性, 在遥操作任务中, 视角转换过程还会增加认知负荷。眼动交互对于可视化的目标和任务是一种非常有前景的交互方式, 具有方向控制连续、沉浸感强等优点。现有眼动控制遥操作方式主要有凝视触发策略、平滑追踪策略、眼势策略等类型, 可以仅靠眼睛完成交互而无需使用双手, 但这些交互方式主要是将眼动控制用于触发指令(如前进后退), 虽然触发方式有所不同, 触发操作与整个遥操作控制过程是分离的, 这意味着操作者在选择执行触发操作前可能还是无法避免空间转换的问题。基于此, 本研究以摇杆隐喻为设计原型, 开发了眼动控制遥操作交互方式: eye-stick。**(方法)** eye-stick 来源于摇杆隐喻并加入 PID 避障算法, 使用“上帝视角”显示小车行驶情景并直接作为控制界面, 同时呈现操作者的视线点, 通过视线参考点, 操作者在启动小车后, 只要看向期望小车行驶位置, 小车就能跟随视线移动。为考察 eye-stick 的可用性和易学性, 本研究在 Unity 平台上设计了不同道路类型下的遥操作虚拟小车测试任务, 加入传统 GUI 交互方式(手柄)作为对比进行工效学研究。实验采用 2(控制方式: 手柄, eye-stick) × 3(测试次数: 1 次, 2 次, 3 次)两因素混合设计。实验共招募 40 名被试, 按控制方式分为 2 组, 手柄组使用 Xbox 控制小车, 通过实物手柄上的摇杆来控制虚拟小车的左右和前进后退。每位被试需要完成 3 次遥操作虚拟小车任务, 每次任务内容相同, 均包含 24 次驶出迷宫操作, 每次任务后被试均需完成一套主观体验评价问卷。**(结果)** 实验结果显示, (1) 在第一次测试中, 相比手柄, eye-stick 操作时间显著更少、行驶距离显著更短, 但碰壁次数显著更多; (2) 第三次测试中, eye-stick 相比手柄依旧操作时间显著更少、行驶距离显著更短、碰壁次数更多; (3) 随着测试次数增加, eye-stick 的行驶距离减少量显著少于手柄; (4) 在第一次使用时, eye-stick 的可用性评分显著低于 Xbox 模式, 随着测试次数的增加, 两种模式工作负荷评分均显著下降, eye-stick 模式的易学性评分显著低于 Xbox 模式。**(结论)** 本研究设计的眼控交互方式 eye-stick 可以顺利完成遥操作虚拟小车任务, 且相比传统手柄, eye-stick 的操作时间更短、行驶所需距离更少。eye-stick 的设计可以为遥操作眼动交互提供新方案, 工效学研究结果对该交互的应用有指导意义, 研究所开发的遥操作虚拟小车任务场景可以被不断丰富并为不同的遥操作交互方式提供多样化的测试环境。

关键词 视线交互, eye-stick, 遥操作, 虚拟小车

The Usability Evaluation of eye-stick : An Intelligence Gaze Interactions for Teleoperation

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Abstract: Conventional teleoperation interactions (e.g. mouse, keyboard) are mainly rely on hands to control, result in limitations in operation environments and workload increased in perspective-taking. Gaze interaction is a promising teleoperation interaction based on eye-movement interaction technology. Current gaze interaction has various methods to control objects, like dwell times selection strategy, smooth pursuit selection strategy and gaze gestures strategy, and manage to control agents without hands. However, these strategies almost all utilize eye movement to trigger commands; so the operator cannot avoid the problem of perspective-taking before he sends the operation command when the controlled agents' perspective is incongruous with the operator's perspective. Therefore, this study developed an intelligent gaze interaction *eye-stick* based on human joystick metaphor to ease the perspective-taking problem and enhance operation performance. The interface of *eye-stick* was designed with the “God perspective” (the point of regard and controlled object location in the same interface), utilized 2D vectors from the coordinates of the point of regard on the screen and the object location to control the object locomotion direction while the distance to control the speed. In addition, we optimized with the PID control algorithm to reduce the influence of the deviation of the sight or the gaze tracking error by the eye tracker. Furthermore, we conducted a use

study to test the usability and learnability of eye-stick with a virtual vehicle teleoperation task developed on the Unity platform. We recruited 40 participants (20 females, 20 males) and divided them into two groups, half of the participants used *eye-stick* to control the virtual vehicle (*eye-stick* condition), the other group used Xbox (Xbox condition). Each group were asked to complete 3 times of teleoperation tasks (at least 25 minutes interval), each task contains 24 mazes to be driving out. Participants needed to complete three subjective experience evaluation questionnaires after operation. Our results showed that (1) compared with Xbox condition, the *eye-stick* condition had less operation time, shorter driving distance, and more collisions in the first test. (2) In the third test, the *eye-stick* condition still had less operation time, shorter driving distance, and more collisions. (3) With the increase of test times, the *eye-stick* condition had less decrement of driving distance than Xbox condition. (4) The usability subjective evaluation of *eye-stick* condition was lower than Xbox condition in the first test, the workload significantly declined as test time increased and the learnability subjective evaluation was lower than Xbox condition. In conclusion, *eye-stick* is a feasible interaction and has special operation performance advantages, which is helpful to develop intelligent gaze interaction and promising for application. In addition, the virtual vehicle teleoperation task designed in this study can be developed and provide a diversified evaluation tasks for teleoperation interactions.

Keywords: gaze interaction, eye-stick, teleoperation, virtual vehicle

限制性饮食者在句子阅读中对食物词的注意偏向

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摘要 食物相关的注意偏向是指相对于其它线索, 个体对食物相关刺激的优先注意。以往研究发现食物相关的注意偏向存在于不同状态以及特质类型的群体中。然而, 人类自然阅读中是否存在食物相关的注意偏向, 目前尚无定论。在阅读中, 注意分配的重要指标是预视效应和副中央凹-中央凹效应。在该项目中, 我们通过边界范式探讨自然阅读中的是否存在对食物词的注意偏向, 即食物词相对于非食物词是否存在更大的预视效应以及副中央凹-中央凹效应。研究结果表明, 在匹配无关词汇属性的基础上, 食物词相对于非食物词的整体加工时间更短, 体现了食物词的词优效应。此外, 通过对目标词边界之前的双字词兴趣区分析发现, 食物词相对于非食物词的目标词前兴趣区注视时间更长。进一步分析发现, 该副中央凹-中央凹效应主要体现在限制性饮食群体中, 在非限制饮食群体中差异不显著。该研究表明, 在注视食物词之前, 读者尤其是限制性饮食者可能已经通过预视加工, 知觉到食物和非食物线索的差异。因此, 在食物词条件下, 形成一定的趋避冲突或更强的词汇识别竞争, 导致目标词前兴趣区加工时间延长。最后, 我们讨论了该研究对于理解食物相关的注意偏向以及中文阅读中的眼动控制的意义。

Faster food word processing especially for restrained eaters in Chinese reading

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Abstract: Food-related attentional bias indicates that individuals have priority to attend food-related stimuli compared with non-food related stimuli. Previous studies have found that the attentional bias was modulated by different physiological states and participants characteristics. However, it is still unknown whether food-related attentional bias can be found in natural sentence reading tasks. In the present study, we investigated the above question using the boundary paradigms. The preview benefit and parafoveal-on-foveal effects were reported to study the potentially food-related attentional bias in Chinese reading. The data showed that the target food words were fixated with less time than the non-food words. On the pretarget region, readers fixated with more time in the food word than non-food word conditions. Further analysis showed that the food-related parafoveal-on-foveal effects were only found among restrained eaters. This phenomenon might reveal that restrained eaters were more likely to perceive the difference

between food and non-food words using parafoveal vision. Thus, there might be more competition between restraint and hedonism for restrained eaters. We discussed the possible implications on food-related attentional bias and eye movement control in Chinese reading.

(2) “工程心理专业委员会”专题研讨会 2

不同人际距离对联合行动绩效的影响——一项来自近红外的研究

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摘要 联合行动为个体随着时间和空间的不断变化而调整自己的行为以适应他人 (Sebanz, 2006)。联合行动绩效既取决于操作者的操作技能, 更取决于操作者的协作能力。关注操作者的协作能力是提高联合行动绩效的关键。但是以往少有研究关注操作者之间的协作能力以及人际因素对协作能力及任务绩效的影响。基于此, 本项目将从人际距离视角出发, 以研究人际协作能力的联合 Simon 任务为实验范式, 采用心理物理学实验并结合近红外光谱的超脑扫描技术, 研究协同作业中不同人际距离对操作者协作能力与作业绩效的影响及其机理。研究结果表明: 一方面, 在与抑制控制、具身模拟以及心理理论相关的背外侧前额叶、额下回和内侧前额叶均出现了不一致条件下的脑内激活显著大于一致条件下的结果, 表明操作者在不一致条件下从上述脑区调动了更多的认知资源。另一方面, 在与心理理论相关的内侧前额叶只在朋友组出现一致性效应, 表明朋友组在联合任务表征中对他们心理活动有更多的推测与预期; 脑间相关分析的结果表明, 在不同人际距离水平下, 双侧背外侧前额叶、双侧额下回和内侧前额叶, 普遍参与脑间相关, 表明这些脑区也许是联合行动中涉及共同表征的主要脑区。此外, 值得关注的是, 本研究结果表明与抑制控制、具身模拟、心理理论相关的通道 6、9 和 27 (分别位于左侧背外侧前额叶、左侧额下回和右侧颞极) 的脑间同步性与联合任务绩效之间的显著相关, 即这些区域的脑同步性越高, 联合任务反应时越短, 绩效越高。表明脑同步与更好的任务绩效相联系, 缩短人际距离, 提高脑同步是促进联合行动绩效的重要途径。本研究丰富了对联合行动的研究, 为人际距离对联合行动绩效的影响提供了行为和神经生理的证据, 研究结果将为提高联合行动绩效提供一定启示。

关键词 联合行动, 人际距离, 联合 Simon 任务, 功能性近红外光谱成像技术 (fNIRS), 人际神经同步 (INS)

The influence of interpersonal distance on joint action performance --- a near infrared study

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Abstract: joint action is individuals adjust their actions to those of another person in time and space (Sebanz, 2006). Joint action performance depends not only on the operator's operational skills, but also on the operator's collaborative ability. Focusing on operators' collaborative ability is the key to improving the performance of joint actions. Few previous studies, however, have focused on the effects of the collaborative ability between operators and interpersonal factors on the collaborative ability and operational performance. In consideration of this status, from the perspective of interpersonal distance, this study will take the joint Simon task as the experimental paradigm to investigate the interpersonal collaborative ability, the psychophysical experiment combined with the near infrared spectroscopy and hyperscanning were adopted to study the underlying mechanism of different interpersonal distance on the operators' collaborative ability and task performance in joint action. The results show that channel 6, channel 9

and channel 27 (located in the left dorsolateral prefrontal lobe, left inferior frontal gyrus and right temporal pole) related to inhibition control, embodied simulation and theory of mind are significantly correlated with joint task performance, that is, these areas of the brain synchronicity is higher, the shorter the joint task response, the higher the performance. It is shown that brain synchronization is related to better task performance, shortening interpersonal distance and improving brain synchronization are important ways to promote the performance of joint action. This study can enrich the research on joint action, and provide behavioral and neurophysiological evidence for the influence of interpersonal distance on the task performance of joint action. The results above will provide some enlightenment for promoting the performance of joint action.

Keywords: Joint action, Interpersonal distance, Joint Simon task, Functional Near-infrared Spectroscopy (fNIRS), interpersonal neural synchronization(INS)

基于神经工效学的团队认知增强研究

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摘要 成功的团队协作既需要每个团队成员有效的任务作业, 也需要成员之间有效的团队作业。基于神经工效学的团队认知增强技术是优化团队协作绩效最有前景的干预手段之一。传统认知增强技术常被用于支撑单人任务作业。该技术通过神经生理传感与计算, 实现人的认知状态的实时监测; 并根据认知状态的动态变化, 以通过动态人机功能分配、增强显示等方式优化单人任务作业绩效。认知增强技术要在团队协作场景中有效地应用, 最大的技术难点之一是如何有效地对团队认知状态进行实时监测。近年来不少研究通过如近红外脑成像等脑成像工具结合超扫描技术, 实现了多人交互场景下脑同步程度的测量。研究表明, 脑同步可以作为团队层级的认知状态的有用的神经工效学指标。本报告将介绍两个脑同步与团队协作的研究。第一个研究使用便携式近红外脑成像技术探索了麻醉师二人团队高仿真训练中的脑同步模式。训练过程中, 麻醉师二人团队本别经过了单人任务工作阶段、团队协作阶段以及训练后团队讨论阶段。结果表明, 团队成员之间前额叶的脑同步程度在团队协作阶段显著高于单人任务工作阶段。第二个研究采用近红外脑成像技术探索了无人机二人操作员团队在搜索救援任务团队协作中的脑同步模式。无人机二人操作员团队通过言语沟通, 实现飞机飞行控制操作和雷达传感操作的协同, 以有效地完成搜索救援工作。研究组正在对实验数据进行分析; 研究组预期团队脑同步程度将与团队协同性呈正相关, 并与团队绩效呈正相关。基于这些研究结果, 以及其它在不同场景中的团队协作脑同步研究, 本报告还将探讨未来认知增强技术将如何利用基于神经生理同步的团队层级认知状态监控方法以实现团队认知增强。

关键词 神经工效学, 团队协作, 脑同步, 近红外脑成像, 认知增强

Facilitating Teamwork with Augmented Cognition Technology

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Abstract: Successful team cooperation requires not only effective taskwork by each of the team members, but also effective teamwork among them. One of the promising approaches to promote teamwork is to facilitate team cognition in real time through technological intervention. In recent years, augmented cognition technologies have been developed to improve individual taskwork by real-time cognitive state monitoring based on physiological and neurophysiological sensing, and system adaptation based on the dynamically changing cognitive state. One of the biggest challenges in applying augmented cognition technology in teamwork is real-time monitoring of team-level cognitive states. We propose that physiological compliance and neural synchronization metrics are useful indicators of team-level cognitive states. In this talk, I will summarize recent findings on neural synchrony in clinical crisis management team training and unmanned aerial vehicle control team operation experiments. I will also discuss how future augmented cognition technologies can integrate team-level cognitive state monitoring techniques to achieve team augmented cognition.

Keywords: Neuroergonomics, teamwork, neural synchrony, function near-infrared spectroscopy, augmented cognition

设计师与消费者对产品设计的认知差异研究

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摘要 在消费升级的新时代, 满足消费者的需求已成为企业的首要任务。现有研究多从消费者的角度入手, 讨论不同产品设计对消费者的影响。少有研究从设计师的角度出发, 探讨其是否能够准确解码消费者的偏好。本文利用近红外光谱脑功能成像技术, 旨在探索 (1) 不同设计元素对设计师和消费者产品感知的影响, 以及 (2) 设计师与消费者对产品设计感知差异的认知机制。为此, 我们招募了 20 位设计师分别以“舒适性”“艺术性”“文化性”为主题, 设计三款水杯。一个月之后, 我们分别让设计师与 22 位消费者浏览并评价这些水杯, 同时测量他们的大脑活动。行为结果表明, 与消费者相比, 设计师对自己设计的作品给予了更高的评价。更为重要的是, 设计师认为影响消费者购物态度的主要因素为舒适性和文化性; 而消费者则认为影响其购物态度的主要因素为舒适性和艺术性。脑成像结果进一步显示, 总体而言, 设计师在查看自己设计的产品时奖赏脑区 (左侧眶额叶皮层) 激活更高。而且, 从不同的设计元素来看, 设计师在浏览艺术性产品时, 奖赏脑区激活水平较消费者更高。在浏览文化性产品时, 消费者认知压力相关脑区 (右侧背外侧前额叶) 表现出更高的激活, 表明消费者难以理解产品设计。我们进一步证明了消费者和设计师对文化性产品的感知差异是由于知识结构不同造成的。因此, 当设计师希望通过产品来传递特定的价值时, 应该避免主观服务偏差, 从消费者的角度思考, 尽量降低消费者的理解负荷; 或是在产品推出之前对消费者进行先行教育, 以弥补设计师与消费者之间的认知差异。

关键词 设计师, 消费者, 认知差异, 神经设计学, 近红外光谱脑成像技术

Perception Differences Between Designers and Consumers Towards Product Design

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Abstract: Satisfying consumers' requirements has now become the top priority for every company. However, the existing research mainly focus on the perspective of consumer. Little has been discussed about whether product designers can accurately decode consumers' preferences. Using functional near-infrared spectroscopy (fNIRS), the current study aims to explore (1) how different design elements affect designers' and consumers' perceptions of a product, respectively, and also (2) the cognitive mechanism underlying the perception differences between the consumers and designers when viewing a product. In the current research, 20 designers were asked to design 3 cups focusing on comfortability, artistry, and cultural attribute, respectively. 22 consumers were asked to view the cups and evaluate them from several perspectives. The designers were also asked to view the cups designed by themselves and by other designers. We measured the brain activations of designers and consumers during the whole process. Behavioral results indicated that, compared with consumers, designers gave higher ratings to the cups that they designed. More importantly, designers believed that the main factors that affect consumers' shopping attitudes are comfortability and cultural attribute, while consumers thought that the main factors that affect their shopping attitudes are comfortability and artistry. fNIRS results showed that, overall, compared with consumers, designers showed higher activation in the left orbitofrontal cortex when viewing products designed by themselves, indicating higher reward experience. Moreover, from the perspective of different design elements, while viewing products emphasizing

artistry, designers experienced higher reward than consumers. When viewing products emphasizing cultural attribute, consumers showed higher activations in brain regions related to cognitive pressure (right dorsolateral prefrontal cortex), indicating difficulty in understanding the product design. We further demonstrated that the perception differences between the consumers and designers while viewing products emphasizing cultural attributes resulted from different knowledge structure. Therefore, when delivering specific values through products, designers should avoid subjective service deviations and try to empathize with consumers, so as to minimize consumers' cognitive load. Moreover, firms may also educate consumers before launching a new product, so as to bridge the cognitive gap between consumers and designers.

Keywords: designer, consumer, perception differences, neurodesign, functional near-infrared spectroscopy

利用社会交互场模型构建人性化机器人

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摘要 近年来, 服务机器人的产业迅猛发展, 并在可见的未来极有可能成为人类生活不可或缺的伴侣。与工业机器人不同, 服务机器人的核心功能之一是如何与人类进行有效的交互。设计出社会友好型的服务机器人十分重要。这一问题既涉及到心理学科的理论概念也涉及到工程学科的技术解决方案。心理学等相关学科对人类社会交互行为进行了长期的研究。但是多数研究仍停留在人文科学概念层面上的描述, 缺乏对人类行为量化的测量、计算化的建模以及算法化的描述。另一方面, 工程领域主要以工程效率为目标对机器人行为进行优化, 缺乏对机器人拟人性以及社会交互能力的关注。为了解决这一问题, 首先需要对人类社会交互行为规律进行定量化描述和计算化建模。我们的研究构建了基于虚拟情景下的人类社会行为实验平台, 利用最新的虚拟现实技术, 定量化收集人类社会交互行为数据, 并进一步利用计算建模的方法, 建立数学模型, 最终将模型算法化后应用到机器人的空间导航任务中。我们的研究把心理学理论和工程实践相结合, 有效的提升了服务机器人空间宜人性和拟人性。

关键词 人性化机器人, 社会空间, 虚拟现实

Developing humanoid robots based on social interaction field model

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Abstract: Recent years witness a growing interest in service robots, which is likely to become an indispensable companion of human life in the foreseeable future. Unlike industrial robots, service robots frequently interact with humans. It is important to understand the rules governing human social behaviors and design user-friendly service robots. Psychological studies have described human social interaction behaviors for many years. However, most of these studies only focus on general principles of interaction behaviors conceptually, but lack quantitative measurements and computational modeling. On the other side, engineering researchers mainly optimize the efficiency of robots from an engineering perspective, while pay little attention to the human-like interaction behaviors of robots. To address the issue, it is important to fill the gap between the theoretical psychological concepts and engineering technical solutions. In our study, we utilized cutting-edge virtual reality technology to analyze human social interaction behaviors and develop a computational model of the social interaction field. We finally implement the model into the robot's navigation algorithms, which effectively enhances the social friendliness and humanoid level of service robots.

Keywords: humanoid robots, social space, virtual reality

正念冥想对海军官兵心理增强的干预研究

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摘要 目的 正念冥想研究日益增多,但在海军部队应用研究相对较少。因此,本研究基于循证探讨正念冥想用于增强中国海军官兵心理能力的有效性和可行性,为正念冥想在中国部队的应用与推广提供实证依据。

方法 本研究分为三部分。研究一采用对照研究,选取长期冥想者(2年以上)及对照组,进行生命质量和大脑执行功能的比较。研究二选取49名新兵,分为正念冥想组与候补组,并在参与后的4个时间点(基线、5周、8周、12周)分别对两组人员进行问卷调查,探讨正念冥想对一般健康状况及压力的影响。研究三通过设置实验组和对照组,开展为期8周的正念冥想练习,探讨系统性的正念冥想联系对军事创伤后应激症状及相关心理状况的影响。结果 研究一发现,长期冥想者生理健康总评(84.50 VS 80.42, $p=0.004$)、心理健康总评(80.16 VS 73.44, $p<0.001$)和生命质量总分(82.33 VS 76.93, $p<0.001$)显著优于对照组;每周达到冥想状态的时间大于40分钟者,心理健康总评(83.55 VS 76.44, $p=0.003$)和生命质量总分(85.71 VS 78.77, $p=0.001$)与小于40分钟者相比有显著性差异;每周达到冥想状态的频率大于2次者,心理健康总评(81.94 VS 76.05, $p=0.019$)和生命质量总分(83.70 VS 79.19, $p=0.031$)与低于两次者有显著性差异;另外发现采用注意瞬脱范式探索工作记忆功能时,发现长期冥想组的注意瞬脱程度低于对照组,差异有统计学意义($t=2.993$, $p<0.05$)。研究二发现,与候补组相比,在12周的随访中,正念冥想组在正念($F(1,43)=3.28$, $p<0.05$)和一般健康($F(1,43)=4.593$, $p<0.01$)方面表现出了更多的改善。研究三发现冥想组经过8周正念冥想练习,正念水平的提升较对照组明显($\beta=3.902$, $SE=0.995$, $p<0.001$),军事创伤后应激症状的改善较对照组明显($\beta=-3.173$, $SE=0.818$, $p<0.001$),而正念水平在正念冥想练习和军事创伤后应激症状改善之间起到中介作用。结论 研究一表明长期冥想可以全面提升个体生命质量,以及提升执行功能的工作记忆功能,改善认知能力下降。研究二提示正念冥想能有效改善新兵的一般健康状况,减轻新兵的压力。研究三表明正念冥想可以有效缓解军事创伤后应激症状,提升正念水平,正念水平在正念冥想练习和军事创伤后应激症状改善之间起到中介作用。

关键词: 正念冥想, 海军官兵, 心理增强

Intervention of Mindfulness Meditation on the Mental Enhancement of Navy Officers and Soldiers

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Abstract: Objective The research on mindfulness meditation is increasing, but there is relatively little research on its application in the navy. Therefore, this study is based on evidence to explore the effectiveness and feasibility of using mindfulness meditation to enhance the psychological ability of Chinese navy officers and soldiers, and to provide an empirical basis for the application and promotion of mindfulness meditation in the Chinese army. Methods This study is divided into three parts. Study one compared quality of life and executive function among long-term meditators (> 2 years) and a control group. In the second study, 49 recruits were selected and divided into the mindfulness meditation group and the control group. At 4 time points (baseline, 5 weeks, 8 weeks and 12 weeks) after the participation, questionnaire surveys were conducted to the two groups respectively to explore the effects of mindfulness meditation on general health and stress. In study three, an experimental group and a control group were set to conduct 8 weeks of mindfulness meditation practice to explore the effects of systemic mindfulness meditation on military post-traumatic stress symptoms and mental health. Results In the first study, the scores of physical health

(84.50 VS 80.42, $P=0.004$), mental health (80.16 VS 73.44, $P<0.001$) and quality of life (82.33 VS 76.93, $P<0.001$) of the long-term meditators were significantly better than those of the control group. There were significant differences in mental health scores (83.55 VS 76.44, $P=0.003$) and quality of life scores (85.71 VS 78.77, $P=0.001$) between the subjects who spent more than 40 minutes in meditation state per week and those who spent less than 40 minutes. There were significant differences in mental health scores (81.94 VS 76.05, $P=0.019$) and quality of life scores (83.70 VS 79.19, $P=0.031$) between those who meditated more than twice a week and those who meditated less than twice. In addition, when using attentional blink paradigm to explore working memory function, it was found that the degree of attentional blink in the long-term meditation group was lower than that in the control group, and the difference was statistically significant ($t=2.993$, $P<0.05$). Study 2 found that, compared to the control group, the mindfulness meditation group was significantly more likely to be mindful ($F(1,43)=3.28$, $p<0.05$) and general health ($F(1,43)=4.593$, $p<0.01$) showed more improvement. Study 3 found that after 8 weeks of mindfulness meditation practice, the improvement of mindfulness level in the meditation group was significantly greater than that in the control group ($\beta=3.902$, $SE=0.995$, $p<0.001$), the improvement of military post-traumatic stress symptoms was significantly higher than that of the control group ($\beta=-3.173$, $SE=0.818$, $p<0.001$) and mindfulness levels were a mediator between mindfulness meditation practice and improvement in military post-traumatic stress symptoms. Conclusion The first study showed that long-term meditation can promote the quality of life and the working memory of executive function, and improve the cognitive decline. Study 2 suggested that mindfulness meditation can effectively improve the general health of recruits and reduce their stress. Study 3 showed that mindfulness meditation can effectively relieve the military post-traumatic stress symptoms and improve the level of mindfulness, which played a mediating role between mindfulness meditation practice and the improvement of military post-traumatic stress symptoms

Keywords: mindfulness meditation, navy officers and soldiers, mental enhancement

2.12 “决策心理学专业委员会”专题研讨会

恐惧管理视角下两性的自我客体化：文化依从还是肉身回避？

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摘要 研究探讨了自我客体化的恐惧管理功能，揭示了自我客体化在两性中分别通过文化依从和肉身回避来防御死亡焦虑的不同心理机制。研究1从特质的角度发现，两性的自我客体化水平与死亡焦虑特质正相关，而且男性（而非女性）的自我客体化水平能够被其死亡焦虑特质直接预测；在此基础上，研究2和研究3分别探讨、比较了两性对客体化的“文化依从”和“肉身意识”在死亡焦虑引发自我客体化中扮演的角色。总结而言，在自我客体化的恐惧管理功能上本研究有一些与过往TMT研究不同的发现：死亡焦虑能够提高男女两性的自我客体化水平，但这一过程在两性中存在不同的机制：对于女性而言，文化中普遍存在客体化女性的文化，面对死亡焦虑时女性依从文化而进行自我客体化，以通过文化世界观和自尊防御对抗死亡焦虑；而男性有更明显的肉身性，在面对死亡焦虑时男性通过回避肉身——将自我客体化为不死之“物”来对抗死亡焦虑。

关键词 自我客体化，恐惧管理理论，死亡焦虑，客体化文化，肉身性

Culture Worldview Compliance or Creatureliness Avoidance? Understanding Self-objectification of Women and Men from the Terror Management Theory (TMT) Perspective

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Abstract: Objectification of women exists across cultures and has a long history. Objectification theory and related literature pointed out that self-objectification could lead to mental health problems, such as somatic anxiety, eating disorders, and substance abuse. Terror Management Theory (TMT) can be used to explain the underlying psychological mechanisms of self-objectification from the death anxiety and defense perspective. Based on TMT, the present research aims to explore the roles of "cultural worldview compliance" and "creatureliness avoidance" in both men's and women's self-objectification, respectively. As a start point, the preliminary study results confirmed that self-objectification is more prevalent among females than among males. Notably, contrast to the traditional view, the empirical evidence reveals that masculinity could trigger the stronger awareness of creatureliness than femaleness. Then we conducted three studies to investigate further the relationship between death anxiety and the level of self-objectification in both men and women. Study 1 indicates that death anxiety is positively correlated to self-objectification. Furthermore, men's death anxiety level could predict their self-objectification level, but this is not the case for women. The findings of Studies 2 and 3 suggest that after mortality salience (MS), women's self-objectification level is moderated by "cultural worldview compliance", while "creatureliness avoidance" plays a critical role in men's self-objectification. Our research presents empirical evidence which challenges some basic TMT-based assumptions of female self-objectification. By examining both women and men's self-objectification, we observed that "Cultural worldview compliance" and "creatureliness avoidance" influence men and women's self-objectification in different patterns.

Keywords: self-objectification, TMT, death anxiety, cultural worldview, creatureliness

最优化决策者偏好更多的选择：对代价的敏感程度的中介作用

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摘要 前人的研究表明, 对更多选择的偏好是最优化决策者在决策中存在的一种强烈倾向, 但是对于最优化决策者进行选项搜索乃至于此付出巨大代价的原因, 却知之甚少。本研究探讨了最优化决策倾向在何种条件下会增强个体对更多选择的偏好和这种效应背后的机制。通过四个实验, 本研究发现即便更多的选择并不带来更好的结果, 与满意化决策者相比, 最优化决策者仍然在更多的选择有代价的条件下偏好更多的选择 (实验 1)。本研究通过中介回归模型分析进一步证明了对代价的敏感程度是决策心态和对更多选择的偏好之间的中介机制, 并排除了对选择的重视程度和对代价的重视程度这两个可能的备择解释 (实验 2 和实验 3)。本研究还发现当代价得到凸显时, 最优化决策者会意识到代价, 并将对更多选择的偏好限制到和满意化决策者相同的水平, 因此对代价的敏感程度的在决策心态和对更多选择的偏好之间的中介作用得到了进一步的支持 (实验 4)。本研究的主要结论是: 对代价的敏感程度不同是最优化决策者比满意化决策者偏好更多选择的内在机制。主要的理论贡献是: 探究了最优化决策者进行选项搜索的原因, 为解释最优化悖论做出贡献, 并更深入地指出了最优化决策者和满意化决策者的区别。在实验方面, 本研究还开创了更具生态效度的决策实验范式。

关键词 最优化决策, 满意化决策, 选择, 代价

Insensitivity to Costs and Preference for More Alternatives: A New Approach to Maximization

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Abstract: Prior research showed that preference for more alternatives is a common propensity for maximizers, but little is known about why they pursue them despite the high costs. This research examines why maximizing tendency would enhance one's preference for more alternatives. We show that maximizers prefer more alternatives only under cost condition but not cost-free condition (Experiment 1). In addition, we demonstrate that sensitivity to costs serves as the mechanism underlying this effect, and rule out other possible explanations: importance attached to alternatives and costs (Experiment 2 and 3). Furthermore, we show that when cost is emphasized, maximizers restrict their pursuit for alternatives to the degree of satisficers. Thus, the mediating role of sensitivity to costs is further supported (Experiment 4).

Keywords: maximizer, satisficer, alternatives, costs

个体在被观察时会如何建构事物?

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摘要 我们的生活中常常存在着真实或预期的观察者。一百多年来, 社会心理学家探索了观察者对我们的行为表现等方方面面的影响, 本研究则首次关注个体在被观察时(与私密情境相比)会如何建构事物。通过7项实验, 本研究发现, 个体更倾向于在被观察时采取更高的解释水平建构事物。具体而言, 当被观察时, 个体倾向于从更整体的角度建构事物, 在表达时着眼于更本质的特征, 在消费决策中也更看重商品的核心属性。本研究对该效应的机制进行了进一步的探讨, 发现在被观察时, 个体更倾向于采纳他人的视角, 视角的转化拉远了原有的心理距离, 进而提高了建构事物的解释水平。最后, 本研究发现这一效应在控制个体的唤起水平后仍然存在, 且仅当个体被观察时(而非他人在场但并未观察时)存在。

关键词 解释水平理论, 被观察情境, 私密情境, 他人视角

How Do People Construe Objects When Being Observed?

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Abstract: The current research aims to explore how people construe objects when being observed (vs. in a private context). Using different manipulations of observation and measures of construal, we demonstrate that people are more likely to apply higher-level construals when observed than in a private context (Studies 1–3); this effect holds when controlling for arousal level (Study 2) and is obtained under conditions of observation but not the mere presence of others (Study 3). Studies 4–6 explore the underlying mechanism of this effect: adopting the perspectives of others in the presence of observers. Study 4 demonstrates that when observed, people align their own preferences to their inference of the preferences of others, but this effect is not present in a private context. In Study 5, a mediation analysis suggests that individuals prefer the high-level option when observed because they adopt the perspectives of others. In addition, the link between context and construal level is broken when participants are explicitly asked to focus on their own perspective when observed or to adopt the perspectives of others in a private

context (Study 6). Finally, Study 7 examines implications for evaluation of gifts.

Keywords: construal level, being observed, private context, perspectives of others

感恩对决策后悔的影响：时间焦点的中介作用

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摘要 感恩作为一种特定的积极情绪,可以提升个体的幸福感,促使个体的利他行为。以往关于感恩的研究着重于探讨感恩与幸福感之间的联系,而关于感恩与决策相关情绪的关系研究较少。后悔是决策中常见的消极情绪,不仅影响决策满意度,对于个体总体幸福感也会产生影响。本研究旨在探讨感恩与决策后悔的关系,以及其内在的作用机制。实验1选取美国 Amazon Turk 平台的被试 102 人,采用量表的方法测量特质感恩与后悔,结果发现,特质感恩对于后悔具有负向预测作用。实验2选取问卷星平台的被试 130 人,启动状态感恩测量具体决策情境中的后悔,结果发现,与控制组相比,感恩组的个体较少体验到后悔。实验3a选取问卷星平台的被试 135 人,采用量表测量特质感恩,并用情景实验的方法测量具体决策情境中的后悔,结果发现,感恩程度较高的个体更少体验到后悔,而且时间焦点在其中起到中介作用。实验3b选取美国 Amazon Turk 平台的被试 100 人,采用量表的方法测量感恩、后悔与时间焦点,结果发现,感恩对后悔具有负向预测作用,而且时间焦点在其中起到中介作用。综上所述,本研究一致发现,感恩可以较少决策中的后悔体验,而且时间焦点在其中起到中介作用。本研究丰富了感恩与决策后悔领域的相关研究,拓宽了感恩的积极作用。

关键词 感恩,后悔,时间焦点,过去,决策

The effect of gratitude on regret: the mediating role of temporal focus

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Abstract: Gratitude, as a specific positive emotion, can enhance happiness and promote altruistic behavior. Previous studies on gratitude focused on the relationship between gratitude and well-being, but less on the relationship between gratitude and emotions related to decision-making. Regret is a negative emotion related to decision-making, which not only affects decision-making satisfaction, but also affects individuals' overall well-being. The purpose of this study is to explore the relationship between gratitude and regret, as well as the underlying mechanism. In Study 1, 102 subjects from Amazon Turk were recruited. Trait gratitude and regret were measured via scales. The results showed that trait gratitude could negatively predict regret. In Study 2, 130 participants from wjx.cn were recruited. Trait gratitude was measured via GQ-6 scale and regret was measured in the specific decision-making situation. The results showed that compared with the control group, grateful individuals experienced less regret. In Study 3a, 135 participants were recruited. Trait gratitude and regret in specific decision-making situation were measured. The results showed that grateful individuals experienced less regret, and temporal focus (i.e., focus on the past) played a mediating role in this relationship. In Study 3b, 100 subjects from Amazon Turk were recruited. Trait gratitude, regret and temporal focus were measured via scales. The results showed that gratitude could negatively predict regret, and temporal focus played a mediating role. To sum up, this study found that gratitude reduces regret in decision-making, and temporal focus plays a mediating role. This study enriches the related research in the field of gratitude and regret, and broadens the positive roles of gratitude.

Keywords: gratitude, regret, temporal focus, past, decision

享乐品与实用品对选择偏好的影响：社会比较的中介作用

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摘要 当前研究探讨产品类型（享乐品/实用品）如何影响绝对好与相对好选择偏好。我们在五个研究中通过操纵不同的享乐品与实用品或者同一产品的不同实用目标或享乐目标，测量了消费者的选择偏好和愿意支付价钱。结果表明，消费者选择享乐品时更偏好绝对好选择，而选择实用品时更偏好相对好选择（研究 1a 和 1b）。当消费者选择享乐品时，也显著愿意为绝对好选择相比相对好选择支付更多的钱。但是，当消费者选择实用品时，他们愿意为相对好选择比绝对好选择支付更多的钱，但是两者的差异并不显著（研究 2 和 3）。社会比较中介了产品类型与选择偏好间的关系。尤其是，相比于享乐品，社会比较提升了消费者对实用品的相对好选择偏好（研究 4）。此外，竞争对手调节了产品类型对选择偏好的效应（研究 5）。本研究是第一个从产品类型（享乐品/实用品）视角探讨消费者最好选择偏好的研究。该研究的理论意义还包括探讨了社会比较对消费者选择偏好的影响取决于竞争对手，验证了产品类型对选择偏好的竞争优势，并且使用社会比较解释了产品类型对选择偏好的深层机制。该研究发现也对享乐品与实用品消费有重要的实践意义。本研究结果有助于旧款产品的促销和利用社会比较获得比较优势策略从而提升业绩。

关键词 选择偏好，享乐品，实用品，产品类型，相对好与绝对好，社会比较

How do utilitarian versus hedonic products influence choice preferences: Mediating effect of social comparison

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Abstract: The present research explores how product type influences the trade-off between relative and absolute best choice. We measure consumers' choice preferences and willingness to pay in five studies by manipulating different utilitarian versus hedonic products or different utilitarian versus hedonic goals of the same product. The results demonstrate that consumers prefer the absolute best choice for hedonic products and the relative best choice for utilitarian products (Studies 1a and 1b). When choosing a hedonic product, consumers are willing to pay significantly more for absolute than relative best choice. However, when choosing a utilitarian product, consumers are willing to pay more for the relative than absolute best choice, but the differences are not significant (Studies 2 and 3). Social comparison mediates the relationship between product type and choice preference. Specifically, compared to hedonic products, social comparison increases the relative best choice preference of utilitarian products (Study 4). Moreover, rivals moderate the effect of product type on choice preference (Study 5). The theoretical implication includes demonstrating the comparative advantage of product type on choice preference and interpreting the underlying mechanisms using social comparison. The findings also have important practical implications for utilitarian and hedonic consumption.

Keywords: choice preference, hedonic product, product type, relative and absolute best, social comparison, utilitarian product

付出和获益如何共同影响感恩与亏欠，进而影响整体情绪？

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摘要 当接受不同人的帮助时，情绪体验是不一样的，有时感激，有时则让人有负疚感。事实上，一旦人们受到他人的帮助，感恩和亏欠两种情绪都会产生。然而，它们是两种截然不同的情绪。本研究旨在探讨当受到帮助时，感恩和亏欠是如何产生的，以及感恩与亏欠两种不同的情绪如何共同影响人们在受到帮助时的整体情绪状态。本研究共包含三个实验：实验 1 探究了不同情境下，资助人的付出对受助人的感恩及亏欠两

种情绪的影响；实验 2 进一步探究资助人的付出对受助人的情绪产生影响的边界，即资助人的获益的调节作用，并研究感恩和亏欠对整体情绪的贡献；实验 3 将实验 2 的结论应用于政府资助和私人资助两种不同的背景下，探讨不同资助进行资助时，受助人的情绪差别及原因。主要研究结果：（1）资助人的付出影响受助人的感恩程度与亏欠程度，付出越高，感恩程度与亏欠程度越高；（2）资助人的付出对受助人的感恩的影响只体现在高获益时，而对亏欠的影响则无此边界；（3）感恩与亏欠的差值中介了资助人的付出对受助人的整体情绪的影响；（4）受助者对资助人的付出评估中介了资助者类型（政府/私人）对感恩程度和亏欠程度的影响，且感恩与亏欠的差值中介了资助者类型（政府/私人）对整体情绪的影响，具体而言，受到政府资助的受助人的感恩与亏欠的差值更高，因此，整体情绪更加积极。

关键词 感恩，亏欠，整体情绪，政府资助，私人资助

How Cost and Benefit Jointly Influence Gratitude and Indebtedness, and in Turn General Emotion

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Abstract: This study aims to explore how gratitude and indebtedness occur when receiving help and how the gratitude and indebtedness contribute to general emotion, respectively. We conducted three studies to investigate how the cost (to benefactors) and benefit (for beneficiary) jointly influence the experience of gratitude and indebtedness, and how these two emotions in turn together construct people's general emotion. We found that the cost to the benefactor enhances gratitude and indebtedness. Furthermore, the cost to the benefactor enhances gratitude only when the help is of high benefit to the beneficiary while enhances indebtedness regardless of the value, and the gratitude level minuses the indebtedness level (measured by the same rating scale) mediates the effect the cost (to benefactor) on general emotion state. Applying the findings into the contexts of government aids and private aids, we found that the perceived cost to benefactor mediates the effect the type of benefactor on gratitude and indebtedness, and the gratitude level minuses the indebtedness level is higher for beneficiaries who receive help from government, thus their general emotion state is more positive.

Keywords: gratitude, indebtedness, general emotion, government aids, private aids

2.13 “护理心理专业委员会”专题研讨会

（1）“护理心理专业委员会”专题研讨会 1

抗疫一线护士心理培训需求调查

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摘要 背景：在抗击疫情过程中，面对被感染死亡的风险、高强度的工作任务等，如何保持适宜心理状态、维持积极的工作状态对护士的心理调适提出了巨大挑战。目的：了解抗疫一线护士的心理现状及心理培训需求，为制定执行应急保障任务医护人员的培训提供指导。方法：以武汉一线救援护士为调查对象，采用 PHQ-9、GAD-7 和 WHO-5 评估一线护士的心理状况（焦虑、抑郁和幸福水平），采用自编问卷了解护士对于心理培训的需求等，包括培训的时长、形式、时间等，基于问卷星编辑并发放问卷。结果：共回收有效问卷 477 份，被调查护士的平均年龄 32.31 ± 5.32 ，工作年限 10.12 ± 5.92 ，既往仅有 8.4% 参加过应急保障任务，38.8% 既往参加过心理调适技能的培训。79% 护士认为执行此次任务对自己的心理调适技能产生了调整，65.4% 认为

自己能够应对, 85%以上的护士认为有必要在日常工作中、执行任务前、中、后开展心理调适技能培训, 在执行任务前、中、后开展心理培训的必要性比较发现, 更多的护士认为在执行任务过程中需要心理培训的介入, 培训的内容包括心理素质训练、任务环境中可能心理问题及应对、情绪调控训练(如积极心理暗示等)、团队合作与配合等, 线上学习和任务现场教学是护士首选的 2 种方式, 而培训时间以 3 天以内为主。结论: 抗疫一线护士在执行任务前、中、后存在心理培训的需求, 而在执行应急保障任务中应给以即时心理支持, 以线上或者任务现场教学为主的短期培训更能满足抗疫一线医护人员的培训需求。

关键词 护士, 心理培训, 抗疫, 需求

Investigation on psychological training needs of nurses fighting with COVID-19

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Abstract: Background: In the process of fighting against COVID-19, facing with the risk of infection and death and high-intensity work tasks, how to maintain a suitable psychological state and maintain a positive working state poses a great challenge to the psychological adjustment of nurses. Objective: To understand the psychological status and psychological training needs of front-line nurses fighting with COVID-19 and provide guidance for the training of medical staff who may take emergency support tasks. Methods: PHQ-9, GAD-7 and WHO-5 were used to evaluate the psychological status (anxiety, depression and well-being) of the first-line rescue nurses in Wuhan. A self-designed questionnaire was used to understand the nurses' needs for psychological training, including the duration, form and duration of the training. Results: A total of 477 valid questionnaires were collected. The average age of the investigated nurses was 32.31 ± 5.32 , and the working years were 10.12 ± 5.92 . Only 8.4% of the nurses had participated in the emergency support task and 38.8% had participated in the psychological adjustment skills training before. 79% of nurses thought that their psychological adjustment skills had been challenged during the task, 65.4% thought they could cope with it, and more than 85% of nurses thought it was necessary to carry out psychological adjustment skills training in their daily work, before, during and after the implementation of tasks. The content of the training includes psychological resilience training, possible psychological problems in the task environment and coping, emotional regulation training (such as positive psychological suggestion), team cooperation and communication, etc. Online learning and task on-site teaching were the two preferred methods for nurses, and the training time was mainly within 3 days. Conclusion: Front-line nurses need psychological training before, during and after the implementation of the task, and should be given psychological support in the implementation of emergency support tasks based on their needs. The short-term training based on online or task on-site teaching can better meet the training needs of the nurses.

Keywords: nurse, psychological training, need, fighting with COVID-19

基层防疫人员积极情绪和自我效能对睡眠质量的影响

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摘要 目的: 探究新冠疫情期间, 基层防疫人员积极情绪和自我效能对睡眠质量的保护性作用。方法: 在 2020 年 3 月 2 日-3 月 6 日期间, 通过微信应用平台, 对某市 14 个区基层防疫人员进行线上问卷调查。研究使用中文版正性负性情力量表中积极情绪分量表(PANAS-P)、一般自我效能量表(GSES)和匹兹堡睡眠质量指数量表(PSQI)分别对基层防疫人员的积极情绪水平、自我效能水平和睡眠质量进行评估。本研究在将因变量睡眠质量进行二元分类转换。研究采用二元 logistics 回归模型, 在控制年龄、性别、婚姻、学历、职称和职业后, 探究基层防疫人员积极情绪和自我效能对睡眠质量的影响。所有统计分析均在 SPSS26.0 中进行。

结果：本研究最终纳入基层防疫人员 709 名，其中全科医生 404 名，全科护士 158 名，医技人员 64 名，社区工作者 41 名，其他人员 42 名。在控制年龄、性别、婚姻、学历、职称和职业后，基层防疫人员的积极情绪水平越高，发生睡眠质量问题的发生风险越低（OR, 0.977; 95%CI, 0.955-0.999）；自我效能水平越高，发生睡眠质量问题的风险越低（OR, 0.925; 95%CI, 0.902-0.946）。结论：积极情绪和自我效能是降低基层防疫人员发生睡眠问题的保护性因素。临床管理者和研究人员应该采取干预策略，通过提高基层防疫人员积极情绪和自我效能水平，进而改善基层防疫人员睡眠质量。

关键词 新冠肺炎，基层防疫人员，积极情绪，自我效能，睡眠质量

The effects of positive emotions and self-efficacy on sleep quality among community epidemic prevention workers in COVID-19

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Abstract: Aims: To investigate the protective effects of positive emotions and self-efficacy on sleep quality among community epidemic prevention workers in COVID-19. Methods: From 2nd March to 6th March, by Wechat App, an online investigation for 14 communities in one city in China was conducted. The Chinese version of Positive and Negative Affect Questionnaire-Positive Subscale(PANAS-P), General Self-efficacy Scales(GSES), and Pittsburgh Sleep Quality Index(PSQI) were used to assess the positive emotions, self-efficacy and sleep quality respectively. After controlling for age, gender, marital status, education status, professional title and job, binary regression model was used to explore how positive emotions and self-efficacy associated with sleep quality. All the analysis was conducted in SPSS 26.0. Results: 709 community epidemic prevention workers were recruited in the final analysis, the number of general doctors was 404, general nurses was 158, medical technician was 64, community workers was 41, others was 42. After controlling for age, gender, marital status, educational status, professional title and job, positive emotions was negatively correlated with low levels of sleep quality(OR,0.977; 95%CI:0.955-0.999); self-efficacy was negatively correlated with low levels of sleep quality(OR,0.925;95%CI,0.902-0.946). Conclusion: positive emotions and self-efficacy were protective factors of sleep quality. Clinical managers and researchers should take measures targeting at improving positive emotions and self-efficacy to improve sleep quality of epidemic prevention workers.

Keywords: COVID-19, community health care workers, positive emotions, self-efficacy, sleep quality

新冠病毒疫情期间医护人员情绪状况与应对方式的关系

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摘要 **目的** 了解新冠病毒疫情期间医护人员情绪状况及其与应对方式的关系。**方法** 使用突发性公共卫生事件心理问卷、简易应对方式问卷和自编一般情况问卷，对来自武汉地区、华东地区、华南地区、西部地区、华北和东北地区的医护人员进行调查，发放问卷 530 份，收回有效问卷 503 份。**结果** 女性医护人员的抑郁、神经衰弱、恐惧和疑病反应得分均显著高于男性（ $p<0.05$ ， $p<0.01$ ），护士 5 个维度的情绪反应得分均显著高于医生（ $p<0.05$ ， $p<0.01$ ），初级职称医护人员神经衰弱得分显著高于中级以上职称医护人员（ $p<0.05$ ），武汉地区医护人员五个维度的情绪反应得分均显著高于其它地区（ $p<0.01$ ），疫情定点医院医护人员 5 个维度情绪反应得分均显著高于非定点医院（ $p<0.05$ ， $p<0.01$ ）。积极应对方式使用越多，医护人员的抑郁、神经衰

弱、强迫与焦虑程度越低。消极应对方式使用越多,医护人员的抑郁、神经衰弱、恐惧、强迫与焦虑、疑病程度越高。控制了性别、职业、职称、所在地和医院性质的影响后,积极应对方式和消极应对方式能够显著预测情绪状况($\beta = -0.27$, $p < 0.001$; $\beta = 0.27$, $p < 0.001$)。结论 应对方式是疫情期间医务人员情绪反应的重要影响因素。无论积极应对还是消极应对,对抑郁情绪的影响往往最大。

关键词 应对方式,积极应对,消极应对,情绪

Relationship between Emotional Status and Coping Style of Medical staff during COVID-19 Outbreak

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Abstract: **Objective** To investigate the relationship between emotional status and coping styles of medical staff during the COVID-19 outbreak. **Methods** Psychological questionnaire, simple coping style questionnaire and self-compiled general situation questionnaire were used to investigate medical staff from Wuhan, east China, south China, west China, north China and Northeast China. Totally 530 questionnaires were issued and 503 valid questionnaires were collected. **Results** Depression, neurasthenia, fear and hypochondriacal reaction scores were significantly higher for female medical staff than that of male ($p < 0.05$, $p < 0.01$). Five dimensions of emotional response score were significantly higher for nurses than doctors ($p < 0.05$, $p < 0.01$). Scores of neurasthenia were significantly higher in medical staff with primary titles than those with intermediate title of above ($p < 0.05$). Five dimensions of emotional response scores were significantly higher in Wuhan doctors than those from other areas ($p < 0.01$). The five dimensions of emotional response scores were significantly higher for medical staff in COVID-19 designated hospitals than other hospitals ($p < 0.05$, $P < 0.01$). Lower levels of depression, neurasthenia, obsessiveness and anxiety were associated with positive coping styles. Higher levels of depression, neurasthenia, fear, compulsion, anxiety and hypochondriasis were observed to be associated with negative coping styles. After adjusting for gender, occupation, job title, location, and hospital nature, positive and negative coping styles were significant independent predictors for emotional status ($= -0.27$, $P < 0.001$; $= 0.27$, $P < 0.001$). **Conclusion** Coping style is an important factor affecting the emotional response of medical staff during the COVID-19 outbreak. Both positive and negative responses tend to have the greatest impact on degree depression.

Keywords: Coping Styles, Positive Coping Style, Negative Coping Style, Emotional Status

新型冠状病毒肺炎疫情防控一线护士工作心理负荷现状及影响因素研究

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摘要 目的: 调查抗疫一线护士工作心理负荷现状, 并分析其影响因素, 为促进突发公共卫生安全事件护理人员心理防护、提高护理质量提供参考依据。**方法:** 于2020年3月8日到2020年3月19日采用便利抽样法调查武汉404名抗疫一线护士, 采用护士版NASA任务负荷指数量表和护士应对方式问卷分别对护士的工作心理负荷和应对方式进行调查评估, 并对调查结果进行单因素分析、相关性分析及多元线性回归分析。**结果:** 一线护士工作心理负荷总分为(64.95±12.30)分, 其中脑力要求(70.71±22.91)分、体力要求(86.44±18.19)

分、时限要求(74.06±21.90)分、自我表现(32.05±28.30)分、努力程度(84.05±18.23)分、受挫感(42.41±28.17)分;单因素分析结果显示,不同居住情况、医院所在地、工作年限、抗疫一线工作性质、平均年收入的护士工作心理负荷得分差异有统计学意义($P<0.05$)。相关性分析结果显示,工作心理负荷总分与问题解决、回避与自责、缓解情绪困扰、寻求社会支持呈正相关($P<0.05$)。多元回归分析结果显示,居住情况(和家人居住、独居、合租及其他)、医院所在地、问题解决、回避与自责是抗疫一线护士工作心理负荷的主要影响因素。**结论:**在抗疫一线高强度体力要求与努力负荷下,护士具有较好的自我表现及较低的受挫感。一线护理管理应促进护士积极应对,并通过人口学因素识别潜在高负荷人群,给予相应的有效干预。

关键词 新型冠状病毒肺炎, 心理负荷, 护士, 影响因素

The level of mental workload and influencing factors among frontline nurses in COVID-19 pandemic

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Abstract: Objective: To investigate the level of mental workload of nurses working in the frontline in COVID-19 pandemic to explore the influencing factors to provide evidence for psychological improvement of nursing staff and improve nursing quality in public health emergencies. **Methods:** A total number of 404 frontline nurses were participated during March 8th to 19th, 2020 in Wuhan, China. The Chinese Version of *National Aeronautics and Space Administration Task Load Index* (NASA-TLX) and Coping Style for Nurses scale were employed in this study. The single factor analysis, correlation analysis and multiple linear regression analysis were conducted to explore the influencing factors to mental workload. **Results:** The total mean level of mental workload was (64.95±12.30) and the mental demands, physical demands, temporal demands, performance, effort and frustration were (70.71±22.91), (86.44±18.19), (74.06±21.90), (32.05±28.30), (84.05±18.23) and (42.41±28.17), respectively. The single factor analysis showed that the factors of living status, hospital locations, years of clinical practice, working positions and income were statistically significant between groups. The correlation analysis indicated the relationship between mental workload and problem solving, avoidance or self-accusation, emotional distress alleviation and social support seeking. In addition, the result of multiple linear regression analysis showed that the main influencing factors to mental workload were living status, hospital locations, problem solving and avoidance or self-accusation. **Conclusion:** Frontline nurses were under great task load while in good self-reported performance and low frustration. Nursing management in frontline could facilitate the positive coping of nurses to promote nursing care. Identifying the individuals with high mental workload by sociodemographic factors could provide references to put forward effective interventions.

Keywords: COVID-19, mental workload, nurses, influencing factors

(2) “护理心理专业委员会”专题研讨会 2

COVID-19 轻症患者的心理弹性与焦虑, 抑郁的关系研究: 一项横断面调查

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摘 要 COVID-19 的爆发对个体会产生负面影响, 但心理弹性在处于压力下人们的反应中起着决定性的作用, 可以帮助他们更有效地应对压力。因此, 本研究拟探讨心理弹性在焦虑和抑郁中的作用, 并澄清他们在 COVID-19 轻症患者中的关系。本研究采用横断面的研究设计, 采用方便抽样的方法, 抽取武汉方舱医院的 296 名轻症患者参与本研究。主要采用一般资料问卷, Connor-Davidson 心理弹性量表, 医院焦虑抑郁量表对符合纳入排除标准的 COVID-19 轻症患者进行调查。结果显示, 该研究中约 20.9% 和 18.6% 的患者存在焦虑情绪 (处于临界值以上焦虑状态和重度焦虑) 和抑郁情绪 (处于临界值以上抑郁状态和重度抑郁)。研究对象的心理弹性得分为 69.53, 标准偏差为 16.98, 略低于普通中国成年人的正常水平。心理弹性与焦虑 ($OR = 0.362, p < 0.001$) 和抑郁 ($OR = 0.301, p < 0.001$) 均呈负相关, 并且是其保护因素。其中焦虑的危险因素包括女性 ($OR = 2.227, p = 0.009$) 和同事中患有 COVID-19 ($OR = 2.849, p = 0.005$), 而抑郁情绪的危险因素是家庭成员患有 COVID-19 ($OR = 2.039, p = 0.039$)。这项研究表明, 在控制一般人口统计资料的影响后, COVID-19 轻症患者中较高的心理弹性与较低的焦虑和抑郁情绪相关。卫生专业人员, 尤其是临床护士, 需要了解 COVID-19 患者的心理状况, 并提高其心理弹性, 以改善其心理健康。

关键词 心理弹性, 焦虑, 抑郁, COVID-19

The relationship between resilience, anxiety, and depression among patients with mild symptoms of COVID-19 in China:

A cross-sectional study

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Abstract: The outbreak of COVID-19 has negatively affected some individuals but resilience plays a decisive role in the response of individuals under pressure and can help them deal with pressure more effectively. The aims and objectives of this study was to explore the role of resilience in anxiety and depression and to clarify their relationships among patients with mild symptoms of coronavirus disease 2019 (COVID-19) in Wuhan, China. This was a cross-sectional descriptive correlational survey. In total, 296 patients from Fang Cang Hospital in Wuhan, Hubei, China with mild symptoms of COVID-19 were recruited. Participants were recruited through convenience sampling. The data collected included their demographic information, the Connor-Davidson Resilience Scale, and Hospital Anxiety and Depression Scale. The Results indicated that approximately 20.9% and 18.6% of the patients in this study had above threshold anxiety (subthreshold anxiety and major anxiety) and depression (subthreshold depression and major depression). The mean total resilience score of the participants was 69.53, and the standard deviation was

16.98 which was slightly below the normal level of ordinary Chinese adults. Resilience was inversely associated with and was a protective factor for both anxiety (OR=0.362, $p < 0.001$) and depression (OR=0.301, $p < 0.001$). in our samples. Risk factors for anxiety include being female (OR=2.227, $p=0.009$) and having colleagues with COVID-19 (OR=2.849, $p=0.005$), while a risk factor for depression was having family members with COVID-19 (OR=2.039, $p=0.039$). This study shows that after taking the general demographics into consideration, higher levels of resilience was associated with lower anxiety and depression among mild COVID-19 patients in Wuhan, China. Health professionals, especially clinical nurses, need to be aware of the psychological status of COVID-19 patients and promote resilience in order to improve their mental health.

Keywords: Resilience; Anxiety; Depression; Coronavirus Disease 2019

突发公共卫生事件下群体创伤后应激障碍现状及影响因素分析

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摘要 目的 了解全国抗击新型冠状病毒肺炎疫情期间公众群体创伤后应激障碍现状及影响因素,为下一阶段制定并实施针对性的心理健康指导提供参考依据。**方法** 采用方便抽样法,应用一般资料调查表和创伤后应激障碍检查表-平民版对 998 例研究对象进行调查。由于疫情期间特殊性,本次调查统一采用“问卷星”进行在线填写的方式收集资料,通过微信发送问卷链接。问卷指导语用于向调查对象介绍本次调查的目的、意义以及相关内容等。本次调查共有 1000 例人员参加,其中有效问卷 998 份,问卷有效回收率为 99.8%。**结果** 创伤后应激障碍阳性共 257 例,发生率为 25.75%,非条件 Logistic 回归分析结果显示,性别和居住地是创伤后应激障碍发生情况的影响因素 ($P < 0.05$)。其中,男性创伤后应激障碍的发生率高于女性,城市居民的创伤后应激障碍发生率高于乡镇居民,也高于农村居民。**结论** 抗击新型冠状病毒肺炎疫情期间群体已经产生心理健康问题,应加强对疫情期间公众群体尤其是男性、城市居民的心理健康干预,从生理、情绪、认知以及行为上全面缓解其身心压力,促进公众以最佳的心理状态积极应对此次疫情。

关键词 突发公共卫生事件,新型冠状病毒肺炎,创伤后应激障碍,影响因素

The status and influencing factors of posttraumatic stress disorder in public health emergency

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Abstract: Objective To study the status quo and influencing factors of posttraumatic stress disorder in public during the outbreak of Novel Coronavirus Pneumonia, to provide a reference basis for developing and implementing specific psychosocial health guidance in the next stage. **Methods** Totally 998 cases were investigated using general information questionnaire and posttraumatic stress disorder checklist-civilian version. **Results** A total of 257 cases were positive for posttraumatic stress disorder, with an incidence of 25.75%. Logistic regression analysis showed that gender and place of residence were associated with posttraumatic stress disorder in public health emergency ($P < 0.05$). **Conclusion** The public had psychological health problems during the outbreak of Novel Coronavirus Pneumonia. It's necessary to strengthen the psychological health intervention for the public during the outbreak of Novel Coronavirus Pneumonia, especially men and urban residents, so as to relieve their physical and psychological stress from the aspects of physiology, emotion, cognition and behavior, in order to promote the public to actively respond to the outbreak of Novel Coronavirus Pneumonia in the best psychological state.

Keywords: Public Health Emergency, Novel Coronavirus Pneumonia, Posttraumatic Stress Disorder, Influencing Factors

湖北省新型冠状病毒隔离病房患者孤独焦虑抑郁现状 及影响因素分析

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摘要 目的探讨湖北省新型冠状病毒患者隔离期间的孤独焦虑抑郁现状,以便为患者提供相应的护理措施。**方法**选择2020年1月至3月的117例由感染科负责隔离诊治的疑似及确诊病人为研究对象,运用孤独量表、焦虑自评量表和抑郁自评量表对其进行调查。**结果**117名隔离病房患者中,98名(83.8%)出现孤独情况,72名(61.5%)出现焦虑情况,97名(82.9%)出现抑郁情况。单因素及独立样本t检验分析结果表面,性别、年龄、婚姻状况和慢性病患病情是影响患者孤独感的主要因素;性别、年龄、可支配收入和慢性病患病情是影响患者焦虑症状发生的主要因素;可支配收入、家庭关系和确诊情况是影响患者抑郁症状发生的主要因素。**结论**新型冠状病毒隔离病房患者的孤独、焦虑、抑郁情况发生率较高,影响患者心理健康,从而对患者病情恢复产生消极作用。医护人员应当高度重视隔离病房患者的心理状况,尤其加强对其中女性患者,老年患者及低收入群体患者的关注,制定相应的心理干预体系和措施,通过减轻患者孤独焦虑抑郁水平来加速患者病情恢复。

关键词 新型冠状病毒,孤独,抑郁,焦虑,心理护理

Analysis of the loneliness, anxiety and depression in patient with novel coronavirus in isolation ward of hubei province and potential influence factors

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Abstract: **Objective** To explore the status of loneliness, anxiety and depression during isolation of patients with COVID-19 in order to provide patients with corresponding nursing measures. **Methods** A total of 117 suspected and diagnosed patients from January to March 2020 were selected as the research subjects, who were isolated and treated by the department of infectious diseases. The loneliness scale, anxiety self-rating scale and depression self-rating scale were performed to investigate the psychological status of patients. **Results** Among the 117 patients in isolation wards, 98 (83.8%) developed loneliness, 72 (61.5%) developed anxiety, and 97 (82.9%) developed depression. The further statistical analysis showed that gender, age, marital status and chronic disease prevalence were the main factors affecting the loneliness of patient; gender, age, disposable income and chronic disease prevalence were the main factors affecting the anxiety symptoms of patient; disposable income, family relationship, and confirmed diagnosis were the main factors affecting the occurrence of depressive symptoms in patient. **Conclusion** The patients in isolation wards with COVID-19 exhibit high incidence of loneliness, anxiety, and depression, which significantly affect their psychological health. Therefore, the medical staff should attach great importance to the psychological status of patients in isolation wards, especially pay more attention to the female, elderly, and low-income patients; simultaneously, the medical staff should set up corresponding intervention measures to reduce the level of loneliness, anxiety and depression of patients.

Key words: Novel coronavirus, Loneliness, Anxiety, Depression, Psychological nursing

分级心理护理对新型冠状病毒疑似患者隔离期间心理问题的影响

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摘要 目的 探讨隔离期间新型冠状病毒疑似患者的心理问题,探索分级心理护理对改善其负性情绪效果。方法 采用心理痛苦温度计(DT)、广泛性焦虑自评量表(GAD-7)、9条目病人健康问卷抑郁量表(PHQ-9)对新型冠状病毒疑似患者隔离期间的心理状况进行测评,根据心理问题的严重程度进行针对性护理干预,干预后再用GAD-7、PHQ-9对隔离的新型冠状病毒疑似患者进行测评.采用SPSS 26.0统计软件对干预前后各项测评指标进行分析。结果 大多数新型冠状病毒疑似患者出现不同程度的心理行为反应;干预组新冠病毒疑似患者痛苦、焦虑、抑郁得分均显著低于干预前,差异有统计学意义($P<0.05$);对照组干预后新冠病毒疑似患者痛苦、焦虑、抑郁得分均明显高于干预组,差异有统计学意义($P<0.05$)。结论 突发事件对公众的心理可产生不良影响,分级护理能有效改善新型冠状病毒疑似患者心理痛苦、焦虑抑郁状态。但由于新型冠状病毒疑似患者的隔离期短,长期效果未能观察,希望在以后的研究中能增加院外干预及随访。

关键词 新型冠状病毒疑似患者, 分级心理护理, 干预

Effects of hierarchical psychological nursing intervention on psychological problems of patients with 2019-nCoVAvian Influenza during isolation

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Abstract: Objective: To explore the mental health of the patients with 2019-nCoVAvian Influenza during isolation, and to explore the effect of hierarchical psychological nursing on improving their negative emotions .Methods : Psychological distress thermometer (DT), generalized anxiety self-rating scale (GAD-7), and 9-item patient health questionnaire depression scale (PHQ-9) were used to evaluate the psychological status of patients suspected of 2019-nCoVAvian during isolation. According to the severity of psychological problems carried out targeted nursing intervention. Then the novel coronavirus suspected patients were assessed by GAD-7 and PHQ-9 after intervention SPSS 26.0 statistical software was used to analyze the evaluation indexes before and after the intervention .Results: Most of the patients showed different degrees of psychological and behavioral responses. Scores of the patients' DT, GAD-7, and PHQ-9 were more significantly reduced after intervention than those before intervention in the intervention group ($P<0.05$); Scores of the patients' DT, GAD-7, and PHQ-9 were more significantly reduced in the intervention group than those in the control group ($P<0.05$). Conclusion: Emergency events can have adverse effects on public psychology, and hierarchical psychological can effectively improve the psychological distress, anxiety and depression of patients suspected of 2019-nCoVAvian. However, the novel coronavirus suspected patients had a short isolation period, so that the long-term effect was not observed. We hope that in the future research, we can increase the out of hospital intervention and follow-up.

Keywords: the patients with 2019-nCoVAvian Influenza, hierarchical psychological nursing, intervention

2.14 “语言心理学专业委员会”专题研讨会

语言理解中的语义预测：来自表征相似性分析的证据

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摘要 语言理解中存在的预测性及其可预测的范围和程度是心理语言学研究中的热议话题。该实验旨在考察读者在阅读过程中可以对特定语义特征进行预测, 如生命性特征。该实验采用脑电技术与表征相似度分析相结合的方式, 使用量词-名词短语(数词+量词+名词, 如“一位老师”)作为实验材料, 量词分为修饰有生命特征名词的量词(如“一位”、“一头”)和修饰无生命特征名词的量词(如“一朵”、“一块”)两种条件。我们对脑电活动进行了表征相似性分析, 分别计算了两种量词呈现之后到名词呈现之前的神经活动相似度。结果发现, 修饰有生命特征名词的量词的神经活动相似度比修饰无生命特征名词的量词所引发的神经活动相似度更大。结果表明, 尚未呈现的名词的生命性特征被预先激活, 生命性特征引发更大的神经表征相似性。该结果为语言理解中语义特征的预测提供了神经证据。

关键词 语义预测, 语言理解, 脑电, 表征相似性分析

Semantic prediction in processing Chinese classifier phrases: Evidence from Representational Similarity Analysis

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Abstract: The present study aims to seek neural evidence for the claim that readers predict specific semantic features such as animacy of upcoming words during language comprehension. We have used electroencephalography (EEG), in combination with representational similarity analysis (RSA). Participants read classifier phrases (Numeral-Classifier-Noun, e.g., 一位老师). Classifiers constrained for either animate or inanimate semantic features of upcoming nouns. We computed the similarity between brain activity following the classifiers until just before the presentation of the nouns. RSA revealed that the similarity between neural activity following animate-constraining classifiers was greater than following inanimate-constraining classifiers, indicating the pre-activation of the animacy feature of upcoming nouns. These findings provide clear neural evidence for semantic prediction in reading comprehension.

Keywords: Semantic prediction, Language comprehension, EEG, Representational Similarity Analysis

回视对汉语阅读中预测加工的影响： “如履薄冰”还是“破釜沉舟”？

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摘要 预测加工是大脑的基本工作方式之一。在阅读过程中, 读者基于前文语境不断地对后文内容进行预测, 提升对下文即将出现的词汇的加工效率。回视是眼睛向着与正常阅读方向相反的方向运动, 这一行为占

正常阅读中所有眼睛运动的 15%-25%。已有采用拼音文字进行的眼动研究报告了在回视过程中，读者会对前文语境信息进行再次整合加工，以促进对阅读内容的理解。汉语书写系统的一个重要特点是没有明确的词边界信息，这使读者可能更加依靠前文信息进行词汇的切分和识别。但是，在汉语阅读中回视怎样影响预测加工仍是尚未解决的问题。因此，当前研究的目的是考察：在不同的回视条件下，读者会如何利用前文语境信息进行预测加工？当无法回视时，读者的预测加工是“如履薄冰”的谨慎还是“破釜沉舟”的风险？当前研究采用 2(预测性:高&低)* 2(回视条件:允许回视&不允许回视)的被试内设计。目标词预测性高低的判断标准：招募 20 名被试进行基于目标词前文语境的完形任务，目标词的完型概率 $\geq 80\%$ 为高预测性；完型概率 $\leq 15\%$ 为低预测性。回视条件的操纵：采用随注视点变化的边界范式的变式，允许回视的句子正常呈现；不允许回视的句子中的每两个词之间均设置不可见边界，当被试从左到右阅读时，句子正常呈现，当被试进行回视并越过词左侧边界时，边界之前的所有内容均消失，以达到不允许回视的目的。在天津师范大学招募被试 40 人（18~21 岁），采用 EyeLink 1000 Plus 桌面式眼动仪记录被试在阅读过程中眼动轨迹，考察在汉语阅读中回视对预测加工的影响。结果发现：(1)在注视时间类指标上均发现了预测性和回视条件的主效应，但并未发现交互作用，即在不同的回视条件下存在相似的预测性效应；(2)在眼跳落点位置上发现了预测性和回视条件的交互作用，在不允许回视的条件下高预测性具有显著更远的眼跳落点位置。

关键词 回视，预测加工，汉语阅读，眼动研究

The function of regressions on predictive processing during Chinese reading

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Abstract: Predictive processing is one of the basic functions of human brain. During normal reading, readers predict the following content based on the information of the previous text continuously, in order to improve the processing efficiency of upcoming words. Regressions are the eyes movement to the opposite to the opposite of the normal reading direction, which accounts for 15%-25% of all eye movements in normal reading. Studies using alphabetic language have shown that during the regressions, readers would re-process and integrate the context information of the previous text, and promote the understanding of reading content to a considerable extent. An important feature of the Chinese writing system is that there is no clear word boundary information, which makes Chinese readers rely on the previous information for vocabulary segmentation and recognition. However, how the regressions influence prediction processing in Chinese reading is still an unsolved problem. Therefore, the purpose of the current research is to examine: in different regressions conditions, how do readers use the context information for predictive processing effectively? Would the predictive processing be more cautious or risky when regressions are not allowed? The current study had a 2 (prediction: high & low) * 2 (regression conditions: regressions allowed & regressions not allowed) within subject design. 20 subjects performed a completion task based on the context of the pre-target word. Completion probability of the words $\geq 80\%$ considered to be the high-prediction target words, and $\leq 15\%$ the low-prediction target words. Manipulation of regression conditions was via the boundary paradigm variation, Invisible boundaries are set between each of the two words in a sentence, the sentence presents normally when the participants read from left to right, and when they regressive and crosse the left boundary of the word, everything before the boundary disappears in order to achieve the goal of not allowing regressions. 40 participants (18-21 years old) from Tianjin Normal University were recruited, an EyeLink 1000 Plus desktop eye tracker was used to record the eye movements during reading, and to examine the impact of regressions on the predictive processing during Chinese reading. The results showed that: (1) Main effects of prediction and regression conditions were found in the fixation time measures, no interaction was significant, which means that there were still reliable predictive effects even when regressions were not allowed. (2) The interaction between prediction and regression conditions was found in landing position, which suggests more risky eye movement characteristics were shown under conditions that did not allow regressions.

Keywords: Regressions, predictive processing, Chinese reading, eye movements

语言预期加工的灵活性及音乐经验的调控作用

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摘要 语言预期加工不仅依赖于听者/阅读者的知识系统、而且与特定认知能力密切相关。本研究考察了音乐专业经验是否、如何影响口语理解过程中的语义预期加工倾向性。在脑电实验中, 音乐家和非音乐家聆听高或低语义限制性的口语句子, 在句子之前呈现与该句韵律长时程结构一致或不一致的启动刺激。首先, 锁时在目标名词上的分析发现, 音乐家组和非音乐家组都产生了 N400 降低效应 (高语义限制性 vs. 低语义限制性), 表明高限制性语境促进被预期词汇的语义加工; 在韵律不一致启动条件下 (vs. 韵律一致启动) 这一效应的起始潜伏期相对延迟, 尤其是在音乐家组中 (vs. 非音乐家)。其次, 锁时在目标名词之前的及物动词上的分析发现: 1) 在音乐家组中, 在韵律不一致启动条件下, 高语义限制性 (vs. 低语义限制性) 引起事件相关电位 (ERP) 的正波波幅增加, 同时, 在韵律一致 / 不一致启动条件下, 高语义限制性 (vs. 低语义限制性) 引起 beta 频段时频成分 (19-25Hz) 能量增加 / 降低, 当控制了其他语义和声学的混淆变量后, 这些 ERP 波幅 / beta 能量幅值都与即将到来的目标名词的可预期性 (完型概率) 显著相关; 此结果表明, 在关键动词处, 音乐家在预期随后将要出现的目标名词, 而且这一预期效应在不一致启动条件下更突显; 2) 在非音乐家组中, 在韵律一致和不一致启动条件下, 高语义限制性 (vs. 低语义限制性) 引起 ERP 正波波幅增加, 但这一 ERP 幅值与当前加工的动词的可预期性显著相关、与名词可预期性无显著相关; 此结果表明, 在关键动词处, 非音乐家在此实验情景中没有表现出显著的预期加工。综合以上结果表明, 音乐经验虽然没有益化最终的语义理解效果, 但是提高了听者在口语理解过程中的语义预期加工倾向性 (特别是表现在相对困难的听觉加工条件下)。可见, 语言预期加工不仅仅具有音灵活性、策略性的特点; 音乐经验对语言语义预期加工倾向的促进作用不仅仅是高效声学 / 语音感知加工的副产品、而可能与更高级的认知促进机制有关。

关键词 音乐专业经验, 语义预期, 韵律加工, 口语理解

Flexible predictive semantic processing in language comprehension and the modulating effect of music expertise

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Abstract: Musical experience has been found to aid speech perception. This electroencephalography study further examined whether and how musical expertise affects high-level predictive semantic processing in speech comprehension. Musicians and non-musicians listened to semantically strongly/weakly constraining sentences, with each sentence being primed by a congruent/incongruent sentence-prosody. At the target nouns, a N400 reduction effect (*high vs. low predictable*) was observed in both groups, with the onset-latency of this effect being delayed for incongruent (*vs. congruent*) priming, especially for musicians (as compared to non-musicians). At the transitive verbs preceding these target nouns, musicians' event-related-potential amplitude (in incongruent-priming) and beta-band oscillatory power (in both priming) showed a semantic-constraint effect, and were correlated with the predictability of incoming nouns; non-musicians only demonstrated an event-related-potential semantic-constraint effect, which was correlated with the predictability of current verbs. These results indicate musical expertise can enhance anticipatory

semantic processing in speech comprehension, and this effect might be not just an aftereffect of facilitated acoustic/phonological processing.

Keywords: Musical expertise, Semantic prediction, Prosodic processing, Speech comprehension

句子理解过程中线索比例对刻板印象加工的影响：来自 ERP 的证据

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摘要 为了快速理解语言，理解者需要根据语境以及已有的世界知识（包括社会知识）预测即将出现的语言信息。语言加工中预期机制的性质一直是语言认知研究的中心问题。然而，迄今为止，该领域大多数研究关注的是基于句子语境的词汇水平的语义预期或句法预期，很少涉及世界知识或社会知识。这一局面限制了我们对语言加工中预期机制性质的完整理解。为此，本研究考察汉语句子理解过程中，语言刺激环境中与读者刻板印象相关的语言线索如何通过改变读者的预期，来动态调节刻板印象这种社会知识在句子加工中的作用。研究通过操纵实验刺激中的填充材料，构造出“高比例”和“等比例”两种条件。其中，高比例条件中，与刻板印象一致的句子，如“老王的女儿是一名**护士**，……”，占 80%，而与刻板印象不一致的句子，如“老王的儿子是一名**护士**，……”，占 20%。等比例条件中，一致和不一致两种句子各占 50%。实验采用 2（刻板印象一致性：一致、不一致）× 2（刻板印象一致的比例：高比例、等比例）被试内设计，测量不同比例环境中刻板印象不一致所引发的 ERP 效应。实验时，被试阅读逐词呈现的句子，并且对偶尔出现的理解问题进行“是”或“否”的回答。初步结果（基于 32 名被试，其中女生 19 名；更多被试的数据正在采集中）显示，当先进行高比例后进行等比例实验时，等比例条件下，刻板印象不一致比一致引发更大的 N400（350–450 ms）和晚期负活动（LN，500–700 ms）。其中，LN 效应随试次的增加而减小，表现出预期适应现象。相比之下，高比例条件下，刻板印象不一致与一致所引发的 N400 和 LN 均不存在显著差异。此外，当先进行等比例后进行高比例实验时，刻板印象一致性与试次之间存在边缘交互作用（ $p = .09$ ），随着试次增加，刻板印象不一致所引发的 N400 效应增强。这些结果提示，语言刺激环境中与读者刻板印象一致的句子材料所占的比例，以及不同比例实验的先后顺序会动态调节刻板印象这种社会知识的加工（可能通过影响读者与刻板印象相关的预期）。论文立足于社会知识，从语言预期和语言加工的自动-控制特点两个角度，对上述发现进行了理论讨论。

关键词 刻板印象，社会知识，语用信息，句子理解，线索有效性，ERP

The influence of cue validity to gender stereotypical comprehension during Chinese reading: Evidence from event-related potentials

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Abstract: Based on contextual knowledge and world / social knowledge, comprehenders can generate predictions about upcoming input in order to process it as it unfolds. Many experiments have shown the processes of lexical and syntactical predictability, relatively little is known about the dynamic predication of social language comprehension. The present study conducted an event-related potential experiment to investigate whether and how readers predict and adapt their expectations to gender stereotypical sentences. To address this issue, we experimentally manipulated the probability of occurrence of stereotypical sentences (e.g., Wang's daughter / son is a *nurse*,.....). For the high block, stereotypical congruence sentences were presented more frequently than incongruent sentences to incongruence ones (80% vs. 20%), while they were presented as frequently as incongruent sentences in the equal probability block. Linear mixed-effect models were used to examine how the size of the N400 and LN effect changed as the experiment went along. The results based of 32 Chinese (19 female, note that more data are collecting) showed that when participants read high block first, stereotypical congruent sentences elicited larger N400 and LN than incongruent sentences in equal proportion condition, and LN effect was increasingly smaller over the course of the experiment,

suggesting an adaptation to stereotypical incongruence. Besides, when participants read equal block first, there was a marginal interactive effect between stereotypical and trial, which revealed stereotypical N400 effect was increasingly larger over the course of the experiment. Therefore, these results demonstrated how social knowledge affect language predication dynamically.

Keywords: gender stereotype, social knowledge, pragmatic, sentence comprehension, cue validity, ERP

自然言语理解中句子水平预测表征的脑认知机制

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摘要 预测性在语言理解中发挥着重要作用。但是以往研究大多在音位和词水平进行, 句水平的预测机制仍不清楚。为此, 本研究通过结合计算建模方法和功能磁共振技术探讨了自然言语理解中句子水平的预测表征问题。我们首先使用 BERT 模型对语境信息和待预测语言单元(包括词单元和句单元)进行向量化表征, 并在此基础上分别创建单词和句子的预测表征模型。基于所创建的模型, 对选取的实验材料(连续的故事)进行计算, 分别生成词水平和句水平的预测向量表征。此外, 我们使用功能磁共振技术记录了 31 名被试在倾听故事及其倒放版本时的神经活动(倒放作为对照条件), 并将生成的预测向量表征与脑活动进行关联分析。结果表明, 词水平特异的预测表征位于颞上回后部、右侧脑岛和额下回, 而句水平特异的预测表征脑区则位于右侧额中回后部。进一步的联合分析表明跨层级的预测表征(即在词、句两个水平上都存在显著激活)为左侧背内侧前额叶与左侧额中回前部。这些结果将自然语言理解过程中的预测机制从音位和词汇水平拓展到了句子水平, 并提示大脑中存在着层级特异和层级无关的预测表征神经基础。

关键词 语言, 言语理解, 预测, 句子, fMRI

The Neurocognitive Mechanism of Sentential Predictive Representation During Natural Speech Comprehension

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Abstract: It is well recognized that prediction plays an important role in language comprehension. Previous studies on the predictive mechanism, however, was mainly conducted at the phonemic and lexical level. Thus, little is known about the sentential predictive mechanism. Here we addressed this issue by combining computational model and functional magnetic resonance imaging (fMRI) technique. We firstly vectorized the language context and the upcoming language unit (word or sentence) with the Bidirectional Encoder Representations from Transformers (BERT) model, based on which the predictive representation models at the lexical and sentential levels were built. The trained models were used to generate the predictive representations of 3 stories. Additionally, 31 participants were scanned while they listened to forward and backward (control condition) audio recordings of the 3 stories. By conducting R^2 -based random effect analysis and region of interest (ROI) analysis, we tested the relationship between the lexical or sentential predictive representations and the brain activities. The results showed that the right insula, inferior frontal gyrus, and posterior superior temporal gyrus were associated with the predictive representations at the lexical level, while the right posterior middle frontal gyrus was associated with the predictive representations at the sentential level. Additionally, conjunction analysis showed that the left dorsomedial prefrontal cortex and the left anterior middle frontal gyrus were associated with the predictive representations of both levels. Together, these findings filled the gap of knowledge in the current literature about the predictive representation during natural language comprehension by extending the evidence from the lower level to the sentential level. The above results also reveal hierarchy-specific and hierarchy-general systems for the predictive representation during natural language comprehension.

Keywords: language, speech comprehension, prediction, sentence, fMRI

句子理解中的预期加工：理论与争议

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摘要 语言理解是人类特有的一种极其迅速而高效的认知过程。随着“预测脑”概念的提出，研究者越来越多地关注语言预期在理解中的作用，强调自上而下的信息在目标信息输入前所发挥的作用。对语言预期加工的机制的研究，为解释语言高效加工提供了新角度。在本次报告中，我对语言理解中的预期加工的相关理论和研究进行了介绍，并呈现我们针对以往的分歧所开展的一些工作。根据这些工作，我们讨论了未来在语言预期研究方面应加以关注的一些问题。

关键词 句子理解，预期加工，自上而下加工

Prediction in sentence comprehension: Theory and Controversy

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Abstract: Language comprehension is an extremely rapid and efficient cognitive process peculiar to human beings. With the introduction of the concept “predictive brain”, researchers have increasingly paid attention to prediction in language comprehension, emphasizing the role of top-down information that exists before bottom-up input actually occurs, which provides a new perspective for explaining the efficient language comprehension. In this talk, I will introduce research and theoretical issues related to prediction processing in language comprehension, as well as present our own work in the effort of solving some of the disagreements among research in this area. Based on these works, we raised several key points for consideration in future studies of prediction processing.

Keywords: sentence comprehension, predictive processing, top-down processing

2.15 “社区心理专业委员会”专题研讨会

（1）“社区心理专业委员会”专题研讨会 1

社区干部治理内生动力机制的质性研究

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摘要 社区干部是我国社区治理体系建设中的重要力量，其主动投入社区治理的心理因素及内在动力机制目前仍少有研究进行揭示。本研究以社区干部的治理内生动力为切入点，以探索提升其治理效能的长效心理作用路径为目标，采用基于开放式主题访谈的扎根理论方法，对全国5个省市7个城市辖下17个社区的24名社区干部(其中绩效优秀和普通者各半)进行了访谈，构建出社区干部的治理内生动力机制模型。研究表明：(1) 以治理价值观为核心，继而自然衍生出的自我定位和治理情怀构成了社区干部的治理内生动力系统；(2) 在治理内生动力的驱动下，社区干部可以积极主动地提升自身治理素质来应对社会转型过程中繁杂的社区治理工作，充分释放其治理效能；(3) 良好的治理表现可以使得社区干部在治理工作和居民积极评价中获得自我价值的实现，从而实现通过自我激励增强内生动力的正向循环模式，充分释放其社区干部的治理效能。

关键词 社区干部，治理内生动力，质性研究

A Qualitative Study on the Endogenous Dynamic Mechanism of Community Cadres' Governance

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Abstract: Community cadres are an important force in the construction of community governance system in China, and there are few studies on the psychological factors and internal dynamic mechanism of their active participation in community governance. Taking the endogenous power of community cadres as the breakthrough point, and aiming at exploring the long-term psychological path of improving their governance efficiency, this study uses the grounded theory method based on open-ended topic interview to interview 24 community cadres (half of them are excellent and half are ordinary) from 17 communities in 7 cities of 5 provinces and cities in China, and constructs the governance vitality of community cadres Force model. The results show that: (1) with the governance values as the core, the self positioning and governance feelings naturally derived form the governance endogenous power system of community cadres; (2) driven by the governance endogenous power, community cadres can actively improve their governance quality to deal with the complicated community governance work in the process of social transformation, and fully release their governance effectiveness; (3) the governance of community cadres is not only the core of the governance value, but also the governance of community cadres Good governance performance can enable community cadres to realize their self-worth in the governance work and positive evaluation of residents, so as to realize the positive circulation mode of enhancing endogenous power through self motivation, and fully release the governance efficiency of community cadres.

Keywords: Community cadres, Governance endogenous power, qualitative research

居民社区信任结构探索及影响因素研究

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摘要 在社会发展的过程中,信任的建设是必不可少的一环。而社区作为社会的基本细胞,信任在社区也不可忽视。人们生活在社区中,避免不了相互之间的联系与沟通,这种联系与沟通往往建立在信任的基础之上。所以社区信任是能够促进社区内居民进行合作的重要因素,在社区范围内的群体合作活动中起到重要的润滑作用,能够减少群体内的摩擦,提升社区活动效率。研究者大都认为社区信任是在这种特定的社会性地域空间内形成的信任形式,是指在社区的空间范围内社区生活的个体对于同社区的他者的信任程度。但是学者们对于社区信任的具体内涵有着不同的看法。为了解社区信任的内涵和结构,本研究通过深入社区,与居民进行对话,用访谈的方式来获取居民对于社区信任的看法与感受。采用协商一致小组进入4个社区,共访谈了居民23人。通过质性研究的方法进行文本分析,来对社区信任的内涵和结构进行本土化探索,并分析对社区信任产生影响的因素。研究主要得出以下结论:(1)居民的社区信任由四个成分构成,分别是对**社区组织**、**物业公司**、**邻居**和**居民委员会**这四个对象的信任。居民对**社区组织**的信任主要涉及管理、政策、活动等方面;对**物业公司**的信任涉及所提供的服务方面,如环境卫生、安全、设施、服务等;对**邻居**的信任是人际信任,也是对社区信任的直接感受;**居民委员会**是居民和社区及物业之间沟通的桥梁,居民通过他们向社区传递意见,同时社区也通过他们联系居民,了解居民情况。居民对居委会的信任也是对信息传递的信任。(2)社区信任的影响因素有客观因素和主观因素构成。客观因素主要有服务质量、安全稳定程度、环境卫生情况、关怀程度、和谐氛围及社区活动等方面;主观因素包括居民参与社区活动频率、居民与社区他者接触情况以及居民普遍信任水平等。

关键词 社区信任,社区服务,居民

Community trust structure and influencing factors

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Abstract: In the process of social development, the construction of trust is an essential part. Society is composed of communities, and trust can not be ignored in communities. People living in the community cannot avoid contact and communication, which is often based on trust. Therefore, community trust can promote cooperation among residents in the community, reduce conflicts within groups and improve the efficiency of community activities. Most researchers believe that community trust is the trust formed in this specific social geographical space, which refers to the degree of trust of individuals living in the community to others in the same community. However, researchers have different views on the specific connotation of community trust. In order to study the connotation and structure of community trust, this study obtained residents' views and feelings about community trust by entering the community, talking with residents and interviewing. We entered 4 communities and interviewed 23 residents. Through text analysis, this paper explores the connotation and structure of community trust, and analyzes the influencing factors of community trust. The main conclusions are as follows: (1) Residents' community trust consists of four components, namely, trust in community organizations, property companies, neighbors and resident representative. Trust in community organizations mainly involves management, policies, activities; trust in property companies involves the services provided, such as environmental hygiene, safety, facilities and services; trust in neighbors is interpersonal trust and a direct feeling of community trust; resident representative are the bridge between residents and communities ,properties. Residents pass on their opinions to the community through them, and the community also contacts residents through them to understand their situation. Trust in resident representatives is also trust in information transmission. (2) The influencing factors of community trust include objective factors and subjective factors. Objective factors mainly include service quality, safety and stability, environmental sanitation, care, harmonious atmosphere and community activities; subjective factors include the frequency of participating in community activities, contact with others in the community and the general trust level of residents.

Keywords: Community trust, community service, residents

中国人幸福人格的结构与内涵

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摘 要 幸福感在社会生活中是一个衡量人们生活质量的指标。大量的研究表明人格是预测个体幸福感的最稳定且有效的因素之一, 并认为它是幸福的一个相比于种族、社会阶级、金钱、工作等更大的决定因素。在人格的相关研究中, 中心特质是构成个体独特性的重要特质, 是在各种情境下控制个体行为的人格特征。那么, 影响个体幸福感的众多人格特质中, 哪些会是类似于“中心特质”的、对个体幸福感产生影响的重要、稳定、跨时间一致性的特质呢? 中国人的人格特征有别于西方, 中国人的幸福人格特质也可能有别于西方。比如, 中国讲究“吃亏是福”、“独乐乐不如众乐乐”, 等等。因此, 探讨中国人幸福人格的结构和内涵是十分重要的。本研究基于词汇学假设, 从本土语言体系里与幸福感相关的词汇中提炼幸福人格的结构, 探查中国文化下幸福人格的内涵。为保证词汇信息的完整性, 本研究以王登峰、黄希庭、沐守宽等人编制人格测验的最初词表为基础, 初步收集 2077 个人格词汇。通过筛选与幸福感相关的词汇、删除生僻难懂的词汇、同义词汇总等过程对词汇表进行分析和整理, 共得到幸福人格词汇 225 个。正式施测后通过筛查词汇与幸福维度之间的相关、探索性因素分析、验证性因素分析以及分析比较结构模型拟合指数, 结果保留了 49 个词汇描述幸福人格, 模型拟合良好 ($\chi^2/df=5.1614$, RMSEA=0.066, SRMR=0.054, CFI=0.98, NFI=0.98, NNFI=0.98), 揭示了中国人的幸福人格是一个包括胆识、美德、乐观的三因子结构。

关键词 词汇学, 幸福, 结构, 幸福人格

The happiness personality in Chinese Culture:

Personality structure and connotation

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Abstract: Happiness is an important index to measure the quality of our social life. Happiness in researches was divided into social happiness, subjective happiness, psychological happiness and other different categories. Nevertheless, most psychologists still define it as a kind of psychological experience or subjective feeling when people need to be satisfied. Numerous studies have shown that personality is one of the most stable and effective factors in predicting individual's happiness. What's more, some scholars believe that personality is a greater determinant of happiness than race, social class, money, jobs, and so on. Hence, it can be seen that personality is an important factor that affects individual happiness. While the research on personality shown that the central trait is an important characteristic which constitutes the uniqueness of individual and a personality trait that controls one's behavior in various situations. Previous studies on the relationship between personality and happiness have rarely discussed the structure and connotation of happiness personality in depth, just used a personality questionnaire to explore the factors related to happiness or focused on the relationship between happiness and certain personality traits (such as gratitude, wisdom, self-esteem, etc.). Therefore, it is necessary to explore the happiness personality of Chinese people, and the connotation of happiness personality in Chinese culture from the vocabulary related to happiness in the native language system on the lexicology hypothesis. Firstly, we collected the adjective list of Chinese personality traits compiled by Wang, and that of personality compiled by Huang, as well as that of virtue compiled by Mu. After eliminating the same words, 2,077 personality words were remained. Secondly, by using the method of Delphi, we filtrated the vocabulary and 306 of them were left. After the initial test of 2,608 people, 225 words of happiness personality were obtained. In the formal test, we explored the dimensions of happiness personality, using exploratory factor analysis (EFA) with Sample 1 (n=1098) and confirmatory factor analysis (CFA) with Sample 2 (n=1097). In order to reduce the difficulty of individual assessment in the test, the subjects were only asked to evaluate whether the adjectives provided by the question matched their own personality characteristics or not in the preliminary or formal test. Then selected items on the basis of the vocabulary and the relevant well-being questionnaire. These selected items have lower requirements for the judgment ability of the subjects and is good for the subjects to answer clearly and easily. The results revealed that there are three dimensions of the happiness personality: courage and insight, virtue and optimistic. The words of the courage dimension include those words such as wisdom, bravery, admirable and success. Those of virtue dimension are such as magnanimity, contentment, justice, and responsibility. And the words of optimistic dimension include those such as cheerful, optimistic, and smiley. Thus, we employed a happiness personality lexical rating scale including 49 items. The result shows that the measurement performance of the test is up to the standard by internal consistency reliability, exploratory factor analysis, confirmatory factor analysis, and the correlation analysis with the criterion test. The study found three-factor structures of happiness personalities by using the lexical approach and psychometrics methods, which contributes to the knowledge on happiness. The happiness personality characteristics of Chinese people are different from those in the west, for instance, as the saying goes "Disadvantage is a blessing" "Happiness alone is not as good as happiness with others". Therefore, it is necessary to explore the happiness personality of Chinese people, which is useful for researchers who are interested in Chinese indigenous psychology.

Keywords: Lexical Method, Happiness, Structure of happiness personality

系统公平信念对社区居民亲社会行为的影响：社区认同的中介作用

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摘 要 亲社会行为是指一切有益于他人和社会的积极行为, 包括分享、助人、利他、合作等行为。已有研究发现亲社会行为的增加有助于提升个体的幸福感、生活满意度、生命意义感、生活质量等, 缓解抑郁、焦虑、孤独感等。亲社会行为不仅有利于个体更好地适应环境和应对变化, 而且从社区层面而言, 社区居民的亲社会行为有助于构建融洽的邻里关系, 对和谐社区的建设与发展起到一定的“助推”作用。系统公平信念(System-justifying Beliefs)是个体相信当前的社会体系公平、正当、合理, 并对其加以拥护和支持的态度与观念。已有研究大多关注系统公平信念形成过程的理论解释及其影响因素, 相对忽视了系统公平信念的结果变量, 尤其是系统公平信念对亲社会行为的影响。因此, 本研究在社区背景下, 探讨系统公平信念对亲社会行为的影响及其心理机制。共招募 668 名社区居民(男性 441 名, 年龄 30.15 ± 8.04 岁), 采用系统合理化量表(System Justification Scale)、社区认同量表、亲社会倾向问卷(Prosocial Tendencies Measure, PTM)进行测量。结果: ①相关分析表明, 系统公平信念、社区认同、亲社会行为两两之间呈显著的正相关 ($r=0.40-0.45$, $p < 0.01$); ②中介分析表明, 系统公平信念可以显著预测社区居民的亲社会行为($B = .25$, $SE = .02$; 95% CI [.20, .29]), 且社区认同在系统公平信念和社区居民的亲社会行为之间起部分中介作用($B = .09$, $SE = .01$; 95% CI [.07, .12]), 中介效应占总效应的比例为 37.06%。结论: 系统公平信念不仅可以直接预测居民的亲社会行为, 还可以通过社区认同的中介作用间接预测亲社会行为。研究结果对社区建设具有一定的启发和指导意义, 政府机构和社区管理人员可以通过一定措施(如维护社区规范)提高社区居民的系统公平信念和社区认同, 这将在一定程度上有利于增加社区居民的亲社会行为。

关键词 系统公平信念, 社区认同, 亲社会行为, 中介模型

A Relationship between System-justifying Beliefs and Prosocial Behavior of Community Residents: the Mediating Role of Community Identity

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Abstract: Prosocial behavior refers to all positive behaviors that benefit others and the society, including sharing, helping others, altruism, cooperation and so on. Previous studies have found that the increase of prosocial behaviors is conducive to the improvement of individual happiness, life satisfaction, sense of meaning of life, quality of life, etc., as well as the alleviation of depression, anxiety and loneliness. Prosocial behavior not only helps individuals to better adapt to the environment and cope with changes, but also contributes to building harmonious neighborhood relations and promoting the construction and development of harmonious communities from the perspective of community. System-justifying beliefs is the attitude and concept that individuals believe the current social system is fair, legitimate and reasonable, and support it. Most of the existing researches focus on the theoretical explanation of the formation process of system-justifying beliefs and its influencing factors, but relatively ignore the outcome variables of system-justifying beliefs, especially the influence of System-justifying Beliefs on prosocial behavior. Therefore, in the context of community, this study explores the influence of system-justifying beliefs on prosocial behavior and its psychological mechanism. A total of 668 community residents (441 males, 30.15 ± 8.04 years old) were recruited and measured by system justification scale, community identity scale and prosocial tendencies measure. Results: Correlation analysis showed that there was a significant positive correlation between system-justifying beliefs, community identity and prosocial behavior ($r=0.40-0.45$, $p < 0.01$). The intermediary

analysis shows that the system-justifying beliefs can significantly predict the prosocial behavior of community residents ($B = .25$, $SE = .02$; 95% CI [.20, .29]), and community identity plays a partial mediating role between the system-justifying beliefs and the pro-social behavior of community residents ($B = .09$, $SE = .01$; 95% CI [.07, .12]), the explanation rate of mediating effect was 37.06%. Conclusion: The system-justifying beliefs can not only directly predict the prosocial behavior of residents, but also indirectly predict the prosocial behavior through the mediating effect of community identity. The results of this study have some enlightening and guiding significance for community construction. Government agencies and community managers can improve the system-justifying beliefs and community identity of community residents through certain measures (such as maintaining community norms), which will be beneficial to increase the prosocial behaviors of community residents to a certain extent.

Keywords: System-justifying Beliefs, Prosocial Behavior, Community Identity, Mediation Model

回忆启动范式下公平感对社区居民亲社会行为的影响

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摘要 公平感是个体对所处环境公平与否的主观感知, 以往研究发现公平感对个体的心理与行为存在着广泛的影响。在构建和谐社区的过程中, 公平是维护和谐社区秩序的内在力量与规则底线。因此, 开展社区心理学视野下的公平研究, 对推进社会心理服务体系建设, 为社区中自然法与国家法的融合建立社区心理基础都具有十分重要的意义。亲社会行为不仅有利于个体更好地适应环境和应对变化, 而且从社区层面而言, 社区居民的亲社会行为有助于构建融洽的邻里关系, 对和谐社区的建设与发展起到一定的“助推”作用。为探究公平感对居民亲社会行为的影响及心理机制, 本研究招募 129 名社区居民 (男性 69 名, 年龄 35.29 ± 10.79 岁), 采用单因素被试间设计, 运用回忆启动范式来操控社区居民的公平感水平, 随后对参与实验的社区居民进行亲社会行为测量, 同时还考察了公平启动下居民的社区认同水平。结果: ①公平启动组被试的社区内亲社会行为水平显著高于不公平启动组 ($F=10.49$, $p < 0.01$)。②公平感对社区认同有着正向的预测作用 ($B=0.48$, $SE=0.16$, $p < 0.01$), 社区认同对社区内亲社会行为的正向预测作用显著 ($B=0.47$, $SE=0.05$, $p < 0.001$)。公平感对社区内亲社会行为的直接效应不显著 ($B=0.14$, $SE=0.09$, $p = 0.123$), 但可通过社区认同正向预测社区内亲社会行为的变化且间接效应显著 ($B=0.23$, $SE=0.06$; 95% CI[0.07,0.45])。中介效应占总效应的比例为 62%。结论: 公平感显著正向影响了居民的社区内亲社会行为, 社区认同在公平感对居民的社区内亲社会行为的影响中起完全中介作用。研究结果对社区建设具有一定的启发和指导意义, 政府机构和社区管理人员可以采取一定措施 (如维护社区规范) 提高社区居民的公平感和社区认同, 这在一定程度上有利于增加社区居民的亲社会行为。

关键词 公平感, 回忆启动, 社区认同, 亲社会行为

The Impact of Justice on the Prosocial Behavior of Community Residents under the Recall Priming Paradigm

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Abstract: The sense of justice is an individual's subjective perception of whether the environment is fair or not. Previous studies have found that the sense of justice has a wide range of influences on the individual's psychology

and behavior. In the process of building a harmonious community, justice is the inner strength and the bottom line of rules to maintain the order of the harmonious community. Therefore, the development of justice research from the perspective of community psychology is of great significance to the promotion of the construction of the social psychological service system and the establishment of a community psychological foundation for the integration of natural law and national law in the community. Prosocial behaviors not only help individuals better adapt to the environment and respond to changes, but from the community level, the prosocial behaviors of community residents help build harmonious neighborhood relationships, and play a certain role in the construction and development of harmonious communities. In order to explore the impact of justice on residents' prosocial behaviors and the psychological mechanism, this study recruited 129 community residents (69 males, age 35.29 ± 10.79 years), adopted a single-factor inter-subject design, and used the recall paradigm to manipulate community residents. Then, the pro-social behavior measurement of the community residents who participated in the experiment was carried out, and the community identification level of the residents under the fair start was also examined. Results: ①The prosocial behavior level of subjects in the fair start group was significantly higher than that in the unfair start group ($F=10.49, p < 0.01$). ②The sense of justice has a positive predictive effect on community identity ($B=0.48, SE=0.16, p < 0.01$), and community identity has a significant positive predictive effect on pro-social behavior in the community ($B=0.47, SE=0.05, p < 0.001$). The direct effect of fairness on pro-social behavior in the community is not significant ($B=0.14, SE=0.09, p = 0.123$), but community identity can be used to positively predict changes in prosocial behavior in the community and the indirect effect is significant ($B=0.23, SE=0.06; 95\% CI[0.07, 0.45]$). The mediation effect accounted for 62% of the total effect. Conclusion: The sense of justice significantly positively affects the level of residents' prosocial behavior in the community, community identity plays a complete mediating role in the influence of the sense of justice on the prosocial behavior of residents in the community. The research results have certain enlightening and guiding significance for community construction. Government agencies and community managers can take certain measures (such as maintaining community norms) to improve the sense of justice and community identity of community residents, which will help increase community residents to a certain extent prosocial behavior.

Keywords: sense of justice, recall priming, community identity, prosocial behavior

共赢观量表的编制与检验

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摘要 共赢观主要体现为个体在寻求个人利益时会主动考虑并照顾他人利益, 这是新时代值得大力提倡的重要价值取向。共赢是我国优秀传统文化中的重要思想, 也是构筑和平稳定的世界秩序的关键要素。不过, 目前鲜有研究从心理学视角直接探讨共赢观, 同时也缺乏准确而有效的共赢观的测评工具。因此, 本研究的目的是编制一个具有高信效度的共赢观的测量工具。在预研究中, 开发了 49 个条目的题库, 涉及 5 个维度并包含 29 个特征词。在正式研究一中, 先通过项目分析对条目进行初步筛选, 然后使用探索性因素分析 (EFA) 抽取共同因素, 确定了初始量表的 5 个维度以及 25 个题项, 并将 5 个维度分别命名为诚信性、先进性、利他性、和谐性和协作性。在正式研究二中, 使用包含 25 个题项的初始问卷对 250 名被试进行调查并进行一阶验证性因素分析 (first-order CFA) 以及二阶验证性因素分析 (second-order CFA), 同时对量表的构念效度进行检验。为增进模型简约性, 在一阶验证性因素分析中根据 MI 指数、理论基础以及题项含义删除了 9 个题项, 最终保留 16 个题项, 模型拟合指数均达标。二阶验证性因素分析结果中的因素构念负荷量以及信度指标值也均达到标准。最后对量表进行了内部一致性信度检验、收敛效度检验, 结果均良好。因此, 本研究编制的共赢观量表分为诚信性、先进性、利他性、和谐性和协作性 5 个维度, 是能有效测量共赢观的可靠工具。

关键词 共赢观, 量表开发, 因素分析

Development and validation of the win-win scale

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Abstract: Win-win mainly reflected in the situation that individuals actively consider and take care of others' interests when seeking personal interests. This is an important value orientation that recommendable in new era. Win-win is an important thought in Chinese excellent traditional culture, and also a key factor to build a peaceful and stable world. However, there are few studies in psychology directly discussed the content of win-win. At the same time, there lacks an accurate and effective tool to win-win. Therefore, this research aims to develop a measurement tool to evaluate win-win with high reliability and validity. In our pilot study, we developed the item pool containing 49 items, which was involved in the five dimensions and 29 feature words. In the first study, we screened the items through item analysis and extracted common factors using exploratory factor analysis (EFA), and determined a total of 25 items in the initial scale. The five dimensions are named as honesty, advanced, altruism, harmony and collaborative. In the second study, we used the initial scale with 25 items to test the survey results of 250 subjects through first and second-order confirmatory factor analysis (CFA), and test the construct validity of the scale. In order to improve the model parsimony, we deleted 9 items according to the model modification index, the theoretical basis and the meaning of the items, final remaining 16 items, all the model fitting index are up to standard in the first-order CFA and the second-order CFA. Finally, we tested the internal consistency reliability and convergence validity and the results indicating that the scale had good reliability and validity. Therefore, we have formed a win-win scale involved five dimensions that honesty, advanced, altruism, harmony and collaborative, which is an effective tool to measure win-win.

Keywords: win-win, scale development, factor analysis

(2) “社区心理专业委员会”专题研讨会 2

流动人口政治疏离感及其对差序政府信任的影响

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摘要 城乡二元体制结构下, 由于制度和非制度性阻碍的存在, 流动人口处于“融不进城市、回不去故乡”的政治疏离困境, 促使政治冷漠、相对剥夺感攀升等问题愈发突显, 极易影响他们对各级政府的信任度。基于 621 名流动人口的调查数据, 分析流动人口政治疏离感现状及其对差序政府信任的关系及内在作用机制。结果显示: 1) 流动人口政治疏离总体上处于一般偏上水平, 包括主动疏离过程认知、主动疏离行为倾向、被动疏离过程认知、被动疏离结果体验 4 个方面, 其中被动政治疏离感得分高于主动政治疏离感; 2) 流动人口政治疏离感在学历、政治面貌、职业类型等人口学变量上存在差异, 同时在性别、年龄、学历、政治面貌、职业类型、年收入、户籍类型、流动方向、居住时间、流动理由上存在显著二阶交互作用; 3) 流动人口政治疏离感及其各维度均显著正向预测差序政府信任。4) 相对剥夺感在流动人口政治疏离对差序政府信任的影响中起部分中介作用。可从优化政府管理、改善社会工作、提升公民素养等方面着手缓解流动人口政治疏离感和相对剥夺感, 进而消除差序政府信任现象, 全面提升政府公信力。

关键词 流动人口政治疏离, 差序政府信任, 相对剥夺感

Political Alienation of Floating Population and Its Impact on the Difference of Government Level Trust

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Abstract: Under the dual urban-rural structure, the floating population is in a dilemma of political alienation that cannot integrate into the city and cannot return to their hometown, due to the institutional and non-institutional obstacles, which makes political indifference and relative deprivation more prominent. It will easily affect their trust in various levels of government. Based on the survey data of 621 floating population, analyzed the current situation of the floating population's political alienation and its relationship with the government's trust and its internal mechanism. The results show that:1)The floating population's political alienation is generally at a relatively high level, including four aspects: the process of active alienation, the tendency of active alienate behavior, the process of passive alienation, and the experience of passive alienation results., among which the passive political alienation scores high on the active political alienation;2) The floating population's political alienation differs in demographic variables such as education, political outlook, occupation type;3)The political alienation of floating population is different in demographic variables such as educational background, political status and occupation type, and there are significant second-order interactions in gender, age, educational background, political status, occupation type, annual income, household registration type, mobility direction, residence time and mobility problem;4)Relative deprivation plays a part of the mediating role in the influence of the political alienation of the floating population on the difference of government level trust. We can start to alleviate the sense of political alienation and relative deprivation of the floating population from aspects such as optimizing government management, improving social work, and enhancing citizenship, so as to eliminate the phenomenon of disorderly government trust and comprehensively enhance government credibility.

Keywords: Political alienation of floating population, Difference of government level trust, Relative deprivation

社区居民疫情风险感知、感知压力与心理健康的关系： 未来时间洞察力和信心的作用

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摘要 旨在探讨新冠肺炎疫情期间的疫情风险感知、感知压力与心理健康的关系。通过网络问卷调查 699 名被试的风险感知、感知压力、心理健康 (焦虑、抑郁)、未来时间洞察力及社会信心, 探究风险感知与心理健康 (焦虑、抑郁) 的关系及影响机制。结果发现: (1) 风险感知与焦虑、抑郁呈正相关。(2) 感知压力在风险感知与焦虑的关系中起部分中介作用, 在风险感知与抑郁的关系中起完全中介作用。(3) 未来时间洞察力能负向调节感知压力与抑郁的关系。(4) 社会信心能负向调节感知压力与焦虑的关系。研究强调了未来时间洞察力和社会信心在维持心理健康中的重要作用, 研究结果将为疫情下公众保持心理健康提供实践指导和理论启示。

关键词 未来时间洞察力, 社会信心, 新型冠状病毒, 风险感知, 感知压力, 心理健康

Epidemic Risk Perception, Perceived Stress, and Mental Health during COVID-19 Pandemic: A Moderated Mediating Model

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Abstract: The aim of the present study was to investigate relationships among epidemic risk perception, perceived stress, mental health (depression and anxiety), future time perspective and confidence in society during the novel coronavirus disease (COVID-19) pandemic in China. Especially, we wonder that whether perceived stress mediates associations between epidemic risk perception and mental health and that whether future time perspective and confidence in society moderate the link between perceived stress and mental health. This cross-sectional study was conducted among 693 Chinese adults aged 18–60 years. The results showed that epidemic risk perception was positively related to perceived stress, depression, and anxiety. The correlations between epidemic risk perception and depression and anxiety were reduced when perceived stress was included, suggesting that perceived stress can mediate these relationships. Moreover, the boundary conditions for the associations among perceived stress, depression, and anxiety were found in the study. Specifically, positive future time perspective can buffer the negative effects of perceived stress on depression, and confidence in society can weaken the negative effects of perceived stress on anxiety. These findings highlight the important role of future time perspective and confidence in society in maintaining mental health, and will provide practical guidance and theoretical implications for the public to maintain mental health during the novel coronavirus disease (COVID-19) pandemic. Limitations and future directions are also discussed.

Keywords: future time perspective, confidence in society, risk perception of coronavirus disease (COVID-19), perceived stress, Mental Health

中文版心理幸福感量表在残疾人群体中的修订及应用

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摘要 目的: 检验中文版心理幸福感量表(C-PWBS-42)在残疾人群体中的信效度, 并探讨人口学因素对残疾人心理幸福感的影响。方法: 先后以 C-PWBS-42 和修订得到的 C-PWBS-16 为工具, 通过残联渠道进行施测, 分别获取有效样本 352 人和 513 人。另取 40 名残疾人进行间隔四周的重测。结果: 修订后的中文心理幸福感量表共 16 个题项(C-PWBS-16), 包含环境掌控、生命成长、积极心态和自主四个因子, 具有良好的结构效度、聚合效度、区分效度和效标效度; 总量表和各因子的内部一致性信度在 0.71~0.89 之间, 重测信度在 0.76~0.93 之间。残疾人心理幸福感的人口学差异表现在: 女性高于男性、先天残疾高于后天残疾、重度残疾高于轻度残疾; 受教育水平越高, 心理幸福感越高; 肢残者心理幸福感最低。结论: 修订后的 C-PWBS-16 在残疾人群体中具有良好的信度和效度, 可以作为测量残疾人心理幸福感的工具; 性别、先/后天残疾、残疾等级、残疾类型和受教育水平是影响残疾人心理幸福感的重要因素。

关键词 心理幸福感, 心理幸福感量表, 残疾人, 信度, 效度

Revision and Application of the Chinese Version of Ryff's Scale of Psychological Well-being in People with Disabilities

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Abstract: Objective: To examine the reliability and validity of the Chinese Version of Ryff's Scale of Psychological Well-being (C-PWBS-42) in people with disabilities. Meanwhile, to explore demographic factors that affect the psychological well-being of the disabled. Methods: C-PWBS-42 and the revised C-PWBS-16 were administered to two valid sample ($n_1 = 352$, $n_2 = 513$) through Disabled Persons' Federation channels, respectively. Other 40 disabled persons were retested after an interval of 4 weeks. Results: The revised version of C-PWBS-42 included 16 items (C-PWBS-16), consisting of four factors, namely, environmental mastery, life growth, positive mind, and autonomy. C-PWBS-16 demonstrated satisfactory coefficients for construct, convergent, discriminant and criterion validity. Internal consistency reliability of total scale and four factors ranged from 0.71~0.91, and test-retest reliability ranged from 0.76~0.93. The demographic differences in psychological well-being of the disabled are as follows: women are higher than men, congenital disabilities are higher than acquired disabilities, and severe disabilities are higher than mild disabilities; the higher the level of education, the higher the psychological well-being; people with physical disabilities have the lowest psychological well-being. Conclusion: The revised C-PWBS-16 is reliable, valid, and suitable for measuring psychological well-being of people with disabilities. Gender, congenital/acquired disability, disability level, disability type and education level are important factors influencing psychological well-being of the disabled.

Keywords: Psychological Well-being, Scale of Psychological Well-being, people with Disabilities, Reliability, Validity

社区居民疫情新闻关注时长和抑郁的关系： 风险感知和未来时间洞察力的作用

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摘要 危机事件的新闻报道对公众抑郁情绪有着重要影响, 但是其影响机制少有研究涉及。本研究构建一个有调节的中介模型, 考察疫情相关新闻关注时长与个体抑郁的关系, 及内部因素风险感知的中介作用以及未来时间洞察力的调节作用。采用问卷调查法, 在新型冠状病毒肺炎疫情期间收集了 701 份数据。研究发现: (1) 疫情相关新闻关注时长与抑郁呈显著正相关; (2) 风险感知在疫情新闻关注时长和抑郁之间起部分中介作用; (3) 未来时间洞察力在风险感知和抑郁之间起调节作用, 能缓冲风险感知所带来的不利影响。研究结果为特殊时期缓解公众抑郁情绪提供了依据和启示, 如正负面新闻报道之间的平衡有助于稳定公众的情绪; 个体对未来的美好希望、对战疫胜利的信心也有益促进个体的积极情感, 减少疫情下由于消极情感所引起的抑郁。

关键词 新型冠状病毒, 疫情相关新闻关注时长, 风险感知, 未来时间洞察力, 抑郁

The Relationship between Duration of Attention to Pandemic News and Depression during the Outbreak of COVID-19: The Roles of Risk Perception and Future Time Perspective

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Abstract: Since the outbreak of COVID-19 in China, people have been exposed to a flood of media news related to the epidemic every day. Studies have shown that media news about public crisis events have a significant impact on individuals' depression. However, how and when the duration of attention to pandemic news predicts depression still remains an open question. This study established a moderated mediating model to investigate the relationship between duration of attention to pandemic news and depression, the mediating effect of risk perception and the moderating effect of future time perspective on the relationship. In early February 2020, 701 individuals from 29 provinces, autonomous regions and municipalities across China were asked to self-report their duration of attention to pandemic news, level of depression, risk perception, and future time perspective during the COVID-19 outbreak. Results show that there is a significant positive correlation between duration of attention to news on COVID-19 and depression, risk perception mediates the association between duration of attention to news and depression; and future time perspective plays a moderating role between risk perception and depression. The findings of the present study provide theoretical implications and practically throw some light on alleviating the public's depression during pandemic periods. We highlight the individual's hope for a better future, focusing positive news and time perspective balance during epidemic disease are also beneficial to promote positive emotion and reduce the depression.

Keywords: COVID-19, duration of attention to pandemic news, depression, risk perception, future time perspective

公共服务认同与政府公信力的阶层差异化研究

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摘要 改革开放以来, 社会阶层的变迁一直是中国社会转型的核心问题之一, 而在近年来我国政府致力于增强政府公信力, 建设人民满意的服务型政府的时代背景之下, 理清社会上不同地位群体的公共服务认同与政府公信力水平的阶层差异现状成为推动公共服务均等化、提升政府公信力的重要现实和理论问题。本文立足于 2017 年中国社会状况综合调查(CSS)数据, 以包含个体收入水平、职业类型和教育程度的综合指标为标准, 将样本人群划分为基础、中等和高社会阶层群体, 对我国民众公共服务认同和政府公信力水平的阶层分布和差异化现状进行分析。研究发现, 我国民众的公共服务认同感和政府公信力水平总体上均处于中等较高水平; 民众的公共服务认同存在显著的阶层差异, 其中基础社会阶层民众的公共服务认同度要显著低于中等社会阶层的民众; 民众的政府公信力水平也存在显著的阶层差异, 中和高等社会阶层民众的政府公信力水平均显著高于基础社会阶层民众, 而中等社会阶层民众和高社会阶层民众的公信力水平没有显著差异; 民众的公共服务认同度高会显著提高其政府公信力水平, 而社会阶层地位在中间起负向调节作用, 个体所处的社会阶层越低, 其公共服务认同度对政府公信力水平的提升作用越明显。

关键词 社会阶层, 公共服务认同, 政府公信力

Research on Differentiated Class Identity in Public Service and Government Credibility

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Abstract: Since the Economic Reform and open up, the change of social class has always been one of the core issues of China's social transformation. In recent years, the Chinese government has been committed to enhancing the government's credibility and building a service-oriented government that satisfies the people. The status quo of the group's public service identity and the level of government credibility has become an important practical and theoretical issue to promote the equalization of public services and enhance the government's credibility. Based on the 2017 Chinese Social Survey (CSS) data, this paper uses comprehensive indicators including individual income levels, occupational types, and education levels as the standard, and divides the sample population into basic, middle and high social class groups. Analyze the status quo of class distribution and differentiation of service recognition and government credibility. The study found that the public service identity and government credibility of the Chinese people are generally at a medium-high level; there are significant class differences in the public's public service identity, and the public service identity of the basic social class is significantly lower than that of the middle society. There are also significant differences in the level of government credibility among the people of different classes. The government credibility level of the middle and upper social classes is significantly higher than that of the basic social class, while the credibility levels of the middle and high social classes are not significant. Difference; the public's public service recognition will significantly improve the level of government credibility, while the social class status plays a negative role in the middle. The lower the individual's social class, the more public service recognition will improve the government credibility level.

Keywords: social class, public service recognition, government credibility

新冠疫情下高校复学的学生心理干预研究

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摘要 新冠疫情下高校复学学生心理干预, 不仅是协同高校在特殊时期做好疫情防控, 亦是提供后新冠疫情期的校园心理服务; 既帮助少数大学生消减疫情下持续的过度应激状况, 亦协助大多数学生整合自身资源进行心理保健和自助, 对于大学生的“创伤后成长”(PTG)意义重大。本文就高校复学学生心理干预的特殊性进行细致分析, 明确高校复学学生心理干预的工作原则, 在此基础上, 对高校复学学生心理干预的方案设计进行了探讨。高校复学学生心理干预具有特殊性, 其与高校常态化心理危机干预在工作原则、工作思路、工作目标及工作程序等方面均有差异。其次, 高校复学学生心理干预的评估与筛查亦具有特殊性, 既需面向全体高校学生, 亦应重点关注九类人群。高校学生复学心理干预应有序、科学地开展, 贴近大学生心理需求, 有针对性开展工作, 干预的有效性是重要的评估标准。基于此, 高校学生复学心理干预方案设计应遵循“纵横结合, 优化整合”理念。就纵向开展工作而言, 探索建构“校园心理服务五级体系”, 充分考量高校学生复学前复学后的心理需要, 有层级渐进有序开展心理干预工作。就横向工作而言, 制定“重点群体心理干预专案”, 有针对性开展心理干预工作。心理干预方法应注重优化整合, 从校园环境稳定、身心及人际“联结”、专业的创伤疗愈、生命价值观深度思考等不同维度进行分析和探讨。对高校学生复学心理干预的思考, 从宏观到微观, 从自愈到治愈, 从特殊到常态, 试图探索一条新冠疫情下高校复学安全又健康的心路。

关键词 高校复学, 学生心理, 干预, 新冠疫情, 创伤后成长

Research on psychological intervention against the Coronavirus-19 for students in reopened colleges

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Abstract: Psychological intervention against the Coronavirus-19 for students in reopened colleges assists the disease control of university administration in the unusual period. It also works as mental healthcare on reopened campuses in the post Coronavirus-19 era, helping a few students release their enduring over-stress in the epidemic, and enabling a lot to reassign inner resources for their mental fitness and self-healing, which are of significance for their 'Post-Traumatic Growth (PTG)'. This essay analyses, in detail, the particularity of psychological intervention for students in reopened colleges and sorts out working principles to serve as the base for a further discussion on the design of intervention plans. We argue that, for colleges students in reopened colleges, psychological intervention during this period is different from mental crisis intervention on campus on daily bases in aspects like working principles, lines of thought, goals, procedures, and so on. The premise of the intervention, i.e. psychological evaluation and surveys, are distinctive in that they should include all students on campus and, at the same time, pay more attention on 9 categories of mentally-featured students. We also argue that conduction of the intervention should follow orderly and customized plans in response to students' mental needs, for the effectiveness is one of those key variables to assess the intervention. The plan design of the intervention should be guided by the principle of 'optimizing and reassigning resource both chronically and synchronically'. To design chronically means to build up 'a hierarchical on-campus mental healthcare system of 5 levels' in order to have the intervention practices in orderly and progressive manners and in response to students' mental needs before and after the reopening of campus. Synchronic design of the intervention means composing 'specified plans of mental intervention for focused groups' and conducting them precisely. In the analysis and discussion of intervention plans design, optimizing and reassigning resources should be focused with considerations from multiple dimensions like the stability of campus environment, the connection between the body and the heart as well as between persons, expertise of trauma healing service, and the depth of thoughts of life and value. The essay argues for psychological intervention of students in reopened colleges from standpoints both macro and micro, by the means of both self-healing and healing by others, concerning both normality and particularity. By this way should the authors sort out a safe mental approach to secure the reopening of colleges in the Coronavirus-19 epidemic.

Keyword: reopening of colleges, students' mental state, intervention, Coronavirus-19 epidemic, Post-Traumatic Growth

(3) “社区心理专业委员会”专题研讨会 3

大学生媒体多任务对社会幸福感的影响：一个有调节的中介模型

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摘要 媒体多任务是指个体同时对多个电子或非电子媒体进行操控。随着信息技术的高速发展和手机媒体、数字电视等新媒介形式的不断更新，媒体多任务逐渐成为当代青少年习惯化的行为模式。但这种行为模式可能会对个体的情绪和认知产生影响。相关研究发现，媒体多任务行为显著影响青少年的生理健康、心理健康和幸福感。社会幸福感是研究幸福感的新视角，其更关注个体在社会关系中适应的好坏及程度，而媒体本身

便具有社会属性。但以往研究却未探讨媒体多任务与社会幸福感的关系及其作用机制。为了更全面地了解媒体多任务对大学生的影响,本研究探讨大学生媒体多任务与社会幸福感的关系,并检验二者之间的内在作用机制和影响因素,即在两者关系中学校社区感的中介作用与自我控制的调节作用。本研究采用问卷调查法,以 642 名大学生为研究对象。研究结果如下:(1)大学生平均媒体多任务指数(MMI)为 3.4,即大学生在同一时间平均进行 3.4 个媒体活动。(2)大学生媒体多任务对社会幸福感具有显著的负向预测作用,对学校社区感具有显著的负向预测作用;学校社区感对社会幸福感具有显著的正向预测作用;学校社区感在大学生媒体多任务和社会幸福感的关系中起部分中介作用。(3)自我控制在学校社区感与社会幸福感的关系中起调节作用;在自我控制的五个维度中,健康习惯和专注工作/学习两个维度均在媒体多任务、学校社区感和社会幸福感中介模型中的前半段路径和后半段路径起调节作用。本研究还讨论了研究结果的实践启示。

关键词 媒体多任务,社会幸福感,学校社区感,自我控制,大学生

The influence of media multitasking on social well-being of college students: A moderated mediation model

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Abstract: Media multitasking refers to the simultaneous manipulation of multiple electronic or non-electronic media by individuals. With the rapid development of information technology and constant renewal of new forms of media such as mobile media, digital TV and so on, media multitasking behavior has gradually become a habitual behavior model for teenagers, which may affect their emotion and cognition. It has been found that media multitasking can significantly affect teenagers' physical and mental health as well as their sense of well-being. Social well-being, which is a new perspective to study well-being, pays more attention to the quality and degree of individual adaptation in social relation, and the media itself bears the social attribute. However, no research has previously explored the relationship between media multitasking and social well-being, its internal mechanism and influencing factors. In order to understand the influence of media multitasking on college students more comprehensively, this study explores the relationship between media multitasking and social well-being of college students, and further tests the internal mechanism and influencing factors between them: the mediating role of sense of school community and the moderating role of self-control. Used questionnaire, there are 642 college students from Guangdong province and Jiangsu province participating in this study. The results are as follows: (1) The average media multitasking index (MMI) of college students of this study is 3.4, which means that college students carry out 3.4 media activities on average at the same time. (2) The media multitasking of college students has a significant negative predictive effect on social well-being and a significant negative predictive effect on sense of school community. The sense of school community has a significant positive predictive effect on social well-being. The sense of school community plays a partial mediating role in the relationship between media multitasking and social well-being. (3) Self-control plays a moderating role in the relationship between sense of school community and social well-being. Among the five dimensions of self-control, health habits and the focus on work / learning play a moderating role in the first half and the second half of the mediating model of media multitasking, sense of school community and social well-being. The implications of this study were discussed.

Keywords: media multitasking, social well-being, sense of school community, self-control, college students

父母手机冷落行为对青少年神经质的影响： 父母拒绝与青少年自尊的链式中介作用

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摘要 父母手机冷落行为是指父母在与孩子互动时使用手机或被手机分心的现象。近年，父母手机冷落行为对青少年心理健康的负面影响已引起学界和社会各界的广泛关注。但目前关于父母手机冷落行为对青少年神经质的影响以及其内在的作用机制还不清楚。本研究基于情境-过程-结果模型，即情境因素（父母手机冷落行为）通过一定的过程（父母拒绝、青少年自尊）影响青少年人格特质（神经质）的结果，提出假设：父母拒绝和青少年自尊在父母手机冷落行为与青少年神经质之间起链式中介作用。以 557 名初中生为被试，采用父母手机冷落行为量表、中国大五人格问卷简式版的神经质分量表、简式父母教养方式问卷的拒绝分量表和罗森伯格自尊量表问卷进行测试。结果发现：（1）父亲的链式中介模型和母亲的链式中介模型结果基本一致。（2）多重中介效应检验表明，父亲/母亲手机冷落行为对青少年神经质的影响路径有四条：父亲/母亲手机冷落行为可以直接影响青少年神经质；父亲/母亲拒绝在父亲/母亲手机冷落行为与青少年神经质之间起中介作用；青少年自尊在父亲/母亲手机冷落行为与青少年神经质之间起中介作用；父亲/母亲拒绝与青少年自尊在父亲/母亲手机冷落行为和青少年神经质之间起链式中介作用。（3）对比中介效应发现，在父亲的链式中介模型中，父亲手机冷落行为通过父亲拒绝和青少年自尊影响青少年神经质的链式中介效应显著大于其他中介效应；而在母亲的链式中介模型中，母亲手机冷落行为通过母亲拒绝影响青少年神经质的中介效应显著大于其他中介效应。这些研究结果为父母合理使用手机以及青少年的神经质的干预提供了实证依据。

关键词 父母手机冷落行为；父母拒绝；自尊；神经质

Parental Rejection and Self-esteem as mediators between Parental Phubbing and Adolescent neuroticism

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Abstract: Parental phubbing refers to the phenomenon that parents use mobile phones or are distracted by mobile phones when interacting with their children. In recent years, the negative impact of parental phubbing on adolescents' mental health has aroused widespread concern in academia and society. However, it is still unclear about the influence of parental phubbing on adolescents' neuroticism and its internal mechanism. This research is based on the situation-process-result model that contextual factors (parental phubbing) affect a person's mental health outcomes (adolescents' neuroticism) through a certain process (parental rejection, adolescent's self-esteem), discussing father and mother separately and proposing an assumption: father's/mother's rejection and adolescents' self-esteem play a chain intermediary role between father's/mother's phubbing and adolescents' neuroticism. 557 junior high school students were tested with the parental phubbing scale, the neuroticism subscale of the Chinese Big Five Personality Inventory Brief Version, the parental rejection subscale of the Short-form Egna Minnen av Barndoms Uppfostran and Rosenberg self-esteem scale. The results found that: (1) The father's chain mediation model and the mother's chain mediation model have basically the same results. (2) Multiple intermediary effect tests show that there are four paths for father's/mother's phubbing to adolescents' neuroticism: Father's/Mother's phubbing can directly affect adolescents' neuroticism; father's/mother's rejection plays an intermediary role between father's/mother's phubbing and adolescents' neuroticism; adolescents' self-esteem plays an intermediary role between father's/mother's phubbing and adolescents' neuroticism; father's/mother's rejection and adolescents' self-esteem play a chain intermediary role between father's/mother's phubbing and adolescents' neuroticism. (3) Comparing the mediation effects, it is found that in father's chain mediation model, the chain mediation effect that father's phubbing affects adolescents' neuroticism through father's rejection and adolescents' self-esteem is significantly greater than other mediating

effects, while in mother's chain mediation model, the mediation effect that mother's phubbing affects adolescents' neuroticism through mother's rejection is significantly greater than other mediating effects. The results of the study provide empirical evidence for the rational use of mobile phones by parents and intervention of adolescents' neuroticism.

Keywords: parental phubbing, parental rejection, self-esteem, neuroticism

大学生友谊质量与抑郁情绪的关系：孤独感的中介作用

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摘要 在社会飞速发展的背景下，社会对于大学生的要求越来越高，处在高压下的大学生很容易受到抑郁情绪的困扰。根据对相关研究的 meta 分析来看，大学生的抑郁人数情况不容乐观，近年来大学生抑郁情绪检出的人数占 29.3%。鉴于此，有必要对影响大学生抑郁情绪排解的因素进行探讨，通过及时排解以避免抑郁情绪带来更大的危害，以提高大学生的心理健康水平。大学生大多离开家庭在外求学，此时友谊就成为大学生社会支持中的主要部分。本研究以大学生为研究对象，采用测量方法，旨在探讨大学生友谊质量、孤独感和抑郁情绪之间的关系及其内部作用机制。采用《大学生抑郁量表》SDS、UCLA 孤独量表（第三版）、友谊质量量表对 500 名大学生进行调查。本研究在前人的基础上提出了以下假设：（1）大学生友谊质量对抑郁情绪有负相关，即大学生友谊质量越好，抑郁情绪得分越低；（2）大学生友谊质量对孤独感有负相关，友谊质量越好，则孤独感体验越少；（3）友谊质量除了与抑郁情绪有直接关系外，还可以通过产生孤独感与抑郁情绪产生间接联系，即孤独感在友谊质量和抑郁情绪之间起中介作用。本研究有利于揭示大学生抑郁情绪调节影响因素，为改善大学生抑郁情绪提供了一定的指导意义。

关键词 友谊质量，孤独感，抑郁情绪

The relationship between friendship quality and depression of college students: the mediating role of loneliness

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Abstract: In the context of rapid social development, society has higher and higher requirements for college students who are easily troubled by depression under great pressure. According to meta-analysis of related research, the number of depression among college students is not optimistic. In recent years, 29.3% of college students have detected depression. In view of this, it is necessary to explore the factors that affect the resolution of depression in college students, and resolve them in time to avoid greater harm to depression, so as to improve the level of college students' mental health. Most college students leave their homes to study abroad, and friendship has become a major part of college students' social support. This study takes college students as the research object and uses measurement methods to explore the relationship between college students' friendship quality, loneliness and depression and their internal mechanisms. A survey of 500 college students was conducted using the "College Student Depression Scale" SDS, UCLA Loneliness Scale (third edition), and Friendship Quality Scale. This study puts forward the following hypotheses based on predecessors: (1) The friendship quality of college students is negatively correlated with depression, that is, the better the friendship quality of college students, the lower the depression score; (2) The friendship quality of college students is negative for loneliness. Related, the better the quality of friendship, the less the experience of loneliness; (3) In addition to the direct relationship between the quality of friendship and depression, the quality of friendship can also be indirectly related to the feeling of loneliness and depression, that is, loneliness is in the quality of friendship and depression. Play an intermediary role between. This research is helpful to reveal the factors affecting the regulation of depression in college students, and provides certain guiding significance for

improving depression in college students.

Keywords: friendship quality, loneliness, depression

受手机冷落者的手机冷落行为： 愤怒反刍的中介和道德推脱的调节作用

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摘要 手机冷落行为是指在社交场合使用手机而冷落他人的行为，会给手机冷落行为的实施者和受手机冷落者都造成严重的心理后果，已经引起学界和社会各界的密切关注。先前研究发现，受手机冷落者倾向于使用智能手机，但关于其内在的作用机制还不清楚。根据期望违背理论，受手机冷落者经历了他们期望得到的关注状态与当前遭受的冷落状态之间的冲突。这种差异会引发愤怒反刍。愤怒反刍的多系统模型表明，愤怒反刍会影响攻击的认知和情感基础。大量的经验证据表明，愤怒反刍积极预示攻击行为，对挑衅者甚至对无辜他人的攻击行为增加。因此，我们预期愤怒反刍在受手机冷落和手机冷落行为之间起中介作用。还有研究表明，道德推脱在其他变量对个体不道德行为影响中起调节作用，我们同时也考察道德推脱在愤怒反刍的中介模型中是否起到调节作用。采用受手机冷落影响通用量表、愤怒反刍量表、手机冷落行为量表、道德推脱量表，对576名大学生进行问卷调查。结果发现：1）受手机冷落正向预测手机冷落行为；2）愤怒反刍在受手机冷落和手机冷落行为关系中起部分中介作用；3）道德推脱在受手机冷落和手机冷落行为之间，以及受手机冷落和愤怒反刍之间都起调节作用。具体的，相对于低道德推脱水平个体，高道德推脱水平个体受手机冷落时更可能发生愤怒反刍和手机冷落行为。

关键词 受手机冷落，手机冷落行为，愤怒反刍，道德推脱

Phubbees' Phubbing Behavior: The Mediating Role of Anger Rumination and the Moderating Role of Moral Disengagement

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Abstract: “Phubbing” is defined as the behavior that a person starts snubbing someone by paying attention to his/her smartphone in a social situation. Phubbing has a serious psychological influence on phubbers and phubbees, which has attracted the close attention of all sectors of society and scholars. Previous studies have shown that a person who being phubbed tended to use his/her smartphone, but the mechanism of its action is not clear. According to Expectancy Violations theory, phubbees experience a conflict between their expected state of attention and their current state of being snubbed. And this discrepancy will cause anger rumination. The Multiple Systems Model of Anger Rumination shows that anger rumination can affect the cognitive and emotional underpinnings of aggression. A lot of empirical evidence shows that anger rumination positively predicts aggressive behavior against provocateurs and even innocent people. Thus, we expect anger rumination to play a mediating role between being phubbed and phubbing. Other studies have shown that moral disengagement moderates the influence of other variables on individual immoral behavior, meanwhile we also examine whether moral disengagement plays a moderating role in the mediating model of anger rumination. Generic Scale of Being Phubbed(GSBP), Anger Rumination Scale(ARS), Generic Scale of Phubbing(GSP) and Moral Disengagement Scale were used to investigate 576 college students. The results indicated that: (1) Being phubbed positively predicts phubbing behavior. (2) Anger rumination plays a part of mediating role between being phubbed and phubbing behavior. (3) Moral disengagement moderates both the relations between being phubbed and phubbing as well as being phubbed and anger rumination. Specifically, compared with phubbees with low moral disengagement, phubbees with higher moral disengagement tend to occur anger rumination and phubbing behavior.

Keywords: being phubbed, phubbing, anger rumination, moral disengagement

学术型硕士研究生专业认同、职业决策自我效能感与职业决策困难的关系研究

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摘要 近年来, 研究生的职业决策和就业问题愈益成为社会热点问题。专业认同和职业决策自我效能感等因素对研究生的职业决策困难问题存在直接影响。本研究立足于学术型硕士的特点, 在文献研究和相关理论研究的基础上, 对上海市具有代表性6所高校中的学术型硕士, 采用“线上+线下”问卷调查方式展开调研, 得出以下结论: 职业决策困难在学术型硕士中普遍存在, 并呈中度以上水平; 学术型硕士的专业认同、职业决策自我效能感和职业决策困难在人口统计学变量上存在显著性差异; 学术型硕士的专业认同与职业决策自我效能感显著正相关, 职业决策困难与职业决策自我效能感显著负相关; 专业认同对职业决策困难有负向预测作用, 职业决策自我效能感对职业决策困难有负向预测作用; 并且职业决策自我效能感可以在专业认同和职业决策困难中起部分中介作用。研究提出如下建议: 激发研究生个体主观能动性, 提高其专业认知水平; 优化专业软硬环境建设, 完善配套专业体系; 了解个体目的与动机, 改善个体行为方式; 为有效提升个体自我效能, 积极开发心理资本; 增强自我认知与核心竞争力, 选择正确的归因方式; 多方引导, 帮助学硕生树立正确职业价值观, 加强团体咨询干预; 识别并关注长期困难, 建立健全困难干预机制; 搭建校园到职场的互通平台, 完善在校学生由“自我—职业”的认知。

关键字 学术型硕士, 专业认同, 职业决策自我效能感, 职业决策困难

A Study on the Relationship between Professional Identity, Career Decision-Making Self-efficacy and Career Decision-Making Difficulties of Academic Postgraduates

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Abstract: In recent years, career decision-making and employment issues for graduate students have increasingly become social hot issues. Factors such as professional identity and career decision-making self-efficacy have a direct impact on graduate students' career decision-making difficulties. This research is based on the characteristics of academic masters, and on the basis of literature research and related theoretical research, the "online + offline" questionnaire survey method is used to investigate the academic masters of six representative universities in Shanghai. The following conclusions are drawn: career decision-making difficulties are common in academic masters, and are at a moderate level or above; academic masters' professional identity, career decision-making self-efficacy and career decision-making difficulties have significant differences in demographic variables; The professional identity of academic masters is significantly positively correlated with career decision-making self-efficacy, and career decision-making difficulties are significantly negatively correlated with career decision-making self-efficacy; professional identity has a negative predictive effect on career decision-making difficulties, and career decision-making self-efficacy is associated with career decision-making difficulties. It has a negative predictive effect; and career decision-making self-efficacy can play a part of mediating role in professional identification and career decision-making difficulties. The research puts forward the following suggestions: to stimulate individual subjective initiative of graduate students and improve their professional cognition; optimize the construction of professional soft and hard environment, improve the supporting professional system; understand individual goals and motivations, and improve individual behavior; to effectively enhance individual self-efficacy, actively develop Psychological capital; enhance self-awareness and core competitiveness, choose the correct attribution method; multi-direction, help students establish correct professional values, strengthen group consultation and intervention; identify and pay

attention to long-term difficulties, establish and improve the difficulty intervention mechanism; build a campus The intercommunication platform to the workplace will improve the students' awareness of "self-career".

Keywords: Academic master degree, Professional identification, self-efficacy of professional decision-making, Difficulty in career decision-making

大学生依恋对网络欺凌旁观者干预的影响： 网络人际信任的中介作用和安全依恋的调节效应

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摘要 大学生作为社交网站使用的主力军，会不可避免地成为网络欺凌事件中的旁观者，其行为影响着事件的发展演变。网络欺凌旁观者干预指旁观者在目睹网络欺凌事件时，通过直接或间接方式做出的制止欺凌者或保护受害者的行为。先前研究证实，网络欺凌旁观者干预能够在欺凌事件中为受害者提供即时帮助，并预防未来网络欺凌事件的发生，然而少有研究从积极心理学的角度探索网络欺凌旁观者干预的影响因素。本研究采用自编的大学生网络欺凌旁观者干预问卷、亲密关系经历量表（ECR）和网络空间人际信任问卷为研究工具，对440名大学生进行调查。同时，对61名大学生进行了情境实验。研究结果表明：（1）依恋回避和依恋焦虑可负向预测网络欺凌旁观者干预，网络人际信任可正向预测网络欺凌旁观者干预；（2）网络人际信任在依恋回避与网络欺凌旁观者干预之间起部分中介作用，网络人际信任在依恋焦虑与网络欺凌旁观者干预之间起完全中介作用；（3）事件严重程度可正向预测网络欺凌旁观者干预的干预意愿以及直接和间接干预水平。安全依恋可调节事件严重程度对旁观者间接干预水平的影响，即安全依恋启动时，严重程度低对间接干预水平的正向影响减弱。本研究从特质依恋和状态依恋的角度揭示了依恋和网络欺凌旁观者干预之间的关系，为未来针对网络欺凌旁观者干预的研究提供了新的思路，同时给网络欺凌预防体系的建设提供了实证参考依据。

关键词 网络欺凌，网络欺凌旁观者干预，依恋，网络人际信任

Cyberbullying Bystander Intervention and Its Relationship with Attachment: The Mediating Effect of Online Interpersonal Trust and the Moderating Effect of Security Attachment

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Abstract: As an important part of Internet users, college students will inevitably become cyberbullying bystanders. Their behaviors will affect the development of cyberbullying. Cyberbullying bystander intervention refers to bystander's direct or indirect actions to stop the bully or protect the victim when they witness cyberbullying. Previous studies have confirmed that cyberbullying bystander intervention can provide immediate assistance to victims in bullying incidents and prevent the occurrence of future cyberbullying. However, few studies have explored the influencing factors of cyberbullying bystander intervention from the perspective of positive psychology. The study investigated 440 college students with self-designed questionnaire of bystander intervention in cyberbullying, Experience in Close Relationships Inventory (ECR) and the questionnaire of interpersonal trust in cyberspace. Moreover, situational experiments were carried out on 61 college students. The results show that: (1) There was a significant negative correlation between attachment avoidance/anxiety and cyberbullying bystander intervention. There was a significant positive correlation between online interpersonal trust and cyberbullying bystander intervention; (2) Online interpersonal trust played a partial mediating role between attachment avoidance and cyberbullying bystander intervention. Online interpersonal trust played a fully mediating role between attachment avoidance and cyberbullying bystander intervention; (3) The incident severity can positively predict the intervention willingness of cyberbullying bystanders and the level of direct/indirect intervention. Security attachment can adjust

the influence of incident severity on the level of indirect intervention of bystanders, that is, the positive effect of low severity on the level of indirect intervention is weakened when security attachment priming is activated. This study reveals the relationship between attachment and cyberbullying bystander intervention from the perspective of characteristic of attachment and state of attachment, and provides a new mentality for future research on cyberbullying bystander intervention. At the same time, it provides an empirical reference for the construction of cyberbullying prevention system.

Keywords: Cyberbullying, Cyberbullying bystander intervention, Attachment, Online interpersonal trust

(4) “社区心理专业委员会”专题研讨会 4

城市社区困难群众心理服务的经验模式研究

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摘 要 党中央高度重视社区群众和社会居民的心理健康和心理服务工作。先后出台发布多个文件阐述社会心理服务体系建设和重要意义。习近平总书记在十九大报告中强调加强社会心理服务体系建设, 培育自尊自信、理性平和、积极向上的社会心态, 为构建城市社区困难群众心理服务体系提出了具体要求, 指明了工作方向。本研究旨在通过为困难群众及其家庭提供心理关怀、心理疏导、危机干预等心理服务, 培育积极社会心态, 有效疏导心理压力, 塑造乐观生活信念, 最终助其摆脱心理贫困, 构建完整的城市社区困难群众心理服务体系, 以完善社会心理服务体系建设的系统理论, 提高基层社区治理体系与治理能力现代化。本研究梳理了城市社区困难群众心理服务的现状和不足, 总结了社区困难群众存在的主要心理问题, 通过问卷调查探讨了社区困难群众主要心理问题; 根据城市社区困难群众心理服务的政策背景和理论背景, 构建了城市社区困难群众心理服务体系的思路, 提出城市社区困难群众心理服务的经验模式, 对城市社区困难群众长期贫困与心理健康相互作用的心理机制进行了分析, 最后为城市社区困难群众心理服务提出了对策与建议。

关键词 城市社区; 困难群众; 心理服务; 社会心理服务体系建设; 心理健康

Study on the Empirical Mode of psychological service for the poor people in urban Community

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Abstract: In his report to the 19th National Congress of the CPC, General Secretary Xi Jinping stressed the importance of strengthening the construction of the social psychological service system and fostering self-esteem, self-confidence, rationality and peace. The positive social mentality puts forward specific requirements and points out the working direction for the construction of the psychological service system for the disadvantaged people in urban communities. The purpose of this study is to provide psychological counseling through psychological care for the needy people and their families Crisis intervention and psychological services, to foster positive social mentality, effective stress, the optimistic faith, our lives eventually help them get rid of the psychological poverty, build a complete urban community difficult people psychological service system, so as to perfect the system of social psychological service system construction theory, the modernization of the grassroots community governance system and management ability. This study sorted out the status quo and deficiency of psychological services for the disadvantaged people in urban communities, summarized the main psychological problems of the disadvantaged

people in the community, and discussed the main psychological problems of the disadvantaged people in the community through a questionnaire survey. According to the needy urban community psychological service policy background and theoretical background, constructs the city community difficult people psychological service system, it puts forward the model of urban community difficult people psychological service experience, the long-term poverty and mental health of urban community difficult people to analyze the psychological mechanism of interaction between, finally for the urban community psychological service puts forward the countermeasures and the needy advice.

Keywords: Urban community; People in straitened circumstances; Psychological services; Construction of social psychological service system; Mental health.

平衡时间洞察力与心理健康的关系：情绪调节策略的中介作用

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摘要 平衡时间洞察力是个体对过去、现在和未来的整体积极认知, 根据情境特点表现出适应性时间取向的能力。大量研究表明平衡时间洞察力对于心理健康的维持具有重要作用, 然而二者之间的作用机制尚不清楚。本研究以 1432 名 ($M=29.04$, $SD=14.38$) 成年人为被试, 探究平衡时间洞察力与心理健康的关系, 并检验情绪调节策略的中介效应。结果发现: (1) 平衡时间洞察力与主观幸福感正相关, 与焦虑负相关。(2) 平衡时间洞察力与认知重评正相关, 与表达抑制负相关。认知重评与主观幸福感正相关, 与焦虑负相关。表达抑制与主观幸福感负相关, 与焦虑正相关。(3) 认知重评、表达抑制在平衡时间洞察力与主观幸福感之间起部分中介作用; 表达抑制在平衡时间洞察力与焦虑之间起部分中介作用。研究结果强调了平衡时间洞察力对人们的情绪调节和心理健康的重要意义, 并给出了培养和构建平衡时间洞察力的建议。

关键词 平衡时间洞察力 心理健康 主观幸福感 焦虑 情绪调节

Balancing Time Perspective and Mental Health: The Mediating Role of Emotion Regulation Strategies

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Abstract: Balanced time perspective (BTP) refers to an individual's overall positive cognition of the past, present and future, and the ability to show adaptive time perspective depending on a situation's demands. Numerous studies have generally found a positive and strong association between balanced time perspective and indicators of mental health. However, little is known about the mediating mechanism underlying the link between balanced time perspective and mental health. The present study aims to examine the mediating effect of emotion regulation strategies between balanced time perspective and mental health. A total 1432 adults (mean age = 29.04 years, $SD = 14.38$) participated in the present study. The results showed that (1) balanced time perspective positively related with subjective well-being and negatively linked with anxiety. (2) Balanced time perspective positively related with cognitive reappraisal and negatively linked with expression suppression. Cognitive reappraisal positively related with subjective well-being and negatively related with anxiety. Expression suppression was negatively related to subjective well-being and positively related with anxiety. (3) Cognitive reappraisal and expression suppression mediated the relationship between balanced time perspective and subjective well-being. Expression suppression mediated the relationship between balanced time perspective and anxiety. Limitations and future directions are also discussed.

Keywords: Balanced time perspective; mental health; subjective well-being; anxiety; emotion regulation strategies

口腔保健社区化模式下的医务社工体系探索

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摘要 随着现代化水平的提高, 大众对于口腔健康的关注度也在日益增加, 当前口腔预防工作也正面临着从传统生物治疗模式到医学—心理—社会模式的转变, 而医务社会工作的介入可以优化社区内资源的配置与使用, 并能以多种方式在社区口腔保健领域中开展服务, 合理的运用社区口腔保健资源。为了能达到社区口腔保健服务与医务社工服务的内在融合, 本文进行了两个方面的研究。研究一是针对口腔保健社区化模式的探索, 该研究从社区的既有资源出发, 将社区口腔保健的地点固定在社区内, 将保健服务的范围固定在居民的口腔保健与问题预防上, 更注重社区口腔保健服务对口腔疾病的“预防性”。研究二是针对医务社工在口腔保健社区化模式中的管理与服务体系的探索。本文以社区医疗健康主题下的口腔健康为切入点, 以生态系统理论以及行为转变理论为指导, 采用了参与式观察法、访谈法、问卷调查法进行研究。在社区中通过组建跨专业的复合式团队, 优化口腔保健服务流程与服务结构, 探索口腔保健社区化模式该如何开展。在社区口腔保健服务中积极探索口腔医务社工的管理体系。在口腔医务社工的服务体系中通过分诊、宣教、运用三阶段来达成口腔保健观念意识化、口腔保健行为日常化、口腔健康问题预防化的目标。通过对社区服务提供者的访谈资料的分析显示, 口腔保健社区化模式的运作可以有效地为社区口腔保健领域进行服务; 通过对服务开展的过程与结果进行评估显示, 口腔医务社工的介入对居民的口腔健康知识、信念有了显著的改变, 但是居民口腔健康行为的改变并不明显。由此得出结论, 经由医务社工有体系地在社区内开展口腔保健社区化模式, 可以有效的进行口腔健康服务队伍的建设, 促使居民培养正确的口腔保健意识, 形成正确的口腔保健观念, 但是短期内对居民口腔健康行为的促进作用还不够明显。

关键词 医务社会工作, 口腔保健, 社区服务

Exploration of medical social work system under the mode of community of oral health care

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Abstract: With the improvement of modernization level, the public attention to oral health are also growing, the current oral preventive work also is facing from the traditional biological treatment mode to - psychology - social medical model transformation, and the medical affair social work intervention can optimize the configuration and use of community resources, and can in a variety of ways to carry out the services in the field of community oral health, the use of the community oral health resources rationally. In order to achieve the internal integration of community oral health service and medical social worker service, two aspects were studied in this paper. The first study is to explore the community-based model of oral health care. Starting from the existing resources of the community, the location of community oral health care is fixed in the community, and the scope of health care services is fixed on the residents' oral health care and problem prevention, paying more attention to the "prevention" of oral diseases by community oral health care services. The second study is to explore the management and service system of medical social workers in the community-based model of oral health care. In this paper, the oral health under the theme of community health is taken as the entry point, and the ecosystem theory and behavioral change theory as the guidance, the participatory observation method, interview method and questionnaire survey method are adopted to carry out the research. Through the establishment of a cross-professional compound team in the community, the process and structure of oral health services are optimized to explore how to carry out the community-based model of oral health care. Actively explore the management system of oral medical social workers in community oral health services. In the service system of oral medical social workers, the goals of awareness of oral health care, daily oral health care behavior and prevention of oral health problems are achieved through triage, education and application of three stages.

The analysis of the interview data of community service providers shows that the operation of the community-based model of oral health can effectively serve the field of oral health in the community. The evaluation of the process and results of the service development showed that the intervention of oral medical social workers had significant changes in residents' oral health knowledge and beliefs, but the changes in residents' oral health behaviors were not obvious. Thus concluded that a system by medical social worker within the community to carry out the oral health community model, can be effective for oral health service team construction, encourage residents to develop correct oral health awareness, to form a correct concept of oral health care, but in the short term for residents to promote oral health behavior obvious enough.

Keywords: Medical social work, Oral health care, Community service

医务社会工作视角下儿童口腔治疗恐惧的就医支持服务模式探索

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摘要 伴随着生物心理社会医学模式的兴起,“全人”照顾的医疗服务日益被重视,因此面对儿童口腔治疗的恐惧,从个人到环境层面的全方位支持十分必要。本文旨在通过了解儿童口腔治疗恐惧的就医支持现状,寻找有效缓解儿童口腔治疗恐惧的介入对策,这对于解决儿童就医多方面和较复杂的个人、家庭或社会问题具有重要作用。笔者通过文献回顾发现,口腔治疗恐惧让儿童身心健康的发展经受着挑战,因此,口腔治疗恐惧的儿童处于相对弱势的处境,他们需要来自生理、心理和社会层面的支持。本研究以口腔治疗恐惧的儿童为研究对象,旨在探索出医务社会工作视角下的就医支持服务模式,充分发挥社会工作者整合系统资源的作用,协助患儿缓解或克服恐惧。全文采用质性的研究方法,运用访谈法和参与式观察法来探究与儿童紧密相关的两大环境系统(医疗机构和家庭系统),并以类属分析的方法进行资料整理。笔者基于生态系统理论和社会支持理论展开研究,本文的研究共分为三个部分:第一部分是医务社工针对儿童口腔治疗恐惧的就医支持现状研究;第二部分是儿童口腔治疗恐惧的就医支持服务模式构建研究;第三部分是复合式儿童口腔治疗支持服务模式的评估研究。最终得出本文的结论:第一,介入儿童口腔治疗恐惧不仅需要关注儿童本身的需求,也需要考虑儿童所处生态环境系统的影响;第二,医务社工能够作为服务模式的主导者和服务的实施者,运用专业的知识、理论和方法体现其整合功能的优势,主动与医疗机构建立合作,以医疗机构为阵地,将社会工作者、医护人员和心理咨询师组建成复合式的团队,提供利他的支持性服务;第三,本文所提出的服务模式其作用体现有:在医务社工的参与下能够为口腔患儿、儿童家庭和医疗机构提供系统的就医支持,并通过科学的评估方法检验该服务模式的有效性,使其能够具有一定的推广价值。总之,笔者所提出的服务模式,为解决儿童口腔治疗恐惧打开了新的思路和方法,也是社会工作在医务领域的较新探索,为处理儿童口腔治疗恐惧这一问题提供了一些参考和方向。

关键词 儿童口腔治疗恐惧,医务社会工作,就医支持

Exploration of Medical Support Service Mode for Children's Fear of Oral Treatment from the Perspective of Medical Social Work

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Abstract: With the rise of bio-psycho-social medical model, "whole person" care of medical services is increasingly valued. Therefore, in the face of children's fear of oral treatment, all-round support from the individual to the environment level is necessary. The purpose of this article is to find out the current situation of medical treatment support for children's fear of oral treatment, and to find effective intervention countermeasures to alleviate children's

fear of oral treatment, which plays an important role in solving various and more complicated personal, family or social problems of children's medical treatment. Through literature review, the author found that children's physical and mental health development is challenged by fear of oral therapy. Therefore, children with fear of oral therapy are in a relatively weak position, and they need support from physiological, psychological and social levels. This study takes children with fear of oral therapy as the research object, aiming to explore the medical support service mode from the perspective of medical social work, give full play to the role of social workers in integrating system resources, and assist children to alleviate or overcome fear. The full text uses qualitative research methods, interviews and participatory observation methods to explore the two major environmental systems (medical institutions and family systems) closely related to children, and uses generic analysis methods to collate data. Based on the ecosystem theory and the social support theory, the research in this paper is divided into three parts: The first part is the research on the status quo of medical support for children's fear of oral treatment by medical social workers; The second part is the research on the construction of medical support service model for children's fear of oral treatment. The third part is the evaluation and research of the composite oral treatment support service model for children. Finally, the conclusions of this paper are as follows: First, the intervention of children's fear of oral therapy not only needs to pay attention to the needs of children themselves, but also needs to consider the impact of the ecological environment system in which children live; Second, medical social workers can act as the dominant and implementer of the service mode, use professional knowledge, theories and methods to embody the advantages of its integration function, actively establish cooperation with medical institutions, and take medical institutions as the position to form a composite team of social workers, medical personnel and psychological consultants to provide altruistic and supportive services. Third, the service mode proposed in this paper has its functions as follows: it can provide systematic medical support for children with oral diseases, children's families and medical institutions with the participation of medical social workers, and test the effectiveness of the service mode through scientific evaluation methods, so that it can have certain promotion value. In a word, the service mode proposed by the author opens up new ideas and methods for solving children's fear of oral treatment, and is also a relatively new exploration of social work in the medical field, providing some references and directions for dealing with the problem of children's fear of oral treatment.

Keywords: Children's Fear of Oral Therapy, Medical social work, Medical support

性别歧视对婚前、婚外、同性性行为包容度的影响 ——基于中国综合社会调查（CGSS）数据的城乡对比

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摘要 在我国,与性别歧视有关的言论一直不断,尽管在国家政策影响和倡导下显性歧视已经变得非常少,隐性歧视却依旧存在,与此同时,婚前、婚外、同性性行为的问题备受政府、社会以及网络媒体等各界的关注,然而国内在性别歧视与婚前、婚外、同性性行为包容度的研究领域同时聚焦城乡差异的实证研究还比较有限。本研究采用 spss24.0 软件,对 2015 年中国综合社会调查(CGSS)的 10968 名城市和农村参与者的相关数据进行了描述性分析和回归分析,其中城镇人口样本 4774 个,农村人口样本 6194 个。分析结果表明:在个体因素变量中,在城镇和农村中,男性都表现出对婚前性行为和婚外性行为包容度更高;年龄越小对婚前性行为和同性性行为包容度都越高;少数民族都比汉族更能包容同性性行为;受教育程度越高越能包容同性性行为;而在农村地区,汉族人民比少数民族对婚前性行为和同性性行为包容度低,而在城市地区没有表现出显著影响;城市地区,身体健康状况对婚前性行为和同性性行为的包容度产生显著正向影响,婚姻状况对同性性行为的包容度产生显著负向影响,在农村地区这两者都没有表现出显著影响。在控制个体因素的情况下,城乡地区性别歧视对婚前、婚外、同性性行为三者包容度表现出异同;相同的地方在于城乡地区性别歧视均对婚前性行为的包容度和婚外性行为的包容度产生显著正向影响,不同的地方在于性别歧视在农村地区对同性性行为的包容度有显著正向影响,在城镇中则没有显著影响。由此可见,城乡地区经济发展水平、传统文

化、社会规范和生活环境的不同，会影响到人们的价值观念和态度，政府、媒体和社会要采取正确的和多样的方式引导公众性态度的合理化定型，并减轻社会上的性别歧视现象，降低性别歧视带来的负面影响。

关键词 性别歧视；性行为包容度；城乡对比

The Correlation between Gender Discrimination and Sexual Tolerance in China: an urban - rural comparison

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Abstract : In China, there have been constant speeches related to gender discrimination. Although explicit discrimination has become very rare under the influence and advocacy of national policies, implicit discrimination still exists. The problems of premarital, extramarital, and same-sex sexual behavior have received attention from the government, society, and online media. However, domestic research on gender discrimination and premarital, extramarital, and same-sex sexual tolerance while focusing on urban-rural differences is still relatively limited. This study uses spss24.0 to perform descriptive analysis and regression analysis on the relevant data of 10968 urban and rural participants in the 2015 China Comprehensive Social Survey (CGSS), including 4,774 urban population samples and 6,194 rural population samples . The analysis results show that in individual factor variables, both in urban and rural areas, men show greater tolerance for premarital sex and extramarital sex; the younger the age, the higher the tolerance for premarital sex and same-sex sex. Minorities are more tolerant of same-sex sexual behavior than Han people; the higher the level of education, the more tolerant of same-sex sexual behavior; while in rural areas, Han people are less tolerant of premarital sex and same-sex behavior than ethnic minorities, while in urban Regions did not show a significant impact; in urban areas, physical health status has a significant positive impact on the tolerance of premarital sex and same-sex sexual behavior, and marital status has a significant negative impact on the tolerance of same-sex sexual behavior. In rural areas, both None of them showed a significant impact. Under the control of individual factors, gender discrimination in urban and rural areas shows similarities and differences in the tolerance of premarital, extramarital, and same-sex sexual behavior; the same thing is that both urban and rural gender discrimination in tolerance of premarital sex and extramarital sexual behavior The difference is that gender discrimination has a significant positive impact on the tolerance of same-sex sexual behavior in rural areas, but has no significant impact in urban areas. This shows that differences in the level of economic development, traditional culture, social norms, and living environment in urban and rural areas will affect people's values and attitudes. The government, the media, and society should adopt correct and diverse ways to guide the rationalization and finalization of public sexual attitudes, and reduce gender discrimination and the negative impact of gender discrimination.

Keywords: gender discrimination; sexual tolerance; urban-rural comparison

受艾滋病影响青年的歧视和人生意义感特点：宽恕的中介作用

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摘 要 随着艾滋病在全球范围内的蔓延，受艾滋病影响群体这一弱势群体的数量也在不断增长。他们不仅要承受家人的患病或死亡带来的巨大伤痛，还要承受来自外界对“艾滋病”这个有色标签的歧视和排斥，对于他们的身心健康带来不利影响，进而对他们处理人际伤害、领会生活意义等方面造成严重的负面影响。采用歧视量表、青少年宽恕量表和人生意义感量表对河南省某县 175 名受艾滋病影响青年进行问卷调查研究，结合相应的统计分析软件对受艾滋病影响青年的歧视经历、宽恕以及人生意义感的关系进行分析，并在此基础上分析宽恕在歧视经历对人生意义感中的中介作用。研究结论如下：第一，受艾滋病影响青年的歧视经历在其接受教育程度上存在显著差异，接受教育程度较低的受艾滋病影响青年遭受的歧视经历多于接受教育程

度较高的受艾滋病影响青年；第二，受艾滋病影响青年的人生意义感在接受教育程度上存在显著差异，接受教育程度较高的受艾滋病影响青年的人生意义感更高；第三，受艾滋病影响青年的歧视经历与宽恕、人生意义感呈显著负相关，宽恕和人生意义感呈显著正相关；第四，受艾滋病影响青年的歧视经历对其宽恕、人生意义感的负向预测作用显著；宽恕对人生意义感的正向预测作用显著；第五，受艾滋病影响青年的宽恕在歧视经历和人生意义感之间起部分中介作用。

关键词 受艾滋病影响群体，歧视，宽恕，人生意义感

The Characteristic of Stigma and Life Meaning among Adolescents Affected by HIV/AIDS: The Intermediary Role of Forgiveness

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Abstract: With the spread of HIV/AIDS worldwide, the number of vulnerable groups affected by HIV/AIDS is also increasing. They not only have to endure the enormous pain caused by the illness or death of their family, but also have to deal with the discrimination and rejection of the label “HIV/AIDS” from the outside world, which has an adverse impact on their physical and mental health, which will further affect their interpersonal injuries management and the understanding of life meaning. This study, by using Hearland forgiveness scale, the scale for stigma and the questionnaire for meaning in life to test 175 adolescents affected by HIV/AIDS from a rural area of Henan province, aims to explore the relationship between forgiveness, stigma and life meaning in adolescents affected by HIV/AIDS. The conclusions are as follows: First, the adolescents affected by HIV/AIDS prove the significant educational level difference in stigma experience, the adolescents affected by HIV/AIDS with lower educational level experience more stigma than the adolescents affected by HIV/AIDS with a higher level of education. Secondly, there was a significant difference in the sense of life meaning among the adolescents affected by HIV/AIDS in the level of education, and the adolescents affected by AIDS with higher education level have a higher sense of life meaning. Thirdly, stigma experience of HIV/AIDS affected adolescents is negatively correlated with forgiveness and life meaning respectively, forgiveness is positively correlated with life meaning.

Fourthly, negative predict effect of stigma experience to forgiveness and life meaning is significant, positive predict effect of forgiveness to life meaning is significant. Finally, forgiveness partially mediated between stigma experience and life meaning.

Keywords: adolescents affected by HIV/AIDS, stigma, forgiveness, life meaning

(5) “社区心理专业委员会”专题研讨会 5

依恋对大学生网络欺凌旁观者干预的影响：网络人际信任的中介作用

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摘 要 大学生作为社交网站使用的主力军，会不可避免地成为网络欺凌事件中的旁观者，其行为影响着事件的发展演变。网络欺凌旁观者干预指旁观者在目睹网络欺凌事件时，通过直接或间接方式做出的制止欺凌者或保护受害者的行为。已有研究证实，网络欺凌旁观者干预能够在欺凌事件中为受害者提供即时帮助，并预防未来网络欺凌事件的发生。依恋作为一种较为稳定的特质会对个体的人际信任产生重要影响，而人际信任与网络中的助人行为等存在密切关系，因此我们假设大学生依恋既可能会直接预测网络欺凌旁观者干预，也可能通过人际信任产生间接的预测作用。本研究采用自编的大学生网络欺凌旁观者干预问卷、亲密关系经历量表和网络空间人际信任问卷，对 440 名大学生进行调查，考察大学生依恋、网络人际信任与网络欺凌

旁观者干预之间的关系。结果表明：（1）依恋回避和依恋焦虑负向预测网络欺凌旁观者干预，网络人际信任正向预测网络欺凌旁观者干预；（2）网络人际信任在依恋回避与网络欺凌旁观者干预之间起部分中介作用，而在依恋焦虑与网络欺凌旁观者干预之间起完全中介作用。该研究揭示了依恋和网络欺凌旁观者干预之间的关系及其机制，为网络欺凌的预防和干预提供了实证参考依据。

关键词 网络欺凌旁观者干预，依恋，网络人际信任，大学生

The Influence of College Students' attachment on Cyberbullying Bystander Intervention: The Mediating Effect of Online Interpersonal Trust

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Abstract: As an important part of Internet users, college students will inevitably become cyberbullying bystanders. Their behaviors will affect the development of cyberbullying. Cyberbullying bystander intervention refers to bystander's direct or indirect actions to stop the bully or protect the victim when they witness cyberbullying. Previous studies have confirmed that cyberbullying bystander intervention can provide immediate assistance to victims in bullying incidents and prevent the occurrence of future cyberbullying. Attachment, as a relatively stable trait, will have an important impact on individual interpersonal trust, which is closely related to helping others on the Internet. Therefore, we assume that college students' attachment may not only directly predict the intervention of cyberbullying bystanders, but also indirectly predict it through interpersonal trust. The study investigated 440 college students with self-designed questionnaire of bystander intervention in cyberbullying, Experience in Close Relationships Inventory(ECR) and the questionnaire of interpersonal trust in cyberspace. The results show that: (1) There was a significant negative correlation between attachment avoidance/anxiety and cyberbullying bystander intervention. There was a significant positive correlation between online interpersonal trust and cyberbullying bystander intervention; (2) Online interpersonal trust played a partial mediating role between attachment avoidance and cyberbullying bystander intervention. Online interpersonal trust played a fully mediating role between attachment avoidance and cyberbullying bystander intervention. This study reveals the relationship between attachment and cyberbullying bystander intervention from the perspective of characteristic of attachment and state of attachment, and provides a new mentality for future research on cyberbullying bystander intervention. At the same time, it provides an empirical reference for the construction of cyberbullying prevention system.

Keywords: Cyberbullying bystander intervention, Attachment, Online interpersonal trust, College student

一次单元团体辅导：企事业员工心理健康服务需求的实践研究

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摘要 目的：当前我国企事业员工面临着对心理健康服务的需求较高，但对其了解程度和易得性均显不足的状况，这不利于员工身心健康发展和社会心理服务体系的建设，社会亟须创新心理健康服务形式来调和这一矛盾。因而本研究的目的在于，了解企事业员工对于社会心理健康服务在内容和设置方面的需求，在此基础上提出一次单元团体辅导的心理健康服务方式，并探究其在满足企事业员工心理健康服务需求方面的效果。方法：根据自编的心理健康服务需求问卷和满意度评估表，选取了123名企事业单位员工，对他们采用一次单元团体辅导的服务方式，探究一次单元团体辅导对企事业员工心理健康服务的效果。结果：1，企事业员工心理健康服务需求的特点是在上班期间、单位以外提供一次性的体验活动，主要以自我认识、压力应对、人际关系、职业规划和工作成效等内容为主。2，一次单元团体辅导对企事业员工在知识技能、自我满意度、人际互动、团体满意度等方面具有良好效果，总体满意度达到“满意和非常满意”的比率为78%。3、人际互动与

工作成效、人际关系以及压力应对等维度显著相关,人际互动在企事业单位员工的心理健康服务中作用显著,能激励和催化员工信任和参与团体,使人际关系更为融洽,可以疏解工作和生活中的压力,进而提高其应对工作时的信心。结论:一次单元团体辅导是满足企事业单位员工社会心理健康服务需求的一种有效方式。

关键词 心理健康服务需求,企事业单位员工,一次单元团体辅导

Single Session Group Counseling: A practical study on the mental health service demand of employees in enterprises and institutions

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Abstract: At present, employees of enterprises and institutions in China are facing a high demand for mental health services but a lack of understanding and accessibility, which is not conducive to the physical and mental health development of employees and the construction of a social psychological service system. Therefore, the purpose of this study is to explore the needs of employees for psycho-social services in terms of content and settings, and to propose single session group counseling approach to psycho-social health services and investigate its effectiveness in the needs of employees for psycho-social health services. Methods: Based on a self-administered mental health service demand questionnaire and satisfaction assessment form, 123 employees of enterprises and institutions were selected, and single session group counseling service was applied to them to investigate the effect of the single session group counseling on the mental health service of employees of enterprises and institutions. Results: 1, the demand for mental health services in enterprises and institutions is characterized by the provision of one-time experiences during work-time and outside the workplace, mainly focusing on self-awareness, stress coping, interpersonal relationships, career planning and work effectiveness. 2, the single session group counseling has a good effect on knowledge and skills, self-satisfaction, interpersonal interaction and group satisfaction, and the overall satisfaction rate is 78% of which is "satisfied" and "very satisfied". 3. Interpersonal interaction is significantly related to work effectiveness, interpersonal relationship and stress coping, and it plays a significant role in mental health services of enterprises and institutions, which can motivate and catalyze employees to trust and participate in groups, make interpersonal relationship more harmonious, relieve pressure in work and life, and further improve their confidence in dealing with work. Conclusion: Single session group counselling is an effective way to meet the demand for psycho-social health services for employees in enterprises and institutions.

Keywords: mental health service demand, enterprise employees, single session group counseling

人格特质对校园欺凌的影响：一个有调节的中介模型

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摘要 青春期(12至18岁)的青少年由于生理和心理都处在急剧变化时期,面临自我统一和角色混乱的冲突(黄希庭, 2007),这个阶段极易产生问题行为,校园欺凌便是广泛存在的问题之一。影响校园欺凌的因素众多,其中人格特质对校园欺凌的影响尤为明显。Nail等人(Nail, Simon, Bihm, & Beasley, 2005)提出的修订后的攻击性补偿模型认为防御性人格结构才是欺凌的重要原因。为了更好地探究人格特质对校园欺凌的影响,本研究纳入中介变量孤独感与调节变量自我概念以1631名中学生为被试进行问卷调查。研究采用SPSS宏程序PROCESS对数据进行分析,结果表明:神经质对受欺凌具有显著的正向预测作用,外向性对受欺凌具有显著的负向预测作用,宜人性对欺凌/受欺凌具有显著的负向预测作用。孤独感在神经质与受欺凌行为、外向性与受欺凌行为、宜人性与欺凌/受欺凌行为之间起中介作用。此外,自我概念在孤独感对神经质、外向性、宜人性与受欺凌行为的中介路径中起调节作用。进一步使用简单斜率分析发现低孤独感的学生,在发生校园欺凌行为时,自我概念的调节能力更明显,个体的自我概念水平对于是否发生欺凌行为具有更显著

的作用。较高孤独感会加剧欺凌/受欺凌的发生，而较好的自我概念能减少校园欺凌的发生。因此，帮助学生清晰自我概念是减少校园欺凌行为发生的重要途径；降低学生的孤独感也是避免欺凌行为发生的重要举措。

关键词 人格特质，校园欺凌，孤独感，自我概念

The Effect of Personality Traits on School Bullying: A Moderated Mediation Model

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Abstract: Due to the rapid physiologic and psychological changes, adolescents (12-18 years old) are confronted with conflicts between self-identity and role confusion. At this stage, problem behaviors are readily lead to occur, and school bullying is one of the widespread problems, the detection rate of school bullying victim among Chinese teenagers is around 20%. It can be seen that the phenomenon of school bullying is widespread and has been a practical problem to be solved urgently. There are many factors affecting school bullying, among which the impact of personality traits is significant. In addition, whether personality traits directly affect school bullying behavior and whether there are interactions between personality traits and other factors in the process of personality traits influencing school bullying behavior, deserve our consideration. Researches have proved that personality traits influence loneliness, and loneliness affects school bullying behavior. Individuals with weak self-concept tend to form high levels of loneliness, and high levels of loneliness predict individuals' aggressive behavior. Therefore, different levels of self-concept can affect the formation of loneliness level, which in turn enhance or weaken the impact of personality traits on school bullying. In this, we propose two hypotheses: (1) loneliness acts as the mediator between personality traits and school bullying behavior; (2) self-concept plays a moderating role in the mediating process of loneliness to personality traits and school bullying behavior. To test the hypotheses, this study adopted questionnaire method to conduct collective anonymous test on 1631 middle school students who were took a class as a unit to explore the relationship between their personality traits and campus bullying, and to clarify the mediating function of self-concept and loneliness between their personality traits and school bullying behavior. The SPSS macro program PROCESS plugin was used for data analysis, and percentile Bootstrap method with deviation correction was used for repeated sampling 5000 times for testing, and 95% confidence interval was calculated. The results show that: (1) Neuroticism has a significant positive predictive effect on being bullied. Extroversion has a significant negative predictive effect on it. And agreeableness has a significant negative predictive effect on bullying/being bullied. (2) Loneliness plays an intermediary role between neuroticism and bullied behavior, extroversion and bullying behavior, agreeableness and bullying/bullied behavior. (3) Self-concept plays a role in adjusting the loneliness to neuroticism and bullied behavior, to extroversion and bullied behavior, and to agreeableness and bullied behavior. But it does not adjust loneliness to agreeableness and bullying behavior. In summary, school bullying/ being bullied is harmful to the development of the adolescents' both mind and body health, bullying at school is worth our continued attention and reflection. In terms of personality traits, the score of neuroticism, openness and agreeableness can positively or negatively predict the occurrence of bullying behavior. In addition, high-level loneliness which affected by parent-child relationship, peer relationship, campus atmosphere, social support and other factors will enhance the occurrence of school bullying/being bullied, and a better self-concept can reduce the occurrence of bullying behavior on the basis of reducing loneliness. Therefore, helping students clear their self-concept is an important way to reduce bullying behavior, and alleviating their loneliness is also an needful measure. Families, schools and society should be united to keep bullying away from teenagers.

Keywords: campus bullying, personality traits, loneliness, self-concept

教育获得感如何影响大学生的未来目标选择？ ——未来时间洞察力和自我控制的调节作用

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摘要 大学生未来目标选择不仅是解释个体行为的重要动机变量，也会对其未来职业生涯规划起到重要引导作用。本研究对未来目标选择的影响机制和因素进行了丰富和补充，为大学生未来的人生目标的引导提供了帮助。在本研究中，采用了未来目标选择问卷、教育获得感问卷、未来时间洞察力问卷和自我控制问卷对304名在校大学生进行了调查，随后对调查数据进行了回归分析和调节作用检验。结果发现：①大学生教育获得感在个体之间差距较大，并受到自身成绩水平的影响，且他们的未来时间洞察力和自我控制水平也体现出了较大的异质性水平；②知识性目标会在不同年级和自身成绩水平上存在差异，情绪调节性目标会受到自身成绩的影响；③教育获得感作为一项人格特质能够显著地影响个体未来目标的选择倾向，它对知识性目标（ $r=0.793$, $p<0.01$ ）和情绪调节性目标（ $r=0.715$, $p<0.01$ ）都有着较明显的预测作用；④未来时间洞察力和自我控制在其中存在调节作用，低未来时间洞察力的个体比高未来时间洞察力的个体更加敏感，即更容易受到教育获得感的影响而改变自身的目标选择倾向，自我控制能力较差的个体亦然。自我控制能力强的个体往往能够提升知识性目标，降低情绪调节性目标。基于上述研究结果看到了教育获得感对不同个体未来目标选择的影响作用，应对不同的学生采取不同的提升教育获得感的方式。

关键词 未来目标选择，教育获得感，未来时间洞察力，自我控制，大学生

How the sense of education gain affects the future goal selection of college students?——The regulation role of future time perspective and self-control

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Abstract: The future goal selection of college students is not only an important motivation variable to explain individual behavior, but also plays an important role in guiding their future career planning. This study enriches and complements the mechanism and factors of the future goal selection, which provides help for the guidance of college students' future life goals. In this study, 304 college students were surveyed by future target selection scale, the sense of education gain scale, future time perspective scale and self-control scale, and then the regression analysis and adjustment effect test were carried out on the survey data. The results showed that: (1) College students' sense of education gain was greatly different from the individual, which was affected by their own level of achievement, and their future time perspective and self-control also reflected the greater heterogeneous level; (2) Knowledge goals will vary in grades and their own grades, and emotional goals will be influenced by their own grades; (3) As a personality trait, the sense of education gain can significantly influence the choice tendency of individual's future goal selection, which has a more obvious predictive effect on the intellectual goal ($r=0.793$, $p<0.01$) and the emotional regulation target ($r=0.715$, $p<0.01$); (4) future time perspective and self-control have a regulatory effect, and individuals with low future time perspective are more sensitive than individuals with high future time perspective, i.e. more susceptible to the influence of the sense of educational gain and change their tendency to change their own goal choices, and poor self-control. Individuals with strong self-control ability are often able to improve their knowledge goals and reduce their emotional goals. Based on the above research results, we see the influence of educational acquisition on the future goal selection of different individuals, and different students should adopt different ways to enhance the sense of educational gain.

Keywords: future goal selection, sense of education gain, future time perspective, self-control, college students

道德领导对公共部门职工绿色行为的影响 ——组织绿色倡导和环保热情的中介作用

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摘要 绿色组织行为是近年来新兴的一个研究领域, 而职工绿色行为正是其中一个重要议题。众多研究已经指出, 随着环境问题日益严重, 如何提升组织和职工绿色行为成为值得研究的问题。为了节约组织运行成本、提高环境绩效、增强社会责任感, 公共部门有必要向绿色管理发展。因此, 本研究基于社会学习理论构建一个双中介模型, 从情境因素和个体因素两方面对道德领导与公共部门职工绿色行为之间的关系进行讨论。本研究采用职工绿色行为问卷、道德领导量表、组织绿色倡导问卷和环保热情问卷对 299 名公共部门职工进行调查, 数据分析结果显示: 道德领导对职工绿色行为有显著正向预测作用; 组织绿色倡导、环保热情都在道德领导与职工绿色行为之间起部分中介作用, 环保热情的中介效应更强。此外, 道德领导与职工绿色行为的关系在不同类型公共部门中表现不同, 具体而言, 道德领导与职工绿色行为在政府部门和社会组织中存在积极影响, 而在事业单位和国有企业中不显著; 组织绿色倡导、环保热情只在政府部门道德领导与职工绿色行为间起双重中介作用, 而在社会组织中, 只有环保热情起部分中介作用。本研究试图丰富职工绿色行为的研究内容以及道德领导的研究范围, 并从道德领导、组织绿色氛围和职工个体三方面对公共部门组织绿色人力资源管理提供实践启示。

关键词 职工绿色行为; 道德领导; 组织绿色倡导; 环保热情; 绿色人力资源管理

The Impact of Ethical Leadership on Employee Green Behavior in Public Sector: A Dual-Mediator Model of Organization's Green Advocacy and Harmonious Environmental Passion

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Abstract: Green Organization behavior is a new research field in recent years, and employee green behavior is one of the important core issues. Many studies have pointed out that with the growing environmental problems, how to improve the organization and employees' green behavior become a problem worthy of study. In order to save the running cost of the organization, improve the environmental performance and enhance the sense of social responsibility, it is necessary for the public sector to develop to green management. Based on social learning theory, this study constructs a dual-mediator model, and investigated the effects of ethical leadership and employee green behavior of public sector from both situational and individual factors. In this study, 299 public sector employees were investigated with employee green behavior questionnaire, Ethical Leadership Scale, organization's green advocacy questionnaire and harmonious environmental passion questionnaire. The results show that ethical leadership positively predicted employee green behavior; organization's green advocacy and harmonious environmental passion mediated the relationship between ethical leadership and employee green behavior, moreover, the mediation effect of harmonious environmental passion is stronger. In addition, the relationship between ethical leadership and employee green behavior is different in different types of public sectors. Specifically, the positive effect of ethical leadership and employee green behavior is significant in government departments and social organizations, but not in public institutions and state-owned enterprises; organization's green advocacy and harmonious environmental passion play a dual-mediator model between the ethical leadership of government department and employee green behavior, while in social organizations, harmonious environmental passion plays a part of intermediary role. According to this, it attempts to enrich the research about employee green behavior and ethical leadership, and provides a reference for the organization's green human resource management from the ethical leadership, the organization green atmosphere and the staff individual three aspects.

Keywords: employee green behavior; ethical leadership; organization's green advocacy; harmonious environmental

行为契约法改善小学生学业拖延的个案研究

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摘要 目的: 探讨行为契约法对小学生学业拖延干预的过程及效果。方法: 单个被试实验设计, 用行为契约法对一名小学生的学业拖延进行干预, 采用 A-B 基线设计, 分为基线期(1-6 天)、干预期(7-26 天)和追踪期(27-33 天)三个阶段, 并综合观察法、访谈法和问卷法等多种方法对学业拖延进行观测与评估。结果: 行为契约法的干预使个案的学业拖延水平有所降低, 即其在干预期、追踪期出现学业拖延的频次均低于基线期。结论: 行为契约法对改善小学生的学业拖延是有效的, 且这一效果具有保持的作用。

关键词 行为契约法; 学业拖延; 小学生; 个案研究

Effects of Behavior Contract on a Primary School Student with Academic Procrastination : A Case Study

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Abstract : Objective: This study was to explore the improvement effect of behavior contract on a primary school student with academic procrastination. Methods: Using single-participant research design, a primary school student received behavior contract to intervene on academic procrastination. This study adopted the A-B baseline experiment design which was divided into three stages: the baseline (1-6 days), intervention (7-26 days) and follow-up (27 to 33 days), and combined the methods of observation, interview and questionnaire. Result: The intervention of behavioral contract law reduced the level of academic procrastination, which means, the frequency of academic procrastination in the follow-up period and the intervention period was lower than that in the baseline period. Conclusion: The behavioral contract method can improve the primary school students' level of academic procrastination, and it has sustained effect.

Keywords: Behavior contract; Academic procrastination; Primary school student; Case study

社交媒体素养对手机依赖的影响：正念和网络自我控制的中介作用

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摘要 随着社交媒体的普及, 社交媒体对个体身心健康的影响引起学术界的广泛关注。社交媒体素养是个体对社交媒体信息发布过程要素的认知能力。以往研究表明, 社交媒体素养与手机依赖、问题性网络使用等健康危险行为密切相关, 但社交媒体素养与手机依赖的内在作用机制还有待深入探讨。研究采用自编社交媒体素养问卷、网络使用自我控制量表认知分量表、五项正念注意觉知量表(MAAS-5)和手机依赖指数量表(MPAI)中文版对 539 名被试进行调查。结果显示: (1) 社交媒体素养和正念、网络自我控制、手机依赖呈显著正相关; 正念、网络自我控制和手机依赖呈显著负相关; 正念和网络自我控制呈显著正相关; (2) 采用多元层次回归分析方法对正念、网络自我控制在社交媒体素养与手机依赖关系中的链式中介效应进行检验, 其中特定中介效应: 社交媒体素养→正念→手机依赖产生, (Bootstrap 法重复抽取 5000 次) 95% 的区间为[-0.02, 0.01],

中介作用不显著；社交媒体素养→网络自我控制→手机依赖产生 95%的区间为[-0.18, -0.06]，中介作用显著，中介效应值为-0.12；社交媒体素养→正念→网络自我控制→手机依赖产生 95%的区间为[-0.04, -0.001]，中介作用显著，中介效应值为-0.02，故正念、网络自我控制在社交媒体素养与手机依赖关系中起链式中介作用。本研究揭示了社交媒体素养与手机依赖的关系和内在机制，丰富了传统媒体素养的理论，并为社交媒体素养教育应用于手机依赖的预防提供了基本证据。

关键词 社交媒体素养，手机依赖，正念，网络自我控制

Social Media Literacy and Its Relationship with Mobile Phone Dependence: The Mediating Effect of Mindfulness and Self-Control in Internet Use

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Abstract: With the popularity of social media, its impact on physical and mental health have attracted widespread attention. Social media literacy is an individual's cognitive ability to the elements of the social media information publishing process. Previous studies have shown that social media literacy is closely related to health risk behaviors such as mobile phone dependence and questionable internet use, but the internal mechanism of social media literacy and mobile phone dependence deserves further discussion. The study investigated 539 participants with self-designed questionnaire of social media literacy, the cognitive subscale of Internet Usage Self-Control Scale (IUSCS), the 5-items version of Mindful Attention Awareness Scale (MAAS-5) and the Chinese version of Mobile Phone Addiction Index (MPAI). The results show that: (1) There was a significant positive correlation between social media literacy, mindfulness, self-control in internet use and mobile phone dependence; while mindfulness and self-control in internet use were significantly and negatively correlated with mobile phone dependence; mindfulness have been shown to correlate with self-control in internet use positively and significantly; (2) Multiple hierarchical regression analysis was used to test the chain mediating effect of mindfulness and self-control in internet use in the relationship between social media literacy and mobile phone dependence. It is composed of three indirect effects: The 95% confidence interval of social media literacy→mindfulness→mobile phone dependence (Bootstrap repeated extraction 5000 times) is [-0.02, 0.01], and the mediating effect is not significant; The 95% confidence interval of social media literacy→self-control in internet use→mobile phone dependence is [-0.18, -0.06]. The mediating effect is significant, and the mediating effect value is -0.12; The 95% confidence interval of social media literacy→mindfulness→self-control in internet use→mobile phone dependence is [-0.04, -0.001]. The mediating effect is significant, and the mediating effect value is -0.02. Therefore, mindfulness and self-control in internet have chain mediating effect in the relationship between social media literacy and mobile phone dependence. This study reveals the relationship and internal mechanism between social media literacy and mobile phone dependence, enriches the theory of traditional media literacy, and provides basic evidence for the application of social media literacy education in the prevention of mobile phone dependence.

Keywords: Social media literacy, Mobile phone dependence, Mindfulness, Self-control in internet use

加强老年心理学研究的必要性

李怡锦

摘要: 以往关于心理学的科普读物以及相关研究大多是集中在青少年、青年以及中年人等群体。随着近年来医疗技术的不断发展，我国的人均寿命也在不断增加。这意味着我国的老年人在整个人口结构中所占比例将会与日俱增。老年人面临的社会问题也越来越多，例如养老，医疗以及赡养等问题，往往给老年人的心理健康带来打击。而中华民族向来就有着尊老爱老的优良传统，所以老年人的心理健康也不容忽视，我们迫切需

是人生中心必会经历的一个阶段。而老年的健康不仅指物质器官的健康,也包含心理健康。所以在关注老年人心理健康的同时,我们不仅是在关注老年人,其实也是在关注我们自己。老年也易发生心理障碍,例如脑功能衰退和性格变化。因为随着人生阅历的提升,老年人往往会经过更多的困难、例如退休、丧偶、少了子女的陪伴……而性格变化就包括变得固执、易怒、有较大的孤独感……而如果在心理学研究方面也加强对老年心理学的研究,就可以在每一代老年人变老之时进行及时的心理疏导,增强老年人的心理健康,这样就有利于正确处理家庭生活,有利于防止身心疾病,甚至是有利于老年人延缓衰老的到来。而加强老年人心理学的研究,也有助于让子女更为科学地关注老年人的心理健康。特别是近年来兴起的养老行业,对于老年心理学就需要有更进一步的研究。因此老年心理学在我国的研究具有十分重要的意义,有利于营造出一个美丽的社会环境。

关键词: 老年心理学、老年人心理健康、性格变化、社会环境

The necessity of strengthening the research of geriatric psychology

Abstract: In the past, popular science books and related researches on psychology were mostly concentrated on teenagers, young people and middle-aged people. With the continuous development of medical technology in recent years, the life expectancy of our country is also increasing. This means that the proportion of the elderly in the whole population structure will increase day by day. The elderly are facing more and more social problems, such as pension, medical care and support, which often bring a blow to the mental health of the elderly. The Chinese nation has always had a fine tradition of respecting and loving the elderly, so the mental health of the elderly can not be ignored. We urgently need to change the problem that the mental health of the elderly is easily ignored. Whether young people, young people or middle-aged people, they will eventually become old age. Old age is a stage that must be experienced in life. The health of the elderly not only refers to the health of physical organs, but also includes mental health. Therefore, while paying attention to the mental health of the elderly, we are not only paying attention to the elderly, but also paying attention to ourselves. Old age is also prone to psychological disorders, such as brain function decline and personality changes. Because with the improvement of life experience, the elderly often go through more difficulties, such as retirement, widowhood, lack of children's company And character changes include becoming stubborn, irritable, and having a greater sense of loneliness If we also strengthen the research on psychology of the elderly, we can conduct timely psychological counseling when the elderly of each generation get older, and enhance their mental health. This is conducive to correctly handling family life, preventing physical and mental diseases, and even delaying the arrival of aging. Strengthening the research on the psychology of the elderly will also help children pay more scientific attention to the mental health of the elderly. In particular, the rising pension industry in recent years requires further research on geriatric psychology. Therefore, the research of geriatric psychology in China is of great significance, which is conducive to creating a beautiful social environment.

Keywords: geriatric psychology, mental health of the elderly, personality change, social environment

(6) “社区心理专业委员会”专题研讨会 6

心理适应对务工型流动老年人长期居留意愿的影响： 剩余生活成本的调节作用

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摘 要 随着我国人口老龄化趋势的不断加强, 流动人口中老年人的比重也越来越大。外出务工、养老、家庭随迁是老年人口流动的三大原因, 相比于养老型与随迁型流动老年人而言, 务工型流动老年人的长期居留意愿更低。为探究务工型流动老年人长期居留意愿的心理机制, 本文采用了 2017 年卫计委全国流动人口数据筛

选了 60 周岁以上且流动原因为务工的流动老年人口,有效数据为 928 份,并将其分为城镇户籍 138 份与农村户籍 890 份,利用 process 进行检验。结果表明:(1)城镇户籍务工型流动老年人心理适应的三个维度中,身份认同与长期居留意愿有显著的相关关系($r=0.32^{**}$),行为习惯与歧视感知于长期居留意愿没有显著相关;而农村户籍的务工型流动老年人口身份认同($r=0.348^{**}$)、行为习惯($r=0.108^{**}$)、歧视感知($r=0.136^{**}$)与长期居留意愿均有显著的相关;(2)剩余生活成本在心理适应对城镇户籍的务工型流动老年人的长期居留意愿的关系中起负向调节作用($\beta=-0.8393$, $p<0.01^{**}$);使用 Johnson-Neyman 法对农村户籍务工型流动老年人的剩余生活成本进行简单斜率分析,剩余生活成本在对农村户籍的老年人而言,只正向调节了前半段路径,标准化的取值范围在 $[-1.71, 1.89]$ 时,简单斜率都显著不为 0。结论:剩余生活成本负向调节了城镇户籍务工型流动老年人心理适应对长期居留的关系;对农村户籍而言则是部分路径正向调节了它们的关系。

关键词 流动老年人, 长期居留意愿, 心理适应

The effect of psychological adaptation on long-term residence intention of migrant workers: the moderating effect of residual cost of living

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Abstract: With the increasing trend of population aging in China, the proportion of middle-aged and elderly people in floating population is also increasing. The three main reasons for the flow of the elderly population are migrant workers, pension and family migration. Compared with the elderly and mobile elderly, migrant workers have lower long-term residence intention. In order to explore the psychological mechanism of long-term residence intention of migrant workers, based on the national floating population data of the national health and Family Planning Commission in 2017, this paper selects the floating elderly population over 60 years old who are migrant workers, the valid data were 928, which were divided into 138 urban household registration and 890 rural household registration. The results show that: (1) In the three dimensions of psychological adaptation of migrant elderly with urban household registration, there is a significant correlation between identity and long-term residence intention($r=0.32^{**}$), there was no significant correlation between behavior habit and discrimination perception on long-term residence intention; However, the identity ($r=0.348^{**}$), behavior habits ($r=0.108^{**}$) and discrimination perception ($r=0.136^{**}$) were significantly correlated with long-term residence intention; (2) Residual cost of living negatively moderates the relationship between psychological adaptation and long-term residence intention of migrant elderly with urban household registration ($\beta=-0.8393$, $P < 0.01^{**}$), this paper uses Johnson Neyman method to analyze the residual cost of living of migrant elderly with rural household registration. For the elderly with rural household registration, the residual cost of living only positively adjusts the first half of the path. When the standardized value range is $[-1.71, 1.89]$, the simple slope is not 0. Conclusion: the residual cost of living negatively moderates the relationship between the psychological adaptation of migrant elderly with urban household registration and long-term residence; for rural household registration, it is part of the path that positively regulates their relationship.

Keywords: Floating Elderly, Long term residence willing, Psychological adaptation

公共事务参与与流动老人流入地认同的关系研究

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摘要 根据国家卫计委发布的《中国流动人口发展报告 2018》,我国流动老人的规模正快速增加,截止 2015 年,流动老人的数量已达到流动人口总量的 7.2%,流动老人成为越来越需要关注的群体。流入地认同是个体适应流入地环境和主观融入流入地的一个动态过程,主要包括城市认同、身份认同、文化认同以及群体归属感。目的:考察流动老人的流入地认同现状,以及公共事务参与和流动老人流入地认同的关系,为鼓励我

国流动老人积极参与公共事务,提升流动老人流入地认同提供一定借鉴。方法:利用2017年全国流动人口动态监测调查数据,通过多元线性回归模型,分析了公共事务参与对流动老人流入地认同的关系($N=5645$)。结果:流动老人总体的公共事务参与度较低($M=4.519$, $SD=1.173$),流入地认同相对较高($M=25.780$, $SD=3.423$);除文化认同维度外,公共事务参与对流入地认同的各维度均有正向预测作用($\beta=0.03\sim 0.07$, 均 $P<0.05$),其中公共事务参与对提高流动老人城市认同的作用最为突出($\beta=0.07$, $P<0.01$);另外,控制了样本的个人特征、家庭特征以及社区特征后,公共事务参与依然显著预测我国流动老人对流入地的认同。结论:流动老人的公共事务参与度越高,其流入地认同越高。流动老人的个人特征、家庭特征以及社区特征都与流入地认同有显著相关。

关键词 流入地认同, 公共事务参与, 流动老人

Public Affairs Participation and Its Relationship with Identity of In-Migration Areas of the Migrant Elderly

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Abstract: "Report on the development of migrant population in China 2018" issued by the national health and Family Planning Commission, reports that the scale of China's elderly migrant population is increasing rapidly. As of 2015, the elderly migrants account for 7.2% of the total migrant population, and the migrant elderly have become a group that needs more attention. The identity of in-migration areas is a dynamic process in which an individual adapts to the environment of the in-migration areas and integrates into the in-migration areas subjectively, it mainly includes urban identity, identity, cultural identity and group belonging. Objective: To investigate the identity of in-migration areas of migrant elderly people, and the relationship between the participation in public affairs and the identity of in-migration areas of migrant elderly people, so as to provide some reference for encouraging the migrant elderly people to actively participate in public affairs and enhance their identity of in-migration areas. Methods: Using the data from 2017 China Migrants Dynamic Survey, through multiple linear regression model, this paper analyzes the impact of public affairs participation on migrant elderly identity ($n = 5645$). Results: The participation of the migrant elderly in public affairs was low ($M = 4.519$, $SD = 1.173$), and their identity of in-migration areas was relatively high ($M = 25.780$, $SD = 3.423$); except for the dimension of cultural identity, public affairs participation had a positive predictive effect on other dimensions of identity ($\beta = 0.03-0.07$, all $P < 0.05$), among which public affairs participation played the most prominent role in improving urban identity of migrant elderly ($\beta = 0.07$, $P < 0.01$). In addition, after controlling the sample's personal characteristics, family characteristics and community characteristics, public affairs participation still significantly predicted the identity of in-migration areas of migrant elderly. Conclusion: The higher the participation of migrant elderly in public affairs, the higher their identity of in-migration areas, the personal characteristics, family characteristics and community characteristics of migrant elderly will affect the sample's in-migration areas identity.

Keywords: Identity of In-Migration Areas, Public Affairs Participation, Elderly Migrants

农村老年人的社会排斥体验与健康状况：有调节的中介模型

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摘要 著名社会学家费孝通先生曾用“差序格局”描述了中国传统农业社会中的人际格局。在传统农业社会中,老年人在农村家庭中是享有威望并受到尊重的。但是随着现代经济的发展,越来越多的农村年轻人在外出务工过程中获得了财富、增长了新的见识,老年人的家庭地位逐渐降低,参与的社会角色也越来越少,并面临着一定程度的社会排斥问题。受到社会排斥的老年人会失去对社会的归属感,感受到自己和主流社会发生了分离,进而会产生一系列身心健康问题。本研究基于社会排斥的多元动机模型、负性情绪影响健康的

四通路模型,采用社会排斥体验量表、抑郁-焦虑-压力量表、人际信任量表等测量工具,对覆盖中国 31 个省级行政区(不含港澳台)的农村居民开展社会调查,考察了 1803 名农村老年人社会排斥体验与健康状况的关系,以及负性情绪、人际信任、经济状况在两者中的作用。结果表明,农村老年人的社会排斥体验负向预测其健康状况;负性情绪在农村老年人社会排斥体验和健康状况之间起中介作用;人际信任在农村老年人社会排斥体验和负性情绪之间起调节作用;经济状况在农村老年人负性情绪和健康状况之间起调节作用;整体有调节的中介模型成立。该调查属于大样本调查,且采用了分层多阶段抽样方法,其结论可以推广至全国范围的农村老年人群体。本研究为农村的养老服务体系建设和农村老年人的健康服务工作提供了启示。在农村养老服务体系建设和过程中,应关注遭受社会排斥的老年人群体,采取有效的干预措施减少其社会排斥体验,避免对老年人身心健康造成损害;同时应注重提升农村老年人的人际信任水平,从而缓解社会排斥所带来的消极影响。其次,在农村老年人心理健康实践中,应更多关注老年人的负性情绪体验,从而缓解负性情绪对健康的不利影响。另外,在农村精神文明建设过程中,要引导农村老年人树立健康生活的理念,避免经济状况较好的农村老年人因过度吸烟、饮酒等因素导致的健康问题。

关键词 社会排斥, 健康, 负性情绪, 人际信任, 农村老年人

Social Exclusion Experience and Health Condition among the Rural Elders: The Moderated Mediation Model

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Abstract: Based on the multimotive model of social exclusion and the model of pathways linking affective disturbances to physical disorders, the current study investigated 1803 rural elders from the 31 provinces (excluding Hong Kong, Macao, and Taiwan) in China, in order to test the influence of social exclusion experience on health condition, and the effects of negative emotional states, interpersonal trust, and economic conditions between them. The results showed that (1) social exclusion experience negatively predicted health condition. (2) Negative emotional states mediated social exclusion experience and health condition. (3) Interpersonal trust moderated the link between social exclusion experience and negative emotional states. (4) Economic condition moderated the link between negative emotional states and health condition. The current study not only verifies and extends the two theoretical models but also provides some implications for the construction of rural elderly care and health services.

Keywords: social exclusion, health, negative emotional states, interpersonal trust, rural elders

社区老年人衰弱与生理、心理、社会因素的关系

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摘要 **目的** 调查社区老年人的衰弱情况及考察生理心理社会因素和社区老年人衰弱之间的关系。**方法** 采用方便抽样法,用自编基本情况调查表、Tilburg 衰弱量表(TFI)、简易体能状况量表(SPPB)、简版老年抑郁量表(GDS-15)、日常生活能力量表(ADL),于 2019 年 11 月至 2019 年 12 月对四川省某三个社区 178 名 65 岁及以上的老年人进行调查。采用卡方检验比较衰弱与非衰弱老年人在体能、抑郁、经济状况等方面的差异,用相关分析和二分类 Logistic 回归分析衰弱与不同因素的关系。**结果** (1) 社区老年人的衰弱率为 23%。(2) 社区老年人衰弱组与非衰弱组在肌肉功能、抑郁情况、经济状况和日常生活能力方面存在显著组间差异($P < 0.05$)。(3) 衰弱与抑郁、经济状况和日常生活能力得分均显著正相关,相关系数分别为 0.476 ($P < 0.01$)、0.303 ($P < 0.01$)、0.313 ($P < 0.01$),衰弱与肌肉功能中的椅上起坐测试得分有显著负相关,相关系数为-0.203 ($P < 0.01$)。(4) Logistic 回归分析结果显示,抑郁、经济状况、日常生活能力是影响社区老年人衰弱的重要因素。相较于无抑郁症状、经济状况较好、日常生活能力未受损的老年人,有抑郁症状、经济状况较差、日常生活能力受损的老年人衰弱的 OR 值分别为 4.466 ($P < 0.01$)、2.172 ($P < 0.05$)、0.245 ($P < 0.05$)。**结论** 社区老年人衰弱率较高,并受生理、心理、社会等因素的影响。社区老年人需要在相关专业人员的协助

下从生理心理方面进行自我改善,制定相关政策,加强老年人的社会经济和医疗等保障。以内外结合、多角度入手来改善社区老年人的衰弱状况。为节省医疗开支,提高老年人的自主性,改善其生活质量,需要制定相应的干预措施来预防及管理衰弱。

关键词 社区老年人,衰弱,影响因素

Associations between physical, psychological and social factors and frailty among community-dwelling old adults

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Abstract: **Objective** To investigate the frailty of the elderly in community and the relationship between physiological, psychological and social factors and the frailty of the community-dwelling old adults. **Methods** 178 elderly people aged 65 and above in four communities of Sichuan Province were investigated from November 2019 to December 2019 by using convenient sampling method with self-made general condition scale, Tilburg Frailty Indicator(TFI), Short Physical Performance Battery(SPPB), Geriatric Depression Scale Short-form(GDS-15) and Activities of Daily Living(ADL). Chi-square test was used to compare the differences in physical fitness, depression and economic status between frail and non-frail community-dwelling old adults, and correlation analysis and binary Logistic regression were used to analyze the relationship between frailty and different factors. **Results** (1)The prevalence of frailty among community-dwelling old adults was 23%. (2) There are significant differences in muscle function, depression, economic status and activities of daily living between the frail group and the non-frail group ($P < 0.05$). (3) Frailty has a significant positive correlation with depression, economic status and daily living ability scores, with correlation coefficients of $0.476(P < 0.01)$, $0.303(P < 0.01)$ and $0.313(P < 0.01)$, while frailty has a significant negative correlation with the score of chair sitting-standing test of muscle function, with correlation coefficient of $-0.203(P < 0.01)$ (4)Logistic regression analysis showed that depression, economic status and ability of daily living were the important factors affecting the frailty of the elderly in the community. Compared with the elderly with no depressive symptoms, good economic condition and impaired ADL, the OR values of the elderly with depressive symptoms, poor economic condition and impaired ADL were $4.466(P < 0.01)$, $2.172(P < 0.05)$ and $0.245(P < 0.05)$, respectively. **Conclusion** The frailty rate of the community-dwelling old adults is high, which is influenced by physiological, psychological and social factors. Considering subjective factors, the elderly in community need to improve themselves from physiological and psychological aspects with the help of relevant professionals. From an objective point of view, it is necessary to build social and medical system security, and improve the frailty of the elderly in the community by combining internal and external aspects. Interventions are needed to prevent and manage frailty in order to save medical expenses, increase the autonomy of old adults and improve their quality of life.

Keywords: Community-dwelling old adults, Frailty, Influencing factor

社区老年人抑郁与衰弱的关系：生活满意度的中介作用

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摘要 **目的:** 考察社区老年人的抑郁和衰弱之间的关系,以及生活满意度在其中的作用,为社区老年衰弱干预提供思路。**方法:** 采用自编一般情况调查问卷、Tilburg 衰弱量表(TFI)、老年抑郁表简版(GDS-15)和生活满意度量表(SWLS)对 180 名成都市 65 岁及以上的街道社区老年人进行调查。统计方法使用描述统计,相关分析,回归分析和中介效应检验。**结果:** ①社区老年人的抑郁总分为 (5.61 ± 1.960) , 抑郁检出率为 43.9%,社区老年人的衰弱总分为 (3.21 ± 2.72) , 衰弱发生率为 23.3%。②社区老年人抑郁和衰弱总分($r = 0.50, p < 0.01$)、以及身体衰弱($r = 0.44, p < 0.01$)和心理衰弱($r = 0.39, p < 0.01$)呈显著正相关,而抑郁和生活满意度呈显著负相关($r = -0.28, p < 0.01$), 衰弱和生活满意度呈显著负相关($r = -0.31, p < 0.01$)。③社区老年人抑郁得

分对衰弱得分的正向预测作用显著($\beta = 0.50, t = 7.50, p < 0.01$), 且当放入生活满意度做中介变量后, 抑郁对衰弱的直接预测作用依然显著 ($\beta = 0.46, t = 6.66, p < 0.01$), 抑郁对生活满意度的负向预测作用显著($\beta = -0.25, t = -3.36, p < 0.01$), 生活满意度对衰弱的负向预测作用也显著($\beta = -0.21, t = -3.20, p < 0.01$); **结论:** ①社区老年人的抑郁和衰弱检出率较高, 应当予以重视; ②社区老年人衰弱情况受到抑郁和生活满意度的影响, 抑郁不仅能够直接影响衰弱, 还能够通过生活满意度的中介作用影响衰弱。未来对社区老年人的衰弱干预应当与抑郁干预结合, 还要考虑提高老年人的生活满意度。

关键词: 社区老年人; 抑郁; 衰弱; 生活满意度

The relationship between depression and frailty in the community-dwelling old adults: a mediate role of life satisfaction

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Abstract: **Objective:** To investigate the relationship between depression and frailty in the elderly in the community, and the role of life satisfaction in it, and provide ideas for community elderly frail intervention. **Method:** A total of 180 community-dwelling older adults aged 65 years and above in Chengdu city were investigated by self-made general survey questionnaire, Tilburg Frailty Indicator (TFI), Geriatric Depression Scale Short-form(GDS-15), and Satisfaction With Life Scale(SWLS). The statistical methods used descriptive statistics, correlation analysis, regression analysis and mediation effect test. **Results:** ① The total score of depression for the elderly in the community was (5.61 ± 1.960) , the incidence of depressive symptoms was 43.9%, and the total score of frailty for the elderly in the community (3.21 ± 2.72) , the incidence of frailty was 23.3%. ② There is a significant correlation between the depression score and the frailty score of the elderly in the community ($r = 0.50, p < 0.01$), and the depression score has a significant positive correlation with the physical frailty ($r = 0.44, p < 0.01$) and mental frailty ($r = 0.39, p < 0.01$) in the frailty dimension. There is a significant negative correlation between depression score and life satisfaction score ($r = -0.28, p < 0.01$), and there is a significant negative correlation between frailty score and life satisfaction score ($r = -0.31, p < 0.01$). ③ The depression of the elderly in the community had a significant predictive effect on frailty ($\beta = 0.50, t = 7.50, p < 0.01$), and when life satisfaction is added as an intermediary variable, the direct predictive effect of depression on frailty is still significant ($\beta = 0.46, t = 6.66, p < 0.01$), and the negative predictive effect of depression on life satisfaction is significant($\beta = -0.25, t = -3.36, p < 0.01$), life satisfaction has a significant negative predictive effect on frailty ($\beta = -0.21, t = -3.20, p < 0.01$). **Conclusion:** ①The detection rate of depression and frailty among the elderly in the community is very high and should be taken seriously; ②The frailty of the elderly in the community is affected by depression and life satisfaction. Depression can not only directly affect frailty, but also through life satisfaction. In the future, debilitating interventions for the elderly in the community should be combined with depression interventions, and consideration should be given to improving the life satisfaction of the elderly.

Keywords: Community-dwelling old adults, Depression; frailty, Life satisfaction

主动参与公益活动与流动老人心理融入的关系： 歧视知觉和接纳知觉的中介作用

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摘要 近年来流动老人数量持续增长, 但心理融入普遍处于较低水平, 吸引越来越多学者的关注。已有研究表明, 社会参与度低或感知到歧视、排斥均会导致流动人口心理融入失败, 这可能与沟通交流的缺乏和刻板印象的存在有关。通过提供良性互动的机会, 公益活动参与可能改变流动老人对本地人态度的感知, 利于其心理融入。本研究利用 2017 年全国流动人口动态监测调查数据, 以 5705 位流动老人为研究对象, 构建链

式中介模型,探讨主动参与公益活动与流动老人心理融入的关系及其作用机制。结果表明:(1)主动参与公益活动与流动老人歧视知觉呈显著负相关,与接纳知觉、心理融入呈显著正相关;(2)歧视知觉和接纳知觉在主动参与公益活动与心理融入间起中介作用,且该中介作用包含三条路径:歧视知觉的单独中介作用显著,中介效应值为0.003;接纳知觉的单独中介作用显著,中介效应值为0.052;歧视知觉-接纳知觉的链式中介作用显著,中介效应值为0.007。这一发现表明主动参与公益活动可通过影响流动老人的歧视知觉和接纳知觉来促进其心理融入,为提高流动老人心理融入水平的相关干预提供了实证依据。未来应重视提高流动老人参与公益活动的积极性,增进其与本地居民的交流,改变其对本地居民态度的错误认知,以加快流动老人的社会融入进程。

关键词 公益活动,心理融入,歧视知觉,接纳知觉,流动老人

The Relationship between Active Participation in Public Benefit Activity and Psychological Integration of Migrant Elderly People: The Mediating Effects of Stigma Perception and Acceptance Perception

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Abstract: In recent years, the number of migrant elderly people has continued to increase, but their psychological integration is generally at a low level, attracting more and more scholars' attention. Studies have shown that not only low social participation but also perceived discrimination or exclusion led to the failure of the migrant population's psychological integration. This may due to the lack of communication and the existence of stereotypes. By providing opportunities for benign interaction, participation in public benefit activities may change the perception of elderly migrants' attitudes towards locals, therefore facilitating their psychological integration. Using the data from 2017 China Migrants Dynamic Survey, a serial mediation model was conducted to examine the mediating role of stigma perception and acceptance perception in the relation between active participation in public benefit activity and psychological integration in a sample of 5705 migrant elderly people. The main findings of this study were as follows: (1) Active participation in public benefit activities was significantly negatively correlated with elderly migrants' stigma perception, and significantly positively correlated with acceptance perception and psychological integration. (2) Mediation analysis revealed that active participation in public benefit activity affected psychological integration through the mediation of stigma perception and acceptance perception. The mediating effect included three paths: Firstly, the separate mediating effect of stigma perception was significant, with a mediating effect value of 0.003. Secondly, the separate mediating effect of acceptance perception was significant, with a mediating effect value of 0.052. Thirdly, the chain mediating effect of stigma perception - acceptance perception was significant, with a mediating effect value of 0.007. These findings show that the active participation of migrant elderly people in public benefit activity can promote psychological integration by changing their stigma perception and acceptance perception, providing empirical evidence for interventions to improve the level of psychological integration of elderly migrants. It suggests that in the future, attention should be paid to increasing the enthusiasm of migrant elderly people in participation in public benefit activities, enhancing their communication with local residents, and changing their misperceptions about the attitudes of local residents, so as to speed up the process of social integration of migrant elderly people.

Keywords: Public Benefit Activity, Psychological Integration, Stigma Perception, Acceptance Perception, Migrant Elderly people

2.16 “网络心理专业委员会”专题研讨会

(1) “网络心理专业委员会”专题研讨会 1

亲子关系与网络受欺负：一个有调节的中介

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摘要 背景: 家庭与学校作为青少年成长的重要场所, 其保护性作用的重要性不言而喻。以往有研究者提出, 不同保护性因子之间可能存在交互作用, 并根据作用方向的不同, 提出了“保护假说”与“排除假说”两种观点。然而, 据我们所知目前在网络受欺负领域, 仍未有研究将家庭与学校两个方面的保护性因素同时纳入。因此家庭、学校与网络受欺负之间联系的内部机制在很大程度上仍是未知的。本研究首次结合积极感知学校氛围探讨亲子关系与网络受欺负的中介与调节机制, 以便未来有针对性地增加青少年成长过程中的保护性因素, 减少网络受欺负。**方法:** 采用《亲子关系问卷》、《青少年学生心理资本问卷》、《网络受欺负量表》及《校园氛围问卷》在湖北省和福建省两地, 选取总共 4 所中学的 1340 名中学生进行问卷调查。采用 SPSS 的宏 PROCESS 进行数据处理。**结果:** (1) 亲子关系显著负向预测网络受欺负; (2) 偏差校正的百分位 Bootstrap 中介效应检验表明, 心理资本在亲子关系与网络受欺负之间起部分中介作用; (3) 中介作用后半段受到积极感知学校氛围的调节。具体而言, 当个体积极感知学校氛围较高时, 亲子关系通过心理资本对网络受欺负的负向预测作用不显著, 只有在中低积极感知学校氛围的情况下, 亲子关系才能通过心理资本负向预测网络受欺负。**结论:** 较高水平的亲子关系不仅直接预测了较低的网络受欺负, 还能通过提高心理资本间接降低青少年网络受欺负, 并且这种间接效应受到感知学校氛围的调节。本研究结果支持了“保护因子—保护因子模型”的排除假说, 表明在网络受欺负的影响机制中, 家庭与学校的关系可能是“美不胜收”, 即良好的亲子关系可以降低网络受欺负风险, 而对于亲子关系不良的学生, 同样可以通过提升其积极感知学校氛围减少网络受欺负。该结果不仅有利于揭示亲子关系与网络受欺负的关系与内部心理机制, 且对网络受欺负的干预实践, 维护青少年良好成长环境有着建设性意义。

关键词 网络受欺负, 亲子关系, 感知学校氛围, 心理资本

Parent-child Relationship and Cyberbullying Victimization: A Moderated Mediation Model

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Abstract: Background: Family and school are important for teenagers, and their protective role is self-evident. Previous studies have suggested that there is an interaction between different protective factors, which are divided into two viewpoints according to the different directions of interaction: ‘conservation hypothesis’ and ‘exclusion hypothesis’. As far as we know, no studies have included both family and school protective factors in the field of cyberbullying victimization. So, the internal mechanism of the association between family, school and cyberbullying victimization remains largely unknown. This study is the first to explore the mediating and regulating mechanism

between parent-child relationship and cyberbullying victimization in combination with positive perceived school climate, so as to increase the protective factors and reduce cyberbullying victimization. **Methods:** In this study, questionnaires including the perceived school climate scale, the revised cyberbullying victimization inventory, the adolescent psychological resource scale, and the parent-child relationship scale were administrated to 1340 junior high school students in Hubei and Fujian province. Data were collected and analyzed with SPSS 23.0 and SPSS macro PROCESS. **Results:** (1) Parent-child relationship significantly negatively predicted cyberbullying victimization; (2) The mediation effect test results of the bias-corrected percentile Bootstrap method showed that psychological resource played a partial mediating role between parent-child relationship and cyberbullying victimization; (3) The mediating effect of psychological resource were regulated by positive perceived school climate. Specifically, when the positive perceived school climate was high, the negative prediction effect of parent-child relationship on cyberbullying victimization through psychological resource was not significant. Only in the middle and low positive perceived school climate, the mediating effect was significant. **Conclusion:** High parent-child relationship not only directly predicted less cyberbullying victimization, but also indirectly reduced cyberbullying victimization by increasing psychological resource. The indirect effect is moderated by perceived school climate. These results supported the 'exclusion hypothesis': High parent-child relationship can reduce the risk of cyberbullying victimization, and for students with poor parent-child relationship, it can also reduce cyberbullying by improving the perceived school climate. The results are not only helpful to reveal the relationship and the underlying psychological mechanism between parent-child relationship and cyberbullying victimization, which is of constructive significance to interfere with cyberbullying victimization and to guide teenagers to use the Internet healthily.

Keywords: cyberbullying victimization, parent-child relationship, perceived school climate, psychological resource

女性青少年网络约会虐待受害与睡眠质量：破碎假设理论的视角

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摘要 在青春期, 开始恋爱关系是一项正常的发展任务, 但技术的进步加速了青少年不健康的交往方式。网络约会虐待受害与女性青少年生理健康之间的关系在很大程度上是一个被忽视的全球健康问题。本研究从破碎假设理论的视角出发, 探讨了网络约会虐待通过公正世界信念和自尊的中介作用与睡眠质量的关系。此外, 我们还探讨了独生子女状况在网络约会虐待与睡眠质量之间的直接和间接联系中的调节作用。以 420 名中国女性青少年为研究对象, 采用网络约会虐待问卷、公正世界信念量表、罗森伯格自尊量表和中文版匹兹堡睡眠质量指数量表进行调查。结果表明, 网络约会虐待受害与睡眠质量呈正相关关系, 且公正世界信念和自尊在这个关系中起中介作用。此外, 独生子女状况调节了网络约会虐待受害与公正世界信念和睡眠质量之间的关系。独生子女家庭女性青少年网络约会虐待和睡眠质量之间的关系强于非独生子女家庭女性青少年。而公正世界信念在网络约会虐待受害与睡眠质量之间的中介作用仅在非独生子女女性青少年中显著。本研究首次从破碎假设理论的角度探讨了中国女性青少年网络约会虐待受害与睡眠质量之间的关系, 未来研究应进一步关注如何改善遭受网络约会虐待的女性青少年的世界观假设、自我评价和睡眠问题。

关键词 网络约会虐待受害, 公正世界信念, 自尊, 睡眠质量, 独生子女

Cyber dating abuse victimization and sleep quality among female adolescents: A perspective of shattered assumption theory

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Abstract: The relevance between cyber dating abuse victimization (CDAV) and female adolescents' physical

problems is a largely ignored global health issue. From the perspective of shattered assumption theory (SAT), the current study explored how CDAV is related to sleep quality (SQ) through the mediating roles of belief in a just world (BJW) and self-esteem (SE). Additionally, we also investigated the moderating role of only-child status in the direct and indirect link between CDAV and SQ. A total of 420 Chinese female adolescents were included and administered multiple scales, including the cyber dating abuse questionnaire, belief in just world scale, Rosenberg self-esteem scale and Chinese version of the Pittsburgh Sleep Quality Index. The results indicated a positive relationship between CDAV and SQ, which was mediated by BJW and SE. Besides, only-child status moderated the link between CDAV and BJW and SQ. Specifically, the positive correlation between CDAV and SQ was stronger for female adolescents from only-child families than those from non only-child families. Surprisingly, the mediating role of BJW in the relationship between CDAV and SQ only exist among non only-child female adolescents. These results provide a first insight into the association between CDAV and SQ among Chinese female adolescents from an perspective of SAT. More attention should be given to improve female adolescents world assumptions, self-assessment and sleep problems after being abused.

Keywords: Cyber dating abuse victimization, Belief in a just world, Self-esteem, Sleep quality, only-child

青少年线上自我表露能加剧父母心理控制与网络受欺负的关系吗？ 核心自我评价的中介作用

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摘 要 网络欺负是一种普遍存在的破坏性的网络偏差行为。遭受网络欺负能够导致个体产生严重的内化问题和外化问题。考虑到网络受欺负在青少年群体中的普遍性和危害性, 本研究旨在探讨网络受欺负的风险因素和保护因素。已有研究发现父母对青少年行为方面的监控和干预有助于青少年网络受欺负的减少, 而父母对青少年的心理控制对其网络受欺负的影响尚不清楚, 因此本研究考察了父母心理控制对青少年网络受欺负的影响。为了进一步探索这种影响机制, 本研究基于相关理论和实证证据, 探究了父母心理控制对青少年网络受欺负的影响机制, 将核心自我评价作为中介因素, 线上自我表露作为调节因素进行了考察。821 名青少年 (男孩占 51.0%, 年龄 $M = 13.11$, $SD = 1.19$) 完成了中文版的父母控制问卷、网络受欺负问卷、线上自我表露分量表和核心自我评价量表。相关分析表明, 父亲心理控制、母亲心理控制、网络受欺负和线上自我表露间呈显著两两正相关; 父亲心理控制、母亲心理控制和网络受欺负分别于核心自我评价呈现正相关; 另外, 线上自我表露与核心自我评价无显著相关。模型检验表明, 核心自我评价在父亲心理控制与网络受欺负之间其完全中介作用, 而在母亲心理控制与网络受欺负之间起部分中介作用。调节效应检验发现, 线上自我表露能够加强母亲心理控制与网络受欺负之间的直接关系。也能够增强核心自我评价在母亲心理控制与网络受欺负之间的中介作用以及在父母心理控制与网络受欺负之间的中介作用。本研究的结果揭示了对于减少青少年网络受欺负的干预措施需要聚焦于减少青少年的线上自我表露、促进积极核心自我评价的建立, 以此降低青少年在遭受父母心理控制后可能遭受网络欺负的可能性。

关键词 父母心理控制, 核心自我评价, 网络受欺负, 线上自我表露, 有调节的中介模型

Does online self-disclosure aggravate cyberbullying victimization after suffering parental psychological control?

The mediating role of core self-evaluations

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Abstract: Given the high prevalence and significant harmful implications of cyberbullying victimization, a growing number of studies focused on the risk and protective factors of cyberbullying victimization. However, the association and underlying mechanisms of parental psychological control with adolescent cyberbullying victimization are still unclear. To fill these gaps, based on self-determination theory, this study aimed to explore the relationship between parental psychological control and cyberbullying victimization and the mediating role of core self-evaluations and moderating role of online self-disclosure in this relation. The present study recruited 821 Chinese middle school students (51.0% boys; mean age = 13.11, SD = 1.19) to completed questionnaires on parental psychological control, core self-evaluations, cyberbullying victimization, and online self-disclosure. Correlation analysis indicated that paternal psychological control and maternal psychological control were positively associated with adolescent cyberbullying victimization. Mediation analysis revealed that core self-evaluations completely mediates the relationship between paternal psychological control and cyberbullying victimization, and partially mediates the relationship between maternal psychological control and cyberbullying victimization. Moderated mediation analysis provided that online self-disclosure strengthens the direct associations of maternal psychological control and core self-evaluations with cyberbullying victimization, and further aggregates the indirect associations of paternal psychological control and maternal psychological control via mediating effect of core self-evaluations. The current results revealed that interventions focused on decreasing online self-disclosure and promoting core self-evaluations can alleviate the risk of cyberbullying victimization among adolescents suffering parental psychological control.

Keywords: parental psychological control; core self-evaluations; cyberbullying victimization; online self-disclosure; moderated mediation model

校园氛围与青少年网络欺负的关系： 心理资本的中介作用和友谊质量的调节作用

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摘要 以往研究表明, 青少年感知的校园氛围对其网络欺负行为有重要影响。但是, 校园氛围对青少年网络欺负的内在影响机制, 以及积极的校园氛围(学校因素)、心理资本(个体因素)和友谊质量(同伴因素)等不同类型的保护性因素在青少年网络欺负中的作用还有待进一步探讨。本研究基于生态系统理论, 在整合“情境—过程—结果模型”和“保护因子—保护因子模型”的基础上提出一个有调节的中介模型, 考察了青少年感知的校园氛围与网络欺负的关系, 以及心理资本的中介作用和友谊质量的调节作用。以湖北省和福建省4所中学的1320名青少年作为研究对象, 采用校园氛围感知问卷、心理资本问卷、友谊质量问卷和网络欺负问卷进行问卷调查。结果表明: (1) 在控制了性别、年级、工作日和节假日日均上网时长后, 积极的校园氛围显著负向预测青少年的网络欺负。(2) 心理资本在校园氛围与青少年网络欺负的关系中起部分中介作用。

(3) 校园氛围影响青少年网络欺负的间接效应的前半段路径受到友谊质量的调节。具体来说,在友谊质量较高或较低水平的青少年群体中,校园氛围对心理资本的正向预测作用均显著,但在友谊质量较高的青少年群体中校园氛围对心理资本的正向预测作用更强。研究结果有助于了解校园氛围对青少年网络欺负的作用机制,厘清不同类型的保护性因素在青少年网络欺负中所起的作用,对预防以及减少青少年网络欺负具有一定的现实意义。

关键词 校园氛围,网络欺负,心理资本,友谊质量,青少年

School Climate and Adolescent Cyberbullying: The Roles of Psychological Capital and Friendship Quality

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Abstract: Previous studies have documented that perceived positive school climate is associated with adolescents' cyberbullying. However, the mechanism of school climate on adolescent cyberbullying, and the role of different types of protective factors such as positive school climate, psychological capital and friendship quality in youth cyberbullying remain to be further explored. According to the ecological systems theory, the "context-process-outcomes model" and the "protective-protective model", the present study constructed a moderated mediation model to examine whether psychological capital mediated the relationship between school climate and adolescent cyberbullying, and whether this mediating process was moderated by friendship quality. A total of 1320 adolescents (mean age = 13.86 years, SD = 1.64) from 4 schools of Hubei province and Fujian province were invited to take part in this study. Participants anonymously completed Perception of School Climate Questionnaire, Psychological Capital Questionnaire, Friendship Quality Questionnaire, and Cyberbullying Questionnaire. Results showed that: (1) After controlling for gender, grade, and average daily online hours on weekdays and holidays, positive school climate negatively predicted adolescent cyberbullying. (2) Psychological capital partially mediated the relationship between school climate and adolescents' cyberbullying. (3) The first half of the mediating effects of "school climate—psychological capital—cyberbullying" was moderated by Friendship quality. Specifically, the positive prediction effect of school climate on psychological capital was much stronger for individuals with high friendship quality compared to those with low friendship quality. The results revealed the mechanism of school climate on adolescent cyberbullying, and the role of different types of protective factors in adolescent cyberbullying. It suggests that the school administrators and educators should pay attention to the important role of school climate, psychological capital and friendship quality in adolescent cyberbullying, which can contribute to the prevention of cyberbullying.

Keywords: school climate, cyberbullying, psychological capital, friendship quality, adolescents

亲子关系与青少年网络欺负行为: 友谊质量与心理资本的序列中介效应

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摘要 随着智能手机和计算机网络的普及,网络欺负作为一种新的欺负行为日渐增多。网络欺负会给青少

年的成长带来一系列负面影响,迫切需要学校采取相应的干预措施。家庭环境因素会对青少年网络欺负行为产生重要影响,其中缺乏良好的亲子关系更容易导致问题行为。同时处于青春期的个体,友谊质量对其的影响也日益增强。青少年知觉到的亲子关系会影响其对友谊质量的知觉,进而影响个体的发展。然而,亲子关系、友谊质量作为个体的外部因素,不一定能直接作用于外部行为,会借助其他个体内部因素发挥一定的作用,其中心理资本就是一个重要的个体内部因素。因此,本研究拟探讨亲子关系对青少年网络欺负行为的预测作用及其内部作用机制,在生态系统理论、依恋理论和一般攻击模型的基础上,建构了一个序列中介效应模型,考察青少年友谊质量和心理资本的中介作用。研究采用亲子关系量表、友谊质量量表、心理资本量表和网络欺负量表,对湖北省和福建省4所中学的1320名青少年进行问卷调查,研究结果发现:(1)亲子关系、友谊质量、心理资本和网络欺负之间两两相关显著;(2)亲子关系显著负向预测青少年网络欺负行为;(3)友谊质量和心理资本在亲子关系与青少年网络欺负行为之间起序列中介作用,具体而言,亲子关系通过两条路径影响青少年网络欺负行为,一是心理资本的单独中介作用;二是友谊质量和心理资本的链式中介作用。本研究验证了家庭系统(亲子关系)、同伴系统(友谊质量)和个人系统(心理资本)对青少年网络欺负行为的联合作用,为从家庭、同伴和个体层面预防和干预青少年网络欺负行为提供了参考。

关键词 亲子关系,网络欺负,友谊质量,心理资本,青少年

Parent-child Relationship and Cyberbullying in Adolescents: A Serial Mediation Effect of Friendship Quality and Psychological Capital

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Abstract: With the popularity of smartphones and computer networks, cyberbullying as a new form of bullying is increasing. Cyberbullying has a series of negative effects on the development of adolescents, so there is an urgent need for appropriate interventions in schools. Family factors have an important impact on cyberbullying, among which the lack of a good parent-child relationship is more likely to lead to problem behavior in adolescents. At the same time, for adolescents, the impact of friendship quality on them is also increasing. Adolescents' perceived parent-child relationship will affect their perception of friendship quality, and then affect their development. However, parent-child relationship and friendship quality are external factors, which may not directly affect individuals' behaviors, but they can play a role with the help of other internal factors of individuals, among which psychological capital is an important internal factor of individuals. Therefore, this study aims to explore the mechanism between the parent-child relationship and cyberbullying in adolescents. Based on the ecological systems theory, attachment theory, and general aggression model, a serial mediating effect model is constructed to investigate the mediating role of friendship quality and psychological capital. A sample of 1320 adolescents from 4 schools in Hubei and Fujian provinces completed the Parent-child Relationship Scale, Friendship Quality Scale, Psychological Capital Scale and Revised Cyber Bullying Inventory. The results showed that: (1) Parent-child relationship, friendship quality, psychological capital and cyberbullying were significantly correlated with each other; (2) Parent-child relationship can significantly negatively predict cyberbullying in adolescents; (3) Friendship quality and psychological capital played mediating roles between parent-child relationship and cyberbullying in adolescents. In particular, parent-child relationship affected cyberbullying through two paths: the separate mediation effect of psychological capital, and the chain mediation effect of friendship quality and psychological capital. This study validates the combined influence of family factors, peer factors, and individual factors on cyberbullying in adolescents, which provide a reference for the prevention and intervention of cyberbullying.

Keywords: parent-child relationship, cyberbullying, friendship quality, psychological capital, adolescents

SEL 教育变革视角下疫期大学生孤独感与网络欺负行为的关系 及干预对策探析

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摘要 为考察疫期大学生孤独感与网络欺负行为之间的关系, 采用孤独感量表、网络欺负量表对 1125 名大学生进行测量。结果发现: 孤独感、网络欺负、网络受欺负三者之间两两正相关; 孤独感能显著地正向预测网络欺负行为; 只有网络受欺负水平高的大学学生的孤独感才能显著预测网络欺负行为, 即网络受欺负调节孤独感与网络欺负行为的关系。社会情感学习 (SEL) 是当前教育变革的重要价值取向, 在此视角下针对疫期大学生孤独感与网络欺负行为的关系而提出了一些干预对策。

关键词 社会情感学习, 教育变革, 孤独感, 网络欺负, 干预

An Analysis of the Relationship between Loneliness and Cyberbullying among College Students and Its Intervention Countermeasures in Epidemic Period from the Perspective of SEL Education Reform

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Abstract: In order to investigate the relationship between loneliness and cyberbullying, 1125 college students were measured by the Loneliness Scale and Cyberbullying Scale. The results showed that loneliness, cyberbullying and cybervictimization were positively correlated with each other. Loneliness can significantly predict cyberbullying behavior. Only the loneliness of college students with high level of cybervictimization can predict the cyberbullying significantly, that is, the cybervictimization moderates the relationship between loneliness and cyberbullying. Social emotional learning (SEL) is an important orientation of education revolution in modern world. From this perspective, some intervention countermeasures are proposed for the relationship between loneliness and cyberbullying of college students during the epidemic period.

Keywords: Social Emotional Learning, Education Revolution, Loneliness, Cyberbullying, Intervention

(2) “网络心理专业委员会”专题研讨会 2

问题性手机使用与青少年焦虑的关系: 核心自我评价和积极应对的作用

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摘要 越来越多的研究表明, 问题性手机使用 (PSU) 与包括焦虑在内的情绪健康问题有关。然而, 一些研究并没有发现这种联系或发现这种联系存在个体差异。通过文献回顾, 我们发现青少年核心自我评价 (CSE) 和积极应对 (PC) 可能分别是 PSU 和焦虑之间联系的关键的中介变量和调节变量。通过相对无偏的参数估计方法——潜调节结构方程建模, 我们使用 428 名青少年的数据 (年龄 = 15.27±1.27 岁) 检验了我们的理论模

型。青少年完成了自我报告调查,包括 PSU、CSE、焦虑、PC 等。在控制了性别、年级和家庭所在地后,结果发现:(1) PSU 与焦虑相关不显著;(2) CSE 完全中介了 PSU 与焦虑之间的联系;(3) 积极应对调节了所有三条路径。也就是说,当青少年积极应对水平较高(而非较低)时,PSU 与焦虑显著正相关。然而,当青少年积极应对水平较低(而非较高)时,PSU 通过 CSE 与焦虑显著正相关;(4) 通过计算调节的总效应,我们发现总体而言较高(而非较低)的积极应对增强了 PSU 与焦虑的联系。这些发现进一步加深了对问题性手机使用期间青少年情绪症状形成过程的理解,为有效干预青少年情绪健康问题带来了启发。

关键词 青少年, 问题性手机使用, 核心自我评价, 焦虑, 积极应对

Problematic Smartphone Use and Adolescent Anxiety: The Roles of Core Self-Evaluation and Positive Coping

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Abstract: An increasing number of studies have documented problematic smartphone use (PSU) was linked to emotional health problems including anxiety. However, some studies have not found this link or found that there are individual differences in this link. By reviewing the literature, we assume that adolescent core self-evaluation (CSE) and positive coping (PC) may be critical mediating and moderating variables respectively. By Latent Moderated Structural Equations (LMS), which generate relatively unbiased parameter estimations, we examined our theoretical model with 428 adolescents (Mage = 15.27 years, SD = 1.27). Adolescents completed self-reported surveys, including PSU, CSE, anxiety, PC, and so on. After controlling for gender, grade, and family location, results found that: (a) PSU wasn't associated with anxiety. (b) CSE fully mediated the link between PSU and anxiety. (c) PC moderated the link between all three paths. That is, PSU associated with anxiety when individuals with higher (vs. lower) PC. However, PSU associated with anxiety through CSE when individuals with lower (vs. higher) PC. (d) by calculating the moderated total effect, we found that higher (vs. lower) positive coping promoted the effect of PSU on anxiety. These findings further deepen the understanding of the formation process of emotional symptoms during PSU and provide insights for the effective intervention of adolescent emotional health problems.

Keywords: Adolescents. Problematic smartphone use. Core self-evaluation. Anxiety. Positive coping

网络疑病症与青少年心理健康：不安全感的中介作用

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摘要 网络疑病症是指由于反复进行有关医疗信息的在线检索而导致个体过度关心自身身体健康的临床现象。鉴于新冠疫情对于个体的影响十分严重与深远,本研究拟在后疫情时代背景下探讨网络疑病症是否以及如何影响青少年的心理健康。基于心理健康的双因素模型,选取幸福感与抑郁作为心理健康指标。依据健康信念模型与需要层次理论以及以往的实证研究,考察了不安全感在网络疑病症与心理健康之间的中介作用。本研究以 1108 名中学生与大学生为被试(年龄范围 12-23 岁,平均年龄 16.78 岁,标准差 3.42; 32.5%男生),通过网络问卷进行调查。采用《网络疑病症量表》、《安全感量表》、《主观幸福感量表》和《流调中心用抑郁量表》对核心变量进行测量。在控制了人口学变量、手机成瘾、压力和 COVID-19 焦虑后,路径分析结果表明:(1) 在控制了一系列协变量后,网络疑病症水平高的个体抑郁水平较高,主观幸福感水平较低;(2) 网络疑病症会通过个体安全感的降低,进而增加其心理健康问题的风险,降低其幸福感水平。因此,本研究结果揭示了网络疑病症作为后疫情时代的重要公共卫生问题对青少年心理健康产生的不利影响,本研究中介检验结果进一步阐明了心理不安全感在这一过程中的重要中介作用。具体而言,网络疑病症水平高的个体过度担心自身健康状况,在疫情的影响下他们倾向于认为周围环境是不可控的,自身的安全感得不到保障,安全需要难以满足,这最终会影响他们的心理健康。通过识别网络疑病症对心理健康的潜在影响及个体自身安全感在其中的潜在机制,本研究为后疫情时代青少年心理健康的预防与干预提出了具有可塑性的目标。

关键词 COVID-19, 网络疑病症, 不安全感, 幸福感, 抑郁

Cyberchondria and mental health among adolescents: The mediating role of insecurity

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Abstract: Cyberchondria refers to the clinical phenomenon in which repeated Internet searches regarding health information result in excessive concerns about their own physical health. Given that the serious and far-reaching impact of the COVID-19 outbreak on individuals, this study is intended to explore whether and how Cyberchondria affect the mental health of adolescents in the context of the post-epidemic era. Based on the dual-factor model of mental health, chose both well-being and mental illness (depression) as our mental health indicators. According to the health belief model and hierarchical theory of needs as well as previous empirical research, the mediating role of insecurity between cyberchondria and mental health were investigated. A total of 1,108 middle school students and undergraduates (age ranged 12 to 23 years, $M_{age} = 16.78$ years, $SD = 0.89$; 32.5% male) through an online survey. The study variables were measured by the Short Cyberchondria Scale, the Security Questionnaire, the Subjective Well-Being Index, Center for Epidemiological Studies Depression Scale. The covariates (i.e., demographic variables, smartphone addiction, stress, and COVID-19 anxiety) were held constant in each analysis. The results of path analysis show that: (1) after controlling a series of covariates, individual who reported higher level of cyberchondria showed higher levels of depressive symptoms and lower levels of subjective well-being, and (2) psychological insecurity mediated the relationship between Cyberchondria and mental health (both well-being and depressive symptoms). Therefore, the results of this study reveal the Cyberchondria as an important public health problem in the post-epidemic era, may have adverse effects on adolescent mental health. The results of our mediating model test further demonstrate the important mediating role of psychological insecurity in this process. Specifically, individuals with high levels of Cyberchondria are overly concerned about their health, and under the influence of the COVID-19 outbreak they tend to believe that their surroundings are uncontrollable, then their safety needs are difficult to meet, which ultimately affects their mental health. By identifying the potential effects of Cyberchondria on mental health and the underlying mechanism of security, this study puts forward plastic targets for the prevention and intervention of adolescent mental health in the post-epidemic era.

Keywords: COVID-19, Cyberchondria, insecurity, well-being, depressive symptoms

儿童学校归属感与病理性网络游戏使用的关系：有调节的中介模型

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摘要 病理性网络游戏使用是指个体过度投入网络游戏，其行为失去控制，并造成个体和社会功能受损等不利后果。它不仅会造成儿童的社交孤立、睡眠不足、学业不良和生活满意度降低，还会诱发焦虑症、抑郁症、周围神经病变等身心疾病。因此，探究儿童病理性网络游戏使用的风险和保护因素，已成为备受关注的公共卫生问题。在生态系统理论和发展资源框架的视域下，学校归属感的不足可能是导致儿童形成病理性网络游戏使用的重要风险因素。但目前少有研究关注学校归属感对病理性网络游戏使用的影响及内在机制。本研究构建一个有调节的中介模型，考察心理韧性在学校归属感预测儿童病理性网络游戏使用中的中介作用，以及正念对上述中介路径的调节作用。本研究采用方便抽样的方法，选取武汉市某小学3至6年级学生进行整体施测。测量工具包括：人口学资料问卷、《病理性网络游戏使用量表》、《学校归属感量表》、《儿童青少年心理韧性量表》及《儿童青少年正念量表》。结果表明：（1）在控制了年龄之后，学校归属感负向预测病理性网络游戏使用。（2）心理韧性在学校归属感和病理性网络游戏使用间起部分中介作用。即儿童学校归属感的不足，会降低心理韧性，进而增加病理性网络游戏使用。（3）正念调节“学校归属感→心理韧性→

病理性网络游戏使用”的前半段路径,即当儿童正念水平较高时,能缓冲学校归属感不足对心理韧性的负向预测作用。本研究发现,学校归属感不足,会损耗儿童的心理韧性,最终导致病理性网络游戏使用的产生;同时,较高的正念水平能有效补偿学校归属感不足对儿童心理韧性的不良影响。本研究揭示了学校系统和个人系统对病理性网络游戏使用的作用机制,对儿童病理性网络游戏使用的防治防控提供了理论依据。

关键词 儿童,病理性网络游戏使用,学校归属感,心理韧性,正念

Relationship between children's school belonging and pathological online games use: A Moderated Mediating Model

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Abstract: Pathological online game use refers to the over-indulgence of individuals in online games, the loss of control of their behavior, and resulting in individual and social function damage as well as other adverse consequences. It not only causes social isolation, lack of sleep, poor school performance and reduced life satisfaction, but also causes physical and mental disorders such as anxiety, depression, and peripheral neuropathy. Therefore, it has become a public health issue of great concern to explore the risk and protective factors of children's pathological online game use. In the perspective of ecological systems theory and development resource framework, the lack of school belonging may be an important risk factor for children's pathological online game use. However, few studies have focused on the effect of school belonging on pathological online game use and its underlying mechanism. This study constructs a moderated mediating model to examine the mediating role of resilience in school belonging in predicting children's pathological online game use, and the moderated role of mindfulness in this mediating path. In this study, the convenience sampling method was adopted to select students from grade 3 to grade 6 in a primary school in Wuhan. The instruments included demographic data questionnaire, Pathological Online Game Use Measure, School Belonging Measure, Child and Youth Resilience Measure, and Child and Adolescent Mindfulness Measure. The results show that: (1) after controlling for age, school belonging negatively predicted pathological online game use. (2) resilience plays a part of mediating role between school belonging and pathological online game use. That is, children's lack of school belonging will reduce the resilience, thus increase the possibility of pathological online game use. (3) mindfulness moderated the first half path of "School belonging → resilience → pathological online game use", that is, the negative predictive effect of school belonging on resilience can be buffered when children have a relatively high mindfulness. This study found that the lack of school belonging can damage the child resilience and eventually lead to the pathological online game use. At the same time, a higher level of mindfulness can effectively reduce the negative impact of school belonging on child resilience. This study reveals the mechanism of school system and personal system on pathological online game use, and also provides theoretical basis for prevention and control of children's pathological online game use.

Keywords: children, pathological online games use, school belonging, well-being, mindfulness

智能手机使用与自我扩展的关系: 认知专注与心理需求网络满足的链式中介作用

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摘要 作为现代社会最为普遍的手持工具, 智能手机与人们的生活有着密切的联系。以往的研究大量地讨论了智能手机使用对于个体心理和行为的消极影响, 但少有研究从自我扩展的视角考察了智能手机使用与自我的关系, 即手机自我扩展。自我扩展是个体通过获取新的资源、视角、身份等以促进自我成长和提升的根本动机。青少年处于自我概念发展的重要时期。他们可能会更加积极主动地通过各种各样的途径扩展自我。在与智能手机的互动中, 青少年可能会深度地沉浸其中, 并从中感知到更多的心理需求满足, 进而将多功能

性的智能手机视为获取知识,丰富自我的有效途径。因此,基于自我扩展模型,本研究旨在考察青少年智能手机使用与手机自我扩展的关系,并进一步探究认知专注和心理需求网络满足在其中的作用机制。研究采用智能手机使用问卷、手机自我扩展量表、认知专注量表和心理需求网络满足量表,对武汉市某中学 874 名高中生进行了问卷调查。最终得到有效问卷 866 份,其中男生 389 人,女生 477 人,被试平均年龄为 15.96 岁($SD = 0.84$)。结果表明:(1)智能手机使用、认知专注、心理需求网络满足和手机自我扩展存在显著的正相关关系;(2)青少年的智能手机使用能够正向预测其手机自我扩展;(3)认知专注、心理需求网络满足在智能手机使用对手机自我扩展的影响中发挥着链式中介作用。本研究结果进一步揭示了智能手机与自我的关系,加深人们对智能手机的影响的认识,启示父母应鼓励青少年进行有益的智能手机活动以促进自我发展。

关键词 智能手机使用,自我扩展,认知专注,心理需求网络满足

Smartphone Use and Self-Expansion via Smartphone: The Mediating Roles of Cognitive Absorption and Online Basic Psychological Need Satisfaction

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Abstract: As the most popular handheld tech tool in modern society, smartphones have been closely tied to people's lives. Previous studies widely discussed the negative influence of smartphone use on people's psychology and behavior. However, few studies examined the relationship between smartphone use and the self from the perspective of self-expansion, that is self-expansion via smartphone. Self-expansion is the basic motivation which drives people to gain resources, perspective and identities for growth and improvement. Adolescents are experiencing an important period of self-concept development. They may be fundamentally motivated to improve and expand the self through various ways. When interacting with the smartphone, adolescents may be deeply absorbed and perceive more need satisfaction, thus, they tend to consider the multi-functional smartphone as an efficient way to acquire knowledge and enrich the self. Therefore, based on the self-expansion model, this study aimed to examine the relationship between adolescents' smartphone use and self-expansion via smartphone, and further explored the mechanisms of cognitive absorption and online basic psychological need satisfaction. The current study used the smartphone use questionnaire, smartphone self-expansion scale, cognitive absorption scale and online basic psychological need satisfaction scale, and investigated 874 high school students from a high school in Wuhan. Finally, a total of 866 participants provided valid data, and there were 389 male and 477 female students. The average age of all participants was 15.96 ($SD = 0.84$). The results showed that: (1) There were significant positive correlations among smartphone use, cognitive absorption, online basic psychological need satisfaction, and self-expansion via smartphone; (2) Adolescents' smartphone use can positively predict self-expansion via smartphone; (3) Cognitive absorption and online basic psychological need satisfaction served as the underlying mediators of the relation by which smartphone use is associated with self-expansion via smartphone. These findings help to reveal the relationship between smartphones and the self, and deepen people's understanding of the influence of smartphones. This study also enlightens parents to encourage beneficial smartphone activities to promote adolescents' self-development.

Keywords: smartphone use, self-expansion, cognition absorption, online basic psychological need satisfaction

父母低头行为降低青少年核心自我评价的作用机制

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摘 要 核心自我评价是个体对自身价值和能力的最基本评价。青少年期是自我评价发展的重要时期。家庭是影响青少年社会发展的重要环境变量。家庭作为一个生态环境的子系统,父母通过实际参与和指导,可以直接影响儿童和青少年的行为和人格特质,促进孩子自我评价的发展。在数字媒介快速发展的当下,手机已

经成为生活中必不可少的设备。父母使用手机忽视和排斥孩子的情境已逐渐成为常态。父母低头行为是指在家庭环境中，父母低头使用手机而忽视亲子的面对面交流，使孩子感受到被父母忽视的现象。已有研究表明父母低头行为会增加青少年手机成瘾、抑郁的风险。但少有研究者关注父母低头行为对青少年自我评价的影响。本研究旨在探讨父母低头行为对青少年核心自我评价的影响，以及基本心理需求满足的中介作用和反刍思维的调节作用。本研究采用父母低头量表、基本心理需求满足量表、反刍思维量表、核心自我评价量表对 811 名青少年进行调查。结果发现：(1)父母低头行为负向预测青少年的核心自我评价；(2)基本心理需求满足在父母低头行为与核心自我评价之间起部分中介作用；(3)反刍调节了基本心理需求满足与核心自我评价之间的关系。与低反刍水平的青少年相比，高反刍思维水平的青少年在基本心理需求没有得到满足时，核心自我评价更易受贬损。结果表明：父母低头行为会使青少年的基本心理需求没有得到满足，进而贬损青少年的核心自我评价。在此过程中，较高的反刍思维水平会增强基本心理需求没有得到满足对核心自我评价的消极作用。本研究结果有助于理解青少年核心自我评价的内在机制及其与父母低头行为的关系。

关键词 父母低头行为，核心自我评价，基本心理需求满足，反刍思维

Parental Phubbing Decreases Adolescents' Core Self-evaluation

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Abstract: Core self-evaluation is the most basic evaluation of individuals' value and ability. Adolescence is an important period for the development of self-evaluation. Family is an important environmental variable affecting adolescents' psychological development. As a subsystem of the ecological environment, parents can affect the behavior and personality traits of adolescents and promote the development of children's self-evaluation through practical participation and guidance. With the rapid development of digital media, the mobile phone has become an indispensable device in life. The situation that parents ignore and reject their children using mobile phones has gradually become the norm. Parental phubbing means that in the family environment, parents use their mobile phones and ignore face-to-face communication with their children so that children feel neglected by their parents. Studies have shown that parental phubbing increased the risk of adolescents' mobile phone addiction and depression. However, few researchers pay attention to the impact of parental phubbing on adolescents' self-evaluation. The purpose of this study was to explore the impact of parental phubbing on adolescents' core self-evaluation, the mediating role of basic psychological needs satisfaction, and the moderating role of rumination. In this study, 811 adolescents completed the Parental Phubbing Scale, Basic Psychological Needs Satisfaction Scale, Rumination Scale, and Core Self-evaluation Scale. The results showed that: (1) parental phubbing negatively correlated with adolescents' core self-evaluation; (2) basic psychological needs satisfaction played a partial mediating role between parental phubbing and core self-evaluation; (3) rumination moderated the relationship between basic psychological needs satisfaction and core self-evaluation. Compared with adolescents with low rumination level, adolescents with high rumination level are more vulnerable to derogation when their basic psychological needs are dissatisfied. The results show that parental phubbing deteriorated adolescents' core self-evaluation through decreasing basic psychological need satisfaction. In this process, a higher level of rumination enhanced the negative effect of basic psychological needs satisfaction on core self-evaluation. The results of this study are helpful to understand the underlines mechanism of adolescents' core self-evaluation and its relationship with parental phubbing.

Keywords: parental phubbing, core self-evaluation, basic psychological need satisfaction, rumination

(3) “网络心理专业委员会”专题研讨会 3

家庭社会经济地位与数字素养的关系：父母网络干预的中介作用

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摘要 在当前信息社会, 数字素养已成为个体的基本素养, 是影响个体数字使用及其发展适应结果的重要因素。在这一背景下, 数字素养的影响因素及其干预对策已成为相关领域研究者关注的热点问题。基于此, 本研究拟探讨在小学生和初中生群体中家庭社会经济地位对数字素养的影响及其内在机制——积极父母干预和限制性父母干预在其间的中介作用。本研究采用方便取样方法, 在湖北省选取 4 至 8 年级的 1058 名学生 ($M_{age}=11.82\pm1.43$; 男生 493 人, 46.60%) 为研究对象, 使用家庭社会经济地位量表、父母干预量表以及数字素养量表对学生进行调查。结果发现: (1) 家庭社会经济地位、积极父母干预、限制性父母干预和数字素养两两之间均呈显著正相关; (2) 家庭社会经济地位对数字素养的直接正向预测效应显著; (3) 采用 Hayes 编制的 SPSS 宏中的 Model 4 对父母干预进行并行中介效应分析发现, 积极父母干预在家庭社会经济地位和数字素养关系中的中介效应显著, 但限制性父母干预在这一关系中的中介效应不显著; 具体而言, 家庭社会经济地位显著正向预测积极父母干预和限制性父母干预, 积极父母干预显著正向预测数字素养。这表明家庭社会经济地位不仅能对数字素养产生直接正向预测作用, 还通过增加积极父母干预对数字素养产生正向预测作用。本研究不仅有助于加深对数字素养影响因素的理解, 还能为中小学生的数字素养的干预提升提供实证依据。

关键词 家庭社会经济地位, 数字素养, 积极父母干预, 限制性父母干预

The Association Between Family Socioeconomic Status and Digital Literacy: The Mediating Role of Parental Internet Mediation

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Abstract: In the current information society, digital literacy has become a basic literacy, which has an important impact on digital use and the outcomes of development and adaptation. In this context, the influencing factors of digital literacy and its intervention strategies have become a hot issue for researchers in related field. Therefore, the present study intends to investigate the influence of family socioeconomic status on digital literacy among elementary and junior high school students and its mechanism—the mediating role of active parental mediation and restrictive parental mediation. This study used convenience sampling method, selected Grade 4-8 students in Hubei province 1058 ($M_{age}=11.82\pm1.43$; boys 493, 46.60%) for the study. Participants completed the following questionnaires: Family Socioeconomic Status Scale, Parental Mediation Scale and Digital Literacy Scale. The results showed that: (1) Family socioeconomic status, active parental mediation, restrictive parental mediation and digital literacy are all significantly positively correlated; (2) Family socioeconomic status has a significant direct positive predictive effect on digital literacy; (3) Using Model 4 in the SPSS macro compiled by Hayes to analyze the mediating effect of parental mediation and found that the mediating effect of active parental mediation in this relationship between

family socioeconomic status and digital literacy is significant, but the mediating effect of restrictive parental mediation in this relationship is not significant. Specifically, family socioeconomic status significantly positively predicts active parental mediation and restrictive parental mediation, and active parental mediation significantly positively predicts digital literacy. This shows that family socioeconomic status can not only directly predict digital literacy, but also positively predict digital literacy by increasing active parental mediation. This research not only helps to deepen the understanding of the factors affecting digital literacy, but also provides empirical evidence for the intervention and improvement of digital literacy among primary and middle school students.

Keywords: family socioeconomic status, digital literacy, active parental mediation, restrictive parental mediation

父母积极干预与学习适应的关系： 视频游戏使用的中介作用及越轨同伴交往的调节作用

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摘要 学习适应是教育者及父母非常关注的问题。研究发现, 当儿童有良好的学习习惯时就会涉及到较好的学习适应, 而学习适应与学习效果有直接关系。学习适应不良严重影响儿童学业和身心健康。因此, 有必要识别影响儿童学习适应的因素及其作用机制。众多研究表明, 父母干预是影响儿童行为的重要因素。但是, 少有研究在学习适应领域探究父母干预的影响及其作用机制。本研究通过构建一个有调节的中介模型, 旨在考查视频游戏使用在父母积极干预与儿童学习适应之间的中介作用以及越轨同伴交往在该过程的调节作用。本研究采用随机整群抽样法对湖北省两所小学的 683 名小学生 (平均年龄 11.1 岁, $SD=0.92$) 进行调查。测量工具包括人口学背景资料问卷、“父母积极干预问卷”、“视频游戏行为问卷”、“学习适应问卷”以及“越轨同伴交往问卷”。结果表明: (1) 在控制了年龄、性别之后, 父母积极干预显著正向预测学习适应。(2) 父母积极干预显著负向预测视频游戏使用行为, 进而增加儿童学习适应能力, 即视频游戏使用在父母积极干预和儿童学习适应之间起着中介作用。(3) 父母积极干预通过视频游戏使用对儿童学习适应的间接作用受到越轨同伴交往的调节, 越轨同伴交往调节了视频游戏使用与儿童学习适应的关系, 即视频游戏使用行为对儿童学习适应的影响, 随着越轨同伴交往程度的提高而降低。因此, 父母积极干预对儿童学习适应的影响是有调节的中介效应。

关键词 父母积极干预, 学习适应, 视频游戏使用, 越轨同伴交往

Parental Active Internet Mediation and Children's Academic Adaptation: The Mediating Role of Video Gaming and Moderating Role of Deviant Peer Affiliation

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Abstract: Academic adaptation is a concern of educator and parents. Studies have found that good learning habits involve academic adaptation, and academic adaptation is directly to the learning effect. Lower academic adaptation seriously affects children's academic and physical and mental health. Therefore, it is necessary to identify the

influencing factors and mechanisms of children's academic adaptation. Although numerous research has shown that parental mediation is an important factor affecting children's behavior, less is known about the impact of parental mediation on academic adaptation and the process and mechanism underlying this association. The present study would test a moderated mediation model in which video gaming served as a mediator between parental active mediation and children's academic adaptation and deviant peer affiliation moderated the mediation processes. Participants were 683 children (mean age =11.1 years, SD=0.92) recruited from 2 primary schools in Hubei province of china through stratified and random cluster sampling. They completed a series of questionnaires regarding demographic variables, parental active mediation, video gaming, deviant peer affiliation, academic adaptation. The results indicated that: (a)parental active mediation was positively associated with academic adaptation among children after controlling for gender, age; (b) parental active mediation reduced video gaming among children, which in turn increased academic adaptation, such that video gaming mediated the relationship between parental active mediation and academic adaptation; and (c)The indirect effects of parental active mediation on academic adaptation through video gaming were moderated by deviant peer affiliation. Deviant peer affiliation moderated relationship between video gaming and academic adaptation, that is, the influence of video gaming on academic adaptation reduced with the improvement of deviant peer affiliation. Therefore, the influence of parental active mediation on children's academic adaptation is a moderated mediation model.

Keyword: parental active mediation, academic adaptation, video gaming, deviant peer affiliation, moderated mediation

父母网络监管对青少年病理性网络使用的影响： 数字素养的中介作用

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摘 要 在现代信息社会，网络技术及其诸多应用在人们生活中发挥着日益重要的作用，但伴随着这一趋势，病理性网络使用的问题也日益凸显，特别是在青少年群体中更是如此。病理性网络使用在青少年群体中不仅具有较高的发生率，还会对青少年个体的身心健康带来严重的消极影响。基于此，青少年的病理性网络使用及其影响因素一直是社会关注的热点问题。以往研究指出，家庭相关因素特别是父母监管，是影响青少年包括病理性网络使用在内的诸多社会适应指标的重要环境因素；且伴随着网络的普及，父母的监管行为也延伸到网络使用领域，研究者将其界定为父母网络监管。与此同时，数字素养也日益受到研究者和社会的广泛关注，它指个人能够正确使用数字工具和设备、利用数字资源等的意识、态度和能力；作为个人在数字社会中生存所需的基本能力，数字素养是影响个体在数字化时代发展适应的重要因素，特别是它有助于塑造良好的使用行为，减少个体沉迷数字使用的风险。基于以上论述，在生态科技亚系统理论的视角下，本研究拟探讨父母网络监管行为（积极监管和限制性监管）对青少年病理性网络使用的影响及其内在作用机制——数字素养的作用。使用父母网络监管问卷、青少年病理性互联网使用量表和数字素养量表对 533 名青少年进行调查，结果发现：（1）父母积极和限制性监管、以及数字素养均与病理性网络使用呈显著负相关；（2）积极监管不仅可以直接影响病理性网络使用，还能通过数字素养的中介作用产生影响；但数字素养在限制监管与病理性网络使用关系中的中介作用不显著。本研究结果表明，虽然积极和限制性网络监管均有助于降低青少年病理性网络使用的风险，但积极监管还有助于培养青少年个体的数字素养水平；这不仅有助于加深我们对父母监管的作用、数字素养和病理性网络使用影响因素及其作用机制的理解，还能为合理健康的网络使用、父母监管方式的选择以及青少年数字素养的培养提供更具针对性和有效性的指导。

关键词 父母监管，病理性网络使用，数字素养，青少年

The Influence of Parental Mediation on Adolescents' Problematic Internet Use: The Mediating Role of Digital Literacy

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Abstract: In the modern information society, Internet technology and its various applications are playing an increasingly important role in individuals' lives. However, along with this trend, the problem of problematic Internet use is also becoming more and more prominent, especially among adolescents. Problematic Internet use not only has high incidence in adolescents, but also has a serious negative impact on adolescents' physical and mental health. Based on this, adolescents' problematic Internet use and its influencing factors have always been a hot issue in society. Previous research pointed out that family-related factors, especially parental mediation, are important environmental factors affecting many social adaptation indicators of adolescents (including problematic Internet use); and with the popularization of the Internet, parental mediation behavior also extended to the field of network use. Researchers define it as parental mediation of Internet use. At the same time, digital literacy has also received wide attention from researchers and society. It refers to the awareness, attitude and ability of individuals to correctly use digital tools and equipment, and use digital resources in a specific situation; in the digital society, digital literacy is an important factor that affects the development and social adaptation of individuals. In particular, it helps to shape good use behaviors and reduce the risk of individuals indulging in digital technology. Based on the discussion above, this study aimed to examine the influence of parental Internet mediation (active and restrictive) on adolescents' problematic Internet use, as well as the mediating role of digital literacy. A sample of 533 adolescents (mean age = 14.92 years) were recruited to participate into the study. They were asked to complete a set of questionnaires, on the *Parental Internet Mediation Scale*, *Problematic Internet Use in Adolescents Scale* and *Digital Literacy Scale*. Based on the perspective of the ecological techno-subsystem theory, a mediation model was constructed to analyze the mediating effects of digital literacy in the association between parental mediation and problematic Internet use. Results indicated that: (1) Parents' active and restrictive mediation, as well as digital literacy, were all negatively correlated with problematic Internet use. (2) Active mediation was not only associated with problematic Internet use directly, but also could influence problematic Internet use through the mediating effect of digital literacy; however, the mediating effect of digital literacy was insignificant in the relationship between restrictive mediation and problematic Internet use. The present study reveals that although both active and restrictive Internet mediation can help reduce the risk of adolescents' problematic Internet use, active mediation can also help cultivate adolescents' digital literacy. It may contribute to a better understanding on the association between parental mediation and adolescents' problematic Internet use. Even with several limitations, the findings of this study still have implications for the prevention and intervention of adolescents' problematic Internet use, as well as how to conduct appropriate mediation

Keywords: Parental Mediation, Problematic Internet Use, Digital Literacy, Adolescents

媒介素养的新结构：一项质化分析

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摘要 互联网是当今社会生活中不可或缺的信息传播渠道。媒介素养是人们利用互联网获取信息和解决问题的必备能力，是21世纪公民必备的素质之一，也是21世纪学生发展的核心素养之一。尽管已有大量研究对媒介素养的结构进行了充分讨论，但目前较为成熟的媒介素养结构模型仍有一些有待完善之处。信息过载时代下，应该从媒介使用知识和媒介道德行为的视野来探讨媒介的科学使用。为进一步完善媒介素养的结构，

本研究对 30 名大学生（其中，男生 15 名，女生 15 名；平均年龄为 20.93 岁，标准差为 1.39）开展半结构化访谈，并采用协商一致的质的研究方法对访谈结果进行分析。结果发现，媒介素养是一个 3（知识性、批判性、道德性）×2（获取，创作）的多维交叉结构，共包含 6 个一级维度：知识性获取、批判性获取、道德性获取、知识性创作、批判性创作、道德性创作。每个一级维度下有 2-4 个二级维度，共有 18 个二级维度。对每个维度的含义及其与现有理论和研究的关系进行了讨论。本研究还发现，大学生对媒介信息可靠性的判断较为理性并体现出一定的质疑精神。但是由于缺乏相关的媒介知识，大部分学生将焦点放在媒介信息本身，而不是媒介信息本身是如何构建的以及创作媒介信息的积极性上。新结构将媒介知识和媒介道德行为考虑其中，既丰富了媒介素养的结构，还符合我国文化特征和信息时代的发展需求，为后续媒介素养的量化研究和高校的媒介素养教育提供了新思路。

关键词 媒介素养，知识性，批判性，道德性

New structure of media literacy: a qualitative analysis

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Abstract: Internet is an indispensable channel of information dissemination in today's social life. Media literacy is the necessary ability for people to obtain information and solve problems by using the Internet, one of the necessary qualities for citizens in the 21st century, and one of the core qualities for students' development in the 21st century. Although a large number of studies have fully discussed the structure of media literacy, the mature model of media literacy structure still has some problems to be improved. In the age of information overload, we should discuss the scientific use of media from the perspective of media use knowledge and media moral behavior. In order to further improve the structure of media literacy, this study investigated 30 college students (including 15 females and 15 males; The average age is 20.93 years old, and the standard deviation is 1.39). Semi-structured interviews were conducted, and the results of interviews were analyzed by consensus qualitative research methods. The result showed that media literacy is a multi-dimensional cross structure of 3 (knowledge, criticism and morality) ×2 (acquisition and creation), which included six first-level dimensions: knowledge acquisition, critical acquisition, moral acquisition, knowledge creation, critical creation and moral creation. There were 2-4 secondary dimensions under each primary dimension, with a total of 18 secondary dimensions. The meaning of each dimension and its relationship with existing theories and research were discussed. This study also found that college students' judgment on the reliability of media information was rational and reflected a certain spirit of questioning. However, due to the lack of relevant media knowledge, most students focused on the media information itself, rather than how the media information itself was constructed and the enthusiasm of creating the media information. The new structure takes media knowledge and media moral behavior into account, which not only enriches the structure of media literacy, but also meets the development needs of Chinese cultural characteristics and information age, and provides new ideas for the follow-up quantitative research of media literacy and media literacy education in colleges and universities.

Keywords: media literacy, knowledge, criticism, morality

自我扩展的科技陷阱：手机自我扩展对智能手机成瘾的影响

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摘 要 智能手机成瘾是指个体由于对智能手机的过度使用行为而导致其社会功能受损、并带来心理和行为问题的一种新型行为成瘾，而青少年作为该成瘾行为的易感人群，他们智能手机的使用问题备受研究者关注。以往关于青少年智能手机成瘾的研究大多集中于家庭层面（父母粗暴养育、科技干扰）、个人特质层面（神经质、回避型依恋、感觉寻求倾向），但极少有研究聚焦于自我层面变量（手机自我扩展）。然而根据以往研究与自我扩展理论，手机自我扩展对青少年智能手机成瘾具有重要影响。鉴于此我们有必要探究其中的内在

机制。基于自我扩展理论和理性成瘾理论,本研究构建了一个有中介的调节模型来检验注意控制在青少年手机自我扩展和问题性智能手机之间的中介作用以及这一中介效应是否被内部觉知所调节。采用手机自我扩展量表、注意控制量表、内部觉知量表以及智能手机成瘾量表对 863 名中学生($M_{\text{年龄}} = 15.96$ 岁)进行调查研究。结果表明:(1)手机自我扩展显著正向预测青少年智能手机成瘾,并且注意控制在其中起部分中介的作用;(2)个体的内部觉知调节中介效应的前半段,具体而言,随着内部状态意识水平的降低,通过智能手机进行的自我扩展与注意控制之间的相关性变得更强。结果显示,通过对注意控制和内部觉知的合理干预,可以一定程度减少手机自我扩展对青少年智能手机成瘾的消极影响。

关键词 手机自我扩展, 智能手机成瘾, 注意控制, 内部觉知, 青少年

The technology trap of self-expansion: The effect of self-expansion via smartphone on smartphone addiction

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Abstract : Smartphone addiction usually refers to a new type of behavioral addiction in which an individual's uncontrollable overuse of smartphones, which leads to impaired social functioning and psychological and behavioral problems. As a vulnerable group, the overuse of smartphones by adolescents has triggered increased concerns. Previous studies have focused on smartphone addiction at the family level (e.g., parental rough nurturing, technological interference) or personality traits(e.g., neuroticism, avoidant attachment, sensory seeking), but few researchers stay on important variables on the ego level(self-expansion via smartphone). However, according to previous research and self-expansion theory,self-expansion via smartphone has a significant impact on adolescent smartphone addiction. In view of this, it is necessary to explore the underlying mechanisms. Based on self-expansion theory and rational addiction theory, a mediated moderation model was constructed to examine the mediating role of attentional control between adolescent self-expansion via smartphone and smartphone addiction and whether this mediating effect was moderated by internal awareness. A total of 863 middle school students ($M_{\text{age}} = 15.96$ years) completed measures of self-expansion via smartphone, attentional control, internal state awareness, and smartphone addiction. The results showed that (1)self-expansion via smartphone significantly and positively predicted adolescent smartphone addiction and that attentional control partially mediated this effect, and (2) individuals' internal awareness moderated the first half of the mediating effect. Specifically, the correlation between self-expansion via smartphone and attentional control became stronger as the level of internal state awareness decreased. The results suggest that the negative effects of self-expansion via smartphone on adolescent smartphone addiction can be reduced to some extent through reasonable interventions for attentional control and internal awareness.

Keywords : self-expansion via smartphone, smartphone addiction, attentional control, internal state awareness, adolescents

(4) “网络心理专业委员会”专题研讨会 4

网络电子游戏过程中前额叶功能活动的实时功能近红外光谱监测

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摘要 世界卫生组织近期在 ICD-11 中将电子游戏障碍列为了精神疾病的一种。电子游戏障碍的发病可能与长期玩电子游戏所引发的脑可塑性改变有关。之前有实验证据表明: 频繁地玩电子游戏会影响大脑前额叶皮层 (prefrontal cortex, PFC) 以及其它一些脑区的结构、功能与网络连接。为进一步探究电子游戏相关脑可塑性改变的神经机制, 我们在本研究中利用功能近红外光谱 (fNIRS) 技术, 实时监测了被试在完成一局多人线上对战竞技游戏 (massively multiplayer online battle arena, MOBA)——英雄联盟 (League of Legends, LOL) 的过程中三个 PFC 亚区中的氧合及去氧血红蛋白含量的变化, 并用之反映这些脑区在游戏过程中的功能 (负) 激活情况。我们对游戏开始阶段以及一些特定游戏事件相关的脑激活进行了分析, 同时对比了高段位玩家与低段位玩家脑激活的异同。结果表明: 游戏开始伴随有腹外侧前额叶 (ventrolateral prefrontal cortex, VLPFC) 的显著正激活以及背外侧前额叶 (dorsolateral prefrontal cortex, DLPFC) 和额极区 (frontal pole area, FPA) 的显著负激活。特定游戏事件 (如击杀敌人或被敌人击杀) 伴随有锁时 (time-locked) 且区域特异性的 PFC 响应; 但并不是所有游戏事件均是如此 (如推塔)。此外, 我们还发现击杀敌人和被敌人击杀这些游戏事件相关的 FPA 响应受到被试游戏段位的影响。这些实验结束表明: fNIRS 技术可被用于实时监测网络电子游戏过程中 PFC 的功能活动, 且具有较好的生态效度。

关键词 功能近红外光谱, 网络游戏, 前额叶

Real-time monitoring prefrontal activities during on-line video game playing by functional near-infrared spectroscopy

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Abstract: Gaming disorder may be linked to brain neuroplasticity induced by frequent video game playing (VGP). It is well-documented that structure, function and connectivity of the prefrontal cortex (PFC) are affected by VGP. In this study, functional near-infrared spectroscopy (fNIRS) was used to monitor real-time changes of hemodynamics/oxygenation in the PFC of subjects playing a massively multiplayer online battle arena (MOBA) video game, League of Legends (LOL), under naturalistic conditions. The regional brain activities related to game onset and specific game events were assessed, and compared between high-rank and low-rank players. It was demonstrated that game onset was associated with a significant activation in the ventrolateral prefrontal cortex (VLPFC) and concomitant deactivations in the DLPFC and frontal pole area (FPA). Certain game events, such as Slaying and Slain, were associated with time-locked and brain region-specific PFC responses, but not the others, for example, Destroying A Turret. Furthermore, it was shown that the player's rank had significant modulatory effects on the game event-related PFC responses, especially for the event with negative outcome or valence (i.e., Slain). It is concluded that it is feasible to use fNIRS to monitor real-time prefrontal activities during on-line VGP under naturalistic settings.

Keywords: functional near-infrared spectroscopy, on-line video games, prefrontal cortex

脑岛在网络游戏成瘾中的重要性：一项 fMRI 研究

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摘要 网络游戏障碍（IGD）是一个令人关注的需要进一步研究的问题。在本研究中我们尝试考察其神经机制，尤其是脑岛在其中的重要作用。根据我们之前提出的三元神经认知模型，我们假设（a）电子游戏线索会引起玩家与对照组之间更强的奖赏系统激活和较弱的前额叶激活；（b）玩家的 IGD 得分与奖励系统的激活呈正相关，与前额叶区域的激活呈负相关，（c）剥夺视频游戏会导致脑岛激活的增加，尤其是当游戏者接触视频游戏线索（相比于中性线索）时；以及（d）在剥夺条件下，脑岛与其他两个神经系统之间会分别产生正向和负向耦合。实验是招募了两组被试（长期游戏玩家与对照组），所有参与者都需要面对游戏刺激与中性刺激，而对于游戏玩家还需要在剥夺游戏时和正常状态下两个时间参加 fMRI 扫描。fMRI 结果显示 IGD 评分与右腹纹状体的活动呈正相关，与右背外侧前额叶皮层（DLPFC）的活动呈负相关。当观察剥夺状态下的视频游戏线索时，左脑岛皮层活动最高。最后，与在剥夺条件下观看对照视频时相比，左脑岛与左腹纹状体之间的耦合增加，与左 DLPFC 的耦合减少。这些结果说明脑岛在平衡剩下两个系统的激活，以达到一个平衡，这揭示了游戏成瘾背后的脑机制。

关键词 决策，功能磁共振成像，脑岛皮层，网络游戏障碍，内感受意识，三元神经认知模型

The role of insula in internet game disorder: an fMRI study

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Abstract: Internet gaming disorder (IGD) is a concerning issue that requires further research. Here, we seek to examine its neural etiology with an emphasis on the role of the insula. To do so, we relied on the tripartite neurocognitive model of addictive behaviors as applied to IGD. We hypothesized that (a) video game cues will elicit stronger reward system activation and weaker prefrontal activation in gamers vs controls, (b) the IGD scores of gamers will be positively associated with activation of the reward system and negatively with activation of prefrontal regions, (c) deprivation from video gaming will result in increased activation of the insula, when gamers are exposed to video game cues vs to neutral cues, and (d) in deprivation conditions, there will be positive and negative coupling, respectively, between activation of the insula and the reward and prefrontal regions in gamers. We tested these hypotheses with a design with one between-subjects factor (gamers vs controls) and two within-subject factors: stimuli (gaming vs neutral; for all participants) and session (deprivation vs satiety; only for gamers). Findings based on functional magnetic resonance imaging (fMRI; applied to all 52 subjects, 26 gamers, and 26 controls) and psychophysiological interaction (PPI; applied to the 26 gamers) engaged in a video reactivity task supported our assertions. The IGD score positively correlated with activity in the right ventral striatum and negatively with activity in the right dorsolateral prefrontal cortex (DLPFC). Left insular cortex activity was the highest when observing video gaming cues under deprivation. Lastly, there was an increased coupling between the left insula and left ventral striatum and a decreased coupling with left DLPFC when observing video gaming cues compared with when watching control videos in the deprivation condition.

Keywords: decision making, fMRI, insular cortex, internet gaming disorder, interoceptive awareness, tripartite neurocognitive model

药物线索诱导的背外侧前额叶皮层的激活预测海洛因依赖者的治疗结果

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摘要 药物滥用和成瘾是世界范围的健康问题。然而, 很少有研究使用 fMRI 来研究海洛因依赖者线索反应后的大脑激活与治疗结果之间的关系。为了丰富这一领域的知识, 我们采集了 29 名海洛因使用障碍患者和 23 名健康对照者的脑功能成像。结果显示, 海洛因使用者在接触毒品相关线索时, 左背外侧前额叶皮层、左侧苍白球、左侧丘脑、右侧额叶皮层和双侧楔前叶的大脑活动增加。两组参与者对色情图片的大脑反应没有显著差异。此外, 我们对 29 名海洛因依赖者进行了治疗和跟踪, 最后我们对 15 名海洛因依赖者进行了治疗后渴望评分。毒品相关线索诱导的左背外侧前额叶皮层激活与治疗前后渴望改变呈正相关。综上所述, 研究表明, 海洛因使用障碍患者在暴露于毒品相关线索时, 其大脑活动是独特的。此外, 我们的结果表明, 毒品相关线索诱导的左背外侧前额叶皮层的激活可以预测海洛因依赖者的治疗结果。

关键词 功能磁共振成像, 海洛因, 依赖性, 毒品线索, 色情线索

Activation of DLPFC induced by Drug Cue predicts treatment outcomes in heroin dependent individuals

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Abstract: Drug abuse and addiction are worldwide health problems. However, few studies have used fMRI to investigate the correlation between brain activation following cue-reactivity and treatment outcomes in the heroin dependent individuals. To enrich knowledge in this field, functional brain imaging was conducted during a cue-reactivity paradigm task in 29 individuals with heroin use disorder, and 23 healthy control subjects. The results showed that heroin user have increased brain activity in the left dorsolateral prefrontal cortex(DLPFC), the left pallidum, the left thalamus, the right frontal cortex (OFC) and the bilateral PCC/precuneus, when exposed to drug-related cues. No significant differences in brain activity in response to pornographic images were found between the two groups. Additionally, we treated and followed 29 heroin dependent individuals, and we ended up with a post-treatment craving score for 15 heroin dependent individuals. The activation of DLPFC induced by drug-related cues was positively correlated with alterations in craving before treatment and after treatment. In conclusion, the present study indicates that, individuals with heroin use disorder have unique brain activity when exposed to drug-related cues. Additionally, our results illustrate that the activation of DLPFC induced by drug-related cues predicted treatment outcomes in heroin dependent individuals.

Keywords: fMRI, heroin, dependent, drug cued, erotic cued

网络游戏成瘾的心理行为干预及起效的脑机制

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摘要 儿童青少年网络游戏成瘾已经成为世界性的心理健康问题。游戏成瘾自 2013 年和 2019 年分别被精神疾病诊断和统计手册 (第 5 版) 和国际疾病分类体系 (第 11 版) 收录以后, 得到了越来越多的关注。总结

以往围绕这一问题的干预研究，心理行为干预仍然是主流模式；特别是以认知行为疗法为主的个体、团体干预可改善个体对网络使用的不良认知、减少网络游戏时间、改善网络成瘾程度。此外，已有的研究还围绕个体的冲动性、渴求和不良家庭关系等重点影响因素进行了一定的探索，也初步认为能够改善成瘾问题。我们课题组在过去的几年内相继进行了多项网络游戏成瘾干预研究。在基于网络游戏成瘾渴求降低的心理行为团体干预研究中，成瘾者接受了每周一次每次约三小时持续六周的团体行为干预，辅以平时的正念冥想训练。结果发现，这一团体干预可有效地降低游戏成瘾者对游戏的渴求、每周的网络游戏时间，并改善网络游戏成瘾程度。同时神经影像结果发现，干预前成瘾者的奖赏环路的核心区域——腹侧纹状体与左侧顶下小叶、额中回和右侧额下回的静息态功能连接异常，并与游戏成瘾程度呈正相关；而接受了团体干预的游戏成瘾组还表现出腹侧纹状体与顶下小叶的功能连接异常的改善；并在完成线索诱发渴求任务时表现出右侧脑岛活动的激活增强及其与角回功能连接的减弱。此外，正在进行的一项采用随机分组、双盲设计的情感联结偏向矫正干预研究显示，持续一周的训练可以有效地减少网络游戏成瘾者的游戏时长、改善对游戏线索的加工，并得到了奖赏系统关键区域——壳核活动及其与额叶功能连接改善等影像学的证据。这些结果促进了人们对心理行为干预在网络游戏成瘾中的作用及起效机制的理解。

关键词 网络游戏成瘾，心理行为干预，神经机制，基于渴求降低的行为团体干预

Psycho-behavioral Therapy in treating Internet Gaming Disorder and its underlying Neural mechanisms

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Abstracts: Internet Gaming Disorder (IGD) among children and adolescents may constitute a widespread and serious mental health problem. It has received increasing attention since it was included in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) and the International Classification of Diseases (ICD-11) in 2013 and 2019, respectively. To sum up the previous intervention research around this problem, psycho-behavioral intervention is still predominate in the treatment of Internet Gaming Disorder (IGD). Individual and group intervention based on cognitive behavioral therapy can improve individuals' maladjusted cognitive of internet use, reduce the time spent on internet games, and reduce the severity of internet addiction. Besides, some existing studies have explored the important factors such as impulsivity, craving, and family relationships, and they preliminarily believe that it can improve the addiction problem. In the past few years, our group has conducted several studies on the intervention of IGD. In the intervention study to reduce the craving for internet games, addicts received a group behavioral intervention once a week for about three hours each time for six weeks, followed by daily mindfulness meditation training. The results showed that this group intervention could effectively reduce the craving for games, the weekly hours of internet games, and decreases in addiction severity. At the same time, neuroimaging results showed that resting-state functional connectivity (rsFC) of the ventral striatum (VS), the core region of reward circuit, to left inferior parietal lobule (IPL), right inferior frontal gyrus and left middle frontal gyrus was positively associated with IGD severity cross-sectionally. The IGD group that received group intervention also showed a greater decrease in VS-IPL connectivity. During an fMRI cue-reactivity task, the intervention group also showed enhanced activation in the right insula and decreased insular connectivity with the lingual gyrus in a treatment-sensitive manner.

Moreover, an ongoing intervention study using a randomized grouping and double-blind design shows that a week-long emotional connection bias correction training can effectively reduce the hours of internet game and optimize the processing of game cues. We also have imaging evidence of improved activity in the putamina, a key region of the reward system, and its connection to frontal gyrus. These results promote people's understanding of the role and mechanism of psychological behavior intervention in online game addiction.

Keywords : Internet Gaming Disorder, Psycho-behavioral intervention, Neural Mechanism Craving Behavioral Intervention

网络游戏成瘾的特异性特征是控制失败而不是逃避负面情绪 ——来自行为和神经影像数据的证据

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摘要 目前, DSM-5 和 ICD-11 中有关网络游戏成瘾的诊断标准依然存在争议。本研究通过行为评估和功能磁共振成像 (fMRI) 结合的方法来检验网络游戏成瘾诊断两个潜在核心标准的特异性, 即 DSM-5 中“控制玩网络游戏失败” (控制失败) 和“通过网络游戏逃避或缓解情绪” (逃避负面情绪)。招募了年龄为 14 至 32 岁的符合 DSM-5 针对互联网游戏障碍的标准的网络游戏成瘾被试 (PIGD); 网络游戏非成瘾被试 (NIGP) 和正常被试进行实验。实验方法: 实验 1 测量控制失败相关的行为 (Barratt 冲动量表的非计划性冲动子量表和逃避负面情绪评估) 和大脑网络 (延迟折扣任务)。实验 2 测量逃避负面情绪的评估和大脑网络 (爱华博弈任务)。实验 3 为回顾性研究; 网络游戏成瘾被试和正常被试有关冲动控制和逃避负面情绪的行为的测量。实验结果: 实验 1 被试总数 $n=141$ (男性 $n=135$), PIGD 组 ($n=32$, 年龄 $=19.53\pm3.23$) 其正常被试对照组 ($n=32$, 年龄 $=20.44\pm2.82$); NIGP 组 ($n=35$, 年龄 $=23.51\pm1.80$) 其正常被试对照组 ($n=42$, 年龄 $=24.29\pm2.33$); 与正常被试相比, 只有 PIGD 组提高了折扣率 (平均值 $=0.093$; 95% CI, $0.034-0.152$) 和计划外冲动 (平均值 $=2.249$; 95% CI, $0.076-4.422$), 以及额叶前额网络的改变 (平均值 $=3.458$; 95% CI, $0.163-6.754$); 实验 2, 被试总数 $n=119$ 名 (男性 $n=103$), PIGD 组 ($n=30$, 年龄 $=20.00\pm3.23$), 其正常被试对照组 ($n=25$, 年龄 $=20.48\pm2.99$); NIGP 组 ($n=28$, 年龄 $=23.57\pm1.60$), 其正常被试对照组 ($n=36$, 年龄 $=23.89\pm2.12$); 与正常被试相比, PIGD 组和 NIGP 组均增加逃避负面情绪和损失减去收益固着 (平均值 $=0.306$; 95% CI, $0.002-0.610$) 并改变了前扣带回皮层-脑岛-杏仁核网络 (平均值 $=3.576$; 95% CI, $0.208-6.945$)。实验 3, 回顾性研究表明, PIGD 组逃避负面情绪变化增加, 但冲动控制没有变化。结论: 行为评估和功能磁共振的结果一致证明 IGD 的特异性特征是控制失败而不是逃避负面情绪。本研究对网络游戏成瘾的定义, 诊断和预防具有重要意义。

关键词 网络游戏障碍, 冲动控制, 负面情绪逃避, 成瘾, 功能磁共振成像

Unsuccessful Control Is Specific but Negative Mood Escape Is Non-specific for Internet Gaming Disorder: Evidence from Behavioral and Neuroimaging data

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Abstract: Diagnostic criteria of Internet gaming disorder (IGD) in DSM-5 and ICD-11 remain controversial. Objective: We combined behavioral assessments and functional magnetic resonance imaging (fMRI) to examine the specificity of two potential core criteria for IGD diagnosis, i.e., the “unsuccessful attempts to control the participation in Internet games” (unsuccessful control) and the “use of Internet games to escape or relieve a negative mood” (negative mood escape) in the DSM-5. Design, Setting, and Participants: This observational study was conducted between October 2012 and June 2020. Retrospective type for Experiment 3. Eligible participants aged 14 to 32 years were enrolled. In Experiment 1 and 2, patients with IGD (PIGD), non-dependent Internet gaming participants (NIGP), and controls were enrolled. In Experiment 3, PIGD patients and controls were enrolled. Analysis began February

2015 and ended June 2020. Exposures: PIGD met the DSM-5 criteria for Internet gaming disorder. Main Outcomes and Measures: In Experiment 1, unsuccessful control-related behavioral and brain network measures. In Experiment 2, negative mood escape-related behavioral and brain network measures. In Experiment 3, retrospective behavioral data on impulse control and negative mood escape. Results: In Experiment 1, 141 participants (135 male) and the mean (SD) age was 19.53 (3.23) and 23.51 (1.80) for PIGD and NIGP respectively. In Experiment 2, 119 participants (103 male) and the mean (SD) age was 20.00 (3.23) and 23.57 (1.60) for PIGD and NIGP respectively. Compared to controls, the PIGD but not the NIGP showed increased discounting rate (mean, 0.093, 95% CI, 0.034-0.152)/Non-planning impulsiveness (mean, 2.249; 95% CI, 0.076-4.422) as well as altered frontoparietal network (mean, 3.458; 95% CI, 0.163-6.754), while both the PIGD and NIGP showed increased negative mood escape/loss minus gain perseverance (mean, 0.306; 95% CI, 0.002-0.610) and altered anterior cingulate cortex-insula-amygdala network (mean, 3.576; 95% CI, 0.208-6.945). Retrospective data showed an increased change in negative mood escape but not impulse control in PIGD. Conclusions and Relevance: This study provides consistent behavioral and neuroimaging evidence supporting that unsuccessful control rather than negative mood escape represents a specific feature of IGD. These findings have implications for the definition, diagnosis, and prevention of IGD in the future.

Keywords: Internet Gaming Disorder, impulse control, negative mood escape, specific factor, addiction, fMRI

青少年吸烟成瘾者短期戒断状态下的脑电研究

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摘要 吸烟是全球可预防的主要死亡原因之一。我国 15-24 岁青少年吸烟率从 2003 年的 8.3% 上升到 2013 年的 12.5%。早期吸烟和青少年时期的持续性吸烟会发展成为尼古丁依赖, 甚至导致终身吸烟。以往研究发现, 尼古丁戒断不仅会引起吸烟者大脑功能的变化, 还会造成认知控制能力的降低和对香烟渴求的增加, 促使戒烟失败而导致复吸。在本研究中, 我们采用 Go/NoGo 任务和 Flanker 任务, 通过青少年吸烟者在吸烟满足状态和 12 小时短期戒断状态下, 观察并比较与抑制控制相关的成分 N200、P300 和与错误处理相关的成分错误相关负电位 (ERN)、错误正电位 (Pe) 的波幅和潜伏期, 分析青少年吸烟者在满足状态和戒断状态下的事件相关电位 (ERP) 及行为学的变化, 探讨戒断对青少年吸烟者认知控制能力和错误监测能力的影响。实验结果显示, 青少年吸烟者在 12 小时戒断状态下, N200 潜伏期延长。同时, N200 潜伏期与戒断状态下行为学表现中的 NoGo 错误数和 Go 反应时具有显著相关关系。此外, 青少年吸烟者在 12 小时戒断状态下的 Pe 波幅明显降低。这些结果表明, N200 潜伏期可能与青少年吸烟者在短期戒断条件下的抑制控制能力有关。更重要的是, 青少年吸烟者在短期戒断状态下对错误发生后的错误处理能力降低, 这可能是由戒断引起。这些研究结果可能为青少年吸烟者短期戒断状态下的神经生理学机制提供新的见解。

关键词 青少年吸烟成瘾者, 短期戒断, 事件相关电位

EEG Study of Adolescent Smoking Addicts in Short-term Abstinence

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Abstract: Smoking is one of the main preventable causes of death in the world. The smoking rate of adolescents aged 15–24 in China rose from 8.3% in 2003 to 12.5% in 2013. Early smoking and persistent smoking during adolescence may develop into nicotine dependence and even lead to lifelong smoking. Previous studies have found that nicotine abstinence may not only cause changes in the brain function of smokers, but also cause decrease of cognitive control ability and increase in craving for cigarettes which promote failure of smoking cessation and lead to relapse. In this study, we used the Go/NoGo task and the Flanker task to observe and compare the amplitude and latency of N200, P300 associated with inhibition control and error-related negative (ERN), error positive potential (Pe) associated with error processing for adolescent smokers between satiety state and 12-hours short-term abstinence state, to analyze the

changes in event-related potentials (ERP) and behaviors in two states, and to explore the effect of abstinence on the cognitive control ability and error monitoring ability of adolescent smokers. The results showed that the latency of N200 was prolonged in adolescent smokers after 12-hours abstinence. At the same time, there were significant correlations between the latency of N200 and behavioral performance of NoGo errors and Go reaction time in abstinence. In addition, the Pe amplitude of adolescent smokers in 12-hours abstinence state was significantly reduced. These results indicated that the latency of N200 may be related to the inhibitory control ability of adolescent smokers under short-term abstinence conditions. More importantly, the ability to handle errors after an error occurs of adolescent smokers in abstinence reduced, which may be caused by abstinence. These findings may provide new insights into the neurophysiology mechanism of adolescent smokers in short-term abstinence state.

Keywords: adolescent smoking addicts, short-term abstinence, event-related potentials

2.17 “情绪与健康心理学专业委员会”专题研讨会

社会治理背景下青少年智能手机成瘾的生成与治理

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摘要 智能手机成瘾作为移动新媒体发展衍生出的社会问题, 对人们的身心健康发展和社会秩序的良性发展均产生了一定的负面影响。智能手机成瘾的形成受到个体内部驱动力与外部驱动力的双重作用。从个体内部诱发驱动力来看, 主要包括源自个体内部的心理需求动机、人格特质、情绪体验等。从个体外部诱发驱动力来看, 移动新媒体时代的社会背景和环境“迫使”青少年不得不使用智能手机, 而社会线索刺激则加剧了人们对智能手机使用的心理渴求感。开展对智能手机成瘾问题的“由心而治”和实现智能手机成瘾问题的“善治”, 既要考虑智能手机成瘾的内部诱因驱动力, 也要兼顾智能手机成瘾的外部诱因驱动力, 同时还要站在社会管理的社会治理视角寻求智能手机成瘾治理的多元解决路径。研究1采用心理测量法, 对青少年人格特质(神经质、外向性、自恋性等)、负性情绪(错失恐惧、社交焦虑、孤独感等)、心理动机(积极评价、社会支持、缓解压力、寻求满足等)与智能手机成瘾(尤指问题性社交媒体使用)的关系及作用机制进行了研究, 揭示了上述变量对智能手机成瘾的影响及作用机制。研究2采用行为实验, 对青少年智能手机成瘾(尤指问题性社交媒体使用)的注意偏向和智能手机使用的心理渴求感进行实验研究, 发现图片相关刺激能诱发被试更强烈的使用心理渴求感, 并且智能手机成瘾者对成瘾相关刺激存在注意偏向, 且成分为注意警觉和注意转移困难。研究3采用干预实验, 使用正念认知训练和心理健康教育活动课对智能手机成瘾者进行矫正干预, 发现正念认知训练和心理健康教育活动课对智能手机成瘾者能产生一定积极干预效果。基于相关理论与实证研究, 提出智能手机成瘾的治理路径可从智能手机成瘾治理的个体心理发展路径, 家庭、学校和社会教育路径, 以及社会管理路径三个方面开展社会行为干预与矫正。

关键词 智能手机成瘾, 问题性社交媒体使用, 诱发机制, 社会治理

The Formation and Management of Smart Phone Addiction in Adolescents under the Background of Social Governance

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Abstract: As a social problem derived from the development of mobile new media, smart phone addiction has a certain negative impact on people's physical and mental health development and the healthy development of social order. The formation of smart phone addiction is affected by both internal and external driving forces. From the perspective of individual internal driving force, it mainly includes psychological needs motivation, personality traits, emotional experience and so on. From the perspective of individual external driving force, the social background and environment of mobile new media era "force" adolescents to use smart phones, while social cues stimulate people's psychological desire for smart phones. To carry out the "heart to heart" and "good governance" of smart phone addiction, we should not only consider the internal incentive drive of smart phone addiction, but also take into account the external incentive drive of smart phone addiction. At the same time, we should also seek multiple solutions from the perspective of social management. In Study 1, the relationship between personality traits (neuroticism, extroversion, narcissism, etc.), negative emotions (fear of missing out, social anxiety, loneliness, etc.), psychological motivation (positive evaluation, social support, stress relief, seeking satisfaction, etc.) and intelligent hand addiction (especially the use of problematic social media) were studied by psychometric method. The effects of the above variables on the addiction of smart phones and its mechanism were discussed. In Study 2, behavioral experiments were conducted to investigate the attentional bias and psychological craving of adolescents with smart phone addiction (especially problematic social media use). It was found that picture related stimuli could induce more intense psychological craving. Moreover, the attention bias of smart phone addicts to addiction related stimuli was found, and the components were attention vigilance and it is difficult to transfer. In the third study, mindfulness cognitive training and mental health education activities were used to correct and intervene smart phone addiction. It was found that mindfulness cognitive training and mental health education activities could have a positive effect on smart phone addiction. Based on the relevant theoretical and empirical research, the governance path of smart phone addiction is proposed, which can be carried out from three aspects: individual psychological development path, family, school and social education path, and social management path.

Keywords: smart phone addiction, problematic social media use, inducing mechanism, social governance

新冠肺炎疫情中在线摄影干预对网络成瘾的降低：一项随机对照试验

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摘要 新冠肺炎疫情期间长期的居家隔离和社会恐慌, 导致民众对生活的控制感降低, 网络成瘾的现象越来越严重。针对疫情期间减少接触的现实要求, 本研究开发了在线的摄影干预, 并通过随机对照试验考察了在线摄影干预是否可以通过增加控制感, 缓解疫情期间的网络成瘾及压力、焦虑、抑郁情绪, 提升心理健康。在线招募具有网络成瘾倾向的参与者, 将其随机分配到干预组 ($n=64$) 和控制组 ($n=81$), 干预组将完成连续十天的摄影干预任务, 控制组在追踪完成后再进行训练, 分别在干预前、干预后、干预结束 7 天后进行了前测、后测和追踪。结果表明将性别、年龄、教育水平, 主观社会经济地位和社会支持作为协变量控制后, 将网络成瘾水平作为因变量, 是否干预 (干预组 vs. 控制组) 与时间 (前测 vs. 后测 vs. 追踪) 的交互作用显著 ($F(1.68, 238.71)=5.51, p=0.007, \eta_p^2=0.037$), 干预组与控制组相比, 网络成瘾水平在后测和追踪中降低的效应量更大 ($\eta_p^2=0.342$ vs. $\eta_p^2=0.095$)。压力、焦虑、抑郁、正负性情绪作为因变量, 时间的主效应显著 (Pillai's trace = 0.135, $F(10, 133)=2.08, p=0.030, \eta_p^2=0.135$), 无论干预组还是控制组情绪状态均有改善。此外, 社会支持能显著调节

控制感（后测）对干预和网络成瘾水平（追踪）的中介作用($\beta=0.17$, $SE=0.072$, $95\%CI=[0.029, 0.315]$), 只有对高社会支持的个体而言, 中介作用显著($\beta=0.27$, $SE=0.104$, $95\%CI=[0.066, 0.478]$)。研究结果表明当社会支持充足时, 在线摄影干预可以通过提升控制感, 帮助个体降低因新冠疫情导致的网络成瘾, 为通过在线心理干预进行疫情防护的可行性和有效性提供了重要证据。

关键词 新冠肺炎(COVID-19, 摄影干预, 网络成瘾, 控制感

Online Photography Intervention Reduces Internet Addiction During COVID-19: A Randomized Controlled Trial

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Abstract: During COVID-19 epidemic period, long-term home quarantine and social panic has led to a reduction in people's sense of control over their lives, and Internet addiction has become more and more serious. In response to the realistic requirement of reducing face-to-face contact during the epidemic, this study developed online photography intervention, and investigated whether it can increase a sense of control and relieve Internet addiction, stress, anxiety, and depression during the epidemic through a randomized controlled trial. Participants with Internet addiction tendencies were recruited online and randomly assigned to the intervention group ($n=64$) and the control group ($n=81$). The intervention group completed ten-day photographic intervention tasks, while the control group completed training after follow-up test. The pre-test, post-test, and follow-up performed before the intervention, after the intervention, and 7 days after the intervention respectively. The results showed that after controlling gender, age, education level, subjective socioeconomic status and social support as covariates, and using Internet addiction level as the dependent variable, the interaction effect of intervention (intervention group vs. control group) and time (pretest vs. posttest vs. follow-up) was significant ($F(2,138)=5.355$, $p=0.006$, $\eta_p^2=0.072$), such the intervention group($\eta_p^2=0.342$) had a larger effect size of reduced internet addiction levels at post-test and follow-up compared to the control group($\eta_p^2=0.095$). With stress, anxiety, depression, positive and negative emotion as the dependent variables, the main effect of time was significant (Pillai's trace =0.135, $F(10,133)=2.08$, $p=0.030$, $\eta_p^2=0.135$), such that emotional status improved in both the intervention and control groups. In addition, social support significantly moderated the mediating effect of sense of control (post-test) on the relationship of intervention and Internet addiction (follow-up) ($\beta=0.17$, $SE=0.072$, $95\% CI=[0.029, 0.315]$), and the mediating effect was significant only for individuals with high social support ($\beta=0.27$, $SE=0.104$, $95\% CI=[0.066, 0.478]$). The finding suggests that when social support is adequate, online photography intervention can help individuals reduce Internet addiction during COVID-19 by enhancing the sense of control, providing important evidence for the feasibility and effectiveness of epidemic protection through online psychological interventions.

Abstract: COVID-19, photography intervention, Internet addiction, sense of control

后疫情时代的网络成瘾问题和在线干预方案

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摘要 新冠肺炎的爆发破坏了民众正常生活秩序, 加剧了网络成瘾的问题。我们用大样本比较了新冠肺炎爆发前后青年人网络成瘾的变化, 发现疫情显著增加了网络成瘾的症状。在公共危机状态下, 心理援助资源的稀缺和保持社交距离的要求使开发高效易得的干预新范式势在必行。因此, 如何将疫情作为契机催生临床和健康心理学范式变革, 利用智能技术健全援助体系成为亟待解决的问题。远程心理健康干预(Tele-mental health)是解决这个问题的方案。开发一系列循证、零花费、易操作、个体化的低强度数码干预包是疫情期值得推行的干预新途径。为此, 我们团队开发了 2 套缓解网络成瘾提升心理健康的在线干预包, 分别采用摄影

干预和基本需要满足干预,通过随机对照研究初步验证了其有效性。这两个程序通过提升自我控制的中介机制降低了成瘾性的缺乏控制和渴求维度。下一步工作包括建立心理健康干预包公众自助平台,配合现有热线和咨询服务,使之在疫情后仍能长期发挥作用。

关键词 网络成瘾,新冠肺炎,在线干预,远程心理健康干预

基本需要满足在线干预对网络成瘾现象的缓解:一项随机对照试验

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摘要 新冠肺炎疫情爆发时期,自我隔离和主动保持社交距离已成为民众生活的一部分。这样的生活习惯转变加剧了网络成瘾的问题。网络成瘾的产生主要与控制感、归属与社交、自我实现和自我超越等心理需求相关,这与自我决定理论中的自主、能力、关系三个基本心理需要密切相关。疫情防控的需要产生了对心理需求满足的环境限制,导致通过网络满足心理需要的情况更易发生。但随着疫情缓解和复工复产,仍然保持网络使用相关的成瘾行为,可能会对已恢复的正常生活带来负面影响。因此,本研究针对疫情背景下加剧的网络成瘾问题,着眼于通过非网络渠道满足民众的心理需要,根据自我决定理论开发出基本需要满足远程心理干预,并通过随机对照研究初步验证了其缓解网络成瘾现象的有效性。本研究在线招募有网络成瘾倾向的参与者,将其随机分配到干预组($n=66$)和控制组($n=85$),干预组将完成持续十天的需要满足干预,控制组在追踪完成后再进行训练,分别在干预前、干预第五天、干预后、干预结束7天后进行了前测、中测、后测和追踪。结果表明,MANCOVA分析因变量发现,干预前后两组网络成瘾的总体得分和分维度得分均有显著下降,同时后测时干预组的总体得分($p=0.022$, $95\%CI=[-5.69,-0.44]$, $Cohen's d=0.38$)、失控($p=0.024$, $95\%CI=[0.24,3.32]$, $Cohen's d=0.28$)和渴求($p=0.031$, $95\%CI=[-2.89,-0.14]$, $Cohen's d=0.40$)分维度得分均显著低于对照组。在干预和前后测时间点的交互作用上,网络成瘾总体显著($F(1,135)=5.34$, $p=0.022$, $\eta^2=0.038$);其中失控($F(1,139)=5.24$, $p=0.024$, $\eta^2=0.036$)和渴求($F(1,139)=4.72$, $p=0.031$, $\eta^2=0.033$)维度均显著。随后的中介分析发现,消极情绪中介心理需要满足的变化对网络成瘾和焦虑抑郁的影响。研究结果表明在线基本需要满足干预可以帮助个体降低新冠疫情背景下的网络成瘾。

关键词 新冠肺炎(COVID-19),网络成瘾,心理需要满足,在线干预,随机对照

Basic Psychological Need Satisfaction Online Intervention Reduces Internet Addiction During COVID-19: A Randomized Controlled Trial

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Abstract: Self-isolation and social distance have become parts of people's life during COVID - 19 outbreak period, which aggravates the problem of Internet addiction. The generation of Internet addiction is mainly related to psychological needs such as sense of control, belonging and social contact, self-realization and self-transcendence, which is closely related to the three basic psychological needs of autonomy, competence and relationship in the self-determination theory. The need for epidemic prevention and control has created environmental constraints to satisfy psychological needs, making it more likely that psychological needs can be met through the Internet. However, as the epidemic abates and work resumes, maintaining Internet addictive behaviors may have a negative impact on the normal life that has been restored. Therefore, this research aims at the problem of Internet addiction aggravated in the context of the COVID - 19 epidemic. It focuses on satisfying people's psychological needs through non-network channels, and develops an online basic psychological needs intervention based on self-determination theory, and

initially verifies its effects through a randomized controlled trials study. This study recruited participants with Internet addiction tendency online and randomly assigned them to intervention group ($n = 66$) and control group ($n = 85$). The intervention group completed a ten-day need satisfaction intervention and the control group will be trained after the follow-up is completed. The pre-test, mid-test, post-test and follow-up will be performed before the intervention, on the fifth day, after the intervention, and 7 days after the intervention. MANCOVA analysis of the dependent variables found significant decreases in overall and sub-dimension scores for Internet addiction in both groups before and after the intervention, along with significant decreases in overall scores in the intervention group at posttest ($p=0.022$, 95% $CI=[-5.69,-0.44]$, $Cohen's d = 0.38$), loss of control ($p=0.024$, 95% $CI=[0.24,3.32]$, $Cohen's d = 0.28$) and craving ($p=0.031$, 95% $CI=[-2.89,-0.14]$, $Cohen's d = 0.40$) sub-dimension scores were significantly lower than the control group. On the interaction between intervention and pre- and posttest time points, Internet addiction was significant overall ($F(1,135) = 5.34$, $p = 0.022$, $\eta_p^2 = 0.038$); where the loss of control ($F(1,139) = 5.24$, $p = 0.024$, $\eta_p^2 = 0.036$) and craving ($F(1,139) = 4.72$, $p = 0.031$, $\eta_p^2 = 0.033$) dimensions were significant. Mediation analysis found that negative affect mediates changes in psychological needs satisfaction for Internet addiction, anxiety and depression. The results suggested that needs satisfaction online interventions can help individuals reduce Internet addiction in the context of COVID-19 epidemic.

Keywords: COVID-19, internet addiction, online psychological intervention, psychological need satisfaction, randomized controlled trials

手机端解释偏差修正训练对青少年社交焦虑的干预研究

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摘要 青春期是发展理性思维的敏感时期。适应性思维模式的培养对青少年理性思维的培养和社会焦虑的预防具有重要意义。最近的研究表明, 解释认知偏差修正(CBM-I)可以促进乐观解释偏差的产生, 降低青少年的社交焦虑。本研究旨在通过应用软件探讨八期 CBM-I 训练对中国青少年社交焦虑的影响。将 30 名中国高社交焦虑青少年随机分为训练组 and 对照组。训练组每周两次登录 CBM-I 申请, 连续四周接受 CBM-I 阳性训练, 对照组在等待四周集中接受与训练组相同测试任务和问卷测验后, 并集中进行相同的认知训练。训练后, 训练组的正解释偏差显著增加, 负解释偏差显著低于对照组($p < 0.05$)。训练组的社交焦虑得分显著低于对照组($p < 0.05$)。这说明 CBM-I 应用程序作为中国青少年社交焦虑的多时段干预可能具有潜在的应用价值。

关键词 青少年, 多时段, CBM-I 手机 app, 解读偏差, 社交焦虑

Effects of the Ambiguous Scenarios Paradigm on Social Anxiety in Chinese Adolescents Based on a Mobile App

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Abstract: Adolescence is a sensitive period in the development of rational thinking. The training of adaptable thinking mode is of great significance for the cultivation of adolescents' rational thinking and the prevention of social anxiety. Recent evidence has shown that cognitive bias modification of interpretation (CBM-I) may promote an optimism interpretation bias and reduce adolescents' social anxiety. The purpose of this study was to explore the eight-session CBM-I training effect on the social anxiety of Chinese adolescents based on an app. Thirty Chinese adolescents with high social anxiety were randomly assigned to the training group and the control group. The training group logged into the CBM-I application twice a week for four weeks to accept positive CBM-I training, and the control group only accepted the same recognition test task and questionnaire as the training group after 4-week waiting, and then received the same training in two hours. After training, the positive interpretation bias in the

training group was significantly increased, with significantly reduced negative interpretation bias compared to the control group ($p < 0.05$). The social anxiety score of the training group was significantly lower than that of the control group ($p < 0.05$). This indicates that the CBM-I app may have potential applications as a multi-session intervention for social anxiety in Chinese adolescents.

Keywords: adolescents, multi-session, CBM-I mobile app, interpretation bias, social anxiety

基于接纳承诺疗法的 DNA-V 模型：线下和线上干预效果的比较研究

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摘要 研究基于接纳承诺疗法的青少年干预 DNA-V 线下和线上干预对我国中学生焦虑情绪的影响作用及认知融合的中介作用, 为下一步针对青少年的学校心理干预提供指导依据。方法: 以北京市某中学初二年级的学校课程为背景, 以班级为单位, 随机分为 DNA-V 干预组 ($n=40$)、DNA-V 网络干预组 ($n=53$)、主动干预对照组 (学校常规心理课程; $n=46$) 同步进行 6 周干预。采用中学生焦虑量表、认知融合量表 (Cognitive Fusion Questionnaire, CFQ) 分别在干预前 2 周内 (T1)、干预后 1 周内 (T2)、干预结束后 2 个月 (T3) 进行施测; 并在干预后 1 周内进行随机选取 12 名被试进行访谈。结果: 对焦虑情绪的重复测量结果显示: 时间与组别的交互作用显著 [$F = 2.52, p = 0.046, \eta_p^2 = 0.04$]。DNA-V 组在 T3 的分数显著低于 DNA-V 网络组 ($p = 0.061$), DNA-V 组的 T3 分数显著低于 T1 ($p = 0.000$) 和 T2 ($p = 0.043$)。对认知融合的重复测量结果显示: 时间与组别的交互作用显著 [$F = 3.71, p = 0.007, \eta_p^2 = 0.05$]。DNA-V 组在 T3 的分数显著低于主动对照组 ($p = 0.073$) 和 DNA-V 网络组 ($p = 0.008$), DNA-V 组的 T3 分数显著低于 T1 ($p = 0.001$) 和 T2 ($p = 0.003$)。对焦虑情绪的 HLM 分析结果表明: DNA-V 组和主动对照组相比, 对焦虑分数的降低有加速的作用, 可以使降低的速度显著加速 3.12 分, 但认知融合的中介作用不显著。结论: 基于接纳承诺疗法的 DNA-V 干预可以在我国学校课堂背景下, 有效降低中学生的认知融合水平和焦虑情绪, 可考虑作为提高中学生心理健康水平的有效训练。

关键词 接纳承诺疗法, 线上干预, 线下干预, 青少年, 焦虑

DNA-V Models Based on Acceptance Commitment Therapy: A Comparative Study of The Effects of Online and Face to face interventions

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Abstract: To evaluate the influence of DNA-V face to face and online intervention for adolescents based on acceptance commitment therapy on anxiety of Middle school students in China and the mediating effect of cognitive fusion, so as to provide guidance for the next step of school psychological intervention for adolescents. Methods: Based on the school curriculum of grade two in a middle school in Beijing, the students were randomly divided into DNA-V face to face intervention group ($n=40$), DNA-V web-based intervention group ($n=53$) and active control group (school routine psychological curriculum; $N = 46$) Synchronous intervention for 6 weeks. The anxiety Scale and Cognitive Fusion Questionnaire (CFQ) for middle school students were used within 2 weeks before the intervention (T1), 1 week after the intervention (T2), and 2 months after the intervention (T3). Twelve students were randomly selected for interviews within one week after the intervention. Results: Repeated measures of anxiety showed significant interaction between time and group [$F = 2.52, p = 0.046, \eta_p^2 = 0.04$]. The T3 score of DNA-V face to face group was significantly lower than that of DNA-V web-based group ($P = 0.061$), and the T3 score of DNA-V face to face group was significantly lower than that of T1 ($p = 0.000$) and T2 ($p = 0.043$). Repeated measures of cognitive fusion showed significant interaction between time and group [$F = 3.71, p = 0.007, \eta_p^2 = 0.05$]. The T3

score of DNA-V face to face group was significantly lower than that of the active control group ($p = 0.073$) and the DNA-V web-based group ($p = 0.008$), and the T3 score of DNA-V face to face group was significantly lower than that of T1 ($p = 0.001$) and T2 ($p = 0.003$). The HLM analysis of anxiety showed that compared with the active control group, The DNA-V face to face group had an accelerated effect on the reduction of anxiety scores, which could significantly accelerate the reduction by 3.12 points, but the mediating effect of cognitive fusion was not significant. Conclusion: The DNA-V intervention based on acceptance commitment therapy can effectively reduce the cognitive integration level and anxiety of middle school students in the classroom setting of our country, and can be considered as an effective training to improve the mental health level of middle school students.

Keywords: acceptance commitment therapy, online intervention, offline intervention, adolescents, anxiety

2.18 “心理学脑成像专业委员会”专题研讨会

资源匮乏抑制亲社会行为的脑机制

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摘要 行为研究表明, 资源匮乏的情况下, 人的行为模式、特别是与匮乏资源相关的亲社会行为(例如分享)会显著改变: 个体更加自私, 亲社会行为明显减少。而这一现象尚未从神经科学的角度被深入探讨, 神经证据的缺乏阻碍了对这一重要社会现象的理解、预测和调节。近期, 本课题组通过系列实验, 试图从神经科学层面探讨资源匮乏对亲社会分享行为的调节机制。本系列实验设计了“噪音解救资源”范式, 可以有效诱发共同面临危险而关键性资源匮乏的现实情境。实验1发现, 当解救资源匮乏时, 相比于资源充足情况下, 被试的分享行为更自私。神经层面上发现, 颞顶联合区、内侧前额叶和后扣带皮层等脑区在资源匮乏时激活显著降低。动态因果模型分析显示, 右侧颞顶联合区到内侧前额叶的功能连接强度随着资源匮乏程度的提高而增强。此外, 相关分析发现, 个体共情特质与资源匮乏对分享行为的调节强度相关: 共情越高, 资源匮乏对分享行为的影响越弱。实验2通过引入噪音威胁的不确定性因素发现: 强噪音出现的可能性越大, 个体体验到的焦虑水平越高, 其在分享行为中就越自私。神经层面上发现, 双侧前脑岛的激活水平受到不确定性的调节, 并与主观焦虑水平评价相关。而个体分享行为的自私程度受到不确定性调节的强度与左侧颞顶联合区的激活强度相关。动态因果模型分析显示, 右侧前脑岛与左侧颞顶联合区之间的功能连接强度预测了个体分享行为受不确定性焦虑影响的程度。本系列实验初步验证了以下两个假设: 第一, 在确定性情境下, 资源匮乏会通过抑制共情相关脑网络, 降低共情水平, 导致个体更加自我中心, 从而减少亲社会行为的发生。第二, 在不确定性情境下, 不确定性诱发的焦虑情绪反应为杏仁核或脑岛的激活; 这些边缘系统通过干扰共情相关脑网络的正常工作, 降低共情水平, 从而减少亲社会行为。

关键词 资源匮乏, 亲社会行为, 共情, 功能磁共振, 颞顶联合区, 脑岛, 动态因果模型

Prosocial Decisions under resource scarcity

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Abstract: Previous behavior studies have shown that, in the case of resource scarcity, people's behavior patterns, especially the prosocial behaviors (such as sharing), would change significantly: individuals become more selfish and sharing behaviors are significantly suppressed. However, this phenomenon has not been deeply explored from the perspective of neuroscience. Through a series of experiments, our lab explored the modulating mechanism of resource scarcity on prosocial sharing behavior. To investigate these issues, we designed a novel paradigm in which participants decided whether (and how much) to share an amount of "relieving resources" (for counteracting unpleasant noises), which mimics real-life situations that we cost our own resources to help others escape from adversity. Experiment 1 found that when the rescue resources were scarce, participants were more selfish in sharing decision makings than when the resources were sufficient. At the neural level, the activation of the temporoparietal junction(TPJ), medial prefrontal cortex(mPFC), and posterior cingulate cortex(PCC) decreased significantly when resources were scarce. Dynamic causal modeling (DCM) analysis showed that the strength of functional connectivity from the TPJ to mPFC was modulated by the scarcity of the resource. In addition, the correlational analysis found that empathy trait was related to the modulating strength of resource scarcity on sharing behavior such that the higher the empathy scores one has, the weaker the impact of resource scarcity on his/her sharing behavior. In Experiment 2,

by introducing the uncertainty of noise threat, we found that the greater the probability of receiving an unpleasant strong noise, the higher the level of anxiety individuals experienced, and the more selfish they are in sharing decisions. On the neural level, the activation level of the bilateral anterior insula (AI) was modulated by uncertainty and correlated with a subjective rating of anxiety. The degree of an individual's selfishness in sharing behavior modulated by uncertainty is related to the activation of the TPJ. DCM analysis showed that the strength of functional connectivity between the AI to TPJ predicted the degree of individual sharing behavior affected by uncertainty anxiety. This series of experiments preliminarily verified the following two hypotheses: (1) Resource scarcity may reduce the level of empathy by inhibiting the brain regions related to empathy (e.g., TPJ, mPFC, PCC), leading to more egocentric-thinkings, thus reducing sharing behaviors; (2) in the uncertain situation, the anxiety induced by uncertainty triggered the activation AI. These limbic systems reduce the level of empathy and prosocial behavior by interfering with the normal work of empathy- such as TPJ.

Keywords: resource scarcity; prosocial behavior, empathy, functional magnetic resonance imaging; temporoparietal junction(TPJ), anterior insula (AI), Dynamic causal modeling(DCM)

自发认知重评的神经机制

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摘 要 自发的情绪调节与人们的心理健康密切相关，以往研究表明自发认知重评的增多与减弱的情绪反应及抑郁水平下降有关。然而，迄今为止自发认知重评的内在神经机制尚未明晰。因此，我们使用个体差异的研究方法，结合核磁共振技术从静息态与任务态两个角度对自发认知重评的神经机制进行探究。在研究中除了评估被试自发认知重评的程度之外，我们基于 105 名被试的静息态 fMRI 数据分析了他们大脑默认模式网络的时间动态性差异，并利用任务态 fMRI 考察了 50 名被试在图片观看任务中的杏仁核功能连接变化，进而探究个体自发认知重评的程度与这些指标变化之间的联系。我们的结果发现倾向于自发认知重评的个体其默认模式网络有着较高的时间复杂性，并且在观看任务中他们的眶额叶皮层和基底杏仁核的功能连接会更强。进一步的中介分析结果表明，在自发认知重评的过程中，个体前额叶皮层的时间复杂性与眶额叶皮层和基底杏仁核的功能连接发挥着重要作用。一方面，前额叶皮层的高时间复杂性反映出自发认知重评个体有着较强的认知灵活性。另一方面，在自发认知重评的过程中，眶额叶皮层对基底杏仁核的调制可能是个体情绪反应发生变化的必要条件。总之，当前的研究发现澄清了自发认知重评的神经机制，有助于人们理解那些与情绪调节异常有关的脆弱性因素。

关键词 认知重评，时间复杂性，默认模式网络，情绪调节，杏仁核

The neural mechanism of spontaneous reappraisal

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Abstract: Spontaneous emotion regulation is known to be associated with mental health, and increased spontaneous reappraisal is closely correlated with decreased emotion reaction and depression. However, neural mechanisms subserving spontaneous reappraisal is unclear. Here, we investigated resting-state and task-based spontaneous reappraisal processes by using an individual-difference approach. Besides assessing the degree of spontaneous reappraisal, we also explored the temporal complexity of the default mode network (DMN) from 105 participants during resting-state, and the alteration functional couplings of amygdala from 50 participants during

emotional-picture watching task, respectively. Our results showed that individuals with spontaneous reappraisal were significantly correlated with higher temporal complexity of DMN during resting-state, and higher functional coupling between the orbitofrontal cortex (OFC) and the basolateral amygdala (BLA) during watching task. Moreover, further mediation analyses suggested that temporal complexity of medial prefrontal cortex (MPFC) and functional coupling of the right OFC-BLA play important roles in spontaneous reappraisal processes. On the one hand, individuals with spontaneous reappraisal have increased temporal complexity of MPFC represent higher cognitive flexibility. On the other hand, in spontaneous reappraisal processes, the modulation of BLA activity from OFC may be necessary for changing emotional response. These findings clarify the neural mechanisms of spontaneous reappraisal, which may help shed light on important vulnerability factors implicated in emotional dysregulation.

Keywords: reappraisal, temporal complexity, DMN, emotion regulation, amygdala

社会拥挤对个人空间圈的影响

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摘要 个人空间圈是指在心理上属于个体的、在身体外周的一个不可见区域。当他人侵入我们的个人空间圈时, 我们会感受到威胁和不舒适。传统的研究对个人空间圈仅作了概念化的定义, 并未对其进行精确量化的描述。我们的研究利用虚拟现实的技术构建场景和人物, 并且量化的操纵这些场景。同时, 我们采用停止距离实验范式, 让一个虚拟人在预设的虚拟场景中从被试的正前方走向被试, 直至被试感受到不舒适并要求虚拟人停止靠近, 从而获得个人空间圈的大小。通过这样的实验, 我们精确地测量出个体的个人空间圈。我们的结果发现个人空间圈不是一个固定的区域, 而是受到人们感受到的威胁程度而动态调节的。在较为安全的环境中, 个人空间圈较小, 而当危险场景出现时, 人们需要更大的个人空间圈。此外, 对于环境的量化操控使得我们进一步发现, 社会拥挤会降低个人空间圈的需求。当场景中人物数量增加时, 个人空间圈会随之收缩。这种收缩仅限于社会拥挤, 而非物理拥挤。同时, 这种个人空间圈的收缩现象只会发生在安全友善的社会场景中。这一研究量化描述了人类个人空间圈及其影响因素。其研究结果对智能机器人交互设计具有一定的应用意义。

关键词 社会拥挤, 个人空间, 虚拟现实

Effect of social crowding on human personal space

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Abstract: The personal space is an invisible area around a human. Humans feel threatened and uncomfortable when others intrude into his/her personal space. Previous research has only conceptualized the human personal space and but has not provided a quantitative description. Our current study used virtual reality techniques to construct and manipulate virtual scenes. We applied the stop-distance paradigm to measure the size of personal space. In particular, an avatar walked towards a participant in a pre-defined virtual scene until the participant felt uncomfortable and stopped the avatar. We found that the personal space was not a fixed area, but was dynamically adjusted by the perceived threat. Participants' personal space was smaller in a safer environment, while they needed larger personal space when in a dangerous situation. Further experiments found that social crowding decreased the size of the personal space. This effect was limited to social crowding but not physical crowding and only occurred in safe and friendly social scenes. This study provides a quantitative description of human personal space and the factors that influence it and valuable guides to design of humanoid social robots.

Keywords: social crowding, personal space, virtual reality

策略性决策框架下的交流行为及其认知神经机制

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摘要 交流是人类最重要的社会行为之一。不同于竞争、合作、共情等高级社会认知功能,我们对复杂交流行为所依赖的认知和神经机制知之甚少。理解交流行为不仅需要交流信号本身(如表情、手势、语音、词义、句法等)进行研究,还需要探索这些信号是如何在具体的社会情境中被灵活使用,表达含义。本研究将决策神经科学、计算语言学以及博弈论等多学科研究方法相结合,提出通过目标导向的策略性行为这一角度,来探索大脑如何因地制宜地编码和解码交流信号,为研究社会交流这一难题开辟了新的定量研究的思路。研究表明,人类大脑通过灵活、自动、理性地模拟他人的合作行为,来逆向推断交流信号的潜在含义。利用计算模型和脑成像等方法,我们发现交流信号接收方的腹内侧前额叶表征了对说话人行为的模拟,纹状体则参与了基于该模拟结果推断说话人意图的计算过程。这一过程和以贝叶斯为代表的逆向推理计算模型高度吻合,说明了交流意图推断的潜在神经机制,为理解社会交流提供了一个简单、可扩充的认知神经模型。

关键词 社会决策、交流、合作、腹内侧前额叶、fMRI

Communication as Goal-Directed, Strategic Decision-Making

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Abstract: Communicative reasoning - how the human brain understands what is and is not being said by conversational partners - is a topic of tremendous importance and disciplinary breadth. Yet our knowledge about its neural mechanisms remains in its infancy. The challenge relates to not only the inherent complexity in human communication, but also the lack of quantitative instruments capable of decomposing the complex mental processes in a principled way to probe the related neural activity. Here we propose to examine inferences and choices in intentional communication through the lens of goal-directed, strategic decision-making, bringing together strands of decision neuroscience, game theory, and computational linguistics. In this talk, I will present recent fMRI findings on neurocomputations underlying communicative reasoning in a referential communication game. Our results suggest a neural generative process, subserved by the frontal-striatal circuits, by which the listener rationally simulates the speaker's choice process and inverts the inference to recover the speaker's most probable meaning.

Keywords: social decision, communication, cooperation, vmPFC, fMRI, computational modeling

社会联结对人类群体中不同等级个体神经同步性的影响

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摘要 社会层级是自然界中大部分物种的基本特征,并对群体的生存和繁衍发挥着至关重要的作用。因此维持层级化的社会结构已经演变为每个群体的关键要素。社会联结(social bonding)作为一种普遍存在的社会现象,被广泛得用来强化人际互动,从而稳定群体结构。然而,在层级化的社会群体中存在着层级内与层级间两种不同的社会互动,社会联结是否以及如何分别作用于这两种不同的社会交互仍是未知的。本研究招募了528名健康被试,进一步分成了176个三人小组。被试被随机地分配至社会联结条件或控制条件中完成组内互动任务。在此期间,他们就给定的话题进行小组讨论,然后民主地选举出小组领导,模拟社会等级制度的自然建立过程。与此同时,研究采用了功能近红外光谱成像超扫描技术,同时记录了社会层级中每个成员的背外侧前额叶与颞顶联合区的神经活动并分别计算了层级内与层级间的脑间神经活动同步。研究发现,社会联结显著地改变了群体成员间的神经活动同步,并进一步影响群体行为,这两者都受到了社会层级的调节作用。具体来说,社会联结选择性地提升了层级间的背外侧前额叶神经同步性,该结果进一步预测了行为层面上群际偏好的提升。此外,层级间的背外侧前额叶的神经同步性还表现出了时间不对称性,即领导者的神经活动比追随者早1~6秒,表明了领导者对追随者的心理活动进行预测,从而实现层级间自上而下

的神经活动同步。最后，我们还发现这种神经预测与领导者的背外侧前额叶-颞顶联合区的功能连接有显著的正相关关系。本研究揭示了社会联结的功能特异性，即对层级间的社会互动的选择性增强，并对此提供了直接的认知神经机制，研究结果对社会层级的管理具有实际的应用意义。

关键词 社会等级，社会联结，神经同步性，近红外同步扫描

Social bonding modulates hierarchical neural alignment in human groups

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Abstract: Social hierarchy is identified across species, from insects, to nonhuman and human primates. Hierarchical social structures clarify the roles of individual group members and facilitate social coordination. Social bonding has been suggested to strengthen inter-individual affiliations and consequentially to stabilize social structures. Yet, whether and how bonding distinctively modulates inter-class and intra-class interactions in hierarchical groups remains unknown. Using functional near-infrared spectroscopy (fNIRS), we simultaneously recorded brain activity of 3 interactive individuals, and examined neural synchrony between individuals with different (or same) status (i.e., inter-classes or intra-class neural synchrony) in 176 triadic, hierarchical groups engaging (or not) in social bonding. We found that bonding (vs. control) elevated the inter-classes neural synchrony in the dlPFC, which accounted for the follow-up escalated intergroup discrimination. The potentiated inter-classes neural synchrony in dlPFC showed temporal asymmetry that it emerged when higher-class individuals' neural activity preceded that of lower-class individuals for 1 to 6 seconds. This suggested that higher-class individuals predicted or inferred lower-class individuals' mind to achieve the top-down neural alignment after social bonding. Furthermore, such predictive alignment was associated with dlPFC-TPJ functional connectivity of higher-class individuals. Our findings decipher how social bonding and interpersonal neural coupling impact the formation of social hierarchy and shape hierarchical interactions.

Keywords: Social hierarchy, Bonding, Inter-brain synchrony, fNIRS hyper-scanning

2.19 “音乐心理学专业委员会”专题研讨会

(1) “音乐心理学专业委员会”专题研讨会 1

我国音乐治疗专业的发展历程与教育教学标准

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摘要 音乐协助健康的各种应用实践在世界各地各民族文化中古已有之，而作为一门集艺术与医学、心理学的新兴交叉学科，“音乐治疗/Music Therapy”创建于美国，历经七、八十年的发展已经形成了完整的理论体系、治疗原则和应用技术，并且通过循证实践和科学研究验证了它的有效性。我国音乐治疗专业的发展开始于上世纪八十年代，经历了初步探索、学科建立、教学项目完善、临床实践与应用研究各阶段，现在国内已有十几所高校开设音乐治疗专业。音乐治疗专业人才培养标准，在北美、欧洲、亚洲的韩国等音乐治疗发展较先进地区已经形成了规范的教育教学标准和成功的教育经验。制定科学、清晰的音乐治疗专业教育教学

标准，培养符合国际标准的音乐治疗专业人才，是我国音乐治疗发展现阶段的一个重要工作目标。随着社会经济水平的提高和医学人文观念在医疗领域与在民众中的推广，社会对音乐治疗的接纳与需求在迅猛发展，问题也随之快速增长。很多人误解音乐治疗为用音乐作为“处方”；不能分辨何为音乐治疗，将一切使用音乐协助健康的方式方法都误作“音乐治疗”；对音乐治疗的专业性认识不足，致使培训速成的“音乐治疗师”比比皆是。这些问题都在破坏音乐治疗这一协助医疗进行身心康复的学科的专业性、科学性、严肃性。本文将梳理音乐治疗在我国发展历程中的失败与成功经验；对比成熟的音乐治疗专业教学标准与我国的科学音乐治疗教学设置；分析我国音乐治疗发展现存的主要问题与可能的解决方案。

关键词 音乐治疗，发展历史，教育教学标准，问题与应对

The Development History and Educational Standards of Music Therapy in China

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Abstract: Music has a long history of application to health among various ethnic groups around the world, and as an emerging interdisciplinary discipline spanning music, psychology and medicine, "music therapy" was founded in the United States. It has been developed over the past 70 to 80 years, and its effectiveness has been verified through evidence-based practice and scientific research. The development of music therapy in China began in the 1980s and has gone through the stages of initial exploration, discipline establishment, teaching program improvement, clinical practice and application research. Music therapy professional training standards have formed standardized education and teaching standards and successful educational experiences in North America, Europe, Asia's Korea and other regions with more advanced music therapy development. The development of scientific and clear education and teaching standards for the music therapy profession and the training of music therapy professionals who meet international standards is an important goal of work at this stage of music therapy development in China. As the socio-economic level increases and medical humanistic concepts are promoted in the medical field and among the population, the acceptance of and demand for music therapy in society is growing rapidly, and so are the problems. Many people misunderstand music therapy as the use of music as a "prescription"; they cannot distinguish what music therapy is, and mistake all ways and means of using music to assist health as "music therapy"; they have little understanding of the professional nature of music therapy, resulting in the training of quick-fire "music therapists" who are more qualified than those who are not. There is a lack of understanding of the professionalism of music therapy, resulting in a plethora of trained "music therapists". These problems are undermining the professionalism, science and seriousness of music therapy as a discipline that assists medical treatment for physical and mental rehabilitation. This paper will sort out the failures and successes in the development of music therapy in China; compare the mature professional teaching standards for music therapy with the scientific music therapy teaching settings in China; and analyze the main existing problems and possible solutions for the development of music therapy in China.

Abstract: Music therapy, development history, educational standards, problems and solutions

GIM 连续模式在成人音乐心理治疗中的研究与应用

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摘 要 音乐引导想象 (Guided Imagery and Music, GIM) 也称邦妮方法音乐引导想象 (Bonny Method of GIM, BMGIM)。由 Helen Bonny 在 20 世纪 70 年代初，创造发展出并应用于临床中，是常被用于成人心理干预的音乐心理治疗技术方法之一。BMGIM 方法是利用 30 分钟已编排好的古典音乐组合，在音乐中引导聆听者跟随音乐进入潜意识进行深层次情绪情感体验，跟随音乐发展意象进行探索。GIM 连续模式 (Continuum Model

of GIM), 由 Lisa Summer 教授根据 BMGIM 原始层次模型和概念拓展出了音乐与想象 (Music and Imagery, MI) 的方法, 并将 GIM 以及 MI 根据 Wheeler 提出的实践层次理论发展了架构: 支持性 (Supportive) 层次, 涉及积极的内部资源的发展, 关注以内部资源的稳定化为目标; 再教育性 (Re-educative) 层次, 直接涉及来访者的具体症状, 更多关注内在情绪情感的相关议题和模式; 和重构性 (Reconstructive) 层次, 涉及无意识中资源和症状的根源, 聚焦于减少核心议题对日常生活的影响以及灵活性和自我内在探索。GIM 连续模式的整体架构是两种方法在三个层次上的应用, 因而形成了六种方法, 音乐治疗师能够更好的根据来访者不同能力水平及需求, 灵活应用 GIM 连续模式中的不同干预层次方法。音乐的选择及干预方式能更直接的将外部与内部心理状态和情绪感受建立链接, 利用音乐更贴近来访者不同能力水平的心理状态是在 GIM 连续模式应用中重要的一环。本文将通过研究文献与案例, 展现在研究与临床中发现的音乐应用的层次对来访者意象发展的影响。

关键词 音乐心理治疗, 音乐引导想象(GIM), 音乐与想象(MI)

Application of Continuum Model of GIM in Adult Psychotherapy Intervention

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Abstract: Guided Imagery and Music (GIM) is also called the Bonny Method of GIM (BMGIM). By Helen Bonny in the early 1970 s, creation was developed and applied in clinical practice. It is one of the music psychotherapy techniques often used in adult psychological intervention. The BMGIM method is to use the 30-minute arranged classical music combination to guide the listener to follow the music into the subconscious for deep emotional experience, and explore the music development of images. Continuum Model of GIM, taught by Professor Lisa Summer, expands the methodology architecture of music and images (MI) based on BMGIM's original hierarchical model and concepts. Apply GIM and MI according to the practice hierarchy of Wheeler; Supportive level: involving the development of positive internal resources, focusing on the stabilization of internal resources; The level of Re-educative: directly involves the specific symptoms of visitors, with more attention on the relevant issues and patterns of emotional; Reconstructive levels: involving the roots of resources and symptoms in the unconscious, more on reducing the impact of core issues on daily life and spirituality and self-internal exploration. The overall architecture of GIM continuous mode is the application of two methods at three levels, thus forming six methods. Through the overall architecture of the continuum model of GIM, the music therapists are better able to flexibly apply the different intervention levels methods in the continuum model of GIM according to the different ability levels and needs of the visitors. In clinical practice, the level of music application will affect the development of the visitor's image. The choice music and intervention mode of music can more directly link the external and internal psychological state and emotional feelings. The psychological state of music closer to the different ability levels of the visitor is an important link in the application of the Continuum Model of GIM.

Abstract: music psychotherapy, music guided imagination, music & imagination

音乐治疗在老年领域中的研究与应用

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摘要 随着许多国家老年人口占比的增加, 人口老龄化已成为了一种全球性现象。它给我们带来挑战的同时也带来了许多机遇。音乐治疗能够为老年人带来什么帮助, 也成为了当今音乐治疗研究者和临床工作者努力的方向。衰老的过程会带来认知、社会交往、交流沟通、情绪以及生理健康方面的变化。大量的研究显示音乐治疗对于老年人的干预具有积极意义, 包括音乐治疗能够控制疼痛、降低抑郁和焦虑, 减少激越等问题行为、召回长期记忆、建立与他人的积极社会交往、辅助肢体康复, 以及提高生命质量等。接受过专业训练并

且具备执业资格的音乐治疗师会为每位来访者进行全面的评估，然后制定个性化目标，再通过个体或团体治疗进行干预来达到个性化需求。在这个过程中音乐治疗师在关注来访者需要面对的问题和需要的同时，也着重关注于老年人所拥有的优势和资源。音乐治疗师会根据来访者的个人音乐喜好、音乐性、家庭社会文化、现存能力以及人生经历选择音乐和音乐体验形式，并带领来访者参与到有意义的音乐治疗活动中。音乐治疗师在老年人中常用的方法包括再创造式、即兴式、创作式以及接受式音乐治疗方法。研究显示音乐治疗师在老年领域主要工作的人群有：健康的老年人、在养老机构居住的老年人、神经认知障碍患者、临终关怀患者、专业医护照料者以及患者家属。在老年领域中，音乐治疗师常与其他医护人员进行跨学科合作，为老年人提供全面、持续的服务。

关键词 老龄化，音乐治疗，老年人

Research and Clinical Application of Music Therapy in Elderly Population

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Abstract: As the rapid growth in proportion of older persons in many countries, Population Ageing has been recognized as a global phenomenon. It brought us challenges, as well as chances. What kind of professional health care music therapy could offer to the elderly, has become a direction, where music therapy researchers and clinical practitioners strive for. Ageing process brings changes in cognition, social interaction, communication, emotion, and physical health. A substantial amount of researches have demonstrated the positive results regarding the effectiveness of music therapy for older adults, including music therapy assists in pain management, reduces depression and anxiety, decreases agitation and other problem behaviors, recalls long-term memory, establishes positive social interactions, helps with physical rehabilitation, and improves the quality of life, etc. Professionally trained and qualified music therapist comprehensively assesses each client, followed by individualized treatment plan, and then implement music therapy interventions designed to meet client's unique needs through individual or group session. During this procedure, music therapist focus on client's problems and needs, also pay close attention to their strengths and resources, as well. Music therapists choose music and music experiences according to client's own preference, musicality, family and social culture, existing functions, and rich life history, and engage clients in meaningful music therapy activities. The methods that music therapists most commonly applied with older adults are re-creative, improvisational, compositional and receptive music therapy methods. Researches have shown that the targeted clients which music therapists work with are healthy older adults, elderly residents in nursing facilities, older persons with neurocognitive disorders, clients with terminal illness, and professional health caregivers, as well as the family members of patients. Within this elderly population clinical field, music therapist often work with other professionals in an interdisciplinary team, to provide comprehensive, systematic and continuum services.

Keywords: aging, music therapy, older adults

结合音乐的甲基苯丙胺成瘾者的情绪测量和干预研究

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摘要 情绪失调是造成毒品成瘾者滥用毒品和复吸的重要原因。研究显示毒品成瘾者对毒品药物奖赏反应增高，而对天然奖赏的情绪反应降低。音乐作为一种审美体验，不仅能强烈激活奖赏系统，也能激活情绪体验和情绪调节的相关脑区，有着改善毒品成瘾者情绪失调问题的潜力。本研究首先探索了甲基苯丙胺成瘾者对于正负性音乐的情绪反应特征及其认知神经机制，然后探索了团体音乐治疗的方法对于改善甲基苯丙胺成瘾者负性情绪和情绪调节功能的疗效。实验一比较了30名女性甲基苯丙胺成瘾者和30名健康女性被试对于愉悦、恐惧和平静音乐的自评（效价，唤醒度，趋近度）和惊跳反射的反应。结果发现与健康对照相比，女

性甲基苯丙胺成瘾者对正负性音乐刺激的惊跳反应、效价和唤醒度的感知都出现异常。他们对负性（恐惧）音乐的惊跳反应减弱，对负性音乐的效价升高和唤醒度降低，对正性音乐的唤醒度也降低。实验二中，研究者将 31 名甲基苯丙胺成瘾者被试随机分成两组，实验组（n=16）接受每周 2 次，每次 90 分钟，共 8 次的团体音乐想象干预，对照组（n=15）接受戒毒所内的标准处置。在干预前后采用自评量表和情绪 stroop 测试评估被试的抑郁、焦虑、情绪调节能力、以及对正负性情绪线索和毒品线索的情绪反应。结果发现实验组经过团体音乐想象治疗后，显著的改善了抑郁和情绪调节能力，降低了毒品渴求，对于正性情绪的情绪调节能力也显著提高。研究结果表明音乐治疗能有效的改善毒品成瘾者的负性情绪，提高情绪调节能力。

关键词 音乐，情绪反应，音乐治疗，甲基苯丙胺，毒品成瘾者

The application of music in the study of emotion reactivity measurement and intervention for people with methamphetamine use disorder

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Abstract: Emotional dysregulation is one of the important reasons for drug abuse and relapse. Research show that people with drug abuse problems have an increased response to drug rewards, and a decreased response to natural rewards. Music as a aesthetic experience not only can activate reward system, but also stimulate the brain areas related to emotional experience and regulation, as well as the functional connection between these areas. My research work explored the mechanism of emotional responses in people with methamphetamine use disorder and the effects of music therapy for this population. In Experiment 1, the researcher compaired the responses of 30 female methamphetamine addicts and 30 healthy female subjects to pleasure, fear and calm music in temrns of self-evaluation (valence, arousal, approach) and startle reflex. The results showed that compared with healthy controls, female methamphetamine addicts had abnormal startle response, valence and arousal to negative music stimuli. Their startle response to negative (fear) music was decreased, and the valence and arousal level to negative music were increased. The arousal of positive music was decreased. In Experiment 2, 31 methamphetamine addicts subjects were randomly divided into two groups. The experimental group (n = 16) received group 8 sessions of music imagery intervention (twice a week, 90 minutes per session). The control group (n = 15) received the standard treatment in drug rehabilitation center. Before and after the intervention, self rating scale and emotional Stroop test were used to evaluate the subjects' depression, anxiety, emotion regulation ability, and emotional response to positive and negative emotional cues and drug cues. The results showed that after group music imagery intervention, the experimental group significantly improved depression and emotion regulation ability, reduced drug craving, and significantly improved the ability of emotion regulation for positive emotions. The results show that music therapy can effectively improve the negative emotion of people with drug use disorders and improve their ability of emotion regulation.

Keywords: Music, emotion reactivity, music therapy, methamphetamine use disorder

音乐治疗在烧伤患者功能锻炼疼痛管理中的作用研究

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摘 要 疼痛是人类最基本的感觉，被列为第五大生命体征，对于人类生存有重要的意义。由于疼痛给人类带来了巨大的痛苦和经济损失，因此消除疼痛成为关乎全球健康的公共卫生问题。烧伤疼痛极具特殊性，管理不当会导致一系列生理和心理问题。药物镇痛是目前烧伤疼痛干预的主要手段，但由于其副作用，在烧伤患者功能锻炼中使用受限。目前，音乐治疗作为一种非药物的干预方式已经成为重要的临床辅助手段，被广泛地应用于多种疼痛治疗中并取得了很好的疗效。然而音乐治疗在烧伤领域的应用还十分有限，对烧伤患者

功能锻炼中疼痛的干预效果尚不清楚。本研究选择四肢关节部位烧伤后瘢痕增生造成关节功能障碍的患者为研究对象,采用前瞻、随机对照设计,进行为期30天临床试验,应用基于音乐的想象(MBI)和音乐交互参与(MAE)的音乐治疗方法对烧伤患者功能锻炼中的疼痛干预效果的评价。通过51名患者(测量患肢73例)在功能牵伸中疼痛、焦虑、生命体征、关节活动度、疼痛度、疼痛控制满意度的测量。研究显示,音乐治疗组、背景音乐组和对照组患者在治疗中的平均疼痛评分为2.57、3.37、3.69,音乐治疗组的平均疼痛评分低于对照组,差异有统计学意义,且随着治疗时间增加疼痛评分降低(P 值 <0.0001)。音乐治疗组、背景音乐组和对照组患者在治疗中焦虑降低的平均值分别为1.09、1.46、2.06,音乐治疗组的平均焦虑评分显著低于对照组,且随着治疗时间增加焦虑评分降低越显著(P 值 <0.0001)。此外,对烧伤患者功能锻炼中的呼吸频率、血压(舒张压)有明显改善作用。但音乐治疗对于心率、血压(收缩压)和血氧饱和度的改善尚无统计学意义,且对关节活动度、依从性和疼痛控制满意度的改善不明确,还需要进一步的研究。

关键词 音乐治疗, 烧伤, 疼痛, 焦虑, 关节活动度

The of Effect of music therapy on pain of burn patients

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Abstract: Pain is a basic feeling, which has a great significance for human beings. It has been generally accepted as one of the five vital signs for human beings. However, pain has brought tremendous suffering and economic loss. Pain management has become one of the important issues for global public health. Burn pain is extremely special. Inadequate pain management leads to a series of physiological and psychological problems, which makes the treatment of burn very challenging. Functional exercise is the main means of burn rehabilitation. The pain caused in this process may bring great suffering to burn patients, leading to their poor compliance in the process of functional training, and thus seriously influencing the effect of rehabilitation treatment. In recent years, drug analgesia is the main method of burn pain treatment, but since most of the analgesic drugs have side effects, the use of drug analgesia in functional exercise of burn patients is limited. Currently, As a non-pharmacotherapy, music therapy has become an important clinical treatment method. It has been widely used in pain management and better effect has been achieved. However, The application of music therapy in the field of burn treatment is still very limited, and the effect of music therapy on pain by burn patients during functional training is still unclear. Therefore, this study is a clinical trial of prospective, randomized controlled design, to evaluate the effect of music therapy on pain intervention in burn patients performing functional exercise. During 30 day, the patients with joint dysfunction caused by hyperplastic scar after joints of limbs burn were invited as research participants. The pain, anxiety, vital signs, joint range of motion, pain degree and pain control satisfaction of 51 patients were measured during functional exercise. The results showed that the average pain scores during the process of total treatment in MT group, BM group, and UC group were 2.57, 3.37, and 3.69, respectively. The average pain score in MT group was lower than in UC group, and the difference was statistically significant. The repeated measures analysis showed that treatment time also had an influence on pain score, which would be low with the increase of treatment time ($p<0.0001$). The average anxiety scores during the process of total treatment in MT group, BM group, and UC group were 1.09, 1.46, and 2.06, respectively. The average anxiety score in MT group was significantly lower than in UC group, and it remarkably decreased with the increase of treatment time ($p<0.0001$). In addition, the research results suggested that the application of music therapy in the treatment process of burn patients had an obvious improving effect on their respiratory rate and blood pressure (diastolic pressure). However, there was no statistical significance on the changes of heart rate, blood pressure (systolic pressure) and oxyhemoglobin saturation in MT group and it is also unclear if music therapy could improve joint mobility, compliance and satisfaction of pain control. Therefore, futher research is still needed to verify the effect of music therapy on pain management for joint burn patients during functional exercise.

Keywords: burn patients, music therapy, pain, anxiety, joint range of motion

诺道夫·罗宾斯音乐治疗： 即兴“创造音乐”在特殊儿童治疗中的可行性研究

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摘要 “每个人都有与生俱来的音乐敏感性”，不论来访者有什么障碍与局限，在音乐里音乐治疗师都能找到与来访者的连接之处。治疗师强调的不是来访者做不到的事情，而是如何从他们能做的事情里面延伸，突破障碍。建立在这种理念之上的诺道夫·罗宾斯音乐治疗采用即兴音乐与来访者一同打造出所需的治疗性的“音乐空间”。音乐在普遍认知里是名词，而在诺道夫·罗宾斯音乐治疗里音乐被视为动词“musicing/创造音乐”，使音乐从被动转向了互动，强调有意识的享受音乐中的体验。来访者在音乐中的微妙回应，可以体现出他们充满个性化的互动。身体的动作，发出的声音，呼吸的方式，每个弹奏的音符，甚至是微妙的眼神接触都能作为调动来访者的契机。许多研究显示没有音乐基础的孩子也能觉知并理解与感受音乐当中传递的情感，而在分析了音乐治疗互动后人们发现，特殊儿童可以在音乐互动中展现出在其他地方无法体现的复杂认知过程。音乐中包含了许多人与人互动中常见的“行动模式”，其中包括我们的“沟通性乐感”。在音乐中培养非语言交流的互动暗示与婴孩时期的母婴互动中有许多相似之处。前语言时期，婴儿与母亲的互动建立在共同的“声音”对话上。这“对话”包含了如何掌握节奏时机，回应顺序，相互凝视，延长专注力，如何运用声音与身体，和能否享受两人分享一个主题的能力。结合以上几点，音乐治疗师会带领来访者通过生动的互动式音乐演奏，去捕捉每位来访者的优势，一同发展来访者的潜能。本文将通过大量研究与直观的案例，呈现诺道夫·罗宾斯音乐治疗方法在特殊儿童领域的应用原理与治疗程序，展现音乐治疗师是如何通过音乐体验的力量有针对性地对生活产生积极的影响，建立健康的关系，表达自我，提升专注力，培养创造力和对世界的好奇心。

关键词 诺道夫·罗宾斯音乐治疗，特殊儿童，即兴音乐

Nordoff-Robbins Music Therapy: The therapeutic possibilities improvisational musicing holds for children with developmental disabilities

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Abstract: “Every person is born with an innate sensitivity to music”. Regardless of ability and cognition, it will always be possible to find a connecting point within the music. The music therapist emphasizes not on what the individual is unable to do but instead focuses on how to extend and develop upon what the individual can do. Built upon these principles Nordoff-Robbins music therapy uses improvised live music to create a “music space” tailored to the client’s music therapy needs. Music is usually a noun but in Nordoff-Robbins music therapy the verb “musicing” is used. Musicing sees music as a “human activity”, where in the act of music there is engagement, interaction, as well as shared enjoyment. The change shifts passive music into an active musical experience. It is there, in the musical personal factors and the subtleties of the response that we can see the child’s character and content of the child’s engagement – giving the therapist a direction to take the creative work. Body movement, vocalizations, breathing patterns, musical selection, even the slightest eye contact and become the opportunity to connect and begin the therapeutic process. Research has shown that children are able to recognize, understand and convey the emotions in music and through musical analysis it uncovered the presence of complex cognitive processes that were not detectable through other means in individuals with developmental delays. The development and understanding of non-verbal communication cues are similar to the mother-infant communications process formed in early childhood. While learning to interact with the environment we develop many “patterns of action” including our “communicative musicality”. Infants with no language learn to share meaning by being in communication, which maybe through a “musical conversation”, this includes rhythm, sequencing, mutual gaze, attention, vocalizations, affect and body

movement, as well as the ability to share joy in joint interaction. By combining the above factors therapy aims to amplify individual strengths, discover their hidden potential, and bring about positive inner change. Through precise interactive music engagement Nordoff-Robbins music therapists can help children with developmental delays form skills to build healthy relationships, self-expression, increase their attention span, develop their creativity, and cultivate a curiosity towards the external world.

Keywords: Nordoff-Robbins Music Therapy, Developmental Delays, Special Needs, Improvisational Music Therapy

(2) “音乐心理学专业委员会”专题研讨会 2

音乐训练干预老年人抑制控制能力的脑机制探索： 基于 GoNoGo 任务

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摘要 研究表明与认知控制相关的 theta 频段能够影响被试在 GoNoGo 任务中的表现, 而 NoGo 试次中发现, theta 振荡可能与年轻人的抑制反应有关。随着年龄的增长, 老年人的抑制控制能力逐渐下降, 影响老年人的行为技能。研究发现音乐训练是一种有效的认知老化干预手段, 但其起效机制尚不清晰, 因此, 本研究拟从抑制控制能力改变的角度来对该问题展开探索。我们招募了 16 名健康的老年人进行为期 3 个月的音乐训练, 在音乐训练前后使用 BioSemi Active Two 采集系统记录了被试执行 GoNoGo 任务的脑电图。我们使用 Brainstorm 工具包对数据进行处理, 首先, 我们检查并排除了被试错误反应的试次。随后, 对连续脑电图进行滤波并对每一个刺激前 500 ms 与后 1000 ms 进行分析。时频分析结果显示, 音乐训练前老年人 NoGo 试次的 theta 振荡显著大于 Go 试次 ($p=0.02$, $t=2.61$); 在 NoGo 试次中, 老年人在音乐训练后的 theta 振荡小于音乐训练前 ($p=0.07$, $t=-1.95$)。该结果表明: 相比于其他频段, 老年人的 theta 振荡无论是在 NoGo 还是 Go 试次下均占主导地位, 但是老年人需要更强的 theta 振荡以完成抑制控制任务, 而经过 3 个月的音乐训练后, 老年人 NoGo 试次中 theta 振荡降低, 这可能是由于音乐训练后老年人在执行抑制控制任务时所需要的资源减少。该工作有助于认识音乐训练干预老年人抑制控制的脑机制, 为理解音乐干预认知老化的起效机制提供了切入点。

关键词 theta 振荡, 老年人, 音乐训练, GoNoGo, 抑制控制

The brain mechanism exploration of music training affects older adults' inhibitory control ability: Based on GoNoGo task

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Abstract: Studies suggested that theta band which is associated with cognitive control, affects subjects' performance in the GoNoGo task. Theta oscillation has been found in NoGo trials, which may be associated with the inhibitory response of young adults. Ability of inhibitory control has been suggested to be decreased gradually with the increase of age and it will influence the behavioral skills of older adults. Studies found that music training is an effective intervention for cognitive aging, but its brain mechanism is still not clear. Thus, this study intends to explore the problem from the perspective of changing of inhibitory control ability. 16 healthy older adults were recruited for 3 months music training and EEG was recorded before and after music training by using a BioSemi Active Two acquisition system. The processing of data was completed by using Brainstorm toolbox. First, we checked and eliminated trials with false reaction. Then, we filtered continuous EEGs and analyzed 500 ms of pre-stimulus activity

and 1000 ms of post-stimulus activity. Results of time-frequency analysis shown that before music training, the theta power of NoGo trials is significantly greater than that of Go trials ($P=0.02$, $t=2.61$). At NoGo trials, the theta power of subjects after music training is smaller than that before music training ($P=0.07$, $t=-1.95$). The results show that, compared with other bands, theta brain oscillation of older adults is dominant whether in NoGo or Go trials. But older adults need greater theta oscillation to complete the task of inhibitory control. However, the theta oscillation of older adults in NoGo trials decreases after 3 months music training. This may because older adults who received music training need less resources to carry out tasks of inhibitory control. This work is helpful for understanding the brain mechanism of music training affects inhibitory control of older adults and provides an entry point for understanding the mechanism behind the benefits of music training on cognitive aging.

Keywords: theta brain oscillation, older adults, music training, GoNoGo, inhibitory control

老化和音乐训练经验对脑功能偏侧化与言语知觉的影响研究

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摘要 老化会伴随有明显的言语感知和理解能力的下降, 而音乐训练经验被发现可能对抗和延缓老化所引起的噪音下言语感知能力衰退。这提示了老化和音乐训练经验对言语感知的交互作用, 但这种交互作用背后的脑机制目前尚不明确。言语认知功能存在脑偏侧化, 之前研究发现年龄和音乐训练经验都可能会对人脑的言语认知功能及其脑偏侧化产生一定的影响。因此, 言语知觉相关的脑功能偏侧化是不是在上述交互作用中起着至关重要的作用就值得我们去探索。本研究采集了 93 名被试(青年音乐家/非音乐家、老年音乐家/非音乐家)的功能磁共振影像数据, 基于同位区域自发连接图谱(AICHA)定义了全脑的同位区, 采用静态功能连接的方法得到了两种测量左右半球同位区功能偏侧化的计算方式: 功能整合与功能分离。针对大脑中某一对同位区, 前者表示该区域倾向于在半球间信息交流, 而后者表示该区域倾向于在半球内信息交流。研究结果发现在这两种脑功能偏侧化上, 老化和音乐训练经验交互作用显著的脑区呈现出明显的前后差异。功能整合交互作用显著的脑区主要位于额叶, 包括额下回、额下沟以及中央前沟、颞上回和颞中回的部分区域等, 功能分离交互作用显著的脑区则主要位于除额叶以外的大脑中后部。而且两种指标的交互作用都主要是老年音乐家更强的右偏所导致, 提示老化和音乐训练经验引发的右半球对言语知觉的代偿性作用。与行为的相关分析结果显示, 功能整合交互作用显著的额中回眶部和岛叶的功能整合指标与噪音下视听言语音节辨别正确率呈显著负相关; 功能分离交互作用显著的岛叶、颞上回、缘上回和舌回等区域的功能分离指标与正确率则呈显著正相关。以上这些结果证明了老化和音乐训练经验对额叶功能整合与颞-顶-枕叶功能分离的交互作用, 同时提示了与言语知觉直接相关的颞上回、岛叶等区域的功能偏侧化在老化/音乐训练经验和言语知觉行为之间的桥梁作用。

关键词 言语知觉, 老化, 音乐训练经验, 脑功能偏侧化, 功能磁共振成像

Effects of aging and musical training experience on brain functional lateralization and speech perception

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Abstract : Aging is associated with a significant decline in speech perception and comprehension, while music training experience has been found to counteract and delay the decline of speech perception under adverse listening conditions induced by aging. This suggests an interaction between aging and music training experience on speech perception, but the brain mechanism behind this interaction is not clear yet. Previous studies have found that aging and music training experience may have certain influence on speech cognition as well as its brain lateralization. Therefore, it's worth exploring whether brain functional lateralization plays a crucial role in this interaction of speech perception. This study adopted resting-state functional connectivity to obtain two functional lateralization indices of

homotopic brain regions based on an atlas of intrinsic connectivity of homotopic areas (AICHA), using functional magnetic resonance imaging data from 93 subjects (young musicians/non-musicians, old musicians/non-musicians). Functional integration means the interactions between left and right hemispheres, while functional segregation implies a tendency for greater intra-hemispheric relative to inter-hemispheric interactions. Our results found a distinct whole-brain anterior-posterior difference of interactions between aging and music training experience on the two functional lateralization indices. Regions with significant interactions of functional integration mainly located at frontal lobe, including inferior frontal gyrus, inferior frontal sulcus and parts of precentral sulcus, superior temporal gyrus, middle temporal gyrus. However, regions with significant interactions of functional segregation were widely distributed over the brain except the frontal lobe. And both types of interactions were mainly driven by stronger right lateralization in older musicians, indicating an age- and musical experience-related compensation by right hemisphere in speech perception. Brain-behavior correlation analysis showed significant negative correlations between functional integration in orbital middle frontal gyrus, insular and audiovisual syllable-in-noise identification accuracy. Functional segregation in areas such as insular, superior temporal gyrus, supramarginal gyrus and lingual gyrus were positively associated with accuracy. Our findings truly confirmed the interactions between aging and music training experience on functional integration in frontal lobe and functional segregation in temporal-parietal-occipital lobe. In addition, the correlations suggested a role of functional lateralization in areas such as superior temporal gyrus, insular and so on, as a bridge between aging/musical training experience and speech perception.

Abstract: speech perception, aging, music training experience, brain functional lateralization, functional magnetic resonance imaging

音乐乐句层级结构动态加工和学习的神经机制：一项 EEG 研究

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摘要 与语言加工一样, 人脑对音乐的加工也存在一套复杂的系统, 对音乐的理解在很大程度上受到句法的影响。前人研究表明个体对音乐句法的加工依托于对不同层级音乐结构的感知, 且受到音乐训练经历和注意的调节。但目前大脑如何加工/追随动态的音乐信息, 尤其是根据音乐的句法结构将其切分为有意义的单元或整合成完整内容的神经机制尚未明确, 与乐句切分有关的神经特征还不明朗。为了回答这些问题, 本研究选用了 10 首巴赫的众赞歌选段, 去除声学线索后按局部(保留正常乐句边界音符)与整体倒转的方式打乱音乐的结构, 与原曲一同组成三种条件的刺激。我们让 30 名非音乐家被试在安静环境下反复聆听三遍音乐刺激, 并同时使用 EEG 记录被试的脑电响应, 以考察个体如何在线加工与整合音乐的不同层级结构。研究结果发现, 与前人研究一致, 个体的大脑低频神经振荡对音乐的节奏会产生跟踪响应, 且受到音乐训练经历的调节。对时域(时间响应函数)和频域(调制频谱)分析的结果都显示个体对音乐片段的加工受到乐句周期的调节, 对乐句神经跟踪响应的幅度在原曲和局部倒转音乐中均高于整体倒转音乐, 且响应幅度随着聆听次数的增加逐渐减弱。本研究同时计算了对乐句跟踪的相位提前指数, 结果发现聆听次数的增加并没有促进对乐句边界神经响应相位的提前, 表明对音乐层级结构的学习和预测可能需要个体先验知识的参与。本研究提示大脑可以通过对音乐乐句的跟踪实现在线切分与加工连续音乐流, 为音乐层级结构的动态加工提供了强有力的神经指标。

关键词 音乐句法, 乐句切分, 神经跟踪响应, 相位提前指数

The Neural Mechanisms Underlying Dynamic Processing And Learning Of Hierarchical Structure In Music: An EEG Study

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Abstract: Same as language, there is a complex system for music processing in our brain, which is largely affected by musical syntax. Previous studies in music neuroscience have shown that to what degree can listeners learned the musical syntax depends on their perception of different levels of music structures, and is modulated by music training experience and distribution of attention. However, how does the brain track dynamic music information, especially the neural mechanism of segmenting music into meaningful units or establishing high-level music structures during music listening is not yet clear. In order to answer these questions, we presented 10 Bach chorales for 3 times consecutively to 30 non-musician subjects in quiet condition undergoing electroencephalogram (EEG) recording. The acoustics correlates of musical phrase were removed, then the structures of the music stimuli were disrupted by locally or globally reversing the harmonic progression, to contrast with the original condition. Our results found a low-frequency neural component that modulated the neural rhythms of beat tracking, which was associated with the music training experience. Using temporal response function and power modulation spectrum we discovered that the phrase tracking was modulated by phrasal structure manipulation as the modulation magnitude was significantly stronger in the original and local reversal conditions than the global reversal condition, and showed a significant decrease with repetitions. We also calculated the phase precession index to investigate the predictive process of musical phrase segmentation. The results showed that the repetitions did not facilitate the learning of the phrase boundary, indicating that the prediction of phrase requires prior knowledge of classical music. This study suggests that the brain can segment continuous music streams online via tracking phrasal boundaries, and provides a robust neural signature of processing the musical syntax.

Abstract: musical syntax, phrase segmentation, neural tracking response, phase precession index

鼓圈对害羞大学新生适应性的干预研究

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摘要 目的: 验证鼓圈干预对改善害羞大学新生入学后适应不良问题的干预效果。方法: 采用亨德森-津巴多害羞量表(ShyQ)筛选害羞程度高的大一新生44名,并随机分配到干预组(n=22)和对照组(n=22),干预组接受每隔2日1次,共7次鼓圈干预,干预分为三个阶段,分别是关系中心、任务中心和自我中心,对照组不做任何干预,并保持其它条件与干预组一致。采用ShyQ、评估他人量表(EOS)和大学生适应性量表对干预前后新生的状态进行测量;采用团队活动满意评估表对每次干预效果进行评估,采用团队成员角色行为评估问卷对每个阶段干预效果进行评估。结果: 新生对干预的满意度随干预次数的增加而增加,第三次的满意程度较第一次产生了显著性变化($p<0.05$),在团队角色行为评估的维度上,关系中心和自我中心阶段发生了显著性的变化($p<0.05$);组间比较结果显示,干预组在7次干预后ShyQ和大学生适应性量表的得分与对照组产生显著性的差异(均 $p<0.05$);组内比较结果显示,干预组在7次干预后ShyQ、EOS和大学生适应性量表的得分均低于干预前得分(均 $p<0.05$),而对照组只有ShyQ的前后测得分存在显著性差异($p<0.05$)。结论: ①鼓圈针对害羞大学生适应性的干预效果显著;②鼓圈能有效地降低害羞大学新生的害羞程度和对他人负向评价,从而提高害羞大学新生的适应性问题。

关键词 害羞, 鼓圈, 适应性, 大学新生

The Intervention Study of Group Drumming in the Adaptability of Shy University Freshmen

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Abstract: Objective: To verify the effect of drum circle intervention on improving the poor adaptation of shy college freshmen. Methods: The Henderson-Zimbardo shyness scale (ShyQ) was selected and randomly assigned to the intervention group (n=22) and n=22, received once every 2 days, divided into three stages, relationship center, task center and self-center, and kept other conditions consistent with the intervention group. The status of freshmen before and after the intervention was measured using the ShyQ, assessment (EOS) and the student adaptability scale; the effectiveness of each intervention was evaluated using the team activity satisfaction assessment table and each stage using the team member role behavior assessment questionnaire. Results: Freshmen satisfaction increased with the number of intervention, The third degree of satisfaction produced significant changes from the first ($p < 0.05$), On the dimensions of the team role behavior assessment, Significant changes occurred in the relationship center and self-center phases ($p < 0.05$); The inter-group comparison results show, A significant difference between the scores of the ShyQ and the control scale after 7 interventions (both $p < 0.05$); In-group comparison results show, Both the ShyQ, EOS and college student fitness scales after 7 interventions were lower than the pre-intervention scores (both $p < 0.05$), There were significant differences in the ShyQ ($p < 0.05$). Conclusion: Drum circle effectively reduces the adaptability of shy college students and improves the adaptability of shy college students.

Abstract: shy, group drumming, adaptability, college freshmen

平静音乐干预状态焦虑的效果探索

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摘要 状态焦虑是一种特定形式的焦虑, 任何人都可以体验到。长期的焦虑如果不进行干预会形成抑郁, 有自杀的风险。焦虑的干预方式包括药物干预和非药物干预, 非药物干预包含迷走神经刺激、快速经颅刺激和音乐干预。但其中的一些手段都存在耗时长、操作不便等问题, 音乐干预以其无创性和便利性的特点吸引了临床学者的关注。一些临床研究已经表明平静音乐对焦虑具有缓解作用, 但是其脑机制尚不清楚。本研究招募了 41 名健康且没有焦虑的大学生, 随机分为两组, 在使用自主设计的焦虑诱发范式诱发状态焦虑后分别接受平静音乐刺激和无声刺激的干预, 并全程记录脑电。行为学结果表明, 平静音乐组在干预后的状态焦虑水平下降程度显著高于无声刺激组; 功率谱结果显示, 在聆听平静音乐后, 枕叶的功率谱密度在 γ_2 频段显著下降 ($p < 0.05$), 而在聆听无声刺激后, 没有显著的差异; 进一步通过脑网络分析发现, 在平静音乐干预后, 枕叶与左额叶的在 γ_2 频段的脑网络连接增强 ($p < 0.05$)。上述结果表明, 音乐对状态焦虑具有干预效果, 并且音乐干预状态焦虑的脑机制与枕叶功率谱的下降和枕叶到左额叶的脑网络连接增强有关, 表明中性音乐的干预可能依赖于注意力、情绪和共情的三重调节。本研究深入了解平静音乐干预状态焦虑的脑机制, 进一步推动今后非药物干预的临床干预。

关键词 平静音乐, 状态焦虑干预, 功率谱, 脑网络

Effect of neutral music on state anxiety

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Abstract: State anxiety is a specific form of anxiety that anyone can experience. Long-term anxiety, if state anxiety is

not intervened, it can lead to depression and risk of suicide. Anxiety intervention methods include drug intervention and non-drug intervention. Non-drug intervention includes vagal nerve stimulation, rapid transcranial magnetic stimulation and music intervention. However, some of these methods have problems such as time-consuming and inconvenient operation. Music intervention has attracted the attention of clinical scholars due to its non-invasive and convenient characteristics. Some clinical studies have shown that neutral music has a relieving effect on anxiety, but its brain mechanism is still unclear. In this study, 41 healthy and non-anxious college students were recruited and randomly divided into two groups. After using the self-designed anxiety-inducing paradigm to induce state anxiety, they received the intervention of neutral music stimulus and blank stimulus respectively, and were recorded EEG throughout the process. Behavioral results showed that the level of state anxiety decreased in the neutral music group after the intervention was significantly higher than that in the blank stimulus group, and the power spectrum results showed that after listening to neutral music, the power spectrum density of the occipital lobe decreased significantly in the gamma2 band ($p<0.05$), while under the condition of blank stimulus, there was no significant difference. Further brain network analysis found that the power spectrum density of the occipital lobe decreased significantly in the gamma2 band ($p<0.05$). After the intervention, the brain network connection between the occipital lobe and the left frontal lobe in the gamma2 band was enhanced ($p<0.05$). The above results indicate that music has an intervention effect on state anxiety, and the brain mechanism of music intervention in state anxiety is related to the decrease of the power spectrum of the occipital lobe and the enhancement of the brain network connection from the occipital lobe to the left frontal lobe, which might rely on a ternary role modulation of attention, emotion and empathy after listening neutral music. This study has an in-depth understanding of the brain mechanism of neutral music intervention in state anxiety, and further promotes future non-pharmacological interventions in clinical interventions.

Abstract: neutral music, state anxiety intervention, power spectrum, brain functional connectivity

(3) “音乐心理学专业委员会”专题研讨会 3

音乐训练影响汉语歧义短语加工的神经过程

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摘要 音乐和言语作为高度复杂的两类声学系统, 都可通过相同的参数如音高、时程、响度等来表示其音韵学特征, 并共享一些基本的神经环路和加工机制 (Knösche et al., 2005; Koelsch, Gunter, & Wittfoth, 2005; Koelsch, 2006; Levitina & Menon, 2003; Patel, Gibson, Ratner, Besson, & Holcomb, 1998)。随着认知神经科学技术的发展, 一些研究者开始关注音乐训练如何影响语言加工 (Dawson, 2014; Milovanov & Tervaniemi, 2011; Peretz, Vuvan, Lagrois, & Armony, 2015)。本研究利用 ERPs 技术, 采用启动范式, 探索了音乐训练影响听者加工韵律短语启动的神经过程。实验以 400 ms 间隔成对呈现歧义短语 (前一个为启动项, 后一个为目标项), 要求音乐组和控制组依次完成词汇判断 (某个词汇是否在两个短语中呈现) 和结构判断任务 (前后呈现两个短语的结构是否一致)。结果发现, 在 100~500ms 时间窗, 启动项中, 音乐组和控制组在加工歧义短语边界时诱发了无差别的反映韵律切分的脑电效应 CPS; 在目标项中, 只有音乐组加工被启动的目标项时, CPS 波幅明显更小, 产生了显著的韵律启动效应, 并且该效应受到实验任务和短语结构的调节。结果表明音乐训练可以跨领域影响言语韵律加工, 音乐组产生明显的韵律启动效应可能是由于其对边界加工的各种声学参数 (如音高, 时长) 更加敏感, 加工启动项时激活的音韵模板更稳定或者能更准确预期目标项结构。

关键词 音乐训练, 韵律边界, 歧义短语, CPS, 启动

The Neural Processing of Chinese Ambiguous Phrases Under the Influence of Music Training

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Abstract: As two highly complex auditory systems, music and speech represent phonological characteristics with the same parameters, such as pitch, duration, stress, etc., and share some basic neural circuits and processing mechanisms. Along with the development of cognitive neuroscience technology, some researchers begin to pay attention to how music training affects language processing. Using the structural priming paradigm, the present study investigates the neural processes by which music training influences listeners' processing of prosodic phrases priming. The experiment presented ambiguous phrases in pairs with a 400 ms interval (the prior one is Prime and the later one is Target) and asked musicians and nonmusicians to finish lexical judgment task (whether a word was presented in the two phrases) and structural judgment task (whether the structure of the two phrases are the same). The results indicated that, in the 100~500 ms time window, the prosodic boundaries embedded in ambiguous phrases elicited the CPS stably, which reflects prosodic segmentation, regardless of whether the participants were trained in music. More importantly, we found that only in musicians, the CPS amplitude reduced and generated significant prosodic priming effect, when they processed the target phrases. This effect was also affected by experiment tasks and phrases structure. The results may suggest that music training had a cross-domain effect on speech prosody processing. The obvious prosodic priming effect in musicians may because they are more sensitive to various auditory parameters (i.e. pitch, duration, etc.) of boundary processing, and thus the phonological template activated by Primes can be utilized to anticipate the structure of Targets more stably or more accurately.

Abstract: music training, prosodic processing, ambiguous phrase, CPS, prime.

从具身认知角度谈钢琴音色在演奏者-听众之间的传达与交流

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摘要 在钢琴表演中, 钢琴家往往通过精湛的演奏技巧试图塑造和表现不同的音色 (如明亮的, 圆润的等), 以期与听众进行音乐交流。但是与交流情感或音乐表现力的研究相比, 现有研究对于演奏者-听众之间有关音色交流的研究较少, 在不同的视听呈现条件下演奏者是否能向听众可靠地传达他们的音色意图这一点仍是未知的。笔者以往的研究 (Li & Timmers, 2020) 揭示了演奏者对钢琴音色的隐喻受肢体运动和身体体验的影响, 而这些具身化的过程丰富了演奏者在表演过程中的主观体验, 这一点暗示了音乐表演中视觉信息对听众音乐感知的重要性。据此我们设计了一个音色感知实验, 以验证钢琴表演中听觉信息和视觉信息对听众音色感知的影响。该实验采用了 3 (三位演奏者) × 3 (三种视听条件) × 2 (音色对照) 设计的重复测量方差分析, 检验了演奏者-听众之间 10 种音色 (明亮的/灰暗的, 沉重的/轻盈的, 圆润的/尖锐的, 紧张的/松弛的, 干涩的/天鹅绒般的) 的交流是否可行。三首曲目由三位不同的钢琴演奏者用 10 种音色演绎完成 (即 30 首), 21 位听众要求在三种视听条件下 (纯音频, 纯视频, 音视频兼具) 对这 30 首音乐材料进行音色判断 (1-7 里克特量表)。结果显示了九种音色均可以可靠地交流和传达, 灰暗的音色 (dark) 除外; 视觉信息提高了紧张的和松弛的两种音色的交流准确性, 且不受演奏者这一因素的干扰。对于其他的几组音色, 我们发现了不同演奏者对依赖视觉线索以提高交流准确性的偏好和能力有所不同。该实验表明, 钢琴音色的交流不完全只依赖于声音线索 (即音色的声学特征), 也与音乐表演中的视觉线索 (即观察到的表演姿态, 动作) 有关。这一实证研究丰富了具身认知理论在音乐表演和音乐交流研究领域中的应用, 即演奏者和听众在肢体运动和身体体验方面的共识为音色的具身化交流奠定了基础。

关键词 钢琴音色, 音乐具身认知, 音乐交流, 视听呈现条件, 感知实验

The Communication of Timbral Intention between Pianists and Listeners an Embodied Perspective on Music Communication

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Abstract: Studies on the audio-visual presentation of musical performance have investigated its impact on perceived expressiveness and musical appreciation/evaluation. Little is known about whether a precise timbral intention by a pianist can be communicated to listeners. An interview study (Li & Timmers, 2020) on the conceptualization of piano timbre revealed pianists' extensive utilization of timbral intentions in piano performance. The findings also suggested that timbre metaphors are enriched by embodied experience such as bodily movements and feelings, indicating the relevance of visual cues. The perceptual experiment reported in this article explored whether the communication of five pairs of timbral intentions (bright/dark, heavy/light, round/sharp, tense/relaxed, dry/velvety) between pianists and listeners is reliable and the extent to which performers' gestures provide visual cues that influence the perceived timbre. Three pianists played three musical excerpts with ten different timbral intentions (3x10=30 music stimuli) and twenty-one piano students were asked to rate perceived timbral qualities on both unipolar Likert scales under three modes (vision-alone, audio-alone, audio-visual). The results revealed that nine of the timbral intentions were reliably communicated between the pianists and the listeners, except for the dark timbre. The communication of tense and relaxed timbres was improved by the visual conditions regardless of who is performing; for the rest, we found the individuality in the pianists' preference for using visual cues. This study implies that the communication of piano timbre is not based on acoustic cues alone but relates to a shared understanding of sensorimotor experiences between the performers and the listeners. This research enriches the understanding of embodied perspective on music communication, that the shared knowledge of sensorimotor experience and bodily movements between pianists and listeners lays a foundation of embodied music communication.

Keywords: piano timbre, embodied music cognition, music communication, audio-visual presentation mode, perceptual experiment

N400 标识音乐和语言中共享的运动信息

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摘要 过往研究发现音乐蕴含的运动概念能促进具有运动信息的图片(如飞鸟)的加工,但对表达静止信息的图片(如站着的鸟)没有影响。假如跨类的运动概念普遍存在的话,具有运动属性的音乐能否启动表达运动概念的语言?在此背景下,本研究旨在探索音乐能否以及如何影响不同语言学范畴(动词和名词)的加工。本研究由两个ERP实验构成,探讨音乐启动条件下汉语动词和名词的加工情况。实验一(包括任务一和任务二)考察音乐启动动词(动作动词和状态动词)的加工,音乐分有节奏变化的音乐(加速音乐和减速音乐)和没有节奏变化的音乐(快速音乐和慢速音乐)两种。实验二(由任务三和任务四组成)采用实验一相同的音乐,考察名词(有生命名词和无生命名词)在音乐启动下的加工情况。两个实验均采用跨通道概念启动范式,首先给无音乐经验的被试播放一段音乐,音乐结束之后呈现一个词,被试的任务是判断该词与刚听到的音乐是否在运动概念上一致。任务一和任务三结果显示,在有节奏变化的音乐启动下,状态动词和无生命名词分别比动作动词和有生命名词在前部脑区引发了更大的N400波幅。但在这类音乐内部,N400效应只发生在动作动词和有生命名词上,基本上对状态动词和无生命名词无影响;在加速音乐条件下引发的N400波幅比减速条件下更大。然而,在任务二和任务四中,当无节奏变化的音乐启动动词和名词时,没有出现N400

成分。总之，两个实验表明，只有有节奏变化的音乐才能影响动词和名词的加工。具体来说，在有节奏变化的音乐启动下，动作动词和有生命名词比状态动词和无生命名词加工更容易，说明 N400 成分是标记运动概念的脑电指标。尽管音乐和词是截然不同的两类范畴，但理解音乐和词中的运动概念都离不开具身性（我们的身体经验）。所有这些都表明，运动作为一种物理知觉信息可以转化为人们语言认知中的一个概念信息，并相应地影响着不同范畴的加工。从方法论视角看，本研究为音乐意义和语言意义的比较研究提供了一个可以借鉴的研究范式。

关键词 音乐，运动概念，语言，动词，名词

N400 Indexing the Motion Concept Shared by Music and Language

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Abstract: Previous studies found that motion concept implied by music helps facilitate the processing of dynamic entities (e.g., a picture of a flying bird) but exerts no impact on static entities (e.g., a picture of a standing bird). To date, however, no study has been conducted on whether such a relationship holds between music and language provided that motion concept is ubiquitous across categories. Against this background, the current study aims to investigate whether and how music can affect different linguistic categories like verbs and nouns when primed by music. The whole study is composed of two ERP experiments on the processing of Chinese verbs and nouns under different music priming conditions. Experiment 1 tested the processing of verbs (action verbs vs. state verbs) primed by music, i.e., the music with tempo changes (accelerating music vs. decelerating music) in Task 1 and the music without tempo changes (fast music vs. slow music) in Task 2 while Experiment 2 (made of Task 3 and Task 4) tested the processing of nouns (animate nouns vs. inanimate nouns) using the same set of music stimuli as adopted in Experiment 1. Following the cross-modality concept priming paradigm, participants were required to hear a piece of music prior to judging whether the word is semantically congruent with the motion concept conveyed by the music. The results of Task 1 and Task 3 showed that when primed by music with tempo changes, state verbs and inanimate nouns elicited larger N400 amplitudes than action verbs and animate nouns in the anterior regions. But between the music sub-types, the effect occurred only on action verbs and animate nouns (but basically not on state verbs or inanimate nouns), i.e., the N400 amplitudes were larger in accelerating music condition than in decelerating music condition. In Task 2 and Task 4, nevertheless, the N400 component was absent as verbs and nouns were primed by music without tempo changes. In sum, Experiment 1 and Experiment 2 reveals that only music with tempo changes can affect the processing of verbs and nouns. Specifically, action verbs and animate nouns become easier to process than state verbs and inanimate nouns when they are primed by music with tempo changes, indicating the motion concept indexed by N400. Despite the fact that music and words represent two distinct categories, they have shared concept of motion derived from embodiment (our bodily experience). All this suggests that motion as a physical perception can turn into a conception in people's linguistic cognition and affect the processing of diversified categories accordingly. Apart from the point, this study provides an applicable research paradigm to the meaning study encoded by music and language.

Keywords: music, motion concept, language, verbs, nouns

自闭特质者跨通道视听情绪整合加工：来自 ERP 的证据

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摘要 自闭症谱系是以社会交往和交流障碍、有限的/重复的行为、兴趣或活动模式为主要症状的一种神经发展障碍。跨通道情绪整合加工是社会交往的核心之一。由于自闭症者个体差异较大、存在共病，导致已有

研究结果不一致。考虑到高自闭特质者具有相似的自闭症状，但没有存在共病，本研究试图通过 ERP 技术探究高自闭特质者对音乐和面孔情绪的整合加工。为了避免同时呈现视听刺激存在的干扰效应。本研究采用跨通道情感启动范式（视听情绪刺激先后呈现）：实验 1 启动刺激是表现愉悦或不愉悦情绪的和弦，目标刺激是与和弦情绪一致或不一致的面孔图片。实验 2 启动刺激是愉悦或不愉悦的情绪面孔图片，目标刺激是与面孔图片情绪一致或不一致的和弦。脑电结果显示，无论启动刺激是和弦还是面孔图片，与情绪一致条件相比，低自闭特质者对情绪不一致条件均诱发 N400 成分。与此相反，高自闭特质者对情绪一致和不一致两个条件的神经反应没有存在差异。为了进一步探究高自闭特质者的情绪整合障碍是否缘于他们对和弦与面孔情绪识别的能力，实验 3 和 4 通过单通道情绪启动范式（和弦启动和弦，或面孔启动面孔）分别探究他们对和弦情绪和面孔情绪的识别。研究结果显示，对于和弦情绪来说，高低自闭特质者大脑均能对和弦情绪变化做出反应，体现出高自闭特质者具有正常的音乐情绪信息的局部加工能力。然而，对于面孔情绪来说，与低自闭特质者不同，高自闭特质者大脑不能觉察出面孔情绪的变化。这些结果说明，尽管高自闭特质者可以识别出和弦情绪，但由于他们大脑无法觉察面孔情绪的变化，导致他们无法对跨通道的视听情绪信息进行整合加工。

关键词 自闭特质，音乐情绪，面孔情绪，情感启动范式，ERP

Impaired audiovisual integration of emotion in individuals with autistic traits: Evidence from ERP

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Abstract: Autism spectrum disorder is a neurodevelopmental condition characterized by deficits in social communication and social interaction, and restricted/repetitive patterns of behaviors, interests or activities. One of the cores of social interaction is audiovisual integration of emotional signals. Previous studies have yielded inconsistent results, which may be due to the large individual differences and other comorbidities in individuals with autism. Considering that individuals with high autistic traits have similar symptoms of autism and have no comorbidities, this study used ERPs to investigate the integration of emotional information from music and face in individuals with high autistic traits. A crossmodal affective priming paradigm was used in Experiments 1 and 2, in which target facial expressions or chords were preceded by affectively congruous/incongruous chords or facial expressions with a 250-ms stimulus onset asynchrony (SOA). Results showed that incongruous targets evoked an increased N400 than congruous targets in individuals with low autistic traits but not in individuals with high autistic traits. To further examine whether the deficits in audiovisual integration of emotional information resulted from impaired musical and facial emotion recognition, a unimodal affective priming paradigm was used in Experiments 3 and 4, in which target chords or facial expressions were preceded by affectively congruous/incongruous chords or facial expressions with the SOA of 250 ms. while amusics failed to exhibit such a N400 effect. We found that both individuals with high and low autistic traits exhibited a similar P3 in response to incongruous target chords, while only individuals with low autistic traits showed a larger N400 in response to incongruous target facial expressions. These results suggest that facial expression recognition deficits are responsible for the impaired audiovisual integration of emotional signals in individuals with high autistic traits.

Keywords: autistic traits, music emotion, facial emotion, affective priming paradigm, ERP

2.20 “眼动心理研究专业委员会”专题研讨会

(1) “眼动心理研究专业委员会”专题研讨会 1

形旁语义分解促进汉语伴随词汇学习：基于眼动的证据

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摘要 作为阅读的基本加工单位, 词汇在毕生发展中不断积累。当词汇量积累到一定程度, 阅读中伴随习得词汇成为个体拓展词汇量的主要方式。在阅读浅层正字法书写系统(如希伯来语)的文本时, 读者通过“语音解码”, 自发地在阅读中建构新词表征, 这是完成词汇学习的核心机制(Share, 1995, 2008)。而作为深层正字法书写系统, 汉语形-音对应相对不系统, 但具有由形知义的特点, 即形旁可以在亚词素水平提供语义线索。那么, 形旁语义线索如何作用于汉语阅读伴随词汇学习? 该效应如何随着新词表征的逐步积累而变化? 本研究通过操纵新词的形旁语义是否透明, 对上述两个问题进行研究。构造两类双字假词作为新词: 一类新词的形旁可以提示整词语义(形旁语义透明条件); 一类新词的形旁不能提示整词语义(形旁语义不透明条件)。在学习阶段, 通过 15 个强限制性学习语境, 把每个新词描述为某种语义类别下的新成员; 为降低学习负荷, 将整个学习阶段均分于五个子阶段, 阅读期间记录被试的眼动轨迹。在测试阶段, 通过正字法选择、语义类别判断、新词释义任务考察学习效果。结果发现, 在与语义测试相关的两个测试中, 读者在形旁语义透明条件下的表现显著优于形旁语义不透明条件, 表现出典型的形旁语义透明度效应。此外, 在分析整个学习阶段的眼动数据时, 仅发现微弱的形旁语义透明度效应(仅反映在回视入概率上)。基于前一次或几次阅读在整个阅读伴随词汇学习中的重要作用, 我们又对第一个语境的眼动数据进行分析, 结果发现, 形旁语义透明条件下对新词的回视入概率显著降低, 且总注视时间、总注视次数均显著少于形旁语义不透明条件, 表明在第一次阅读新词时获得了更大的形旁语义透明度效应, 该效应主要发生在词汇加工的晚期阶段。上述研究结果表明, 汉语熟练读者会自发利用亚词素形旁语义信息促进阅读伴随词汇学习。由此证明, 阅读伴随词汇的学习机制在具有语言普遍性的同时(Li et al., 2018; Li et al., 2019), 也具有语言间的特异性。

关键词 伴随词汇学习, 形旁语义透明度, 汉语阅读

Semantic radical decomposition facilitated incidental word learning during Chinese reading: Evidence from eye movements

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Abstract: As the primary processing unit of reading, word is accumulated over a lifetime of development. When vocabulary was accumulated at a certain level, incidental vocabulary learning became the main way of lexical development and expanding vocabulary. When reading texts in shallow orthographic writing systems (e.g., Hebrew), the spontaneously gradual construction of new word representations through "phonological recoding" is the sine qua non of reading acquisition and vocabulary learning (Share, 1995, 2008). Chinese, as a deep orthographic writing system, its orthography is remarkably different from alphabetic language. Character is the basic writing unit of Chinese, and about 80% of modern Chinese are compound characters, which contain semantic and phonetic radicals. Furthermore, orthography-to-meaning mapping is more reliable than orthography-to-phonology mapping. As submorphemic units, semantic radicals would be semantic cues for words. So, how does semantic radical transparency in submorphemic level affect incidental word learning in Chinese? How does the effect change as new words representations gradually accumulated during incremental vocabulary learning? This study investigated these two issues by manipulating whether the semantic radical of new words was transparent. Two groups of semantic

radicals with high or low semantic transparency were selected and combined with low-frequency right-hand radicals to form left-right structured pseudo-characters. And then, two types of two-characters pseudowords were constructed as novel words: one type of them had a semantic radical that could give clues of whole word meanings (semantic radical transparent condition); the other type of novel words had a semantic radical that could not prompt whole word meanings (semantic radical non-transparent condition). This study applied "learning-test" paradigm, and combined eye-tracking technology during the learning phase to examine the effect of semantic transparency across sentence reading. Firstly, in the learning phase, fifteen informative sentences were created for each novel word to support word learning. Meanwhile, to ensure that the novel words were genuinely novel, we created semantic cues for each novel word as a new concept of a kind of semantic category and presented those cues before the target word to support lexical learning. In order to reduce the learning load, the learning contexts were evenly divided into five learning sessions, and the participants were required to read and comprehend one session every half day. Secondly, in the testing phase, the learning effect was examined through an orthographic choice task, semantic category choice task, and definition task. The analysis of three offline testing task found that the performance of semantic category choice task and definition task exhibited a typical promotion effect of semantic radical transparency, that is to say, the scores of novel words was significantly higher in semantic radical transparent condition than in semantic radical non-transparent condition. Besides, when analyzing eye movement data throughout the learning phase, only a weak semantic radical transparency effect was found, which reflected only in the probability of regressions in the novel words. Based on the critical role of the first exposure of novel words during incidental word learning, we also analyzed the eye-tracking data on the first sentence and every first sentence of five learning sessions. We found that the probability of regressions in the target words was significantly lower in the transparent condition, and the total fixation time and the total number of fixations on transparent novel words were significantly less than that on low non-transparent ones. It showed that a more substantial semantic radical transparency effect was obtained during the first reading of novel words, and this effect mainly occurred in the late stage of novel words processing. All the above findings indicated that proficient Chinese readers would spontaneously use the semantic information of submorphemic semantic radical units to facilitate incidental novel words learning. Thus, it was demonstrated that the learning mechanism of incidental Chinese word learning not only showed linguistic universal but also had its specificity.

Keywords: incidental word learning, semantic radical transparency, Chinese reading

预测性对快速和慢速读者词汇加工的影响

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摘要 根据词汇质量假说, 阅读效率高(快速)的读者词汇表征质量更高, 在词汇加工中对语境信息的依赖更少; 而阅读效率低(慢速)的读者则更依赖语境信息来弥补较低的词汇表征质量(Andrews, 2015; Perfetti, 2007)。相反, 预测编码理论则认为, 与阅读效率低的读者比, 阅读效率高的读者拥有更丰富的阅读经验, 更善于利用语境来预测即将出现的词汇(Hawelka et al., 2015)。在中文阅读中, 不同阅读效率的成人读者对预测性的依赖还不清楚, 本研究借助 Eyelink 1000 眼动仪并通过两个实验检验这两种观点。实验 1 通过比较 15 组快速与慢速读者在句子阅读中对目标词(高或低预测)的注视情况, 来考察两组读者在中央凹词汇加工中利用预测性信息的差异。实验 1 共有 60 对高-低预测实验句子。实验 2 使用边界范式(Rayner, 1975)操纵 60 个高预测词的副中央凹预视(相同、视觉相似假字、低预测词和无关假字)来考察预视对 20 组快速与慢速读者加工预测性信息的影响。整体结果显示, 快速组比慢速组对目标词的注视更少、更短, 跳读更多。实验 1 发现高预测词比低预测词的注视时间更短, 即预测性效应, 且该效应在两组上表现一致。实验 2 发现了

显著的预视效应，且该效应受阅读组别调节：慢速组在低预测预视和无关预视下的注视时间长于快速组，而在相同预视下两组的注视时间相似；另外，在跳读率上，慢速组对相同预视下目标词的跳读显著多于低预测预视，而快速组对相同预视和低预测预视下目标词的跳读没有差异。本研究结果表明，在中文阅读中，快、慢速读者对预测性信息的依赖程度没有差异，不支持词汇质量假说和预测编码框架理论；但是，与快速读者相比，无关预视对慢速读者的目标词加工和下一次眼跳目标选择的干扰更大，反映了慢速读者对无关或不恰当信息激活的抑制较弱。

关键词 预测性，中央凹加工，副中央凹加工，快速读者，慢速读者

The effect of lexical predictability on word processing in fast and slow readers during Chinese reading

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Abstract: According to the lexical quality hypothesis, highly-proficiency (fast) readers have well-specified lexical representations which enable automatic word identification and less context decoding (Andrews, 2015; Perfetti, 2007), while low-proficiency (slow) readers rely on context for word identification during reading due to their imprecise lexical quality. In contrast, the predictive coding framework assumes that highly-proficiency readers rely on their more reading experience to predict the upcoming context compared to low-proficiency readers (Hawelka et al., 2015). However, it is still unclear how skilled readers with different levels of reading proficiency rely on context information (e.g., predictability) for word processing during Chinese reading. In two experiments, the present study aimed to investigate individual differences in the use of lexical predictability for word identification by using the eye-tracking technique. In Experiment 1, eye movements of fast and slow readers were recorded while reading sentences containing predictable or unpredictable target words to investigate differences between predictability effects of the two groups of readers. Sixty pairs of predictable-unpredictable target words were selected, each of which was embedded into the same sentence frame. Fifteen groups of fast and slow readers participated in Experiment 1. In Experiment 2, parafoveal previews of the 60 predictable target words (identical, visually similar pseudocharacter, unpredictable word or unrelated pseudocharacter previews) were manipulated by using the boundary paradigm (Rayner, 1975) to explore how parafoveal preview influences the processing of predictability information of fast and slow readers. Twenty groups of fast and slow readers took part in Experiment 2. The results showed that fast readers fixated shorter and less on the target words and were more likely to skip the target words than slow readers. Although reliable predictability effects (i.e., predictable words were fixated shorter than unpredictable words) were found in Experiment 1, a similar pattern was observed in the two groups. Moreover, Experiment 2 showed robust parafoveal preview effects on the target word which interacted with the reading group. In particular, the two groups had the same first-pass fixation times at the target word under the identical previews while slow readers made longer fixations than fast readers on the target words with unpredictable previews or unrelated previews. In addition, fast readers skipped target words at a similar probability between the identical preview and unpredictable preview conditions while slow readers tended to skip less with unpredictable than identical previews. The current findings indicate that both fast and slow readers rely on context information (i.e., predictability) to identify words with no difference while processing such information during Chinese reading, which provides no evidence for either the lexical quality hypothesis or the predictive coding framework. However, compared to fast readers, slow readers are disturbed more by unrelated parafoveal information for their word processing as well as saccadic targeting, suggesting that slow readers are less effective at suppressing unrelated or inappropriate information during reading.

Abstract: lexical predictability, foveal processing, parafoveal processing, fast readers, slow readers

中文阅读中长距离回视引导机制的眼动研究

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摘要 回视是阅读中的一种常见现象。研究者根据回视距离, 将其分为长距离和短距离回视。对长距离回视引导机制进行解释的理论存在争议: 空间编码假设认为长距离回视由空间记忆引导, 而言语重构假设认为其由言语记忆引导。对长距离回视中的修正眼跳的主导因素也还没有确切结论。因而, 本研究采用最初回视误差、最初回视大小、累积回视大小、回视反应时等回视指标, 通过三个实验探究中文阅读中长距离回视的引导机制, 以完善相关研究。实验一采用 2 (回视条件: 阅读、不阅读) $\times$ 2 (词频: 高频、低频) $\times$ 3 (目标词位置: 前三分之一、中间三分之一、后三分之一) 三因素混合实验设计。结果发现, 阅读组最初回视误差更低, 最初回视大小在目标词位置之间差异显著, 不阅读组则不显著; 目标词位置在所有回视指标上的主效应都显著。实验二采用 2 (回视可见性: 可见、不可见) $\times$ 2 (词频: 高频、低频) $\times$ 3 (目标词位置: 前三分之一、中间三分之一、后三分之一) 三因素混合实验设计。结果发现, 不可见组的最初回视误差更小, 最初回视大小更大。实验三采用 3 (回视目标: 原词、近义词、形近非词) $\times$ 3 (目标词位置: 前三分之一、中间三分之一、后三分之一) 的被试内实验设计。结果发现, 句中目标词为形近非词时的累积回视大小显著小于原词和近义词, 而原词的回视反应时小于近义词。实验结果表明, 长距离回视的最初回视由空间记忆引导, 支持空间编码假设; 修正眼跳受文本视觉信息和言语记忆引导。

关键词 长距离回视, 记忆, 眼动

Eye movement study of long distance regression mechanism in Chinese reading

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Abstract: Regression is a common phenomenon in reading. According to the regression distance, the researchers divided it into long distance and short distance regression. Theories explaining the long-distance regression mechanism are controversial: the spatial coding hypothesis holds that long-distance regression is guided by spatial memory, while the speech reconstruction hypothesis holds that long-distance regression is guided by verbal memory. There is also no definitive conclusion as to the dominant factors for corrected saccades in long distance regression. Therefore, in this study, initial regression error, initial regression size, cumulative regression size, reaction time and other regression indicators were adopted to explore the guidance mechanism of long-distance regression in Chinese reading through three experiments. Experiment 1 adopted a three-factor mixed experimental design of 2 (regression condition: reading, not reading) $\times$ 2 (word frequency: high frequency, low frequency) $\times$ 3 (target word position: first third, middle third, and last third). The results showed that the initial regression error was lower in the reading group, and the initial regression size was significantly different between the positions of the target words, but not significant in the non-reading group. The main effect of the target word position on all the regression indexes was significant. Experiment 2 adopted a three-factor mixed experimental design of 2 (regression visibility: visible, invisible) $\times$ 2 (word frequency: high frequency, low frequency) $\times$ 3 (target word position: first third, middle third, and last third). The results showed that the initial regression error was smaller and the initial regression size was larger in the invisible group. In experiment 3, 3 (regression target: original word, synonym, and similar-looking non-word) $\times$ 3 (target word position: the first third, the middle third, and the last third) was adopted. The results show that the cumulative regression size of similar-looking non-word is significantly smaller than that of the original word and the synonym condition, while the regression size of the original word is smaller than that of the synonym. The results

show that the initial regression of long distance regression is guided by spatial memory and supports the hypothesis of spatial coding. Corrected saccade is guided by textual visual information and verbal memory.

Keywords: long distance regression, memory, eye movement

汉语阅读中双字同音词的预视效应

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摘 要 在阅读过程中读者不仅通过中央凹注视获取完成阅读所需要的信息，还可以通过副中央凹预视获取随后被注视文本的信息。通过副中央凹预视加工所获取的预视信息对随后的眼动控制产生显著的影响。在拼音文字中由于存在词间空格标记了词边界信息，因此读者在副中央凹的加工是以词为单位进行的，去除词间空格会显著地阻碍读者的副中央凹加工。虽然词在汉语阅读中具有重要的作用，但是汉语文本缺少词间空格作为外显的词切分线索。汉语读者能够对副中央凹中的字进行预视加工，根据之前的理论假设，对字进行部分加工即可激活词水平的加工，那么在汉语阅读的副中央凹加工中能够激活词水平的加工呢？为探讨该问题，本研究采用眼动仪记录了 40 名大学生阅读过程中的眼动行为，采用边界范式，在副中央凹呈现与双字目标词（高校）相同的预视、同音词预视（高效）、同音非词预视（高笑）、非同音非词预视（高曹）。在目标词的注视时间上发现，目标预视的注视时间显著短于其他预视条件，同音词预视条件显著短于非同音非词预视与同音非词预视，而同音非词预视与非同音非词预视的差异并不显著。结果表明，汉语读者在副中央凹加工中能够获得双字词的语音信息，但是并不能获取非词的语音信息，因此我们认为汉语读者在副中央凹加工中能够激活词水平的加工。

关键词：副中央凹加工，同音词，预视效应

Preview benefit homophones of two -character-word in Chinese reading

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Abstract: During reading, the readers can not only obtain the information needed to complete the reading through the foveal vision, but also extract the information of the text from parafoveal vision. And the information obtained through the parafovea preprocessing has a significant impact on the eye movement control. In alphabetic languages, because there are spaces between words to mark word boundary information, the readers' processing of the parafoveal is carried out in units of words. Removing the spaces between words will significantly hinder the reader's processing of the parafoveal. Although words play an important role in Chinese reading, Chinese text lacks space between words as an explicit word segmentation clue. Since Chinese readers are able to pre-process the characters in the parafovea, according to the previous theoretical hypothesis, partial processing of the characters can activate word level processing. Then, in the parafoveal preprocessing of Chinese reading, can it activate word level processing? In order to explore this problem, this study used eye tracker to record 40 college students' eye movements during reading. Boundary paradigm has been used to manipulate the type of preview of two-character word, including identical preview, word of homophones preview, non-word of homophones preview and control preview. The fixation

duration of the target word under identical preview was significantly shorter than other preview conditions. And the fixation duration of target was shorter with word of homophones preview than non-word of homophones preview and control preview, but there was no difference between non-word of homophones preview and control preview. The results suggest that Chinese readers can obtain the the phonological information of two-character words in parafoveal preprocessing, but not the non-word phonological information. Therefore, we believe that Chinese readers can activate the word-level processing in the parafoveal preprocessing.

Keywords: parafoveal preview, homophones, preview benefit

蒙古文阅读中的知觉广度与视觉注意分布特征

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摘要 阅读的知觉广度是指读者在阅读过程中每次注视能够获取有效信息的有限区域。研究发现, 知觉广度沿着阅读方向呈现不对称性。对此, 研究者提出阅读方向引起的注视点两侧注意资源分布不对称假设。但是尚未有明确的实证能够支持该假说, 因此本研究通过两个实验考察蒙古文阅读知觉广度的同时考察视觉注意在读者阅读过程中的分布特征, 以此验证注意假说是否成立。实验1采用经典的移动窗口范式, 以音节作为窗口单位, 设计 9 符号作为掩蔽字符, 制定 8 种不同的窗口条件。将其他 7 种条件与正常阅读条件进行对比分析发现, 当窗口呈现上方一个音节和下方三个音节时阅读时间显著长于正常阅读条件。由此得出蒙古文阅读中的知觉广度上限为注视点上方一个音节, 下限为注视点下方三个音节, 并沿着阅读方向呈现上下不对称特征。实验2将文本阅读任务与刺激探测任务创新性地结合在一起, 采用边界范式, 在阅读过程中当被试的眼睛越过边界后句子消失, 接着在眼睛落点位置的周围呈现一个红色方块作为探测刺激, 刺激呈现的位置有七个不同的距离水平。结果发现被试对呈现在注视点位置的刺激探测反应时最短, 当探测刺激呈现在注视点上方时反应时显著长于呈现在注视点下方的条件, 探测刺激呈现在知觉广度范围外时反应时显著长于呈现在知觉广度范围内的条件, 注意资源的分布呈现出与知觉广度相吻合的不对称性。表明知觉广度范围内注意资源分布较多, 也是造成知觉广度不对称的重要原因。

关键词 蒙古文阅读, 知觉广度, 视觉注意, 不对称性, 眼动

Perception Span and Visual Attention Distribution During Mongolian Reading

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Abstract: The perceptual span is defined as the amount of visual information that is processed in a given fixation. Many studies have found that perceptual span is asymmetrical along the direction of reading. In this regard, the attention bias hypothesis argues that readers allocate more attention to upcoming novel information, leading to an increased perceptual span in the reading direction. However, there is no clear empirical evidence to support this hypothesis. Therefore, this study conducted two experiments to investigate the perceptual span of Mongolian reading and the distribution characteristics of visual attention in the process of reading, to verify the validity of the attention bias hypothesis. Experiment 1 uses the moving window paradigm, with syllables as window units, design 9 symbols as a masking character, and 8 different window conditions are formulated. Comparisons of window conditions with

the normal reading condition showed that the Mongolian readers reached asymptotic performance in a reading time when windows revealed at least one syllable above and three syllables below the currently fixated one. The results of this experiment demonstrate an asymmetry in Mongolian reader's perceptual span. In experiment 2, an eye-movement-contingent probe detection task was used to determine the allocation of visual attention during reading. On a subset of trials, a to-be-detected visual probe replaced visual text when the eyes crossed and landed at the bottom of an invisible interword boundary. The probe was either near the fixated location or at a more distant location in the upper or lower visual field. Probe detection latencies were shorter for probes that were closer to fixation, and they were shorter when the probes were shown in the lower rather than the upper visual field. In the same way, the response time within the perceptual span is shorter than outside the perceptual span. It shows that more attention is distributed within the perceptual span, which is also an important reason for the asymmetry of the perceptual span.

Abstract: Mongolian reading, Perceptual span, Visual attention, Asymmetry, Eye movements

(2) “眼动心理研究专业委员会”专题研讨会 2

蒙语词汇阅读的注视位置效应

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摘 要 注视位置效应是眼动阅读研究的重要内容。以英语、汉语等不同文字为对象的研究均发现存在词汇加工的注视位置效应。研究发现, 词频、词汇类型等高水平语言学因素是影响注视位置效应的主要因素, 但仍存在争议, 特别是表现在不同的语言文字系统中。蒙古语是古老的民族语言之一, 属于阿尔泰语系蒙古语族, 是由 31 个蒙文字母 (7 个元音、24 个辅音) 构成的音素文字。蒙文的书写方式是上下连书, 行款从左到右; 有词间空格, 但字母之间没有空格。本文以蒙古语为研究对象, 试图揭示蒙古语阅读中的注视位置效应及眼动特征, 丰富已有眼动控制理论的内容。共设计了两个实验, 均为单因素被试内设计。实验一探讨词频因素 (高频词、低频词) 对蒙古语阅读过程中注视位置效应的影响。实验二以蒙古语的构词特点为切入点, 探讨词汇类型 (派生词、单纯词) 对注视位置效应产生的影响。结果发现: (1) 单次注视条件下, 词频影响具体词汇的注视位置。高频词的首次注视落在词中心区域字母四的概率最高, 低频词的首次注视集中在词首的字母二和字母三上。词频也影响再注视模式, 高频词中, 当首次注视落在词首时, 再注视位置集中于词尾部分; 低频词中, 当首次注视落在词首时, 再注视位置集中于词中心区域。(3) 词汇类型不影响读者阅读过程中的首次注视位置, 但影响晚期指标注视次数和再注视模式。派生词的注视次数和再注视概率均少于单纯词。当首次注视落在派生词的词首时, 落在词尾的再注视概率最高; 当首次注视落在单纯词的词首时, 再注视更多落在词中心区域, 而首次注视落在单纯词的词中心时, 再注视则落在词尾的概率最高。表明读者阅读派生词时, 通常需要注视词首和词尾就能完成词汇识别。而注视单纯词时, 由于没有帮助理解的词根在词中, 因此通常在词首、词中心以及词尾都需要注视一次才能达到词汇识别。结果表明: (1) 蒙古语阅读过程中存在偏向注视位置, 同时也表现出一定的语言特点。(2) 高水平的语言因素对蒙语词汇识别的影响支持阅读认知加工的 SWIFT 模型。

关键词 蒙古语, 词频, 词汇类型, 注视位置效应, 眼动

The Fixation position effect of Mongolian vocabulary reading

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Abstract: The effect of fixation position has been consistently found in the study of English phonetic characters and Chinese hieroglyphics. It is also found that the high level of linguistic factors such as word frequency and word type

are the main factors that influence the fixation effect, but there are still some disputes on this issue, especially in different language systems. Mongolian language is one of alphabetic languages. And Mongolian writing is top to down style, there is spaces between words, but no spaces within word. The goal of the present study was to reveal the fixation position effect and eye movement characteristics in Mongolian reading. Two experiments were conducted in present study. The first one measured whether word frequency (high vs low) affects the landing position in Mongolian words. And the second one examined whether word types (simple vs derived) influence the decision of where to move the eyes next. Results as follows: (1) Initial landing position is nearer to the centre of words for high-frequency words than low-frequency words. And they also show differences emerge in later measures. When readers' initial fixation close to the beginning of high-frequency word, then the refixation will be targeted towards the end of the word. While readers' initial fixation close to the beginning of low-frequency word, then the refixation will be targeted towards words' centre, and the end of the word at the third time. (2) It's exhibited a strong tendency to fixate at the slightly above of the word centre in single-fixation cases and at the word beginning in multiple-fixation cases for two types of Mongolian words. They do not differ in initial landing positions, but do differ in refixation behaviour. Readers tend to refixate on the end of derived word when their initial landing position targeted on the beginning of that word at first. While readers target their eyes at the centre of the simple word, when they fixate at the beginning of that word in the first fixation event. Conclusions as follows: There is in an fixation location effect during reading Mongolian. Word frequency and word types as higher level linguistic factors support SWIFT model from cognitive model.

Keywords: Mongolian, Eye movements, Fixation location effect

小学生阅读知觉广度的发展：对称到不对称

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摘要 本研究通过移动窗口范式探讨了小学生在汉语阅读过程中注意分布的发展变化情况。研究采用4(年级: 一年级、二年级、三年级、五年级)×7(窗口条件: L1R1, L1R2, L1R3, L2R1, L2R2, L3R1, FL)的两因素混合实验设计, 其中年级为被试间变量, 窗口条件为被试内变量。所有的被试(共144名)均要阅读相同的一年级水平的材料。结果发现: 第一, 在眼动指标上表现出了基本的阅读发展趋势, 比如一年级学生的阅读时间(平均注视时间、凝视时间、单一注视时间)与注视次数最多, 五年级学生的阅读时间与注视次数最少; 在阅读速度与平均向右眼跳距离上, 一年级学生的阅读速度最慢, 眼跳距离最短, 五年级学生的阅读速度最快, 眼跳距离最长。第二, 在阅读速度上, 一年级小学生在L1R1窗口条件下的阅读速度与FL整行不存在显著性差异; 二年级、三年级与五年级学生均在L1R2条件下的阅读速度与FL整行条件不存在显著差异。第三, 当对L1R2与L2R1窗口条件下的阅读速度进行比较时, 研究发现L1R2与L2R1条件下的阅读速度在二年级学生中不存在显著差异, 但在三年级与五年级学生中的差异显著, 且五年级学生受到的L1R2与L2R1窗口的差异效应要显著大于三年级学生。总之, 本研究使用移动窗口范式首次探讨了小学生在阅读过程中的注意分布发展情况。首先, 研究结果重复了典型的眼动阅读发展趋势, 即随着年级的升高, 读者的阅读速度越来越快, 注视时间与注视次数越来越少, 向右眼跳距离增长。第二, 一年级学生的阅读知觉广度为L1R1; 二年级、三年级及五年级学生的阅读知觉广度为L1R2。第三, 一年级学生在阅读时的注意分布表现出了对称性的特点, 二年级学生在阅读时表现出了比较灵活的注意分布特点, 三年级与五年级学生在阅读时的注意分布表现出了向右的不对称性特点, 且这种不对称性在五年级学生中表现更加明显。

关键词 注意分布; 知觉广度; 阅读发展; 小学生

Development of Perceptual Span for Primary School Students: From Symmetry to Asymmetry

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Abstract : Using moving-window paradigm, the present study mainly explored the developmental trajectory of attention allocating during Chinese reading. A total of 144 students in Grade 1, Grade 2, Grade 3 and Grade 5 from a primary school was recruited. We also manipulated six window sizes (L1R1, L1R2, L1R3, L2R1, L2R2, L3R1) and a full-line control condition (FL). All of the participants were required to read the same materials that appropriate for first graders. The results showed that: (1) there was a basic reading developmental pattern, such as reading time (average fixation, first fixation and gaze duration) and fixation count among first graders were the longest, while among fifth graders were the shortest; in a similar fashion, the reading speed was slowest and mean rightward saccade amplitude were the shortest for Grade 1 students, the reading speed was fastest and mean rightward saccade amplitude were the longest for fifth graders. (2) On the measure of reading speed, the difference between L1R1 and FL in Grade 1 students was not significant, however, there was no significant difference between L1R2 and FL condition among second, third and fifth graders, indicating that first graders could extract information from 3 characters, while for higher graders, they could get information from 4 characters during a single fixation. (3) When comparing the reading speed under L1R2 and L2R1, we found that the difference between L1R2 and L2R1 was not significant for second graders, however, the reading speed was faster in L1R2 condition than L2R1 condition for both Grade 3 and 5 students, and this difference was more robust for fifth graders compared with third graders. In summary, the present study firstly replicated the typical eye movement developmental trajectory, reading performance becomes proficiency with grade. Second, the reading perceptual span for first graders was L1R1, while the perceptual span for higher graders was L1R2. Third, the attention allocation among first graders is symmetric, that's to say, they allocated the same attention to the right and left fixation; Grade 2 students adopted a flexible attention allocation strategy during reading; for third and fifth graders, they would put more attention resource to the right of fixation to keep a fluent reading.

Keywords: Attention allocation; Perceptual span; Reading development; Children

汉语儿童自然文本阅读中的词长效应及其发展

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摘 要 有效的词汇识别是儿童阅读能力发展的基础。词长是影响词汇加工效率的重要因素之一，长词相比较短词加工时间更长、识别速度更慢（即词长效应）。基于前人孤立词汇识别的反应时研究显示，词长效应随儿童年龄增大而逐渐减小，反映了儿童从分析式加工到整体性加工的识词策略的发展变化。然而，在汉语自然文本阅读中，由于词与词之间无词空格，并存在词边界歧义等因素，儿童能否有效获得并利用词长信息并不清楚。基于此，本研究采用眼动追踪技术，以小学三、五年级 54 名儿童和 30 名大学生为对象，操作句子中目标词的长度（单字词、双字词、三字词）和儿童的阅读技能水平，探究汉语儿童读者在自然句子阅读中的词长效应及其发展特点，这对深化儿童词汇加工规律和汉语阅读眼动控制发展问题具有重要启示。结果显示：（1）在自然句子阅读中，儿童能够获取词长信息并利用其进行词汇识别和眼动控制，表现为随词汇长度的增加，儿童对目标词的注视时间更长、跳读率更低，且眼跳注视位置更靠近词汇右侧，与熟练大学生读者表现相似。（2）随着年龄的增长，儿童对词长信息的利用效率逐渐增大，表现为词长效应在注视时间维度

上随儿童年龄的增大而减小,在注视位置维度上随年龄的增大而逐渐增大,支持自然句子阅读中从分析式加工到整体性加工的识词策略变化。(3)词汇理解技能的发展对儿童词长效应的调节作用最大,且其作用广泛分布于眼动行为的注视时间和注视位置维度之上。

关键词 词长效应,分析式加工,整体性加工,眼动,儿童读者

Word Length Effect in Developing Readers during Chinese Sentences Reading

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Abstract: Effective word recognition is the foundation of the development of children's reading skills. Word length is one of the most important factors to influencing word processing efficiency for developing readers. Long words are identified for longer than that of short words, that is, word length effect. The response time research based on isolated word recognition shows that children's word length effect gradually decreases with age, which demonstrated the change of word recognition strategies from analytical processing to holistic processing. However, it is not clear whether children can effectively obtain and use word length information since there are no spaces marking word boundaries in Chinese text. Therefore, to investigate the word length effect and its development characteristics in developing readers when Chinese text reading, 54 children in grade 3 and 5 of primary school and 30 college students were recruited as participants and their eye movements was recorded as reading sentences containing a one-, two-, or three-character word. Children's reading skills were manipulated as well. Results showed that (1) Children could obtain and use word length information to identify words and control eye movement behaviors in Chinese text reading, which showed that longer words were fixated for longer and less likely to be skipped and the fixation position was closer to the right side of the word than that of short words for both children and adults. (2) children's utilization efficiency of word length information gradually increased with the increase of age, which was manifested in that the word length effect decreased with the increase of children's age in the dimension of fixation time and increased with the increase of age in the dimension of fixation position, supporting the change of word recognition strategies from analytical processing to holistic processing. (3) The development of word comprehension skills had the greatest moderating effect on children's word length effect, and its effect widely distributed on both behaviors of when and where to move the eyes.

Abstract: word length effect, analytical processing, holistic processing, eye movements, developing readers

预测性与词素变换对中文阅读的影响及年龄差异

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摘要 阅读在日常生活中发挥着重要作用,而老年人由于认知老化与视力退化等原因会在阅读上表现出与青年人不同的模式。阅读时前文语境的可预测性是影响阅读的重要因素,在拼音文字和中文阅读的眼动研究中均发现高预测性词的跳读率高、注视时间更短、注视次数以及回视次数都更少。拼音文字研究中还进一步发现语境预测性会对换位字母效应产生影响。换位字母效应是指将某个单词内的字母互换位置对阅读带来的干扰要小于对应字母替换为其他的字母带来的干扰,在高限制性语境条件下,换位条件的启动效应与替换条件一致,也就是说语义预测性消除了字母换位效应。在中文研究中也发现了词素的换位效应,双字词的两词素换位带来的干扰明显小于词素替换。在拼音文字中预测性与字母换位都会对阅读产生影响而且两者有交互作用,那么在汉语中语境预测性与词素换位对阅读的影响是怎样的呢?是否也会存在交互作用呢?而老年人和青年人是否会表现出相似的模式呢?使用 Eyelink 1000 plus 眼动仪,进行了两个实验对以上问题进行探讨。实验1选取48名青年被试与36名老年被试,采用自然阅读范式,进行2(年龄:青年人、老年人)×2(预测

性：高、低）×3（呈现条件：原词、换位非词、替换非词）的混合实验设计，考察在正常阅读条件下语境预测性与词素换位对阅读的影响及其年龄差异，结果发现：低预测条件下换位非词与原词之间的总注视时间差异大于高预测条件，高预测条件下替换非词与换位非词之间的差异大于低预测条件，而且老年人在高预测条件下替换非词与换位非词之间的差异显著高于青年人。实验2选取60名青年被试与36名老年被试，采用边界范式，进行2（年龄：青年人、老年人）×2（预测性：高、低）×3（预视条件：原词、换位非词、替换非词）的混合实验设计，考察在预视条件也就是在加工的早期阶段语境预测性与词素换位对阅读的影响及其年龄差异，结果发现：高预测性条件下的词素换位效应要显著大于低预测条件下，但年龄差异不显著。

关键词 预测性，词素变换，老年人，中文阅读，眼动

Assessing Word Predictability Effects for Young and Older Chinese Readers

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Abstract: A word's predictability from the prior linguistic context has been shown to have an important influence on mechanisms of eye movement control in reading. With this presentation, I will report a series of experiments that provide new insights into effects of word predictability on eye movement control in Chinese reading. This will include two experiments that reveal differences in the basic effects of word predictability on the eye movements of young (18-30 years) and older (65+ years) adults, which may provide the clearest evidence to date for adult age differences in word predictability effects. The Eyelink 1000 plus was used to carry out two experiments to discuss the above problems. In experiment one, 48 young participants and 36 old participants were selected, and a mixed experimental design of 2 (age: young people, old people) × 2 (predictive: high, low) × 3 (presentation conditions: identity, transposed-character and substituted-character) was carried out using natural reading paradigm. The influence of context predictability and morpheme transposition on reading under normal reading conditions and their age differences are investigated. The results show that the difference in total fixation time between transposed non-words and identity under low prediction conditions is greater than that under high prediction conditions, the difference between substituted non-words and transposed non-words under high prediction conditions is greater than that under low prediction conditions, and the difference between substituted non-words and transposed non-words under high prediction conditions is significantly higher for the elderly than for the young. In experiment 2, 60 young participants and 36 old participants were selected, and a mixed experimental design of 2 (age: young people, old people) × 2 (predictive: high and low) × 3 (preview condition: identity preview, transposed non-word preview and substituted non-word preview) was carried out by using the boundary paradigm. The effects of contextual predictive and morpheme transposition on reading and their age differences were investigated under the predictive condition, i.e. in the early stage of processing. The results showed that the morpheme transposition effect under the high predictive condition was significantly greater than that under the low predictive condition, and there was no age difference in this different effect.

Keywords: word predictability, morpheme transformation, old adults, Chinese reading, eye movement

汉语印刷和手写文本阅读中正字法邻近字启动的抑制效应

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摘要 在日常沟通交流和获取信息的过程中，汉语常采用手写体和印刷体两种形式。手写体是最早的书写形式；随着科技的发展，印刷体逐渐成为人们获取信息的主要载体，但是手写体仍有其不可替代的作用。那么读者阅读分别以手写体和印刷体呈现的汉语文本的加工过程是否存在差异，是研究者关注的研究问题。

已有研究表明, 汉字词汇识别会受正字法邻近字的影响。但手写体汉字的书写中, 往往会出现部件、笔画简略等现象, 不仅破坏读者原本熟悉的字形信息, 而且对汉字不同水平的正字法信息产生影响, 这一现象在多笔画汉字中尤为明显。以往研究发现, 读者阅读汉语印刷文本中存在正字法邻近字启动的抑制效应和笔画数效应。前者指在词汇识别或阅读中, 对先出现的邻近字的加工会抑制对后出现的目标字的识别; 后者指与笔画数少的字或词相比, 对笔画数多的字或词的注视时间更长。那么, 当读者识别和阅读笔画或部件简略的汉语手写文本时, 是否也会出现正字法邻近字启动的抑制效应和笔画数效应? 两种文本呈现形式中的以上两种效应是否表现出差异? 实验一采用 2 (文本类型: 印刷体、手写体) $\times$ 2 (笔画数: 多笔画、少笔画) $\times$ 2 (启动类型: 正字法邻近字、控制字) $\times$ 2 (SOA: 43ms、57ms) 的被试内设计。利用启动范式, 材料为形近、音异的正字法邻近字对, 考察在印刷体和手写体汉字的识别中的正字法邻近字启动的抑制效应和笔画数效应。实验二采用 2 (文本类型: 印刷体、手写体) $\times$ 2 (笔画数: 多笔画、少笔画) $\times$ 2 (启动类型: 正字法邻近字、控制字) 的被试内设计。利用眼动记录法, 考察读者阅读印刷和手写文本中的正字法邻近字启动的抑制效应和笔画数效应。本研究初步得出以下结论: (1) 读者在对印刷文本和手写文本进行词汇识别和阅读时均存在显著的笔画数效应。(2) 与印刷体汉字相比, 手写体汉字的阅读代价更大。(3) 读者识别和阅读汉语印刷文本过程中, 均存在正字法邻近字启动的抑制效应, 且该效应仅发生在词汇识别的早期, 但在手写文本中无此效应。

关键词 手写体汉字, 正字法邻近字, 笔画数效应

The Inhibitory Neighbor Priming Effect during Chinese Printed and Handwritten Text Reading

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Abstract: In daily communication and information acquisition, there are two main written forms of Chinese characters, which are handwritten and printed. Handwritten character is the earliest form of writing and communication. With the development of science and technology, printed character has become the main form for people to communicate and obtain information, but the handwritten character still plays its irreplaceable role. Therefore, the researchers have focused on the processing of recognizing and reading the two forms of characters, whether the above two processing process are different. Orthographic processing is an important processing process during Chinese character recognition. However, in handwritten character, a large number of strokes and radicals have been simplified, which destroy the original structure and orthographic information of Chinese characters at different levels. This phenomenon is particularly obvious in the Chinese characters with more strokes. Previous studies have found inhibitory neighbor priming effect and stroke number effect during the processing of printed characters. The inhibitory neighbor priming effect refers to that during the word recognition or sentence reading, the processing of orthographic neighbor will inhibit the recognition of the later target words. Stroke number effect means that compared with words with fewer strokes, the recognition of words with more strokes is more difficult and takes longer time. In the present study, the inhibitory neighbor priming effect and stroke number effect were investigated during the character recognition and sentence reading, which the Chinese characters and sentences were presented in the handwritten and printed form. The experiment one was a 2 (text type: printed text, handwritten text) $\times$ 2 (stroke number: more strokes, less strokes) $\times$ 2 (priming type: orthographic neighbor, control word) $\times$ 2 (SOA: 43ms, 57ms) within-subject design. The priming paradigm was adopted, and orthographic neighbors with similar shape and different pronunciation were used as experimental materials. Readers were asked to complete the naming task, in order to investigate inhibitory neighbor priming effect and stroke number effect in single printed and handwritten Chinese character recognition. The experiment two was a 2 (text type: printed text, handwritten text) $\times$ 2 (stroke numbers: more strokes, less strokes) $\times$ 2 (priming type: orthographic neighbor, control word) within-subject design. Eye tracker was used to investigate the inhibitory neighbor priming effect and the stroke number effect during printed and handwritten sentence reading. According to the results of the two experiments, the conclusion was shown as

follows. (1) The stroke number effect was significant for the printed and handwritten texts during character recognition and reading. (2) Compared with printed text, the character recognition and reading for handwritten text showed more reading cost. (3) During the process of recognition and reading of printed text, the inhibitory neighbor priming effect was significant, and it only occurs in the early stages of character recognition. But there is not significant for the handwritten text.

Keywords: Chinese handwritten character, Orthographic neighbor, Stroke number effect

不同线索有效性下文本预期性对预视加工的影响

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摘要 本研究采用眼动追踪技术, 结合边界范式(Rayner, 1975), 探究在正常阅读时, 不同线索有效性条件下, 文本的高、低预期性对预视加工的影响, 从而探讨预期性加工是自动激活的还是受策略控制的。根据自动激活模型, 阅读过程中, 输入的刺激激活了相关语义后, 会自动激活语义网络中相近位置上的信息, 该过程自动、快速且无意识地发生, 预期性加工不会受到所处阅读环境的影响, 是一个自下而上的过程(Brothers, Swaab, & Traxler, 2017)。根据策略加工模型, 阅读过程中读者会根据阅读环境来对预期性加工的策略进行调整, 这是一个自上而下的过程(Huetting, 2015; Lupyan & Clark, 2015)。实验1和实验2分别在高线索有效性(87.5%)和低线索有效性(12.5%)下探讨预期性对预视效应的影响, 采用 2(预期性: 高, 低) $\times$ 2(预视类型: 一致预视, 不一致预视)被试内实验设计。实验1结果发现显著的预期性和预视的主效应, 且二者存在交互作用, 高预期条件下预视效应更大; 实验2结果发现了呈边缘显著的预期性效应以及显著的预视效应, 二者的交互作用不显著。将两实验结果进行合并分析, 未发现显著的三重交互作用; 但发现, 在高预期条件下, 线索有效性的高低不会影响预视效应的大小; 但在低预期条件下, 低线索有效性会呈现出更大的预视效应, 表现为不一致预视条件下会产生更大的阅读阻碍。通过本研究发现, 读者对不同水平的预期性加工呈现出不同的加工机制, 高预期词的加工呈现出一种自动激活的特点, 但低预期词的加工会受到读者阅读策略的控制。

关键词 线索有效性, 预期性, 预视, 自动激活, 策略控制

Influence of Contextual Predictability on Preview Processing in Different Validity of Cues

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Abstract: In this study, eye-tracking technology and boundary paradigm (Rayner, 1975) were used to explore the influence of high and low contextual predictability on preview processing in different validity of cues during normal reading, so as to discuss whether predictive processing is automatically activated or controlled by strategy. According to the automatic activation model, when the input stimulus activates the relevant semantics in the process of reading, the information at a similar position in the semantic network will be automatically activated. This process occurs quickly and unconsciously, and the predictive processing will not be affected by the reading environment, which is a bottom-up process (Brothers, Swaab, & Traxler, 2017). According to the strategically controlled model, readers will adjust the predictive strategies according to the reading environment, which is a top-down process (Huetting, 2015; Lupyan & Clark, 2015). In experiment 1 and 2, the influence of predictability on preview effect was investigated under the high (87.5%) and low validity of cues (12.5%) respectively. 2 (predictability: high, low) $\times$ 2 (preview type: identical preview, dissimilar preview) within subject design was adopted in the experiments. The results of Experiment 1 showed that there were significant predictability effect and preview effect, in addition, the interaction effect was found, the preview effect was larger in high than low predictability. The results of experiment 2 showed that the marginal significant predictability effect and the significant preview effect, but the interaction between them was not significant. By combining the results of two experiments, no significant three-way interaction was found.

However, the result indicated that when in the high predictability condition, the validity of the cues did not affect the size of the preview effect, but when in the low predictability, low validity of cues will show a larger preview effect, which is resulted from a greater reading difficulty under the dissimilar preview. Through this study, it is found that readers have different mechanisms for different levels of predictive processing. The processing of high predictive words presents the feature of automatic activation, while the processing of low predictive words is controlled by readers' reading strategies.

Keywords: validity of cues, predictability, preview, automatic activation, strategic control

(3) “眼动心理研究专业委员会”专题研讨会 3

中文阅读中三字复合词的词切分

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摘要 本研究通过两个眼动实验考察了中文阅读中三字复合词的切分过程。复合词是由多个字组成的词, 其特点是其中所包含的字能够独立组成另一个词, 这个独立组成的词汇被称为嵌套词。例如, 在三字复合词“老板娘”中, 前两个字能够独立组成“老板”(嵌套词)。在两个实验中, 读者阅读包含三字复合词的句子, 通过变换三字复合词之前的动词对三字复合词和嵌套词的合理性进行了操纵。在实验1中, 保持三字复合词与动词的组合始终合理, 操纵嵌套词与动词组合的合理性, 形成嵌套词合理与嵌套词不合理两种实验条件。眼动数据表明, 当三字复合词始终合理的条件下, 未发现嵌套词的合理性效应。在实验2中, 同时操纵三字复合词和嵌套词的合理性, 形成复合词合理-嵌套词合理、复合词合理-嵌套词不合理、复合词不合理-嵌套词合理、复合词不合理-嵌套词不合理四种实验条件。结果发现, 在三字复合词合理的条件下, 未发现嵌套词的合理性效应, 然而, 在三字复合词不合理的条件下, 发现了嵌套词的合理性效应。当前结果表明, 中文读者在词切分的过程中倾向于切分更大的词汇单位, 但是, 在文本不合理条件下, 中文读者则会转而切分更小的词汇单位以期构建一个合理的心理表征。

关键词 中文阅读, 眼动, 三字复合词, 词切分

On the Segmentation of Chinese Incremental Words

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Abstract: In the present study, we report two eye-tracking experiments investigating how Chinese readers segment incremental words while reading Chinese. Incremental words are multicharacter words containing a subset of characters that constitute another word (referred to as the *embedded word*). For example, in a word containing three characters ABC (e.g., “老板娘”, meaning landlady), the first two characters AB (“老板”, meaning boss) constitute an embedded word. In two experiments, Chinese readers read sentences with 3-character incremental words. In Experiment 1, the incremental words were always plausible, and the verbs prior to the target words were manipulated so that the embedded word of the incremental word was either plausible or implausible as an independent word. The eye-movement data showed that the plausibility manipulation did not influence the reading times on the incremental words or their embedded words. In Experiment 2, we manipulated the plausibility of both incremental words and embedded words. No plausibility effect of the embedded word was observed when the incremental words were plausible. However, the plausibility effect of the embedded word was obtained when the incremental words were implausible. These results suggest that Chinese readers tend to segment larger lexical units (i.e., incremental words in

the present study) from the rest of a character string. However, when the text is implausible, Chinese readers segment the incremental words as smaller lexical units (i.e., embedded words within incremental words in the present study), intending to construct a coherent representation.

Keywords: Chinese reading, eye movements, incremental words, word segmentation

汉语阅读伴随词汇学习：视觉复杂性效应

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摘要 词汇是语言建筑的重要材料, 是阅读发展的核心成分。学龄期儿童约 80% 的词汇是在阅读中伴随习得。拼音文字阅读中 (如英语), 视觉复杂性 (如词长) 是影响阅读伴随词汇学习的重要因素之一。汉语的词长相对固定, 其视觉复杂性主要体现在笔画数多少上。已有研究发现, 笔画数多少是影响汉语阅读词汇识别的重要因素之一, 即多笔画词的加工时间显著长于少笔画词 (见 Liversedge et al., 2014)。那么, 视觉复杂性如何影响汉语阅读的伴随词汇学习? 该效应如何随学习的逐步积累而变化? 这是本研究两个实验目的。基于新词相当于极端低频词加工, 心理词典中事先没有相应词汇表征, 倾向于采用自下而上的逐字加工方式, 我们预期: (1) 阅读伴随词汇学习中可能存在更大的笔画数效应; (2) 随着学习次数的增多, 新词的熟悉性逐步增强, 读者更偏向于在整词水平上加工新词, 由此推断, 笔画数效应可能随学习次数的增多逐步减弱。构造两类假词作为新词: 一类新词由两个多笔画汉字构成; 一类由两个少笔画汉字构成。将每个新词嵌在 15 个强限制语境中, 分五天学习, 供被试 (成人读者) 构建新词的词汇表征。在学习阶段记录被试阅读时的眼动轨迹。在测试阶段, 要求被试完成三项主观测试 (包括正字法学习测试、语义类别学习测试, 和具体语义信息学习测试)。结果发现, 两种实验条件下的首次注视时间无显著差异, 多笔画新词的凝视时间及总注视时间显著长于少笔画词, 表明阅读伴随词汇学习的笔画数效应反映在词汇加工的相对晚期阶段; 此外, 与多笔画新词相比, 被试在少笔画新词上的首次眼跳定位更加靠近词中心。上述结果表明, 阅读伴随词汇学习中的笔画数效应, 同时反映在阅读眼动控制的“when”和“where”方面。此外, 研究并未发现笔画数多少和学习次数的交互作用, 表明笔画数效应并未随着新词学习效果的累积而逐步减弱, 再次证明笔画数作为汉字最为显著的视觉特征之一, 独立于词汇熟悉性, 稳定地作用于阅读伴随词汇学习的全程。

关键词 伴随词汇学习, 视觉复杂性, 汉语阅读

Examining novel word learning during Chinese reading: The effect of visual complexity

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Abstract: Vocabulary is an important building material of language and is generally considered as a core component of reading development. From mid-childhood onward, over 80% of the novel words are acquired implicitly via reading. In alphabetic reading (like English), visual complexity (as indexed by word length) influences novel word learning in reading, such that long novel words are processed with longer fixations and more refixations relative to short novel words during reading. In Chinese, word length is relatively constant, most words are one or two characters long. The characteristic of visual complexity of Chinese character is highly relevant to how many strokes each character has. Previous studies have shown that when reading known words, those with low visual complexity are processed more quickly than those with high visual complexity (as indexed by number of strokes, e.g., Liversedge et al., 2014). In the present study, we aimed to investigate how visual complexity influenced novel word learning in Chinese reading; specifically, we investigated how such effect changes within a short period of learning. Given that novel words are considered as extreme cases of low frequency words which are processed with a basis of

character-to-character sequentially rather than processing adjacent characters holistically, and there is no pre-existing lexical representation in mental lexicon, we predicted that there might be a larger visual complexity effect in novel word learning in Chinese reading. Furthermore, as novel words become more familiar over cumulative learning, they might be processed more and more holistically and be less dependent on the visual features of each constituent character of a novel word. Given this, we predicted that the visual complexity effect might be gradually reduced over learning. We constructed two-character pseudowords as novel target words, and the number of strokes of novel words was manipulated as being either high or low. Each pseudoword was embedded within 15 meaningful sentences in a learning phase. Participants' eye movements were monitored throughout the learning phase. In the test phase, three unexpected offline tests were also set to assess orthographic and semantic knowledge of the newly learned pseudowords. The participants made shorter gaze durations and total fixation duration on pseudowords with low than high visual complexity throughout exposure, and there was no significant difference for the measure of first fixation duration in the two conditions, indicating that visual complexity effect occurs in the relatively late stage of novel word processing. In addition, the participants tended to target their initial saccades further into the novel words with low than high visual complexity, suggesting that the decisions of where to move the eyes are also influenced by how many strokes a novel word has. Finally, we did not find interactive effects between visual complexity and exposure for all the eye movement measures, showing that visual complexity effect is not reduced over the learning of novel words in reading. Together with these findings above, we argued that, the number of strokes, as salient visual feature of Chinese characters, independent of word familiarity, might influence all the processes of novel lexical representations, including instantiation, configuration and integration.

Keywords: novel word learning, visual complexity, Chinese reading

学习及视觉搜索中的暴露频率效应

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摘要 词频效应是正常文本阅读中的经典效应(即高频词比低频词更快实现词汇通达),然而词频效应是否会出现于文本的视觉搜索任务中仍然存在争议(如, Rayner & Fischer, 1996)。本研究采用眼动技术,首先探讨了频率效应在英文假词学习中的形成过程(学习阶段),接着探讨了假词学习中模拟的频率效应是否会出现于不同词切分条件下(空格切分、颜色切分、无切分)的假词文本的视觉搜索任务中(扫描阶段)。结果显示:学习阶段,高频暴露的假词比低频暴露的假词学习得更好更快(如,更高的准确率,更短的反应时、注视时间)。学习阶段成功且有效地模拟出阅读中经典的频率效应。相比之下,在扫描阶段的目标假词搜索任务中,没有出现频率效应,但词切分方式显著影响了目标假词识别以及眼跳目标选择。无词切分条件下的注视时间最长,颜色切分条件次之,空格切分条件最短。无词切分条件下平均眼跳距离显著短于空格切分以及颜色切分条件下的平均眼跳距离。此外,无词切分条件下,首次注视落点位置集中在假词的词首;空格切分或颜色切分条件下,首次注视落点位置靠近假词中心。与空格条件相比,颜色切分条件下首次注视点位置偏左。本研究表明,假词文本视觉搜索任务中不存在频率效应,空格切分相比于颜色切分对于眼动控制有更大的促进作用。

关键词 暴露频率效应, 空格效应, 视觉搜索

Exposure frequency effects occurred in learning but not maintain to string scanning

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Abstract: Despite the clarity that exists regarding frequency effects in the literature, it remains controversial as to whether frequency effects exist for visual search in text (e.g., Rayner & Fischer, 1996). We examined how frequency effects were established during the learning of novel stimuli (i.e., English pseudowords) and how simulated frequency influenced eye movements during scanning of longer strings under different demarcation presentations (spaced vs. unspaced shaded vs. unspaced). Main findings were as follows: Robust exposure frequency effects occurred during learning, but exposure frequency effects did not maintain to string scanning. Robust spacing effects occurred. Spacing facilitated target identification and saccadic targeting during scanning to a greater level relative to shading. These findings demonstrate that exposure frequency does not affect eye movements in visual search and spacing works more effective in directing eye movements relative to shading in even non-linguistic visual search task.

Keywords: Exposure frequency effect, spacing effect, visual search

（4）“眼动心理研究专业委员会”专题研讨会 4

无法忍受不确定性对急性应激水平的影响： 反刍的中介作用和媒体暴露时间的调节作用

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摘要 目的: COVID-19 的爆发作为一种创伤性的公共突发事件, 具有不可预测性、突发性和传播迅速等特点。此外, 在公众面临长期居家隔离等情况下, 媒体广泛传播各种信息, 这可能会使公众对现状更加感到不确定。在这种情况下, 公众的心理健康受到威胁。急性应激反应 (ASR) 是个体急性应激后产生的一系列认知、情绪、行为及生理反应。ASR 的发生和严重程度不仅与应激事件有关, 而且与当时个体的人格特征、对应激源的认知和态度、应对方式、身体健康和生活状况密切相关。以往研究表明, 社会创伤事件发生后, 无法忍受不确定性 (IU) 是导致心理疾病产生的一个脆弱性认知因素, 并通过反刍来加强 IU 与不良心理症状之间的关系。社会风险放大模型中认为媒体会导致公众感知的风险增加, 并且在以往集体创伤事件后对媒体曝光的研究中也发现了其对人们急性应激反应的影响。因此, 本研究在人们面临疫情危机和长时间隔离的情况下, 在探讨 IUS 对 ASR 的作用显著的基础上, 探索反刍在 IUS 和 ASR 之间的中介作用, 以及媒体暴露在反刍与 ASR 之间的调节作用。方法: 采用无法忍受不确定性量表 (IUS)、反刍反应问卷 (RRS)、斯坦福急性应激量表 (SASRQ) 和媒体暴露时间自评量表对 1411 个人进行了问卷调查。结果: (1) 无法忍受不确定性既可以直接影响急性应激反应, 也可以通过反刍的中介作用间接影响急性应激反应。(2) 媒体暴露调节了无法忍受不确定性通过反刍影响急性应激反应的中介过程的后半路径。更长时间的媒体暴露下, 个体的反刍思维对急性应激反应的影响更为显著。本研究有助于提高人们对反刍和媒体暴露在 IU 和这些负面心理症状之间的关系中的作用的认知, 对当前重大疫情下缓解人们急性应激反应的干预措施提供了理论依据。

关键词: 急性应激反应, 无法忍受不确定性, COVID-19, 反刍思维, 媒体暴露

The relationship between intolerance of uncertainty and acute stress reaction: The mediating role of rumination and the moderating role of duration of media exposure related to COVID-19

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Abstract: Objectives : As a traumatic public emergency, the COVID-19 outbreak characterized by unpredictability, abruptness and rapid transmission. In addition, when the public is facing a long period of home isolation and other circumstances, the media widely spread various information, which may make the public more uncertain about the current situation. In this case, the public's mental health is threatened. Acute stress reaction (ASR) is a series of cognitive, emotional, behavioral and physiological responses after people exposure to a traumatic event. The occurrence and severity of ASR are not only related to stress events, but also closely related to the individual's personality characteristics, cognition and attitude to stressors, coping styles, physical health and living conditions at the time. Previous studies have shown that intolerable uncertainty (IU) is a cognitive factor of vulnerability that leads to negative psychological outcomes after traumatic events, and rumination is used to strengthen the relationship between IU and negative psychological outcomes. The social amplification of risk model holds that media will increase the risk of public perception, and in the literature about media exposure after social traumatic events have also found its impact on public acute stress response. Therefore, present study explores the mediating effect of rumination between IUS based on the significant role of IUS on ASR, and the moderating role of duration of media exposure between rumination and ASR during people are facing epidemic crisis and prolonged isolation. Methods: Intolerance of Uncertainty Scale (IUS), Rumination Response Questionnaire (RRS), Stanford Acute Stress Reaction Scale (SASRQ) and Duration of Media Exposure Self-Rating Scale were used to survey 1411 individuals. Results: (1) Intolerance of Uncertainty could directly affect the acute stress response, but also indirectly affect the acute stress response through the mediating effect of rumination. (2) Duration of media exposure moderating the latter half of the mediation process in which intolerance of uncertainty on the acute stress response through rumination. With prolonged media exposure, the individual's rumination thinking has a more significant impact on the acute stress response. This study helps to improve public's understanding of the role of rumination and duration of media exposure in the relationship between IU and acute stress symptoms, and provides a theoretical basis for interventions to alleviate people's acute stress response facing the current epidemic.

Keywords: Acute stress reaction, Intolerance of uncertainty, COVID-19, rumination, Media exposure

大学生择业价值取向与求职自我效能感的纵向研究

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摘要 为探讨社会变迁及新冠肺炎疫情对大学生择业价值取向和求职自我效能感的影响, 选择 2004 年和 2020 年共 843 名大学生填写问卷, 结果发现 2004 年个人价值取向大学生可以预测其求职自我效能感, 社会价值取向大学生不能预测, 而 2020 年个人价值取向和社会价值取向大学生都可以预测其求职自我效能感; 2004 年和 2020 年个人价值取向的大学生的求职自我效能感都高于社会价值取向的大学生; 2020 年社会价值取向的大学生的求职自我效能感显著高于 2004 年社会价值取向的大学生的求职自我效能感。研究结果表明, 个人价值取向的大学生对自己求职效能评价更积极; 比起 2004 年, 2020 年社会价值取向的大学生对自己求职效能评价更积极。

关键词 新冠肺炎, 大学生, 择业价值取向, 求职自我效能感, 纵向研究

A Longitudinal Study on the College Students' Value Orientation of Career Choice and Job-seeking Self-efficacy

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Abstract: In order to explore the influence of social changes and COVID-19 pandemic on college students' job-seeking value orientation and job-seeking self-efficacy, a total of 843 college students in 2004 and 2020 were selected to fill out questionnaires. The results showed that college students with personal value orientation in 2004 could predict their job-seeking self-efficacy, but college students with social value orientation could not, while college students with personal value orientation and social value orientation in 2020 could predict their job-seeking self-efficacy. In 2004 and 2020, the self-efficacy of college students with personal value orientation was higher than that of college students with social value orientation. The job-seeking self-efficacy of college students with social value orientation in 2020 is significantly higher than that of college students with social value orientation in 2004. The results show that college students with personal value orientation have a more positive valuation of their job search effectiveness. Compared with 2004, college students with social value orientation in 2020 have a more positive evaluation of their job search effectiveness.

Keywords: COVID-19, College Students, Value Orientation of Career Choice, Job-seeking Self-efficacy, Longitudinal Study

后疫情时代大学新生的心理健康： 儿童期虐待、安全感和友谊质量的作用

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摘要 新冠疫情给全社会民众带来了巨大的心理冲击。疫情后刚入学的大学新生面临着适应新生活的挑战, 其心理健康值得得到重点关注。本研究以人类发展的生态系统理论和自我决定论为基础, 考察后疫情时代大学新生的心理健康状况, 并探讨儿童期虐待、安全感、友谊质量在其中的作用机制。采用儿童期虐待量表 (Childhood Trauma Questionnaire, 28 item Short Form, CTQ-SF)、安全感量表 (Security Questionnaire, SQ)、友谊质量量表 (Friendship Quality Inventory, FQI) 和抑郁-焦虑-压力量表 (The short-form version of the Depression Anxiety Stress Scales, DASS-21) 对天津市两所高校的 750 名大学生进行问卷施测, 被试平均年龄 18.23 岁 ($SD=0.65$), 男生 244 人 (34.4%), 女生 466 人 (65.6%)。研究结果表明: (1) 大学生抑郁情绪阳性检出率为 19.6%, 焦虑情绪阳性检出率为 36.8%, 压力情绪阳性检出为 25.5%; (2) 不同性别大学生抑郁、压力程度之间的差异有统计学意义, 女生抑郁、压力程度高于男生; 而不同性别大学生焦虑程度之间的差异无统计学意义; (3) 儿童期虐待能显著正向预测大学生负性情绪 (抑郁、焦虑、压力); (4) 安全感在儿童期虐待与大学生负性情绪的关系中起中介作用, 儿童期虐待通过安全感影响大学生负性情绪体验; (5) 友谊质量调节了中介模型的前半段路径, 即友谊质量在儿童期虐待和安全感的起调节作用。在高、低友谊质量水平条件下, 儿童期虐待均可显著负向预测安全感, 但是在友谊质量水平较高的大学生中, 儿童期虐待对安全感的负向预测作用更强。 (6) 有调节的中介效应模型仅在女生被试群体中成立, 在男生被试群体中不成立。

关键词 心理健康, 儿童期虐待, 安全感, 友谊质量

Mental health of college freshmen in a post-epidemic era: the role of childhood abuse, safety, and friendship quality

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Abstract: COVID-19 has brought a huge psychological impact to the whole society. The mental health of new college students who are facing the challenge of adapting to a new life after the outbreak deserves special attention. Based on the ecosystem theory of human development and self-determinism theory, this study investigated the mental health status of college freshmen in the post-epidemic era, and explored the mechanisms of childhood abuse, security, and friendship quality. Childhood Trauma Questionnaire (28 item Short Form, CTQ-SF), Security Questionnaire (SQ), Friendship Quality Inventory (FQI), and The Short-Form Version of The Depression Anxiety Stress Scales (DASS-21) were used to test 750 college students from two universities in Tianjin. The average age of the participants was 18.23 years old (SD=0.65). There were 244 male (34.4%) and 466 female (65.6%) students.

The results showed that: (1) The positive detection rate of depression, anxiety and stress was 19.6%, 36.8% and 25.5%, respectively. (2) There were statistically significant differences in the degree of depression and stress among college students of different genders. The degree of depression and stress of female students was higher than that of male students. However, there was no statistical significance in the degree of anxiety among college students of different genders. (3) Childhood abuse can significantly positively predict college students' negative emotions (depression, anxiety, stress); (4) The sense of security plays a mediating role in the relationship between childhood abuse and college students' negative emotions. Childhood abuse affects college students' negative emotions through the sense of security; (5) Friendship quality moderated the first half of the mediating model, i.e. friendship quality moderated the relationship between childhood abuse and security. Under the condition of high and low friendship quality, childhood abuse was significantly negative predictor of security, but among college students with higher friendship quality, childhood abuse had a stronger negative predictor of security. (6) The moderated mediating effect model was only valid in female subjects, but not in male subjects.

Keywords: Mental health, Childhood abuse, Security, Friendship quality

疫情防控常态化下大学生社会心态现状调查

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摘要 调查疫情防控常态化下大学生的社会心态现状。选取 DASS21 问卷测量大学生的压力、焦虑和抑郁, 采用 PANAS 量表测量积极和消极情绪, 自编 71 道题目测量大学生的新冠知识、对政府及小区防控措施的态度、疫情的影响、生命意义、自杀意念与风险、麻痹与厌战心理、应对方式和前景判断。采用分层抽样, 于 7 月 18 至 27 日在全国 9 个省市自治区的 13 所大学进行了在线调查。收取有效样本 3629 人, 男生 1111 (30.6%), 女生 2518 (69.4%), 他们分布在全国除香港和台湾外的 32 个省市自治区 (海外 1 人)。结果显示: 压力、焦虑和抑郁的检出率分别为 8.4%、20.4% 和 16%; 21.99% 的大学生有过自杀念头, 8.87%-17.63% 的大学生存在自杀风险; 绝大多数大学生对新冠肺炎病毒的传播途径、症状表现等知识了解较为准确; 对已康复的新冠肺炎患者和疫区来的人存在担心被传染的风险; 72.75% 的家庭收入减少, 24.52% 的家庭收入不变, 只有 2.73% 的家庭收入增加; 大部分人有积极的生命意义感; 有 11%-14% 的大学生存在麻痹和厌战心理; 90% 以上的大

学生赞同国家和小区的防控措施，并认为防控效果非常有效，只有 14.19%的大学生认为国外的防控措施非常有效，绝大多数大学生（90%以上）对战胜疫情、恢复经济发展有较大信心。在男女差异方面，女生的新冠知识更准确、小区防控上更赞同；但男生在方针政策上更赞同、有更多的麻痹心理、更高的厌战心理和更乐观的前景判断。家庭收入减少者有更多的消极情绪、更不准确的新冠病毒知识、更多的麻痹心理、更悲观的前景判断、生活习惯变化更大、生活状态更加清闲、生命意义感更低。对小区防控的态度影响个体的生命意义、心理健康和前景判断，且这种影响力大于国家防控措施的影响。本研究说明，大学生在心理健康和社会心态上受疫情影响较大，但对国家的防控非常满意，且对未来充满信心。结果还提示，做好小区防控是落实国家防控方针政策的关键。

关键词 社会心态，大学生，新冠肺炎

A survey of College Students' Social Mentality under the Normalization of COVID-19 Prevention and Control

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Abstract: Objective to investigate the current situation of College Students' social mentality under the normalization of COVID-19 prevention and control. DASS21 questionnaire was used to measure the stress, anxiety and depression of college students. The positive and negative emotions were measured by PANAS scale. 71 items were designed to measure college students' COVID-19 knowledge, attitude to government and community prevention and control measures, impact of epidemic situation, meaning of life, suicide ideation and risk, paralysis and war weariness, coping style and prospect judgment. Using stratified sampling, an online survey was conducted in 13 universities in 9 provinces and autonomous regions of China from July 18 to 27. A total of 3629 valid samples were collected, including 1111 boys (30.6%) and 2518 girls (69.4%). They were distributed in 32 provinces and autonomous regions except Hong Kong and Taiwan (one overseas). The results showed that the detection rates of stress, anxiety and depression were 8.4%, 20.4% and 16% respectively. 21.99% of college students had suicide thoughts, and 8.87%-17.63% students had suicidal risk. Most college students were more accurate in understanding the transmission routes and symptoms of COVID-19, and were worried about the risk of infection for those who recovered from the COVID-19 and those in the affected areas. 72.75% of the family income decreased, 24.52% of the family income remained unchanged, only 2.73% of the family income increased; most of the people had a positive sense of life meaning; 11% - 14% of the college students had paralysis and war weariness; more than 90% of the college students agreed with the national and community prevention and control measures, and thought it was very effective, only 14.19% of the college students thought that the foreign prevention and control measures were very effective. Most college students (more than 90%) have great confidence in overcoming the epidemic situation and recovering economic development. In terms of gender differences, girls' knowledge of COVID-19 is more accurate and community prevention and control is more favorable; but boys are more in favor of government preventions, more paralytic psychology, higher weariness of war and more optimistic prospect judgment. Those with decreased family income have more negative emotions, more inaccurate knowledge of new coronavirus, more paralytic psychology, more pessimistic prospect judgment, greater changes in living habits, more leisure life state and lower sense of life meaning. The attitude of community prevention and control affects individual's life meaning, mental health and prospect judgment, and this influence is greater than that of national prevention and control measures. This study shows that the mental health and social mentality of college students are greatly affected by the epidemic situation, but they are very satisfied with the prevention and control of the country, and are full of confidence in the future. The results also indicate that the key to implement the national prevention and control policies is to do a good

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(1) “心理学质性研究专业委员会”专题研讨会 1

宗教信仰与自我构念的关系探析

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摘 要 既往研究认为, 宗教信仰差异可能是东西方之间在自我构念上存在差异的原因。西方人的社会取向根植于犹太教和基督教, 强调自主独立性, 培养了其明显的个体主义和独立型自我构念特征。而东方人的社会取向源于儒家思想, 强调个人服从整体, 有明显的集体主义倾向和依存型自我构念特点。但既往研究尚存不足, 突出表现为两点: 首先是关于宗教信仰与自我构念的实证研究较少, 而除宗教信仰差异外, 东西方之间在语言、经济等方面也存在差异, 这都研究结论的因果性造成了影响; 其次, 既往研究的思路多局限于宗教对心理及行为的影响, 缺乏对二者之间交互作用的考察。为此, 研究采用亲亲性测试和深度访谈相结合的混合研究方法, 使用单文化拓展范式对信基督教景颇族和传统景颇族的大学生被试予以考察, 同时对其语言、经济状况等额外变量予以控制, 旨在深入研究宗教信仰与自我构念的双向影响。亲亲性测试结果发现: 与信传统宗教的景颇族大学生比, 信基督教的景颇族大学生表现出更明显的独立型自我构念; 深度访谈结果显示: 信传统宗教和信基督教的景颇族大学生多是家族信教, 部分景颇族同胞因追求文明生活和戒除不良习俗等原因选择了信基督教。同时, 信传统宗教的景颇族家庭表现出强调长幼有序的垂直型集体主义特点, 而信基督教的景颇族家庭表现出强调“博爱”、“平等”的水平型个体主义特点。总体研究结果表明, 民族宗教信仰与自我构念存在双向影响, 为揭示宗教心理和行为的背后原因、民族地区的基层治理和青少年心理健康教育提供了借鉴。

关键词 景颇族, 自我构念, 基督教

An Analysis of the Relationship between Religious Belief and Self

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Abstract: Previous studies have suggested that religious belief differences may be the reason for the differences in self-construal between East and West. Westerners' social orientation is rooted in Judaism and Christianity, which emphasize on independence. Therefore, they have developed an individualism culture and independent self-construal. Easterns' social orientation originated from Confucianism, which emphasizes on the subordination to the whole and harmonious interpersonal relationship. Therefore, they have developed an collectivism culture and interdependent self-construal. However, there were still some deficiencies in previous studies. Firstly, there were few empirical studies with regard to the influence of religious belief to self-construal. In addition to differences in religious belief, there were also some differences between the East and the West, such as languages and economic conditions. Secondly, previous studies were limited to the influence of religion on human psychology and behavior, however, few researches focus on the interaction between them. For this purpose, this research used the self-inflation test and

in-depth interview to investigate the relationship between self-construal and religious belief with Christianity and traditional Jingpo ethnic college students. Besides, the language and the condition of economic control were controlled in this study. The result of self-inflation test showed that compared with the traditional jingpo students, the Christianity Jingpo students showed a more independent self-construal. The results of in-depth interviews showed that the majority of Jingpo college students are religious families, and some Jingpo student chose to believe in Christianity because of to live a more civilized life and to get rid of some bad customs. At the same time, the Jingpo family who believed in traditional religion showed a more vertical collectivism culture emphasizing the order in their family living, while the Jingpo family that believes in Christianity showed a more horizontal individualism emphasizing "fraternity" and "equality". The overall results showed that ethnic religious beliefs and self-construal have a two-way influence, which provides reference for revealing the reasons behind religious psychology and behavior, grass-roots governance in ethnic areas and teenagers' psychological counselling.

Keywords: Jingpo nationality, Self-Construal, Christianity

从边陲到中央：叙事治疗与自我叙说的困与解

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摘要 叙事治疗和自我叙说在台湾流行有其社会背景因素，其中深入人心的多元文化理念是重要元素。叙事治疗强调在地文化可以超越主流文化，成为自己认定的自我文化。对主流文化的超越，是有治疗意义的，这和时下台湾的文化氛围是相对契合的。辅仁大学心理学系是台湾自我叙说研究的大本营，系上元老翁开诚先生在布置期末论文时，最常要求是“写一篇十年后你自己会记得的东西”。这有强烈对个人意义的肯定、对个人叙事的鼓励，没有外在要求，唯一的标准是符合你的内心。系上的陆生大多爱这个系爱的深沉，不是因为发论文技能的提升，而是对个人价值和意义的允许与肯定。一位陆生曾在论文中写“自由而开放，人文而真诚。这是辅大心理系给我的专业准则”。在大陆，叙事治疗有着不错声誉，有一群热情高涨的学习者和实践者，但很多学习叙事治疗的咨询师反映，觉得叙事治疗看起来很美，可实践起来却不知如何下手。也有依靠好奇和欣赏让自己初具叙事治疗师雏形，但却难有切实疗效，最终让自己的叙事治疗有些轻浮和隔靴搔痒。如何解构主流叙事，如何充分肯定个人在地文化和支线叙事，是很多人忽视的功课，这和大社会和文化氛围有关。主流叙事成为显学，而个人支线叙事只能在个人内心暗流涌动。笔者在编辑机构的历史手册时，便深切体会到这种拉扯：历史是集体的、抽象的，是和人相对无关的，过多人的色彩出现是不合适的。自我叙说在大陆尚未被广泛接纳为一种研究取径，常听到“就是写自己故事”、“怎么能算一种研究呢”？潜在话语是抽象的才有意义，具体是没有意义的。相对来说，边陲的台湾有较天然的优势去允许支线和多元，大陆是中央容易忽略支线和多元。无论叙事治疗和自我叙述研究，都需要额外反身去看自己身处的主流文化和主流论述，从中央进到边陲视角，才能真正用好叙事治疗和做好自我叙说研究。

关键字 自我叙说，叙事治疗，人文心理，心理咨询

From the frontier to the mainland: the dilemma and solution of narrative therapy and self narrative

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Abstract: The popularity of narrative therapy and self narrative in Taiwan has its social background factors, among which the multi-cultural concept deeply rooted in the hearts of the people is an important element. Narrative therapy emphasizes that local culture can transcend the mainstream culture and become self identified culture. It is of therapeutic significance to transcend the mainstream culture, which is relatively consistent with the current cultural atmosphere in Taiwan. The psychology department of Fu Jen University is the headquarters of Taiwan's self narrative research. When Mr. Kai-Cheng Wong, the veteran of psychology department, was arranging his final paper, he often

asks "write something you will remember in ten years". There is a strong affirmation of personal meaning and encouragement of personal narration. There is no external requirement. The only criterion is to conform to your heart. Most of the Mainland students in the Department love this department deeply, not because of the improvement of thesis writing skills, but because of the permission and affirmation of personal value and significance. One Mainland student once wrote in his paper "free and open, humanistic and sincere. This is the professional criterion given to me by the psychology department of Fu Jen University. In mainland China, narrative therapy has a good reputation. There are a group of enthusiastic learners and practitioners. However, many consultants who study narrative therapy think that narrative therapy looks beautiful, but they don't know how to start it in practice. Others rely on curiosity and appreciation to make themselves take shape as narrative therapists, but they are difficult to achieve effective results. Finally, their narrative therapy is somewhat frivolous and superficial. How to deconstruct the mainstream narrative, how to fully affirm the individual local culture and branch narrative are the lessons that many people ignore, which is related to the big society and cultural atmosphere. The mainstream narrative has become a prominent school, while the individual branch narrative can only flow in the private heart. When editing the history Manual of the organization, the author deeply realized this kind of pull: history is collective, abstract, and has nothing to do with people. It is inappropriate for too many people to appear in color. Self narrative has not been widely accepted as a research approach in mainland China? Only when the potential discourse is abstract can it be meaningful, while the concrete one is meaningless. Comparatively speaking, Taiwan in the border area has a natural advantage to allow branch lines and diversification, while mainland is the center, so it is easy to ignore the branch line and diversity here. No matter narrative therapy or self narrative research, we need extra reflexivity to see the mainstream culture and mainstream discourse. Only from the central perspective to the frontier perspective can we really make good use of narrative therapy and self narrative research.

Keywords: self narrative, narrative therapy, humanistic psychology, psychological counselling

鄂伦春人生计方式的百年变迁和心理印记 ——基于个体叙事的角度

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摘 要 鄂伦春族是我国东北地区人口最少的民族之一, 长期在山林中持续着集狩猎、渔业和采集于一体的游猎生计方式。由于定居、环境变化等因素影响, 鄂伦春人的生计方式在近百年中发生巨大变迁, 经历了传统的狩猎—半农半猎—农牧林结合为主、狩猎为辅—狩猎生计终止、生计多样性—文化旅游生计兴起的变迁过程。从个体叙事的角度出发, 通过鄂伦春人对不同年代生计方式的记忆, 可以串联出一个鲜活、生动和具体的社会变迁口述史, 并从中探寻这百年来的生计变迁带给鄂伦春人怎样的特殊心理印记。

关键词 鄂伦春人, 生计方式, 百年变迁, 心理印记, 个体叙事

The Centennial change and psychological imprint of Olunchun's life plan

Abstract: As one of the least populated ethnic groups in northeast China, the Oroqen, maintains a living pattern of hunting, fishing and gathering for a long time. Considering settlement, environmental change and other factors, the way of the Oroqen's livelihood has changed greatly in the past hundred, and experience the transition process of traditional hunting - half agriculture and half hunting - combination of agriculture, herding and forestry, supplemented by hunting - diversity of livelihood, termination of hunting livelihood - prosperity of cultural tourism livelihood. Long-term hunting livelihood has been withdrawn from the Oroqen's life, and a new way of livelihood has changed their life. From the perspective of individual narration, this study records the memory of different generations and endeavors to connect them in terms of the four stages of the development of the Oroqen's society: the

period of forest hunting, the period of collective labor after settlement, the period of commodity economy and the new century. This study aims to describe a vivid and humane history of the Oroqen's living way through one hundred years and explore how special psychological imprints could be left on the Oroqen with a hundred years.

Keywords: Oroqen, means of livelihood, transition of one hundred years, psychological imprint, Individual narration

土家族留守高中生的生存发展状况 ——基于恩施州 F 县支教的人种志研究

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摘要 我国留守高中生的生存发展状况长期以来被学界所忽视, 然而高中阶段是其青春期身心发展的关键期, 亦是其人生的重要转折期, 着实值得高度关注。本文基于笔者一年支教工作所得的质性资料, 将该地留守高中生所处的寄宿制学校视为文化共同体, 用人种志方法展现该文化系统中的留守高中生内部以及与外界诸角色之间的互动情况, 以剖析当前该群体生存发展所存在的问题, 构建留守高中生成长外部不利影响因素模型, 并提出相关建议。研究表明, 当前相关社会保障及管理服务等方面仍有诸多不足; 监护不力是导致该群体学业、身心发展出现诸多问题的根源; 留守寄宿制学校教育管理问题严重; 社会闲散人员则对该群体身心健康发展构成安全隐患, 需投入更多关注。

关键词 留守高中生, 心理健康, 家庭监护, 学校教育, 协同育人机制, 人种志研究

The survival and development of left-behind high school students ——Based on the investigation of a county in Enshi during a supporting education

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Abstract: The survival and development of left-behind high school students in China has not been paid enough attention for a long time. However, the high school stage is an important period for the physical and mental health of adolescence and the choice of life path, which deserves great attention. As a member of the 2018 graduate education support group, the author went to a county in Enshi Prefecture of Hubei Province for one year. And based on the qualitative data obtained from one year of supporting education, this research regards the boarding school where the left-behind high school students are located as a cultural community, and uses ethnographic methods to show these students' daily interpersonal interaction. And then analyzes the current problems in the survival and development of this group, establishes a model of external adverse influence factors for left-behind high school students and makes relevant suggestions. The research shows that there are still many deficiencies in the current social security and management services; inadequate supervision is the root cause of many problems in the academic and physical and mental development of the group; the education and management problems of left behind boarding schools are serious; the social idle personnel constitute a potential safety hazard for the physical and mental health development of the group, which needs more attention.

Keywords: High-school Students, Left-behind, Psychological Health, Family Guardianship, Scholastic Education, Cooperative education mechanism, Ethnographic Research

斗士的一生——文人李敖的心理传记学分析

摘要 心理传记学是运用心理学的理论框架, 在社会历史背景下重点研究那些著名的、神秘的、非凡的、有争议的个体, 从而将个人生命史转换成一个连续且具有启发性的故事。李敖是台湾著名学者、作家、近代

史学者及时事批评家，他跨越海峡两岸，曾亲历战乱、深陷囹圄，饱受苦难依旧笔耕不辍，凭借长篇历史小说《北京法源寺》获得了诺贝尔文学奖提名。本研究从心理传记学的角度，采用质性研究的方法对传主李敖展开分析，以李敖勤勉写作、敢怒敢言、偏执的性格特点为主要悬疑性问题。通过搜集其自传、书信等第一手材料以及他人对李敖的传记、回忆和评价，利用凸显性指标与原型情景理论筛选资料并进行文本分析，兼用心理传记学中的因果式解释模式与连贯式解释模式，从成长性关键因素和传主所处的时代背景以及文化环境入手，多方面诠释传主李敖一生中的悬疑性问题：因以父亲为观察学习的榜样、长时间对其自我同一性的探索、以及出狱后对不能自由写作的补偿作用，李敖一生都勤勉写作，最终著作等身；民主型的教养方式让李敖在求学时代拥有独立个性和自由思考的能力，并形成了良好的心理韧性，帮助他在度过多年牢狱生活后依然笔耕不辍、口伐不停；坐牢多年的李敖不再信任朋友，与人交往中倾向于带着猜疑和偏执。

关键词 李敖，心理传记，教养方式，偏执

The Life of a Fighter -- an Analysis of Li Ao's Psychobiography

Abstract: Psychobiography uses the theoretical framework of psychology and focuses on the well-known, mysterious, extraordinary, and controversial individuals in the context of social history. In this way, the personal life history is transformed into a continuous and inspiring story. Li Ao is a well-known formosan scholar, writer, modern historian and current affairs critic. He crossed the Taiwan Strait, had experienced wars and was deeply imprisoned, suffered hardships and continued to work hard. He won with the novel "Beijing Fayuan Temple" nominated for the Nobel Prize in Literature. From the perspective of psychobiography, this study used qualitative research methods to analyze the biographee Li Ao, taking Li Ao's diligent writing, daring to speak up, and paranoid personality character as the main suspenseful issues. We using first-hand materials such as the biographee's autobiographies, letters, as well as others' biographies, memories, and evaluations of Li Ao. "Indicators of Saliency" and "The Prototypical Scene" were used to screen and process the relevant data. Using both the causal interpretation mode and the coherent interpretation mode in psychobiography, starting from the key factors of growth and the background and cultural environment of the biographee, the suspenseful issues in the life of the biographee Li Ao are interpreted from various aspects: Li Ao's life is due to his father's role as an example of observation and learning, his long-term exploration of his self-identity, and his compensation for his inability to write freely after his release from prison. Li Ao is diligent in writing and eventually has many works; the democratic education style enables him to have an independent personality and the ability to think freely in the era of study, and forms a good psychological resilience, which helps him to continue to write and speak after many years of prison life; Li Ao, who has been in prison for many years, no longer trusts his friends and tends to be suspicious and paranoid in his communication with others.

(2) “心理学质性研究专业委员会”专题研讨会 2

乡下人的志向：做一个力争上游的人

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摘要 “为什么要比别人差？别人吃的是饭，你吃的是糠吗？”贫穷农村家长的这句普通训斥，却深深地烙在传主阿杰幼小的内心，并一直影响着他的整个求学和工作生涯。幸运的是，在“人生就是命，落地八分命”“读书也不包分配，不如早打工”的贫穷价值观念下，阿杰并没有如许多同龄人那样辍学挣钱，他始终坚信“知识能改变命运”，要做“力争上游的人”。从一个贫穷的农村娃，到上大学并攻读博士学位，最终成为某大学的教授。客观来看，阿杰不是一个聪明超凡的人，但他确实是一个异常勤奋的人。是什么样的力量使得一个闭塞落后的农村儿童，有了和周围同伴不一样的志向和信念呢？本文拟从自我叙事与心理传记的路径出发，试图厘清什么样的内生动力使阿杰摆脱世代贫困，而成长为一名大学教授，而这样的内生动力又是又什么样的心路历程和生命事件所促成的？揭示这一蜕变的心路历程，以期为更多徘徊中的青少年提供一

种人生发展的借鉴。

关键词 力争上游, 志向远大, 心理传记, 家庭心理资本

The ambition of the country folk: to be a person striving for the top

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Abstract: "Why worse than others? Others eat rice, do you eat chaff?" This ordinary reprimand from a poor rural parent was deeply imprinted in Ajie's young heart, and it has been affecting his entire school and working life. Fortunately, under the influence of the poor values of "Life is determined by fate, even if you fall to the ground." and "It is hard to find a job even if you study, so it is better to earn money earlier." Ajie did not drop out of school to earn money like many of his peers. He always believed that "knowledge can change destiny" and made great efforts to be "a person striving for the top". From a poor rural boy, he went to university and got a doctor's degree, and eventually became a professor in a university. Objectively speaking, Ajie is not a smart and extraordinary person, but he is indeed an extremely diligent person. What kind of drive makes a closed and backward rural child have different aspirations and beliefs from his peers around him? Based on the path of self-narration and psychobiography, this paper tries to clarify what kind of endogenous drive makes Ajie get rid of the poverty of generations and grow up to be a university professor. What kind of mental process and life events lead to this endogenous drive? This paper reveals the mental process of this transformation,, in order to provide a reference for the development of life for young people who are more hesitant about their career.

Keywords: strive for the top, lofty ambition, psychobiography, family mental capital

远离尘嚣：一个普通人的遁世情结

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摘要 “我不愿生活在这个不安的、神经质的、忙乱的、琐细的世纪中, 宁可或立或坐, 沉思着, 听任这世纪过去。”梭罗《瓦尔登湖》中的语句不时打动传主小柯的心。生活中类似的时刻很多, 传主身上有一种很强烈的遁世情结。周围人看来的成就无法冲淡小柯内在的寂寞。一个看起来很积极的人为什么有如此强烈的离开的冲动, 这像极了卡夫卡“就当是一场梦”的体验? 生活终无处遁逃, 如何应对这种挣扎, 是传主当下的课题。本文拟从心理传记的视角, 尝试探究是什么样的心路历程和事件造就了传主的遁世情结? 这种情结是否有化解的方法和途径? 这对于理解部分当代青年流露出的饱含遁世元素的生存体验与生命观, 有一定的启示。

关键词 遁世情结, 化解路径, 心理传记

Far from the Madding Crowd: An ordinary person's Hermit complex

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Abstract: "Rather than live in this restless, nervous, busy, trifling century, I stand or sit, meditating, and let it pass." The words in Thoreau's "Walden" from time to time touched the heart of the narrator, Xiao Ke. There are many similar moments in life. Xiao Ke has a very strong hermit complex. The achievement that the person around looks cannot dilute Xiao Ke's inner loneliness. Why does a seemingly positive person have such a strong urge to escape? It's a lot like Kafka's "Just think of it as a dream" experience. There is no escape from life, how to deal with this struggle, is the narrator's current topic. From the perspective of psychological biography, this paper attempts to explore what kind of mental process and events created the hermit's hermit complex? Whether does this kind of

complex have dissolve method and way? This has certain enlightenment for understanding the existence experience and life view of some contemporary youth which are full of reclusive elements.

Keywords: Hermit complex, Path to Resolve, Psychobiography

磨砺与玫瑰，两种面相的天使 ——女性政治家朴槿惠、昂山素季的比较心理传记学研究

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摘要 本文采用比较心理传记学研究方法，对两位典型的亚洲黄种人女性政治家——朴槿惠与昂山素季的成长及政治历程进行考察。通过对人物传记、个人著作、媒体采访报道等进行整理，探寻并比较两位女性政治家面对人生坎坷磨炼的复杂内心状态。国内复杂的政治矛盾、被软禁或被监视的经历和宗教都对她们的心路历程产生影响，强大的自我安慰与补偿、对情绪的控制力、高雅的生活情趣使她们取得政治上的成功，并继承与超越了父亲的影响。作为政治人物，成就动机、权力动机在她们面对人生的坎坷时成为前进的动力，在巨大的压力下二人的坚忍的表现也反映出她们非凡的心理素质与政治品格。就现状来看，两人不同的境况也有前期心理因素的累积的原因。用分年龄时段的传叙方式，对两人不同时期的心理进行有效的精神分析与比较，或可理解她们内心世界的丰富性与矛盾性。宗教、哲学等信仰因素也对朴槿惠和昂山素季在逆境中的行为和处世方式造成影响，不同的社会文化背景使得她们的政治构想也有所不同。她们对环境的适应能力、面对挫折时展现的巨大定力与勇气、对情绪的调节能力都是值得我们学习的。在生活中，我们也要学会信任他人、直面逆境与挑战，协调好家庭、事业的关系。朴槿惠、昂山素季对国家的信仰和对目标锲而不舍追求的精神也可以作为我们的榜样。

关键词 朴槿惠，昂山素季，心理传记学

Angels with two faces -- Comparative psychobiography of female politicians Park Geun hye and Aung San Suu Kyi

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Abstract: This paper adopts the method of comparative psychobiography to investigate the growth and political process of two typical Asian yellow women politicians Park Geunhye and Aung San Suu Kyi. Through the collation of biographies, personal works, media interviews and reports, this paper explores and compares the complicated inner state of the two female politicians in the face of life's ups and downs. The complicated domestic political contradictions, the experience of being under house arrest or surveillance and religion all have an impact on their mental process. Their strong self consolation and compensation, their emotional control and their elegant life taste make them succeed in politics and inherit and surpass the influence of their father. As political figures, their achievement motivation and power motivation become the driving force when they face the ups and downs of life. Under the great pressure, their perseverance also reflects their extraordinary psychological quality and political character. As far as the present situation is concerned, there are also reasons for the accumulation of psychological factors in the early stage. By using the narrative method of different age periods, the effective psychoanalysis and comparison of the two people's psychology in different periods can help us understand the richness and contradiction of their inner world. Religious and philosophical factors also influence Park Geunhye and Aung San Suu Kyi's behavior and way of life in adversity. Different social and cultural backgrounds make their political ideas different. Their ability to adapt to the environment, the great determination and courage in the face of setbacks, and the ability

to regulate emotions are all worth learning. In life, we should also learn to trust others, face adversity and challenge, and coordinate the relationship between family and career. Park Geunhye and Aung San Suu Kyi's faith in the country and the spirit of persistent pursuit of goals can also serve as examples for us.

Keywords: Park Geunhye, Aung San Suu Kyi, Psychobiography

天才之完美范例——维特根斯坦的真实与责任

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摘要 本文采用心理传记学的研究方法,对现代西方著名哲学家之一的路德维希·维特根斯坦的真实与责任进行了探讨。童年时期的维特根斯坦总是敏感于别人不好的看法,习惯以正确无误的礼貌和对他人的感受力与帮助让自己得到赞美和喜爱。因此“撒谎对自己有利的时候,为什么要说实话?”其本质,是否压倒一切的要求自己是真实的?这是他最早的关于哲学问题的思考。早年他即在父亲的高压统治之下,树立了一种严格的责任意识,这种严格的责任意识不仅在于限制了维特根斯坦发展自我兴趣点的可能,这与他在认为自己攻克了哲学上的难题后无所转向的人生选择有着密切的关系,刨去了对哲学的专注,维特根斯坦发现自己很难再对任何事物产生长久的兴趣。此外,这种责任意识还反映在维特根斯坦对于这个世界强烈的责任感,他的自杀倾向的直接来源:如果自己是多余的,自己不能为这个世界作出自己的一点贡献或者是改变,那么似乎也就没有活着的必要。在成为罗素学生之前的数年里,哲学是维特根斯坦最强烈的冲动这件事在他身上造成的责任和冲动的冲突一直令他深受折磨。他确实相信,人应当——像他父亲、他哥哥汉斯和一切天才那样,是冲动的动物。但他也具有几乎压倒一切的责任感,而且易于产生反复的极度自我怀疑。罗素的鼓励之所以是必须的,恰是因为他能由此而克服这怀疑,在自我探索的过程中做出决策,从而摆脱探询状态,进入自我认同的最高阶段——达成的认同这一阶段。最终他与罗素的分离正是体现了维特根斯坦性格中对于真实的绝对追求,当他认识到了自己和罗素的理想不一致时,他便决然将自己流放,在挪威独自生活,希冀寻找最正确的哲学证明。总之,真实于自己是不容违背的责任,决心不隐藏“自己之所是”成了维特根斯坦总体人生态度的核心。

关键词 维特根斯坦, 心理传记学, 责任

The perfect example of genius ——Wittgenstein's truth and responsibility

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Abstract: In this paper, one of the most famous modern western philosophers, Ludwig Wittgenstein, is discussed with the method of psycho-biography. As a child, Wittgenstein was always sensitive to other people's bad views, and used to praise and love himself with correct politeness and feelings and help for others. So "why tell the truth when it's good for you to lie?" Is the nature of the overwhelming claim to be true? This is his earliest thinking about philosophy. Wittgenstein was under the father's oppressive rule in his childhood, who had established a strict responsibility sense since then. The strict responsibility consciousness not only restricts the development of Wittgenstein's interest, but it also has to do with him after he solving the philosophical problem. Wittgenstein found it difficult to interest on anything in a long term. In addition, this sense of responsibility is also reflected in Wittgenstein's strong sense of responsibility for the world, and the direct source of his suicidal tendency: if he is redundant and cannot make a contribution or change to the world, then there seems to be no need to live. In the years before he became a student of Russell, Wittgenstein was tortured by the clash of responsibilities and impulses caused by philosophy. He really

believed that people should be impulsive creatures, like his father, his brother Hans, and all geniuses. But he also has an almost overwhelming sense of responsibility and is prone to recurring episodes of extreme self-doubt. Russell's encouragement is necessary precisely because he is able to overcome this doubt and make decisions in the process of self-exploration, so as to get out of the state of inquiry and enter the highest stage of self-identity -- identity achieved. Finally, his separation from Russell reflected Wittgenstein's absolute pursuit of truth. When Wittgenstein realized his inconsistency with Russell's ideal, he decided to exile himself and live alone in Norway, hoping to find the most correct philosophical proof. In brief, Being true to oneself is an inviolable responsibility. The determination not to hide "what I am" became the core of Wittgenstein's overall attitude towards life.

Keywords: Wittgenstein, psycho-biography, responsibility

清末四臣比较心理传记学研究：学养与民族关系

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摘要 左宗棠、张之洞、曾国藩和李鸿章是晚清洋务派的四位领军人物，并称为“晚清中兴四大名臣”，他们在各自的舞台上驰骋施展，有时又相互配合。首先，梳理他们的“少时学力”，即少时考取功名的情况，从比较心理传记的角度，在他们的成长环境中加以分析。四人在求学过程中都表现出较强的地域属性，无论是一直在本省内求学，还是迁徙到异地考举，在家长、族亲的引荐下多得同乡学者的指点和提携——可以将其概括为“地方学问”。其次，四人少时的民族环境存在差异，有的在少数民族地区长大，父辈参与镇压民族起义。他们之后形成的“民族意识”从三个方面加以概括：一是跟清朝统治者的亲近程度，二是如何处理汉族一少数民族的关系，三是国际关系考察。由这三个方面组成的“民族意识”，对他们的政治归属和军事选择都产生了一定影响。将“晚清中兴四大名臣”置于其当时的历史时代背景，从社会心理传记的角度，结合其社会关系和典型作品进行考察，试图分析其“民族意识”、“政治归属”、施政措施和军事选择等的形成脉络和理路，这样一方面可以丰富对他们个体的研究，另一方面，也可以探究其时代的教育和成长环境，以及逐渐形成的社会网络和国际关系。

关键词 比较心理传记学，少时学力，地方学问，民族意识，政治归属

Comparative Psychobiographical Research of the Four Ministers in the Late Qing Dynasty : Education Accomplishments and Ethnic Relations

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Abstract: Zuo Zongtang, Zhang Zhidong, Zeng Guofan and Li Hongzhang were the four leading figures of the Westernization school in the late Qing Dynasty, and they were known as the “four famous officials of the rejuvenation of the late Qing Dynasty”. They developed in their own realms and sometimes cooperated with each other. First of all, their “youth academic abilities” are traced and compared, that is, their credits and fames obtained in youth are analyzed in their growth environments, from the perspective of comparative psychobiography. Their studying processes all showed a strong regional attribute. Whether they had always been studying in their own provinces or had migrated elsewhere for examination, they all benefited a lot from the guidances and supports from hometown scholars introduced by their parents or clan relatives, which can be summarized as the “indigenous edification”. Secondly, their ethnic environments in youth were different that some grew up in minority regions and their parents participated in suppressing ethnic uprisings. Their “ethnic consciousnesses” formed later on can be summarized from three aspects: first, the closeness to the rulers of the Qing Dynasty; second, how to deal with the

relationship between the Han and the ethnic minorities; third, their international relations. The “ethnic consciousness” composed of these three aspects had a certain impact on their “political affiliations” and military choices. From the perspective of social and historical psychology and by consulting their social relations and typical works, this paper attempts to analyze the formation context and logic of their “ethnic consciousnesses”, “political affiliations”, administrative measures and military choices. On the one hand, it can enrich the study of the four individuals. On the other hand, it can also explore the education and growth environment of their times, as well as the gradually formed social networks and international relations.

Keywords: comparative psychobiography, youth academic ability, indigenous edification, ethnic consciousness, political affiliation

2.22 “心理学与社会治理专业委员会”专题研讨会

(1) “心理学与社会治理专业委员会”专题研讨会 1

新冠疫情防控下的家庭心理疏导

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摘要 新冠肺炎疫情给我国民众和社会都带来了极大的影响。在有效防控疫情的隔离环境下，家庭作为社会的细胞单元，成为了安抚和安定人心的最温暖的港湾。而如何有效地对家庭进行健康心态的引导与疏导逐渐成为当前心理学人关注的共同问题。华中师范大学心理学院/社会心理研究中心身处疫情暴发的最严重的武汉地区，具有义不容辞的责任与使命全力投入到这场抗疫行动中。聚焦到家庭的心态建设上，我们主要进行了如下四方面的工作：第一，家庭心态的现状调查和咨政报告。自武汉封城以来，我们与中国科学院行为科学重点实验室合作对 6500 名民众的风险认知、焦虑和家庭支持等进行了动态追踪考察，依据家庭心态现状特点与存在的问题进行有针对性地干预，针对“病亡者家属”人群的创伤后应激障碍及其心理重建的建议被国家有关部门采用；第二，“温馨行动·抗疫心文”的推文科普。我们联合湖北省妇联联合开办“温馨行动·抗疫心文”心理科普栏目，自 2 月 4 日起，针对家庭和妇女群体的心理状态累计推送心理疏导文章 100 篇，其中围绕家庭关系、亲子沟通、夫妻关系、家庭会议、缓解家庭压力、工作家庭平衡等主题的文章 30 余篇，这些推文在“湖北 e 家庭”、“湖北省心理学会”和“印象社会心理”公众号发布，受到了民众的广泛喜爱与好评；第三，“家爱学院”的家庭教育助力。我们和湖北省妇联、湖北省家教研究会共同建设的“家爱学院”，是面向家长的公益教育平台，宗旨是服务家长，关爱生命，美好人格，同心成长。助力家长和孩子一同绽放“生命之花”、体悟“人性之善”、展示“人格之美”、做好“社会之人”。自 2020 年 3 月 8 日上线以来，已累计开课 18 期，服务家长 300 余万人次，受到广泛好评与信赖。第四，编写心理疏导书籍和进行科普讲座。一方面，我们编写出版了疫情时期青少年心理健康指导书籍为疫情期间居家防疫的心态建设提供了专业指导；另一方面，我们针对妇女儿童和一些重要创伤人群如治愈患者的家庭社区融入和心理健康引导进行了科普讲座，对于家庭心态调适和疏导进行了有效的引导。

关键词 新冠肺炎疫情，心理疏导，家长教育，心理建设，创伤群体

Family psychological counseling under the prevention and control of COVID-19 epidemic

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Abstract: The COVID-19 outbreak has caused significant impact on citizens and the society. In an isolated

environment that aimed to effectively prevented and controled the epidemic, as the cell units of the society, the familis became the warmest harbor for comfort and claming people. Therefore to effectively guide the families to keep in good mental health had gradually become a major concern of all psychological scholars. The School of Psychology and Center for Studies of Social Psychology in Central China Normal University which is located in Wuhan, where the epidemic is the most serious, has an unshirked responsibility to fully engage in the fight against the epidemic. Focus on the family's attitude construction, we work mainly in the following four aspects: the current state of family mentality survey and consultation report. Since the closure of Wuhan, we have cooperated with the Key Laboratory of Behavioral Sciences of the Chinese Academy of Sciences to conduct dynamic follow-up investigations on 6,500 people's risk perceptions, worries, and family support, and conduct targeted investigations based on the current characteristics of family mentality and existing problems. Intervention, recommendations for post-traumatic stress disorder and psychological reconstruction of the "family of the deceased" are adopted by the relevant state departments; second, we and the Women's Federation of Hubei Province jointly launched the "Warm Action · Anti-epidemic Essays" psychological science column. Since February 4, we have gradually triggered 100 psychological counseling articles on the psychological state of families and women groups, including family relationships. There are more than 30 articles on parent-child communication, husband-wife relations, family meetings, family stress relief, work-family balance and other topics. These articles were published on the "Hubei e-family", "Hubei Provincial Psychological Association" and "Impression Social Psychology" public accounts. It has been widely liked and praised by people; thirdly, the family education of the "Family Love College" is assisted. The "Family Love College" built by us, the Hubei Provincial Women's Federation and the Hubei Provincial Family Education Research Association is a public education platform for parents. It is helpful for parents to care for life and grow together. Since it went online on March 8, 2020, it has started 18 courses, serving more than 300 parents and children, it blooms the "flower of life" and help to understand "The goodness of human nature", show the "beauty of personality", and be a good "person of society." For the fourth time, we write psychological counseling books and conduct popular science lectures. For the last part, we have compiled and published mental health guidance books. For teenagers during the epidemic, the mentality construction of epidemic prevention provides professional guidance; on the other hand, we have conducted popular science lectures for women and children and some important trauma groups, such as family and community mergers and mental health guidance for cured patients, which are effective for family mentality adjustment.

Keywords: COVID-19 epidemic, psychological counseling, parent education, mental construction, Trauma group

公共卫生事件下的网络心理援助平台建设

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摘 要 新型冠状病毒肺炎(COVID-19)在全球肆虐, 对公众心理健康造成极大的威胁。网络心理援助平台整合心理援助资源, 巩固公众的心理防线。本文以中国教育部华中师范大学心理援助平台为例, 介绍网络心理援助平台的构成要素, 以及为保障平台专业性, 提升心理援助效果和求助率而采取的措施。网络心理援助平台应包括: (1) 提供心理援助的咨询师; (2) 求助者; (3) 咨询师和求助者的交互平台以及 (4) 管理系统。保障平台运行的管理系统包括专家工作组和执行工作组, 执行工作组由协调组、审核督导培训组、咨询过程管理组、综合服务组以及网络技术组构成。为提升心理援助的效果和求助率, 平台制定了严格的伦理准则, 包括保障咨询师的专业胜任力, 保护求助者和咨询师的权益; 维护交互平台的稳定性, 及时解决平台的技术问题; 建立咨询过程与效果的评估与反馈系统以及提升平台的可获得性等。能够快速建立平台的经验包括争取政府支持、整合专业资源以及建立高效的执行体系。平台未来的发展方向可通过制定本土化的一次单元咨询手册, 增加咨询的连续性等途径提升心理援助的深度; 通过网络化自助干预等方式提升平台的干预效

率。

关键词 公共卫生事件, 网络心理援助, 新型冠状病毒肺炎

Establishment of Online Platform for Psychological Assistance during a Public Health Emergency

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Abstract: The Coronavirus Disease 2019 (COVID-19) is raging worldwide, seriously threatening the public's mental health. Online platform for psychological assistance integrated various sources to promote the public's mental health. This article, using the Mental Health Service Platform at Central China Normal University, Ministry of Education (MOE-CCNU-MHSP) as an example, aims to describe the experience of building an online platform for psychological assistance in a public health emergency. The key elements of this construct include: (1) counselors who provide psychological assistance and (2) help-seekers who need help; (3) channels for communication between counselors and help-seekers; and, (4) a management system to oversee an intervention infrastructure. The administrative system includes expert committee and execution group. The execution group is divided into five sub-groups: a coordination team, a counselor management team, a counseling process monitoring team, a general management team, and a technique service team. The online platform had several design features to maximize its effectiveness. The first design feature was that the psychological assistance provided by the platform should ensure compliance with ethical norms, particularly in ensuring that the counselors are competent, obtaining informed consent from help-seekers, and protecting the rights of counselors. The second, was that standardized crisis intervention procedures would be employed. The third, that a technical problem resolution plan would be developed to support the high-functioning platform. The final design feature was that it would have an evaluation and feedback system and improve the accessibility of the MOE-CCNU-MHSP. Platform construction experience includes striving for government support, integrating professional resources and establishing an efficient operating system. The future direction of the online platform can improve the depth of psychological assistance by developing a rigorous indigenized one-session counseling skill manual and increasing the continuity of psychological assistance. The intervention efficiency of the platform can be improved by internet-based self-help intervention.

Keywords: public health emergency, online psychological assistance, Coronavirus Disease

高校参与社会心理服务体系建设模式探索

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摘要 社会心理服务体系建设是一项时代新课题, 目前我国社会心理服务工作处于试点和探索阶段, 如何基于相关科学理论, 依托现有的服务基础, 构建切实有效的服务模式, 提供系统、全面的社会心理服务, 需要不断的尝试和探索。高等学校作为专业人才和学术资源的集聚地, 在社会心理服务科普工作、社会心理服务理论支撑等方面具有得天独厚的优势。我们在深入分析区域性社会心理服务体系特点的基础上, 细化区域性社会心理服务需求, 初步形成了高等学校服务社会心理服务体系建设的四级模型。第一, 建立社会心理服务体系建设的智库研究中心, 从理论构建、制度建设等方面提供支撑; 第二, 成立社会心理服务体系建设的科普团队, 科学普及心理科学知识, 推动人民群众对心理健康的科学认识是社会服务体系建设的任务之

一, 通过科学普及, 可以有效提高全民的心理科学素养; 第三, 练就一支服务基层的社会心理服务队伍, 主要服务政府、企业、社区等部门和机构的社会心理服务需求; 第四, 培养社会心理服务人才, 根据国家社会心理服务体系建设的需要, 调整培养方案, 培养社会急需的人才。接下来, 我们将总结前期工作的经验, 进一步研究不同群体心理健康的特点和社会心理服务的需要, 探索精准开展社会心理服务的途径, 提出符合我国国情和特点的社会心理服务模式。

关键词 社会治理, 心理服务, 服务模式

Exploration of the Mode of Universities Participating in the Construction of Social Psychological Service System

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Abstract: The construction of a social psychological service system is a new topic of the times. At present, China's social psychological service is in the pilot and exploratory stage. How to build a practical and effective service model based on relevant scientific theories and rely on the existing service foundation to provide a systematic and comprehensive society Psychological services require constant experimentation and exploration. As a gathering place of professional talents and academic resources, colleges and universities have unique advantages in the popularization of social psychological services and theoretical support of social psychological services. On the basis of in-depth analysis of the characteristics of the regional psychosocial service system, we refined the needs of regional psychosocial service, and initially formed a four-level model for the construction of the social psychology service system of colleges and universities. First, establish a think tank research center for the construction of a social psychological service system to provide support from theoretical construction and system construction; second, establish a science popularization team for the construction of a social psychological service system, scientifically popularize psychological science knowledge, and promote the people's mental health The scientific understanding of the social service system is one of the main tasks of the construction of the social service system. Through the popularization of science, the psychological science literacy of the whole people can be effectively improved; third, to train a social psychological service team that serves the grassroots, mainly serving the government, enterprises, communities, etc. The social psychological service needs of departments and institutions; fourth, cultivate social psychological service talents, adjust training programs according to the needs of the national social psychological service system construction, and cultivate talents urgently needed by the society. Next, we will summarize the previous work experience, further study the characteristics of mental health of different groups and the needs of psychosocial services, explore ways to accurately carry out psychosocial services, and propose a psychosocial service model that meets my country's national conditions and characteristics.

Keywords: Social governance, Psychological service, Service pattern

(2) “心理学与社会治理专业委员会”专题研讨会 2

高阶层者为何更不支持再分配? 贫富差距归因的中介作用

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摘 要 与低阶层者相比, 高阶层者的再分配偏向为何更低? 长期以来, 有关再分配偏向阶层差异的心理机制备受研究者的关注, 由此这一研究领域发展出了自利动机与公平认知两大研究视角。针对自利动机视角的局限, 公平认知视角认为个体的再分配偏向不仅受到自利动机的驱动, 也在很大程度上受其公平认知的影响。然而在社会阶层与再分配偏向的关系中, 具体的公平认知机制尚不清楚。基于此, 本研究则通过社会阶层不

平等维持模型的观点与相关研究发现,揭示了贫富差距归因的中介作用。研究1基于中介测量设计,通过主观阶层量表、贫富差距归因问卷、自利问卷、再分配偏向量表对448名城乡居民展开了调查。结果发现即使在控制自利动机的情况下,与低阶层者相比,高阶层者的再分配偏向仍然更低;而贫富差距归因在这一过程中起到中介作用。研究2则进一步基于实验因果链设计验证了这一中介路径的因果关系。其中,研究2a通过对124名成人被试进行社会阶层启动,发现与低阶层启动相比,高阶层启动会增强个体对贫富差距的内归因。研究2b通过对155名成人被试进行贫富差距归因启动,发现内归因启动能够降低个体的再分配偏向。本研究结果验证了社会阶层不平等维持模型的重要观点,同时也带来了一定的社会治理启示:即可以通过培育民众更多从外部环境来看待贫富差距或经济不平等,以更好地推动收入再分配、实现发展成果共享。

关键词 社会阶层, 贫富差距归因, 再分配偏向, 经济不平等

Why are higher-class individuals less supportive of redistribution? The mediating role of attributions for rich-poor gap

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Abstract: Why are higher-class individuals are less supportive of redistribution than lower-class individuals? Regarding social class differences in redistributive preferences, researchers developed a self-interest perspective and an ideology perspective. Due to explanatory limitations of the self-interest perspective, the ideology perspective contends that one's redistributive preferences are not only motivated by self-interest, but also to a large extent influenced by their beliefs or ideologies about social equality. But it's unclear that what is the specific belief mechanism of social class differences in redistributive preferences. According to the inequality maintenance model of social class, the present study uncovered the mediating role of attributions for rich-poor gap. In study 1, we conducted a measurement-of-mediation design among adults ($N = 448$) with the results showing that compared with those from lower social classes, higher-class individuals were more likely to make internal attributions for rich-poor gap, in turn, had lower redistributive preferences. And these associations held controlling for self-interest. In study 2, we conducted an experimental-causal-chain design with the results showing that the experimentally induced higher social class increased internal attributions for rich-poor gap (study 2A, $N = 128$), and priming internal attributions for rich-poor gap lowered redistributive preferences (study 2B, $N = 155$). These findings provide supporting data for the inequality maintenance model of social class and shed some light upon social governance. That is, to promote wealth redistribution and the sharing of developmental fruits, social governance could cultivate individuals' more structural understandings of poverty, wealth, and economic inequality.

Keywords: social class, attributions for rich-poor gap, redistributive preferences, social inequality

健康的阶层差距及其机制与干预研究

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摘要 本文从心理学视角, 基于社会文化自我模型和社会阶层心理学, 采取实验、纵向追踪研究与大样本问卷调查相结合的方式, 首先考察社会阶层的健康差距的现状; 接着, 重点揭示社会阶层影响健康的机制, 提出社会阶层影响健康的模型, 探索自我健康管理与健康风险行为的连续中介作用(机制), 以及自我健康管理技能教育干预的调节作用(干预)。具体来说, 本研究为了达到在探究社会阶层影响健康水平的机制的基础上, 考察如何缩小社会阶层的健康差距这一目标, 分别从效应、机制及其干预三个方面设计了三个大研究7个子研究。研究一通过全国范围大样本考察社会阶层对健康水平的影响, 发现无论是身体健康, 还是心理健康作为健康的指标, 客观社会阶层显著正向预测个体的健康水平; 主观社会阶层显著正向预测个体健康水平, 证实了前人的研究结论。研究二基于社会阶层心理学和社会文化自我模型探讨了自我因素在社会阶层

影响健康中的机制。中介作用模型分析结果发现自我健康管理能力和自我健康行为在阶层预测健康过程中起到中介作用。对于我国个体来说,主观社会阶层越高,健康水平越高;个体主观社会阶层越高,自我健康管理能力越强;个体自我健康管理能力越强,健康水平越高。主观社会阶层主要通过自我健康管理能力影响人们的健康水平,其影响机制可以描述为:主观社会阶层越高的人自我健康管理能力越强,而自我健康管理能力又直接影响了人们的健康水平。研究三探讨促进低阶层健康水平的干预方案。以96名大学生为被试,进行持续4周的随机对照干预实验研究表明,健康教育与心理支持干预技术,如执行意向可以显著提升人们的自我健康管理能力与健康素养,进而形成良好的生活方式与健康行为,达到增进健康这一目的。本研究结论可作为保障弱势群体的健康权利、解决健康贫困问题的政府公共管理和医疗改革的对策依据。从长远来看本课题研究结论,有利于推动“人口红利”收获,有利“全民健康,全面小康”目标的实现。

关键词 社会阶层, 社会文化自我模型, 自我健康管理, 执行意向, 健康

Health Gap in Social Class and its Mechanism and Intervention

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Abstract: We carried out field experiment and large sample questionnaire survey to investigate the relationship between social class and health and their psychological mechanism and intervention. That is, the purpose of this project is to: 1) investigate the relationship between social class and health; 2) test the underlying mechanism under the framework of social class psychology and socio-culture self model; 3) explore possible solutions to narrow the social class gap in health. Specifically, Study 1 examines the effect of social class on health. It was found that physical health and mental health were used as indicators of health, the objective social class was significantly positive in predicting individual health status; the subjective social class was significantly positive in predicting individual health status, which confirmed the previous research conclusions. It shows that for our citizens, with the development of economy, the social class gap in health is growing. The results of this study show that the lower the class, the worse the health status. Study 2 explores the mechanisms by which social classes affect health. We found that self-health management ability and self-health behavior play a mediating role in the process of social class affect health. For individuals in China, the higher the subjective social class is, the higher the health status is; the higher the subjective social class is, the stronger the self-health management ability is; the stronger the self-health management ability is, the higher the health status is. The subjective social class mainly affects people's health level through their self-health management ability. Its influence mechanism can be described as: the higher the subjective social class is, the stronger the self-health management ability is, and the self-health management ability directly affects people's health status. Study 3 explores possible solutions to narrow the social class gap in health. Ninety-six college students were selected as subjects in this study. The results of a 4-week randomized controlled intervention experiment showed that the implementation of intention education intervention can significantly improve the lower class' self-rated health. The conclusion of this study can be used as the basis of government public management and medical reform to protect the health rights of vulnerable groups and solve the problem of health poverty. In the long run, the findings of this study is conducive to promoting the goal of "national health and overall well-off".

Keywords: social class, socio-culture self model, self health management, implementation intention, health

突发公共事件与差异性补偿反应

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摘要 过往很多不同领域的研究都发现过这样的一种现象, 即当人们的期望与现实体验发生不一致时, 他

们倾向于表现出各种具有补偿性意味的心理和行为反应。尽管我们可以对于这样的效应做出不同途径的理论解释，但在众多解释中，新兴的差异补偿理论体系可能是最有吸引力的观点之一。基于差异补偿的理论视角认为，当人们遇到现实经验与期望价值的冲突时，会内隐或外显地感到焦虑和不适。为了减轻这种焦虑，人们将诉诸于使用一系列心理和行为策略，这些策略表现为不同类型的补偿性反应。而由于突发公共事件是一种影响范围广，影响力强的社会事件，因此通常会使公众感到期望与现实之间的冲突矛盾。因此，我们认为从差异补偿的视角入手来分析突发公共事件中人们的心理和行为反应具有重要意义。本研究试图从差异补偿理论体系中选取三种不同的理论视角来解释突发公共事件下民众的应激反应。首先，恐惧管理理论可以解释为什么人们在经历灾难后更多地倾向于寻求意义。其次，系统合理化理论有助于理解人们为什么以及何时更多表现出对于现存社会系统的支持与拥护。另外，补偿性控制理论可以从控制感缺失的角度揭示突发公共事件中谣言和阴谋论产生和传播的原因。基于差异补偿的视角，未来的研究可以更深入探索人们在突发公共事件中的反应及其心理机制。此外，对于突发公共事件中的社会心理建设，也可以从差异补偿的角度出发来探索针对于公众心理重建的干预策略。同时，这些研究和探索也将进一步丰富和发展差异补偿理论体系。

关键词 差异性补偿，突发公共事件，恐惧管理，系统合理化，补偿性控制

Public Emergency and Inconsistency Compensation

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Abstract: Previous studies have repeatedly found that people tend to exhibit a variety of compensatory psychological and behavioral responses when they are faced with an inconsistency between their expectations and actual experiences. Although this phenomenon can be explained with a lot of opinions, an emerging theoretical system of inconsistency compensation may be one of the most attractive perspectives. Inconsistency compensatory perspective holds that, when people experience a conflict with their expectations, they feel anxious and uncomfortable. Being motivated to alleviate this anxiety, they will resort to using a series of psychological and behavioral strategies, which manifest as different kind of compensatory responses. Since public emergencies are a sort of social events with a wide range of impacts and relatively strong effects, they usually cause the public to feel inconsistent between expectations and reality. Therefore, we believe that it is of significance to analyze people's psychological and behavioral responses in public emergencies from the perspective of inconsistency compensation. The present study tries to take three different theoretical perspectives in the theoretical system of inconsistency compensation to explain the public response in emergencies. First, terror management theory can explain why people are more inclined to seek meaning after experiencing a disaster. Second, system justification theory helps to understand the effect that why and when people support the prevailing social system. Last but not least, compensatory control theory may reveal the reason why rumors and conspiracy theories are spreading in public emergencies. Based on the perspective of inconsistency compensation, future research may deeply explore people's responses in public emergencies, as well as the psychological mechanism. In addition, applied research can also start from this perspective to explore intervention strategies. Meanwhile, these research explorations will further enrich the theoretical system of inconsistency compensation.

Keywords: inconsistency compensation, public emergency, terror management, system justification, compensatory control

公共卫生事件中阴谋论信奉的成因：风险感知的中介作用

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摘要 遭遇重大公共卫生事件时，各类阴谋论往往层出不穷，该研究在新冠疫情大流行期间对全国30个省市区的1524名受访者进行在线问卷调查，考察公共卫生危机中的中国居民对内外群体阴谋论的信奉及其形成机制，结果发现：（1）在新冠疫情大流行早期（2020年1月31日-2月1日），与非湖北地区的居民（ $N=964$ ）相比，处于疫情中心的湖北地区居民（ $N=560$ ）表现出了显著更高的风险感知（ $p<.001$ ）、更加信奉内群体阴谋论（ $p<.001$ ）以及外群体阴谋论（ $p=.001$ ）；（2）地区通过风险感知预测内群体阴谋论信奉的部分中介作用成立，即与非湖北地区居民相比，处于疫情中心的湖北地区居民之所以更相信官方对疫情相关信息的隐瞒，是因为他们感知到了更高水平的疫情风险，激活了其存在动机，进而更倾向于信奉内群体阴谋论；（3）地区通过风险感知预测内群体阴谋论信奉的中介作用不成立。上述结果表明，在公共卫生危机事件中：（1）处于该事件中心的居民可能同时信奉内群体阴谋论和外群体阴谋论；（2）信奉外群体阴谋论可能存在与信奉内群体阴谋论不同的心理机制，需要未来研究进一步探究，如系统合理化的作用等。此外，启示了我们在应对公共卫生事件的社会治理中，对阴谋论的流行应当分类施治。

关键词 公共卫生事件，阴谋论，风险感知，社会治理

Causes of conspiracy belief in public health events: the mediating role of risk perception

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Abstract: When encountering public health events, various conspiracy theories often emerge in endlessly. During the COVID-19 pandemic, the study conducted an online questionnaire survey of 1524 respondents in 30 provinces across the country to examine Chinese residents' belief in conspiracy theories of internal and external groups and the formation mechanism. The results showed that: (1) In the early stage of the COVID-19 pandemic, residents of Hubei province at the epicenter of the epidemic showed significantly higher risk perception and more belief in in-group conspiracy theories and out-group conspiracy theories than residents of non-Hubei provinces; (2) The region predicts that partial medium role of the ingroup conspiracy theories through risk perception is established, that is, compared with non-Hubei residents, the reason why Hubei residents is more believe official conceals the epidemic information, is because they perceive a higher level of epidemic risk. Then activates their motivation for existence, and make them are more inclined to believe in ingroup conspiracy theories; (3) The mediating role of regional risk perception in predicting the belief of ingroup conspiracy theories is not hold. The above results indicate that in a public health crisis event: (1) Residents at the center of the event may believe in both ingroup conspiracy theories and outgroup conspiracy theories; (2) There may be a different psychological mechanism between the belief in outgroup conspiracy theory and the belief in ingroup conspiracy theory, which needs further research in the future, such as the role of system rationalization. In addition, it suggests that the prevalence of conspiracy theories should be treated categorically in the social governance of public health events.

Keywords: public health incidents, conspiracy theories, risk perception, social governance

主观社会阶层对高等教育满意度的影响： 成就外归因的中介作用

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摘要 不同社会阶层对教育的满意度不同，但社会阶层影响教育满意度的心理机制尚不明确。本文基于阶层的认知理论，以482名大学生为研究对象，使用问卷法探究其主观家庭社会阶层与高等教育满意度之间的关系，以及成就归因倾向在两者之间的中介作用。研究结果发现：(1)主观社会阶层对高等教育满意度具有显著正向预测作用；(2)个人成就外归因倾向在主观社会阶层与高等教育满意度之间起部分中介作用，主观社会阶层越低，人们越倾向于对个人成就做外归因，他们对高等教育的满意度也就越低。该研究结果表明，个人成就外归因是解释低主观社会阶层成员对高等教育满意度较低的重要因素。

关键词 社会阶层，高等教育满意度，成就外归因，阶层社会认知理论

Subjective Social Class and Satisfaction of High Education: The Mediating Role of Attribution Tendency

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Abstract: People from different social class have different satisfaction with high education, but the mechanism by which social class affects education satisfaction is still unclear. Based on the social cognition theory of social class, this study explores the relationship between family social class and high education satisfaction, and the mediating role of achievement attribution tendency. The results found that: (1) Subjective social class has a significant positive predictive effect on satisfaction of high education; (2) External attribution plays mediate role between subjective social class and satisfaction of high education. The research results show that subjective social class is an important factor affecting satisfaction of high education, attribution tendency is an important factor to explain the relation between social class and satisfaction of high education.

Keywords: Subjective Social Class, Satisfaction of High Education, Attribution Tendency, the Social Cognition Theory of Social Class

2.23 “文化心理专业委员会”专题研讨会

(1) “文化心理专业委员会”专题研讨会 1

文化心理变迁的社会阶层视角

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摘要 文化心理变迁关注三种变迁模式: 个人主义提升/现代取代传统, 集体主义维持不变/传统得到保持, 个人主义和集体主义并存/传统与现代相融合。越来越多的证据将文化心理变迁最重要的影响因素指向宏观社会经济发展因素和群体或个体的社会阶层因素。因此, 社会阶层可以看作社会变迁的一个缩影和研究文化心理的一个视角, 用来考察文化心理变迁的机制。从社会阶层的角度, 结合跨文化心理学、多元文化心理学和本土心理学有关文化心理变迁的研究, 可以得到有关社会阶层与文化心理维度及其变迁的对应关系。即在中国社会文化变迁的背景下, 个人主义与集体主义并存和自主-关系型自我更能代表文化心理变迁的模式, 同时将社会阶层作为影响这一变迁的显著因素, 可以将这种变迁模式突出地表现出来。因为在中国文化背景下, 本身是一个集体主义文化, 在集体主义文化的基础上随着经济社会的发展, 又增加了个人主义的因素, 最终将表现为个人主义和集体主义双高的模式, 用自我概念的表述, 则是自我-关系型自我。从社会阶层的角度来说, 中国的中高阶层将更明显地表现出这种文化心理变迁模式。

关键词 社会阶层, 文化心理变迁, 个人主义, 集体主义, 自主关系型自我

Social Class Perspective of Cultural Psychological Changes

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Abstract: Cultural changes focus on three modes of change: Individualism increasing / modernity replacing tradition, collectivism remaining unchanged / tradition being maintained, individualism and collectivism coexisting / tradition and modernity merging. More and more evidences point out that the most important influencing factors of cultural psychological changes point to the macro socio-economic development factors and the social class factors of groups or individuals. Therefore, it can be seen as a microcosm of social change. From the perspective of social class, combined with cross-cultural psychology, multicultural psychology and indigenous psychology, we can get the corresponding relationship between social class and cultural psychological dimensions and their changes. That is to say, under the background of social and cultural changes in China, the coexistence of individualism and collectivism and autonomous-related self are more representative of the mode of cultural psychological change. Taking social class as a significant factor affecting this change can show these change modes prominently. Because under the background of Chinese culture, it is a collectivism culture. On the basis of collectivism culture, with the development of economy and society, the factor of individualism has been added. Finally, it will be expressed in the mode of both individualism and collectivism, or in the mode of autonomous-related self. From the perspective of social class, the middle and upper class in China will show these cultural and psychological change mode more obviously.

Keywords: social class, cultural psychological change, individualism, collectivism, autonomous-related self

集体主义文化之下的一致性行动是如何达成的？ ——以新冠肺炎疫情期间戴口罩行为为例

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摘要 在这次人类防治新冠肺炎疫情的努力中，“戴口罩”一度成为颇受争议的话题。中国人似乎一夜戴上口罩之际，不少国家还在为戴不戴口罩而纠结甚至争执；当中国有效控制疫情、一些人开始在户外摘下口罩时，多数国家的人们却“不约而同”戴上口罩。本文关注的，正是秉持集体主义文化的中国人戴口罩的现象，试图揭示集体主义文化之下戴口罩这样一种一致性行动是如何达成的。研究采用问卷调查法，共收集到来自全国各地各年龄段和身份的4311份有效问卷。分析结果发现：1.新冠肺炎疫情期间，多数人听从官方媒体指导，确认了新冠病毒的严重危害，分别在几个重要时间点不约而同戴上了口罩，并在戴口罩的具体情形和持续时间上都形成了共识。2.“责任感知”是集体主义文化下人们在戴口罩行为上展现出一致性行动的关键心理因素。一方面，个体认为，本人既对自己又对集体的健康安全负有重要责任；另一方面，个体认为，他人同样既对自己又对集体的健康安全负有重要责任。正是在内生责任感知和外在责任感知的双重驱动之下，多数人严格遵守戴口罩的规范，从而为中国人的整体健康安全提供了良好保障。3.与全部调查对象的整体情况相比，受调查的在校中小学生心理呈现出更多的异质性特征：首先，他/她们对自己在集体中的责任有更加积极的认知，在发现问题时，更倾向于积极采取行动；其次，他们具有更为强烈的独立意识和自我保护意识，但他/她们作出的判断更依赖于身边的专业人士和亲友；最后，对他人的行为，他/她们的态度更加包容。本研究对于本土文化心理学在人们生活实践中的理解和应用具有显著意义。

关键词 集体主义，一致性行动，新冠肺炎疫情，戴口罩行为；在校中小学生

How can concerted actions be achieved in a collectivist culture? A Study on the Chinese people's mask-wearing behavior during the COVID-19 pandemic

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Abstract: In the efforts of global COVID-19 prevention and treatment, "wearing masks" has become a controversial topic. It seems that when Chinese people put on masks overnight, many countries were still struggling and even arguing about whether to wear protective masks. When China effectively controlled the pandemic and some people began to take off their masks when outdoors, people in most other countries just started to "coincidentally" wear them. This paper focuses on the mask-wearing behavior of Chinese people who are believed to uphold collectivism (as opposed to individualism), aiming to reveal how such a concerted action of mask-wearing under a collectivist culture is achieved. A total of 4311 valid responses through an online survey were collected from all over the country, including people of different ages and identities. The results of the analysis are as follows: 1. During the COVID-19 epidemic, most Chinese people listened to the official media guidance, understood the seriousness of the coronavirus, and put on masks almost "coincidentally" at several important time points, and formed a consensus on the specific situation and the duration of wearing masks. 2. "Sense of responsibility" is the key psychological factor of Chinese people's concerted action in mask-wearing under a collectivist culture. On one hand, individuals believe that they are both responsible for their own and the collective health and safety; on the other hand, individuals believe that others are equally responsible for their own and the collective health and safety. It is the result of a dual drive of the endogenous responsibility and the external responsibility that most people strictly abide by the norms of wearing

masks, thus providing a good guarantee for the overall health and safety of Chinese people. 3. Compared with the overall situation of all the respondents, the K-12 students' psychology shows some heterogeneous characteristics: firstly, they have a more positive cognition of their collective responsibility and tend to take active actions when they find problems; secondly, they have a stronger sense of independence and self-protection, but their judgments are more dependent on the professionals, relatives and friends around them; finally, their attitudes towards others' behavior are more tolerant. This research is of great significance to the understanding and application of indigenous psychology in people's real life.

Keywords: Collectivism, concerted action, COVID-19, mask-wearing behavior, K-12 students

领导幽默对员工利他行为的双刃剑效应——基于独裁者博弈的研究

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摘要 了解利他行为的新机制对人们的健康和社会发展至关重要。我们研究了工作场所中的领导幽默风格——领导者的亲和式幽默和攻击性幽默风格对下属的利他行为的影响。我们采用独裁者博弈的方法测量利他行为。基于社会交换理论，我们假设，领导者的亲和式幽默风格将促进领导与下属的交换关系，从而促进下属的利他行为；但领导的攻击式幽默则不利于领导与下属建立高质量的交换关系，从而减少下属的利他行为，研究结果支持了我们的观点。我们的研究结果有助于理解领导者的行为，这有助于在领导者和下属之间建立高质量的交换关系，以及理解可能解释领导幽默影响的关系过程。

关键词 领导幽默，社会交换理论，利他行为，独裁者博弈

The mixed blessing effect of leader humor on employee altruistic behavior: evidence from the dictator game

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Abstract: Understanding the new mechanism of altruistic behavior is vital to people's health and social development. In this study, we examined the effect of leader humor styles (the leader's affiliative and aggressive humor) on employees' altruistic behaviors in the workplace. We use dictator games to measure altruistic behavior. Based on social exchange theory, we proposed that the leader's affiliative humor will promote the exchange relationship between the leader and his subordinates, thus promoting the altruistic behavior of the subordinates. However, the aggressive humor of the leader is not conducive to the establishment of a high-quality exchange relationship between the leader and the subordinate, thus reducing the subordinate's altruistic behavior. The research results support our view. Our research helps to understand the behavior of the leader, which helps to establish a high-quality exchange relationship between the leader and the subordinates, and to understand the relational process that may explain the influence of the leader humor.

Keywords: leader humor, social exchange theory, altruistic behavior, dictator game

大学生自尊与微信成瘾：状态焦虑和网络人际信任的中介作用

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摘要 凭借时尚的界面设计和强大的功能，微信逐渐成为近年来最受欢迎的社交工具之一。虽然微信给我们带来了一些便利，但过度使用也会带来微信上瘾的问题。先前的研究已经发现自尊和社交媒体成瘾之间存在相关性，但其潜在的机制还没有得到进一步的探索。因此，本研究试图探讨自尊与微信成瘾之间的内在机

制。基于社会行为恐惧管理理论,我们认为微信的使用可以弥补由于低自尊产生焦虑的个体的自我价值感缺失,这种需要的满足会强化他们的行为,导致微信成瘾。因此,我们假设状态焦虑在自尊与微信成瘾之间起中介作用。同时,在“富者更富”假设的基础上,高自尊的个体会发展出高的网络人际信任,从而促进微信使用寻求社交。因此,我们认为网络人际信任可能是自尊与微信成瘾之间的另一个中介变量。此外,我们假设焦虑和网络人际信任能够在自尊和微信成瘾中起到链式中介作用。共有 931 名大学生(男 419 人,女 512 人)参与本次研究,平均年龄为 19.59 岁。测量的量表包括罗森伯格自尊量表、微信成瘾量表、状态-特质焦虑量表、网络人际信任量表。采用 SPSS23.0 和 Mplus 7.4 对数据进行统计分析,建构结构方程模型检验焦虑和网络人际信任的中介作用。结果表明:(1)自尊与状态焦虑、微信成瘾呈负相关,状态焦虑与网络人际信任呈负相关,网络人际信任、状态焦虑与微信成瘾呈正相关。(2)自尊虽然不能直接预测微信成瘾,但能够通过状态焦虑影响微信成瘾。(3)状态焦虑和网络人际信任起到了链式中介作用。本研究基于恐惧管理理论和“富者更富”假设,揭示了自尊与微信成瘾之间的内在机制。我们发现网络人际信任能够正向预测微信成瘾,这与前人的研究不一致,却揭示了微信成瘾的特殊性和复杂性。另一方面,自尊不能直接预测网络人际信任,这可能是由于网络关系的复杂性造成的。本研究为区分现实生活中的网络信任和网络中的人际信任提供了一定的证据。未来的研究可以考虑多种方法探索更多影响微信使用动机的因素。

关键词 微信成瘾,自尊,网络人际信任,焦虑,大学生

The Relationship between Self-esteem and WeChat Addiction Among Undergraduate Students: The Multiple Mediating Roles of State Anxiety and Online Interpersonal Trust

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Abstract: With fashionable interface design and powerful functions, WeChat has gradually become one of the most popular social tools in recent years. While WeChat has brought us some convenience, excessive use can lead to negative outcomes, such as WeChat addiction. Previous studies have found a correlation between self-esteem and social media addiction, but its underlying mechanisms has not been further explored. Therefore, this study attempted to explore the underlying mechanisms between self-esteem and WeChat addiction. Based on the Terror Management Theory of social behavior, we supposed that for individuals with state anxiety caused by low self-esteem, WeChat use could compensate for the lack of self-worth, and that the satisfaction of this need would strengthen their behavior and would eventually lead to WeChat addiction. Therefore, we assumed that state anxiety would mediate the relationship between self-esteem and WeChat addiction. Meanwhile, based on the “Rich Get Richer” hypothesis, individuals with high self-esteem would develop high online interpersonal trust, thus promoting the use of WeChat to seek social contact, which might increase the susceptibility of WeChat addiction. Therefore, we assumed that online interpersonal trust might be another mediator between self-esteem and WeChat addiction. Furthermore, we supposed state anxiety and internet interpersonal trust would play a serial mediating role between self-esteem and WeChat addiction. A total of 931 undergraduate students (419 males, 512 females) with an average age of 19.59 years old completed a series of paper-and-pencil questionnaires. The questionnaires included the Rosenberg Self-esteem Scale (RSES), WeChat Addiction Scale (WIA), State-Trait Anxiety Inventory (STAI), Online Interpersonal Trust Scale (OIT). Data was analyzed using SPSS 23.0 and Mplus 7.4, and the bias-corrected percentile bootstrap method was used to test the mediating roles of anxiety and online interpersonal trust. Harman’s test suggested that there was not serious common method bias in this study. The results showed that: (1) Self-esteem was negatively correlated with state anxiety and WeChat addiction; state anxiety was negatively correlated with online interpersonal trust; online interpersonal trust and state anxiety were positively correlated with WeChat addiction. (2) Although self-esteem couldn’t directly predict

WeChat addiction, it could predict WeChat addiction via state anxiety. (3) State anxiety and online interpersonal trust played a serial mediating role between self-esteem and WeChat addiction. Based on the Terror Management Theory and the "Rich Get Richer" hypotheses, this study has found the underlying mechanisms between self-esteem and WeChat addiction. Given the social attributes of WeChat, we found that online interpersonal trust can directly predict WeChat addiction. Though not consistent with previous studies, this finding reveals the particularity and complexity of WeChat addiction. On the other hand, self-esteem could not directly predict online interpersonal trust, which may be caused by the complexity of online relationships. This study provides some evidence to distinguish the interpersonal trust in real life from that in the network. Future research can further consider a variety of methods, as well as more factors affecting WeChat use motivation.

Keywords: WeChat addiction, Self-esteem, Internet interpersonal trust, State-anxiety, Undergraduate students

个体主义—集体主义文化特征及其对情绪感染的影响

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摘要 中国社会在大多数研究中被定义为“集体主义”，而这种文化背景下的个体大多呈现“互依我”的自我构念。随着社会的发展，宣传和教育模式的改变，中国年轻一代可能更多呈现“个体主义”的文化特征，但在定义自我与他人关系时，依旧保持“互依我”的自我构念。而文化作为一种过程性和陈述性知识的网络，能够影响个体的行为及情绪反应，特别是情绪感染这种由于他人情绪而引发的情绪现象。在“集体主义”文化背景下，个体通常会限制情感表达以确保群体的和谐，而“互依我”个体常以他人参考为核心产生情绪体验。因此，本研究旨在探究大学生的文化特征及其对情绪感染的影响。研究一，使用世界价值观调查(World Values Survey, 以下简称 WVS)与文化特征相关的题目，分析 1994 年到 2020 年之间，30 岁以下中国人集体主义/个体主义取向及自我构念的变化；研究二，采用《个体主义-集体主义量表》，《自我构念量表》及《大学生情绪感染能力量表》探究不同文化特征的个体情绪感染能力的差异。WVS 结果表明，从 1994 年到 2020 年个体在空闲时间选择提升自己技能的比例逐渐升高，选择见朋友的比例逐渐降低，呈现出个体主义的倾向；而选择“朋友最重要”和“家庭最重要”的比例比较平稳，说明依然保持“互依我”的自我构念；问卷结果印证了研究一的发现，且结果表明，焦虑情绪感染能力与“独立我”负相关（ $r = -0.362, p < 0.01$ ），与“集体主义”正相关（ $r = 0.420, p < 0.01$ ），快乐情绪感染能力与“个体主义”正相关（ $r = 0.344, p < 0.05$ ）。总的来说，当今大学生在文化层面上呈“个体主义”，而个体层面呈现“互依我”的特点，这种文化特征的个体，积极情绪感染能力更强，对焦虑情绪的感染能力也更强，本研究探索了大学生文化特征对情绪感染的影响，为提高积极情绪感染，减少焦虑情绪感染提供了理论支持。

关键词 个体主义，集体主义，自我构念，情绪感染

The individualism and collectivism of culture characteristics and their influence on emotional contagion

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Abstract: Chinese society is defined as "collectivism" in most studies, and most individuals under this cultural background present "interdependent" self-construction. With the development of society and changes in propaganda and education models, the younger generation may show more "individualism" cultural characteristics, but they still maintain "interdependence" self-construction when defining relationship between themselves and others. As a network of procedural and declarative knowledge, culture can influence individual behavior and emotion, especially emotional contagion, which is an emotional phenomenon triggered by the emotions from others. In "collectivism" culture, individuals usually suppressed emotional expression to ensure harmony, while "interdependent" individuals often use other people's reference as the core to produce emotional experience. Therefore, this research aims to

explore the cultural characteristics of college students and their influence on emotional contagion. In study 1, we used the topics related with cultural characteristics in World Values Survey (WVS) to analyze the phenomenon of collectivism or individualism and self-construction of Chinese under 30 from 1994 to 2020; In study 2, we used the "Individualism-Collectivism Scale", "Self-Construction Scale" and "College Students Emotional Contagion Ability Scale" to explore the differences in individual emotional contagion abilities with different cultural characteristics. The WVS result shows that (1) from 1994 to 2020, more and more individuals chosen to improve their skills in their free time, while less individuals chosen to meet friends. Which means an increasing tendency of individualism. It also shows that (2) the proportion of chosen "friends/family is most important" is relatively stable, indicating that the self-construction of "interdependence" is still maintained. The results of the questionnaire confirm the findings of Study 1 and show that the ability of anxious contagion is negatively correlated with "independent" self-construction ($r = -0.362, p < 0.01$) and positively correlated with "collectivism" culture background ($r = 0.420, p < 0.01$), while the ability of happy contagion is positively correlated with "individualism" culture background ($r = 0.344, p < 0.05$). In general, nowadays, college students are "individualism" at the cultural level, while at the individual level they present the characteristics of "interdependence". With this cultural characteristic, individuals have a stronger ability of positive emotions contagion, and their contagion ability of anxiety even stronger. In this study, we explored the impact of cultural characteristics on emotional contagion, which provide support for improving positive emotional contagion and reducing anxiety contagion.

Abstract: Individualism, collectivism, self-construction, emotional contagion

时间取向与社区老年人主观幸福感：积极心理资本的作用

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摘要 随着我国人口老龄化进程的加剧，老年人群在社会中占比越来越大，如何有效提升老年人生活质量、提高其幸福感已经成为学界关注的热点问题。以往研究表明时间取向是老年人心理健康和幸福感的的重要预测因素。作为时间取向的重要方面，未来结果考虑（CFC）是指个体当前行为考虑未来结果/现在结果的程度，其与老年人主观幸福感的之间的关系较少被关注，其中的机制也尚不清晰。本研究拟在未来结果考虑概念下探讨老年人未来和现在时间取向对其主观幸福感的影响，并进一步考察积极心理资本中自我效能感和心理弹性的中介作用。具体来讲，在吉林省某社区开展问卷调查，采用未来结果考虑量表、生活满意度量表、PANAS、一般自我效能感问卷和心理弹性量表对 81 名老年人（ $M_{age}=66.03$ ）进行施测。运用 SPSS 和 PROCESS 插件进行统计检验。结果显示：（1）现在取向与生活满意度、积极情绪显著正相关，与自我效能感、心理弹性呈显著正相关，自我效能感、心理弹性与生活满意度、积极情绪显著正相关；未来取向与积极情绪、消极情绪均呈显著正相关，与生活满意度无关；（2）现在取向对主观幸福感有显著的正向预测；未来取向的预测作用则不显著；（3）在控制了社会经济地位、身体健康状况以及有关人口学变量后，自我效能感在现在取向和主观幸福感之间起完全中介作用，心理弹性在现在取向和主观幸福感之间也起完全中介作用。研究结果表明老年人对短期结果的关注与更高的主观幸福感有关，且这种关系是通过积极心理资本的提升来实现的。

关键词 时间取向，主观幸福感，自我效能感，心理弹性，老年人

Time Orientation and Subjective Well-being of the Elderly in Community: The Role of Positive Psychological Capital

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Abstract: With the exacerbate of the aging process in China, the number of the elderly population is increasing rapidly, so how to effectively improve the life quality of the elderly has already become an important issue of

academic concern. Previous studies have shown that time orientation is an important predictor of mental health and well-being of the elderly. As an important aspect of time orientation, consideration of future consequences (CFC) refers to the extent to which people consider the potential future/immediate outcomes of their current behaviors and are influenced by those potential outcomes. The relationship between CFC and subjective well-being have been rarely studied in the older population, and the underlying mechanism is not clear. This study intends to investigate the influence of future and present time orientation on subjective well-being of the elderly, and further explore the mediating role of two components of positive psychological capital: self-efficacy and resilience. A survey by questionnaire was carried out in a community of Jilin Province. 81 elderly people ($M_{age} = 66.03$) were tested with CFC-14 Scale, Life Satisfaction Scale, PANAS, General Self-Efficacy Scale and Connor-Davidson Resilience Scale. SPSS and PROCESS plug were used for statistical analysis. The results show that: (1) CFC-immediate was significantly positively correlated with life satisfaction and positive emotions, and positively correlated with self-efficacy and resilience; self-efficacy and resilience were both significantly positively correlated with life satisfaction and positive emotions; CFC-future was significantly positively correlated with both positive emotions and negative emotions, but not correlated with life satisfaction; (2) CFC-immediate positively predicted subjective well-being, while CFC-future did not predict subjective well-being; (3) After controlling for the socio-economic status, physical health status and other demographic variables, self-efficacy completely mediated the relationship between CFC-immediate and subjective well-being; psychological resilience also completely mediated the relationship between CFC-immediate and subjective well-being. The results indicated that the elderly's concern for short-term consequences was related to higher subjective well-being, and this relationship was realized through the promotion of positive psychological capital.

Keywords: time orientation, subjective well-being, self-efficacy, resilience, elderly

(2) “文化心理专业委员会”专题研讨会 2

文化变迁视角下汉族、景颇族整体-局部型思维方式比较研究

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摘 要 文化包括物质文化、制度文化和心理文化三个层次。其中, 物质文化是人们在日常生活中所创造的物质文明, 制度文化是人们在日常生活、实践中创造的各种制度, 心理文化则包括一个民族特有的思维方式、宗教信仰等。在世界多极化、经济全球化、文化多样化、社会信息化的今天, 中国正处于百年未有之大变局中。从宏观层面看, 中国居民的经济环境、居住环境和人际环境都在不断地发生变化, 研究这种文化的变迁对国人思维方式的影响有重要意义。但既往研究尚存不足, 突出表现为两点。首先, 既往研究多使用跨文化比较范式, 但除文化差异外, 不同的跨文化团体间在经济状况、语言等方面也存在差异, 这影响了自变量的推定; 其次, 还缺乏对少数民族的考察。为此, 从云南省德宏市某大学选取了 120 名汉族、传统景颇族和信基督教景颇族大学生, 分别使用跨文化对比范式、单文化拓展范式予以实验。实验 1 通过跨文化对比考察了汉族与信仰传统宗教的景颇族之间在整体-局部型认知方式上的差异, 结果显示: 无论民族, 与经济状况一般组比, 经济贫困组被试在 Navon 字母测试、归因测试中都表现出更明显的整体型认知加工特点; 无论经济状况, 与景颇族被试相比, 汉族被试在分类上都表现出更为明显的局部型认知加工特点。实验 2 通过单文化拓展范式考察了信仰传统宗教的景颇族与信仰基督教的景颇族之间在整体-局部型认知方式上的差异, 结果与实验 1 相似。实验结果证实“变迁的文化”对整体-局部型认知方式的塑造具有不同步性特点: 经济主要影响了 Navon 字母测试和归因测试的结果, 但分类测试受民族文化影响较大。这三种测试涉及不同的认知思维过程, 不能简单归因于由文化某一方面 (比如辩证性) 特质影响所致。

关键词 文化, Navon 字母测试, 分类测试, 归因测试, 整体-局部型认知方式

A Comparative Study on Holistic - Local Thinking Style of Han and Jingpo from Perspective of Cultural Change

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Abstract: Culture includes three levels, that is, Material Culture, Institutional Culture and Psychological Culture. Material culture refers to the material civilization created by people in daily life. Institutional culture refers to the various systems and institutions created by people in daily life and practice, and psychological culture includes the unique thinking mode and religious belief of a nation. At a time of World Multi-Polarization, Economic Globalization, Cultural Diversity and Society Information, China is undergoing major changes unseen in a century. From the macro level, the economic environment, living environment and interpersonal environment of Chinese residents are constantly changing, so it is of great significance to study the impact of such cultural changes on the thinking style of Chinese people. The author selected 120 students of Han, traditional jingpo and Christian jingpo from a university in Dehong, Yunnan province. Experiment 1 examined by cross-cultural paradigm between the Han and the traditional Jingpo. The results showed that regardless of ethnic, the poor group of participants showed more holistic thinking style in Navon and Attribution test. Regardless of economic status, the Han subjects showed more obvious analytical cognitive style in categorization. Experiment 2 examined by single cultural expansion paradigm to test the difference between traditional Jingpo and Christian Jingpo in global - local cognitive style, and the result was similar to experiment 1: regardless of ethnic, the poor group of participants showed more obvious global thinking style; Regardless of economic status, the Han subjects showed more analytical in Categorization. These results confirmed that the rapid changes and "mix " culture shape global-local cognitive style with asynchronism characteristics: economic factors could shape the style of attention and attribution, but the categorization was greatly influenced by the specific historical culture of the nation. Research result provides strong supports for the characteristics of cognitive style of Mixing Culture and thinking styles of the poor.

Keywords: Culture, Navon test, Categorization test, Attribution test, Global-Local Cognitive Style

留学经历是否提升辩证思维？来自中国留学生的证据

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摘要 本研究基于文化启动范式考察了中国留学生的海外学习经历是否提升辩证思维。通过在线行为实验，本研究收集了 258 名正在不同国家和不同地区（比如美国、英国、德国、荷兰、澳大利亚、日本等）留学的中国学生的行为数据。结果发现，相比短期旅行、家乡文化和控制条件，当被试被启动留学经历时更加能够容忍矛盾，即被试认为两个互相矛盾的科学陈述同时具有说服力，而且被试对这些科学观点表现出同等偏好。本研究揭示了留学经历如何影响中国学生的心理过程与行为模式，即留学经历能够提升辩证思维，同时这种效应不会受到特定留学国家和留学地区的影响。未来尚需更多研究来探索以下问题：1）该心理效应是否在辩证思维的其他维度同样存在，比如整体认知和变化预期；2）采用不同的文化启动范式是否能够发现类似的结果；3）如何探索内部机制来解释为何留学经历会提升辩证思维。

关键词 多元文化经历，辩证思维，人类普适，文化差异，中国留学生

Do Studying abroad experiences Promote Dialectical Thinking?

Empirical evidence from Chinese International students

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Abstract: Our current work seeks to provide direct evidence on whether Chinese international students' studying abroad experiences promote dialectical thinking. We collected behavioral data from 258 Chinese International students in multiple regions (the U.S., U.K., Germany, Netherlands, Australia, Japan, etc.). Our results indicated that when primed with studying abroad (relative to traveling abroad, hometown culture and control condition), participants were more likely to tolerate for contradiction. In other words, they deemed both sides of the contradictory scientific statements were convincing and likable. Taken together, it is plausible that Chinese international students' studying abroad experiences promote their dialectical thinking regardless of their host culture. More work is needed to further this line of research by 1) replicating this effect among other measures of dialectical thinking, 2) adopting differing cultural paradigms to provide robust findings, and 3) explaining why is the case that studying abroad experiences would promote dialectical thinking.

Keywords: Multicultural experiences, dialectical thinking, human universals, cultural differences, Chinese international students

多语经验与锅庄仪式对普米族中老年人执行功能的影响

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摘要 中老年人认知功能随年龄增长而衰退的主要原因是执行功能的下降。除语言经验以外，最近的部分研究表明执行仪式也有利于改善执行功能。普米族人使用多语的现象非常普遍，而且大多保留了每日举行锅庄仪式进献祖先的文化习俗。本研究对 57 名普米族中老年人执行功能的抑制、转换和刷新三个任务分别进行了测量。实验 1 采用 Go/No-Go 任务考察多语经验、记诵祖先辈数对执行功能的抑制能力的影响。结果发现：多语者比双语者在抑制控制能力上表现更好；记诵辈数的主效应不显著；交互效应不显著。实验 2 采用局部-整体任务考察多语经验、记诵祖先辈数对执行功能的转换能力的影响。结果发现：语言经验主效应不显著；记诵辈数的主效应不显著。实验 3 采用 N-back 范式考察多语经验、记诵祖先辈数对执行功能的刷新能力的影响。结果发现：语言经验主效应不显著；多记诵辈数者在刷新能力上具有优势；在控制了教育水平后，语言经验和记诵辈数交互作用显著。普米族中老年多语经验者与双语经验者相比，在执行功能方面的优势主要是在抑制控制能力上。在普米族日常举行的锅庄仪式中，记诵辈数对执行功能中的刷新能力有显著影响，记诵祖先辈数越多越能锻炼记忆刷新能力。多语经验与仪式对刷新功能的交互作用受任务难度调节。任务难度较高，多语经验越多、记诵辈数越多者的刷新功能优势越明显。

关键词 认知衰退，执行功能，多语经验，锅庄仪式，记诵辈数

Effects of multilingual experience and Guozhuang ritual on the executive function of Pumi middle-aged and elderly people

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Abstract: The main reason for the decline of cognitive function in the middle-aged and elderly is the decline of executive function. Many researches found that language experience and executive rituals can also improve executive function. The phenomenon of multilingualism is very common among the Pumi people, and most of them keep the cultural custom of holding daily Guozhuang ritual to offer ancestors. This study used the related experimental

paradigm of executive function to measure the inhibition, transformation and refresh of executive function of 57 Pumi middle-aged and elderly people. In Experiment 1, Go/No-Go task was used to investigate the effect of multilingual experience and memorization of ancestors on the inhibition of executive function. The results showed that multilinguals performed better than bilinguals in inhibition and control; the main effect of the number of generations of recitation is not significant; the interaction effect is not significant. In Experiment 2, the influence of multilingual experience and the number of ancestors on the ability of executive function transformation was investigated by using local whole task. The results show that: the main effect of language experience is not significant; the main effect of recitation is not significant. In Experiment 3, n-back paradigm was used to investigate the influence of multilingual experience and the number of ancestors on the refresh ability of executive function. The results show that: the main effect of language experience is not significant; those who memorize more than one generation have an advantage in refresh ability; after controlling the level of education, the interaction between language experience and memorization generation is significant. In conclusion, the main conclusions of this study are as follows: Compared with the bilinguals, the middle-aged and old people with multilingual experience have the advantage in executive function mainly in inhibition and control ability. In the daily Guozhuang ritual held by the Pumi people, the number of generations of recitation has a significant impact on the refresh ability in the executive function. The more generations of recitation, the more exercise memory refresh ability. The refreshing function advantage of language and ritual is regulated by task difficulty and individual cognitive ability.

Keywords : Cognitive decline, executive function, bilingualism, Multilingual experience, Guozhuang ritual, memorization generation

多语表述与框架对彝族中学生道德决策的影响

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摘要 少数民族个体对道德决策与判断任务的认知加工会随着表述的语言形式(母语/汉语普通话/地方汉语方言)的不同而发生改变。框架效应是指相同信息的不同框架表述导致不同决策的现象。为了考察多语表述与损失性、获得性情境表达是否影响彝族中学生的道德决策，实验1选取90名彝族中学生，考察普通话、汉语方言、彝族语的不同表述下，被试对道德困境和非道德困境的决策行为。实验2选取60名彝族中学生，考察普通话地方方言、彝族语对获得性和损失性道德困境的表述下，被试道德决策的差异。结果表明，母语表述下，被试的道德决策倾向于道义论，而在地方方言和普通话表述下倾向于功利主义。彝族中学生的道德决策主要受到语言表述方式的影响，但未出现框架效应。

关键词 多语表述，框架效应，道德决策，彝族中学生

The Influence of Multilingual Representation and Framework on the Moral Decision-making of Yi Middle School Students

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Abstract : Minority individuals' cognitive processing of moral decision-making and judgment tasks will change depending on the language form of expression (mother tongue / Mandarin / local Chinese dialect). Frame effect refers to the phenomenon that different frame expressions of the same information lead to different decisions. In order to investigate whether multilingual expressions and lossy and acquired situation expressions affect the moral decision-making of Yi middle school students, experiment 1 selected 90 middle school students of Yi nationality, and examined the different expressions of Mandarin, Chinese dialects, and Yi language. Difficult decision-making behavior. In Experiment 2, 60 middle school students of Yi nationality were selected to investigate the differences in moral decision-making of the subjects in the local dialects of Mandarin and the language of Yi nationality regarding

the acquisition and loss of moral dilemmas. The results show that, in the expression of the mother tongue, the subjects' moral decisions tend to be deontological, while in the expressions of local dialects and Mandarin, they tend to be utilitarian. The moral decision-making of middle school students of Yi nationality is mainly influenced by the way of language expression, but there is no frame effect.

Keywords: Multilingual representation, frame effect, moral decision-making, Yi middle school students

(3) “文化心理专业委员会”专题研讨会 3

新冠疫情中政府治理对民众压力紧张感的作用机制

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摘 要 新冠肺炎疫情是对我国治理体系和能力的一次大考。民众压力紧张程度既是政府应急管理需要考虑的重要内容,也是衡量政府治理政策行为效应的重要维度。在新冠疫情这一突发重大公共事件中,相比较以个体范式方式进行民众心理疏导和干预,政府治理的状况与民众压力紧张感联系更为密切。本研究基于在疫情爆发初期($N=4590$)和攻坚期($N=1140$)的在线调查,探讨了在疫情不同阶段政府治理对民众压力紧张感的作用机制。结果显示:(1)从疫情爆发初期到攻坚期,民众的压力紧张感显著降低,其政治效能感和政治信任水平继续维持在中等偏上水平;(2)在疫情爆发初期,政策知晓度、政治效能感和政治信任在信息传播管理与民众压力紧张感之间有多重链式中介作用,即信息传播管理正向预测民众的压力紧张感,但同时又通过政策知晓度、政治效能感、政治信任的单独中介作用直接影响民众压力紧张感或者通过政策知晓度与政治效能感、政策知晓度与政治信任的链式中介作用来间接影响民众压力紧张感;(3)在疫情攻坚期,只有政治效能感在信息传播管理和民众压力紧张感中有中介作用,政策知晓度在疫情信息传播管理与政治效能感之间有调节作用,从而形成一个有调节的中介模型。最后,本文进一步探讨了政府治理对民众压力紧张感的影响机制,并为重大突发事件中政府治理效能的提升和民众心理的有效干预提出针对性的建议。

关键词 新冠肺炎疫情,压力紧张感,信息传播管理,政策知晓度,政治效能感,政治信任

The Mechanism of Government Governance on People's Stress and Tension during the COVID-19

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Abstract: The COVID-19 is a major test for Chinese governance system and capabilities. The degree of people's psychological stress and tension is not only an important content for government emergency management decision-making, but also an important dimension to measure the policy behavior effect of government prevention and control measures. In the eruptive of this vital emergent event, the government governance is more closely related to people's mental health than the individual paradigm of psychological counseling and intervention. Based on the online survey in the early stage of the outbreak ($N=4590$) and the critical period ($N=1140$), this study explored the impact of the performance of government governance on people's stress and tension, and its different presentation in different stages of the COVID-19. The results showed: (1) from the eruptive period to the critical period of the COVID-19, the public's sense of stress and tension decreased significantly, and the level of political efficacy and political trust remained at the upper middle level; (2) in the eruptive period of the COVID-19, prevention and control policy awareness, political efficacy and political trust had multiple chain mediating roles in the epidemic information dissemination management and people's psychological stress and tension, that is, information dissemination management positively predicted the public's sense of stress and tension, at the same time it directly affected people's

stress and tension through the single mediating role of policy awareness, political efficacy and political trust, or indirectly through the chain intermediary role of policy awareness, political efficacy, policy awareness and political trust; (3) in the critical period of the COVID-19, only political efficacy was found had a moderating role between the epidemic information dissemination management and people's psychological stress and tension, policy awareness played a moderating role between the epidemic information dissemination management and political efficacy, thus forming a moderated mediation model. Finally, this paper further explored the mechanism of government governance on people's stress and tension, and provided useful suggestions for the improvement of government governance efficiency and effective public psychological intervention under vital emergent events.

Keywords: COVID-19, stress and strain, information dissemination management, policy awareness, political efficacy, political trust

疫情信息获取模式对政策内化效应的影响研究

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摘要 政策行为效应是衡量政府治理能力的重要标准, 其中, 政策内化效应是政策行为效应的主要测量维度, 公共政策能否转化为个体自发的行为, 很大程度上取决于个体对政策的内化和认同。以往研究从政策质量的角度对政策的合法性和有效性进行了大量探索, 相对而言, 讨论政策信息获取途径对政策内化效应的研究是有限的。在信息大爆炸时代, 政策信息的来源与收集方式, 是否会影响个体对公共政策的认同, 并进而作用于个体的行为选择? 本研究基于新冠肺炎疫情期间收集的 4590 份问卷数据, 着重探讨危机信息获取模式对政策内化效应的影响。研究发现: (1) 信息获取积极性 (信息收集时间与所获信息数量) 正向影响政策内化效应, 即信息获取积极性越高, 则越认同政策并愿意按政策要求采取行动 ($p < 0.001$); (2) 信息获取方式的差异会导致政策内化效应的显著差别, 依靠各类媒体获取信息的个体比通过与人交流的方式获取信息的个体具有更明显的政策内化效应 ($p = 0.001$); (3) 不同媒体信任度的人在政策内化效应方面存在差异显著。政策内化效应最明显的为信任政府新闻发布会和中央官方媒体信息发布平台的个体, 其次为信任地方官方媒体发布平台的个体, 信任自媒体和海外媒体平台的个体的政策内化效应最弱 ($p < 0.001$)。为了找到影响个体政策内化效应的更深层次原因, 本研究还对性别、年龄、学历、收入水平等社会人口学变量的作用进行了探索, 发现以上变量均对政策内化效应产生显著影响 ($ps < 0.005$)。本研究认为, 公共政策的传播和获取途径将会对政策的合法性与有效性 (认同并且遵守) 产生重要影响, 同时, 不同个体在政策内化效应上的差异也应引起关注。

关键词 政策行为效应, 危机信息获取, 政策传播, 公共危机治理, 新冠肺炎疫情

The Effect of Information Acquisition Mode on Policy Internalization During COVID-19

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Abstract: The policy-behavior effect is an important criterion to measure the government's governance ability. Among them, the internalization effect of policy is the main measurement dimension of the policy-behavior effect. Whether public policy can be transformed into an individual's spontaneous behavior depends largely on the individual's internalization of policy and identification with policy. Previous studies have conducted a lot of research on the legitimacy and effectiveness of policies from the perspective of policy quality. Comparatively speaking, the research

on the internalization effect of policy information acquisition methods is limited. In the era of the information explosion, will the source and collection method of policy information affect individuals' identification with public policies, and in turn affect individual behavior choice? Based on 4590 questionnaire data collected during the COVID-19, this study focuses on the impact of crisis information acquisition mode on the internalization effects of policies. Results reveals that, first, information acquisition enthusiasm (time of information collection and the amount of information obtained) positively affects the internalization effect of policy, that is, the higher the enthusiasm for information acquisition, the more an individual agrees with the policy and is willing to take action as required by the policy ($p < 0.001$); second, differences in information acquisition methods lead to significant differences in the internalization effect of policy. Individuals that rely on various media to obtain information shows more obvious internalization effect of policy than individuals that obtain information through communication with people ($p = 0.001$); third, individuals with different media trust show different internalization effects of policy. The most obvious internalization effect of policy is the group that trusts government press conferences and the central official media information release platform, followed by the group that trusts local official media release platforms, and the group that trusts self-media and overseas media platforms shows the weakest internalization effect of policy ($p < 0.001$). In order to figure out substantial reasons for the internalization effect of policy, this study explores the role of social-demographic variables such as gender, age, education, and income level, and find that the above variables all have a significant impact on the internalization effect of policy ($ps < 0.005$). The dissemination and access of public policy will have an important impact on the legitimacy and effectiveness of the policy (identification and compliance). At the same time, the differences in the internalization effect of policy by different groups should also cause concern.

Keywords: policy-behavior effect, crisis information acquisition, policy communication, public crisis governance, COVID-19

从个人责任到系统信任：政策知晓和社区示范的桥梁作用

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摘要 系统效率是应对突发性重大公共卫生事件的核心, 公众对系统的信任则是维护效率的基础, 而信任不但来自于规范化、制度化的授权, 还与个人与社会的交互作用息息相关。本文基于 2020 年 2 月新冠疫情期的自我报告数据, 探讨了个人主体性与社会交互通达系统信任的路径。通过路径分析法, 比较个人责任 (3 题, $\alpha = 0.70$) 对于系统信任 (2 题, $\alpha = 0.76$) 的直接作用, 以及个人的社会责任感通过社区示范 (4 题, $\alpha = 0.94$) 及政策知晓 (5 题, $\alpha = 0.90$) 的间接作用。结果发现, 个人出于责任感而对疫情防控措施执行的担当, 解释了系统信任意愿的 35.8%, $\beta = 0.15$, 而通过社区示范和政策知晓产生的间接作用为 63.7%, $\beta = 0.27$ 。说明在疫情防控中, 个人社会责任感会投注为对系统的信任, 个人社会担当感越强, 越能够信任系统及其举措, 个人的责任担当对于系统信任具有直接重要性; 与此同时, 个人责任也需要社会交互过程作为实现的路径, 即宏观政策知晓、社区及熟悉人群的参与、示范, 对于个人责任转化为系统信任, 也具有不可或缺的重要性。总体上来看, 从个人责任到系统信任, 公众的社会互动与认知是实现个人品质到系统信任的重要通达机制。

关键词 社会责任感, 政策知晓, 社区示范, 系统信任

Bridge Personal Responsibility and System Trust: The Influence from Policy and Community

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Abstract: System efficiency is the kernel to deal with major public health emergencies, and public trust in the system which not only comes from the standardized and institutionalized authorization, but also related to the interaction

between individual and society in the coping process. Based on the self-reported data of the COVID19 pandemic in February 2020, this paper discusses the path of individual subjectivity and social interaction to build system trust. The path analysis showed the direct effect of personal responsibility (3 items, $\alpha = 0.70$) on system trust (2 items, $\alpha = 0.76$) as well as the indirect effect of personal social responsibility through community demonstration (4 items, $\alpha = 0.94$) and policy acquaintance (5 items, $\alpha = 0.90$) on system trust. The sense of responsibility for implementation of epidemic prevention and control measures explained 35.8% of the system trust tendency, $\beta = 0.15$, while the indirect effect by community and policy was 63.7%, $\beta = 0.27$. It shows that in the epidemic prevention and control, personal responsibility will be invested into the system trust, the stronger the sense, the more system trust and its measures acknowledged. At the same time, personal responsibility also needs macro policy acquaintance and demonstration play an indispensable role in transforming personal responsibility into systematic trust. Overall, the social interaction and cognition is an important mechanism transforming personal quality to system trust.

Keywords: Sense of Social Responsibility; Policy Acquaintance; Community Demonstration; System Trust

谣言治理何以精准施策？——基于新冠疫情调查实验的实证分析

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摘要 自2019年下半年以来，新冠肺炎疫情这一重大危机事件给世界造成了极大的影响，随之而来的是层出不穷的相关谣言，有些谣言甚至造成了公众恐慌。此类谣言的传播已对政府开展防疫工作造成了极大影响，亟需得到治理。如何根据不同谣言的特性“精准施策”，灵活利用不同的政策工具治理谣言，成为谣言治理的关键所在。本研究基于行为公共政策的新视野，考察各类行为政策工具在谣言治理上的效能，以期从微观公众心理层面探索谣言治理的最优解。在研究方法上，首先通过定性谣言资料分析，对本次疫情期间所爆发的谣言进行概括、梳理，归纳出两种谣言类型：个人行为类，以“双黄连能迅速高效治愈新冠肺炎”为案例；疫情发展类，以“新冠肺炎疫苗已被研制成功”为案例。其次引入行为公共政策视角，采用2（疫情谣言分类：个人行为、疫情发展） $\times$ 2（行为政策工具：助力、助推） $\times$ 2（是否快速反应：快速反应、非快速反应）的被试间设计，共形成8种实验条件作为自变量，以谣言治理效果（包括谣言治理的总体效果、政策的性价比以及支持度）为因变量，通过Qualtrics网上调查系统进行，共回收有效样本871个。实验通过了操纵检验与平衡检验，结果显示：（1）谣言内容和是否快速反应的主效应均显著，即个人行为类谣言比疫情发展类谣言治理效果好，快速反应比非快速反应谣言治理效果好；（2）谣言内容和是否快速反应的交互效应不显著（ $F=0.58$, $p>0.05$ ）；行为政策工具和是否快速反应的交互效应极显著（ $F=8.44$, $p<0.01$ ），即是否快速反应对辟谣行为工具的效用有调节作用。进一步进行简单效应检验发现，在快速反应阶段，选择助力比助推谣言治理效果更好；在非快速反应阶段，选择助推比助力谣言治理效果更好。研究启示，谣言的击破不仅仅只是要求民众不信谣不传谣，还要进行科学化精准施策，有的放矢，从底线管理走向信息治理，方能在节省社会成本的基础上取得较好谣言治理效果，并获得民众支持。基于分析结论，本研究对谣言治理的精准施策提出了具有针对性的政策建议。

关键词 谣言治理，公共危机管理，行为公共政策，调查实验

How can Rumor Governance be Targeted?-- An Empirical Study Based on COVID-19 Survey Experimentation

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Abstract: Since late 2019, COVID-19 has been a major crisis that has had an enormous impact on the world, and has been followed by numerous rumors, some of which have even caused public panic. The spread of such rumors has greatly affected the government's epidemic prevention efforts and is in urgent need of government. The key to rumor

governance lies in how to make flexible use of different policy tools to manage rumors according to the characteristics of different rumors. Based on the new perspective of behavioral public policy, this study explores the effectiveness of various behavioral policy tools in rumor governance, hoping to explore the optimal solution of rumor governance from the perspective of micro public psychology. Early research use qualitative analysis to summarize and sort out the rumors, and then introduce behavior public policy perspective. Our survey experiment use a 2(Epidemic rumors categories: individual behavior, the epidemic situation development)*2(Behavioral policy tools: boost, nudge)*2(Whether rapid response : rapid response, slow response) survey experiment matrix designs between the subjects, which form eight kinds of experimental conditions as independent variables, and the governance effect of rumor(including the overall effect, cost performance and support) is taken as dependent variables. This survey based on Qualtrics online survey system, a total of 871 valid samples were collected. The experiment passed the manipulation test and balance test, and the results showed that :(1) the main effect of rumor types and whether rapid response was significant, this means that individual behavior kind of rumor is easier to control than the epidemic situation development rumors, rapid response has better governance effect than slow response. (2) There was no significant interaction between rumor content and whether rapid response ($F=0.58, p > 0.05$); The interaction effect between behavioral policy tools and whether rapid response is very significant ($F=8.44, P < 0.01$), which means that whether rapid response has a regulatory effect on the effectiveness of the rumor-refuting behavioral tool. Use a simple effect test, we can found that if in the rapid response stage, chose boosting is more effective than nudging. However, in the stage of non-rapid response, nudging is a better way. The study shows that if government wants to control the rumors, they should not only just asking people do not believe a rumor and do not spread it, Scientific and precise measures should be taken to find policy priorities and move from bottom-line management to information governance. Only in this way can rumor governance achieve better effects and win public support on the basis of saving social costs. Based on our analysis conclusion, this study puts forward targeted policy Suggestions for the precise measures of rumor governance.

Keywords: rumor governance; public crisis management; behavioral public policy; survey experiment

突发公共危机中的群防群治行为效应及其作用机制

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摘要 群防群治作为我国应对突发公共应急事件的重要经验,是国家实现治理体系与治理能力现代化的重要组成部分。在本次抗击“新冠疫情”的进程中,以群众联防联控为核心的公共应急政策发挥了重要作用,通过构建群防群治的抗疫防线,取得了疫情防控的显著成效。因此,如何总结有益经验,从行为层面优化突发公共应急响应政策的群防群治作用机制,成为今后提升公共危机应对实效,增强基层社会治理能力的重要课题。本文从行为公共管理视角切入,以政策过程机制理论为基础,构建政策—行为互动机制分析框架,从政策感知过程、政策认知过程以及行为转化过程三个阶段考察群防群治行为效应的作用机制,以期进一步发挥群众路线在应急管理中的实践性与有效性。在国内“新型冠状病毒肺炎”疫情爆发期间(2020年2月中上旬),本研究在全国范围内进行了网络问卷调查,共回收有效问卷5090份。通过多元回归的嵌套模型分析发现,在控制了人口学属性、个体心理状态以及信息传播状态等一系列变量后,(1)政策感知变量(政策知晓度)与政策认知中的治理效能对群防群治行为效应有着显著的正向影响;(2)政策认知中的心理效应(政府信任效应、社会凝聚效应)对群防群治行为效应也有着显著的正向影响,并且影响程度略大于政策感知和执行质量的共同影响程度,表明政策效能发生了从政策系统到个体心理的“溢出”转化;(3)政策遵循逻辑(效益计算、回避惩罚、“他者”规范、责任认同)对群防群治行为效应的影响最大,表现为“趋利避害”的理性逻辑与责任承担的情感逻辑,二者共同作用形成合力,成为政策心理效应转化为政策行为效应的关键所在。同时,本研究也应用了机器学习的方法,通过Lasso回归交叉验证了作用机制的稳健性,证明了该机制具有

向外延伸的普适性。研究启示, 通过提升政策认知过程中的“政策—心理”效能转化以及“心理—行为”效应转化效率, 可以有效巩固和发挥应急管理响应政策的群防群治行为效应, 为相关政策的改良优化提供有益参考。

关键词 突发公共应急响应; 公共政策; 群防群治; 行为效应

The Behavioral Effect and Mechanism of Mass Prevention and Treatment on Public Emergency Response Policy

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Abstract: Novel coronavirus pneumonia suddenly struck in the beginning of spring 2020. The Central Committee of the Communist Party of China has implemented a series of public emergency response policies, which closely rely on the people, and achieved positive results. China has always achieved important results in public emergency management, and the mechanism behind mass prevention and treatment needs to be explored. Different from the perspective of traditional policy science, this study starts from the perspective of behavioral public management, based on the theory of policy process mechanism, constructs an analysis framework of policy behavior interaction mechanism, investigates the mechanism of behavioral effect of mass prevention and treatment from three stages of policy perception process, policy cognition process and behavior transformation process, in order to further play the practicality and effectiveness of mass line in emergency management. During the domestic outbreak of the epidemic (early February 2020), an online questionnaire survey was conducted nationwide, and 3274 valid questionnaires were collected. Through the nested model analysis of multiple regression, after controlling a series of variables such as demography attribute, individual psychological state and information dissemination state, the research finds that (1) policy perception variables and implementation quality variables in policy cognition have significant positive effects on mass prevention and treatment behavior; (2) The psychological effects of policy cognition (government trust effect, social cohesion effect) also have a significant positive impact on the mass prevention and treatment behavior effect, and the influence degree is slightly greater than the joint influence degree of policy perception and implementation quality, which indicates that the effect transformation from policy system to individual psychology has taken place; (3) The logic of policy following (benefit calculation, punishment avoidance, "the other" norms, responsibility identification) has the greatest impact on the effect of mass prevention and treatment, which is manifested in the rational logic of "seeking advantages and avoiding disadvantages" and the emotional logic of responsibility identification. The two factors work together to form a joint force, which is the key to transform the psychological effect of policy into the effect of policy behavior. At the same time, this study also uses the method of machine learning to cross verify the robustness of the mechanism through lasso regression, which proves that the mechanism has the universality of extension. The research reveals that by improving the efficiency of "policy psychology" efficiency transformation and "psychological behavior" effect transformation in the process of policy cognition, the mass prevention and treatment behavior effect of emergency management response policy can be effectively consolidated and brought into play, which provides beneficial reference for the improvement and optimization of relevant policies.

Keywords: Public emergency response, public policy, mass prevention and treatment, behavior effect

2.24 “积极心理学专业委员会”专题研讨会

(1) “积极心理学专业委员会”专题研讨会 1

直觉还是反思？第三方惩罚中群体偏差的中西文化差异

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摘要 第三方惩罚 (TPP) 是指旁观的第三方对违反社会规范、损害他人权益者进行的惩罚, 即使第三方有时要付出一定代价。第三方惩罚有利于阻止违规行为, 对促进合作和维持社会稳定至关重要。由于社会规范产生于群体之中, 群体关系对第三方惩罚的执行具有重要影响。研究表明, 第三方惩罚中存在两种方向不一致的群体偏差: 内群偏爱 (容忍内群的违规者) 和内群约束 (惩罚内群的违规者)。然而, 目前鲜有研究探讨不一致方向背后的机制。围绕这一问题, 本研究在中国和西方的成年人中进行了五个经济游戏实验 (总人数 $n = 632$), 考察直觉和反思性的决策情境、群体认同及文化对第三方惩罚中群体偏差的交互影响。研究通过操纵认知负荷, 让参与者在直觉或反思的情境下观察到内群和外组成员的不公平分配, 然后决定扣除分配者多少钱作为惩罚。结果表明, 无论在直觉或反思的情境下, 中国被试在第三方惩罚中都表现出内群偏爱, 且群体认同感越强内群偏爱程度越高, 尽管中国被试对内群的违规行为感到内疚。相反, 西方被试中的高群体认同者在直觉情境中表现出内群偏爱, 而在反思情境下对内群的惩罚比外群体更严厉。研究结果有助于揭示第三方惩罚和群体偏差背后的社会心理机制, 也为社会规范执行与群际互动的中西文化差异研究提供了新视角。

关键词 第三方惩罚, 群体偏差, 时间压力, 认知负荷, 群体认同, 文化差异

Reflexive or Reflective? Group Bias in Third-Party Punishment in Chinese and Western Cultures

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Abstract: Engaging in costly punishment of norm violators on behalf of bystanders, which is known as third-party punishment (TPP), plays an essential role in maintaining social norms and facilitating coordination. Social norms develop in groups, and thus norm enforcement is deeply influenced by group membership. Researchers have shown two inconsistent directionalities of intergroup bias in third-party punishment: ingroup favoritism (tolerating ingroup norm violators) and ingroup regulation (punishing ingroup norm violators). However, the possible mechanisms underpinning these findings are rarely discussed in existing studies. The current study examined how reflexive and reflective decision-making contexts, group identity, and culture interact to influence group bias in TPP. We conducted five experiments employing economic games among Chinese and Western adults (total $n = 632$). Participants observed ingroup and outgroup members allocated resources unfairly in either reflexive or reflective contexts (by manipulating cognitive load). Then they decided how much money to deduct as a punishment toward the allocator. Results showed that Chinese participants, particularly those who were strongly identified with the group, exhibited ingroup favoritism in TPP regardless of cognitive load, though they felt guilty about ingroup transgressions. In contrast, high group identifiers from Western countries punished ingroups more severely than outgroups in a reflective (rather than reflexive) context. These findings make important contributions to the social-cognitive basis of group bias in TPP and highlight an East-West contrast in norm enforcement during intergroup interactions.

Keywords: third-party punishment, group bias, time pressure, cognitive load, group identity, cultural difference

新技术为何难以被接受？个人控制对基因自然主义的影响

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摘要 在推进社会治理智能化和社会治理创新的进程中，人们对于新技术的接受程度是一个值得关注的问题。为何很多时候人们不愿意去接受某些新技术以及新技术产品，其中有怎样的心理机制在起作用，这些问题需要心理学予以探索和回应。本研究从个人控制的角度切入，以人们对基因改变农产品的态度为例，考察个人控制对于基因自然主义的影响。基因自然主义指的是人们相信“自然的就是好的”这样一种社会认知与态度。基于补偿性控制理论，研究推测当个体感知到的个人控制水平较低时，他们会形成更高的基因自然主义倾向，即表现为对于基因改变农产品较低的接受程度。这是由于补偿性控制理论提出，个体感知的个人控制较低时，则其对于能够提供结构性、秩序性和确定性的事物就有更强烈的需求。而基因改变的农产品相对于传统农产品而言，人们普遍认为其可预测性和确定性的程度较低，因此研究假设感知个人控制水平较低的人更倾向于拒绝基因改变农作物。研究1通过使用问卷，基于278名有效被试数据发现个人控制可以负向预测人们对基因改变农作物的风险感知，而结构需求在其中起到中介作用。在研究2中，研究者招募了108名有效被试，操纵了个体感知的个人控制，并且发现在较低的个人控制条件下，人们更加意识到基因改变农产品的风险性，从而降低了他们购买基因改变食品的意愿。这些结果表明，人们所感知到的个人控制会影响到人们对于某些他们不熟悉且认为具有不确定性的新技术的接受程度，拥有较高个人控制的个体则更倾向于接受这些事物，而个体对结构性、可预测性和确定性的需求在其中起到中介作用。同时，研究也支持了补偿性控制理论的观点。

关键词 基因自然主义，个人控制，补偿性控制理论，结构需求

Why New Technologies Are Not Easily Accepted? The Influential Effect of Personal Control on Genetic naturalism

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Abstract: Why are people unwilling to accept certain emerging technologies and new technological products? What kind of psychological mechanisms are at work? These problems require psychological exploration. The present study takes people's attitudes towards genetically modified (GM) crops as an example to examine the influence of personal control in this issue. Some previous studies have suggested that people will have a perception and attitude of "genetic naturalism", that is, people believe that "the more natural, the more better". In addition, based on compensatory control theory, as one's perception of personal control is lower, he or she will exhibit a higher tendency of genetic naturalism because of their higher need for structure, order and predictability. Therefore, based on the folk belief that GM crops are more uncertain than traditional crops, we hypothesize that individuals with lower level of personal control are more inclined to reject GM crops. By using questionnaires, Study 1 ($N = 278$) found that individuals' personal control negatively predicted their risk perception of GM foods, and the need for structure played a mediating role. In study 2 ($N = 108$), personal control was manipulated, and it was revealed that under lower-control condition, individuals were more aware of the risk of GM crop, which decreased their willingness to purchase GM food. The results suggest that individuals' personal control will affect their attitude towards the products which they feel unfamiliar, as they are motivated to compensate their lack of control. This findings also support the perspectives of compensatory control theory.

Keywords: genetic naturalism, personal control, compensatory control theory, need for structure

疫情背景下中国社会道德动机动态追踪

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摘要 新冠疫情作为全球性大流行疾病, 不光带来了健康威胁, 同时还伴随着民众心理巨震。针对历史上流行病爆发的研究表明, 疾病的爆发与流行往往带来广泛的心理影响, 如个体主义-集体主义倾向的变化、外向性变化、民主化、公民自由性的变化等。灾难通常见证人性, 尤其是道德。诸如此类流行疾病引发的灾难下, 道德所强调的对他人的关爱遭遇个体直接生命健康威胁, 我们会如何取舍? 作为新冠疫情的经历者, 疫情是否会带来了中国社会的道德变化? 基于道德相关理论, 道德行为由能动与共生两种基础动机支配, 前者强调个体的提升、追求与成就, 后者则强调与他人的联结、协同与合作。在此框架下, 道德可以高共生低能动水平来衡量与定义, 共生水平与能动水平的比值即作为道德动机的量化指标。本研究中, 为追踪中国社会道德动机水平在疫情背景下的变化细节, 我们在新浪微博平台抓取官方媒体“人民日报”自2020年1月1日起至2020年4月7日期间全部微博以及微博下的公众评论作为实验语料, 以研究中国社会公众对疫情的直观反应。以心理学能动与共生词表为基础, 设计自然语言分析算法理解微博语义, 统计公众评论中能动与共生表达量, 进而量化道德动机。大数据研究结果表明, 疫情对中国社会道德动机的影响是情境敏感的。具体而言, 相比于疫情前, 疫情严重时期公众道德动机显著提高, 随着疫情得到控制, 疫情平稳时期以及恢复时期道德动机则回落, 疫情恢复期公众道德动机与疫情前无显著差别。细粒度研究结果表明疫情同时刺激能动与共生两维度发生变化, 变化模式均与道德动机相似。

关键词 道德动机, 能动, 共生, 大数据, 新冠疫情

Dynamics of Chinese Public Moral Motivation during COVID-19

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Abstract: From the beginning of 2020, the COVID-19 pandemic stroke all over the world. Besides great physical health threats, the pandemic inevitably brings impacts upon a wide array of psychological dimensions, such as individualism-collectivism, extraversion, democratization, restriction rights and civil liberties, etc., according to previous studies over historically infectious diseases. Disasters, such as these influenza pandemics, always manifest human nature, especially the morality. Since individual life security gets threatened by disasters, concern for others which morality emphasizes confronts unignorable self-interest focus. As witnesses of COVID-19, we wonder whether public morality will be promoted by the pandemic and how the morality dynamically evolves during the pandemic. Moral behavior is always driven by two fundamental motives, *agency* and *communion*, which are often conceptualized as being in tension. Agency is the motive to promote the interest of self, reflected as getting ahead, individuating and advancing the self; while on the contrary, communion is the motive to promote the interest of others, with the theme of getting along and contributing to a social collective. Based on the theoretical framework, morality could be guided by a high sense of others-oriented motive and a low level of self-oriented motive, so that moral motivation could be represented as the ratio of communion to agency motives. In this study, We crawled the public comments under the micro-blog posts of People's Daily from 2020/1/1 to 2020/4/7 as the experimental corpus, and retrieve the linguistic expressions associated with the two motives to understand the dynamic evolvement of moral motivation throughout the pandemic. Big data analysis showed disaster impact upon moral motivation was context-sensitive. The severity of the disaster played a leading role in the variation of moral motivation, where disasters increased moral motivation only when the situation was severe, while such augmentation rapidly faded

when the disaster got controlled and recovered. Unpacking moral motivation, we also found the disaster boosted both agency and communion in a similar way to that of moral motivation.

Keywords: moral motivation, agency, communion, big data, COVID-19

算法歧视比人类歧视引起更少道德惩罚欲

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摘要 算法的应用被认为可以有效减少人类决策中的歧视, 但算法歧视在现实生活中却仍然存在。那么, 人们对人类歧视和算法歧视的反应是否存在差异? 以往研究聚焦于道德情绪, 比较了人们对算法歧视和人类歧视的道德义愤, 发现人们对算法歧视的愤怒小于对人类歧视的愤怒。然而, 尚未有研究考察人们对算法歧视和人类歧视的行为倾向, 尤其是道德惩罚欲是否存在差异。本研究通过 4 个实验比较了人们对算法歧视和人类歧视的道德惩罚欲, 实验情境涉及日常生活中存在的多种歧视类型, 包括性别歧视 (实验 1)、学历歧视 (实验 2)、民族歧视 (实验 3) 和年龄歧视 (实验 4)。实验 1 发现相对于人类歧视, 人们对算法歧视的道德惩罚欲更少。实验 2 深入探讨这一现象背后的心理机制, 结果发现自由意志在不同主体 (人类 vs. 算法) 歧视对道德惩罚欲的影响中起中介作用, 即人们之所以对算法歧视的道德惩罚欲更少, 是由于认为其相对于人类而言具有更少的自由意志。实验 3 通过操纵人们对自由意志的信念, 进一步验证了本研究假设的理论机制。实验 4 考察了拟人化倾向的调节作用, 结果发现拟人化倾向较低的被试对人类歧视的道德惩罚欲更多, 而拟人化倾向较高的被试对人类歧视和算法歧视的道德惩罚欲则没有显著差异。研究结果在理论上验证了自由意志对道德惩罚欲的影响, 在实践上有助于更好地理解人们对算法歧视的反应。

关键词 算法, 歧视, 道德惩罚, 自由意志, 拟人化

Algorithmic Discrimination Causes Less Desire for Moral Punishment than Human Discrimination

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Abstract: The application of algorithm is believed to contribute to reducing discrimination in human decision-making, but algorithmic discrimination still exists in real life. So is there a difference between folk responses to human discrimination and algorithmic discrimination? Previous research that focused on moral emotion compared people's moral outrage when facing algorithmic discrimination as well as human discrimination, and found that people's moral outrage at algorithmic discrimination was less than that at human discrimination. Few studies, however, have investigated people's behavioral tendency towards algorithmic discrimination and human discrimination, especially whether there is a difference in their desire for moral punishment. The present study compares people's desire to punish algorithmic discrimination and human discrimination through four experiments, which involve various kinds of discrimination in daily life, including gender discrimination (experiment 1), educational background discrimination (experiment 2), ethnic discrimination (experiment 3) and age discrimination (experiment 4). Experiment 1 finds that compared with human discrimination, people have less desire to punish algorithmic discrimination. Experiment 2 deeply explores the psychological mechanism behind this phenomenon, and reveals that free will plays a mediating role in the effect of agents (human vs. algorithm) on desire for moral punishment. Experiment 3 further validates the theoretical mechanism by manipulating people's belief in free will. Experiment 4 examines the moderating effect of anthropomorphism tendency, and finds that participants with lower anthropomorphism tendency have more desire to punish human discrimination, but for participants with higher anthropomorphism tendency, there is no significant difference between their desire for moral punishment for human

discrimination and algorithmic discrimination. The results corroborates the influence of free will on desire for moral punishment in theory and contribute to a better understanding of people's responses to algorithmic discrimination in practice.

Abstract: algorithm, discrimination, moral punishment, free will, anthropomorphism

谦逊降低内群体偏见：来自最小群体范式的证据

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摘要 谦逊作为一种积极的心理品质，被普遍认为同时具有特质性与状态性。相关理论研究指出，谦逊能有效地将个体关注点从自我转移到其他外在事物上：通过降低自我关注，增加对于他人的关注，进而使个体更加倾向于表现出亲社会的特点。心理学实证研究也证实了这一理论假设。不同研究分别揭示了谦逊与包括共情、亲社会情绪、助人行为、宽恕、合作行为等在内的一系列亲社会变量相关。但以往研究较少探索谦逊如何在与敌意倾向潜在相关的群际知觉与态度中发挥作用。本研究假设，谦逊个体因其自我关注的转移，能以更客观的方式评价和看待内外群体成员，从而更少地表现出因群体过程而产生的内群体偏见效应。本研究共招募 129 名大学本科生参与实验。被试首先完成一系列特质性谦逊量表。接着，他们被随机分配至谦逊组（ $n = 66$ ）和控制组（ $n = 63$ ），并分别完成对应唤起任务。谦逊组被试被要求回忆并写下自己表现出谦逊的一次经历，控制组被试则被要求回忆并写下一次中性情绪的日常生活。内群体与外群体的实验操纵使用 Tajfel et al. (1971) 设计的最小群体范式。该范式可以在不基于社会现实的前提下，有效通过社会分类完成对被试内外群体划分的实验室操纵。本研究使用这一经典范式，将被试全部划分为高估组，并要求他们对于内群体（高估组）和外群体（低估组）成员进行态度评分。研究结果表明，状态性谦逊对于内群体偏见的影响，由特质性谦逊所调节。具体而言，谦逊组中的特质性谦逊得分低的被试，相比控制组中的低特质性谦逊得分被试，表现出程度更低的内群体偏见；而高特质性谦逊被试无论是否被唤起状态性谦逊，其内群体偏见均较低。这一发现支持了本研究的研究假设，即谦逊能有效减少个体的内群体偏见现象。本研究揭示了谦逊在群体过程中所扮演的重要作用。作为一种积极的亲社会心理品质，谦逊可以有效减少内群体偏见，进而缓解群际间敌意，促进群际和谐。未来研究可进一步探索谦逊影响内群体偏见的内在机制。

关键词 谦逊，最小群体范式，内群体偏见

Humility in group processes:

Humility attenuates in-group bias in the minimal group paradigm

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Abstract: Recent research has identified humility as a prosocial psychological construct with both dispositional and state levels. It is theorized to be able to shift one's egocentric focus to other entities. Supporting this notion, psychological studies have linked humility to a number of altruistic interpersonal outcomes, such as empathy, prosocial emotions, helpfulness, forgiveness, and cooperation. However, few studies have examined how humble individuals might perceive others in group processes. We hypothesized that humble individuals, by shifting their focus from the self to others, would be more likely to perceive out-group members and in-group members in a less biased manner. A total of 129 undergraduate participants were first instructed to complete several measures of dispositional humility. They were then randomly assigned into either a humility ($n = 66$) or a control condition ($n = 63$). Participants in the humility condition were primed with a humble state by recalling and writing down their humble experiences; whereas participants in the control condition were asked to recall and write down neutral

experiences. The in-group versus out-group distinction was manipulated by the minimal group paradigm. The paradigm was first designed by Tajfel et al. (1971) to test in-group favoritism through mere social categorization with no social grounds in reality. Following the classic procedure of this paradigm, participants in this study were all classified as over-estimators and were instructed to indicate their attitudes towards their in-group members (i.e., overestimators) and out-group members (i.e., underestimators). Results revealed that the effect of primed humility on in-group bias was moderated by dispositional humility. In particular, primed humility reduced the in-group favoritism only among those participants who were low in dispositional humility; whereas those participants who were high in dispositional humility maintained a relatively lower level of in-group bias regardless of whether they were primed with state humility. These findings supported the initial assumption that humility can reduce in-group bias. Individuals who are high in dispositional humility tend to resist group bias, showing a relatively balanced attitudes towards both out-group and in-group members. For those individuals who are low in dispositional humility, priming state humility can significantly reduce their in-group bias. This study could be one of the first studies recognizing the significance of humility in group processes. As a prosocial virtue, humility facilitates cohesive intergroup relationships by enabling more balanced and accurate evaluations of both in- and out-groups. Future studies could further investigate the underlying mechanisms of this relationship.

Keywords: Humility, Minimal Group Paradigm, In-group Bias

接受痛苦，但不接受“他”带给我的痛苦—— 医疗情境下的人机不对称

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摘要 伴随信息技术的日趋发展，人工智能与人类之间的互动也愈发频繁。其间出现一种名为“人机不对称”的现象，即人工智能体和人类相同的行为却引起人们有差别的反应。该现象可以从人对不同目标的心智归因方式加以理解，有研究表明，当医务人员对患者产生非人化后——对患者更少的心智归因，在一定程度上不把患者当作人类感知和对待——会导致医务人员在选择治疗方案时选择更为痛苦且有效的方案。那么，从患者的角度而言，是否会因为察觉医生作为同类却罔顾自己的心智能力而无法接受痛苦的治疗方案？是否又会因为医生是人工智能体而可以接受痛苦的治疗方案？本文在医疗情境下对以上问题及人机不对称现象进行研究，通过三个实验发现：（1）在控制信任、厌恶、欣赏、威胁后，面对由人工智能或人类制定的相同治疗方案，后者的接受度更高；（2）治疗主体和治疗方案的性质之间存在交互作用，并影响对治疗方案的接受度；（3）对医生和人工智能心智感知的归因结果，尤其是对医生与人工智能体在感受性能力归因的差别在上述关系中起中介作用。本研究从心智感知理论的视角尝试对“人机不对称”的现象进行解释，研究结果对于引导人工智能更合理的使用，以及如何对患者进行说服等应用层面具有启示意义。

关键词 人机不对称，心智感知，感受性，能动性

Accepting the pain, but not the pain that "he" brings me - Human robot asymmetry in medical contexts

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Abstract: Along with the increasing development of information technology, the interaction between artificial intelligence and human was even more frequent. In this context, a phenomenon called "Human robot asymmetry" emerged, in which the same behaviors of AI and humans elicited different responses. Human robot asymmetry can be understood in terms of the way people attribute mind capacities to different targets. It has been demonstrated that

when medical professionals dehumanize patients - making fewer mental attributions to patients and, to some extent, not perceiving and treating them as full human - it leads to more painful and effective treatment options. From the patient's perspective, will painful treatment options be unacceptable when they perceive the doctor as a human but disregard his or her own mental abilities? Is it possible to accept a painful treatment plan because the doctor is an artificial intelligence? Based on the above, the current study investigated the above questions and the phenomenon of Human-machine asymmetry in a medical context. Through three experiments it was found that. (1) By controlling for trust, disgust, appreciation, and threat, the latter was accepted more when faced with the same treatment plan developed by an AI or a human. (2) There was an interactional effect between the treatment subject and the nature of the treatment plan, and therefore affected the acceptance of the treatment plan. (3) The results of physician and AI's mind perception capacities, especially the experience capacities mediated in the above relationship. Overall, this study attempted to explain the phenomenon of Human robot asymmetry from the mind perception theory and the findings are revealing at the applied level for guiding the more rational use of AI and how to persuade patients.

Keywords: human robot asymmetry, mind perception, agency, experience

(2) “积极心理学专业委员会”专题研讨会 2

敬畏情绪对欺骗行为的影响：自我控制的中介作用

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摘要 欺骗行为是指个体在明知某一事件或信念是错误的情况下, 有意试图说服他人相信这一事件或信念, 以获得某些好处或避免损失的行为。研究表明, 自我控制资源影响个体欺骗行为的产生, 与自我控制资源相关的因素也可能会影响欺骗行为。根据积极情绪扩展和建构理论, 积极情绪能够建设个体的身心资源、认知资源和人际资源。敬畏作为一种积极情绪, 可以调动个体的心理资源, 敬畏体验可以增加个体的自律行为和自我监控。此外, 敬畏还是一种能引发道德感的情绪, 能提升人们的道德感。那么, 敬畏情绪是否能够通过提高自我控制资源从而对个体欺骗行为施加影响呢? 本研究旨在探究敬畏情绪对欺骗行为的影响及该影响发生的心理机制。本研究共包括三个实验: 实验一探究敬畏情绪对欺骗行为的影响, 采用单因素(敬畏情绪, 中性情绪)被试间实验设计, 通过回忆任务范式诱发两种情绪, 以视觉-感知任务考察被试的欺骗行为和欺骗倾向。预期结果: 当诱发敬畏情绪时, 被试会产生更少的欺骗行为和欺骗倾向。实验二探究敬畏情绪对自我控制资源的影响, 采用 2(敬畏情绪, 中性情绪)*2(自我控制资源衰竭, 自我控制资源未衰竭)的两因素被试间设计, 通过视频任务范式诱发两种情绪, 因变量为坚持性任务的表现(坚持时长)。预期结果: 敬畏情绪组的坚持时长显著高于中性情绪组, 自我控制资源未衰竭的坚持时长显著高于衰竭组。实验三探究敬畏情绪对欺骗行为的影响中自我控制资源的作用。预期结果: 敬畏情绪会减少个体的欺骗行为, 自我控制资源在这一影响中起中介作用。

关键词 敬畏情绪, 欺骗行为, 自我控制

The Influence of Awe on Deceptive Behavior: The Mediating Role of Self-control

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Abstract: Deceptive behavior refers to the behavior in which an individual knowingly tries to persuade others to believe an event or belief in order to gain some benefits or avoid losses. Studies have shown that self-control

resources affect the generation of individual deceptive behavior, and factors related to self-control resources may also influence deceptive behavior. According to the theory of expansion and construction of positive emotions, positive emotions can build the physical and mental resources, cognitive resources and interpersonal resources of individuals. As a positive emotion, awe can mobilize individual psychological resources, and the awe experience can increase individual self-discipline and self-monitoring. In addition, awe is a moral emotion that can enhance people's sense of morality. So, can awe influence individual deceptive behavior by increasing self-control resources? The purpose of this study is to explore the influence of awe on deceptive behavior and its psychological mechanism. This study consists of three experiments. Experiment 1 explores the influence of awe on deceptive behavior. A single-factor experimental design (awe emotion and neutral emotion) is adopted to induce two kinds of emotions through the recall task paradigm, and the visual perception task is used to investigate the deceptive behavior and deceptive tendency of the subjects. Expected results: When awe was induced, participants were less likely to deceive. Experiment 2 explored the influence of awe on self-control resources. Two-factor design was adopted among subjects to induce two kinds of emotions through video task paradigm. The dependent variable is the performance of persistence task (duration of persistence). Expected results: The persistence time of the awe group was significantly higher than that of the neutral group, and the persistence time of the control resource group was significantly higher than that of the other group. Experiment 3 explores the role of self-control resources in the influence of awe on deceptive behavior. Expected results: Awe will reduce the deceptive behavior of individuals, and self-control resources play a mediating role in this effect.

Keywords: Awe, Deceptive behavior, Self-control

特质敬畏对中学生攻击性的影响

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摘要 个体攻击性是指个体以直接或间接方式有意伤害被攻击对象, 使被攻击对象遭受破坏性影响的心理与行为倾向。敬畏作为一种混合了困惑、钦佩、惊奇、服从等多种感觉的复杂的情绪体验, 有特质和状态之分。特质性敬畏反映的是个体在面对敬畏体验时的感受差异, 状态敬畏是指个体在面对自然奇观、艺术杰作、或非凡的人类行为等敬畏诱发源时所感受到的敬畏情绪。已有研究表明状态敬畏可增加个体的亲社会行为, 减少攻击性行为。但目前尚未有研究表明个体特质敬畏与攻击性的关系及其内在的心理机制。本研究以山西省某中学 251 名学生为被试, 采用特质敬畏情绪量表、Buss-Perry 攻击性量表, 同时引入“小我”和“自我控制”两个变量, 采用“感知到的小我”量表以及“自我控制量表”进行测量, 拟探究特质敬畏情绪对中学生攻击性的影响, 以及“小我”与“自我控制”在其中的中介作用。结果表明: (1) 特质敬畏、小我、自我控制、攻击性两两显著相关。具体来说, 特质敬畏($r=-0.148, p<0.05$)、小我($r=-0.157, p<0.01$)、自我控制($r=-0.482, p<0.01$)与攻击性呈显著负相关; 特质敬畏与小我($r=0.145, p<0.05$)、自我控制($r=0.307, p<0.01$)显著正相关; 小我与自我控制呈显著正相关($r=0.254, p<0.01$)。 (2) 特质敬畏能够显著负向预测个体攻击性($\beta=-0.148, p<0.05$)。 (3) 自我控制在特质敬畏与个体攻击性间起中介作用 (效应值 $=-2.04, 95\%CI=[-3.26, -1.02]$) ; 小我与自我控制在特质敬畏与个体攻击性间起链式中介作用 (效应值 $=-0.23, 95\%CI=[-0.54, -0.02]$)。综上, 本研究揭示了特质敬畏对中学生攻击性的影响, 以及自我控制的中介作用和小我与自我控制的链式中介作用, 丰富了敬畏情绪对个体攻击性的实证研究, 为减少个体攻击性提供新思路。

关键词 特质敬畏, 攻击性, 小我, 自我控制

The influence of trait awe on the aggression of middle school students

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Abstract: Individual aggression refers to the psychological and behavioral tendency that an individual intentionally harms the victim in a direct or indirect way and causes the victim to suffer destructive effects. Awe, as a complex emotional experience that mixes feelings of confusion, admiration, surprise, and submission, can be divided into trait awe and state awe. Trait awe reflects the differences in the feelings of individuals in the face of awe experience, while state awe refers to the awe that individuals feel in the face of natural wonders, artistic masterpieces, or extraordinary human behaviors and other awe inducing sources. Previous studies have shown that state awe can increase individual prosocial behavior and reduce aggressive behavior. However, there have been no studies to show the relationship between individual trait awe and aggression, as well as its internal psychological mechanism. This study takes 251 students from a middle school in Shanxi Province as the research object. At the same time, this study introduced “small self” and “self-control”, and used trait awe scale, aggression scale, small self scale and self-control scale to explore the influence of trait awe on individual aggression and the mediating role of “small self” and “self-control”. The results showed that (1) Trait awe, small self, self-control and aggression were significantly correlated with each other. Specifically, trait awe ($r=-0.148$, $p<0.05$), small self ($r=-0.157$, $p<0.01$), self-control ($r=-0.482$, $p<0.01$) were negatively correlated with aggression; Trait awe was significantly positively correlated with small self ($r=0.145$, $p<0.05$) and self-control ($r=0.307$, $p<0.01$). There was significant positive correlation between small self and self-control ($r=0.254$, $p<0.01$). (2) Trait awe can significantly and negatively predict individual aggression ($\beta = -0.148$, $p<0.05$). (3) Self-control mediated the relationship between trait awe and individual aggression (Effect= -2.04 , 95%CI= $[-3.26, -1.02]$); Small self and self-control play a chain mediating role between trait awe and aggression (Effect= -0.23 , 95%CI= $[-0.54, -0.02]$). In conclusion, this study reveals the influence of trait awe on the aggression of middle school students, as well as the mediating role of self-control and the chain mediating role of small self and self-control, which enriches the empirical research of awe on individual aggression, and provides new ideas for reducing individual aggression.

Keywords: Trait awe, Aggression, Small self, Self-control

敬畏对肥胖人群的去人性化的影响

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摘要 根据最新的《中国居民营养与慢性病状况报告(2020)年》,我国成年居民超重肥胖超过50%,城乡各年龄段居民超重肥胖率持续上升。在引发诸多相关慢性疾病的同时,肥胖问题也会导致个体产生一系列心理问题,例如受到歧视、污名化以及去人性化。敬畏(awe)指当我们面对那些广阔的、浩大的,以及超越我们当前理解范围的事物时产生的惊异的情绪体验。研究表明,敬畏可以减少个体的社会支配取向,改善个体对外群体的刻板印象,因此本研究假设敬畏可以有效减少大众对于肥胖人群的去人性化现象。据此,本研究首先验证了对中国肥胖人群的去人性化现象,并探究了敬畏情绪对该不良现象的影响及其内在机制。研究1(N=130)验证了本土环境下肥胖人群的去人性化现象,并探究了其个体的特质敬畏之间的关系。研究表明,中国肥胖人群遭到了公然去人性化。同时,虽然特质敬畏与肥胖人群去人性化之间无显著相关,但特质敬畏与个体的肥胖偏见和肥胖厌恶情绪均呈显著的负相关。研究2(N=180)采用单因素(情绪类型:愉悦、敬畏、中性)被试间实验设计,采用视频法诱发目标情绪,通过“人类进化水平测试”和“慈善捐赠任务”来测量被试对于肥胖人群的去人性化,并检验社会支配取向的中介作用。结果表明:(1)与愉悦和中性情绪相比,敬畏情绪可以显著降低个体对于肥胖人群的去人性化;(2)与愉悦和中性情绪相比,敬畏情绪可以显著降低个体的

社会支配取向；(3)在敬畏情绪对肥胖人群的去人性化的影响中，社会支配取向起到了中介作用。

关键词 敬畏，去人性化，肥胖人群，社会支配取向

The Effect of Awe on Dehumanization of People with Obesity

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Abstract: According to the latest *Nutrition and Chronic Diseases Report in China (2020)*, more than 50 percent of Chinese adults are overweight and obese, and the rate of overweight and obesity continues to rise among urban and rural residents of all ages. Causing many kinds of related chronic diseases, obesity can also lead to a series of psychological problems, such as discrimination, stigmatization and dehumanization. Awe is an amazing emotion we experienced when we faced something vast and beyond our current understanding of the world. Previous studies have implied that awe could reduce individuals' social dominance orientation and the stereotype of the out-group. Thus, this study hypothesized that awe can effectively reduce the dehumanization of people with obesity. The current research aimed to provide the evidence that people with obesity are dehumanized, and explore the effects of awe on dehumanization of people with obesity and the underlying mechanism. Study 1(N=130) examined the dehumanization of obese people in the local environment and explored the relationship between dehumanization and trait awe. The results indicated that Chinese people with obesity were being blatantly dehumanized; although not correlated with the dehumanization, trait awe was significantly negatively correlated with both anti-fat prejudice and disgust towards obesity. In Study 2(N=180), we manipulated state emotions (i.e., positive awe, amusement, and neutral emotion) in a between-subject design, and used the ascent of humans test and the charity donation task to measure the dehumanization of obese people. Besides the effects of awe on dehumanization, Study 2 tested the role of social dominance orientation (SDO). The results indicated that 1) positive awe (relative to neutral and amusement emotion) reduced the dehumanization of obese people; 2) positive awe (relative to neutral and amusement emotion) reduced the SDO; 3) SDO played a mediator in the effect of awe on the dehumanization of people with obesity.

Keywords: awe, dehumanization, people with obesity, social dominance orientation

敬畏会让人睡得更香吗？特质敬畏对大学生睡眠质量的影响

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摘要 睡眠是维系个体身心健康发展的关键因素，长期低质量睡眠会影响个体的健康、认知水平与社会关系，最新的元分析结果显示，我国大学生睡眠质量呈逐渐恶化趋势。积极情绪拓展-建构理论与国内外实证研究表明，特质敬畏会影响个体体验敬畏情绪的频次和强度，且无论情绪的效价积极与否均对睡眠质量有显著的影响，那么特质敬畏是否可以通过影响个体体验敬畏情绪进而影响睡眠质量还不得而知。研究表明，特质敬畏水平高的个体报告了更低水平的压力，进而增加主观幸福感，主观幸福感水平越高，个体的睡眠质量越好。基于此，本研究采用“匹兹堡睡眠质量指数量表”“特质积极情绪量表”“大学生压力量表”与“幸福感指数量表”对229名大学生进行调查，欲探讨特质敬畏对大学生睡眠质量的预测作用，并进一步探究压力与主观幸福感在两者之间的作用。结果表明：(1)特质敬畏、主观幸福感与睡眠质量三者两两呈显著正相关，压力与特质敬畏、主观幸福感和睡眠质量呈显著负相关；(2)控制性别与年龄后，特质敬畏可以显著正向预测大学生睡眠质量($\beta=0.277, P<0.001$)；(3)特质敬畏能通过压力和主观幸福感的中介作用对睡眠质量产生影响，且该中介作用包含三条路径：压力的中介作用($\beta=0.071, 95\%CI:0.030, 0.119$)、主观幸福感的中介作用($\beta=0.095, 95\%CI:0.038, 0.165$)以及压力→主观幸福感的链式中介作用($\beta=0.019, 95\%CI:0.006, 0.037$)。结论：压力与主观幸福感在特质敬畏与睡眠质量之间起到链式中介作用。未来研究可进一步操纵敬畏变量分析状态敬畏和睡眠质

量之间的内部机制。

关键词 敬畏, 睡眠质量, 压力, 主观幸福感, 链式中介

Does awe make people sleep better?

Trait-Awe and Sleep Quality Among Undergraduate Students

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Abstract: Sleep is a key factor in maintaining the physical and mental health of individuals. Long-term low-quality sleep will affect individual health, cognitive level and social relationships. The latest meta-analysis results show that the sleep quality of Chinese college students is gradually deteriorating. The Broaden-and-Build Model of Positive Emotions and empirical research at home and abroad show that trait-awe affects the frequency and intensity of individual experience of awe, and whether the valence of emotions is positive or not, it has a significant impact on sleep quality, but whether trait-awe can affect the quality of sleep by affecting the individual's experience of awe is still unknown. Studies have shown that individuals with high levels of trait-awe report lower levels of stress, which in turn increases subjective well-being. The higher the level of subjective well-being, the better the individual's sleep quality. Based on this, our study used the Pittsburgh Sleep Quality Index, Dispositional Positive Emotions Scale, Stress Scale for College Student, and Well-being Index Scale to survey 229 college students, in order to explore the predictive effect of trait-awe on college students' sleep quality, and further explore the role of stress and subjective well-being between trait-awe and sleep quality. The results showed that: (1) Trait-awe, subjective well-being and sleep quality were positively correlated pairwise, and stress was significantly negatively correlated with trait-awe, subjective well-being, and sleep quality. (2) After controlling for gender and age, traits-awe can significantly positively predict the sleep quality of college students ($\beta=0.277$, $P<0.001$). (3) Trait-awe can affect sleep quality through the mediating effect of stress and subjective well-being, and the mediating effect includes three paths: the mediating effect of stress ($\beta=0.071$, 95%CI: 0.030, 0.119), the mediating effect of subjective well-being ($\beta=0.095$, 95%CI: 0.038, 0.165), and the chain mediating effect of stress and subjective well-being ($\beta=0.019$, 95%CI: 0.006, 0.037). Conclusion: Stress and subjective well-being play a chain mediating role between trait-awe and sleep quality. Future research can manipulate the awe variable to analyze the internal mechanism between state-awe and sleep quality.

Keywords: awe, sleep quality, stress, subjective well-being, chain mediating

敬畏与自杀意念的关系：心理韧性和生命意义感的链式中介作用

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摘要 自杀意念是指个体在思想或认知上想要结束生命的想法、念头, 是预测未来自杀企图和自杀死亡最可靠的指标之一。近年来, 大学生自杀事件频发, 引起人们的广泛关注, 这也反映出高校在培养学生敬畏情绪上存在缺失, 特别是对生命的敬畏。因此, 关注大学生的心理健康, 研究大学生敬畏情绪对自杀意念的影响, 以及其内部机制尤为重要。本研究从积极心理学的视角, 基于积极情绪的拓展—建构理论和自杀缓冲假设, 考察特质敬畏情绪与自杀意念的关系, 并探讨心理韧性与生命意义感在其中的作用。研究采用特质性积极情绪量表中的敬畏分量表(DPES-r)、青少年心理韧性量表(RSCA)、生命意义感量表(MLQ)和青少年自杀意念量表(PANSI)对251大学生进行问卷调查。结果发现:(1)敬畏、心理韧性和生命意义感两两之间均显著正相关, 敬畏、心理韧性、生命意义感三者均与自杀意念呈显著负相关;(2)敬畏能显著负向预测自杀意念($\beta=-0.403$, $t=-6.682$, $p<0.001$); (3)敬畏能通过心理韧性和生命意义感的中介作用对自杀意念产生影响, 且该中介作用包含了三条路径: 敬畏→心理韧性→自杀意念(Bootstrap法重复抽取5000次, 95%

CI = [-0.315, -0.117], 中介作用显著, 中介效应值-0.205); 敬畏→生命意义感→自杀意念 (95% CI = [-0.089, -0.012], 中介作用显著, 中介效应值-0.044); 敬畏→心理韧性→生命意义感→自杀意念 (95% CI = [-0.072, -0.011], 链式中介作用显著, 中介效应值-0.038)。结论: 敬畏情绪对自杀意念有直接影响, 也可通过影响心理韧性和生命意义感对自杀意念产生间接影响。本研究结果认为高校应注重对大学生敬畏情绪的教育和培养, 提高学生的心理韧性和生命意义感, 提升心理健康水平, 减少自杀意念的产生, 从而有效的预防自杀现象的发生。

关键词 敬畏, 心理韧性, 生命意义感, 自杀意念

Awe and Suicidal Ideation:

The Chain Mediating Effect of Resilience and Meaning in Life

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Abstract: Suicidal ideation refers to the thoughts of an individual who wants to end his life in thought or cognition. It is one of the most reliable indicators for predicting future suicide attempts and suicide death. In recent years, the frequent suicides among college students have aroused widespread attention, which also reflects the lack of cultivation of awe among college students, especially the awe of life. Therefore, it is particularly important to pay attention to the mental health of college students and to study the influence of awe on suicidal ideation and its internal mechanism. From the perspective of positive psychology, this research examines the relationship between traits of awe and suicidal ideation, and explores the role of resilience and the sense of meaning life, based on the broaden-and-build theory of positive emotions and suicide buffer hypothesis. A total of 251 college students were investigated by using the awe subscale of Dispositional Positive Emotion Scale (DPES-r), Resilienc Scale for Chinese Adolescent(RSCA), Meaning in Life Questionnaire (MLQ) and Positive and Negative Suicide Ideation (PANSI). The results showed that: (1) Awe, resilience, and meaning in life were positively correlated with each other; awe, resilience, and meaning in life were negatively correlated with suicidal ideation; (2) Awe significantly negatively predicted suicidal ideation ($\beta = -0.403$, $t = -6.682$, $p < 0.001$); (3) Awe can influence suicidal ideation through the mediating effect of resilience and the meaning in life, and the mediating effect includes three pathways: Awe→resilience→suicidal ideation (5000 times repeated by Bootstrap method, 95%CI = [-0.315, -0.117], the mediating effect was significant, the mediating effect value was -0.205); Awe→meaning in life→suicidal ideation (95%CI = [-0.089, -0.012], the mediating effect was significant, the mediating effect value was -0.044); Awe→resilience→meaning in life→suicidal ideation (95%CI = [-0.072, -0.011], the chain mediated effect was significant, the mediating effect value was -0.038). Conclusion: awe has both direct and indirect effects on suicidal ideation, such as via resilience and meaning in life. The results of this study suggest that colleges and universities should pay attention to the education and cultivation of awe of college students, improve students' resilience and meaning in life, enhance their mental health, reduce the generation of suicidal ideation, and effectively prevent suicide.

Keywords: awe, resilience, meaning in life, suicidal ideation

敬畏对跨期决策的影响：时间知觉和小我的中介作用

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摘要 跨期决策是指对发生在不同时间点上的成本与收益进行权衡进而做出选择的过程。敬畏是个体面对浩大以及超越当前认知范围的事物时产生的一种情绪体验。这些事物包括自然奇观、艺术杰作、或非凡的人

类行为等，而暴露于自然景观下的个体在跨期决策时更偏好延迟的高收益选项。本研究在时间感知基础模型和解释水平理论的基础上引入“时间知觉”和“小我”两个中介变量，旨在探究敬畏情绪对跨期决策的影响以及时间知觉和小我的中介作用机制。研究一采用单因素被试间实验设计，通过自然图片和几何图片分别诱发敬畏情绪和中性情绪，使用延迟折扣范式测量跨期决策，探究敬畏对跨期决策的影响。研究二为排除自然元素的干扰，采用非自然景观视频诱发敬畏情绪，同时在研究一的基础上引入“时间知觉”和“小我”两个中介变量，探究时间知觉和小我在敬畏对跨期决策影响间的中介作用。本研究预期结果：（1）无论是自然还是非自然景观诱发的敬畏情绪与中性情绪相比都能够显著降低跨期决策的延迟折扣率；（2）时间知觉和小我在敬畏与跨期决策间的中介作用显著。总体来说，敬畏可以使人们知觉到的时间更充裕以及将注意力从自身转移到宏大的事物上，进而促进人们在跨期决策中选择等待延迟的高收益。

关键词 敬畏，跨期决策，时间知觉，小我，延迟折扣

The Influence of Awe on Intertemporal Choice: The Mediating Effect of Time Perception and Small Self

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Abstract: Intertemporal choice is a process of decision making after weighing costs and benefits that occur at different points in time. Awe is an emotional experience that an individual produces when faced with something vast and beyond the current cognitive range, including natural wonders, masterpieces of art, or extraordinary human behavior and people who exposed to natural landscape prefer the high-yield option of delay in intertemporal choice. Based on the Perceived-time-based model and the Construal level theory, the study introduces two intermediary variables, namely “time perception” and “small self”, to explore the influence of awe on intertemporal choice, as well as the intermediary role of time perception and small self. Study I Using a single-factor experimental design, the subject's awe and neutral emotions were manipulated by presenting mood-inducing images, the intertemporal choice of the subject was measured using the Delay Discounting Task, to examine whether awe affected the intertemporal decision-making of the subject. In study II, to eliminate the interference of natural elements, we use unnatural landscape video to induce awe, and at the same time, on the basis of study I, introduces two intermediary variables, namely “time perception” and “small self”, to explore these two variables' intermediary role between awe and intertemporal choice. Expected results: (1) Awe induced by both natural and unnatural landscapes can significantly reduce the rate of delay discounting for intertemporal choice compared to neutral emotions; (2) The intermediary role of time perception and small self between awe and intertemporal choice is significant. Generally speaking, awe can make people feel more time and shift their attention from themselves to the grander things, which in turn encourages people to choose to wait for delayed high return.

Keywords: awe, intertemporal choice, time perception, small self, delay discounting

2.25 “校园欺凌与暴力防治专业委员会”专题研讨会

受欺凌对中学生抑郁情绪的影响：安全感与自尊的链式中介作用

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摘要 受欺凌是指个体受到力量较强同伴故意伤害的经历, 具有重复发生的特点。全世界范围内, 约 32% 的儿童青少年遭受过他人欺凌; 我国约 1.5%~13.4% 的儿童青少年遭受过同伴欺凌。以往的研究发现, 遭受同伴欺凌会导致儿童青少年出现一系列心理社会适应问题, 如抑郁、焦虑、攻击行为、违纪等, 甚至会诱发自残、自杀等极端行为。中学阶段是青少年生理和心理发展的关键时期, 抑郁情绪是衡量心理健康的重要指标之一。根据一般压力理论, 个体在经历压力和紧张时会体验到一种或多种负面情绪, 如失望、抑郁、焦虑、恐惧等。以往的研究表明, 受欺凌可显著正向预测抑郁情绪, 持续受欺凌的学生会表现出更低水平的自尊与更多的抑郁情绪。相较于那些未受欺凌或未参与欺凌事件的个体, 有受欺凌经历的个体更容易出现抑郁情绪, 而且这种抑郁情绪会随着早期受欺凌经历的增加而增加。然而, 目前鲜有研究深入探讨受欺凌影响中学生抑郁情绪的具体过程。本研究试图回应这一问题, 为早期预防和干预中学生抑郁情绪提供具有针对性的依据。采用整群取样方法面向全国三个省区市七所中学的学生进行调查, 共发放问卷 1000 份, 回收有效问卷 978 份, 有效回收率为 97.80%。其中男生 477 名, 女生 501 名; 平均年龄为 15.43($SD=2.16$)。采用受害量表、安全感问卷、自尊量表和抑郁自评量表对 978 名中学生进行调查。结果显示: (1) 受欺凌、安全感、自尊与抑郁情绪两两之间均呈显著相关; (2) 受欺凌对抑郁情绪的直接效应和间接效应均显著。间接效应包括通过安全感的中介作用、通过自尊的中介作用以及通过安全感—自尊的链式中介作用三条路径。本研究的发现揭示了受欺凌是中学生抑郁情绪产生的一个风险因素, 并且受欺凌作为一种负性生活事件会通过影响安全感和自尊间接影响中学生的抑郁情绪。基于需求层次理论和抑郁自尊理论, 能深入了解受欺凌对抑郁情绪的复杂发生机制, 为中学生心理健康教育提供具有针对性的理论基础。因此, 本研究对于抑郁情绪的早期预防与干预具有重要借鉴意义。

关键词 受欺凌, 抑郁情绪, 安全感, 自尊, 中学生

The Effect of Bullying Victimization on Middle School Students' Depression: Roles of Psychological Capital and Self-esteem

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Abstract: Bullying victimization refers to the experience of an individual being deliberately hurt by a stronger peer, which is characterized by recurrence. Around 32% of children and adolescents have been bullied by others over the world; about 1.5% to 13.4% of children and adolescents in China have been bullied by peers. Previous studies have found that being bullied by peers can cause a series of psychological and social adaptation problems in children and adolescents, such as depression, anxiety, aggressive behavior, violation of discipline, etc., and even induce extreme behaviors such as self-harm and suicide. Middle school is a critical period for the physical and psychological development of adolescents, and depression is one of the important indicators to measure mental health. According to

the general stress theory, individuals experience one or more negative emotions when experiencing stress and tension, such as disappointment, depression, anxiety, fear, etc. Previous studies have shown that being bullied can significantly positively predict depression, and students who continue to be bullied will show lower levels of self-esteem and more depression. Compared with individuals who have not been bullied or participated in bullying events, individuals who have experienced bullying victimization are more likely to experience depression, and this depression will increase with the increase of early bullying experiences. However, there are currently few studies that deeply explore the specific process of depression in middle school students affected by bullying victimization. This study attempts to respond to this problem and provides a targeted basis for the early prevention and intervention of depression in middle school students. The cluster sampling method was used to survey students from seven middle schools in three provinces, autonomous regions, and municipalities across the country. A total of 1,000 questionnaires were distributed, and 978 valid questionnaires were returned, with an effective recovery rate of 97.80%. Among them, there are 477 boys and 501 girls; the average age is 15.43 (SD=2.16). The victim scale, security questionnaire, self-esteem scale and depression self-rating scale were used to survey 978 middle school students. The results showed that: (1) There was a significant correlation between bullying victimization, sense of security, self-esteem, and depression; (2) Both the direct and indirect effects of bullying victimization on depression were significant. Indirect effects include three paths through the mediation of security, the mediation of self-esteem, and the chain mediation of security-self-esteem. The findings revealed that bullying victimization is a risk factor for middle school students' depression, and bullying victimization, as a negative life event, can indirectly affect middle school students' depression by affecting their sense of security and self-esteem. Based on the hierarchy of needs theory and depressive self-esteem theory, it can deeply understand the complex mechanism of depression caused by bullying victimization, and provide a targeted theoretical basis for the mental health education of middle school students. Therefore, this study has important reference significance for the early prevention and intervention of depression.

Abstract: bullying victimization, depression, sense of security, self-esteem, middle school students

青少年传统/网络受欺凌与社交焦虑、抑郁情绪的关系： 一项短期交叉滞后分析

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摘 要 校园欺凌是一种特殊类型的攻击行为，涉及的当事人之间存在权力或力量的不平衡(受害人在保护自己不受欺凌方面存在困难)，并且具有重复发生性。校园欺凌可以分为身体欺凌、言语欺凌、关系欺凌（三者并称为传统欺凌）和新型的网络欺凌。大量研究探讨了传统/网络受欺凌与情绪问题（抑郁情绪/社交焦虑）的关系，早期有研究者提出负性循环理论，即有情绪问题的青少年可能有受欺凌的风险，而反复受欺凌可能会加剧情绪问题。发展情境理论也更加支持了这种观点。以往研究较多关注传统受欺凌与抑郁情绪和社交焦虑的关系，网络受欺凌与情绪问题的时间序列关系还存有争议；此外，以往研究较少进行传统/网络受欺凌的比较，即两类受欺凌与抑郁情绪/社交焦虑的时间序列关系和因果关系及效应大小是否不同。本研究拟进行深入比较，为青少年受欺凌的干预提供实证支持。选取 1865 名青少年（10-18 岁； 12.90 ± 2.23 ）进行相隔半年的追踪调查，构建青少年传统/网络受欺凌与社交焦虑和抑郁情绪的交叉滞后模型，结果发现：（1）抑郁情绪与传统/网络受欺凌均可以相互显著正向预测；社交焦虑仅与传统受欺凌显著正向相互预测，与网络受欺凌无法互相预测（表现为：前测网络受欺凌不能显著正向预测后测社交焦虑）；（2）传统受欺凌对个体抑郁情绪和社交焦虑的预测作用比网络受欺凌强；（3）传统/网络受欺凌对个体抑郁情绪的预测作用比对社交焦虑更强；抑郁情绪对传统/网络受欺凌的预测作用更强；（4）抑郁情绪对传统受欺凌的预测作用显著高于对网络受欺凌的预测作用。总之，传统受欺凌的影响更大，突出表现为抑郁情绪；抑郁情绪是传统/网络欺凌的预测因素和结果，而社交焦虑作为预测因素的作用要强于作为结果的作用。

关键词 传统受欺凌，网络受欺凌，抑郁情绪，社交焦虑，青少年

The Relation of Traditional School Bullying/Cyberbullying Victimization and Social Anxiety/Depression in Adolescents: a Cross-lagged Analysis

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Abstract: School bullying is a special type of aggressive behavior, which involves the imbalance of strength between the parties (the victim has difficulty in protecting himself from bullying), and it occurs repeatedly. School bullying can be divided into physical bullying, verbal bullying, relational bullying (all three are called traditional bullying) and cyber bullying, the new type of school bullying. A large number of studies have explored the relation between traditional school bullying/cyberbullying and emotional problems (depression / social anxiety). In the early stage, some researchers put forward the Negative Cycle Theory, that is, adolescents with emotional problems may be at risk of being bullied, while repeated victimization may aggravate emotional problems. The Developmental Contextualism supports this view. Previous studies focused more on the relation between traditional school bullying and depression/social anxiety, but the time-series relation between cyberbullying and emotional problems is still controversial. In addition, previous studies rarely compared the traditional school bullying/ cyberbullying, that is, whether the time-series relation, causality and effect size of the two types of school bullying and depression / social anxiety are different. This study intends to conduct in-depth comparison to provide the basis for the intervention of adolescent school bullying. In this study, 1865 adolescents (10-18 years old; 12.90 ± 2.23); The results showed that: (1) depression and traditional school bullying/cyberbullying can significantly positively predict each other; Social anxiety and traditional school bullying significantly positively predicted each other, but not with cyberbullying (Performance: Pretest cyberbullying cannot significantly positively predict posttest social anxiety). (2) Traditional school bullying has a stronger predictive effect on depression and social anxiety than cyberbullying. (3) Traditional school bullying/Cyberbullying has a stronger predictive effect on depression rather than on social anxiety; Depression has a stronger predictive effect on traditional bullying/Cyberbullying. (4) Depression can predict traditional bullying better than Cyberbullying. In a word, traditional school bullying is more influencing, especially on depression; Depression is a predictor and result of traditional school bullying/Cyberbullying, and social anxiety is more important as a predictor than as a result.

Keywords: Traditional bullying, Cyberbullying, Depression, Social Anxiety, Adolescents

社会支持与受欺凌程度的关系：有调节的链式中介模型

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摘要 校园欺凌是指在校环境中个体被一个或多个学生有意地、反复地、持续地施以负面行为，造成受害者心理或身体的不适或伤害。以往的研究发现，儿童青少年受欺凌经历能够显著预测其两年后的外化问题行为、内化问题行为、社交问题及学业问题。社会支持的缓冲模型指出，个体在面对同伴侵害等压力事件的情况下，从所处近端社会关系中获得的社会支持是最重要的保护性资源之一。已有研究表明，社会支持可显著负向预测受欺凌程度，高社会支持会拥有更高的应对效能与更积极的应对方式。相对于那些高求助意愿的个体，低求助意愿的个体更容易遭受到欺凌。然而，社会支持是“如何影响”受欺凌程度，以及会受到“何种条件”制约却缺乏深入探讨。本研究试图回应这一问题，为降低青少年受欺凌程度提供具有针对性的依据。采用整群随机抽样选取宁波市某地区4所学校进行问卷施测，总共发放1100份问卷，回收有效问卷1011份，有效率为91.91%。其中男生493名，女生518名；平均年龄为 14.76 ± 2.36 岁。采用社会支持行为量表、

欺凌/受害问卷、应对效能量表、校园欺凌应对方式量表和求助意愿量表对 1011 名青少年进行调查。结果显示：（1）社会支持、应对效能、应对方式、求助意愿与受欺凌程度两两之间均呈显著相关；（2）社会支持对受欺凌程度的直接效应和间接效应均显著，间接效应包括通过应对效能的中介作用、通过应对方式的中介作用以及通过应对效能—应对方式的链式中介作用三条路径；（3）求助意愿在社会支持与受欺凌程度关系的链式中介路径中起调节作用。本研究的发现揭示了社会支持是降低青少年受欺凌程度的一个保护因素，并且社会支持作为一种保护性资源会通过应对效能和应对方式间接预测青少年的受欺凌程度，也受到个体求助意愿的调节。基于社会支持的缓冲模型和压力应对理论，能够深入了解社会支持对受欺凌程度的内在发生机制，为青少年预防校园欺凌提供具有针对性的理论基础。因此，本研究对校园欺凌的干预和防治具有重要借鉴意义。

关键词 社会支持，应对效能，应对方式，求助意愿，受欺凌程度

The relationship between social support and degree of bullying victimization: Moderated chain mediation model

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Abstract: School bullying refers to the intentional, repeated, and continuous negative behaviors of one or more students in the campus environment, causing the victim's psychological or physical discomfort or harm. Previous studies have found that the experience of bullying victimization can significantly predict their behavior of externalized problematic behavior, internalized problematic behavior, social problem and academic problems two years later. The buffer model of social support points out that the social support obtained from the close social relationship is one of the most important protective resources in the face of peer infringement and other pressure events. Some studies have shown that social support can significantly negatively predict the degree of bullying victimization, and high social support will have higher response coping efficiency and more positive coping styles. Compared with those with a high willingness to ask for help, the individuals with a low willingness to ask for help are more vulnerable to bullying victimization. However, how social support “affects” the degree of bullying victimization and the “conditions” it will be restricted by, but there is a lack of in-depth discussion. This study attempted to respond to this problem and provided a targeted basis for reducing the level of bullying victimization among adolescents. The cluster random sampling was used to select 4 schools in a certain area of Ningbo to conduct the questionnaire survey. A total of 1100 questionnaires were distributed, and 1011 valid questionnaires were returned, with an effective rate of 91.91%. 493 boys and 518 girls were male students; The average age was 14.76 (SD=2.36). 1011 teenagers were investigated by the inventory of supportive behavior, bullying/victimization questionnaire, coping efficiency scale, school bullying coping style scale and the willingness to seek help scale. The results showed that: (1) There was a significant correlation between social support, coping efficiency, coping style, willingness to ask for help and the degree of bullying victimization; (2) The direct and indirect effects of social support on the degree of bullying victimization are significant. The indirect effects include three ways through the mediation of coping efficiency, the mediation of coping style and the chain mediation of coping efficiency and coping style; (3) The willingness to ask for help plays a moderated role in the chain mediation path between social support and the degree of bullying victimization. The findings revealed that social support is a protective factor to reduce the degree of bullying victimization among adolescents. Social support, as a protective resource, indirectly predicts the degree of bullying by coping efficiency and coping style and is also moderated by individual willingness to ask for help. Based on the buffer model of social support and the theory of stress coping, they can deeply understand the internal mechanism of social support to the degree of bullying victimization, and provide a theoretical basis for teenagers to

prevent school bullying. Therefore, this study is of great significance for the intervention and prevention of school bullying.

Keywords: social support, coping efficiency, coping style, willing to ask for help, degree of bullying victimization

能力越大，责任越大：公正世界信念与欺凌保护行为的关系

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摘 要 公正世界信念是指人们相信自己生活在一个公正的世界里，人们得其所应得，所得即应得。不公正事件与已有公正信念相冲突时个体的公正世界信念会受到影响，而校园欺凌无疑是初中生群体面临的严重不公正威胁。面对校园欺凌这一不公事件，一部分个体会通过保护受欺负同伴来阻止欺负事态的扩大，这不仅维护了自身的公正世界信念，同时对校园欺凌起到有效的干预作用。以往的研究表明，公正世界信念水平越高的青少年个体越容易表现出助人行为，参与欺凌的可能越低，更倾向于保护受欺负的同伴。虽然已有关于公正世界信念的研究非常广泛，但目前鲜有研究深入探讨公正世界信念如何作用于欺凌情境中的保护行为。本研究试图回应这一问题，为促使学生在欺凌事件中做出更多保护行为提供依据。采用整群取样方法，面向东部某省三所初级中学的学生进行问卷调查，共发放问卷 850 份，得到有效问卷 837 份，有效回收率为 98.47%。其中男生 421 名，女生 416 名；平均年龄为 13.6(SD=0.79)。结果显示：（1）公正世界信念、自我效能感、责任感和保护行为两两之间均呈显著相关；（2）公正世界信念对保护行为的直接效应不显著，但可以通过自我效能感的中介作用、责任感的中介作用以及自我效能感—责任感的链式中介作用三条中介路径间接预测保护行为。（3）在自我效能感—责任感的路径上存在性别差异。相比女生，男生的自我效能感对责任感的预测作用更强，进而做出更多保护行为。本研究的发现揭示了公正世界信念作用于欺凌保护行为的认知过程，启示学校教育工作者不仅要塑造学生高水平的公正世界信念，还要注重提升学生的自我效能感和责任感，以促进学生在欺凌事件中做出更多积极干预行为，保护受害者，阻止欺凌事件。

关键词 公正世界信念，保护行为，自我效能感，责任感，校园欺凌

With Great Power Comes Great Responsibility: Relationship between Belief in a Just World and Defending Behavior

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Abstract: Belief in a just world means that people believe that they live in a just world and that people get what they deserve and what they get is what they deserve. When an unjust incident conflicts with an existing belief in justice, the individual's belief in a just world will be affected, and school bullying is undoubtedly a serious unjust threat faced by junior high school students. Faced with the injustice of school bullying, some individuals will prevent the expansion of bullying by protecting their peers. This not only maintains their belief in a just world, but also plays an effective role in intervening in school bullying. Previous studies have shown that adolescent individuals with a higher level of belief in a just world are more likely to show helpful behaviors, are less likely to participate in bullying, and are more inclined to protect their peers who are being bullied. Although there have been extensive studies on beliefs in a just world, there are few studies that deeply explore how beliefs in a just world can affect defending behavior in bullying. This research attempts to respond to this question and provide a basis for promoting students to make more defending behaviors in bullying. Using the cluster sampling method, a questionnaire survey was conducted for students from three junior high schools in a certain eastern province. A total of 850 questionnaires were distributed and 837 valid questionnaires were obtained, with an effective recovery rate of 98.47%. Among them, there are 421

boys and 416 girls; the average age is 13.6 ($SD=0.79$). The results show that: (1) The belief in a just world, self-efficacy, responsibility and defending behavior are all significantly correlated; (2) The belief in a just world has no significant direct effect on defending behavior, but it can be mediated by self-efficacy, responsibility, and the chain mediation of self-efficacy and indirectly predict defending behavior. (3) There are gender differences in the path from self-efficacy to sense of responsibility, compared with girls, boys' self-efficacy has a stronger predictive effect on the sense of responsibility, and then they make more defending behaviors. The findings of this study reveal that the cognitive process of the belief in a just world affects defending behavior, and enlighten school educators not only to shape students' high-level belief in a just world, but also to enhance students' sense of self-efficacy and responsibility in order to promote students make more active interventions in bullying and protect victims.

Abstract: belief in a just world, defending behaviors, self-efficacy, responsibility, school bullying

父母教养方式与亲欺凌行为的关系：同辈群体的作用

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摘要 亲欺凌行为是在欺凌事件发生时, 协助欺凌者一同参与欺凌的行为或在一旁实施围观、鼓噪等煽动性的行为的总称。以往研究发现, 亲欺凌行为在校园欺凌事件中通常起到一种推波助澜的负面作用, 激发了欺凌者施暴的表现欲, 使得一些原本可规避的欺凌事件变得不可逆转。以往研究多从个人角度探究亲欺凌行为的产生原因, 如: 道德推脱、共情水平、责任分散等。鲜有研究从中学生的重要他人的角度探究这一问题。根据生态系统理论, 父母和同伴是个体交往最多、联系最密切的重要他人。父母的教养方式、与同伴的关系以及交往同伴的性质均会对中学生的行为产生重要影响。本研究试图从中学生成长过程中的重要他人入手, 进一步探究亲欺凌行为产生的原因。研究采用整群随机抽样的方法, 共选取 886 名初中生, 其中男生 452 人, 女生 434 人, 平均年龄 13.56 岁 ($SD=0.78$), 采用父母教养方式问卷、同伴关系问卷、越轨同伴交往问卷和亲欺凌行为问卷对其进行调查。研究结果表明: (1) 父母教养方式、同伴关系、越轨同伴交往与亲欺凌行为两两之间均呈显著相关; (2) 父母教养方式对亲欺凌行为的直接效应不显著, 间接效应显著。间接效应包括通过同伴关系的中介作用、通过越轨同伴交往的中介作用, 以及通过同伴关系—越轨同伴交往的链式中介作用三条路径。本研究的发现揭示了父母教养方式是亲欺凌行为产生的一个风险因素, 并且父母教养方式会通过影响青少年同伴关系和越轨同伴交往间接影响中学生的亲欺凌行为。基于父母接纳-拒绝理论和差别交往理论, 能深入了解父母教养方式对亲欺凌行为的复杂发生机制, 为青少年亲欺凌旁观者行为的干预提供具有针对性的理论基础, 对于亲欺凌行为早期预防与干预具有重要借鉴意义。

关键词 父母教养方式, 同伴关系, 越轨同伴交往, 亲欺凌行为, 中学生

The relationship between parenting style and pro-bullying behavior: The role of peer groups

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Abstract: Pro-bullying behavior is a general term for assisting the bully to participate in the bullying behavior or performing inflammatory behaviors such as onlookers and uproar when a bullying incident occurs. Previous studies have found that pro-bullying behaviors usually play a negative role in the school bullying incidents, which inspires the bully's desire to express violence and makes some bullying incidents that could have been avoided become irreversible. Previous studies have mostly explored the causes of pro-bullying behavior from a personal perspective, such as: moral evasion, empathy, and decentralized responsibility. Few studies have explored this issue from the

perspective of the important others of middle school students. According to the ecological system theory, parents and peers are the most important and the most closely connected people among individuals. The parenting style, the relationship with peers, and the nature of the companions all have an important influence on the behavior of middle school students. This research attempts to start with important others in the growth process of middle school students to further explore the causes of bullying behavior. The study adopted a cluster random sampling method. A total of 886 junior high school students were selected, including 452 boys and 434 girls, with an average age of 13.56 years ($SD = 0.78$). The parenting style questionnaire, peer relationship questionnaire, deviant peer association questionnaire and relatives were selected. Investigate it with a bullying behavior questionnaire. The research results show that: (1) parenting styles, peer relationships, deviant peer interactions and pro-bullying behaviors are all significantly correlated; (2) parenting styles have insignificant direct effects on pro-bullying behaviors, but significant indirect effects. Indirect effects include three paths: mediation through peer relationship, mediation through deviant peer interactions, and chain mediation through peer relationship-deviant peer interaction. The findings of this study reveal that parental rearing styles are a risk factor for pro-bullying behavior, and parental rearing styles will indirectly affect middle school students' pro-bullying behaviors by influencing teenagers' peer relationships and deviant peer interactions. Based on parental acceptance-rejection theory and differential communication theory, it can deeply understand the complex mechanism of parental rearing styles on pro-bullying behaviors, and provide a targeted theoretical basis for the intervention of youth pro-bullying bystanders, and for the early prevention and prevention of pro-bullying behaviors. Intervention has important reference significance.

Abstract: parenting style, peer relationship, deviant peer interaction, pro-bullying behavior, middle school students

青少年网络受欺凌与反应性攻击的关系：一个有调节的中介模型

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摘要 近年来，随着网络的发展与普及，网络欺凌逐渐成为一种新型且常见的校园欺凌形式，青少年越来越多地遭到来自线上群体或个人的攻击。前人研究已表明，遭受网络欺凌的青少年会更易出现外化问题，如睡眠障碍、学业成绩不佳和攻击行为等。反应性攻击作为个体为应对感知到的威胁或不公而采取的伴有愤怒情绪的伤害行为或倾向，对攻击者和受害者都会带来影响。我国对网络欺凌的研究起步较晚，成果较少，且大多研究着重考察网络受欺凌与网络欺凌的关系，关于网络受欺凌与青少年的反应性攻击的关系及内部机制还尚不明晰。因此，本研究基于一般压力理论和发展情境理论，采用网络受欺凌问卷、抑郁情绪问卷、反应性攻击问卷以及友谊质量问卷对温州地区 11 所中小学校共 1629 名学生进行调查，为探讨青少年网络受欺凌与反应性攻击的关系及其作用机制，建构了一个有调节的中介效应模型，检验抑郁情绪在网络受欺凌与反应性攻击之间的中介作用以及友谊质量的调节作用。结果表明：（1）网络受欺凌显著正向预测反应性攻击。（2）抑郁情绪在网络受欺凌和反应性攻击关系中起部分中介作用。（3）友谊质量调节了“网络受欺凌→抑郁情绪→反应性攻击”的后半段，即当青少年的友谊质量较高时，抑郁情绪对反应性攻击的预测作用减弱。因此，青少年遭受网络欺凌会引起抑郁情绪，从而产生反应性攻击，但是，较高的友谊质量能够降低抑郁情绪对反应性攻击的消极影响，在一定程度上起到了保护作用。本研究验证了压力性生活事件、个体因素和同伴因素对青少年攻击行为的共同作用，对青少年攻击行为的防治具有一定的指导意义。

关键词 网络受欺凌，抑郁情绪，反应性攻击，友谊质量，青少年

The Relationship between Cybervictimization and Reactive Aggression in Adolescents: A Moderated Mediation Model

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Abstract: In recent years, with the development and popularization of the Internet, cyberbullying has gradually become a new and common form of school bullying. More and more young people are attacked by online groups or individuals. Previous studies have shown that adolescents suffering from cyberbullying have been more likely to have externalization problems, such as sleep disorders, poor academic performance and aggressive behavior, etc. Reactive aggression, as an individual's injurious behavior or tendency with anger in response to perceived threat or injustice, will have impact on the attack and the victim. The study of cyberbullying in China started late and hasn't achieved many results. Most studies focused on the relationship between cybervictimization and cyberbullying. The relationship between cybervictimization and reactive aggression among adolescents is still unclear. Therefore, based on the general stress theory and the developmental contextualism, this study used the cybervictimization questionnaire, depression questionnaire, reactive aggression questionnaire and friendship quality questionnaire to survey 1629 students from 11 middle and primary schools in Wenzhou, constructed a moderating mediating effect model to explore the relationship between cybervictimization and reactive aggression, and confirmed the mediating role of depression between cybervictimization and reactive aggression and the moderating role of friendship quality. The results showed that: (1) Cybervictimization can significantly positively predict reactive aggression. (2) Depression partly mediates the relationship between cybervictimization and reactive aggression. (3) Friendship quality moderates the second half of "cybervictimization → depression → reactive aggression", namely, when adolescents' friendship quality is high, the predictive effect of depression on reactive aggression is weakened. Therefore, adolescents suffering from cyberbullying will lead to depression and reactive aggression. However, higher friendship quality can reduce the negative impact of depression on reactive aggression and play a protective role to a certain extent. This study verified the joint effect of stressful life events, individual factors and peer factors on adolescent aggressive behavior, which has a certain guiding significance for the prevention and treatment of adolescent aggressive behavior.

Keywords: cybervictimization, depression, reactive aggression, adolescents

2.26 “行为与健康心理学专业委员会”专题研讨会

童年情感忽视降低共情准确性

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摘要 已有研究表明童年情感忽视影响共情, 但研究结果不一致, 这可能是以往研究很少在具体社会情境中将共情准确性作为指标进行考察。共情准确性是指共情高度依赖于特定情境, 因他人之喜而喜, 因他人之悲而悲才是准确性共情。社会接纳和社会排斥情境是与人类生存与生活息息相关的典型的社会情境, 为更细致地探究童年情感忽视对共情的影响, 采用模拟社会接纳与社会排斥情境的方法, 考察童年情感忽视个体对社会排斥/社会拒绝情境中人物对象的共情准确性。92名大学生被试被随机分配到社会排斥共情组和社会接纳共情组, 采用童年创伤问卷(CTQ)测量被试的情感忽视水平, 被试的任务是观看其“同伴”遭受社会排斥或者社会接纳的视频, 然后报告自我的积极和消极情绪。回归分析结果发现, 无论是在社会接纳还是在社会排斥情境下, 情感忽视水平越高, 共情准确性越低。研究结果表明在童年遭遇情感忽视个体, 由于其情感需求没有得到满足, 因此无法体会和感受他人的积极或者消极情绪。这一结果也提示了童年情感忽视对个体社会适应性功能的影响。

关键词 童年情感忽视, 社会接纳, 社会排斥, 共情准确性

Childhood Emotional Neglect Dampens Empathic Accuracy both in Social Inclusion and Social Exclusion Context

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Abstract: Previous studies on the relationship between childhood emotional neglect and empathy are inconsistent, possibly because the influence of social contexts on empathy has been largely neglected. In real life, empathy is highly dependent on specific contexts with a wealth of information. In order to further explore the impact of childhood emotional neglect on empathy, the simulation of social inclusion and social exclusion contexts are used to investigate the influence of childhood emotional neglect on empathic accuracy. We were interested in whether participants could accurately empathic on his/her partner's emotion in a naturalistic environment. A total of 92 participants (mean age=19.83 years, SD=1.56, 52 females) were recruited by online advertisements. Of the sample, 46 (26 females) were randomly assigned into social exclusion context (SE), and another 46 (26 females) were assigned into social inclusion context (SI). The Childhood Trauma Questionnaire (CTQ) was used to investigate childhood maltreatment. In the SI condition, participant's partner was nicely talking with the other two confederates with verbal or nonverbal behaviors (e.g., smiling, nodding). In the SE condition, participant's partner was rejected by the other two confederates verbally and non-verbally (e.g., noncommittal, frowning, or disdainful expression). Empathy was measured by participants' subjective oral report by evaluating "To what extent can you feel the emotion of your partner?" via a 9-point scale (1=hardly, 9=largely). A reference named dI was used to indicate the empathic accuracy in SI context. Specifically, $dI = (\text{empathy for positive emotion} - \text{empathy for negative emotion}) / \text{total standard deviation}$. The higher the value(dI), the higher degree of the empathic accuracy in the SI context. A reference named dE was used to indicate the empathic accuracy in SE context. Specifically, $dE = (\text{empathy for negative emotion} - \text{empathy for positive emotion}) / \text{total standard deviation}$, the higher the dE value, the higher degree of the accuracy in the SE context. Linear regression analyses were used to examine the effect of Childhood emotional neglect on empathic accuracy in both social contexts. Participants' empathic accuracy in the SI context (dI) showed Childhood emotional neglect could negative predict participants' empathic accuracy in the SI context, suggesting the higher level of emotional neglect, the lower level of empathic accuracy. Participants' empathic accuracy in the SE context (dE) showed Childhood emotional neglect could negative predict participants' empathic accuracy in the SE context, suggesting the higher level of emotional neglect, the lower level of empathic accuracy. Overall, the current study indicated individuals who has experienced childhood emotional neglect were less likely to empathy other's emotion, which might dampen their social adaptive function.

Keywords: childhood emotional neglect, social inclusion, social exclusion, empathy accuracy

COVID-19 暴发期间媒体暴露预测急性应激反应和急性应激障碍：一项横断面研究

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摘要 背景：2019 年冠状病毒病（COVID-19）的大范围流行给公众带来了前所未有的心理压力。在疫情爆发期间，大众媒体报道是 COVID-19 相关信息的主要来源。本研究旨在研究媒体暴露对急性应激反应的影响，并识别急性应激的相关预测因子。方法：于 2020 年 2 月 7 日至 2 月 20 日对 1450 名中国人进行在线调查。编制媒体接触问卷，评估媒体接触时间、媒体接触形式和媒体接触内容。采用斯坦福急性应激反应问卷（SASRQ）测量急性应激水平和可能发生急性应激障碍（ASD）的危险性。进行了一系列多元回归分析。结果：在对人口统计学进行控制后，长时间的媒体接触和社交媒体的使用与更高的急性压力和发生自闭症的几率相关。观察病人的情况与更高的急性应激有关，而查看最新的流行数据与较低的可能发生自闭症的几率有关。女性，居住在湖北省，与她们关系密切的人被诊断为 COVID-19，精神疾病史，不良生活事件和以前的集体创伤暴露是急性应激反应的危险因素。结论：这些发现证实了间接媒体接触流行病事件与急性应激反应之间的关系。

各国政府和其他有关机构应意识到与灾害有关的媒体曝光的负面影响，并采取适当的干预措施，以促进创伤事件后的心理健康。

关键词 COVID-19, 媒体接触, 社交媒体, 急性应激, 急性应激障碍, 心理健康

Media exposure predicted acute stress responses and acute stress disorder during COVID-19 outbreak in China: A cross-sectional study

Abstract: Background: The widespread pandemic of coronavirus disease 2019 (COVID-19) has led to unprecedented psychological stress on the general public. Mass media coverage was the main sources of COVID-19-related information during the epidemic outbreak. This study aimed to examine the effects of media exposure on acute stress responses and recognize associated predictors of acute stress. **Methods:** An online survey was conducted on a sample of 1450 Chinese people from February 7 to February 20, 2020. Media exposure questionnaire was developed to assess media exposure time, media exposure forms and media exposure contents. Stanford Acute Stress Reaction Questionnaire (SASRQ) was used to measure acute stress level and the risk of probable acute stress disorder (ASD). A series of multivariable regressions were conducted. **Results:** After controlling for demographics, longer media exposure time and the use of social media were associated with higher acute stress and odds of probable ASD. Viewing the situation of patients was associated with higher acute stress, whereas viewing latest news about epidemic data was associated with lower odds of probable ASD. Being females, living in Hubei Province, someone close to them diagnosed with COVID-19, history of mental illness, adverse life events and previous collective trauma exposures were risk factors for acute stress responses. **Conclusions:** These findings confirmed the associations between indirect media exposure to epidemic events and acute stress responses. The governments and other relevant agencies should be aware of the negative impacts of disaster-related media exposure, and implement appropriate interventions to promote psychological well-being following traumatic events.

Keywords: COVID-19; media exposure; social media; acute stress; acute stress disorder; mental health

情绪调节神经活动指标预测社会心理应激皮质醇反应和恢复

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摘要 应激反应存在巨大的个体差异, 找到客观有效的应激反应预测指标对应激易感人群早期筛查和高压环境作业人群的选拔都具有重要意义。情绪调节与应激反应紧密联系, 以往研究表明自我报告的情绪调节倾向与急性应激的皮质醇反应相关, 但是研究结果的方向并不一致。本研究旨在采用较为客观的情绪调节神经活动指标对应激下的皮质醇变化(包括反应阶段和恢复阶段)进行预测。本研究共招募 75 名大学生参与实验, 最后用于分析的有效数据为 72 名被试, 平均年龄 20.4 岁, 标准差 1.26 岁。所有被试分两天完成实验。第一天被试到实验室在电脑上完成情绪调节任务(包含观看中性、观看负性、认知重评和表达抑制共四种条件), 并同时记录脑电。第二天下午被试到实验室完成应激任务, 即特里尔社会应激测试(Trier Social Stress Test, TSST), 包括准备、当众演讲和心算三个任务。在应激任务前后我们总共采集 10 次唾液样本以分析唾液皮质醇含量, 并且连续记录应激前后和应激过程中的心率。研究结果表明被试的唾液皮质醇含量在应激结束后 10 分钟左右达到峰值, 而心率则在应激的演讲时即达到峰值并且快速回落。更重要的是, 我们发现情绪调节任务过程中的晚期正电位(the late positive potential, the LPP)能够显著预测社会心理应激的唾液皮质醇上升程度、恢复程度和恢复速率。并且在控制年龄、性别和身体质量指数(Body Mass Index, BMI)变量之后, 对恢复程度和恢复速率的预测依旧显著。本研究结果表明情绪调节活动的神经指标确实能够作为社会心理应激反应的有效预测指标。

关键词 社会心理应激, 情绪调节, 皮质醇反应

Neural Markers of Emotion Regulation Predicts Cortisol Response to and Recovery from Psychosocial Stress

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Abstract: There is considerable individual difference in stress response. Detecting valid predictors of stress response is of great significance for both screening of stress-vulnerable populations and selection of personnel working in high-pressure environment. Emotion regulation is closely related to stress response, and previous studies have shown that self-reported emotion regulation habits are associated with cortisol response to acute stress, but the directions of those findings are inconsistent. The aim of this study was to use an objective indicator, i.e., the neural activity of emotion regulation, to predict cortisol changes under stress (both reaction and recovery phases). A total of 75 university students were recruited in this study, and the final valid data used for analysis were 72 participants (Mean = 20.4 years old, SD = 1.26 years old). All participants visited the lab in two days to complete the whole experiment. On the first day, the participants completed an emotion regulation task on a computer (four conditions: viewing neutral, viewing negative, cognitive reappraisal, and expression suppression), with EEG simultaneously recorded. On the second day, participants came to the lab in the afternoon to complete a stress task, the Trier Social Stress Test (TSST), which consisted of three tasks: preparation, public speaking, and mental arithmetic. A total of 10 saliva samples were collected before and after the stress task to analyze salivary cortisol levels, and heart rate was recorded continuously before, during and after the stress. The results showed that the participants' salivary cortisol levels peaked about 10 minutes after the end of the stress, while the heart rate peaked during the stressful speech and returned back to baseline rapidly. More importantly, we found that the late positive potential (the LPP) during the emotion regulation task significantly predicted the salivary cortisol increase magnitude, recovery magnitude and recovery efficiency during psychosocial stress. The regressions were still significant after controlling for age, gender, and Body Mass Index (BMI). The results of this study suggest that neurological indicators of emotion regulation activity can serve as effective predictor of psychosocial stress response.

Abstract: psychosocial stress, emotion regulation, cortisol response

急性应激影响创造性认知加工过程的认知神经机制

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摘要 随着 VUCA (Volatility: 易变性; Uncertainty: 不确定性; Complexity: 复杂性; Ambiguity: 模糊性) 时代的到来, 应激成为每个人都会面临的一种生活方式。当前, 剧烈的社会变革对人类创造性提出了严峻的考验。无论个人还是组织, 经常需要在应激状态下创造性地提出解决问题的策略。例如, COVID-19 危机就是对个体和组织在应激状态下如何创造性解决问题的一次“大考”。因此, 探讨应激状态下创造性的加工机制具有重要的理论价值和现实意义。本研究探讨了急性应激影响创造性认知加工过程的认知神经机制。研究一运用特里尔压力测试 (Trier Social Stress Test, TSST) 诱发个体应激状态, 以唾液皮质醇 (salivary cortisol, sC) 与唾液α淀粉酶 (salivary alpha amylase, sAA) 作为评估压力的指标。结果表明, 应激对发散思维产生了显著的阻碍作用。研究二运用 EEG 技术, 通过高频 (10-12Hz) α波的任务相关功率 (task-related power, TPR) 从时间进程的角度进一步探究了应激状态下创造性活动发生进程中大脑皮层兴奋水平的变化。结果表明, 在应激之前个体的α波只在第一阶段出现同步化, 而在应激之后个体的α波全时程处于去同步化, 反映出自下而上受刺激驱动的加工状态。因此, 急性应激直接影响了创造性认知加工进程中的早期阶段。研究三运用 fNIRS 超扫描技术, 探究了急性应激影响团体创造力的脑间互动机制。结果发现, 急性应激状态下被试小组的合作指数更高, 且右侧颞上回(right superior temporal gyrus, rSTG) 的脑间同步性与创造力任务中流畅性分数呈显著正相关。

未来研究一方面需要深入考察应激影响创造性认知加工进程中个体激素水平的变化对执行功能的影响,进而为揭示应激影响创造力的中介作用机制提供更为系统的解释路径。另一方面应综合运用多模态手段,从神经内分泌系统动态平衡机制的视角,进一步探讨神经内分泌系统的中介作用机制和个体基线的调节作用机制,以期构建起神经科学分子水平-脑网络-行为的综合框架。

关键词 急性应激, 创造力, 发散性思维

The Cognitive Neural Mechanism of Creative Cognitive Processing Under Acute Stress

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Abstract: With the advent of VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) era, stress has become a lifestyle that everyone is facing. At present, dramatic social changes have put a severe test on human creativity. Whether individuals or organizations, it is often necessary to generate creative ideas or decisions under acute stress. The recent COVID-19 crisis could be considered as an examination testing how the individuals and organizations propose creative strategies under stress. Hence, exploring the creative processing mechanism under stress has important theoretical value and practical significance. The present study has explored the cognitive neural mechanism of creative cognitive processing under acute stress. Study 1 applied Trier Social Stress Test to induce individual's stress state. Salivary cortisol and salivary alpha amylase have been used as the indicators to assess the effectiveness of acute stress induction. Results showed that acute stress has exerted a significant hindering effect on creative thinking. Study 2 further examined the underlying neural mechanism of acute stress affecting creative thinking using electroencephalography (EEG). Results showed a general decrease in upper-frequency alpha power after stress, compared with that of before stress, indicating that acute stress impaired creative thinking and primarily affected the earlier phase of the process of creative cognition. Study 3 explored the inter-brain neural mechanism of group creativity under acute stress adopting a functional near-infrared spectroscopy (fNIRS) - based hyperscanning technique. Results showed that behavioral index of cooperation under acute stress was significantly higher, and the interpersonal brain synchronization at right superior temporal gyrus was positively correlated with the flexibility scores in the creativity task. Several avenues for future studies have also been proposed. On the one hand, future research needs to investigate the effects of changes in the individual hormone levels on the executive function during the process of creative cognitive processing under stress, providing a more systematic explanatory path for revealing the mediating mechanism of stress affecting creativity. On the other hand, future research should further explore the mediating mechanism of neuroendocrine system and the regulatory mechanism of individual baseline from the perspective of dynamic balance mechanism of neuroendocrine system by combining with multimodal methods such as neuroimaging and biomarker measurement technology, providing a comprehensive framework of neurological molecular level-brain network-behavior on how stress affects creative cognition.

Abstract: acute stress, creativity, divergent thinking

应激与心理健康的关系是线性假说还是曲线假说? 一项系统和元分析综述

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摘要 尽管应激对心理健康的影响得到了广泛承认, 应激和心理健康的定量研究颇具争议, 线性假说和曲线假说均有实证证据支持。剂量反应理论 (dose-response theory) 更为精准地描述了应激事件与心理健康之间的线性关系 (Turner & Lloyd, 1995), 并随着应激事件种类和数目的增加表现出“积木式”的累积效应。随着对

应激积极视角的转换提出了应激接种模型,对传统的朴素观念提出了挑战,该模型假设生命早期暴露在适度的应激下,反而会有更强的应激应对能力和更好的心理健康。相关概念包括应激接种(Meichenbaum, 2007)、心理复原力(Kalisch et al., 2017)、钢化效应(Rutter, 2012)等,这些现象都指出中等程度的应激能够使人们更好地面对未来的应激事件,进而能在保持更良好的心理健康。也就是说应激事件与心理健康应该具有二次曲线关系。本研究初步纳入了 58 项研究进行系统综述和元分析,对应激和心理健康关系的理论背景、实证研究、争议原因进行了梳理,发现目前研究呈现远端应激支持曲线假说,近端应激支持线性假说的局面,测量偏差和曲线理论验证不足的可能是研究结论不一致的原因。

关键词 应激, 心理健康, 线性假说, 曲线假说, 元分析

Does the relationship between stress and mental health conform linear hypothesis or curve hypothesis?

A systematic and meta-analysis review

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Abstract: Although the impact of stress on mental health has been widely recognized, the results from quantitative research on stress and mental health is controversial, and both linear hypothesis and curve hypothesis are supported by empirical evidence. Dose response theory more accurately describes the linear relationship between stress events and mental health, and shows a cumulative effect with the increase of the type and number of stress events. With the transformation of the positive perspective of coping with stress, a stress inoculation model is proposed, which challenges the traditional simple concept. The model assumes that if exposed to moderate stress in the early stage of life, individuals will have stronger stress coping ability and better mental health. Related concepts include stress inoculation, psychological resilience, which all point out that moderate stress can make people better face future stress events and maintain better mental health. In other words, there should be a quadratic relationship between stress events and mental health. This study initially included 58 studies for systematic review and meta-analysis, combed the theoretical background, empirical research and controversial reasons of the relationship between stress and mental health, and found that the distal stress supports curve hypothesis and proximal stress supports linear hypothesis. The measurement bias and insufficient verification of curve theory may be the reasons for the inconsistency of research conclusions.

Keywords: Stress, mental health, linear hypothesis, curve hypothesis, meta-analysis

重复加工的负性刺激预测实验室诱发的急性应激皮质醇反应和对未来生活应激的易感性

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摘要 在日常生活中,经常暴露于负面刺激中,这是焦虑症临床治疗的基础。在这里,我们评估了重复呈现的负面刺激的神经处理是否具有弹性或对压力的敏感性,通过对实验室诱发的急性压力的生理反应以及对日常生活压力的情绪反应来测量。52 名健康的年轻人被要求观看三次负面或中性的图片,同时记录他们的脑电图。在另一天,参与者接受特里尔社会压力测试(TSST),在压力诱导前后测量唾液皮质醇和心率。随后,连续 30 天对参与者的日常压力、焦虑和抑郁进行了测量。结果显示,相对于中性图像,晚期正电位(LPP)波幅增加到重复呈现负电位,显著预示了 TSST 期间皮质醇增加更大。此外,这种对消极画面重复的 LPP 反应也与对日常生活压力的情绪反应有关。具体来说, LPP 振幅增强的参与者在日常生活压力的反应中报告了更多的焦虑和抑郁症状。这是第一个系统地将情绪处理作为压力敏感性的生物标记进行研究的研究,通过控制良好的实验室范式和生态日常生活进行评估。这些发现可能有助于识别个人在发展压力有关的精神病理学

的风险。

关键词 情绪，晚期成分，皮质醇，急性应激，日常生活应激

Repetitive processing of negative stimuli predicts cortisol reactivity to laboratory-induced acute stress and susceptibility to future life stress

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Abstract: Repeated exposure to negative stimuli occurs frequently in daily life and is the basis of a well-established clinical therapy for anxiety-related disorder. Here we assessed whether neural processing of repetitively presented negative stimuli confers resilience or susceptibility to stress, measured by the physiological reactivity to laboratory-induced acute stress as well as emotional reactivity to daily life stress. Fifty-two healthy young adults were instructed to view negative or neutral pictures presented for three times while their electroencephalogram was recorded. On a separate day, participants underwent the Trier Social Stress Test (TSST), and salivary cortisol and heart rate were measured before and after stress induction. Subsequently, participants' daily stress, anxiety and depressiveness was measured over 30 consecutive days. Results showed that increased late positive potential (LPP) amplitudes to repetitively presented negative relative to neutral pictures significantly predicted larger cortisol increases during the TSST. Furthermore, this LPP reactivity to negative picture repetition was also associated with emotional reactivity to daily life stress. Specifically, participants who had enhanced LPP amplitudes reported more anxiety and depression symptoms in reactivity to daily life stress. This is the first study to systematically investigate emotion processing as a biomarker of stress sensitivity assessed by both a well-controlled laboratory paradigm and ecological everyday life. These findings may help to identify individuals under risk for developing stress-related psychopathology.

Keywords: Repetition, Emotion, Late positive potential, Cortisol, Acute stress, Daily life stress

3.硕/博士研究生论坛

3.1 硕士研究生论坛—基础心理学

(1) 硕士研究生论坛—基础心理学分场 1

基于非正态数据的测量不变性检验：严格等值与渐近等值的比较研究

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摘要 在实证研究中, 研究者常常需要对心理构念进行不同被试组别或时间点上的比较, 进行该比较的前提条件是满足测量不变性。传统测量不变性检验方法, 即严格等值法(exact measurement invariance), 对参数跨组相等的要求过于严格, 可能会导致模型拟合差等问题。而贝叶斯渐近测量不变性, 即渐近等值法(approximate measurement invariance), 通过为参数跨组差异提供均值为零、方差极小的先验分布, 放宽了对参数的严格限制, 因此该方法具有更灵活、拟合更好等优势。然而, 目前关于渐近测量不变性的研究仍局限于正态数据的条件。鉴于非正态数据在心理学领域的常见性及其可能会对估计结果造成的影响, 本研究旨在探讨渐近测量不变性方法在非正态数据下的表现。本研究根据不同数据分布形态、非正态条目数、参数跨组差异、组样本量以及组别数目生成 315 种条件组合, 使用基于稳健最大似然估计的严格等值法和提供不同先验分布的渐近等值法进行分析。结果表明, 在拟合指标方面, 渐近等值法的拟合指标 PPP 值随非正态条目数增多和数据非正态程度的增大而减小。在因子均值差异估计表现方面, 各评价指标受数据非正态性影响较小, 而更多受到其它因素的影响: 跨组差异较小时, 渐近等值法的因子均值差异估计准确性随跨组差异减小、组数减少、组样本量增大和先验方差增大而有所提升, 而跨组差异较大时, 严格等值法和渐近等值法的估计偏差较大且呈现不稳定的趋势。最后, 本文通过一则实例分析展示了两种方法的分析过程, 并对上述结果进行了验证。通过探讨在非正态数据下不同因素对渐近测量不变性方法的影响, 本研究在理论上有助于研究者深入了解该方法在不同条件下的表现, 在实践上也为该方法在非正态数据下的应用提供了相关指导。

关键词 测量不变性; 渐近测量不变性; 贝叶斯结构方程模型; 非正态数据

Measurement Invariance Based on Non-normal Data: Comparison between Approximate and Exact Invariance

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Abstract: In empirical studies, an important assumption for multi-group comparison is measurement invariance. Traditional exact measurement invariance (EMI) constraints parameters to be exactly equal across groups to test for the measurement invariance, which is impractical in real data analysis and could lead to problems such as poor model fitting. Compared to the traditional method, Bayesian approximate measurement invariance (AMI) allows for small deviance from the exact equality constraints by imposing zero-mean and small variance prior distribution on parameter differences across groups, thus it is more flexible and yields better model fitting. However, studies on AMI so far are limited to the condition of normal data. Since non-normal data is common in the field of psychology and could bias the results, the current study aims to investigate the performance of AMI under non-normal data. In the simulation study, data were generated according to different data distributions, numbers of non-normal items, levels of parameter non-invariance, group sizes, and numbers of groups, resulting in 315 conditions. Base on those simulated data, analyses of EMI with robust maximum likelihood estimator and AMI with different prior variances

were conducted. Results indicated that the model fit index of PPP values in AMI decrease as the level of non-normality and number of non-normal data increase. Performances of factor mean difference estimation are mainly affected by factors other than normality: when the parameter non-invariance is small, bias in factor mean difference estimation of AMI decreases as the level of non-invariance and number of groups decrease as well as group size and prior variance increase; while under large parameter non-invariance, both EMI and AMI methods yield more severely biased and unstable estimation. Finally, an empirical analysis is illustrated to demonstrate the process of the two methods and to support the results of the simulation study. By investigating the influence factors on the performance of AMI under non-normal data, the current research provides insights for the performance of AMI under various conditions and guidelines on its application under non-normal data.

Keywords: Measurement Invariance, Approximate Measurement Invariance, Bayesian Structural Equation Modeling, Non-Normal Distribution

工作记忆负载影响面孔空间频率信息加工的时间进程

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摘要 面孔包含构形信息和特征信息, 在实验中存在多种操纵这两种信息的方法, 如模糊、倒置或面孔空间频率信息。高空间频率 (high-spatial frequency, HSF) 呈现原始图像的精细细节, 低空间频率 (low-spatial frequency, LSF) 保留视觉刺激的整体形态, 因此 LSF 和 HSF 可以分别看作面孔构形和特征信息的加工, 而宽空间频率 (broadband-spatial frequency, BSF) 则是面孔构形和特征信息的整合。先前的研究表明面孔加工遵循“由粗到细 (coarse-to-fine)”的顺序。我们最近的 ERP 研究发现, 在注意资源充足的情况下, 面孔构形信息和特征信息分别对 P1 和 P2 成分更敏感。然而, 工作记忆负载是否影响面孔构形和特征信息加工的先后顺序仍待研究, 尤其是记忆编码和提取阶段的时间进程是否存在差异, 二者在何时进行整合性加工尚不清楚。因此, 本研究采用 3 (面孔记忆负载: 高, 中, 低) × 3 (面孔空间频率: 低频, 高频, 宽频) 的被试内设计, 通过延迟再认任务, 探究工作记忆负载对面孔空间频率信息加工时间进程的影响。行为实验结果显示, 在较高的面孔记忆负载下, 宽频面孔识别效果最好, 其次是低频面孔, 高频面孔最不容易识别, 说明在高记忆负载下面孔构形和特征的整合加工表现较好, 其次是构形加工。ERP 结果表明工作记忆负载调节面孔空间频率信息的加工, 即在编码阶段 N170 上, 低记忆负载下不同空间频率的面孔加工差异最大, 在提取阶段 N170 和 P2 上, 中记忆负载下不同空间频率的面孔加工差异最大。具体来说, P1 和 N170 在编码和提取阶段分别对宽频和低频面孔更敏感, 而 P2 在编码阶段对宽频面孔更敏感, 在提取阶段对高频面孔更敏感。这些结果表明, 记忆编码阶段总体上遵循整合、构形、整合加工的时间顺序, 提取阶段遵循整合、构形、特征加工的时间顺序, 说明“由粗到细”的加工顺序只适用于记忆提取阶段, 而不适用于编码阶段。

关键词 面孔, 构形加工, 特征加工, 面孔空间频率, 工作记忆

Working memory load impacted the time sequence of face spatial frequency

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Abstract: Face contains configural and featural information, there are many ways to manipulate these two kinds of information, such as blurred, inversion or face spatial frequency information. High spatial frequency (HSF) presents fine details of the original image, while low spatial frequency (LSF) retains the large-scale overall shape of visual information. In this case, the process of LSF and HSF can be regarded as configural and featural processing, respectively, and broadband spatial frequency (BSF) is the integration of facial configural and featural information. Previous studies suggested that face processing follows a coarse-to-fine sequence. Recently, our ERP studies found that configural and featural face processing was more sensitive to P1 and P2 component, respectively, with the

attentional resource was sufficient. However, the role of working memory (WM) load in the time course of configural and featural face processing remains to be investigated, especially whether it differs between memory encoding and retrieval stages, and when the two processing information are integration. Therefore, in this study, a 3 (face WM load: load 1, load 2, load 3) $\times$ 3 (face spatial frequency: low spatial frequency, high spatial frequency, broadband spatial frequency) within-subject design was adopted through delayed recognition task. The behavioral results showed that, when WM load was load 3, the recognition of BSF faces was the best, followed by LSF faces, and HSF faces were the least easy to recognize, indicating that under high WM load, the integration of face configural and featural processing is the best, followed by configural processing. ERP results showed that WM load modulated the SF processing, as the difference among different SFs was larger under load 1 at encoding stage on N170 component, and under load 2 at retrieval stage on both N170 and P2 components. Specifically, P1 and N170 were more sensitive to BSF and LSF faces at both encoding and retrieval stages, respectively, whereas P2 was more sensitive to BSF faces at encoding stage and to HSF faces at retrieval stage. These results indicated that the working memory encoding stage generally follows the time sequence of integration, configuration and integration face processing, whereas the retrieval stage follows the time sequence of integration, configuration and feature face processing, suggesting that the coarse-to-fine sequence was applicable to the memory retrieval stage, but not encoding stage.

Keywords: face, configural processing, featural processing, face spatial frequency, working memory

基于成本最小化信息的社会性意图识别：来自脑电和行为的证据

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摘 要 与已有研究着重考察如何识别客体导向性意图(动作以物理对象为目标, 而不涉及其他人)不同, 本研究对人们如何识别社会性意图(动作以指向社会主体为目标以影响对方的交互行为)进行了探讨。基于两交互主体在整体层面应遵循效用最大化的分析, 提出当 A 协助 B 达成目标状态所需要的成本小于 B 单独实现该目标状态所需要的成本时(简称为成本最小化信息), 其可被识别为具有社会性意图。通过在 B 面前设置栅栏的方法操纵成本最小化信息, 以指示不同意图类型的脑电 μ 抑制程度、对不同变化的敏感性(辨别力)为指标, 对该假设进行了检验。结果显示, 相比客体导向性意图的控制条件(即 A 将目标物苹果放置在石头前), 当 A 将目标物苹果放置在被栅栏挡住的 B 前, 其动作可减少 B 单独获取该苹果的动作成本, 即符合成本最小化条件时, μ 的抑制程度更高(实验 1), 且对结构改变(某两个动画中充当相同角色的智能体互换)的辨别力更强, 但对角色交换(某个动画中两个智能体的角色交换)的辨别力更弱(实验 3a); 而当栅栏不存在时, 虽然 A 的运动路径与实验 1 相同, 但 A 将苹果放置在 B 前的成本大于 B 自身获取苹果的成本, 即不符合成本最小化条件, 条件间 μ 抑制的差异消失(实验 2), 且对不同动作模式中变化的辨别相当(实验 3b)。鉴于已有研究表明社会性意图所诱发的 μ 抑制强于客体导向性意图, 且人们对存在社会性意图的两个智能体间的结构改变更容易辨别, 而对角色交换不敏感, 故上述结果揭示, 两个个体的行为是否满足成本最小化影响人们对动作意图的识别, 支持成本最小化信息是社会性意图识别线索的观点。

关键词 意图识别, 客体导向性意图, 社会性意图, 成本最小化, μ 抑制

社会地位知觉对抓握运动的影响

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摘 要 知觉与运动的关系一直是心理学研究的热点问题。前人的研究已经证明, 语言和数字等的知觉对抓握运动具有明显的影响。本研究基于广义数量表征系统模型 (Generalized Magnitude System, GMS), 探究在不同文化体系下, 社会地位知觉对抓握运动的影响。本研究分为两部分实验。第一部分为跨文化的对比实验, 包括实验 1a 和 1b, 分别以中国大学生和西方留学生为对象, 比较相同的社会地位词汇 (县长、省长、总理) 对抓握运动的不同影响。结果发现, 社会地位知觉对抓握运动的影响效应在中国大学生和西方留学生之间存

在差异，中国人在抓握时的反应时和最大抓握孔径受社会地位知觉的显著影响，而西方留学生则不受这种影响。中国人和西方人在社会地位上都有高低的隐喻，但西方人的社会地位知觉与大小的联结程度与中国人存在差异。上述结果表明，社会地位知觉对抓握运动大小度量的影响是源于社会地位中大小隐喻的强烈联结和自动化激活。第二部分在实验 1a 的基础上，通过给被试呈现不同差距的社会地位对比（县长与总理；省长与总理），进一步探究社会地位在抓握运动大小度量系统中的表征特征。结果表明，抓握运动大小度量系统对社会地位知觉的表征方式是提取“大小对比”的信息，并没有表征具体的差异量。

研究结论表明，社会地位知觉能够通过其大小对比隐喻的激活影响抓握运动的计划和执行，且抓握运动系统对知觉信息的加工是基于相对大小，而不是绝对大小。

关键词 社会地位知觉，抓握运动，跨文化研究，广义数量表征系统模型

The influence of social status perception on grasping

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Abstract: The relationship between perception and action has always been a hotspot issue of psychological research. According to the previous research, the perception such as semantics and number modulates reaction time and grip apertures of grasping. Based on the generalized magnitude system (GMS), the present research is aimed at studying the influence of social status perception on grasping across different cultures. The study is divided into two parts. The first part is a cross-cultural research, including experiment 1a and 1b. Having Chinese and Western college students participated in the study, we examined whether the effect of the same social status words (Mayor, Governor and Prime Minister) on grasping movements varies across cultures. The result indicated that social status perception had different influence patterns on students from different culture systems. The researchers found that the response time and maximum grip aperture were significantly affected by social status perception in the Chinese student group, while there was no significant effect in the Western student group. Both Chinese and Western participants share the same space metaphor “up and down” for social status. But they are different in the magnitude metaphor “big and small” where Chinese have much stronger magnitude metaphor than the westerners. Therefore, we concluded that social status perception influenced the grasping movement through the automatic activation of magnitude metaphor in the social status. The second experiment is based on experiment 1a. By changing the distances between two social status words (Mayor and Governor; Mayor and Prime Minister) in the experiment, the researchers explored how the grasping system represented the social status distance. The results showed that the grasping system of grasping movement represented the difference of social status by extracting the abstract magnitude information (bigger vs. smaller), instead of the concrete distance of social status.

The present research suggested that social status perception could affect the plan and control of grasping through the automatic activation of magnitude metaphor in the social status. Moreover, the grasping system might process information from the perception of relative magnitude instead of absolute magnitude.

Keywords: Social status perception, Grasping, Cross-cultural research, Generalized magnitude system

Dissociation of Familiarity and Recollection Retrieval Processing on FN400 Under Working Memory N-BACK Paradigm

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Abstract: As a memory retrieval method, recognition involves two dissociated processes: familiarity and recollection. Previous studies employing the N-BACK paradigm have found that working memory (WM) is mainly based on recollection but not familiarity recognition. However, this may be caused by indirect manipulation of the recognition

task. Furthermore, it is unclear when and where the two retrieval methods dissociate. Therefore, the current study aimed to investigate the neural mechanisms underlying WM retrieval using the N-BACK paradigm. We adjusted the N-BACK paradigm to include a recollection and familiarity retrieval that differed in the test stage: the former presented only one test stimulus, while the latter presented two test stimuli. As a result, the late positive complex (LPC) was greater in the familiarity task, and decreased as the memory load increased, indicating that the difference in the LPC between familiarity and recollection may be caused by processing difficulties. However, the frontal N400 (FN400) component was not modulated by memory loads. Importantly, the amplitude of the FN400 component was greater and occurred earlier in the familiarity task than in the recollection task, indicating that the FN400 reflected WM retrieval. Taken together, the current study found that the LPC component reflects processing difficulty, while the FN400 component is responsible for dissociating the retrieval methods and is more sensitive to familiarity-based processing.

Keywords: Working memory retrieval, familiarity processing, N-BACK, ERP, FN400

面孔特征信息在种族识别中的作用：面孔-词 Stroop 效应

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摘要 面孔是一种常见的视觉刺激, 其所包含的种族信息在人们辨别不同族群、识别身份信息过程中发挥了重要作用。为了探究面孔特征在种族信息判断中的作用, 本研究采用面孔-词 Stroop 实验范式进行了 2(面孔种族: 本族、异族)×3(汉字出现部位: 眼睛、鼻子、嘴巴)×2(面孔汉字: 一致、不一致)的被试内实验设计。实验一要求被试判断面孔的种族, 结果发现, 面孔种族和汉字出现部位存在显著交互作用, 简单效应分析发现, 本族面孔识别, 眼睛作用较大, 嘴巴的作用较小; 而异族面孔识别, 眼睛作用较大, 鼻子的作用较小。汉字出现部位与面孔汉字的交互作用显著, 进一步分析发现, 汉字出现在眼睛时 Stroop 效应最大。面孔种族与面孔汉字显著的交互作用表明, 本族面孔较异族面孔诱发更大的 Stroop 效应。为了增加汉字对面孔种族判断的干扰, 诱发更大的 Stroop 效应, 实验二要求参与者不仅要判断面孔种族而且要出声读出汉字, 反应时结果发现三因素交互作用显著, 进一步分析发现, 对本族面孔来说, 汉字出现在嘴巴部位诱发的 Stroop 效应较大; 对异族面孔来说, 汉字出现在鼻子诱发的 Stroop 效应较大。正确率上的面孔种族与面孔汉字的交互作用也发现本族面孔诱发更大的 Stroop 效应。但是, 上述两个实验都是向被试呈现正立面孔, 为了探究面孔构形信息受到破坏时, 特征信息在种族识别中的作用, 实验三使用了倒置面孔图片并重复了实验二的过程, 结果发现面孔种族和汉字出现部位之间存在交互作用, 简单效应分析结果表明识别本族面孔时眼睛作用较大, 鼻子和嘴巴的作用较小; 识别异族面孔时眼睛作用最大, 其次是嘴巴, 鼻子的作用较小。但是, 倒置面孔下的 Stroop 效应不受面孔种族和汉字出现部位的影响。综上, 本研究表明眼睛包含了种族识别的关键信息, 在正立和倒置面孔的识别中都有重要作用, 嘴巴在异族面孔判断中的作用高于本族面孔。

关键词 面孔, 种族, 特征, 倒置面孔, Stroop 效应

The Role of Face Featural Information in Face Racial Recognition: Evidence from Face-Word Stroop Effect

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Abstract: Face is a kind of common visual stimulus, and the racial information it contains plays an important role in distinguishing different ethnic groups and discerning identity information. An experiment designed of 2(face race: own-race vs. other-race)×3(face feature: eyes vs. nose vs. mouth)×2(face Chinese characters: consistent vs. conflicting) was adopted to investigate the role of face featural information in recognizing face race. The participants were required to distinguish the race of faces in Experiment 1, and the results showed a significant interaction between face race and face feature. Simple effect analysis found that the role of eyes was greatest in recognizing the

own-race faces, and the mouth was worst; while in the recognition of other-race faces, eyes' function was greatest, and nose' function was worst. The interaction between face feature and face Chinese characters was significant. Further analysis showed that the Stroop effect was the largest when the Chinese characters appeared on the eyes. The significant interaction between face race and face Chinese characters indicated that the own-race faces had a greater Stroop effect than the other-race faces. In order to increase the interference of Chinese characters on the face race judgment and elicit a greater Stroop effect, Experiment 2 required participants not only to judge the face race but also read the Chinese characters aloud. It was found that the three factors had a significant interaction. For the own-race faces, the mouth part had a greater Stroop effect; for the other-race faces, the nose had a greater Stroop effect. The interaction of face race and face Chinese characters on the correct rate also found that own-race face had a greater Stroop effect. However, the upright faces were presented in these two experiments. To explore the role of features in race recognition when the face configural information was destroyed, Experiment 3 presented the inverted faces with the same task in Experiment 2. The results found that there was an interaction between the face race and the face feature. The simple effect analysis results showed that the eyes had a greater role and the nose and mouth had a smaller role in recognizing the own-race faces; when recognizing the other-race faces, the eyes had the largest effect, followed by the mouth and the nose had the smallest effect. However, the Stroop effect with the inverted faces was not affected by face race and face feature. In summary, the study showed that the eyes contained the key information for racial recognition and played an important role in the recognition of upright and inverted faces. At the same time, the role of the mouth in the judgment of other-race faces is higher than that of own-race faces.

Keywords: Face, Race, Feature, Inverted Face, Stroop Effect

医生人性观结构与影响因素的问卷研究： 医患信任在医患冲突与去人性化间的中介作用

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摘 要 目的：探索医生去人性化在医疗实践中的结构及其影响因素。方法：使用自编社会人口学资料基本情况调查问卷、医患关系基本情况调查问卷、就医人性观问卷作为测量工具，采用随机抽样选取全国多个省份（云南、浙江、黑龙江、湖南、上海、江苏等）中各类医院的医生作为研究对象，共计发放问卷 2000 份，回收问卷 1762 份，有效问卷 1412 份，有效问卷回收率为 70.6%。使用 SPSS 26.0、Mplus 8 软件进行探索性因素分析、验证性因素分析，以确定医生去人性化的结构；进行结构方程模型分析以建立医生去人性化影响因素模型。结果：通过对有效问卷样本进行随机分半，对其中一半样本 695 例进行探索性因素分析发现医生去人性化结构由动物化、机械化和医疗问题综合三个因子构成，分别解释总变异的 36.249%、24.197%、9.151%。对另一半样本 717 例进行验证性因素分析发现因素分析模型拟合良好，拟合指数 CFI=0.904>0.9, TLI=0.876>0.8, SRMR=0.069<0.08。通过结构方程模型发现医患冲突（言语冲突、肢体冲突）会作用于医患信任（人际信任、制度信任），从而影响医生人性观中的动物化、机械化、医疗问题综合因素（拟合指数 CFI=0.913>0.9, TLI=0.895>0.8, RMSEA=0.073<0.08, SRMR=0.059<0.08）。结论：1. 医生就医人性观的结构可以分为 3 个维度，分别是动物化、机械化和医疗问题综合；2. 医生曾经经历过的医患冲突会导致其医患信任的下降，却能够进而导致其人性观得分有所提高。

关键词 去人性化，医患冲突，医患信任，因子分析，结构方程模型

A Questionnaire Study on the Structure and Influences of Physicians' View of Human Nature: The Mediating Role of Doctor-Patient Trust between Doctor-Patient Conflict and De-Humanization

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Abstract: Objectives: To explore the structure of physician dehumanization in medical practice and its influencing factors. Methods: Using the self-prepared socio-demographic data basic situation questionnaire, doctor-patient relationship basic situation questionnaire, and doctor's humanistic view of medical practice questionnaire as the measurement tools, a total of 2000 questionnaires were distributed, 1762 questionnaires were returned, and 1412 questionnaires were validated by random sampling of doctors from various types of hospitals in several provinces (Yunnan, Zhejiang, Heilongjiang, Hunan, Shanghai, Jiangsu, etc.). The valid questionnaire return rate was 70.6%. Exploratory factor analysis and confirmatory factor analysis were performed using SPSS 26.0 and Mplus 8 software to determine the structure of physician dehumanization; structural equation modeling was performed to model the influencing factors of physician dehumanization. Results: Exploratory factor analysis of half of the validated questionnaire sample revealed that the structure of physician dehumanization consisted of three factors: animalization, mechanization, and medical problem synthesis, which explained 36.249%, 24.197%, and 9.151% of the total variation, respectively. The confirmatory factor analysis of the other half of the validated questionnaire sample found that the factor analysis model fit well, with fit indices CFI=0.904>0.9, TLI=0.876>0.8, SRMR=0.069<0.08. The structural equation model found that doctor-patient conflict (verbal conflict, physical conflict) would act on doctor-patient trust (interpersonal trust, institutional trust), thus Factors influencing animalization, mechanization, and medical problem synthesis in physicians' view of human nature (fit index CFI=0.913>0.9, TLI=0.895>0.8, RMSEA=0.073<0.8, SRMR=0.059<0.08). Conclusion: 1. The structure of physicians' view of human nature can be divided into 3 dimensions, namely animalization, mechanization, and medical problem synthesis; 2. Physicians' experience of physician-patient conflict can lead to a decrease in physician-patient trust, but can then lead to an increase in their view of human nature score.

Keywords : Dehumanization, Doctor-patient conflict, Doctor-patient trust, Fact Analysis, Structural Equation Modeling

粤语惯用语语义性质及其内部关系研究——兼与汉语惯用语数据对比

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摘要 通过分析 435 名熟练粤语-普通话双语者对 190 个不同结构的粤语三字格惯用语的语义性质评定结果,探究各项性质间的相互作用关系。结果表明,熟悉性、可理解性、可表象性、字面合理性、词素贡献、分解性、预测性、习得年龄两两之间均相关显著;习得年龄与其它语义性质间存在显著负相关。回归分析显示,熟悉性是影响粤语惯用语预测性的主要因素;“2+1”偏正结构惯用语分解性效应显著。动宾结构惯用语熟悉性效果显著。整词惯用语可表象性效应显著。熟悉性、字面合理性、可表象性是影响惯用语的可理解性的主要因素;熟悉性对 4 类结构惯用语的可理解性均有显著影响;除熟悉性外,对于整词惯用语,可理解性的影响因素还包括可表象性和分解性;字面合理性对另 3 类结构惯用语均有影响;粤语惯用语在理解进路与汉语歇后语存在差异,个体更依赖熟悉性的作用。

关键词 粤语, 惯用语, 语义性质, 熟悉性

A study on the semantic properties and internal relations of Cantonese idioms -- a comparison with Chinese idioms

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Abstract: Based on the analysis of the semantic properties of 190 Cantonese three character idioms with different structures by 435 proficient Cantonese Putonghua bilinguals, this paper explores the interaction between the properties. The results show that familiarity, comprehensibility, representativeness, literal rationality, morpheme contribution, decomposability, predictability and acquisition age are significantly correlated, while acquisition age is negatively correlated with other semantic properties. Regression analysis shows that familiarity is the main factor affecting the prediction of Cantonese idioms, and the decomposition effect of 2 + 1 positive structural idioms is significant. The familiarity effect of verb object structure idioms is significant. The whole word idiom has a significant representational effect. Familiarity, literal rationality and representativeness are the main factors that affect the comprehensibility of idioms; familiarity has a significant impact on the comprehensibility of the four types of structural idioms; in addition to familiarity, for the whole word idioms, the factors that affect the comprehensibility also include representability and decomposition; literal rationality has an impact on the other three types of structural idioms; Cantonese idioms are in the process of understanding There are differences between Cantonese idioms access and two-part allegorical sayings access, and individuals are more dependent on familiarity.

Keywords: Cantonese; idioms; Semantic properties; familiarity

Reward weakened inhibition of return (IOR) in the near depth plane

Lu FeiFei

Abstract: In attentional orienting, researchers have proposed that reward history is a category of attentional control, as the reward value might enhance the spatial attention process to achieve more efficient goal-directed behavior and to improve target-detection performance. Although the effect of reward-induced motivation on attentional orienting has been studied in two-dimensional (2-D) space, the specific mechanisms underlying the influence of reward on inhibition of return (IOR) of attentional orienting in three-dimensional space (3-D) remain unclear. In the present study, by incorporating the Posner spatial-cueing paradigm into a virtual 3-D environment, we aimed to investigate the influence of reward on IOR in 3-D space. The results showed the following: (1) IOR size in the rewarded condition was smaller than IOR size in the unrewarded condition in the near depth plane, resulting in an IOR difference with or without reward. (2) Reward weakened IOR in the near depth plane because the response to the uncued location was slowed, not because the response to the cued location was accelerated. The present study indicated that the different depth planes of the target location in 3-D space could influence the interaction between reward and IOR, and reward weakened IOR in the near depth plane.

Keywords: Three-Dimensional (3-D) Space, Inhibition of Return (IOR), Reward

韵律对汉语句子阅读中“N 的 V”结构加工的制约

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摘要 研究表明内隐韵律能够促进书面文本的理解和加工, 但以往研究多集中在对重音节拍语言的考察, 而较少关注汉语这类音节节拍语言中内隐韵律的作用。本研究采用 EyeLink 1000 眼动仪, 探讨了汉语句子阅读过程中, 动词“V”的音节数如何影响“N 的 V”结构的分析过程, 以及这种韵律约束是否与“N”和“V”之间两类语义关系存在交互作用。研究结果发现: 读者对单音节动词的注视时间长于双音节动词, 并且对含单音节动词的异常韵律模式有更多的回视。此外, 动词后区域存在音节与语义关系的交互作用, 只有在受事语义关系中, 单音节动词条件下对该区的凝视时间才显著长于在双音节动词条件下的凝视时间。当前结果表明, 汉语

读者偏好含双音节动词的“N 的 V”韵律模式，且这种偏好的强度在受事语义关系下更强。本研究证实了汉语韵律信息在句子理解早期阶段的即时加工，并为内隐韵律假说提供了来自汉语的证据。

关键词 韵律模式制约，语义关系，无声阅读，眼动追踪，汉语“N 的 V”结构

Prosodic Constraints in Silent Reading: An Eye Tracking Study investigating Chinese “N de V” Construction

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Abstract: Evidence suggests that implicit prosody can facilitate the processing of written texts. Although there is considerable research on stress-timed languages, the role of implicit prosody in syllable-timed languages, such as Chinese, has not received much attention. The current study explored the cross-linguistic universality of local prosody and how it interacts with the semantic relations of component words (“N” and “V”) in the Chinese “N de V” construction. Eye movements were recorded for Chinese sentences having a “N de V” construction that differed in the number of a verb’s syllables. The results showed that monosyllabic verbs received longer fixation durations than disyllabic verbs, and more regressions were made to anomaly prosodic patterns containing monosyllabic verbs. Moreover, there were interactions between the prosodic pattern and semantic relations in the post-verb area. The findings suggest that Chinese readers prefer the “N de V” prosodic pattern with disyllabic verbs and the preference is stronger in “patient-verb” semantic relationships. Notably, the findings demonstrate the immediate availability of prosodic information in sentence processing in Chinese. They also provide evidence from Chinese sentence reading for the Implicit Prosody Hypothesis.

Keywords: Prosodic pattern constraints, semantic relation, silent reading, eye tracking, Chinese “N de V” construction

不同维度时间-空间映射机制的分离：来自 EEG/ERP 的证据

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摘要 人对时间和空间的心理表征有着密切的关系。人类经常用具体的空间信息来表征抽象的时间信息，比如时间-空间映射或心理时间线。以往的行为研究发现，不同维度上的时间-空间映射似乎有着不同的起源和机制。左右维度的时空映射起源于与阅读书写习惯相关联的感觉运动经验，其内在机制是一种低水平的感觉运动机制；而前后维度时空映射起源于语言中的空间隐喻，是一种高水平的语义加工机制。本研究则进一步采用 EEG/ERP 技术，来探索前后和左右维度时空映射是否存在神经机制的分离。我们采用了经典的 STARC 效应范式并通过游戏摇杆来收集反应，记录被试的行为和脑电数据。行为结果表明，无论是在前后还是水平维度，不一致条件下被试的反应时均显著高于一致性条件，证明了两个维度都存在时空映射；基于反应锁定的 ERP 结果则发现，前后维度和左右维度在不一致反应和一致反应的差异波上存在明显差异；进一步的时频分析结果表明，当发生时空匹配冲突时，左右维度在顶叶的β频段（13-18HZ, 150-200ms）和额叶的θ频段（4-7HZ, 200-400ms）比前后维度上都有更强的功率。最后我们还采用了机器学习（支持向量机 SVM）的方法进一步验证了结果。总之，上述结果都支持前后和水平维度的时空映射机制确实存在分离，具有不同的神经生理基础。

关键词 时间-空间映射，STARC 效应，实验性分离，前后和左右维度

Dissociative Neural Mechanisms of Time-Space Mapping in Different Space Dimensions: Evidence from EEG / ERP

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Abstract: Time and space are closely connected. Human beings often use specific spatial information to represent

abstract temporal information, such as time-space mapping or mental timeline. Previous behavioral studies have found that time-space mapping in different dimensions seems to have different origins and mechanisms. The horizontal space-time mapping originated from the sensorimotor experience associated with reading and writing habits, which is a low-level sensorimotor mechanism. While the sagittal space-time mapping originated from the spatial metaphor in the language, which is a high-level semantic processing mechanism. In this study, electroencephalographic (EEG) was further used to explore the dissociation of the neural mechanism of spatio-temporal mapping in sagittal and horizontal dimensions. We adopted the classic STARC effect paradigm and joystick to respond, recording the behavior and EEG data. The behavioral results showed that the response times under inconsistent conditions are significantly higher than that under consistent conditions, both in sagittal and horizontal dimensions, which proved that there is a spatio-temporal mapping between the two dimensions. The event-related potential (ERP) results of response-locked analytical techniques indicated that there are significant differences in the difference waves between inconsistent response and consistent response both in the sagittal and horizontal dimensions. Further time-frequency analysis results showed that when spatio-temporal mapping conflict occurs, the parietal beta-band and the frontal theta-band (4-7 Hz, 200-400 ms) in the horizontal dimension have a larger power than which in the sagittal dimension. Finally, we used machine learning (support vector machine) to further verify the results. In conclusion, the above results supported that the spatio-temporal matching mechanism of sagittal and horizontal dimensions are indeed separated and have different neurophysiological foundations.

Keywords: time-space mapping, STARC effect, experimental dissociation, sagittal and horizontal dimensions

(2) 硕士研究生论坛—基础心理学分场 2

持续注意任务状态下额叶脑电节律波 beta 和 theta/beta 特性的比较研究

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摘 要 额叶的 theta / beta 作为持续注意神经反馈训练的脑电指标, 被广泛应用于注意缺陷多动障碍的干预治疗等领域。最近的几项荟萃分析认为对于持续注意的神经反馈训练, beta 比 theta / beta 更有效, 因为以往文献比较一致地报告了在较高持续注意需求的任务中, beta 的功率会升高。然而, 与 theta / beta 相比, beta 对于持续注意是否有更好的特异性和敏感性还不清楚。针对这一问题, 本研究结合脑电技术和行为任务开展了一项实验。66 名健康大学生受试者完成了高/低持续注意需求的两类任务, 即两选择反应时任务和简单注视任务。根据行为指标(个体内反应时变异系数)由低到高的顺序, 受试者被分为高注意水平组(22 人, 女 12 人, 排序位于前 1/3)和低注意水平组(22 人, 女 10 人, 排序位于后 1/3)。两组受试者在不同任务状态下的 beta 功率以及 theta 与 beta 功率的比值被提取出来(Fz 电极)。此后, 我们以持续注意水平(被试间变量, 高/低注意水平组)和任务状态(被试内变量, 高/低注意任务状态)为自变量, 分别对 beta 及 theta/beta 进行重复测量方差分析。研究结果表明 beta 和 theta / beta 在持续注意水平和任务状态两个自变量间的交互作用显著(beta: $F_{(1, 40)}=5.6, p=0.02$, theta / beta: $F_{(1, 40)}=6.9, p=0.012$)。两个脑电指标在任务状态变量上的主效应显著(beta: $F_{(1, 40)}=4.7, p=0.03$, theta / beta: $F_{(1, 40)}=63.8, p=0.001$)。高低注意水平组的 theta / beta 随着任务持续注意需求的增加都呈现出显著升高($t_{\text{高水平}}=2.81, p=0.005$; $t_{\text{低水平}}=17.3, p<0.001$)。而对于 beta, 只有高注意水平组会响应任务持续注意需求的改变($t_{\text{高水平}}=2.37, p=0.01$; $t_{\text{低水平}}=-0.34, p=0.37$)。这些结果表明 beta 与 theta/beta 都对持续注意有敏感性, 但 beta 对持续注意的响应只存在于高注意水平受试者。值得注意的是, beta 与 theta/beta 这两个脑电指标在持续注意水平变量上主效应都不显著(beta: $F_{(1, 40)}=1.05, p=0.31$,

theta / beta : $F_{(1, 40)}=0.42, p=0.52$), 说明这两个脑电指标不能区分不同持续注意水平的受试者。这些发现揭示了持续注意任务状态下脑电节律波指标的特性, 为持续注意神经反馈训练中脑电反馈指标的选择提供了指导依据。

关键词 脑电, 持续注意, theta/beta, beta, 神经反馈

A comparative EEG study of frontal beta and theta/beta ratio in the tasks of sustained attention

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Abstract: The ratio of frontal theta to beta activity (theta/beta ratio) of electroencephalogram (EEG) is commonly employed as a neurofeedback indicator in the field of intervention practice of attention deficit. Recently, several meta-analysis studies suggested that the frontal beta activity could be more effective than frontal theta/beta ratio for the neurofeedback practice, because previous literatures have consistently identified increased power of frontal beta in tasks with high-level requirement of sustained attention. However, it remains unclear whether beta activity has better specificity and sensitivity for sustained attention as compared it with theta/beta ratio. To address this issue, the present study performed an experiment using EEG and behavioral tasks. 66 healthy college students were recruited to complete two tasks with high/low requirement of sustained attention, i.e. two-choice response task and simple fixation task. According to the order of lowest to highest behavioral measurement (coefficient of variation of reaction time), high- and low-level attention groups were acquired (ranked in the top/bottom 1/3 of all subjects, 22 individuals for each group). The power of frontal beta and theta/ beta ratio were calculated first for the subjects in each group and in each task (Fz electrode). A repeated measure of analysis of variance was performed with the factors of the attention (between-subject factor, two levels of high and low ability of attention), and task (within-subject factor, two levels of high and low requirement of attention) to determine the specificity and sensitivity of beta and theta/beta ratio for sustained attention. Our results showed that the power of beta and theta/beta ratio have significant interactions effect between the factors of attention and task (beta: $F_{(1, 40)}=5.6, p=0.02$, theta / beta ratio: $F_{(1, 40)}=6.9, p=0.012$). Both beta and theta/beta ratio showed significant main effect of the factor, task (beta: $F_{(1,40)}=4.7, p=0.03$; theta/beta ratio: $F_{(1, 40)}=63.8, p=0.001$). The theta/beta ratio in both of the high- and low-level attention group showed a significant increase($t_{high}=2.81, p=0.005$; $t_{low}=17.3, p<0.001$) in response to the increased requirement of sustained attention for performing tasks. As for the frontal beta, only the high-level attention group responded to the task with increased requirement of sustained attention ($t_{high}=2.37, p=0.01$; $t_{low}=-0.34, p=0.37$). These results indicate that both beta power and theta/beta ratio are sensitive to sustained attention, but the response of beta to sustained attention only exists in subjects with high-level attention but not in subjects with low-level attention. It is worth noting that both beta and theta/beta ratio have no significant main effect of the factor, attention (beta: $F_{(1,40)}=1.05, p=0.31$, theta/beta ratio: $F_{(1, 40)}=0.42, p=0.52$), and then, the two EEG indicators could not distinguish subjects with different levels of sustained attention. These findings reveal the characteristics of EEG rhythmic oscillation for responding to sustained attention, and also provide theoretical basis for the selection of EEG indicators in the neurofeedback practice of sustained attention.

Keywords: electroencephalogram, sustained attention, theta/beta ratio, beta, neurofeedback

小样本情况下错误先验信息对贝叶斯估计的影响： 基于多层模型的研究

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摘要 在心理学、教育学和组织行为学等领域的研究中，研究者往往需要利用多层模型解决多层数据中非独立性观测可能带来的问题。在多层模型中，基于传统频率学派的极大似然估计方法(Maximum Likelihood, ML)需要依赖大样本，在小样本下容易出现参数估计及模型收敛等方面的问题。贝叶斯估计在小样本的情况下往往具有更大的优势，但与此同时，也更容易受到先验信息主观设置的影响。为了探讨贝叶斯估计中错误先验信息可能带来的负面影响，并与传统方法进行对比，本文基于多层模型，利用蒙特卡洛模拟，研究在不同样本量和组内相关系数(Intraclass Correlation Coefficient, ICC)的情况下，设有不同信息强度和偏差程度的先验信息对贝叶斯估计的影响。总体结果显示，贝叶斯估计中均值严重偏离真值的先验分布会对参数估计带来较大的负面影响，特别是在 ICC 较大、群组样本量较小、以及先验分布方差较小的情况。本文对多层模型中错误先验信息对贝叶斯估计的影响进行研究并提出建议，希望为贝叶斯估计中先验分布的设置提供一定的理论补充及实证参考。

关键词 多层模型，小样本，贝叶斯估计，错误先验信息

The Influence of Inaccurate Informative Priors on Bayesian Estimation in Small Samples: A Study Based on Multilevel Modeling

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Abstract: In the research of psychology, education, and organizational behavior, researchers often need to conduct multilevel modeling to solve the statistical problems caused by non-independent observations. Traditional frequentist-based maximum likelihood (ML) approach, which relies on large-sample theory, might lead to problems in parameter estimation and model convergence in multilevel modeling with small samples. In contrast, Bayesian approach is often more advantageous in small samples, but it is also more susceptible to the subjective specification of priors. To investigate the potentially detrimental effects of inaccurate prior information on Bayesian approaches and compare their performance to the traditional approaches, we conducted a series of simulations under the multilevel model framework with different sample sizes and intraclass correlation coefficients (ICCs). In sum, the results revealed the devastating impacts of inaccurate prior information on Bayesian estimation, especially in the cases of larger ICC, smaller level 2 sample size, and smaller prior variance. The present study investigated the impacts of inaccurate prior information on Bayesian estimation and provided advice on the specification of priors. We hope that it could contribute to strengthening the theoretical and practical understanding of prior specifications.

Keywords: Multilevel Modeling, Small Samples, Bayesian Modeling, Inaccurate Prior Information

情绪面孔中定向遗忘效应的产生机制

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摘要 定向遗忘效应是指在实验条件下个体能够采取自上而下的策略主动限制对遗忘项目的记忆的一种现象。目前定向遗忘效应的产生机制存在两种解释，一是选择性编码理论，二是抑制控制理论。以往研究使用词汇、图片等材料作为研究对象，但未探讨人物面孔定向遗忘效应的产生机制。此外，愤怒和愉悦表情影响认知过程，即个体更难主动遗忘情绪性信息，特别是负性信息，同时表情感知和认知过程都会受到面孔性别

的影响。因此,本研究通过3个实验探究情绪表情、面孔性别对面孔身份识别中定向遗忘效应的影响,并进一步澄清情绪面孔中定向遗忘效应的产生机制。实验1采用项目法定向遗忘范式,操控情绪表情(愤怒、愉悦)和面孔性别(女性、男性)以验证不同表情和性别对定向遗忘效应的影响。实验2在实验1的基础上改变学习阶段材料的呈现时间,探究情绪面孔加工过程中是否存在选择性编码。实验3使用颜色作为认知线索,为抑制控制理论寻找行为层面的证据。实验1的结果发现,愤怒面孔的成绩显著好于愉悦面孔,和男性面孔相比,女性面孔的成绩也更好;实验2的结果发现,随着学习阶段材料呈现时间的增加,定向遗忘效应消失,说明记住项目和遗忘项目的成绩差异不是由于选择性编码;实验3的结果发现,和无线索提示相比,线索出现时个体再认成绩更高,尤其是遗忘项目,说明认知线索的出现解除了抑制控制从而促进了个体对面孔的识别。本研究结果表明:(1)和愉悦表情相比,愤怒表情能够促进信息编码和巩固信息;(2)个体对女性面孔的识别和记忆优于男性面孔;(3)情绪面孔中定向遗忘效应的产生非选择性编码,更可能是由于抑制控制。

关键词 定向遗忘, 情绪表情, 面孔识别, 抑制控制

Mechanism of directed forgetting effect in emotional faces

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Abstract: Directed forgetting effect refers to a phenomenon that individuals can adopt top-down strategies to actively limit the memory of forgetting items under experimental conditions. At present, there are two explanations for the mechanism of directed forgetting effect. One is selective coding theory, the other is the theory of inhibition control. Previous researches have studied different experimental materials, including words and pictures etc., while have not discussed the mechanism of directional forgetting effect in faces. What's more, anger and pleasure expressions affect the cognitive process, that is, it is more difficult for individuals to actively forget emotional information, especially negative information, and both facial perception and cognitive process are affected by the gender of the face. This study explored the effects of emotional expression and face's gender on directed forgetting effect through three experiments, and clarified the mechanism of directed forgetting effect in emotional face. Experiment 1 used the item directed forgetting paradigm and manipulate emotional expressions (anger, pleasure) and face gender (female, male) to verify the effect of different expression and face gender on directed forgetting effect. Based on the results of experiment 1, experiment 2 changed the presentation time of materials in the learning stage to find out whether there was selective coding in the processing of emotional faces. Experiment 3 provides empirical evidence for the inhibition control theory using color as a cognitive cue. Experiment 1 showed that angry faces scored significantly better than happy faces, compared male face, female face performed better too; The results of experiment 2 showed that the effect of directed forgetting gradually disappeared with the increase of the material presentation time in the learning stage, indicating that the difference in performance between the remembered items and the forgotten items was not due to selective coding. The results of experiment 3 showed that, compared with the non-cue, the recognition performance of individuals was higher when the cue was presented, especially the forgetting items. The appearance of cognitive cue lifted the inhibition control and promoted the recognition of faces. Based on this, this study has drawn the following three conclusions: (1) compared with the happy expression, the angry expression can promote the encoding and consolidation of information; (2) the recognition and memory of female faces is better than that of male faces; (3) The directed forgetting effect in emotional faces is not selectively encoded, and is more likely due to inhibitory control.

Keywords: directed forgetting, emotional expression, face identification, inhibition control

基本情绪的神经基础:来自 fMRI 与机器视觉技术研究的证据

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摘要 基本情绪理论(basic emotion theory)是情绪科学领域最具代表性的理论, 该理论认为人类情绪是由有限的几种基本情绪组成的, 如恐惧、愤怒、喜悦、悲伤等。基本情绪是为了完成基本生命任务(fundamental life task)进化而来的, 每一种基本情绪都有独特的神经结构和生理基础。尽管基本情绪理论被广泛接受, 但是人类具体有几种基本情绪却莫衷一是。近几十年来, 许多 fMRI 研究试图确定各种基本情绪的独特神经结构基础, 而且取得了许多重要发现, 比如厌恶和脑岛有关, 悲伤和前扣带回有关, 杏仁核是与恐惧有关的重要边缘结构等。但是, 最近有人进行了元分析研究, 发现许多基本情绪存在混淆的大脑区域, 因此对基本情绪的特定脑区理论提出质疑, 甚至否定基本情绪理论。本文通过对基本情绪理论的最新功能性磁共振成像研究进行综述, 提出有关基本情绪理论的争论来源于基本情绪种类的确定, 因为许多所谓的不同基本情绪实际上是同一种基本情绪。本文进一步通过对基本情绪及其神经基础进行探讨, 并根据机器视觉技术应用于基本情绪脑影像研究的探索, 提出人类可能只有三种基本情绪。本文还指出基于机器视觉技术的基本情绪研究在心理疾病诊断与治疗领域的应用前景, 这不仅为基本情绪理论的实证研究提供新思路, 还拓展了其在心理疾病诊疗等领域的意义。

关键词 基本情绪, 情绪维度, fMRI, 机器视觉, 心理疾病

Basic emotion and its neural basis: Evidence from fMRI and machine-vision studies

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Abstract: Basic emotion theory is the most representative theory in the field of emotion science, which holds that human emotions are composed of a limited number of basic emotions, such as fear, anger, joy, sadness and so on. Basic emotions are evolved for fundamental life tasks, and each basic emotion has its own unique neural structure and physiological basis. Although basic emotion theories are widely accepted, there is little agreement on specific basic emotions. In recent decades, many fMRI studies have attempted to determine the unique neural structural underpinnings of each of the basic emotions, and made many important findings, such as disgust is related to the insula, sadness is related to the anterior cingulate gyrus, and the amygdala is an important limbic structure related to fear. However, recent meta-analysis studies have found that many basic emotions share many brain regions. Therefore, the theory of specific brain regions of basic emotions has been questioned and even denied. This paper takes the basic emotion theory and its arguments as clues, and proposes that these arguments stem from the number determination of basic emotions, because many so-called different basic emotions are actually one kind of basic emotion. In this paper, we sort out and discuss the emotion theories based on the basic emotion theories and its arguments. Then, the basic emotions and their neural basis are discussed; the application of machine vision technology to basic emotional brain imaging is proposed, the opinions of humans may have only three basic emotions is proposed, the application prospect of basic emotion research based on machine-vision in the diagnosis and treatment of mental diseases is proposed. Through these work, we hope to provide a new idea for the empirical research of basic emotion theory, and expand its significance in the diagnosis and treatment of mental diseases.

Keywords: basic emotion, emotional dimension, fMRI, machine-vision, mental disease

神经反应和表征：场景中的面部表情

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摘要 已有研究表明，大脑基于场景产生预期从而影响面部表情的识别。然而，二者如何相互作用依然没有得到确切的回答。在此，本研究使用频率标记技术和脑电解码技术探讨了基于场景的预期对面部表情表征和神经活动的影响。参与者被要求观察模糊或清晰的面部表情的情绪动态变化，这些表情图片嵌入在场景图片中以 6Hz 的频率闪烁。结果发现，无论是清晰条件还是模糊条件下，与场景情绪意义一致的面部表情都比与场景不一致的面部表情诱发了更大波幅的稳态视觉诱发电位(steady-state visual evoked potentials, SSVEP)。对于面部表情表征强度，我们发现在清晰条件下，与场景预期一致的面部表情表征强于与场景不一致的面部表情表征。在模糊条件下，与场景预期不一致的面部表情表征强于与场景一致的面部表情表征。总之，这些结果表明在视觉皮层面部表情的加工受到自上而下的影响。清晰性调节了这种基于场景的预期对表情表征的影响。此外，我们的研究也显示了神经激活和表征强度并不是相对应的。

关键词 面部表情，场景，预期，表征，稳态视觉诱发电位，神经解码

Neural response and representation: facial expression in the scene

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Abstract: Previous studies have shown that the brain generates expectations based on scene that affect facial expression recognition. Yet, although known to interact in perception, how facial expression and scene interact is still poorly understood. Here, we used frequency labeling and decoding techniques to reveal the effects of scene-based expectation on the amplitude and representational content of neural activity. Participants viewed emotional changes in clear or ambiguous facial expressions, which flickered at a rate of 6 Hz in a scene. We found that facial expressions that were congruent with the emotional significance of scene elicited a larger steady-state visual evoked potential (ssVEP) amplitude than facial expressions that were incongruent with the emotional significance of scene, in both clear and ambiguous conditions. We also found that the expected facial expression representation was stronger than the unexpected representation in the clear condition. In the ambiguous condition, the unexpected representation was stronger than the expected representation. Together, these results suggest that facial expression processing in the visual cortex was modulated by top-down signals. The clarity of facial expression moderated the influence of scene on facial expression representation. In addition, our study also showed that neural activation amplitude did not correspond to the representational strength.

Keywords: Facial expression, Scene-based expectation, representation, SSVEP, MVPA

红色对时间知觉影响的元分析

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摘要 过往研究中，红色效应会对个体时间知觉产生何种影响的结论并不一致。这些研究通常从红色效应的影响机制等角度探讨导致结果矛盾的原因，往往忽略了研究方法不同而导致研究结果不一致的可能性，因此本研究将对过往红色时间知觉实证研究进行元分析，探讨时间知觉中的红色效应以及研究方法的差异是否

会影响红色效应。经中英文文献搜索，共纳入 17 篇文献和 44 个效应量，总样本量为 1716。元分析结果表明：（1）异质性检验结果表明 $Q=158.080$ ($p<0.001$)， $I^2=72.799$ ，研究间存在较高的异质性，确定了选择随机效应模型的合理性。（2）红色对时间知觉的影响呈现正向较小效应量 $d=0.241$ ($95\%CI [0.101, 0.378]$ ， $p<0.01$)，与蓝绿相比红色导致个体高估持续时间。（3）调节变量检验发现，时间知觉任务 ($Q_b=2.818$ ， $p>0.05$)、被试状态 ($Q_b=1.259$ ， $p>0.05$)、材料性质 ($Q_b=0.042$ ， $p>0.05$) 不具有显著调节作用。被试性别具有显著调节作用 ($Q_b=23.595$ ， $p<0.001$)，表现在男性更容易受红色影响而高估持续时间。颜色呈现方式具有显著调节作用 ($Q_b=1.867$ ， $p<0.05$)，表现在颜色作为背景呈现时，红色导致个体高估持续时间的效果更显著。时间间隔具有显著调节作用 ($Q_b=12.162$ ， $p<0.05$)，表现在实验采用不同时间间隔，个体因红色而高估持续时间的效果有明显差异。（4）发表偏倚性检验发现， Tau 值、 $Intercept$ 值显著，可能存在发表偏倚；删除两个大样本研究再次分析发表偏倚性发现，失安全系数 $Nfs = 365$ ， Nfs 大于 $5k+10=5*42+10$ ， $Tau=1.26$ ($p=0.15$) 不显著， $Intercept=0.18$ ($p=0.09$) 不显著，剪补法显示效应值无明显变化，漏斗图分布均匀，存在发表偏倚性可能性较小。未来研究可以在严格控制好实验选取的时间间隔、颜色呈现方式和被试性别的基础上，再讨论红色对时间知觉的影响。

关键词 元分析，时间知觉，红色，蓝色，绿色，颜色

Time perception in red color: A meta-analysis

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Abstract: In previous studies, conclusions about the influence of the red effect on individual time perception were not consistent. These studies usually explore the reasons for the contradictory results from the perspective of the red effect mechanism and often ignore the possibility of inconsistent research results due to different research methods. Therefore, this research will conduct a meta-analysis of past empirical research on the time perception of red to explore the red effect in time perception and whether differences in research methods will affect the red effect. After searching the Chinese and English databases yielded a total of 17 articles and 44 effect sizes were included ($n = 1716$ participants). The meta-analysis results revealed that: (1) The heterogeneity test results show that Q value is 158.080 ($p<0.001$), the value of I -squared was 72.799, there is high heterogeneity among the studies, which confirms the rationality of choosing the random effects model (2) Red The impact on time perception presents a positively small effect size $d=0.241$ ($95\%CI [0.101, 0.378]$ ， $p<0.01$). Compared with blue and green, red causes individuals to overestimate duration. (3) The test of modulating variables found that time perception tasks ($Q_b=2.818$ ， $p>0.05$)，participant status ($Q_b=1.259$ ， $p>0.05$)，material properties ($Q_b=0.042$ ， $p>0.05$) did not have a significant moderating effect. The gender of the subjects has a significant moderating effect ($Q_b=23.595$ ， $p<0.001$)，which is reflected in the fact that men are more likely to be affected by red and overestimate the duration. The way of color presentation has a significant regulating effect ($Q_b=1.867$ ， $p<0.05$). When the color is presented as a background, the effect of red causing individuals to overestimate the duration is more significant. The time interval has a significant regulating effect ($Q_b=12.162$ ， $p<0.05$)，which is manifested in the fact that the experiment uses different time intervals, and the effect of individuals overestimating the duration due to red is significantly different. (4) The analysis of publication bias shows that the Tau and $Intercept$ values are significant, and there may be publication bias; delete two large-sample studies and re-analyze the publication bias findings, the loss of safety factor is $Nfs = 365$, and Nfs is greater than $5k+10=5*42+10$, $Tau=1.26$ ($p=0.15$) is not significant, $Intercept=0.18$ ($p=0.09$) is not significant, the clipping method shows that the effect value is weakened by the clipping method to 0, the funnel graph is evenly distributed, and less likely to have publication bias. Future research can discuss the influence of red on time perception on the basis of strictly controlling which include the time interval selected in the experiment, the way of color presentation, and the gender of the participant.

Keywords: meta-analysis, time perception, red, blue, green, color

患者感知共情对就医满意度的影响：一个多重中介作用模型

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摘要 近年来医患冲突已成为我国的社会热点, 已有研究发现医患共情对和谐医患关系的构建具有积极推动作用。但国内目前缺少对于患者感知共情与就医满意度的确切关系研究。因此本研究从患者视角出发, 旨在探究影响患者感知共情的因素, 考察患者感知共情与医患沟通评价、医患信任、医患关系和就医满意度的关系, 并重点分析患者感知共情对就医满意度的影响, 及医患沟通、医患信任、和医患关系的中介作用。研究采用诊疗关系共情量表(CARE)、SEGUE 量表、维克森林医师信任量表(WFPTS)中文修订版、PDRQ-15 量表和就医满意度问卷及一些社会人口学问题调查了我国 14 个省份的 2254 名患者。结果发现: 1、患者的年龄、就诊医院的等级、医院的类型、就诊时长、有无言语争吵、肢体冲突这些因素对感知共情有显著影响($p<0.001$)。2、医患沟通、医患信任、医患关系和就医满意度两两之间存在显著正相关($r=0.536\sim0.783, p<0.001$)。3、中介效应分析显示患者感知共情可直接正向预测就医满意度($\beta=0.67, p<0.001$), 患者感知共情显著正向预测医患沟通、医患信任和医患关系($\beta=0.65, \beta=0.49, \beta=0.44, p<0.001$), 医患沟通正向预测医患信任、医患关系和就医满意度($\beta=0.22, \beta=0.23, \beta=0.12, p<0.001$), 医患信任正向预测医患关系和就医满意度($\beta=0.24, \beta=0.09, p<0.001$), 医患关系正向预测就医满意度($\beta=0.56, p<0.001$), 而患者感知共情也可通过医患沟通、医患信任、医患关系多重中介影响就医满意度($\beta=0.12, p<0.001$)。即感知共情可直接影响就医满意度, 也可分别通过医患沟通、医患信任和医患关系的中介作用影响就医满意度, 也可通过四条链式中介对就医满意度起作用。结论: 患者年龄、就诊医院的类型和等级以及就诊时长等会对感知共情产生影响。医患共情贯彻整个诊疗互动过程, 可直接预测患者的就医满意度, 也可通过促进融洽的医患沟通、重建医患信任和构建和谐医患关系, 进而提高患者的就医满意度, 即医患沟通、医患信任和医患关系在感知共情对就医满意度的影响中起多重中介作用。

关键词 医患共情, 医患沟通, 医患信任, 医患关系, 就医满意度

The influence of patient perceived empathy on medical satisfaction: A multiple mediating model

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Abstract: In recent years, doctor-patient conflict has become a hot social issue in China. Previous studies have found that doctor-patient empathy plays a positive role in promoting the construction of harmonious doctor-patient relationship. However, there is a lack of research on the exact relationship between patients' perceived empathy and their satisfaction with medical treatment. Therefore, from the perspective of patients, this study aims to explore the factors that affect patients' perception of empathy, examine the relationship between patient's perception of empathy and doctor-patient communication evaluation, doctor-patient trust, doctor-patient relationship and medical satisfaction, and focus on the analysis of patients' perceived empathy the influence on satisfaction with medical treatment, and the mediating role of doctor-patient communication, doctor-patient trust, and doctor-patient relationship. The study used the diagnosis and treatment relationship empathy scale (CARE), SEGUE scale, the Chinese revised version of Wake Forest Physician Trust Scale (WFPTS), PDRQ-15 scale, medical satisfaction questionnaire, and some sociodemographic questions to investigate 2254 patients from 14 provinces of China. The results showed that: 1. The age of the patient, the grade of the hospital, the type of hospital, the length of the visit, the

presence or absence of verbal quarrels, and physical conflict have a significant impact on perceived empathy ($p<0.001$). 2. There is a significant positive correlation between patients' perceived empathy, doctor-patient communication, doctor-patient trust, doctor-patient relationship and medical satisfaction ($r=0.536\sim0.783$, $p<0.001$). 3. The mediating effect analysis shows that patients' perceived empathy can directly and positively predict medical satisfaction ($\beta=0.67$, $p<0.001$), and patients' perceived empathy significantly positively predicts doctor-patient communication, doctor-patient trust, and doctor-patient relationship ($\beta=0.65$, $\beta=0.49$, $\beta=0.44$, $p<0.001$), doctor-patient communication positively predicts doctor-patient trust, doctor-patient relationship and medical satisfaction ($\beta=0.22$, $\beta=0.23$, $\beta=0.12$, $p<0.001$), Doctor-patient trust positively predicts doctor-patient relationship and medical satisfaction ($\beta=0.24$, $\beta=0.09$, $p<0.001$), doctor-patient relationship positively predicts satisfaction ($\beta=0.56$, $p<0.001$), while patient-perceived empathy also affected doctor-patient satisfaction through multiple mediators of doctor-patient communication, doctor-patient trust, and doctor-patient relationship ($=0.12$, $P<0.001$). In other words, perceived empathy can directly affect medical satisfaction, and it can also affect medical satisfaction through the mediating effect of doctor-patient communication, doctor-patient trust and doctor-patient relationship, and it can also affect medical satisfaction through four chain mediations. Conclusion: The age of the patients, the type and grade of the hospital they visited, and the length of time they visited, etc., have an influence on perceived empathy. The doctor-patient empathy implements the entire diagnosis and treatment interaction process, which can directly predict the patient's satisfaction with the doctor's treatment. It can also improve the patient's satisfaction with the doctor's by promoting harmonious doctor-patient communication, rebuilding doctor-patient trust and building a harmonious doctor-patient relationship. Namely, doctor-patient communication, doctor-patient trust, and doctor-patient relationship play multiple mediating roles in the impact of perceived empathy on medical satisfaction.

Keywords: doctor-patient empathy, doctor-patient communication, doctor-patient trust, doctor-patient relationship, medical satisfaction

潜变量交互效应标准化估计：方法比较与选用策略

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摘要 标准化估计对模型的解释和效应大小的比较有重要作用。虽然潜变量交互效应的恰当标准化估计公式已经面世超过 10 年, 国内外都在使用和引用, 但至今未见到关于不同估计方法得到的恰当标准化估计的系统比较。通过模拟实验, 比较了乘积指标法、潜调节结构方程(LMS)、无先验信息和有先验信息的贝叶斯法的潜变量交互效应标准化估计在不同条件下的表现。结果发现, 在正态条件下, LMS 和有信息贝叶斯法表现较好; 而在非正态条件下, 乘积指标法比较稳健, 但需要较大的样本(不小于 500), 小样本且外生潜变量之间相关较低时可使用无信息贝叶斯法。

关键词 潜变量, 交互效应, 乘积指标方法, 潜调节结构方程, 贝叶斯方法, 标准化估计

Standardized Estimates for Latent Interaction Effects: Method Comparison and Selection Strategy

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Abstract: Analyzing the interaction effect of latent variables has become an important topic in both theoretical and empirical studies. Standardized estimation plays an important role in model interpretation and effect comparison. Although Wen et al. (2010) has formulated the appropriate standardized estimation for the latent interaction effects, there is no popular commercial software that provides the appropriate standardized estimation before the launch of Mplus 8.2 in 2019. The previous method comparisons for estimating latent interaction were based on the original

estimation. In this study, through a simulation experiment, the appropriate standardized estimation of latent interaction effects obtained by the product indicator (PI) approach, Latent Moderated Structural Equations (LMS), Bayesian method without prior information (BN), and Bayesian method with prior information (BI) are compared in terms of the bias of estimation, the bias of standard error, type I error rate and statistical power. The true model in the simulation is based on the structural equation $\eta = 0.4\xi_1 + 0.4\xi_2 + \gamma_3\xi_1\xi_2 + \zeta$ where the latent variables η , ξ_1 , ξ_2 each had three indicators with standardized factor loadings of 0.7. Experiment factors include the distribution of two exogenous latent variables (normal, non-normal), correlation ϕ_{12} between two exogenous latent variables (0, 0.3 and 0.7), interaction effect γ_3 (0, 0.2), sample size N (100, 200, and 500) and estimation method (PI, LMS, BN, BI). The results show that: (1) the proportion of proper solution of LMS and the two Bayesian methods were close to 100% in all treatments, while PI was almost fully proper when $N = 500$; (2) Under the normal condition, the bias of standardized estimation of latent interaction obtained by LMS, BI and BN were ignorable, and PI was acceptable when $N = 500$. Under the non-normal condition, the bias of LMS and Bayesian methods inflated seriously with increasing correlation of two exogenous latent variables, but PI was still acceptable when $N = 500$. (3) Under both distribution conditions, the bias of standard error of standardized estimation of latent interaction obtained by LMS and BN were small and acceptable, while PI was acceptable when $N = 500$, and BI tended to overestimate the standard error. (4) Under the normal condition, the type I error rates of LMS were acceptable when the sample sizes were large, while the other methods were acceptable in all conditions. Under the non-normal condition, the type I error rates of PI were still acceptable, while the other methods were acceptable only when sample sizes were small or the correlation between two exogenous latent variables was low. (5) The statistical power of latent interaction obtained by PI was the lowest among four methods, and a large sample size (e.g., $N = 500$) was required to ensure PI with the statistical power over 80%; LMS and BN had higher statistical power, while BI had the highest one in all conditions. For the latent interaction, the comparison results of standardized estimation of different methods are quite similar to those of the original estimation. Under the normal condition, it is recommended to use LMS to estimate the interaction effect of latent variables, with the caution of Type I error rate and effect size for inference. If accurate prior information can be obtained, Bayesian method is preferred, especially in the case of small sample. When the variables are not normally distributed, it is recommended to use the unconstrained product indicator approach which is more robust than the other methods, but the sample size should be large enough ($N = 500$ or above, say). If the correlation between exogenous latent variables is low (it can be estimated and tested by confirmatory factor analysis), Bayesian method without prior information can be considered for small samples.

Keywords: latent variable, interaction effect, standardized estimation, product indicator, Latent Moderated Structural Equations, Bayesian estimation

秒钟失准会导致短时距的主观时间扭曲吗？

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摘要 虽然大量研究发现操纵钟表的速度会导致时间感知扭曲，但过往研究仅采用了时间估计任务或时间流逝评分，且集中于长时距（10 秒以上）。本研究在未明确提示参与者以秒钟为线索完成时间判断任务的情况下，通过三类时间判断任务（估计/产生/再现），采用 2（时距：3s/5s）*3（相对秒钟转速（秒钟转速与正常秒钟转速的百分比）：75%/100%/125%）的混合设计，系统考察了操纵秒钟速度是否影响短时距的时间感知。组内变量为时距，组间变量为相对秒钟转速，因变量为时间判断相对误差的绝对值(ARE)。结果表明，操纵秒钟转速对短时距加工的影响依赖于时间判断的任务类型，具体为：（1）时间估计任务中，相比相对秒钟转速 100%组，75%组的 ARE 更高，其他组间无显著差异；（2）时间产生任务中，相比 100%组，75%组的 ARE 显著更高，其他组间无显著差异；（3）时间再现任务中，不同相对秒钟转速下的 ARE 无显著差异。综上，在不同类型的时间判断任务中，操纵秒钟速度对短时距的主观时间感知的影响并不一致，并且在产生影响的两类任务中，来自秒钟速度的影响具有不对称性，相比快秒钟，慢秒钟更能使主观时间感知发生扭曲。

作为可提供时间判断时的外部线索的秒钟，其失准对不同范式的时间判断任务的影响不同，这验证了不同时间任务范式涉及的时间加工机制可能具有较大差异。

关键词 时间扭曲，时间估计，时间产生，时间再现，相对钟表转速

Do inaccurate clocks cause subjective time distortions in short time intervals?

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Abstract: Previous studies have found that covert manipulating the speed of the external clock can affect apparent judgments of time duration or the perceived rate of time passage. However, the previous studies only used time estimation task or subjective ratings on the time passage with long durations (above 10s). It remains uninvestigated whether external cues can produce an effect on time judgment in different temporal paradigms with short durations. The present study aimed to systematically investigate the effect of external cues through three temporal tasks without explicitly prompting participants to use external cues --- estimation, production, and reproduction. A 3 (relative rotation speed of external cues: 75% of standard speed, 100% of standard speed, 125% of standard speed) $\times$ 2 (duration: 3s, 5s) mixed factorial design was used. The between-subject variable was the relative rotation speed of external cues, and the within-subject variable was the duration. And the dependent variable was the absolute value of time judgment relative error (ARE). Significantly, a higher ARE reflected greater subjective deviation, and a lower ARE meant smaller subjective deviation. The participants' task was to determine the duration of the central cross-shaped stimuli. In general, we found that the impact of external cues depended on specific experimental tasks. The results are illustrated below: (1) In the time estimation task, a significant main effect of external cues appeared. Compared with the 100% group, ARE in 75% group was significantly higher, while there was no significant difference between other groups. (2) In the time production task, the main effect of the external cues was significant. Compared with the 100% groups, ARE in 75% group was significantly higher, while there was no significant difference between other groups. (3) In the time reproduction task, we did not find any statistically significant result. Based on these results, it was concluded that the temporal tasks played an essential role in the external cues' influence on apparent time judgment. Specifically, the time performance in the estimation task and production task would be distorted by external cues, while the speed of clocks would not influence the time judgment in the reproduction task. In addition, this study also found that in the production and estimation task, the speed of external cues may have an asymmetrical effect, with the slower clock more likely to bias time processing than the faster clock. The importance and originality of this study were that it explored the effect of clock-speed manipulations on short durations employing different temporal paradigms. Furthermore, the present study clarified that various temporal paradigms might involve different underlying mechanisms from a different perspective.

Keywords: subjective time distortions, production, estimation, reproduction, clocks' relative speed

Anger and Neutral Emotion Do Not Have Spatial-valance Congruence Effect: Revalidation of Polarity Correspondence Theory

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Abstract: Numerous studies had focused on the interaction between emotion concepts and vertical spatial locations from the perspective of cognitive processing. And they found that people classified the emotion concepts that appeared in the metaphor congruent locations faster than those in the incongruent locations, which was called

spatial-valance congruency effect. However, there were two different theoretical explanations (based on the polarity correspondence theory or conceptual metaphor theory) for the mechanism of this phenomenon. According to the polarity correspondence theory, the reason for the congruency effect was the overlapping of the polarity advantages of different concepts, while the conceptual metaphor theory held that the congruency effect was based on the metaphor connection between different concepts. The effect had been confirmed by many studies, but the mechanism underlying the spatial-valance congruency effect was still controversial. Based on the emotional identification task, the present study aimed to compare the predictions of reaction time patterns between the two interpretations by further exploring the connection of the neutral emotion and anger with vertical space. Firstly, the language material evaluation study found that there was a connection between the concept of emotion (positive, neutral, anger and non-anger negative emotions) and the vertical space (up, middle, down). Particularly, in Chinese culture, people would correspond the concept of anger with the upper space. Experiment 1a and 1b used verbal and non-verbal stimulus materials to explore the relationship between the emotional dimension and vertical spatial location. The results showed that there was no spatial-valance congruency effect for neutral emotion and negative emotion, while there was only "positive-up" congruency effect for positive emotion when using facial expression symbols as stimuli. Experiment 2 explored the role of conceptual metaphor on spatial-valance congruency effect by using the separation of anger valence and spatial connection. Participants were asked to classify the negative words (angry words and non-anger negative emotion words) and positive words that appeared in the up and down positions. The results also showed that the spatial-valance congruency effect only occurred in the "Positive-UP" condition, while anger and other non-anger negative emotions have no spatial congruency effect. The response time patterns of three experiments reflected that neither "Neutral-MIDDLE" nor "Negative-DOWN" conditions showed the facilitation effect of spatial location on emotional understanding, only under the "Positive-UP" condition can the spatial valence congruence effect appear. Meanwhile, although there was a congruency effect under "Positive-UP" condition, this result did not exist in all experiments of the study. The above results indicated that the spatial-valance congruency effect had asymmetry and variability in the emotional dimension, these phenomena were consistent with the prediction of the polarity-based account. In addition, although the spatial mapping of anger was different from other negative emotions, there was no difference in the reaction time of negative emotion vocabulary discrimination. Therefore, we inferred that the only reason for the formation of spatial-valance congruency effect was the superposition of the positive polar, while the conceptual connection of emotion and space did not affect the generation of congruency effect. Whether this conclusion can explain other conceptual congruency effects, such as temporal-spatial or moral-spatial congruency effect, remains to be further studied.

Keywords: Polarity Correspondence, Conceptual Metaphor, Spatial Congruency, Emotion Classification

人类吸引力信息的自动变化检测：基于视、听觉感知的比较

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摘要 检测社会相关信息（如吸引力）的变化，对于个体具有重要的社会和进化意义。本研究结合脑电技术，使用“偏差-标准-反转”的 oddball 范式，考察人们检测面孔和嗓音吸引力信息发生变化的认知进程及二者的差异。实验向 19 名女性被试呈现作为标准（或偏差）刺激的高吸引力面孔和嗓音以及作为偏差（或标准）刺激的低吸引力面孔和嗓音，要求其完成与吸引力无关的红鼻子（面孔加工）或白噪音（嗓音加工）探测任务。结果发现：面孔和嗓音吸引力的变化都诱发了失匹配负波（MMNs）。此外，低吸引力相比高吸引力的信息，在嗓音条件下诱发较大的失匹配负波，而在面孔条件下诱发较大的 P3。本研究表明，人们可以自动检测吸引力信息的变化，尽管面孔和嗓音吸引力的认知加工过程存在差异。此外，无论在视觉还是听觉通道，相比高吸引力信息，人们可以更好地检测低吸引力信息的变化。

关键词 吸引力，变化检测，oddball 范式，ERPs

Automatic Change Detection of Human Attractiveness: Comparing Visual and Auditory Perception

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Abstract: Change detection of social cues across individuals plays an important role in human interaction. Here we investigated the automatic change detection of facial and vocal attractiveness in 19 female participants and recording ERPs. We adopted a 'deviant-standard-reverse' oddball paradigm where high- or low-attractive items were embedded as deviants in a sequence of standard stimuli. We observed that both facial and vocal attractiveness changes elicited mismatch negativities (MMNs). Furthermore, low-attractive versus high-attractive items induced larger mismatch negativities in the voice condition but larger P3 in the face condition. In conclusion, these data confirmed that attractiveness can be automatically detected, although differences exist between facial and vocal attractiveness processing, and unpredictable unattractive information tends to be a better change detector than attractive information.

Keywords: Attractiveness, Change detection, Oddball, ERPs

(3) 硕士研究生论坛—基础心理学分场 3

中医医学术语空间隐喻的心理现实性与匹配效应研究

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摘要 隐喻(metaphor)是以身体感知经验为基础，将始源域(Source domain)中熟悉、具体概念映射到目标域(Target domain)中陌生、抽象概念的过程。空间隐喻强调个体的身体结构和活动方式在认知活动中的重要作用，利用空间概念映射到非空间概念，易化对非空间概念的理解。对于无法直接感知的身体生理结构和病理现象，中医学理论基于身体感知和生活实践经验，采用“取象比类”的方法在自然界与人体两个概念系统中建立具体概念到抽象概念的映射关系，构建中医学概念的空间隐喻，以解释生命现象、阐释病理机制。本研究参考贾宁等(2018)的研究范式，采用句子启动范式，探讨中医医学术语的垂直空间隐喻映射的心理现实性以及隐喻映射的具体关系。实验1中首先呈现含有空间变化信息的陈述句，要求被试对随后呈现的中医病证术语进行病位分类判断。为考察被试是否选择性地关注启动句中某一空间位置的信息，在实验2、3中，要求被试仅关注陈述句中表示空间变化前或后的位置信息，即前一空间词汇和后一空间词汇。实验4在实验1的基础上将句-词的间隔时间由500 ms延长至4000 ms，考察句-词的间隔时间对中医术语空间隐喻心理表征的影响。结果发现，当关注启动句中某一空间位置信息时，陈述句的空间信息与病证类型的交互作用显著，表现为“下-病位在下”或“上-病位在上”的隐喻一致性。在启动句为动态空间变化语境的情况下，当句-词的间隔时间为500 ms时，表现为先呈现空间位置从下到上的句子，对随后呈现病位在下的中医病证的反应更快，出现“上-病位在下”的匹配抑制现象；当句-词的时间间隔延长至4000 ms时，表现为先呈现空间位置从下到上的句子，对随后呈现的病位在上的病证反应更快，出现“上-病位在上”的匹配易化现象，匹配抑制现象消失。研究表明，中医医学术语空间隐喻具有心理现实性，且隐喻映射具有不稳定性。同时，空间隐喻具有匹配效应，空间隐喻出现匹配抑制还是匹配易化的关键在于认知资源的竞争与释放。

关键词 中医术语，空间隐喻，句子启动。

Psychological reality and matching effect in spatial Metaphor of Chinese Medical Terms by Sentence Prime Paradigm

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Abstract: Metaphor is a process of mapping familiar and concrete concepts in the source domain to unfamiliar and abstract concepts in the target domain based on body perception experience. Spatial metaphor emphasizes the important role of individual body structure and activity mode in cognitive activities, and uses the spatial concept as the source domain to map to the non-spatial concept, thus facilitating the understanding of non-spatial concept. For cannot direct perception of the body physiological and pathological phenomena structure, traditional Chinese medicine (traditional Chinese medicine, TCM) theory based on the body perception experience and life experience, adopt the method of "comparative state" to establish the mapping relationship between the concrete concept and abstract concept in the two conceptual systems of nature and human body, and to construct the spatial metaphor of TCM concept, so as to explain the life phenomenon and explain the pathological mechanism. This study referred to the research paradigm of Jia Ning et al. (2018) and adopted the sentence priming paradigm to explore the psychological reality of vertical spatial metaphor mapping of TCM terms and the specific relationship of metaphor mapping. In experiment 1, a statement containing spatial change information was presented first, and subjects were required to classify and judge the subsequent TCM disease and syndrome terms. In order to investigate whether the subjects selectively pay attention to the information of a spatial position in the primes, in experiments 2 and 3, the subjects were required to pay attention only to the information of the position before or after the spatial change in the statements, namely, the former spatial vocabulary and the latter spatial vocabulary. In Experiment 4, the time interval between sentences and words was extended from 500 ms to 4000 ms on the basis of Experiment 1 to investigate the influence of the time interval between sentences and words on the psychological representation of spatial metaphor in TCM terms. It was found that the spatial information of the statement had a significant interaction with the type of disease, showing the consistency of "down-disease position in lower" or "up-disease position above". In the case that the priming sentence was in the dynamic spatial context, when the time interval between sentences and words was 500 ms, the sentences first present the spatial position from bottom to top, and the response to the TCM terms of disease position in lower subsequently presented was faster, and the matching inhibition phenomenon of "up-disease position in lower" occurred. When the time interval of the sentence-word was been extended to 4000ms, the sentences first present the spatial position from bottom to top, and the response to the TCM terms of disease position above subsequently presented was faster. The matching facilitation phenomenon of "up-disease position above" occurred, and the matching inhibition phenomenon disappeared. The research shows that the spatial metaphor of TCM terms has psychological reality and the metaphor mapping is unstable. At the same time, spatial metaphors have matching effects, and the key to the occurrence of matching suppression or matching facilitation of spatial metaphors lies in the competition and release of cognitive resources.

Keywords: traditional Chinese medicine terms, spatial metaphor, sentence priming.

噪音吸引力对信任合作行为的影响及其神经机制

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摘要 吸引力作为一种高级社会信息, 能够通过面孔、噪音等媒介予以传递。例如, 好看的面孔或好听的噪音使个体得到更积极的社会评价, 具有吸引力的噪音和面孔均能激活奖赏加工相关的脑区, 这提示面孔吸引力和噪音吸引力的加工可能有相似之处。有研究曾采用金钱信任游戏探究面孔吸引力对合作行为的影响,

行为结果显示被试更愿意与高吸引力面孔的合作者进行合作；ERP 结果发现高吸引力面孔会诱发更小的 P2 波幅和更大的 N2 波幅，说明个体对高吸引力面孔的加工较为快速和自动化。两人和三人最后通牒博弈任务的实验结果发现高吸引力的嗓音会提高被试对非公平性方案的接受率，说明高吸引力嗓音在一定程度上激发了个体的亲社会行为。但尚不清楚嗓音吸引力是如何影响合作行为。目前对于嗓音吸引力的神经机制的研究仍有待进一步补充。本研究引用修订后的金钱信任游戏范式，被试先听到合作者的嗓音，然后决定是否用现有的本金与另外一个人进行投资合作。如果被试同意投资，合作者可能会回赠被试金钱，也可能不会给予任何回报。进一步结合 ERP 技术来探究嗓音吸引力加工的神经机制。行为结果显示，被试更愿意与男性合作者和高吸引力嗓音合作者进行金钱投资合作；ERP 的结果发现，高吸引力男性嗓音和低吸引力女性嗓音会诱发更大的 N1 成分；低吸引力男性嗓音诱发更大的 P2 成分。在晚期加工阶段，主要是对嗓音吸引力的高级信息进行加工，高吸引力的男性和女性嗓音均会诱发更大的 P3 成分。由此可见，嗓音诱发的“美貌津贴”现象的存在，即个体更信任高吸引力嗓音的合作者，更愿意同高吸引力嗓音的合作者进行投资。此外，个体更倾向投资给男性的合作者。ERP 的结果发现，在早期加工阶段，对不同嗓音性别信息存在差异化加工。在晚期加工阶段，主要是对嗓音吸引力的高级信息进行加工。综上，嗓音吸引力在一定程度上可以预测信任决策行为。

关键词 嗓音吸引力，信任合作，ERPs

Vocal attractiveness influence on trusting cooperative behavior: ERP and behavioral evidence

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Abstract: Attractiveness is considered as a kind of high-level social information. Attractiveness can be transmitted through face or voice. For example, attractive faces or voices make individuals positive social evaluations. Besides, attractive voices and faces both can activate reward mechanism. This suggests that the processing of facial attractiveness and vocal attractiveness may have similarities. A study used a modified trust game task to explore the impact of facial attractiveness on cooperative behavior. The behavioral results showed that participants were more likely to cooperate with the attractive faces. The ERP analysis for face stimuli showed that a smaller P2 and a larger N2 amplitude were elicited by attractive faces compared to unattractive faces. The result shows that individuals process attractive faces more quickly and automatically. A research adopted a two-person ultimatum game and a three-person ultimatum game to examine the effect of vocal attractiveness on decision-making. The results show the unfair offers from the proposers with attractive voices were more likely to be accepted. It shows that attractive voice stimulates the pro-social behavior of the individual. However, it is not clear how vocal attractiveness affects cooperative behavior. The current research on the neural mechanism of vocal attractiveness needs to be further supplemented. The aim of the present study is to further explore the influence of vocal attractiveness on cooperative behavior in the modified trust game task by using the high temporal resolution of ERPs. Participants first hear the voice of the partners, and then decide whether to invest money to the partners. If the participant agrees to invest, the partners may rebate the participant money or not give anything. Behavioral results show that subjects are more willing to cooperate with male partners and attractive voice partners. The results of ERP found that in the early stage, the information of vocal gender was processed differently. The attractive male and unattractive female voice elicited a more negative N1 amplitude. And unattractive male voice elicited a more positive P2 amplitude. In the late stage, the information of vocal attractiveness was mainly processed. Attractive voice elicited a more positive P3 amplitude. Therefore, vocal attractiveness can induce the “beauty premium”. Individuals trust partners with attractive voices and are more willing to invest in partners with attractive voices. Besides, individuals are more inclined to invest in male partners. The results of ERP found that in the early stage, the information of vocal gender was processed differently. In the late stage, the information of vocal attractiveness was mainly processed. In summary, vocal attractiveness can predict trust cooperative behavior.

Keywords: Vocal attractiveness, Trusting cooperative behavior, ERPs

心智游移与分类学习的关系

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摘要 心智游移是个体的思想内容从外部的环境或任务转移到内部的思维上的现象, 在实验室任务和日常生活中均有发生。根据注意资源理论, 当心智游移发生时, 个体用于当前任务的注意资源减少, 因此心智游移会对任务绩效产生消极的影响。但以往有关心智游移与学习关系的研究多采用基于外显规则的学习任务, 鲜有研究探讨心智游移对基于内隐系统的学习任务表现的影响。而内隐学习作为一种自发的、不需要注意资源参与的过程, 有可能不会受到心智游移的影响。本研究拟选取两种类型的分类学习任务: 基于外显规则的(rule-based)和基于内隐、信息整合的(information-integration), 考察心智游移对不同类型分类学习的影响模式是否不同。本研究招募了 126 名大学生, 随机分配至其中一种分类学习任务。分类学习任务均以光栅作为刺激, 要求被试将一系列光栅分配到两个类别中, 共有 4 轮, 每轮 80 个试次。基于规则的分类学习任务可通过频率完成分类, 而基于信息整合的分类学习任务无外显规则。采用思维取样法(thought sampling)探测学习过程中的心智游移发生率。结果表明: (1)在学习前期, 心智游移与学习绩效均无显著相关; (2)在学习后期, 心智游移与基于规则的分类学习绩效存在显著负相关, 而与信息整合的分类学习绩效无相关; (3)心智游移与基于规则的分类学习绩效增长量存在负相关, 而与信息整合的分类学习绩效增长量无相关。该研究揭示了心智游移与不同类型学习的绩效间存在不同关系模式, 支持并拓展了心智游移的注意资源理论, 即心智游移只对需要注意参与的学习任务存在消极影响, 但不会影响基于内隐系统的学习任务表现。

关键字 心智游移, 分类学习, 思维探针, 注意资源

The Relationship between Mind Wandering and Category Learning

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Abstract: Mind wandering is a shift in the contents of thought away from an ongoing task and/or from events in the external environment to self-generated thoughts and feelings. It frequently happens in laboratory and daily lives. According to the attentional resources theory, when one's mind wanders, his attention is distracted from the ongoing task, so mind wandering is detrimental to the task performance. However, most of the previous studies about mind wandering used explicit learning tasks, and few explored the relationship between mind wandering and implicit tasks. Implicit learning, as a spontaneous process requiring few attentional resources, may not be affected by mind wandering. The current study intended to adopt two types of category learning task, rule-based learning and information-integration learning, to investigate whether mind wandering had different influence patterns on different types of category learning. 126 participants were recruited and randomly assigned to one of the category learning tasks. The category learning tasks both took Gabor patches as stimuli, and required the subjects to distribute them into two categories, with a total of 4 blocks and 80 trials in each block. Stimuli in rule-based task could be classified by spatial frequency, while the classification in information-integration task have no explicit rules. The measurement of mind wandering used thought sampling method. The results showed that, (1) there was no significant correlation between mind wandering and learning performance in the early stage of learning; (2) in the later stage of learning, mind wandering was negatively correlated with rule-based learning performance, but not correlated with information-integration learning performance; (3) mind wandering was negatively correlated with the increment of rule-based learning performance, but not correlated with that of information-integration learning performance. This study revealed that there were different relationship patterns between mind wandering and category learning tasks. It supported and expanded the attentional resources theory of mind wandering, that is, mind wandering has a negative

effect on cognitive tasks requiring attention, but does not affect those requiring little attention.

Keywords: mind wandering, category learning, thought probe, attentional resources

最后通牒博弈中金钱收益对回应者决策的影响： 公平失效与公平敏感的研究

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摘要 传统经济学一个经典假设是“理性经济人”假设。近年来研究者用最后通牒博弈范式通过实验研究探讨人在经济活动中的决策问题,研究结果对传统经济学这一经典假设提出了挑战。尽管前人的研究比较一致地得出人们的经济决策受公平性的影响,随着分配方案公平性的提高,接受分配方案的人数会越来越多。但是,正如近期有研究者提出,相对于比较公平的分配方案,不公平的方案不仅公平性低,同时金钱收益也相对较低。因而,无法分清回应者的拒绝行为是由于不公平还是由于经济收益的降低;同样,在分配总金额固定的条件下,随着公平性的增加,回应者获得的经济利益也在增加,那么,也无法确定,回应者对接受这个趋于公平的分配方案,是由于公平性引起还是由于获得的经济收益增多所引起。目前的研究还无法解答这个问题。基于这个质疑,本研究进一步提出,在最后通牒博弈实验中,公平性是一个相对范畴,在同等的 unfair 分配的情况下,如果增加分配金额,使回应者所分配到的金钱数也增加,回应者是否会随着实际得到的金钱数的增加而逐步淡化对公平性的追究。进一步,本研究一个新的设想是,随着所得的经济利益数量达到一定高度,公平性不再影响人们的经济决策,达到了“公平性失效区”;与此相应,随着所分配的金钱数量不断减少,回应者就会越来越关注公平性,随着所得的经济利益数量降低到一定程度,哪怕公平性很高的分配方案,他们也倾向于不接受,达到了“公平性敏感区”。本研究通过最后通牒范式探究公平性与收益大小对回应者在经济决策中的影响。实验1通过改变收益大小探究公平在决策中的作用;实验2进一步探究了公平性在决策中较为敏感的收益范围。结果发现,公平性在决策中的作用随着经济收益的变化而发生变化,存在公平失效区与公平敏感区。本研究的结果为“理性经济人”理论的适用范围提供进一步的实证支持。

关键词 公平失效区, 公平敏感区, 金钱收益, 回应者, 决策

The Influence of Monetary Gains on the Responder's Decision making in the Ultimatum Game:

Research on Fairness Failure and Fairness Sensitivity

Abstract: In Ultimatum Game paradigm, responder's decision making in economic activities not only affected by fairness, but also affected by economic gains. However, in people's economic decision making, the aforementioned two factors always confound. This study analyzes the influence of fairness and monetary gains on economic decision-making through ultimatum game paradigm. By changing the monetary gains, the role of fairness in economic decision-making and the sensitive range of fairness is explored. The role of fairness in decision-making changes with the change of monetary gains, which will reach the “fairness-sensitive zone (FSZ)” and “fairness-failure zone (FFZ)”. The results show that economic decisions will be affected by fairness within a certain range of economic gains. Overall, people's economic decisions still depend on the pursuit of economic gains. This provides further empirical support for the application of rational economic man theory.

Keywords: Ultimatum Game, Fairness-Failure Zone, Fairness-Sensitive Zone, monetary gains, responder, decision making

新冠疫情期间社会情绪的动力机制

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摘要 为探究新冠疫情期间社会情绪的动力机制，于新冠疫情期间（2020年2月6日至15日）对263人进行了为期10天的经验取样。结果表明，民众的积极情绪和意义感随时间显著提升，消极情绪随时间显著下降；疫情认识水平越高，积极情绪随时间提升得越快。另外，发生积极事件时，民众的积极情绪和意义感显著提升，消极情绪显著下降；性别和应激正向调节了对积极事件的社会情绪反应性。这些发现一方面揭示了疫情期间社会情绪的动态变化，也为在重大突发公共卫生事件中的社会情绪治理提供了科学依据。

关键词 新冠疫情，社会情绪，意义感，动态性，经验取样法

The influence of monetary gain on the decision-making of respondents in ultimatum game:

A study of fairness invalidation and fairness sensitivity

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Abstract: In Ultimatum Game paradigm, responder's decision making in economic activities not only affected by fairness, but also affected by economic gains. However, in people's economic decision making, the aforementioned two factors always confound. This study analyzes the influence of fairness and monetary gains on economic decision-making through ultimatum game paradigm. By changing the monetary gains, the role of fairness in economic decision-making and the sensitive range of fairness is explored. The role of fairness in decision-making changes with the change of monetary gains, which will reach the "fairness-sensitive zone (FSZ)" and "fairness-failure zone (FFZ)". The results show that economic decisions will be affected by fairness within a certain range of economic gains. Overall, people's economic decisions still depend on the pursuit of economic gains. This provides further empirical support for the application of rational economic man theory.

Keywords: Ultimatum Game, Fairness-Failure Zone, Fairness-Sensitive Zone, monetary gains, responder, decision making

统计规则调节快乐面孔的注意捕获

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摘要 许多研究表明，情绪面孔能够引起观察者的视觉注意。作为一种具有社会意义的刺激，情绪面孔对注意的捕获是否与纯粹的刺激驱动的注意捕获一样，并且当干扰项中有情绪面孔时，情绪面孔所在位置的统计规则是否能够减少其对注意的捕获。为了解决这个问题，本研究采用视觉搜索范式，通过三个实验探究快乐面孔能否捕获注意及其是否受统计规则调节。实验一要求被试从由同一模特的四个面孔（两个中性面孔、一个快乐面孔和一个悲伤面孔）中搜索一个悲伤面孔，搜索画面中可能存在也可能不存在快乐面孔（三个中性面孔和一个悲伤面孔），结果发现，当搜索画面中存在快乐面孔时比不存在快乐面孔时被试的搜索绩效（包括反应时和正确率）更低，该结果意味着快乐面孔捕获了观察者的注意。为了排除知觉上的低水平混淆会导致快乐面孔捕获注意，实验二采用倒置面孔组成的搜索阵列，结果发现倒置的快乐面孔并不会影响观察者的搜索绩效，即快乐面孔没有捕获观察者的注意，该结果排除了物理显著性对快乐面孔捕获注意的影响。实验

三操纵快乐面孔在搜索画面中某个位置出现上的概率,使快乐面孔更频繁地出现在某个位置,研究对于快乐面孔的注意捕获是否受统计规则的调节,结果发现与出现在低概率位置的条件相比,快乐面孔出现在高概率位置条件下的注意捕获效应减少了。综合三个实验的结果,我们发现在视觉搜索任务中,快乐面孔不是作为一种纯粹的自下而上的刺激驱动来够捕获观察者的注意,且快乐面孔对注意的捕获受到统计规则的调节。这启示我们统计规则对注意捕获的调节不止局限于刺激驱动的注意捕获,也可以扩展到非纯粹的自下而上的注意捕获,例如面孔所产生的注意捕获。

关键词 视觉搜索,快乐面孔,注意捕获,统计规则,注意抑制

Statistical Regularities Modulate the Attentional Capture of Happy Faces

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Abstract: Many studies have shown that emotional faces can attract the visual attention of observers. As a kind of social stimulus, whether emotional faces capture attention is the same as purely stimulus-driven attentional capture. And whether the statistical regularities of emotional faces' location can reduce their attentional capture when emotional faces are presented as interference items. In this study, we used visual search paradigm to explore whether happy faces can capture attention and whether it can be modulated by statistical regularities. The task of experiments for the participant was to search sad face from the same identity of four faces (two neutral faces, a happy face and a sad face), while the searching array might not exist in happy face (three neutral faces and a sad face). The result showed that performance of subjects is lower when the happy face in the array than that not in the array (including the reaction time and accuracy), indicating that happy faces can capture the attention of the observers. To rule out low level on the perception confusion can lead to a happy face to capture attention, the second experiment used the search array composed of inverted faces. It is found that the inverted faces could not affect the search performance, showing the happy faces didn't capture the attention of the observers. The result ruled out the significant impact of physical property on happy face to capture attention. The third experiment manipulated the probability of happy faces presenting at a certain position in the array, that is the happy faces appeared in a certain position more frequently. Considering that whether the attentional capture of happy face was modulated by statistical regularities, we found that the capture effect of happy face when it appeared to high probable position was less than it appeared to low probable position. Taken together, We found that happy faces were not a bottom-up stimulus to capture attention in the visual search task, and that the capture of attention by happy faces was regulated by statistical rules. This suggested that the modulation of statistical regularities on attentional capture is not limited to stimulus-driven attentional capture, but also can be extended to non-pure bottom-up attentional capture, such as the attentional capture generated by faces.

Keywords: Visual Search, Happy Face, Attentional Capture, Attentional Inhibition

威胁对个体创造力的消极影响：来自 fNIRS 的证据

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摘要 威胁(Threats)是指能够对个体身体或者社会地位等造成伤害的刺激,其具有真实性与直接性等特点。创造力(Creativity)是根据一定的目的,产生新颖、有用且有社会价值的产品的能力。发散思维(Divergent Thinking)与聚合思维(Convergent Thinking)是其主导成分。威胁对创造力的影响主要存在三种观点:威胁能够阻碍创造力的发挥;威胁能够促进创造力的产生;威胁与创造力之间呈倒U型关系,即中等程度的威胁最利于创造力的发挥。但因各实验对威胁操纵方式差异过大、创造力任务难度有异以及创造力维度不同,较多研究并未得出一致结论,且相关脑成像研究尚处于探索阶段。因此,本实验注重在控制创造力任务难度的情况下,采用fNIRS技术探究声音刺激所操纵的威胁对个体聚合思维的影响。预实验通过对声音刺激材料的评价

定, 选取了四种威胁声音刺激(两种女性尖叫声, 警报声与白噪音)与四种中性声音刺激(两种哈欠声, 脚步声与打字声)作为正式实验材料。正式实验为单因素被试内设计, 自变量为刺激类型, 共包括三个水平:

(1) 对照组; (2) 中性组; (3) 威胁组。因变量为被试在中文远距离联想任务(Remote association task, RAT)的正确率、正确答案的反应时与Hb和HbO₂的浓度。实验结果发现, RAT任务反应时主效应显著, $F(2, 90) = 4.13, p < 0.05, \eta_p^2 = 0.08$, 事后比较表明, 对照组反应时($M = 10488.00, SD = 3324.75$)显著高于威胁组($M = 8637.23, SD = 2742.75, p < 0.05$); 其余组差异均不显著。RAT任务正确率主效应显著 $F(2, 90) = 4.05, p < 0.05, \eta_p^2 = 0.08$, 对照组正确率($M = 8.00, SD = 1.88; p < 0.05$)显著高于威胁组($M = 6.81, SD = 1.66$), 其余组均不显著。fNIRS结果发现, 共有18个通道主效应显著, 事后比较表明, 18个通道均为对照组激活程度显著高于威胁组, 其余两组无差异, 且对照组、中性组和威胁组的大脑激活水平呈下降趋势, 与行为数据结果一致。以上实验结果验证了观点一, 即威胁能够阻碍创造力的发挥。本研究的发现为厘清威胁对创造力的影响, 以及为现实情境中培养个体创造力提供了借鉴意义。

关键词 威胁, 创造力, fNIRS

The negative impact of physiological threats on individual creativity: Evidence from fNIRS

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Abstract: Threats refer to stimuli that can cause harm to an individual's body or social status, and it has the characteristics of authenticity and directness. Creativity is the ability to produce novel, useful and socially valuable products based on a certain purpose. Divergent Thinking and Convergent Thinking are its leading components. There are three main perspectives on the impact of threats on creativity: threats can hinder creativity; threats can promote creativity; there is an inverted U-shaped relationship between threats and creativity, that is, a moderate threat is most conducive to creativity. Play. However, due to the large differences in the ways of threat manipulation, the difficulty of creativity tasks, and the different dimensions of creativity, many studies have not reached a consistent conclusion, and related brain imaging studies are still in the exploratory stage. Therefore, this experiment focuses on the use of fNIRS technology to explore the impact of physical threats manipulated by sound stimulation on individual aggregated thinking in the case of controlling the difficulty of creative tasks. The preliminary experiment selected four threatening sound stimuli (two female screams, alarm sound and white noise) and four neutral sound stimuli (two yawns, footsteps and typing) through the evaluation of sound stimulus materials. As a formal experimental material. The formal experiment is a single factor within the subject design, the independent variable is the stimulus type, and includes three levels: (1) control group; (2) neutral group; (3) threat group. The dependent variables are the correct rate of the subjects in the Chinese remote association task (RAT), the response time to the correct answer, and the concentration of Hb and HbO₂. The experimental results found that the main effect of the RAT task response was significant, $F(2, 90) = 4.13, p < 0.05, \eta_p^2 = 0.08$, and Post-hoc test found that the control group responded ($M = 10488.00, SD = 3324.75$) was significantly higher than the threat group ($M = 8637.23, SD = 2742.75, p < 0.05$); the differences in the other groups were not significant. The main effect of RAT task accuracy rate was significant, $F(2, 90) = 4.05, p < 0.05, \eta_p^2 = 0.08$, the accuracy rate of the control group ($M = 8.00, SD = 1.88; p < 0.05$) was significantly higher than that of the threat group ($M = 6.81, SD = 1.66$), the other groups were not significant. The results of fNIRS found that a total of 18 channels had significant main effects. Post-hoc test found that 18 channels were all activated in the control group significantly higher than the threat group, and there was no difference between the other two groups, and the control group, neutral group and threat group. The level of brain activation showed a downward trend, which was consistent with the results of behavioral data. The above experimental results verify the first point of view, that is, threats can hinder creativity. The findings of this study provide a reference for clarifying the impact of threats on creativity and for cultivating individual creativity in real situations.

Keywords: Threats, Creativity, fNIRS

NRF1/miR-4514/ SOCS3 通路调控精神分裂症发病的生物信息学分析

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摘要 背景: 精神分裂症 (Schizophrenia, SZ) 是一种精神病综合征, 其主要特征是出现幻觉、妄想和无逻辑性言语等精神病性症状, 以及执行能力、记忆力和精神理解力受损等认知缺陷。精神分裂症在全球人口普查患病率中约占 1%, 是全球十大致残原因之一。因此, 精分的病因以及发病机制的阐明, 对于提升诊断率和治疗效果有重要的临床应用意义和价值。精神分裂症一直是医学心理研究的热点, 但精分特征的多因素性和临床异质性使精神病学的研究发展面临许多困难。此前医学心理研究显示精分存在遗传性, 属于复杂的多基因遗传疾病, 受多重环境因素影响。选择从生物决定因素的角度去研究精神问题是医学心理研究领域长期存在的方向。方法: 本研究采用生物信息学的方法, 从公共数据库 NCBI-GEO 中下载与精分相关的 mRNA 表达谱 (GSE46509) 进行差异基因筛选, 然后利用 DAVID 数据库进行基因本体论(GO)功能注释分析和京都基因和基因组百科全书(KEGG)通路富集分析。建立了蛋白-蛋白相互作用(PPI)网络来揭示关键基因。随后通过 TargetScan 预测差异关键基因潜在的靶向 miRNA。并在实验验证的数据库中筛选与 miRNA 作用转录因子 (TF), 它们能与 pre-miRNA 启动子区域结合位点。目的是构建出 mRNA-miRNA-TF 调控网络。结果: 我们一共筛选出 1422 个差异基因, 在 GO 与 KEGG 分析结果中发现, 在肽基酪氨酸磷酸化, 转录因子活性以及神经活性配体-受体相互作用通路富集明显。构建了 PPI 网络提取了前 15 个关键基因, 选取其中的基因预测其靶向调控的 miRNA, 发现了多个低表达基因调控的 hsa-miR-4514。最后对调控 hsa-miR-4514 的上游 TF 进行预测, 发现了转录因子 NRF1 并且在 GEO 数据库筛选的基因表达谱中高表达。我们推测在精神分裂患者中存在高表达的 NRF1 调控 hsa-miR-4514 引起 SOCS3, FBXO9 以及 FBXO10 基因的低表达, 从而引起精神分裂症疾病的发生。结论: 本研究旨在利用生物信息学方法, 筛选 SZ 的关键基因、miRNA 和 TF, 构建 mRNA-miRNA-TF 调控网络, 提供精神精神分裂症发病潜在的生物标志物及可能的分子机制。

关键词 精神分裂症, 生物信息学, 微 RNAs, 转录因子

Bioinformatics analysis of NRF1/miR-4514/ SOCS3 pathway regulating schizophrenia pathogenesis

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Abstract: BACKGROUND: Schizophrenia (SZ) is a psychotic syndrome characterized by psychotic symptoms such as hallucinations, delusions, and illogical speech, as well as cognitive deficits such as impaired executive ability, memory, and mental comprehension. Schizophrenia has a prevalence of approximately 1% in the global census and is one of the top 10 causes of disability worldwide. Therefore, the elucidation of the etiology, as well as the pathogenesis of schizophrenia, has important clinical applications and values to improve the diagnosis rate and treatment outcome. Schizophrenia has been a hot topic in medical psychological research, but the multifactorial nature and clinical heterogeneity of the characteristics have made the development of psychiatric research face many difficulties. Previous medical-psychological studies have shown the existence of SZ, which is a complex polygenic genetic disorder and is influenced by multiple environmental factors. The choice to study psychiatric problems from the perspective of biological determinants is a long-standing direction in the field of medical psychological research. METHODS: In this study, a bioinformatics approach was used to download the mRNA expression profile (GSE46509) associated with SZ from the public database NCBI-GEO for differential gene screening, followed by gene ontology (GO) functional annotation analysis and Kyoto Encyclopedia of Genes and Genomes (KEGG) pathway enrichment analysis using the DAVID database. A protein-protein interaction (PPI) network was established to reveal hub genes. Subsequently, potential target miRNAs for differential hub genes were predicted by TargetScan. and miRNA-interacting transcription factors (TFs), which can bind to pre-miRNA promoter regions, were screened in the experimentally validated database. The aim was to construct the mRNA-miRNA-TF regulatory network.

RESULTS: We screened a total of 1422 differential genes and found significant enrichment in peptidyl-tyrosine phosphorylation, transcription factor activity, and neuroactive ligand-receptor interaction pathways in the results of GO and KEGG analysis. A PPI network was constructed to extract the top 15 key genes, and selected genes were predicted to target regulated miRNAs, and multiple low-expressing genes were found to regulate hsa-miR-4514. Finally, upstream TFs regulating hsa-miR-4514 were predicted, and transcription factor NRF1 was identified and highly expressed in the gene expression profile screened by the GEO database. We hypothesize that the presence of high expression of NRF1 in schizophrenic patients regulates hsa-miR-4514 resulting in low expression of SOCS3, FBXO9, and FBXO10 genes, which cause schizophrenia disorders. **CONCLUSIONS:** This study aimed to screen key genes, miRNAs, and TFs of SZ using bioinformatics methods, and construct an mRNA-miRNA-TF regulatory network to provide potential biomarkers and possible molecular mechanisms of schizophrenia pathogenesis.

Keywords: Schizophrenia, bioinformatics, Micro RNA transcription, factors

框架效应对第三方惩罚行为的影响

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摘要 当作为第三方观察者时, 即使事件与自身利益无关, 个体也可能去惩罚违反规范的人。这种第三方惩罚行为是一种亲社会行为, 有利于维护社会规范。先前研究发现, 作为第一方决策者时, 决策倾向会受到“框架效应”的影响。而第三方判断和惩罚行为也可能会受到对违反规范事件的描述方式(即框架)的影响, 这类现象可以被称为“第三方框架效应”。为了探索第三方框架效应的行为模式和神经机制, 本研究设计了一个行为和一个功能磁共振成像实验。实验范式结合了“社会框架”范式和“第三方惩罚”范式。作为第三方个体, 被试被告知将观看先前实验中多个被试在一项社会决策任务中的行为结果: “决策者”决定是否保留自己的经济收益而让另一个人遭受疼痛电击(在不同的框架下描述不同: 在伤害框架下被描述为“电击他人/保留金钱”; 在帮助框架下被描述为“不帮助他人/保留金钱”)。被试随后决定是否用自己的金钱来惩罚该决策者。行为结果表明, 相对于帮助框架, 被试在伤害框架下更愿意执行第三方惩罚, 即发现了显著的“第三方框架效应”。行为实验发现, 被试主观报告的对决策者的愤怒情绪调节了对接受者的疼痛共情和框架效应强度之间的关系。磁共振实验发现, 中扣带皮层和脑岛对框架的主效应均显著;而这些区域之间的功能连接性显著预测了框架效应个体差异。同时, 脑岛激活值在中扣带皮层激活值和行为的框架效应之间起中介作用。本研究揭示了“第三方框架效应”的行为特征及其可能的神经机制, 有助于理解为什么道德标准和道德行为可以是灵活且相对的。此外, 本发现也可能会拓宽对框架效应的一般理解。

关键词 框架效应, 第三方惩罚, 功能磁共振, 中扣带回皮层, 脑岛

To blame or not? Modulating third-party punishment with the framing effect

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Abstract: People as third-party observers, without direct self-interest, may punish norm violators to maintain social norms. However, third-party judgment and the follow-up punishment might be susceptible to the way we frame (i.e., verbally describe) a norm violation. We conducted a behavioral and a neuroimaging experiment to investigate the above phenomenon, which we call “third-party framing effect.” In these experiments, participants observed an anonymous perpetrator deciding whether to keep her/his economic benefit while exposing a victim to a risk of physical pain (described as “harming others” in one condition and “not helping others” in the other condition), then they had a chance to punish that perpetrator at their own cost. Our results show that the participants were more willing to execute third-party punishment under the harm frame compared to the help frame, manifesting a framing

effect. In Experiment 1, self-reported anger toward perpetrators mediated the relationship between empathy toward victims and the framing effect. In Experiment 2, insular activation mediated the relationship between mid-cingulate cortex activation and the framing effect; the functional connectivity between these regions could significantly predict the framing effect size. These findings shed light on the psychological and neural mechanisms of the third-party framing effect.

Keywords: framing effect, third-party punishment, functional magnetic resonance imaging, mid-cingulate cortex, insula

风险决策的群体极化效应

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摘要 群体决策将个人最初的平均反应往更极端化的方向推进,这一现象称为群体极化。为了探究风险决策的群体极化效应的神经机制,本研究招募共 57 名被试,每 3 名被试组成一个群体,借助 fNIRS-超扫描技术同时记录 3 人在实验任务中前额叶和左侧颞顶区域的脑活动,风险预期(优势、劣势)×得失情景(赢、输)共 4 种决策情景随机出现,每种决策情景出现 12 次,被试先完成 48 轮个体决策,然后在群体决策中集中讨论并对相同的 48 轮决策达成共识。研究发现,在风险优势和劣势情景下出现了不同方向的群体极化:风险优势时群体比个体更加冒险,风险劣势时群体比个体更加谨慎。神经结果发现,相对于个体决策,在群体决策时背外侧前额叶和颞顶联合区出现了更高的脑同步,并且群体极化与群体脑同步增加有关。

关键词 群体极化,群体脑同步,风险决策, fNIRS

The Group Polarization Effect of Risky Decision-making

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Abstract: Group decision-making pushes the individual's initial average response to a more extreme direction, a phenomenon known as group polarization. In order to explore the neural mechanism of the group polarization effect, this study recruited a total of 57 subjects, who formed 19 group of 3 subjects. With the help of fNIRS-hypersanning technology, the brain activities of 3 people were recorded in the prefrontal cortex and left temporal parietal region during the experimental task at the same time. Risk expectations (risk-advantages, risk-disadvantages) × Gain or loss domain (win, lose), formed 4 decision-making scenarios appear randomly, each decision-making scenario appeared 12 times. Participants first completed 48 rounds of individual decision-making, and then in the group came into discussion and reached consensus on the same 48 rounds of decision-making. The study found that group polarization in different directions appeared under risk advantages and disadvantages: groups are more risky than individuals when in risk- advantages case, and are more cautious than individuals when they are risk-disadvantages case. The neurological results found that compared with individual decision-making, higher brain synchronization occurred in the dorsolateral prefrontal lobe and temporoparietal region during group decision-making, and group polarization was related to increased group neural synchronization.

Keywords: Group polarization, Group neural synchronization, Risk decision-making, fNIRS

社交焦虑者注意偏向变化的时间进程:来自稳态视觉诱发电位的证据

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摘要 本研究以稳态视觉诱发电位(SSVEP)作为表征注意分配的指标,采用点探测范式,考察亚临床社交焦虑者注意偏向变化的时间进程,并分析注意控制能力与社交焦虑、负性注意偏向之间的关系。结果发现,高社交焦虑组(HSA)在 180~1500ms 时段,相较于快乐和中性面孔,愤怒面孔诱发的 SSVEP 波幅最大;低社交

焦虑组(LSA)在 500~2500ms 时段,快乐面孔诱发的 SSVEP 波幅最大。进一步对差异波的分析发现,在整个刺激呈现过程中(180~2500ms),与快乐-中性、中性-中性条件相比,HSA 组在愤怒-中性条件下的差异波最大;而 LSA 组在快乐-中性条件下的差异波最大。此外,被试的注意控制能力得分与社交焦虑得分、负性注意偏向指数均存在显著的负相关,且 HSA 组被试的注意控制能力得分显著低于 LSA 组。结果表明,高社交焦虑个体对威胁刺激早期表现出注意警觉,随后可能由于注意控制能力受损,未能做出适应性回避,最终表现为持续注意警觉。

关键词 社交焦虑, 注意偏向, 注意警觉, 注意控制能力, 稳态视觉诱发电位

The time course of attentional bias in social anxiety: evidence from steady-state visual evoked potentials

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Abstract : This study aimed to use steady-state visual evoked potential (ssVEP) as an indicator to characterize attention allocation to investigate the time course of changes in attentional bias of individuals with social anxiety to threatening social stimuli, and to further analyzed the relationship between attention control ability, social anxiety and negative attention bias. Selected the average amplitude of ssVEP in the period of 180~2500ms for analysis, and divided the four time windows of 180~500ms (time1), 500~1000ms (time2), 1000~1500ms (time3), 1500~2500ms (time4). The results found that in the HSA group, the ssVEP amplitude induced by the angry face was the largest in the 180~1500ms period compared with the happy and neutral faces; in the LSA group, the ssVEP amplitude induced by the happy face was the largest in the 500~2500ms period. Further analysis of the difference wave found that during the whole stimulus presentation process (180~2500ms), the HSA group had the largest difference wave under anger-neutral conditions, while the LSA group had the largest difference wave under happy-neutral conditions. In addition, attention control ability was negatively correlated with social anxiety and negative attention bias. The results showed that individuals with social anxiety initially showed vigilance to threat stimuli, and then may fail to make adaptive avoidance due to impaired attention control ability, and finally showed sustained vigilance.

Keywords: social anxiety, attention bias, attentional vigilance, attentional control, steady-state visual evoked potential.

3.2 硕士研究生论坛—发展与教育心理学

(1) 硕士研究生论坛—发展与教育心理学分场 1

七年级平面几何认知诊断测验的开发

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摘 要 本研究以人教版七年级下册数学教材为知识载体,基于认知诊断理论开发了七年级平面几何诊断测验,并通过测验提供的信息开展了诊断分析,研究结果表明:1.预测卷基于 G-DINA 模型从 S-X2,Disc(区分度),DIF(项目功能差异)这三个指标对项目进行拟合检验后删除了 18 个项目,剩余 24 道题组成了正式卷;2.属性层级一致性指标 HCI 值为 0.638,且测验具有较好的结构效度;3.基于 CTT 框架下,正式卷的测验的克伦巴赫 α 系数为 0.744,基于 CD 框架下,测验的属性分类一致性信度处于[0.754, 0.908]之间,分类精确性信度处于[0.715, 0.897]之间;4.被试的知识属性平均掌握概率处于(0.365, 0.830)之间,被试的掌握模式总共估计出 58 种,其中掌握全部属性(11111111)的人数最多,共有 126 人,占全部总人数(643 人)的 19.5%。总

之, 该测验具有良好的计量指标, 符合测量学要求, 可应用于实践。

关键词 认知诊断, G-DINA 模型, 七年级平面几何, 学习诊断

Development of the 7th Grade Plane Geometry

Cognitive Diagnostic Test

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Abstract: This study developed a diagnostic test of 7th grade plane geometry based on the cognitive diagnostic theory by using the mathematics textbook of the second book of 7th grade of the Human Education version as the knowledge carrier, and carried out diagnostic analysis through the information provided by the test. The results showed that: 1. The HCI value of the attribute level consistency index was 0.638, and the test had good structural validity; 3. The mean probability of mastery of the attributes was between (0.365, 0.830), and the total number of mastery patterns was estimated to be 58, among which the largest number of subjects mastered all the attributes (11111111) was 126, accounting for 19.5% of the total number of subjects (643). In conclusion, the test has good measures that meet the measurement requirements and can be applied in practice.

Keywords: Cognitive Diagnosis, G-DINA Model, Plane Geometry, Learning Diagnosis

儿童工作记忆训练的效果：来自行为和 ERPs 的证据

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摘要 目的: 工作记忆(WM)训练可以提高参与者在相关任务中的行为表现, 但是关于训练对儿童行为表现和神经生理学结果的影响, 目前的研究结果还不尽一致。本研究的主要目的是考察 WM 训练对儿童 WM 任务行为表现及大脑神经活动的影响。方法: 将 31 名儿童(平均年龄 7.70 岁, 女生 13 名, 男生 18 名)随机分为训练组和对照组。对训练组的 21 人开展工作记忆训练, 对照组参加班级自习学习活动。训练任务采用空间 N-back 任务和计算广度任务相结合, 两个任务都是从低难度开始训练, 并根据儿童的任务表现来调整训练任务的难度, 一共完成 20 次训练, 每次训练分钟。在第一次训练和最后一次训练时收集儿童的脑电数据, 在训练开始前和完成后使用 N-back 任务和数字倒背任务考察儿童 WM 水平。结果: 前后测重复测量方差分析结果表明, 训练组 2-back 任务后测成绩的显著提升。同时, ERPs 的结果也表明 WM 训练对儿童的大脑神经活动产生了一定的影响, 在空间 1-back 任务中具体表现为非目标试次 P3a 和 P3b 潜伏期的缩短, 在空间 2-back 任务中具体表现为 P3b 振幅的增加以及 P3a 和 P3b 潜伏期的缩短。结论: WM 训练能够提高儿童在 WM 任务中的行为表现, 同时也会对儿童大脑神经活动产生一定的影响。本研究在一定程度上证明了儿童 WM 训练的效果及可行性, 初步说明了开展相关研究的潜力及局限性, 为日后相关研究的开展提供了一定的参考。

关键词 儿童, 工作记忆, 认知训练, 事件相关电位 (ERPs), 神经生理学结果

The effects of Working Memory training in children revealed by behavioral responses and ERPs

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Abstract: Introduction: Recent studies have examined the effect of computerized cognitive training on working memory (WM), but the behavioral and neural effects were uncertain. Also, few studies explored WM training effects on children using event-related potentials (ERP). The purpose of our study was to investigate the effects of WM training in children, including the effects on behavioral performance and neurophysiological outcomes. Methods: A sample of 31 healthy children (mean age=7.70, $SD=0.59$, 13 females) was assigned to the training group and the control group. Over 20 training sessions, the training group participated in two training tasks, computation-span and

spatial n-back tasks, whereas the control group just joined in normal class activities. Event-related potentials (ERPs) data were collected at the first and the last training session to analyze the training effect on P3a and P3b ERP components. Pre- and post-test evaluation on WM tasks (digit span backwards task, n-back task) were performed to examine the training effect on behavior performance. Result: The results showed WM training led to improved performance in the digit span backwards task and 2-back task of post-test evaluation, shortened P3a and P3b latencies in nontarget trials during the spatial 1-back task, shortened P3a latency in target and nontarget trials as well as increased P3b amplitude and shortened P3b latency in target trials during the spatial 2-back task. Conclusion: These results suggested that WM training might enhance children's behavioral performance on WM tasks and brought about neurophysiological changes. This study gives insights into the potential of WM training effects on children's behavioral performance and neurophysiological outcomes.

Keywords: children, working memory, cognitive training, event-related potentials, neurophysiological outcomes

反刍思维对中学生非自杀性自伤行为的影响：经验性回避的中介作用及心理弹性的调节作用

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摘要 非自杀性自伤行为 (Non-suicidal self-injury, NSSI) 是中学生主要的公共健康危害之一。反刍思维与 NSSI 的关系已由情绪级联模型证明, 但潜在的中介、调节因素少有人探索。本文从情绪调节功能的视角检验了经验性回避的中介作用, 以及心理弹性调节直接效应的作用。使用反刍思维量表、接纳与行动问卷、青少年心理弹性量表、NSSI 问卷调查广西 1378 名中学生 (40.1%男生, Mage=14.98), 结果显示: 中学生反刍思维可正向预测 NSSI, 且经验性回避在其中起到部分中介作用; 心理弹性可缓冲反刍思维对 NSSI 的影响。本研究启示心理健康教育者与 NSSI 的临床干预者可以运用心理弹性教学、认知行为治疗等方式改善中学生的消极情绪调节过程与 NSSI。

关键词 反刍思维, 经验性回避, 心理弹性, 中学生, 非自杀性自伤行为

Effects of rumination on non-suicidal self-injury behavior of middle school students: mediating effect of experiential avoidance and moderating effect of psychological resilience

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Abstract : Non-suicidal self-injury (NSSI) is a major public health hazard among middle school students. The relationship between rumination and NSSI has been demonstrated by Emotional Cascade Model, but the potential mediators and moderators, which may aggravate or buffer this influence, have seldom been explored. From the perspective of emotional regulation, the current study tested the mediating effect of experiential avoidance and the moderating effect of resilience on the arising of NSSI. The sample consisted of 1378 Chinese participants (40.1% boys; mean age = 14.98) recruited from middle schools in Guangxi Zhuang Autonomous Region. They completed questionnaires regarding rumination, experiential avoidance, resilience, and NSSI. SPSS 25.0 and Amos 21.0 were applied to conduct bootstrap and hierarchical regression analysis. The results indicated that: Rumination could positively predict NSSI, and this correlation was partly mediated by experiential avoidance; Resilience could weaken the effect of rumination on NSSI. All hypotheses were supported. This model gave an interpretation about how rumination, experiential avoidance, and resilience impact NSSI. Also, it provided a practical implication that cognitive behavioral therapy, psychology lesson on resilience, and so on, may be useful to prevent negative emotional

regulation, as well as NSSI.

Keywords: Rumination, Experiential avoidance, Resilience, Middle school students, Non-suicidal self-injury.

儿童期逆境问卷（ACE-IQ）的修订及其信效度检验

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摘要 目的: 对儿童期逆境国际问卷(Adverse Childhood Experiences-International Questionnaire, ACE-IQ)在我国中学生群体中进行修订, 并进行信效度检验。方法: 首先由本研究小组3位成员、一位心理学副教授和一位英语专业研究生对项目进行翻译及回译工作。修订版的问卷删除了有关战争和集体暴力的逆境内容, 增加了符合中国现实情况的两种逆境类型(留守经历和目睹灾害伤亡), 对两种逆境的表述进行了改变(欺凌/孤立/排挤和目睹暴力), 对详细描述暴力形式的三个逆境类型的题项进行了合并。修订改编后的ACE-IQ问卷共包含14种逆境类型, 即14个条目, 共22个具体描述, 采用是否计分方式。本研究选取中部地区某省多个县市的初中、普高、中职、职高共计12所学校, 每个学校每个年级随机抽取一个班发放线上问卷, 共收集4909份问卷, 其中有效问卷共4807份, 回收有效率为97.92%。被试年龄在12~18岁, 平均为14.80±1.47岁。对4807份有效问卷进行项目分析、内部一致性系数分析, 2419份用于验证性因素分析, 2388份用于验证性因素分析, 另选取118名中学生进行间隔2周后的重测, 进行重测信度分析。采用抑郁障碍自评量表、中文版焦虑敏感性指数量表和生活满意度问卷作为校标。结果: ①修订后的ACE-IQ问卷共14个条目, 22个逆境描述, 包括4个维度: 儿童虐待忽视、家庭外暴力、家庭功能障碍和父/母缺失。②各项目得分与维度分之间均显著相关($r=0.40\sim0.84, P<0.01$)。采用独立样本t检验比较各条目在高低分组的差异, t值在6.65~61.53之间, $P<0.001$, 各条目区分度良好。探索性因素分析得到4个公因子, 儿童虐待忽视、家庭功能障碍、父/母缺失和家庭外暴力, 累积方差贡献率为50.00%。验证性因素分析结果发现四因子模型与数据拟合较好($\chi^2/df=6.34, CFI=0.92, IFI=0.92, RMSEA=0.05$)。修订后的ACE-IQ问卷的K-R20系数为0.71, 重测信度为0.73。相关分析表明, ACE-IQ总分与抑郁($r=0.36, P<0.01$)呈显著正相关, 与焦虑敏感($r=0.30, P<0.01$)呈显著正相关, 与生活满意度($r=-0.27, P<0.01$)呈显著负相关。③本研究中发生率最高的逆境类型是留守经历(40.65%), 其次是身体忽视(33.26%), 排在第三的是情感忽视(21.47%)。发生率最低的是家庭功能障碍维度的三个逆境类型, 家人入狱(0.92%)、家人患精神疾病(1.12%)、家人有物质滥用(2.16%)。结论: 修订后的中文版儿童期逆境问卷具有良好的信度和效度, 可作为我国中学生儿童期逆境的测量工具。

关键词 儿童期逆境, 中学生, 效度, 信度

Reliability and Validity of the Adverse Childhood Experiences - International Questionnaire (ACE-IQ) in the Chinese Adolescents

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Abstract: Objective: To review and revise the Adverse Childhood Experiences - International Questionnaire (ACE-IQ) among Chinese adolescents. Methods: Three members of the research team, a psychological professor and an English major graduate student translated and back-translated the project. The revised questionnaire deleted adversity on war and the collective violence content, increased the two types of adversity which accords with the reality of China (left-behind experience and witness casualty), to change two kinds of adversity expression (bullying/ isolation/ excluded and witnessing violence), three types of adversity in the form of violence against a detailed description of item merged. The revised ACE-IQ questionnaire contains 14 adversity types, that is, 14 items, a total of 22 specific descriptions, and the scoring method is adopted. A total of 12 schools including junior middle schools, general high schools, secondary vocational schools and vocational high schools were selected from a province in central China. A class was randomly selected from each grade of each school to issue online questionnaires. A total of 4909

questionnaires were collected, of which a total of 4807 were effective, with a recovery efficiency of 97.92%. The middle school students were tested with the adverse childhood experiences - international questionnaire (ACE-IQ), depression self-rating scale for children (DSRSC), childhood anxiety sensitivity index in children (CASI-C) and satisfaction with life scale (SWLS). The test was conducted in 12 middle schools, general high schools, secondary vocational schools and vocational high schools in a province of central China. 4807 valid questionnaires were obtained for project analysis and internal consistency coefficient analysis, 2419 for confirmatory factor analysis, 2388 for confirmatory factor analysis, 118 middle school students were randomly selected for retesting using the revised scale at intervals of six months. Results: ①The revised ACE-IQ consists of 14 items and 22 adversity descriptions, including 4 dimensions: child maltreatment and neglect, violence outside the home, family dysfunction, and parent/parent absence. ②There was a significant correlation between the scores of each item and the dimension scores ($r = 0.40 \sim 0.84$, $P < 0.01$). Independent sample t-test was used to compare the differences between high and low groups. The T value was between 6.65 and 61.53, $P < 0.001$. Four common factors were extracted by exploratory factor analysis, and the cumulative contribution rate was 50.00%. The confirmatory factor analysis data fit well ($\chi^2/df = 6.34$, CFI=0.92, IFI=0.92, RMSEA=0.05), which supported the four-factor model. The K-R20 coefficient for the total scale is 0.71, and the retest reliability was 0.73. The correlation analysis showed that the total scores of childhood adversity and scores of various dimensions were significantly positively correlated with depression ($r=0.36$, $P<0.01$) and anxiety sensitivity ($r=0.30$, $P<0.01$), and negatively correlated with life satisfaction ($r=-0.27$, $P<0.01$). ③In this study, the most common type of adversity was left behind experience (40.65%), followed by physical neglect (33.26%), followed by emotional neglect (21.47%). The three adversity types of family dysfunction dimension had the lowest incidence: family imprisonment (0.92%), mental illness (1.12%) and substance abuse (2.16%). Conclusions: The revised Chinese version of the Adverse Childhood Experiences - International Questionnaire has good reliability and validity, which can be applied to evaluate the level of adverse childhood experiences among Chinese adolescents.

Keywords: The adverse childhood experiences, Middle school student, Validity, Reliability

父母问题性手机使用对儿童执行功能的不良影响： 科技干扰的中介作用

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摘要 科技干扰是指人们在日常交往互动中被数字科技设备打断或侵扰的现象。家庭中，由于数字科技设备导致的亲子之间互动的干扰或中断被称为亲子科技干扰，亲子科技干扰通常由父母问题性手机使用导致。已有研究表明，智能手机会干扰亲子关系，这种亲子科技干扰与儿童社会情绪发展有关。然而，目前没有研究探究父母问题性科技使用与儿童执行功能之间的关系。作为一种高级认知过程，执行功能控制和协调各种过程的运作，是与学业成就和社会情感能力相关的一系列发展领域的基础。本研究的目的是探讨父母问题性手机使用与科技干扰是否与儿童执行功能有关。本研究选取 472 名 3-9 岁儿童的家长为被试，通过改编的问题性手机使用量表、科技设备干扰量表和儿童执行功能清单分别调查父母手机使用、科技干扰和儿童执行功能表现的情况。结果表明，父母问题性手机使用会导致亲子互动中更多的科技干扰，并且父母问题性手机使用和科技干扰与儿童执行功能问题呈正相关，科技干扰是父母问题性手机使用与儿童执行功能关系之间的中介因素。本研究的结果强调了父母媒体使用行为对儿童执行功能的重要影响，研究人员和教育工作者应该帮助家长认识到媒体使用的效果取决于科技设备的使用方式，并帮助家长养成健康的媒体使用习惯。

关键词 父母手机使用，科技干扰，执行功能，媒体使用

Parents busy with phone Tend to have kids lower in EF: the mediating role of technofence

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Abstract: Technofence refers to the phenomenon that people are interrupted or disturbed by digital technology devices in their daily interactions. In the family, the interference or interruption in parent-child interaction caused by digital technology devices is called parent-child technofence, which is usually raised by parents' problematic mobile phone use. Studies have shown that smart phones can interfere with parent-child relationship, which is related to children's social emotional development. Nonetheless, no studies examine the association between parental problematic technology use and children's executive function (EF). As an advanced cognitive process, executive function controls and coordinates the operation of various processes, which is the basis of a series of development fields related to academic achievement and social emotional ability. The purpose of this study was to explore whether parental problematic mobile phones use and technofence are associated with EF of children. 472 parents of children aged from 3 to 9 years old were selected as subjects to investigate their mobile phone use, technofence and children's executive function performance through the adapted Problematic Mobile Phone Use Scale, adapted Technology Device Interference Scale and The Childhood Executive Functioning Inventory. Results indicated that parental problematic mobile phone use can lead to more technofence in parent-child interaction, and both parental problematic mobile phones use and technofence were positively associated with the problems of children's EF. Technofence was a mediating factor between parental problematic mobile phones use and children's EF. These findings emphasize the important influence of parental media use behavior on the children's EF. Researcher and educators should help parents realize that the effects of media use depend on how the technology is used, and help parents to develop healthy digital habits.

Keywords: parental mobile phone use, technofence, executive function, media use

熟悉危险，让安全更亲近！ ——熟悉性与威胁性对幼儿无意视盲的影响

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摘要 幼儿对威胁相关刺激的认知经验往往非常有限，这导致他们对威胁刺激的熟悉度较低。现实生活中，真正能造成重大伤害的威胁刺激一般都以意外刺激呈现，快速有效地在非预期条件下觉察威胁刺激对个体的生命安全起着重要的作用。本研究将基于无意视盲（IB）范式，考察刺激的威胁性与熟悉性对幼儿觉察非预期刺激的影响。我们采用改编版的 Odd Ball 范式，考察了 258 名 4-5 岁幼儿对低熟悉-高威胁刺激（蛇和刀）、高熟悉-低威胁刺激（蜗牛和勺子）和低熟悉-低威胁刺激（手电筒和田螺）中的 IB 率。结果发现：（1）在生物性刺激中，幼儿对低熟悉-高威胁刺激的 IB 率显著高于低熟悉-低威胁刺激，威胁性的刺激更不容易被觉察；但是幼儿对低熟悉-高威胁和低熟悉-低威胁刺激的 IB 率没有显著差异。这意味着幼儿在生物性刺激的注意加工中，威胁性发挥着作用，而熟悉性没有。（2）在非生物性刺激中，幼儿对低熟悉-低威胁刺激的 IB 率显著高于高熟悉-低威胁刺激，熟悉的刺激更容易被觉察；但是幼儿对低熟悉-低威胁和高熟悉-低威胁刺激的 IB 率没有显著差异。这表明幼儿对非生物性刺激的加工中，熟悉性起着重要作用，而威胁性没有。本研究结果提示着，熟悉性与威胁性对幼儿注意加工的影响会基于刺激的生物性而有所不同，对非生物性刺激，熟悉性的作用更重要，这意味着适当增加幼儿对威胁相关刺激的认知经验非常重要，尤其对非生物性刺激，比起危险的刺激，他们对熟悉的刺激更敏感。

关键词 威胁刺激，注意偏向，幼儿，无意视盲，非预期刺激

Can we get children's safety by keeping them away from danger? —No! A study on attentional bias based on inattention blindness

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Abstract: Young children do not have many cognitive experience of threat-relevant stimuli, which makes them not familiar with these things. The harmful threat-relevant stimuli always appear unexpectedly and the attentional bias to these things are critical in daily life. This study would like to explore preschoolers' attentional bias to dangerous and familiar objects based on inattention blindness (IB) task. We applied the adapted Odd Ball paradigm to explore the IB rates to low-familiarity-high-threat stimuli (snakes and knives), high-familiarity-low-threat stimuli (snails and spoons) and low-familiarity-low-threat stimuli (flashlights and escargots) in 258 4-5-year-old preschoolers. We found that (1) For animate stimuli, preschoolers' IB rates on low-familiarity-high-threat stimuli were significantly higher than that of low-familiarity-low-threat stimuli, threatening stimuli are less likely to be detected; but the character of familiarity does not play an important role in these detection, which showed that no significant difference occurred on the IB rates between low-familiarity-low-threat and high-familiarity-low-threat stimuli. (2) For inanimate stimuli, preschoolers' IB rates on low-familiarity-low-threat stimuli were significantly higher than that of high-familiarity-low-threat stimuli, familiarity stimuli are more possible to be detected; but no significant difference occurred on the IB rates between low-familiarity-high-threat and low-familiarity-low-threat stimuli, which means that the character of threaten does not play an important role for these detection. The results suggest that the character of familiarity plays more important role than threaten in inanimate stimuli, but for animate stimuli, the importance of the two characters are opposite. It signified that proper increase of the exposure to threat-relevant stimuli is also crucial, especially for inanimate stimuli, which may increase preschoolers' intuitive cognitive experience and enhance their vigilance to these stimuli.

Keywords: threat-relevant stimuli, attentional bias, preschoolers, inattention blindness, unexpected stimuli

中国青少年家庭功能的异质性：基于潜在剖面分析

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摘要 采用家庭亲密度与适应性量表、人际指针量表，对陕西省、江苏省五所普通中小学校的 1922 名青少年进行调查，并用潜在剖面分析方法探索中国青少年家庭功能潜在类别，以及考察不同家庭功能潜在类别的青少年人口学特征及其观点采择能力。结果发现：(1)中国青少年家庭功能存在明显的异质性，分为四种潜在类别：高家庭功能组、家庭功能良好组、中等家庭功能组和家庭功能不良组，分别占比为 17.8%、37.0%、31.0%、14.2%；(2)不同家庭功能潜在类别受性别与年级的影响，女生(比男生)和中学生(比小学生)更容易处于不良家庭功能组；(3)青少年观点采择得分在不同家庭功能潜在类别上存在差异：高家庭功能组 > 家庭功能良好组 > 中等家庭功能组 > 家庭功能不良组。由此，中国青少年家庭功能整体处于较高水平，各类型大致呈现“钟形”分布，且不同家庭功能潜在类别受到人口学变量的影响，同时也不同程度地作用于青少年的发展。

关键词 青少年，家庭功能，观点采择，潜在剖面分析

Heterogeneity in Family Function among Adolescents in China: Based on Latent Profile Analysis

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Abstract: A total of 1,921 adolescents were surveyed from 5 primary and middle schools in Shaanxi and Jiangsu provinces by using Family Cohesion and Adaptability Evaluation Scales and Interpersonal Index Questionnaire. The results showed that: (1) four profiles of family function were identified: high family function group (17.8%), good family function group (37.0%), medium family function group (31.0%), and family dysfunction group (14.2%); (2) both gender and grade predicted the profile of adolescent's family function, and girls (compared with boys) and middle school students (compared with primary school students) were more susceptible to family dysfunction group; (3) there were significant differences of scores of adolescents' perspective taking in the four profiles: high family function group > good family function group > medium family function group > family dysfunction group. Thus, the overall family function of adolescents in our country was at a relatively high level and the four profiles are roughly "bell-shaped" distribution, meanwhile different profiles of family function were affected by demographic variables and also influenced the development of adolescents to varying degrees.

Keywords: adolescents, family function, perspective taking, latent profile analysis

特质感恩和亲密关系对大学生人际宽恕的影响：来自 ERP 的证据

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摘要 现实生活中的冒犯事件往往不可避免，而宽恕可以缓解冲突、化解矛盾，有利于构建和谐的人际关系。全国调查研究发现，大学生宽恕感得分在人际情感类别中排名倒数第一，平均分仅有 4.90 分，说明大学生宽恕感总体水平相对较低，亟待提高。以往的研究发现，特质感恩可以正向预测个体的宽恕行为，但这一结论主要基于问卷调查，缺少实证支持。就与冒犯者的关系而言，受害者与冒犯者的亲密关系程度是影响个体人际宽恕的重要因素。本研究从实证角度出发，采用泰勒攻击范式来考察特质感恩感和亲密关系对大学生人际宽恕的影响，并通过使用 ERP 技术考察了特质感恩感和亲密关系对大学生人际宽恕信息加工时电生理反应的影响。研究结果显示：(1)高特质感恩感大学生相比于低特质感恩感大学生对不同亲密关系冒犯者均选择了更低比例的高强度惩罚；(2)相比于陌生冒犯者，受害者均对亲密冒犯者选择了更低比例的高强度惩罚，表现出更高的内在宽恕意向；(3)高特质感恩感大学生和低特质感恩感大学生在选择惩罚强度和输赢结果反馈时的大脑电生理反应不同，具体表现在 LPP 和 P300 波幅上，具体而言，低特质感恩感大学生在选择惩罚强度时表现出更正的 P300 和 LPP 波幅，在输赢结果反馈时表现出更大的 P300 波幅；(4)受害者在面对亲密、陌生冒犯者选择惩罚强度时的大脑电生理反应不同，表现在 LPP 波幅上，具体而言，受害者在面对陌生冒犯者选择惩罚强度时表现出更正的 LPP 波幅。总之，本研究结果表明特质感恩和亲密关系影响大学生的人际宽恕。其结果不仅在实证层面丰富了有关于大学生人际宽恕的研究，还为大学生人际宽恕的干预提供了启示和方向。

关键词 大学生，人际宽恕，特质感恩感，亲密关系，ERP

The Influence of Trait Gratitude and Intimacy on College Students' Interpersonal Forgiveness: Evidence from ERP

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Abstract: In real life, offensive events are inevitable, while interpersonal forgiveness can ease conflicts, resolve conflicts and build harmonious interpersonal relations. Forgiveness refers to the feeling of forgiving others and peace

of mind. The national survey found that the score of forgiveness of college students ranked the last in interpersonal feelings, the average score was only 4.90, indicating that the overall level of forgiveness of Chinese college students is relatively low and needs to be improved urgently. From the perspective of victims, trait gratitude positively predicted forgiveness behavior, but this conclusion is mainly based on questionnaires and lacks empirical support. In terms of the relationship context of offense, relationship closeness between the victim and the offender is also an important influencing factor of interpersonal forgiveness. From an empirical perspective, this study used Taylor's attack paradigm to investigate the influence of trait gratitude and intimate relationship on interpersonal forgiveness of college students. The results showed that : (1) Compared with individuals with low trait gratitude, individuals with high trait gratitude chose a lower proportion of high-intensity punishment for both close offenders and strangers; (2) Compared with the stranger offenders, the victims all chose a lower proportion of high-intensity punishment for the close offenders, and showed a higher internal forgiveness intention; (3)The brain electrophysiological responses of high trait gratitude individuals and low trait gratitude individuals are different when choosing the intensity of punishment and the feedback of win or lose results. Specifically shown in LPP and P300 amplitudes, low trait gratitude individuals induce more negative P300 and LPP amplitude when choosing punishment intensity and win-lose result feedback, and more negative P300 amplitude when winning and losing result feedback; (4) The brain electrophysiological responses of the victims were different when they chose the intensity of punishment for the close and strange offender, which was reflected in the LPP amplitude. Specifically, the victims induced more negative LPP amplitude when they chose the intensity of punishment for the strange offender. In summary, the results of this study show that gratitude feeling and relationship closeness affect college students' interpersonal forgiveness. The results not only enrich the empirical research on college students' interpersonal forgiveness, but also provide inspiration and direction for the intervention of college students' interpersonal forgiveness.

Keywords: college students, interpersonal forgiveness, trait gratitude, relationship closeness, ERP

同等不公有不同时惩罚： 不同资源分配情境中儿童公平规范执行行为的发展特点

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摘 要 本研究根据价值不同属性细化资源价值的同时，创新定义资源客观价值，首次清晰探究 4-9 岁儿童基于数量、客观价值和主观价值的公平规范执行行为的发展。结果显示：（1）儿童公平规范执行行为的发展会因资源分配情境和不公平提议而存在早晚差异；（2）儿童基于价值的公平规范执行行为出现晚于基于数量的公平规范执行行为；（3）资源主观价值会抑制儿童公平规范执行行为的发展；（4）儿童对绝对不公平提议更容易表现出公平规范执行行为。这些发现不但详细阐述儿童公平规范执行行为的发展特点，而且能够为保障个体之间合作活动的持续性以及进行公平规范教育提供既全面又具针对性的建议。

关键词 资源价值，提议不公平，公平规范执行。

Equal injustice not punishment at the same time: the development characteristics of children's fair and standard implementation behavior in different resource allocation situations

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Abstract: While refining resource value according to different attributes of value, this study innovated the definition of objective value of resources, and for the first time clearly explored the development of fair normative execution behavior of children aged 4-9 based on quantity, objective value and subjective value. The results show:(1) The development of children's fair normative enforcement behavior is different in the morning and evening due to the situation of resource allocation and unfair proposals;(2) Children's value-based fair norm enforcement behavior appeared later than quantity-based fair norm enforcement behavior;(3)The subjective value of resources inhibits the development of children's fair and normative executive behavior;(4) Children are more likely to show fair normative behavior in response to absolutely unfair proposals. These findings not only elaborate on the developmental characteristics of children's fair norm enforcement behavior, but also provide comprehensive and targeted suggestions for ensuring the continuity of cooperative activities between individuals and carrying out fair norm education.

Keywords: resource value, the level of unfair proposal, fair and standard implementation

感知教师支持、同伴关系与大学生心理健康的关系： 现实利他行为和网络利他行为的中介作用

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摘 要 目的：根据生态系统理论，微系统作为直接作用于个体发展的近端因素，在个体发展过程中起着关键性作用。除家庭环境之外，学校环境也是对个体产生重要影响的微系统。教师和同伴是学校环境中主要构成要素，尤其对于身处成长关键期的大学生来说，在与教师和同伴的互动过程中，思维理念、实际行动等均会受到影响。因此，本研究探讨感知教师支持、同伴关系与大学生心理健康的关系，以及现实利他行为和网络利他行为在其中的中介作用。方法：采用感知教师支持行为问卷、同伴关系满意度量表、自我报告利他量表、网络利他行为量表和一般健康问卷对 553 名大学生进行问卷调查。结果：(1) 性别差异分析结果显示，感知教师支持和网络利他行为存在显著的性别差异，男生的感知教师支持和网络利他行为水平显著高于女生；(2) 相关分析结果显示，感知教师支持、同伴关系与现实利他行为和网络利他行为呈显著正相关、与心理健康呈显著负相关；现实利他行为和网络利他行为与心理健康呈显著负相关。(3) 结构方程模型分析结果表明，感知教师支持、同伴关系能够正向预测现实利他行为和网络利他行为、负向预测大学生心理健康，现实利他行为和网络利他行为能够负向预测大学生心理健康，现实利他行为和网络利他行为在感知教师支持、同伴关系与大学生心理健康之间的中介作用显著；(4) 性别多群组分析结果表明，现实利他行为和网络利他行为在感知教师支持、同伴关系与大学生心理健康之间的中介作用不存在显著的性别差异。结论：感知教师支持、同伴关系不仅可以直接预测大学生心理健康，而且可以通过现实利他行为和网络利他行为间接预测大学生心理健康。因此，教师应为学生提供足够的支持，形成良好的师生关系，同伴之间应友好相处、互相包容、积极沟通，共同营造和谐健康的互动环境。

关键词 感知教师支持，同伴关系，现实利他行为，网络利他行为，心理健康

Perceived Teachers' Support, Peer Relationship and College Students' Mental Health: The Mediating Effects of Reality and Internet Altruistic Behavior

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Abstract: According to the microsystem theory, as a proximal factor directly acting on individual's development, microsystem plays a key role in the process of individual's development. In addition to the family environment, the school environment is also a microsystem that has an important impact on individuals. Teachers and peers are the main elements in the school environment. Especially for college students in the critical period of growth, their thinking ideas and practical actions will be affected in the process of interaction with teachers and peers. Therefore, this study explored the relationships between perceived teachers' support, peer relationship and college students' mental health, as well as the mediating effects of reality and internet altruistic behavior. Methods: This study adopted the Perceived Teacher's Support Questionnaire, Peer Relationship Scale, Self-Reported Altruism Scale, Internet Altruism Scale, and General Health Questionnaire to conduct measurements in 553 university students. Results: (1) The results of gender differences analysis indicated that there are significant gender differences in perceived teachers' support and internet altruistic behavior. The level of perceived teachers' support and internet altruistic behavior of boys is significantly higher than that of girls. (2) The results of the correlation analysis revealed that perceived teachers' support, peer relationship, reality and internet altruistic behavior are significantly correlated. (3) The results of the structural equation model analysis indicated that perceived teachers' support and peer relationship can positively predict reality and internet altruistic behavior, and negatively predict college students' mental health, reality and internet altruistic behavior can negatively predict college students' mental health. The mediating effects of reality and internet altruistic behavior are significant. (4) The results of the multi-group analysis of gender differences showed that there is no significant gender difference in the mediating effects of reality and internet altruistic behavior between perceived teachers' support, peer relationship and college students' mental health. Conclusion: Perceived teachers' support and peer relationship can not only directly predict college students' mental health, but also indirectly predict college students' mental health through reality and internet altruistic behavior. Therefore, teachers should provide enough support for students and form a good relationship between teachers and students. Peers should get along well, tolerate each other and communicate actively, so as to jointly create a harmonious and healthy interactive environment.

Keywords: perceived teachers' support, peer relationship, reality altruistic behavior, internet altruistic behavior, mental health

(2) 硕士研究生论坛—发展与教育心理学分场 2

不同人际环境、心境状态与小学生在线自我调节学习的关系： 一项追踪研究

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摘 要 2019-nCoV 的出现与爆发不仅引发了我们对公共卫生体系的一些反思, 同时也将在线学习迅速地推

入大众视野。在移动学习迅速发展的今天，在线教育用户规模已然非常庞大。由于在线学习是一种相对缺乏外部监督的学习方式，自我调节对于小学生进行有效的在线学习来说显得尤其重要。因此，探讨在线自我调节学习的影响因素以及研究各因素在时间进程中的特点与关系具有现实的学习者个体意义和重要的社会意义。研究基于自我决定理论和刺激-有机体-反应框架，采用追踪设计对 337 名小学生进行了间隔一学年的三次调查，考察学生人际环境、心境状态对在线自我调节学习的影响。结果发现：（1）感知教师自主支持、感知同伴自主支持均可以通过心境状态的中介作用来对小学生在线自我调节学习发挥作用；（2）在 T2、T3 时间点，心境状态在师生互动与在线自我调节学习的关系中起中介作用，而其在生生互动与在线自我调节学习之间的中介效应不显著；（3）T1 感知教师自主支持能够显著正向预测 T2 自我调节学习，而 T1 感知同伴自主支持不能显著预测 T2 自我调节学习；（4）在线自我调节学习能够显著正向预测之后的师生互动和生生互动。因此，心境状态在教师和同伴的支持性因素与小学生的在线自我调节学习的关系中发挥了重要的中介作用，且这种中介效果在师生互动过程中表现得更加明显。此外，在线自我调节学习作为小学生在学习过程中所表现出的一种积极的行为，也能够为之后的师生互动和生生互动提供一定的反馈作用。最后，研究结果也预示着不同角色的自主支持可能在时间进程中发挥着不同的作用，为在线教育的更有效开展提供了有益的指导。

关键词 在线自我调节学习，自主支持，心境状态，S-O-R 框架，小学生

The Relationship of Different Interpersonal Contexts, Mood State and Primary School Students' Online Self-regulated Learning: A Longitudinal Study

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Abstract: The emergence and outbreak of 2019-nCoV not only triggered some reflections on the public health system, but also quickly pushed online learning into the public's view. With the rapid development of mobile learning today, the scale of online education users is already huge. Since online learning is a learning method that lacks external supervision, self-regulation is especially important for elementary school students to conduct effective online learning. Therefore, exploring the influencing elements of online self-regulated learning and studying the characteristics and relationships of various factors in the time course have practical individual learner significance and crucial social significance. Based on the self-determination theory and the stimulus-organism-response framework (S-O-R), 337 primary school students were recruited three times with one academic year interval using a longitudinal research design to investigate the influence of students' interpersonal contexts on their mood state and online self-regulated learning. The results showed that: (a) perceived teacher's autonomy support and perceived peer's autonomy support could play a role in primary school students' online self-regulation learning through the mediating effect of mood state; (b) Whether it is at T2 or T3, mood state played a mediating role in the relationship between teacher-student interaction and online self-regulated learning, but its mediating effect between student-student interaction and online self-regulated learning was not significant; (c) T1 perceived teacher's autonomy support could significantly positively predict T2 self-regulated learning, while T1 perceived peer's autonomy support cannot significantly predict T2 self-regulated learning; (d) online self-regulated learning significantly positively predicted the subsequent teacher-student interaction and student-student interaction. Therefore, the mood state plays an essential intermediary role in the relationship between the supportive factors of teachers and peers and the online self-regulated learning of primary school students, and this intermediary effect is more obvious in the process of teacher-student interaction. In addition, as a positive behavior displayed by elementary school students in the learning process, online self-regulated

learning may also provide some feedback for subsequent teacher-student interactions and student-student interactions. Finally, the research results also indicate that the autonomous support of different roles may play different roles in the time process, which provides helpful guidance for the more effective development of online education.

Keywords: online self-regulated learning, autonomy support, mood state, stimulus-organism-response framework, primary school students

高一学生求助数学教师行为对数学成绩的影响： 链式多重中介模型

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摘要 数学是科学、工程和技术学科的基础, 如何提升学生数学成绩成为了研究热点。本研究采用整群抽样法抽取甘肃和河北 3 所学校的高一学生共 986 名 (45.1%女生), 采用《中学生感知到的教师支持问卷》、《数学学业情绪量表》、《中学生数学学习投入量表》和《求助数学教师行为问卷》作为测量工具进行调查, 探讨感知到的数学教师支持、积极学业情绪和数学学习投入在高一学生求助数学教师行为对数学成绩的影响机制中的作用。研究发现: (1) 求助数学教师行为、感知到的数学教师支持、积极学业情绪、数学学习投入和数学成绩两两之间存在显著的正相关; (2) 求助数学教师行为对于数学成绩的影响模型中有三重路径, 第一重路径是求助数学教师行为显著正向预测数学成绩; 第二重路径为, 感知到的数学教师支持、积极学业情绪和数学学习投入起简单中介作用; 第三重路径为四条链式中介作用, 包括: 感知到的数学教师支持→积极学业情绪、感知到的数学教师支持→数学学习投入、积极学业情绪→数学学习投入以及感知到的数学教师支持→积极学业情绪→数学学习投入的链式中介作用。因此, 高一学生求助数学教师行为与数学成绩之间存在链式多重中介模型。综上所述, 研究结果有助于理解求助数学教师行为如何影响数学成绩, 强调了为未来教育干预提供了学科指导的必要性。

关键词 高一学生, 求助数学教师行为, 感知到的数学教师支持, 积极学业情绪, 数学学习投入

Asking Teachers for Help and Mathematical Achievement in Chinese Senior One Students: A Multiple Mediation Model

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Abstract: Mathematics is the foundation of many science and technology, so how to improve mathematical achievement has been a research hot spot. This study assessed 986 senior one students (45.1%girls, M-age=15.63 years old, SD=0.81) to examine the role of perceived teacher support, positive academic emotions, and math engagement as mediators in the relationship between asking math teachers for help and mathematical achievement. The results indicated that there is a triple prediction path in the relationship between asking math teachers for help and mathematical achievement. The results show: the first path, asking math teachers for help can positively predict mathematical achievement; the second path contains three simple mediation effects: perceived teacher support, positive academic emotions and math engagement; the third path contains four chain mediation effects: the serial mediation effect of perceived teacher support and positive academic emotions, the serial mediation effect of positive academic emotions and math engagement, the serial mediation effect of perceived teacher support and math engagement, the serial mediation effect of perceived teacher support, positive academic emotions and math engagement. This study shows that for the senior one students, there is a multiple mediation model in the relationship between asking math teachers for help and mathematical achievement. Taken together, findings contribute to understanding how asking math teachers for help influences mathematical achievement and highlight the necessity to provide subject-specific guidance for the future educational intervention.

Keywords: Senior one students, Asking math teachers for help, Perceived teacher support, Positive academic emotions, Math engagement

童年期心理虐待对身体欣赏的影响：自然联结的调节作用

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摘要 目的：探讨自然联结在童年期心理虐待和身体欣赏关系中的调节作用。方法：采用童年期心理虐待量表、自然联结量表、身体欣赏量表对 567 名大学生进行调查。结果：（1）童年期心理虐待和身体欣赏呈显著负相关，自然联结和身体欣赏呈显著正相关；（2）自然联结可以调节童年期心理虐待和身体欣赏之间的关系。在高自然联结水平下，童年期心理虐待对身体欣赏的负向预测作用显著，低自然联结水平下，童年期心理虐待对身体欣赏的负向预测作用不显著。结论：童年期心理虐待对身体欣赏的负向预测作用会随着自然联结水平的升高而减弱。

关键词 童年期心理虐待，自然联结，身体欣赏

Moderating Effects of Connectedness to Nature between Childhood Psychological Maltreatment and Body Appreciation

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Abstract: Objective: The aim of the present study was to investigate the potential moderating roles of connectedness to nature in the association between childhood psychological maltreatment and body appreciation. Methods: A sample of 576 college students was recruited in this study to complete the Child psychological maltreatment scale, the Connectedness to Nature Scale, and Body Appreciation Scale. Results: (1) Childhood psychological maltreatment was negative were related with body appreciation, connectedness to nature was positive related with body appreciation.(2) Connectedness to nature moderated the relationship between childhood psychological maltreatment and body appreciation. That is, there was a significant negative relationship between childhood psychological maltreatment and body appreciation under the high connectedness to nature, but this relationship was not significant at lower connectedness to nature. Conclusion: The negative predictive effect of childhood psychological maltreatment on body appreciation decreased with the increase of connectedness to nature.

Keyword: child psychological maltreatment, connectedness to nature, body appreciation

童年环境压力对女大学生异性人际信任的影响： 生命史策略的中介作用

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摘要 基于进化心理学的生命史理论探究童年环境压力与女大学生异性人际信任的关系。方法：采用童年经济地位量表、童年亲子关系量表、Mini-K 量表、一般信任量表以及殊化信任量表收集 690 名女大学生样本进行问卷调查。结果：女大学生童年环境压力通过生命史策略对一般男性信任及殊化伴侣信任的间接效应显著。其中，童年亲子关系通过生命史策略对女大学生异性人际信任的遮掩效应显著。结论：童年环境压力对女大学生的异性人际信任存在影响。

关键词 童年环境压力，异性人际信任，生命史策略，泛化信任，殊化信任

Childhood environmental Stress and Heterosexual Interpersonal Trust of Female College Students: The mediating role of the life history strategy

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Abstract: Objective: To explores the mediating effect of the life history strategy between childhood environmental stress and heterosexual interpersonal trust of female college students. Methods: A sample of 690 female college students were test with childhood socioeconomic status Scale, childhood parent-child relationship Scale, Mini-K scale, general trust scale and Special Trust scale. Results: The indirect effects of childhood environmental stress on male trust and special trust on the partner were significant through life history strategy. Among them, parent-child relationship has a significant covering effect on female college students' heterosexual interpersonal trust through life history strategy. Conclusion: Childhood environmental stress has influence on female college students' heterosexual interpersonal trust.

Keywords: childhood environmental stress, heterosexual interpersonal trust, life history strategy, general trust, special trust

社会比较对高、低耐挫大学生考试失败后悲伤情绪预期的影响

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摘 要 社会比较指个体将自己的处境、能力等与他人进行比较的过程(Festinger, 1954), 会影响个体的情绪体验。本研究旨在考察社会比较是否影响考试失败后的悲伤预期, 以及在何种耐挫心理水平下社会比较对考试失败后的悲伤预期影响更大。研究一, 考察社会比较对失败后悲伤预期的影响。采用单因素 3 水平(社会比较: 无比较、与好朋友比较、与陌生人比较)被试内实验设计。252 名大学生在四六级考试前一周, 回答如下题目: (1) “如果你没有通过四六级考试, 你的难过程度?” (无比较); (2) “如果您的好朋友通过了考试, 您没通过, 您的难过程度?” (与好朋友比较); (3) “如果您不熟悉的人通过了考试, 您没通过, 您的难过程度?” (与陌生人比较), 问题均采用 11 点计分。结果发现: 社会比较存在主效应 ($F_{(2, 502)} = 78.23, p < 0.001, \eta^2 = 0.24$)。大学生与好朋友比较时的悲伤预期 ($M=7.66, SD=3.01$) 显著强于与陌生人比较 ($M=5.71, SD=3.16, p < 0.001$); 无比较时的悲伤预期 ($M=7.79, SD=2.80$) 显著强于与陌生人比较 ($p < 0.001$)。表明大学生与好朋友比较时更易产生强烈的悲伤情绪预期。研究二, 探讨高、低耐挫水平在社会比较对失败后悲伤预期影响中的作用。采用 3 (社会比较: 无比较, 与好朋友比较、与陌生人比较) $\times$ 2 (耐挫分组: 高耐挫组、低耐挫组) 混合实验设计。270 名大学生在四六级考试前一周填写《大学生耐挫心理问卷》, 选取问卷总分前 27% 的被试为高耐挫组 ($n=73$), 后 27% 的被试为低耐挫组 ($n=73$), 实验材料同研究一。结果发现, 交互作用显著 ($F_{(2, 288)}=3.19, p < 0.05, \eta^2=0.04$)。对低耐挫大学生而言, 无比较 ($M=7.56, SD=2.93$) 和与好朋友比较时 ($M=7.85, SD=2.86$) 的悲伤情绪预期显著强于与陌生人比较时 ($M=5.85, SD=3.14, ps < 0.001$), 但无比较和与好朋友比较时的悲伤情绪预期无显著差异 ($p > 0.05$); 对高耐挫大学生而言, 无比较时 ($M=7.15, SD=2.93$) 的悲伤情绪预期显著高于与好朋友比较时 ($M=6.25, SD=3.65$) 和与陌生人比较时 ($M=4.60, SD=3.66, ps < 0.05$), 大学生与好朋友比较时的悲伤情绪预期显著强于与陌生人比较时 ($p < 0.001$)。表明低耐挫大学生在与好朋友比较时更易产生强烈的悲伤情绪预期, 而高耐挫大学生在与好朋友比较时的悲伤情绪预期有所缓解。

关键词 社会比较, 耐挫心理, 四六级考试, 失败后悲伤预期

The influence of social comparison on the sadness expectation of college students with high or low perseverance after failed in the exam

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Abstract: Social comparison refers to the process in which an individual compares his situation, ability, etc. with others (Festinger, 1954), which will affect an individual's emotional experience. The purpose of current study is to investigate whether social comparison affects sadness expectation after failed in the exam, and under what level of perseverance, social comparison has a greater impact on the expectation of sadness after failing in the exam. The first study examined the effect of social comparison on sadness expectation after failure. One-way ANOVA of three-level (social comparison: no comparison, comparison with good friends, comparison with strangers) in within subject experiment design was conducted. One week before CET-4 and CET-6, 252 college students answered the following questions: (1) "how sad are you if you don't pass CET-4 or CET-6?" (no comparison); (2) "If your good friend passes the exam and you fail, how sad are you?" (compare with good friends); (3) "If someone you don't know passes the exam and you don't, how sad are you?" (compared with strangers). Questions were scored by 11 points. The results showed that the main effect of social comparison was significant ($F_{(2, 502)} = 78.23, p < 0.001, \eta^2 = 0.24$). The college students' sadness expectation of failure in comparison with their good friends ($M = 7.66, SD = 3.01$) was significantly stronger than that in comparison with strangers ($M = 5.71, SD = 3.16, p < 0.001$), and the sadness emotion when not compared ($M = 7.79, SD = 2.80$) was significantly stronger than that when compared with strangers ($p < 0.001$). It reveals that college students are more likely to have strong sadness emotional expectations when compared with good friends. The second study examined the influence of social comparison on the sadness expectation after failure with high or low perseverance college students. Use 3 (social comparison: no comparison, comparison with good friends, comparison with strangers) $\times$ 2 (perseverance group: high perseverance group, low perseverance group) mixed experimental design. One week before CET-4 and CET-6, 270 college students were selected to complete the undergraduate perseverance scale. The first 27% of the total score of the scale were selected as the high perseverance group ($n = 73$), and the last 27% were selected as the low perseverance group ($n = 73$). The experimental materials were the same as those in the first study. The results showed that the interaction was significant ($F_{(2, 288)} = 3.19, p < 0.05, \eta^2 = 0.04$). For the students with low perseverance, the expectation of sadness emotion in no comparison ($M = 7.56, SD = 2.93$) and comparison with good friends ($M = 7.85, SD = 2.86$) was significantly stronger than that in comparison with strangers ($M = 5.85, SD = 3.14, ps < 0.001$), but there was no significant difference between no comparison and comparison with good friends ($p > 0.05$); For college students with high perseverance, the expectation of sadness emotion in no comparison ($M = 7.15, SD = 2.93$) was significantly higher than that in comparison with good friends ($M = 6.25, SD = 3.65$) and strangers ($M = 4.60, SD = 3.66, ps < 0.05$), and the expectation of sadness emotion in comparison with good friends was significantly stronger than that in comparison with strangers ($p < 0.001$). The results show that the students with low perseverance are more likely to have strong sadness emotion expectation when compared with their good friends, while the sadness expectation of the students with high perseverance eases in comparison with their good friends.

Keywords: social comparison, perseverance, CET 4 and CET 6, sadness expectation after failure

儿童期心理受虐者情绪诱发视盲研究

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摘要 儿童期遭受心理虐待, 会对个体产生持续的消极影响, 增加其罹患精神疾病的风险。追踪研究发现心理虐待经历与抑郁呈显著正相关, 探究心理虐待经历对抑郁的影响机制有利于提供干预的方法。情绪诱发

视盲 (Emotion-induced blindness, EIB) 是指在识别一个威胁或恐惧刺激干扰图像后, 随后目标刺激识别受损的现象。唤醒偏向竞争理论 (arousal-biased competition theory, ABC) 认为刺激知觉突出性是产生情绪诱发视盲的主要因素。金钱奖赏能激发动机从而提升行为成绩。金钱奖赏可以削弱情绪诱发视盲。研究发现, 心理虐待者存在明显的负性注意偏向, 并且儿童期虐待经历改变了个体奖赏加工方式。根据前人研究与问卷测量提出以下假设: (1) 心理虐待组在负性刺激下情绪诱发视盲效应更强, 持续时间更长。(2) 金钱奖赏削弱了非心理虐待组的情绪诱发视盲, 心理虐待组不受影响。本研究使用实验对照设计, 通过心理虐待量表筛选被试, 筛选心理虐待个体 30 人和与之匹配的非心理虐待个体 30 人参与实验; 采用 RSVP 范式测量情绪诱发视盲。实验 1: 2 (组别) × 2 (干扰物效价) × 4 (Lag) 混合实验设计, 测量心理虐待个体在基线条件下的情绪诱发视盲。实验 2: 2 (组别) × 2 (干扰物效价) × 2 (金钱奖赏类型) 混合实验设计, 探究金钱奖赏对心理虐待个体情绪诱发视盲的削弱作用。研究结果: (1) 在负性刺激干扰条件下, 两组对目标识别的正确率有显著差异。(2) 随着 Lag 位置增加目标识别的正确率逐渐恢复到基线水平。(3) 操纵金钱奖赏水平不能削弱心理虐待组情绪诱发视盲。研究结论: (1) 心理虐待组存在注意脱离困难, 表现为情绪诱发视盲效应更强, 持续时间更长。(2) 心理虐待组改变奖赏加工, 金钱奖赏不能削弱情绪诱发视盲。这些结果提示心理虐待者对负性刺激存在注意脱离困难并且对积极刺激反应不敏感, 这是儿童期心理虐待影响抑郁情绪的影响机制。

关键词 心理虐待, 情绪诱发视盲, 金钱奖赏

Emotion Induced Blindness in Adult Survivors of Childhood Psychological Maltreatment

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Abstract: Psychological abuse during childhood has a persistent negative effect on individuals and increases their risk of developing psychiatric disorders. The tracing study found a significant positive correlation between the experience of psychological abuse and depression, and it is beneficial to explore the mechanism of the psychological abuse experience on depression to provide an intervention method. Emotion Induced Blindness (EIB) refers to the impairment in the identification of a neutral target image that follows a threatening or fearful distractor image. Arousal biased competition theory (ABC) suggests that stimulus salience is a major factor in producing emotion induced blindness. Monetary reward would motivate people and enhance the behavior. Studies have shown monetary rewards can attenuate emotion induced blindness. Found significant negative attentional biases in psychological abuse, and childhood maltreatment experiences altered individual reward processing. The following hypotheses were proposed based on previous studies and questionnaire measurements: (1) The psychological abuse group showed stronger and longer lasting emotionally induced blind effects under negative stimuli. (2) Monetary rewards attenuate emotion induced blindness in the non psychological abuse group, while the psychological abuse group is unaffected. This study used an experimental control design, according to Child Psychological Maltreatment Scale, 30 psychological abuse individuals and 30 matched non psychological abuse individuals were selected to participate in the experiment; emotion induced blindness was measured using the RSVP paradigm. Experiment 1: 2 (group) × 2 (distractor valence) × 4 (Lag) mixed task. Measurement of emotion induced blindness under baseline conditions in individuals with psychological abuse. Experiment 2: 2 (group) × 2 (distractor valence) × 2 (monetary reward type) mixed task, probing the attenuating effects of rewards on emotion induced blindness in individuals with psychological abuse. Results: (1) There was a significant difference between the two groups in the rate of correct target recognition when the negative stimulus interfered. (2) The correct rate of target recognition gradually returned to baseline as the lag position increased. (3) Manipulating the level of monetary reward does not attenuate emotion induced blindness in the psychological abuse group. Conclusion: (1) Attention disengagement difficulties were present in the psychological maltreatment group and manifested as stronger and longer lasting effects of emotion induced visual blindness. (2) Childhood psychological abuse experiences altered individual monetary reward processing,

monetary rewards can not attenuate emotion induced blindness. These results implicate attentional disengagement difficulties and insensitivity to positive stimuli in the development of depression in psychological abuse.

Keywords: psychological abuse, emotion induced blindness, monetary reward

孰因孰果？中学生公正世界信念与社会心态关系的纵向追踪

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摘要 采用公正世界信念量表、中国人社会心态量表对 373 名中学生（其中初中生 240 名，高中生 133 名）进行为期 17 个月的两阶段纵向追踪调查。其中第一次调查的时间是 2019 年 6 月，共发放问卷 515 份，回收问卷 489 份；第二次调查的时间是 2020 年 10 月，共发放问卷 471 份，回收问卷 436 份。通过交叉滞后回归分析考察中学生公正世界信念与社会心态的发展变化及其相互预测关系。结果发现：（1）前后测公正世界信念、社会心态之间均存在显著差异，在性别上差异不显著；（2）在公正世界信念与社会心态的整体关系上，前测的公正世界信念可以显著正向预测后测的社会心态，前测的社会心态也可以显著正向预测后测的公正世界信念；（3）而对于高社会心态组的中学生，前测公正世界信念能显著正向预测后测社会心态，反之则无法预测。且对于低社会心态组的中学生，两变量间没有预测关系。研究结果提示虽然在整体关系上，两变量间相互预测、互为因果；但是只有当中学生本身处于积极社会心态时，公正世界信念才会对后续社会心态的形成具有预测作用。该结果采用纵向设计的交叉滞后分析方法克服了现有横向研究仅能揭示变量间相关关系的不足，有利于探讨公正世界信念与社会心态间的相互预测关系或因果关系，有利于考察公正世界信念与社会心态间的长期作用机制，从而扩展、深化该领域的理论研究成果；同时，研究成果可以为中学生公正世界信念和积极社会心态的培育实践提供实证性依据和支持，提高中学生公正世界信念水平可以从培育其积极社会心态角度入手，培育中学生积极社会心态也可以从提高其公正世界信念角度入手。

关键词 公正世界信念，社会心态，交叉滞后分析，中学生

What Was Causing What? Longitudinal tracking of the Relationship between Belief in a Just World and Social Mentality among Middle School Students

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Abstract: A two-stage longitudinal survey was conducted on 373 middle school students which include 240 junior high school students and 133 high school students using the Just World Belief Scale and the Chinese Social Mentality Scale for 17 months. The first survey was in June 2019, with a total of 515 questionnaires distributed and 489 questionnaires recovered; and the second survey was in October 2020, with a total of 471 questionnaires distributed and 436 questionnaires recovered. The cross-lagged regression analysis was used to investigate the development and prediction of belief in a just world and social mentality among middle school students. The results showed that: (1) There were significant differences in belief in a just world and social mentality before and after test, but no significant differences in gender; (2) On the overall relationship between belief in a just world and social mentality, the pretest belief in a just world can significantly positively predict the post-test social mentality, and the pretest social mentality can also significantly positively predict the post-test belief in a just world; (3) For middle school students in the high social mentality group, the pretest belief in a just world can significantly positively predict the post-test social mentality, and vice versa, it is unpredictable. And for middle school students in the low social mentality group, there is no predictive relationship between the two variables. The results suggest that the two variables predict each other and cause each other in the whole middle school students. However, only when the middle school students themselves are in a positive social mentality, belief in a just world can predict the formation of subsequent social mentality. This result uses the cross-lagged regression analysis to overcome the shortcomings of existing horizontal studies that can only reveal the correlation between variables, and is conducive to exploring the mutual predictive

relationship or causality between belief in a just world and social mentality, and is conducive to investigating belief in a just world the long-term mechanism of interaction with the social mentality, thereby expanding and deepening the theoretical research results in this field; at the same time, the research results can provide empirical evidence and support for the cultivation of middle school students' belief in a just world and a positive social mentality, and improve the level of middle school students' belief in a just world. It can start from the perspective of cultivating their positive social mentality; cultivating a positive social mentality of middle school students can also start from the perspective of enhancing their belief in a just world.

Keywords: belief in a just world; social mentality; cross-lagged regression analyses; middle school students

基于海明距离变异指数的 CD-CAT 选题策略

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摘要 认知诊断计算机化自适应测验 (Computerized Adaptive Testing for Cognitive Diagnosis, CD-CAT) 兼具认知诊断功能和自适应思想,能够量体裁衣式地为个体适于其知识状态的题目进行作答,相比传统认知诊断测验,效率更高,且能够为个体知识状态提供更为丰富的个性化信息。选题策略作为 CD-CAT 的一个核心环节,直接影响整体测验的准确性和效率。当前已有许多研究者提出参数选题策略,通过最大化信息函数、最小化香农熵等方式进行选题,使得某些题目过度曝光,题库安全性下降。本研究拟构建一种基于海明距离变异指数的非参数选题策略(Hamming Distance Non-parametric Difference index, HD-NDI),通过模拟研究探讨其在 CD-CAT 中的题库安全性及选题效果。本研究构建的海明距离变异指数(HD-NDI)是通过使用海明距离对当前被试估计的各种知识状态赋予不同的权重,并据此构建被试在某个项目上理想正确作答的期望。随后根据被试在该题理想正确作答的变异程度,并以题目的变异程度构建本研究的非参数变异指数。最后,各种题目依据非参数变异指数确定哪些题目能够最大程度的确定被试的知识状态,并据此进行选题施测,实现 CD-CAT 的选题过程。在 0-1 计分情境中,构建出海明距离变异指数选题策略。根据当前得到的各 IRP 与 ORP 计算各属性掌握模式的海明距离,选择具有最大 HD-NDI 值 Q 向量所对应的项目。HD-NDI 的具体步骤为:第

一步,找出最适 Q 向量:计算各属性掌握模式 IRP 与被试 ORP 的海明距离;接着计算被试对题目 j 的期望

作答反应并计算 $HD-NDI_j$ 指标。第二步,随机选择 $HD-NDI_j$ 最大的 Q 向量对应的题目为下一题进行

施测。重复上述步骤,直至满足测验终止规则。HD-NDI 第一步可以保证整个 CD-CAT 做到量体裁衣式的自适应测验,提高测验效率;第二步可以降低项目的曝光率,保护题库,提高测验的安全性。研究设置了两个模拟研究,研究一为 4 选题策略(SHE、PWKL、MI、HD-NDI)×3 标定参数样本容量(30, 50, 100)×3 题库质量(高、低、混合)×3 被试分布(均匀分布、低相关多元正态分布、高相关多元正态分布)的四因素模拟设计。研究二为 5 选题策略(HD-NDI、RP_PWKL、DBS、NPS、WNPS)×3 标定参数样本容量(30, 50, 100)×3 题库质量(高、低、混合)×3 被试分布(均匀分布、低相关多元正态分布、高相关多元正态分布)的四因素模拟设计。研究采用长度为 L=25 的定长法来终止测验。采用以下评价指标:属性模式判准率(pattern correct classification

rate, PCCR)、 χ^2 、测验重叠率(Test Overlap Rate, TOR)、选题策略平均用时。结果表明:(1) HD-NDI 的分类准确性高,并优于其他的选题策略;(2) HD-NDI 的题目使用均匀性好,并优于未加入曝光控制的选题策略;(3) HD-NDI 降低测验重叠率效果好,并优于未加入曝光控制的选题策略;(4) HD-NDI 能更有效降低选题消耗的时间。

关键词 认知诊断自适应测验, 非参数选题策略, 海明距离变异指数, 分类准确性, 曝光控制

New CD-CAT Item Selection Method based on Hamming Distance Non-parametric Difference index

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Abstract: Computerized Adaptive Testing for Cognitive Diagnosis (CD-CAT) is Computerized for Cognitive Diagnosis, which combines Cognitive Diagnosis and Adaptive thinking. Compared with traditional cognitive diagnostic tests, it is more efficient and can provide richer personalized information for individual knowledge state. As a core part of CD-CAT, item selection method directly affects the accuracy and efficiency of the whole test. At present, many researchers have proposed the parameter selection method, which maximizes the information function, Shannon Entropy and other methods to select item, which makes some items overexposed and reduces the security of the items pool. This study intends to construct a non-parametric item selection method based on Hamming distance non-parametric difference index (HD-NDI), and discuss its item bank safety and item selection effect in CD-CAT through simulation study. In this study, the Hamming distance non-parametric difference index (HD-NDI) is constructed by using the Hamming distance to assign different weights to the various knowledge states estimated by the current subject, and based on this, the expectation of the item to give an ideal correct answer on a certain item is constructed. Then the non-parametric difference index of this study was constructed according to the variation degree of the items' ideal correct answers. Finally, according to the non-parametric difference index, various items determine which items can determine the knowledge state of the items to the greatest extent, and then carry out the select item for test accordingly, realizing the selection process of CD-CAT. In the 0-1 scoring situation, the Hamming Distance non-parametric difference index (HD-NDI) selection method was constructed. According to the IRP and ORP obtained currently, the Hamming distance of each attribute mastering mode was calculated, and the item corresponding to the Q vector with the maximum HD-NDI value was selected. The specific steps of HD-NDI are: The first step is to find the optimal Q vector: calculate the Hamming distance between IRP of each attribute mastery mode and ORP of the subject; Then the expected response to the item was calculated and the indicators were calculated. The second step is to randomly select the item corresponding to the largest Q vector for the next item. Repeat the steps until the test termination rule is met. The first step of HD-NDI can ensure that the whole CD-CAT can be tailored to the adaptive test, improve the efficiency of the test; The second step can reduce the exposure rate of the item, item the item bank, and improve the security of the test. Two simulation studies were set up in the study. The simulation study 1 design was based on four factors of 5 selection method (KL, SHE, PWKL, MI, HD-NDI) $\times$ 3 calibration samples (30, 50, 100) $\times$ 3 item pool quality (high, low, hybrid) $\times$ 3 examinees' attribute profiles distribution (uniform distribution, multivariate normal distribution). The simulation study 2 design was based on four factors of 5 selection method (HD-NDI, RP_PWKL, DBS, NPS, WNPS) $\times$ 3 calibration samples (30, 50, 100) $\times$ 3 item pool quality (high, low, hybrid) $\times$ 3 examinees' attribute profiles distribution (uniform distribution, multivariate normal distribution). The study used a fixed length method with length $L=25$ to terminate the test. The following evaluation indicators are adopted: Pattern Correct Classification Rate (PCCR), Test Overlap Rate (TOR), and average time of item selection method. The results showed that:

- (1) the classification accuracy of HD-NDI was higher than that selection methods
- (2) The homogeneity of HD-NDI item selection was better than that without exposure control
- (3) HD-NDI has a better effect on reducing the overlap rate, and is better than the selection method without exposure control
- (4) HD-NDI can effectively reduce the time spent on item selection.

Keywords: cognitive diagnostic adaptive test, non-parameter item selection method, Hamming distance variation index, classification accuracy, exposure control

情绪材料的注意促进效应：基于来源记忆的研究

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摘要 本研究以情绪词为背景材料，在来源记忆框架中探讨注意促进效应的产生及其作用机制。实验采用 2（干扰类型：目标、分心）×2（背景词的情绪效价：正性、负性）×2（背景词的字体颜色：红色、绿色）三因素混合设计，其中背景词情绪效价为组间变量，因变量为再认阶段新旧判断的正确率以及颜色来源判断正确率，并借助 ERP 技术，分析学习阶段几种操纵条件诱发的脑电波幅。行为结果发现，情绪词的来源记忆和项目记忆均出现了注意促进效应。脑电结果显示，相对于分心刺激条件，目标刺激条件的语词编码诱发了更大波幅的 P2 成分，而分心刺激条件的语词编码诱发了更大 N2 波幅，并且在中央区，两种条件诱发的上述波幅差异一直持续到编码的晚期阶段（500-800ms）。以上结果表明，目标和分心刺激的编码不仅包括由物理特征驱动的自下而上的知觉加工，而且包括由大脑内部信息驱动的自上而下的选择与抑制的高级认知过程，注意促进效应是早期知觉编码增强和大脑多路径协调作用的结果。

关键词 注意促进效应，情绪材料，来源记忆，加工机制

The attentional boost effect of emotional material:

A study based on source memory

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Abstract: In this study, emotional words were used as background materials to explore the generation and mechanism of attentional boost effect (ABE) in the framework of source memory. The experiment used a three-factor mixed design of 2 (interference type: target, distraction) × 2 (emotional valence of background words: positive, negative) × 2 (font color of background words: red, green), the emotional valence of background words was the between-subject variable, and the dependent variable was the correct rate of old and new judgments and the correct rate of color source judgments in the recognition stage. In addition, the ERP technique was used to analyze the amplitude of EEG induced by several manipulative conditions in the learning stage. Behavioral results showed that both source memory and item memory of emotional words had attention promoting effect. EEG results showed that target stimuli induced a larger amplitude of the P2 component than distractor, and the distracted stimulus induced a larger N2 amplitude than target condition, and in the central region, the difference of the target and the distracted stimulus in amplitude can continue to the late stage of coding (500 – 800 ms). These results suggest that the encoding of target and distracted stimuli involves not only the bottom-up perceptual processing driven by physical features, but also the cognitive processing of top-down selection and inhibition driven by the internal information of the brain. The attentional boost effect (ABE) is the result of early perceptual coding enhancement and multipath coordination of the brain.

Keywords: attentional boost effect, emotional materials, source memory, processing mechanism

歧视知觉对留守青少年儿童学校适应的影响： 感知内群体地位与核心自我评价的链式中介作用

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摘要 自 20 世纪 70 年代以来，随着城市化进程的快速推进，大量农民涌入城市，加入了中国的劳动力大军。这些农民工进城寻找更好的就业机会，却将子女留在家中，使双方无法长期生活在一起。于是，外来务工人员的子女被称为留守青少年儿童，年龄在 18 岁以下，并且父母一方或双方外出务工而将其留在原产地 6 个月以上（Zhou et al., 2020）。根据最近的一项研究发现，中国农村留守儿童的数量已经达到 6000 万（Ge et al., 2019）。歧视知觉是指个体感知到自己受到的负面评价和不公平对待（Wooda & Cooka, 2019; Pascoe &

Richman, 2009)。一些实证研究已经证实,歧视知觉对青少年的适应具有一定的影响(e.g., Liebkind, 2004; Brody et al., 2010; Nyborg & Curry, 2003; Williams et al., 2003; Paradies, 2006), 但目前对其中的机制却知之甚少。鉴于此, 本研究旨在探讨歧视知觉与学校适应之间的中介机制。基于相关理论(修订后的拒绝-认同模型和系统理性理论)和实证研究, 我们提出了两个中介变量——感知内群体地位和核心自我评价, 从而拓展和加强对歧视知觉与学校适应之间关系的理解。在此基础上, 根据社会认同理论(Tajfel, 1970), 我们推断感知内群体地位对核心自我评价有正向影响。因此, 感知内群体地位和核心自我评价在歧视知觉与学校适应的关系中起链式中介作用。为此, 我们对苏北农村地区四所初中的 428 名留守青少年进行了调查。利用 AMOS 22.0 软件建立结构方程模型评估中介效应。首先, 我们研究了歧视知觉对学校适应的整体影响。然后, 在本研究假设的基础上, 我们建立了几个可供选择的模型, 并通过拟合指标进行比较, 从而选择出最优的终极模型。然后, 采用 bootstrapping 检验最优模型中中介效应的显著性。同时采用 χ^2 、CFI、TLI、RMSEA、SRMR 等拟合指标对模型进行评价。具体来说, RMSEA 和 SRMR 低于 0.08, TLI 和 CFI 高于 0.9, 表明假设模型的拟合更好(Marsh et al., 2004)。

研究结果表明: (1) 歧视知觉对留守青少年儿童的学校适应具有负向预测作用; (2) 感知内群体地位和核心自我评价在歧视知觉与学校适应的关系中分别起部分中介作用; (3) 感知内群体地位和核心自我评价的链式中介效应显著。

关键词 歧视知觉, 学校适应, 感知内群体地位, 核心自我评价, 留守青少年儿童

Perceived Discrimination and School Adaptation Among Left-Behind Adolescent Children: The Chain Mediating Roles of Perceived Ingroup Status and Core Self-Evaluation

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Abstract: Since the late 1970s, with the rapid advancement of urbanization, large numbers of farmers poured into cities and joined the workers in China. These migrant workers went to cities to seek better employment opportunities and left their children at home, making it impossible for them to live together for a long time. The children of migrant workers are called left-behind children or adolescents, who are under 18 years old, and are left behind at their original residence for more than six months while one or two parents of them migrate into other places for work (Zhou et al., 2020). The number of left-behind children in rural China has reached 60 million according to a recent study (Ge et al., 2019). Perceived discrimination is defined as individuals' perception that they have been negatively evaluated and unfairly treated (Wooda & Cooka, 2019; Pascoe & Richman, 2009). Some empirical studies have shown the effects of perceived discrimination on adolescents' adaptation (e.g., Liebkind, 2004; Brody et al., 2010; Nyborg & Curry, 2003; Williams et al., 2003; Paradies, 2006), but far less is known about the mechanisms involved. In view of this, we aimed to investigate the mediating mechanism linking perceived discrimination and school adaptation in this study. Based on the relevant theories (the Refined Rejection Identification Model and the Systematic Rationality Theory) and empirical studies, we proposed two mediating variables—perceived ingroup status and core self-evaluation to broaden and strengthen the grasp of the relationship between perceived discrimination and school adaptation. Also, according to the Social Identity Theory (SIT; Tajfel, 1970), we inferred that perceived ingroup status is positively correlated with core self-evaluation. To be further, perceived ingroup status and core self-evaluation play chain-mediating roles in the relationship between perceived discrimination and school adaptation. To do so, 428 left-behind adolescents from four junior high schools in rural areas of northern Jiangsu province China were surveyed. Structural Equation Modeling was established to assess the mediating effects using the AMOS 22.0 software. First, we investigated the overall effect of perceived discrimination on school adaptation. Then, we built several alternative models based on the hypothesis of this study and compared them through fit indices, thus choosing the best and final model. After that, bootstrapping procedure was adopted to test the significance of the mediating effects in the optimal

model. The fit indices of χ^2 , CFI, TLI, RMSEA, and SRMR were used to assess the models. Specifically, RMSEA and SRMR lower than 0.08, TLI and CFI above 0.9 demonstrated a better fit of the hypothesized model (Marsh et al., 2004).

Results demonstrated that: (a) perceived discrimination negatively predicted school adaptation among left-behind adolescents; (b) perceived ingroup status and core self-evaluation not only respectively but also sequentially mediated the relationship between perceived discrimination and school adaptation. This study shed light on the improvement of school adaptation among left-behind adolescents.

Keywords: perceived discrimination, school adaptation, perceived ingroup status, core self-evaluation, left-behind adolescent children

(3) 硕士研究生论坛—发展与教育心理学分场 3

以个体内反应时变异性为指标的注意控制对小学生学业成绩的影响：一个纵向交叉滞后面板模型

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摘要 个体内反应时变异性（IIRTV）被认为是注意力或认知控制的指标，被发现与学业成绩有关。然而，IIRTV 与学业成绩之间的纵向和双向关系尚不清楚。目的：本研究旨在探讨作为小学生注意控制指标的 IIRTV 与学业成绩之间的纵向和双向关系。方法：以 237 名中国小学生（111 名女生；M 年龄=7.39 岁，SD=0.49）为样本，采用儿童侧翼任务从一年级到三年级分三个阶段对其 IIRTV 进行评估。每年春季学期结束时，从学校收集孩子们的语文和数学期末成绩。在控制了性别、年龄和家庭社会经济状况后，结果表明：（1）通过通过 Flanker 任务评估的 IIRTV 在纵向上显著相关，语文成绩和数学成绩亦是如此；（2）纵向上，IIRTV 与语文成绩相互预测，只有 IIRTV 对数学成绩有预测作用，而数学成绩对 IIRTV 没有预测作用。结论：这些发现揭示了 IIRTV 指标的注意控制与学习成绩之间的纵向和双向关系，有助于研究者和教师评估和提高儿童的学习成绩。

关键词 学业成绩，个体内反应时变异性，注意控制，交叉滞后，小学生

Attentional Control Indexed by Intraindividual Reaction Time Variability and Academic Achievement of Primary School Students: A Longitudinal Cross-Lagged Panel Model

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Abstract: Background. Intraindividual reaction time variability (IIRTV), which is considered an index of attentional or cognitive control, was found to be related to academic achievement. However, the longitudinal and bidirectional relationship between IIRTV and academic achievement is still unclear. Aims. The current research aimed to examine the longitudinal and bidirectional relations between IIRTV as an index of attentional control and academic achievement of primary school students. Sample and Method. With a sample of 237 Chinese primary school students (111 girls; M age= 7.39 years, SD = 0.49), the children's flanker task was employed to assess their IIRTV in three waves from the first to third grade. At the end of the spring semester each year, the children's final grades in Chinese and math were collected from the school. Results. After controlling for gender, age, and family socioeconomic status, the results showed that (1) IIRTV to the flanker task decreased with age, which indicated that children's attentional control increased with age; (2) longitudinally, IIRTV and Chinese achievement were predictive of each other, whereas

only IIRTV predicted math achievement, but math achievement did not predict IIRTV. Conclusions. These findings demonstrated the longitudinal and bidirectional relationship between attentional control indexed by IIRTV and academic achievement, which could help researchers and teachers evaluate and improve children's academic achievements.

Keywords: intraindividual reaction time variability, attentional control, academic achievement, primary school students, cross-lagged analysis

初中生数学核心素养视域下的几何推理能力认知诊断测验编制

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摘要 学者们对中学生数学学力认知诊断测验编制的相关问题进行了探索性的研究，其成果不仅为科学评估中学生数学能力提供了可靠工具，也为进一步推动中学生数学核心素养评价提供了理论与方法借鉴。作为数学核心素养的重要维度，几何推理能力有助于初中生发展学科能力和适应未来社会生活。目前初中数学核心素养教育理念广受关注，但是基于初中数学核心素养框架下标准化几何推理能力诊断工具的相关研究仍显不足。本研究基于认知诊断理论的研究范式，编制初中生几何推理能力认知诊断测验，有利于对初中生几何推理能力的微观认知结构进行细致评估，优化初中数学教学干预方案。研究首先通过对初中数学核心素养框架、课程标准、教材等做内容、结构、目标一致性分析，确定了包括几何直观推理能力、图形表达推理能力、文字表达推理能力、符号表达推理能力、描述分析推理能力与结构关联推理能力等6个关键认知属性的测验Q矩阵，并结合专家评定和学生口语报告分析的结果，编制了含有15个题目的“初中生几何推理能力认知诊断测验”。然后随机抽取642名学生作答，并自编R语言程序选择与数据拟合较好的DINA模型（ $\log\text{like}=-5488.892$ ， $\text{BIC}=11236.37$ ， $p>0.05$ ）进行题目参数估计、测验信效度等一系列分析。结果表明：（1）“初中生几何推理能力认知诊断测验”所有题目参数均与DINA模型有良好拟合，RMSEA取值在0.002~0.049之间，均值为0.022，标准差为0.014；测验平均难度为中等水平（ $b=0.114$ ），平均区分度为中等偏高水平（ $a=1.12$ ），所有项目符合 $g+s<1$ 的原则，测验整体质量较好，能够较好地区分不同几何推理能力的学生，并对其能力的微观结构进行细致诊断。（2）测验克隆巴赫 α 系数为0.71，6个关键认知属性的分类准确率在0.86~0.96之间，且共同解释了题目难度的61%，属性掌握概率解释测验总分83%的变异，测验分数与校标分数相关为0.574（ $P<0.001$ ），研究定义的能力属性完备，层级关系合理，具有良好的结构效度。本研究编制的“初中生几何推理能力认知诊断测验”各项指标均达到了测量学要求，可以作为初中生几何推理能力诊断工具。

关键词 初中生数学核心素养，几何推理能力，认知诊断，测验编制

Development of Cognitive Diagnostic Test for Geometric Reasoning Ability from the Perspective of Junior High School Students' Math Core Literacy

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Abstract: Scholars have made an exploratory study on the establishment of cognitive diagnostic test for middle school students' mathematics ability. The results not only provide a reliable tool for scientific evaluation of middle school students' mathematics ability, but also provide theoretical and methodological reference for further promoting the evaluation of middle school students' mathematics core literacy. As an important dimension of mathematics core literacy, geometric reasoning ability is helpful for junior high school students to develop their subject ability and adapt to future social life. At present, the educational concept of junior high school mathematics core literacy is widely concerned, but the related research on standardized diagnostic tools of geometric reasoning ability under the framework of junior high school mathematics core literacy is still insufficient. Based on the research paradigm of

cognitive diagnosis theory, this study compiles the cognitive diagnosis test of junior high school students' geometric reasoning ability, which is beneficial to evaluate the microcosmic cognitive structure of junior high school students' geometric reasoning ability and optimize the intervention scheme of junior high school mathematics teaching. At first, by analyzing the consistency of contents, structures and goals in the core literacy framework, curriculum standards and teaching materials of junior high school mathematics, the test Q matrix of six key cognitive attributes, including geometric intuitive reasoning ability, graphic expression reasoning ability, literal expression reasoning ability, symbolic expression reasoning ability, descriptive analysis reasoning ability and structural association reasoning ability, was determined. Combined with the results of expert evaluation and analysis of students' oral reports, the "cognitive diagnosis test of junior high school students' geometric reasoning ability" was compiled with 15 questions. Then, 642 students were randomly selected to answer questions, and R language program was compiled to select DINA model (loglike=-5488.892, BIC=11236.37, $p>0.05$), which fitted the data well, to perform a series of analysis such as topic parameter estimation, test reliability and validity. The results show that: (1) all the parameters of the "cognitive diagnosis test of junior high school students' geometric reasoning ability" fit well with DINA model, and the value of RMSEA is between 0.002 and 0.049, with a mean value of 0.022 and a standard deviation of 0.014; The average difficulty of the test is medium ($b=0.114$), and the average discrimination is medium and high ($a=1.12$). All items conform to the principle of $g+s<1$. The overall quality of the test is good, which can better distinguish students with different geometric reasoning abilities and make a detailed diagnosis of the microstructure of their abilities. (2) The test Cronbach's alpha is 0.71, and the classification accuracy rate of six key cognitive attributes is between 0.86 and 0.96, which together explain 61% of the difficulty of the topic, 83% of the variation of the total score of the attribute mastery probability test, and the correlation between the test score and the calibration score is 0.574($P<0.001$). The ability attribute defined by the study is complete, the hierarchical relationship is reasonable, and it has good structural validity. The indicators of the "cognitive diagnosis test of junior high school students' geometric reasoning ability" compiled in this study meet the requirements of surveying, and can be used as a diagnostic tool for junior high school students' geometric reasoning ability.

Keywords: junior high school students' mathematics core literacy, geometric reasoning ability, cognitive diagnosis, assessment development

中职生网络成瘾与学业成绩的关系研究 学习时间管理和行为自我效能感的中介作用

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摘要 随着互联网技术的不断发展, 社交网络俨然已成为青少年生活学习不可或缺的一部分。据中国互联网络信息中心发布的《2020 年全国未成年人互联网使用情况研究报告》显示, 2020 年我国小学、初中、高中、中职学生互联网普及率分别达到 92.1%、98.1%、98.3%和 98.7%, 其中中职生使用不同设备玩游戏的比例高达 75.7%, 为三个学段之首。在此背景下调查中职生这一群体具有重要意义。本研究通过调查山东省 Q 市中职生网络使用的现状, 探究中职生网络成瘾与数学学业成绩的关系, 重点分析学习时间管理和自我效能感的中介影响作用, 为缓解山东省中职生网络成瘾、提升学业表现提供科学依据。采用分层整群抽样方法, 抽取山东省 Q 市 47 所中等职业学校为研究对象。每所学校整群抽取不同专业的中职生, 发放问卷 3855 份并全部回收, 经调查组严格核对后剔除漏填率 $>5\%$ 的无效问卷共 446 份, 最终有效问卷 3409 份, 有效率 88.4%。本研究共包括三部分。研究内容 1: 改编刘炳伦、郝伟、杨德森编制的《青少年上网成瘾自评量表》, 分析中职生网络成瘾现状; 研究内容 2: 分析中职生网络成瘾与数学学业成绩之间的关系; 研究内容 3: 通过构建结构方程模型探讨中职生网络成瘾对数学成绩影响的主要机制。研究结果表明: 1. 中职生网络成瘾存在显著性别差异, 男生成瘾程度高于女生, 整体网络成瘾率为 4.85%。2. 中职生网络成瘾与数学成绩之间存在显著的负向相关关系。3. 行为自我效能感在中职生网络成瘾和数学成绩之间起中介作用。4. 学习时间管理和行为自我

效能感在中职生网络成瘾和数学成绩之间起链式中介作用，且中介效应显著。研究结果有助于阐明中职生网络成瘾与学业成绩的关系及作用机制，从个体监督和动力激发等方面为缓解中职生网络成瘾对学业成绩的不良影响提供理论依据。

关键词 中职生，网络成瘾，学业成绩，学习时间管理，自我效能感

Research on the Relationship between Internet Addiction Disorder and Academic Performance of Secondary Vocational School Students-The mediating role of learning time management and behavioral self-efficacy

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Abstract: With the continuous development of Internet technology, social networks have become an indispensable part of young people's life and learning. According to the "Research Report on the Internet Usage of Minors in China in 2020" released by the China Internet Network Information Center, the Internet penetration rate of primary, junior high, high school, and secondary vocational students in my country will reach 92.1%, 98.1, 98.3%, and% and% in 2020, respectively. 98.7%, among which the proportion of secondary vocational students playing games with different devices is as high as 75.7%, which is the top of the three sections. In this context, it is of great significance to investigate the group of secondary vocational students. This study investigates the current situation of Internet use by secondary vocational students in Q City, Shandong Province, explores the relationship between Internet addiction and mathematics academic performance of secondary vocational students, and focuses on the mediating effect of study time management and self-efficacy, in order to alleviate the secondary vocational Provide a scientific basis for students' Internet addiction and improvement of academic performance. Using the stratified cluster sampling method, 47 secondary vocational schools in Q City, Shandong Province were selected as the research objects. Each school selected a group of secondary vocational students from different majors, distributed 3855 questionnaires and recovered them all. After strict verification by the survey team, 446 invalid questionnaires with a missing fill rate of >5% were eliminated. The final valid questionnaire was 3409, with an effective rate of 88.4 %. This research consists of three parts. Research content 1: Adapting the "Adolescent Internet Addiction Self-rating Scale" compiled by Liu Binglun, Hao Wei, and Yang Desen to analyze the status quo of Internet addiction of secondary vocational students; research content 2: Analysis of the relationship between Internet addiction of secondary vocational students and mathematics academic performance Research content 3: Exploring the main mechanism of the influence of Internet addiction of secondary vocational students on mathematics performance by constructing a structural equation model. Research indicates: There are significant gender differences in network addiction among secondary vocational students. The addiction degree of boys is higher than that among girls, and the overall network addiction rate is 4.85%. There is a significant negative correlation between network addiction and mathematics performance in secondary vocational students. Behavioral self-efficacy plays a mediating role between network addiction and math performance in secondary vocational students. Learning time management and behavioral self-efficacy play a chain intermediary role between network addiction and mathematical performance in secondary vocational students, and the intermediary effect is significant. The research results help to clarify the relationship between the Internet addiction of secondary vocational students and academic performance and the mechanism of action, and provide a theoretical basis for alleviating the adverse effects of Internet addiction of secondary vocational students on academic performance from the aspects of individual supervision and motivational stimulation.

Keywords: Vocational school students, Internet addiction, academic performance, study time management, self-efficacy

低年段小学生的学业能力性别刻板印象及其对兴趣选择的影响： 自我肯定的作用

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摘 要 近年来, 在中国教育领域, 越来越多的“女强男弱”现象开始出现, 这与既往关于性别刻板印象的研究结论并不相符。为考察在当前教育背景下是否存在相对应的刻板印象及其发展情况, 本研究采用人物选择任务和游戏兴趣任务, 探讨低年段小学生学业能力性别刻板印象的发展特点及其对兴趣选择的影响, 并考察自我肯定这一干预措施的作用。结果发现, 自二年级开始, 低年段小学生认为在学业能力上女生比男生更聪明。其兴趣选择在三年级时出现性别差异, 相比男生, 女生对于需要聪明特质才能完成的游戏表现出更强的兴趣。自我肯定能有效削弱三年级男生关于学业能力的性别刻板印象, 进而提升其对相应游戏的兴趣。上述结果揭示, 学业上“女强男弱”的信念已存在于小学低年段, 且从三年级开始严重影响男生的兴趣选择, 但可采用自我肯定法改变男生的这一信念。

关键词 低年段小学生, 学业能力, 性别刻板印象, 自我肯定

Gender Stereotypes of Academic Ability in Primary School Students in Lower Grades and Their Influence on Interest Selection: The Role of Self-affirmation

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Abstract: In recent years, there has been an increasing appearance in the phenomenon of “strong girls and weak boys” in Chinese education. For example, in terms of academic performance, an increasing number of girls in primary and secondary schools outperform boys in academic performance; among students with learning difficulties, the proportion of boys is also higher when compared to girls, and in the field of higher education in China, the number of female graduate students has exceeded that of male graduate students for many years. Previous studies on gender stereotypes on academic ability abroad have found that boys are thought to be better than girls in academic ability. The conclusion of those studies is not consistent with the phenomenon of “strong girls and weak boys” in Chinese education, and few studies have discussed the existence of corresponding gender stereotypes and their development in current Chinese education. Therefore, from the perspective of developing cross-sectional sampling, this study mainly discusses the gender stereotypes of academic ability among primary school students in lower grades (i.e. grades 1 to 3) and its influence on interest selection. We also investigated whether self-affirmation intervention contributes to gender stereotypes in academic ability and influences interest choice. We discuss these problems through three studies. Study 1 selected primary school students and tasked them to select characters by describing “smart” characteristics from a story and allowing them to choose the sex of their chosen characters. This aimed to investigate the development characteristics of gender stereotypes of primary school students’ academic ability. Study 2 selected primary school students for a game interest task which let them choose the game that needs “smart” or “hard” in order to accomplish. This helped to measure the gender stereotypes of academic ability and investigate the influence of gender stereotypes on children’s interest choices. Study 3 used the self-affirmation intervention method to compare whether there are differences in the performance of third-grade boys in character selection and game interest tasks. This in turn helped to explore the role of self-affirmation in the gender stereotypes of academic ability and its influence on interest choice. This study yielded the following main findings: (1) The gender stereotypes of academic ability in primary school students at a lower grade (first to second grades) implies that girls are smarter than

boys in academic ability. (2) There are gender differences in the interest choice of third grade students. Girls are more interested than boys in games that require “smart” traits, and the differences in the interest choice are related to the gender stereotypes of their academic ability. (3) Self-affirmation can effectively weaken the gender stereotypes of the academic ability of boys in the third grade, and thus enhance their interest in “smart” games. This study reveals that the belief of “strong girls and weak boys” in education has existed in the lower grades of primary school and has seriously affected the choice of third-grade boys in interest tasks. It is suggested that parents, teachers, and education managers should change students’ belief knowledge through teaching and activity design, and this intervention is best designed before the third grade of primary school. The self-affirmation method provided in this study provides a practical method for this requirement, suggesting that the activities that boys are good at, can improve the confidence of boys in the academic field, thus changing the gender stereotype in academic ability by creating their own “strong boys” belief.

Keywords: primary school students in lower grades; academic ability; gender stereotypes; self-affirmation

Different effects of insecure adult attachment on prosocial behaviors: A multilevel meta-analysis

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Abstract : As an important individual variable, attachment is closely associated with prosocial behaviors. This association has been shown by the theory and individual studies testing the relation between secure attachment and prosocial behaviors and often focusing on much younger samples, or only involve the difference between secure and insecure attachment, did not specifically discuss the difference between two insecure attachment dimensions. Therefore, it remained ambiguous how insecure attachment dimensions are associated with adults’ prosocial behaviors. In order to increase the understanding of these associations, a multilevel meta-analysis was performed. By a systematic literate search, 86 independent samples were found from 43 eligible studies. A significant moderate overall effect size was found between attachment avoidance and prosocial behaviors(-.319), which was significantly stronger than the correlation with attachment anxiety. Multivariate analysis of the significant moderators that impacted on the strength of the association between insecure adult attachment and prosocial behaviors showed that the relation between helper and recipient and the prosocial motivation uniquely contributed to the explanation of variance. Thus, this meta-analysis demonstrates robust negative associations between insecure attachment and prosocial behaviors in adult, while there still are some moderators can change this negative outcomes, and results of the meta-analysis and the implications were discussed.

Keywords: Attachment anxiety, attachment avoidance, prosocial behaviors, multilevel meta-analysis

同伴关系对网络成瘾的影响：有调节的中介模型

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摘 要 截至 2019 年，未成年人互联网普及率高达 93.1%，其中 32.9%的小学生网民在学龄前就开始上网。随着低龄网络用户人数增加，网络成瘾低龄化趋势也更加明显。而网络成瘾会影响儿童的身心健康，甚至能够正向预测自杀意念，严重威胁儿童的健康发展。因此，有必要对网络成瘾的影响因素及形成机制进行考察。前人研究表明，同伴关系是网络成瘾的保护因素，同伴关系不良的个体更可能成为欺凌者的目标，受到校园欺凌。根据社会补偿理论，受欺负儿童倾向于通过上网释放受欺负所产生的消极情绪和压力，但这种处理压力的方式会导致网络成瘾风险增加。此外，心理韧性的保护因子模型认为，保护因子能够缓解压力对适应的负面影响。心理韧性作为校园受欺负和网络成瘾的保护因素能够缓解不良同伴关系对两者的消极影响，也能够缓解校园受欺负对网络成瘾的影响。本研究期望构建一个有调节的中介模型，考察校园受欺负在同伴关系影响网络成瘾过程中的中介作用以及心理韧性对这一过程的调节作用，为预防与干预网络成瘾提供实证依据。

研究使用同伴关系量表、欺负问卷、中小学生耐挫性量表、网络成瘾测验等工具,对 60197 名四年级学生进行施测。结果发现:①同伴关系负向预测网络成瘾,校园受欺负部分中介同伴关系对网络成瘾的影响。②心理韧性调节中介模型的直接路径和间接路径。结果表明,同伴关系能够通过减少校园受欺负进而减少网络成瘾,心理韧性可以缓冲不良同伴关系对校园受欺负和网络成瘾的消极影响,也能够降低校园受欺负对网络成瘾的负面影响。研究揭示了同伴关系对网络成瘾作用机制,建立了有调节的中介模型,有助于理解同伴关系如何通过直接路径和间接路径影响网络成瘾。心理韧性的调节作用也解释了不同心理韧性水平个体,其直接、间接路径的差异。研究强调了心理韧性的重要作用,在未来干预中需要培养和发挥心理韧性的优势,保护个体免受消极影响。

关键词 同伴关系,网络成瘾,校园受欺负,心理韧性

Relationship between Peer Relationship and Internet Addiction: A Moderated Mediation Model

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Abstract: As of 2019, the Internet penetration rate among minors was 93.1%, with 32.9 % of primary school students going online as early as preschool. With the increasing number of younger Internet users, the trend of younger Internet addiction is obvious. Internet addiction can affect children's physical and mental health, even positively predict suicidal ideation, which seriously threatens children's healthy development. Therefore, it is necessary to investigate the influencing factors and formation mechanism of Internet addiction. Previous studies have shown that peer relationship is a protective factor for Internet addiction. Individuals with poor peer relationships are more likely to be targeted by bullies and be bullied at school. According to the social compensation theory, bullied children tend to release negative emotions and pressures caused by bullying through the Internet, but this way of dealing with pressure will lead to an increased risk of Internet addiction. In addition, the protective factor model of mental resilience suggests that protective factors can alleviate the negative effects of stress on adaptation. As a protective factor of victim and Internet addiction, psychological resilience can alleviate the negative impact of poor peer relationship on victim and Internet addiction, and also can alleviate the impact of victim on Internet addiction. The purpose of this study is to construct a moderated mediation model. We also investigated the influence of peer relationship on Internet addiction through victim and the moderating effect of psychological resilience on this process. This will provide empirical evidence for the prevention and intervention of Internet addiction. Data were collected from 60197 fourth-grade students. The Revised Peer Relationship Scale, Young's Internet Addiction Questionnaire, Bully/Victim Questionnaire and The Revised Resilience Scale were used to conduct the survey. The results found: ① Victim partly mediate the relationship between peer relationship and Internet addiction. ② The direct and indirect paths of the mediating model were moderated by resilience. The results show that peer relationship can reduce Internet addiction by reducing victim. Resilience can reduce the negative impact of low peer relationship on victim and Internet addiction, and can also reduce the negative impact of victim on Internet addiction. Research revealed the mechanism of peer relationship on Internet addiction, and established a moderated mediation model, which is helpful to understand how peer relationship affects Internet addiction through direct and indirect paths. The moderating effect of resilience also explains the difference between the direct and indirect paths of individuals with different levels of resilience. The study highlights the importance of resilience and the need to nurture and leverage its strengths in future interventions to protect individuals from negative impacts.

Keywords: Peer Relationship, Internet Addiction, Victim, Resilience

青少年手机冷落行为对社会心态的影响及其作用机制

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摘 要 十九大报告提出“要加强社会心理服务体系建设，培育自尊自信、理性平和、积极向上的社会心态”。社会心态不仅反映了人们对社会现实各个方面的感受与体验，也是经济社会发展的晴雨表。本研究试图探讨青少年手机冷落行为对社会心态的影响及其作用机制——公正世界信念的中介作用和感恩的调节作用。采用手机冷落行为量表、社会心态量表、公正世界信念量表和青少年感恩量表对广东、山西、河南、江苏和湖北五省的3104名青少年进行问卷调查，其中男生1146人（36.92%），女生1958人（63.08%），平均年龄18.04岁（SD=2.87）。结果显示：（1）在控制了性别和年级之后，青少年手机冷落行为可以显著负向预测社会心态；（2）中介效应检验表明，青少年的公正世界信念在手机冷落行为与社会心态之间具有中介作用；（3）感恩调节了“手机冷落行为→公正世界信念→社会心态”的后半段和直接路径：在后半段路径“公正世界信念→社会心态”这一积极情境中，感恩水平高的个体比感恩水平低的个体，其公正世界信念对社会心态的预测能力更强，起“锦上添花”的调节作用；在直接路径“手机冷落行为→社会心态”这一消极情境中，当青少年感恩水平低时，手机冷落行为对社会心态的负向预测作用不显著，当青少年感恩水平高时，手机冷落行为可以显著负向预测社会心态，起“杯水车薪”的调节作用。这些结果说明青少年手机冷落行为不仅会对自身社会心态产生直接影响，也会通过削弱自身的公正世界信念对社会心态产生间接影响，同时验证了感恩在积极情境中所起的“锦上添花”调节模式以及在消极情境中所起到的“杯水车薪”调节模式，对手机网络时代青少年良好的社会心态培育具有一定的启示意义。

关键词 手机冷落行为，社会心态，公正世界信念，感恩，青少年

The Effect of Phubbing on Adolescents' Social Mentality and its Mechanism

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Abstract: The report of the 19th National Congress of the Communist Party of China proposed that “the construction of a social psychological service system should be strengthened, and a social mentality of self-esteem, self-confidence, rational peace, and positive progress should be cultivated”. Social mentality not only reflects people's feelings and experiences in all aspects of social reality, but also a barometer of economic and social development. This study attempts to explore the influence of adolescents' phubbing on social mentality and the mediating role of belief in a just world and the moderating role of gratitude. A questionnaire survey of 3104 adolescents in five provinces including Guangdong, Shanxi, Henan, Jiangsu and Hubei was carried out using the Phubbing Scale, Social Mentality Scale, Belief In a Just World Scale, and Youth Gratitude Scale. Among them, 1146 (36.92%) are boys, 1958 are girls (63.08%), with an average age of 18.04 years (SD=2.87). The results showed that: (1) After controlled for gender and grade, adolescents' phubbing could negatively predicted social mentality; (2) The mediation effect test showed that adolescents' belief in a just world played a mediating role between phubbing and social mentality. (3) Gratitude regulated the second half and direct path of “phubbing→belief in a just world→social mentality”: compared with adolescents with a low level of gratitude, the high level of gratitude adolescents' belief in a just world had stronger predictive ability on social mentality. Gratitude played an “charcoal in the snow” moderating effect in the positive context of the second half path “belief in a just world→social mentality”; in the negative context of the direct path “phubbing→social mentality”, when a adolescents' gratitude level was low, phubbing had no significant negative predictive effect on social mentality. When adolescents' gratitude level was high, phubbing could significantly negatively predicted social mentality and played a “drop in the bucket” moderating effect. These results indicate that adolescents' phubbing not only has a direct impact on social mentality, but also has an indirect impact on social mentality by weakening the adolescents' belief in a just world. At the same time, it validates the “charcoal in the snow” moderating mode of gratitude in positive situations and the “drop in the bucket” moderating mode played in negative situations. That has a certain enlightenment for cultivate a good social mentality

among adolescents in the age of mobile phone networks.

Keywords: phubbing, social mentality, belief in a just world, gratitude, adolescents

社会临场感与网络过激行为的关系：双自我意识的并行中介作用

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摘要 随着网络的普及, 网络渗透了人们生活的方方面面。与现实相比, 网络具有匿名性、去抑制性、互动性等特点, 人们的线上行为也表现出与线下不同的特性。其中, 网络中的谩骂、侮辱等行为使得网络环境恶化, 并严重影响其他用户的使用体验, 成为研究热点。网络过激行为指网络中故意攻击、伤害他人的行为。线索过滤理论和双自我意识视角是理解网络过激行为的经典角度。前者关注网络媒介层面(如社会临场感)对网络过激行为的影响, 后者则关注个体层面(如公我意识和私我意识)。以往研究较少综合两种视角探讨网络过激行为机制, 且双自我意识、社会临场感、网络过激行为间的关系仍不明晰。因此, 基于三元交互理论, 本研究综合线索过滤理论和双自我意识视角, 构建了一个并行中介模型以探讨社会临场感对网络过激行为的影响机制。本研究采用社会临场感量表、公我意识量表、私我意识量表、青少年网络偏差行为量表, 对1625名大学生进行调查。结果表明: (1) 社会临场感和公我意识、私我意识呈显著正相关, 而网络过激行为与私我意识呈显著负相关; (2) 社会临场感能够显著正向预测大学生网络过激行为; (3) 公我意识在社会临场感和网络过激行为间起到了正向中介作用, 私我意识起到了正向中介作用, 且私我意识的中介效应大于公我意识的中介效应。本研究发现高社会临场感不仅能够直接促进网络过激行为的产生, 还能通过提高个体的公我意识或私我意识水平间接地促进或抑制网络过激行为。具体而言, 根据去个性化效应的社会认同模型, 社会临场感和公我意识的增强可能使个体与网络团体中的其他用户保持一致, 进而表现出网络过激行为; 而私我意识增强可能使个体更关注自己的内在感受和道德标准, 更不易做出网络过激行为。未来研究可进一步探讨双自我意识与网络过激行为的作用机制, 以深化理解并为实践提供引导。

关键词 网络过激行为, 社会临场感, 公我意识, 私我意识

The Impact of Social Presence on Online Flaming: The Parallel Mediating Roles of Dual Self-awareness

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Abstract: With the popularity of the Internet, the Internet has penetrated into all aspects of people's life. Compared with real space, the network has the characteristics of anonymity, disinhibition and interaction. People's online behaviors also shows different characteristics from offline. Among these behaviors, online abusive and insulting behaviors deteriorate the environment of Internet, and seriously affect the experience of other users, which has become a hot topic of research. Online flaming refers to the behaviors of deliberately attacking and hurting others online. Cues-filtered-out theory and dual self-awareness perspective are classical angles for comprehending online flaming. The former pays attention to the impact of network media level (such as social presence) on online flaming, while the latter focus on individual level (such as public self-awareness and private self-awareness). Few previous research explored the mechanism of online flaming from both these two perspectives. Moreover, the relationships between social presence, dual self-awareness, and online flaming are still unclear. Therefore, in order to explore the mechanism of social presence on online flaming, based on ternary interaction theory, the current study integrates cues-filtered theory and dual self-awareness perspective into a parallel mediation model. In this study, 1625 college students were investigated by social presence scale, public self-awareness scale, private self-awareness scale, the

scale for adolescent internet deviance. The results show that: (1) social presence positively associated with public self-awareness, private self-awareness, while online flaming negatively associated with private self-awareness; (2) social presence positively predicted online flaming; (3) public self consciousness plays a positive mediating role between social presence and online flaming, and private self consciousness plays a negative mediating role between social presence and online flaming, and the negative mediating effects of private self-awareness outweighed the positive mediating effects of public self-awareness. This study found that high social presence could not promote online flaming, but also promote or inhibit online flaming by improving individual's public or private self-awareness respectively. Specifically, according to social identity model of deindividuation effects, the enhancement of social presence and public self-awareness may make individuals follow other users in network groups, and in turn demonstrate online flaming; while the enhancement of private self-awareness may make individuals pay more attention to their inner feelings and moral standards, and are less likely to show online flaming. In order to deepen our understanding and provide guidance for practice, future research can further explore the mechanism of dual self-awareness on online flaming.

Keywords: Online flaming, social presence, public self-awareness; private self-awareness

什么是横断历史元分析的最佳实践？ ——一项有关横断历史元分析研究的“元”分析

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摘 要 横断历史元分析 (Cross-temporal Meta-analysis, CTMA) 常被用来考察某个心理变量随年代的变化趋势, 通过与经济社会指标的相关分析来推测心理变量变动的经济社会原因。自 1997 年以来, 国内外心理学期刊已经发表 120 余篇横断历史元分析研究。近年来, 不时有研究者指出 CTMA 在方法学方面存在某些不足。例如, Donnellan, M. B. 等人认为 CTMA 方法依赖于生态关系——关联两个变量的结果, 每个变量代表在聚合分析层面上存在的个体层面现象, 这可能会导致对研究结果的错误解释; Rudolph, C. W. 等人则认为尽管 CTMA 支持出生组效应作为所得结果的主要解释变量, 但可能混淆了出生组和时代效应。然而, 尚没有研究系统地评估已经发表的 CTMA 研究存在的问题, 也没有研究提供 CTMA 研究应该遵循的规范。为了系统评估已发表的 CTMA 研究存在的问题, 研发 CTMA 研究规范, 该文采用领域评价方法 (Scoping Review) 分析了 127 篇已经发表的 CTMA 研究, 这些研究发表于 1997 到 2020 年之间, 包括 57 篇英文论文和 70 篇中文论文。采用自主开发的 CTMA 审核量表 (包含 27 个项目), 该文着重分析了 CTMA 方法中的效应量计算问题、回归问题、经济社会指标与心理变量之间的关联问题, 以及交叉滞后分析中的年代间隔设置问题。研究结果显示: (1) 在 27 条审查条目中仅有 11 项情况较为良好, 其余 16 项均存在问题。(2) 86.6% 的 CTMA 研究采用了 d 作为效应量, 13.4% 则直接采用平均值为效应量。其中问题有二: 效应量 d 应用于 CTMA 方法中并无数学理论证据支撑; d 的计算过程存在应用错误, 研究者在计算年代改变量的标准误时对产生了群体平均值离散水平的误解。(3) 30.7% 的研究将经济社会指标与心理变量相关联以解释心理变量变化的社会原因。但对于指标的选取, 仍缺乏证据支撑。(4) 6.3% 的研究采用了 meta-regression, 93.7% 研究采用了非 meta-regression。非 meta-regression 的错误在于标准误的计算错误。(5) 14.2% 的研究在交叉滞后分析中的年代间隔采用了 5 年。事实上, 不论采用 5 年、1 年或者其他年份区间, 这些选取方式均没有理论依据。总体上看, CTMA 方法本身存在不少缺陷, 需要进一步完善。该文还初步讨论了 CTMA 研究应遵循的基本规范。

关键词 横断历史元分析, 领域评价, 方法学

What is the best practice of Cross-temporal Meta-analysis? A scoping review of Cross-temporal Meta-analysis

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Abstract: Cross-temporal Meta-analysis (CTMA) is often used to examine the trends of a psychological variable over time and to infer the economic and social causes of changes in psychological variables by correlating them with economic and social indicators. Since 1997, more than 120 CTMA studies have been published in national and international psychology journals. In recent years, from time to time, researchers have pointed out certain methodological shortcomings of CTMA. For example, Donnellan, M. B. et al. argue that the CTMA approach relies on ecological relationships - correlating the results of two variables, each representing an individual-level phenomenon that exists at the level of convergent analysis - which may lead to misinterpretation of the findings; Rudolph, C. W. et al. argue that although CTMA supports birth cohort effects as the main explanatory variable for the results obtained, it may confound birth cohort and age effects. However, no studies have yet systematically assessed the problems with published CTMA studies and no studies have provided norms that CTMA studies should follow. In order to systematically assess the problems of published CTMA studies and to develop a standard for CTMA research, this paper analyses 127 published CTMA studies, including 57 English and 70 Chinese papers, published between 1997 and 2020, using the Scoping Review method. Using the self-developed CTMA audit scale (containing 27 items), the paper focuses on the calculation of effect sizes in the CTMA methodology, regressions, correlations between economic and social indicators and psychological variables, and the setting of chronological intervals in cross-lagged analyses. The results of the study showed that: (1) Only 11 of the 27 review entries were in relatively good condition, while the remaining 16 were problematic. (2) 86.6% of the CTMA studies used d as the effect size, while 13.4% used the mean value directly as the effect size. The problems were twofold: the application of the effect size d to the CTMA method was not supported by mathematical theoretical evidence; and there was an application error in the calculation of d . The researchers misinterpreted the standard error of the chronological change in calculating the discrete level of the group mean. (3) 30.7% of the studies correlated economic and social indicators with psychological variables to explain the social causes of changes in psychological variables. However, there is still a lack of evidence to support the selection of indicators. (4) 6.3% of the studies used meta-regression and 93.7% used non-meta-regression. the error in non-meta-regression was the miscalculation of standard errors. (5) In 14.2% of the studies, 5 years was used as the chronological interval in the cross-lagged analysis. In fact, whether 5 years, 1 year or other year intervals are used, there is no theoretical basis for these selections. Overall, the CTMA method itself has a number of flaws and needs further refinement. The paper also provides a preliminary discussion of the basic norms that should be followed in CTMA studies.

Keywords: Cross-temporal Meta-analysis, Scoping Review, Methodology

父母教养方式对高中生利他行为的影响：自尊和共情的链式中介作用

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摘 要 本研究采用问卷调查法探讨了父母教养方式对高中生利他行为的影响以及自尊和共情在其中的链式中介作用。选取黑龙江省及江苏省某三所高中共 650 名学生为被试, 采用《父母教养方式量表》《Rosenberg 自尊量表中文版》《中文版人际反应指针量表》《利他行为自陈问卷》施测, 得出如下结论: 1. 父母教养方式在高中生性别上存在显著差异, 女生经历了更多的信任鼓励型和情感温暖型教养方式、男生经历了更多的

专制型、忽视型和溺爱型教养方式；父母教养方式在父母是否离异上存在显著差异，父母未离异的高中生经历了更多的情感温暖型教养方式、更少的忽视型教养方式；父母教养方式在学业成就上存在显著差异，学优生经历了更多的情感温暖型教养方式、学困生经历了更多的忽视型教养方式。2.自尊水平在学业成就上存在显著差异，从学优生到学困生自尊水平依次递减。3.共情能力在性别上存在显著差异，女生共情能力更强；共情能力在独生与否上存在显著差异，非独生的高中生共情能力更强；共情能力在班干部与否上存在显著差异，班干部共情能力更强。4.利他行为在班干部与否上存在显著差异，班干部利他行为更多。5.相关分析表明，信任鼓励型和情感温暖型教养方式均与自尊、共情能力以及利他行为显著正相关；溺爱型和忽视型父母教养方式均与自尊、利他行为显著负相关；专制型教养方式与自尊水平显著负相关；自尊与共情能力及利他行为均显著正相关；共情能力与利他行为显著正相关。6.结构方程表明：信任鼓励型、情感温暖型、溺爱型及忽视型教养方式分别通过三条路径影响高中生的利他行为：一是自尊的单独中介作用；二是共情的单独中介作用；三是自尊和共情的链式中介作用。

关键词 利他行为，父母教养方式，自尊，共情

（4）硕士研究生论坛—发展与教育心理学分场 4

多媒体教学中分段原则的学习者控制效应

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摘要 多媒体教学中，分段原则被认为可以有效地降低认知负荷、提升学习成绩。为了解分段原则中预分段和学习者控制这两个功能对学习的作用，本实验通过行为测试研究了74名大学生在无分段组（控制组）、预分段-系统播放组（每一段间隔2.5S后自动播放）、预分段-学习者控制组（每一段播放完后自动暂停、由学习者按键继续）的认知负荷、主观感受和学习成绩（保持和迁移）。结果表明：（1）与无分段组相比，预分段-系统播放的教学设计并没有降低认知负荷，也并未提升学习成绩。（2）由教学设计者预分段，并由学习者自己掌控节奏，可以提升保持测验成绩。（3）提供预分段和学习者控制并没有降低认知负荷、学习者的主观感受均无显著差异。本研究发现分段原则中学习者控制的存在对提升学习成绩有积极作用，如果脱离其存在，对学习没有促进作用。未来研究应当探讨视频时长和材料难度的变化是否会影响分段原则中两个特征对学习的影响。

关键词 多媒体教学，分段，学习者控制

习惯性含糖饮料摄入者奖赏加工过程的 ERP 研究

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摘要 含糖饮料（sugar-sweetened beverages,SSBs）作为添加糖摄入主要来源之一，其的过量消费对个体的生理、心理均产生了不良影响。已有研究发现习惯性的含糖饮料消费会造成个体奖赏有关脑区活动的降低，本研究基于奖赏加工过程在时间维度上具有连续性的特点，利用时间分辨率较好的ERP技术，从奖赏预期（wanting）和结果评价（liking）两个独立又相关的阶段探索习惯性含糖饮料摄入对奖赏加工的影响，以及在奖赏加工不同阶段这种影响是否存在分离。研究一采用金钱奖励延迟任务，通过2（含糖饮料摄入：高、低）×3（线索类型：奖赏预期线索、损失预期线索、无奖惩预期线索）的混合实验设计比较高低含糖饮料摄入者在金钱奖励延迟任务上的差异，探讨含糖饮料摄入对奖赏预期的影响。行为结果显示两组被试的反应时无显著差异，均在线索类型上有差异，即对奖励和惩罚线索的反应快于无奖惩线索；脑电结果显示，高含糖饮料摄入组的cue-P3、CNV波幅显著小于低含糖饮料摄入组，两组的SPN波幅无显著差异。研究二采用猜门任务，通过2（含糖饮料摄入：高、低）×2（反馈类型：赢、输）的混合实验设计比较高低含糖饮料摄入者在门任务上的差异，探索含糖饮料摄入对奖赏结果评价的影响。行为结果显示两组被试的反应时无显著差异；脑电结果显示，赢钱反馈比输钱反馈诱发更大的RewP、fb-P3；在输赢不同结果反馈下，高含糖饮料

摄入组比低含糖饮料组诱发更大的 RewP、fb-P3 差异波波幅。结论：习惯性含糖饮料摄入者奖赏加工过程存在分离。(1)含糖饮料摄入影响个体的奖赏预期过程，主要表现在高含糖饮料摄入者对奖惩线索的注意、接近动机显著低于低含糖饮料摄入者。(2)含糖饮料摄入影响个体的奖赏结果评价过程，主要表现在高含糖饮料摄入者对奖赏结果获得的满足感显著高于低含糖饮料摄入者。

关键词 含糖饮料，奖赏预期，结果评价，ERPs

ERP study on reward processing of habitual intake of Sugar sweetened beverages

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Abstract : Sugar sweetened beverages (SSBs) is one of the main sources of added sugar intake. Excessive consumption of SSBs has adverse effects on individual physiology and psychology. Previous studies have found that habitual consumption of SSBs can reduce the activity of reward related brain regions. Based on the continuous feature of reward processing in time dimension, this study uses ERP technology with better temporal resolution. In this study, we explored the effects of habitual SSBs intake on reward processing from two independent and related stages of reward anticipatory and consummatory, and whether the effects were separated in different stages of reward processing. In study 1, Monetary incentive delay (MID) was used to compare the difference of high and low sugar beverages intake in money reward delay task, and to explore the influence of sugar sweetened beverages intake on reward anticipation. The study was 2 (SSBs intake: high, low) $\times$ 3 (Cue Type: no-reward anticipation cue, reward anticipation cue, loss anticipation cue) in the interior design. The results showed that there was no significant difference in the reaction time between the two groups, but there was difference in the types of cues; EEG results showed that the amplitude of cue-p3 and CNV in high sugar sweetened beverages intake group was significantly lower than that in low sugar beverages intake group, and there was no significant difference in SPN amplitude between the two groups. In study 2, the guessing door task was to explore the influence of sugar sweetened beverages intake on the consummatory processing of reward. We used a 2 (SSBs intake: high, low) $\times$ 2 (feedback type: win, lose) mixed experimental design to compare the differences between high and low sugar sweetened beverages intakes in door task. There was no significant difference in reaction time between the two groups; EEG results showed that the feedback of win induced larger Rewp and fb-p3 than the feedback of lose; Under the feedback of different results, the difference wave amplitude of Rewp and fb-p3 in the high sugar sweetened beverages group was larger than that in the low sugar sweetened beverages group. Conclusion: the effect of sugar sweetened beverages intake on reward processing is separate. (1)The results showed that the high sugar sweetened beverages intake had significantly lower attention and approach motivation to reward and punishment cues than the low sugar sweetened beverages intake. (2)The results showed that the satisfaction of high sugar sweetened beverages intake was significantly higher than that of low sugar sweetened beverage intake.

Keywords: sugar sweetened beverages, reward anticipation, reward consummatory, ERP

黑暗三人格与网络游戏成瘾的关系： 基本心理需要满足和消极应对方式的链式中介作用

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摘 要 网络游戏成瘾已成为重要的公共卫生议题，对其前因变量和影响机制的研究逐步得到重视。研究发现，黑暗三人格(即马基雅维利主义、自恋和精神病态)与各类问题性网络使用和行为成瘾关系密切。然而，黑

暗三人格预测网络游戏成瘾的作用和路径尚未明确。故本研究基于 I-PACE 模型探讨黑暗三人格与网络游戏成瘾的关系, 并在使用一满足理论以及认知-行为模型的基础上, 进一步考察基本心理需求满足和消极应对方式在黑暗三人格与网络游戏成瘾间的单一和中介作用。研究采用黑暗十二条量表、网络游戏成瘾量表、基本心理需求量表以及消极应对方式量表, 共收集 740 份有效数据进行路径分析。结果表明: (1) 马基雅维利主义、精神病态和自恋均能正向预测网络游戏成瘾。(2) 在马基雅维利主义预测网络游戏成瘾的模型中, 消极应对方式的单一中介作用以及基本心理需求满足和消极应对方式的链式作用显著。(3) 在精神病态预测网络游戏成瘾的模型中, 基本心理需求满足的单一中介作用以及基本心理需求满足和消极应对方式的链式作用显著。(4) 在自恋预测网络游戏成瘾的模型中, 仅有消极应对方式的单一中介作用显著。研究说明黑暗三人格对网络游戏成瘾具有重要影响, 且这种影响是通过基本心理需求满足和消极应对方式的中介路径来实现的。

关键词 黑暗三人格, 马基雅维利主义, 精神病态, 自恋, 网络游戏成瘾, 基本心理需求满足, 消极应对方式

Dark Triad and Online Gaming Addiction: the Serial Mediation of Basic Psychological Needs and Negative Coping Styles

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Abstract: Online gaming addiction has become an important public health topic, and research on its antecedent variables and influencing mechanisms has gradually gained attention. Studies have found that the Dark Triad (i.e., Machiavellianism, narcissism, and psychopathy) are strongly associated with various types of problematic Internet use and behavioral addiction. However, the role and pathways of the Dark Triad in predicting online gaming addiction have not been clarified. Therefore, this study explored the relationship between the dark three personalities and online gaming addiction based on the I-PACE model, and further examined the single and serial mediating role of basic psychological need satisfaction and negative coping styles between the Dark Triad and online gaming addiction based on the use-satisfaction theory and the cognitive-behavioral model. The study used the Dirty Dozen Scale, the Online Gaming Addiction Scale, the Basic Psychological Needs Scale, and the Negative Coping Style Scale to collect a total of 740 valid data for path analysis. The results showed that (1) Machiavellianism, psychopathy and narcissism all positively predicted online gaming addiction. (2) In the model of Machiavellianism predicting online gaming addiction, the single mediating effect of negative coping style and the serial mediating effect of basic psychological need satisfaction and negative coping style were significant. (3) In the model of psychopathy predicting online gaming addiction, the single mediating role of basic psychological need satisfaction and the serial mediating effect of basic psychological need satisfaction and negative coping style were significant. (4) In the model of narcissism predicting online gaming addiction, only the single mediating role of negative coping style was significant. The study indicates that the Dark Triad has a significant influence on online gaming addiction, and this influence is achieved through the mediating path of basic psychological need satisfaction and negative coping style.

Keywords: Dark Triad, Machiavellianism, Psychopathy, Internet gaming disorder, Basic psychological needs

儿童友谊质量与心理健康的双向关系：一项纵向研究

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摘要 本研究基于社会需要理论、孤独的进化理论与发展情境理论, 对武汉市 212 名儿童进行为期三年的纵向研究, 采用随机截距的交叉滞后模型(RI-CLPM)考察儿童友谊质量与心理健康之间的双向关系, 结果发现: (1) 在个体间水平上, 友谊质量分别与幸福感和孤独感之间的随机截距相关; (2) 在个体内水平上, T1 时

的幸福感显著正向预测 T2 时的友谊质量, 其他交叉路径不显著; (3) 在个体内水平上, T1 时的友谊质量显著负向预测 T2 时的孤独感, 进而显著负向预测 T3 时的友谊质量。综上, 儿童友谊质量与孤独感之间存在循环作用关系, 而友谊质量与幸福感之间仅存在幸福感显著预测友谊质量的单向预测关系。因此, 儿童友谊质量与心理健康具有复杂的双向关系。本研究对儿童心理健康的干预和友谊质量的提升具有重要启示。

关键词 友谊质量, 孤独感, 幸福感, 儿童, 随机截距的交叉滞后模型。

Bidirectional Associations Between Friendship Quality and Mental Health Among Children: A Longitudinal Study

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Abstract: Based on the Social Needs Theory, the evolutionary theory of loneliness and The Development Contextualism, this study utilized a three-year longitudinal design, sampled with 212 children in Wuhan, employed a random intercepts cross-lagged panel model (RI-CLPM) to investigate the bidirectional associations between children's friendship quality and mental health (well-being and loneliness). Results showed that: (1) At the between-person level, the random intercepts of friendship quality are related to the random intercepts of happiness and loneliness, respectively. (2) At the within-person effects, initial well-being significantly positively predicted friendship quality at Time 2. Initial friendship quality did not predict subsequent well-being. (3) At the within-person level, there were reciprocal relations between friendship quality and loneliness. Specifically, initial friendship quality significantly negatively predicted loneliness at Time 2, which in turn negatively predicted friendship quality at Time3. In general, There was a bidirectional association between friendship quality and loneliness, while the relationship between friendship quality and well-being was unidirectional, that is, well-being could positively predict children's friendship quality. These findings reveal the bidirectional and complex nature of the association between friendship quality and mental health, have important implications for the intervention of children's mental health development and the improvement of friendship quality.

Keywords: friendship, loneliness, well-being, children, RI-CLPM.

中学生作业创造性行为量表的编制及适用性检验

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摘 要 目的: 编制中学生作业创造性行为量表(HCBS), 并检验其信度、效度与适用性。方法: 研究一在家庭作业行为整体框架下, 结合开放式访谈的结果, 提出作业创造性的概念并编制 HCBS 初稿。对样本 1 与样本 2 共计 1537 名中学生施测后, 使用 R 进行项目分析、因素分析、信效度检验以及测验等值性检验。研究二在研究一的基础上对样本 2 进行适用性检验, 主要包括人口学差异检验与回归分析。结果: 研究一结果表明 HCBS 包含 1 个维度, 9 道题目, 累计方差解释率在 40%以上; 验证性因子分析显示各因子模型拟合良好, 删除第 7 题后模型达到最佳; 量表总分与威廉姆斯创造性倾向量表总分及四个维度、家庭作业管理量表、作业完成度与学业成绩呈显著正相关, 表明效度良好; 量表内部一致性信度在为 0.86; HCBS 在不同性别与年级水平上具有测量等值性; 研究二结果表明 HCBS 存在显著的性别效应与年级效应, 且男性的 HCBS 得分高于女性, 初中生的 HCBS 得分高于高中生; 中学生作业创造性行为对学业成绩及创造性倾向的预测贡献为 3.5%与 7.5%。结论: 中学生作业创造性行为量表信效度良好, 能够有效预测学生的学业成绩与创造性倾向, 是测量中学生家庭作业行为的有效工具。

关键词 家庭作业, 创造性倾向, 学业成绩, 量表编制, R 语言

A study of the validity and reliability of the Homework Creative Behavior Scale: A psychometric evaluation and application

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Abstract: Objective: To compile students' Homework Creative Behavior Scale (HCBS) and test its reliability, validity and applicability. Method: Study 1: Under the overall framework of homework behavior, combined with the results of open-ended survey, our study put forward the concept of homework creative behavior and compile the first draft of HCBS. After conducting the test on a total of 1537 junior and high school students in sample 1 and sample 2, R was used to perform item analysis, factor analysis, reliability and validity test, and measurement invariance test. The study 2 carried out the applicability test of the sample 2 on the basis of the study 1, which mainly included the demographic difference test and regression analysis. Results: The result of Study 1 showed that HCBS contains 1 dimension, 9 items, and the cumulative variance explanation rate was more than 40%; Confirmatory factor analysis showed that each factor model fits well, and the model reaches the best after deleting item 7; the total score of HCBS was positively correlated with the total score and the four dimensions of the WCAT, HMS, homework completion and academic performance, indicating HCBS had a good validity; the internal consistency reliability of HCBS is 0.86; HCBS has measurement invariance in different gender and grade levels. The results of study 2 indicated that HCBS had a significant gender and grade effect, that is boys' score was higher than girls' and junior school students' score was higher than high school students. The predictive contribution of homework creative behaviors to academic performance and creative aptitude respectively was 3.5% and 7.5%. Conclusion: HCBS has good reliability and validity. HCBS as an effective tool for measuring students' homework behavior can predict students' academic performance and creative aptitude.

Keywords: Homework, Creative Aptitude, Academic Achievement, Scale Development, R studio

学龄前儿童体育运动参与和问题行为之间的关系： 执行功能缺陷的中介作用

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摘要 本研究以 844 名学龄前儿童（男孩 428 名，女孩 416 名， $M_{age} = 4.84$ 岁）的父母为调查对象，以 SPSS 和 Mplus7.0 为工具进行统计分析，探究学龄前儿童体育运动参与、执行功能缺陷和问题行为之间的关系，结果发现：首先，学龄前儿童体育运动参与水平负向预测其执行功能困难和问题行为，并且执行功能困难完全中介了运动参与和问题行为的关系；其次，对男孩和女孩进行分别考察，发现男孩中，执行功能困难的两个维度（执行抑制困难和工作记忆困难）是其问题行为中多动和注意力缺陷的多重中介。总之，本研究不仅发现早期体育可以通过降低执行功能缺陷来减少幼儿的问题行为，并进一步指出，在男孩和女孩中，执行功能困难在运动参与和问题行为之间具有不同作用。

关键词 运动参与，执行功能缺陷，问题行为，学龄前儿童

The Relationship Between Preschool Children's Sport Participation and Problem Behavior: Mediation of Executive Function Deficit

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Abstract: The participants of the current study included 844 preschoolers' (428 boys, 416 girls, $M_{age} = 4.84$ years old) parents. Using SPSS and Mplus7.0 as tools for statistical analysis to explores the relationship between preschool children's sport participation, executive function defects and problem behavior. The results show that: firstly,

preschool children's sport participation level negatively predicts their executive function difficulties and problem behavior, and executive function difficulties completely mediate the relationship between sport participation and problem behavior; Secondly, by investigating boys and girls respectively, it is found that the two dimensions of executive function difficulty (executive inhibition difficulty and working memory difficulty) are the multiple mediators of shyper activity and attention deficit in boys' problem behavior. In a word, this study not only found that early sport can reduce children's problem behavior by reducing executive function defects, but also pointed out that executive function difficulties have different roles between sport participation and problem behavior in boys and girls.

Keywords: sport participation, executive function deficit, problem behavior, preschool children

父母婚姻冲突对青少年主观幸福感的影响： 同胞关系和基本心理需要满足的作用

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摘 要 全面二孩政策后，二孩家庭和同胞关系逐步成为了国内研究关注的热点。父母的婚姻质量是影响二孩养育的重要因素，影响青少年主观幸福感的发展。父母间和谐的关系是青少年基本心理需要满足满足的重要来源，有助于提升青少年的主观幸福感。一些研究表明，父母婚姻冲突会对青少年的同胞关系产生负性影响，而家庭成员间和谐的关系有助于青少年基本心理需要满足的满足。因而同胞关系和基本心理需要满足可能在父母婚姻冲突对青少年主观幸福感的影响中存在链式中介作用。此外，也有研究将同胞关系作为调节变量，认为其会缓冲和加剧父母婚姻冲突对个体发展的作用。因而同胞关系可能调节父母婚姻冲突对青少年主观幸福感的影响以及父母婚姻冲突对青少年基本心理需要满足满足的影响。本研究以同胞关系为关键点，分析父母婚姻冲突对青少年主观幸福感的影响及作用机制。抽取山东省某所初中的初一和初二学生参与问卷调查，采用《父母婚姻冲突量表》、《幸福感指数量表》、《基本心理需要满足满足量表》以及《同胞关系量表清单》中的温暖和冲突两个分维度作为测量工具。共收集到有效问卷 907 份，平均年龄 12.67±0.66 岁。结果发现：（1）父母婚姻冲突可以显著负向预测青少年的主观幸福感。（2）基本心理需要满足在父母婚姻冲突和青少年主观幸福感之间起部分中介作用。（3）同胞关系（温暖和敌意）、基本心理需要满足在父母婚姻冲突和青少年主观幸福感之间起链式中介作用。（4）同胞敌意调节父母婚姻冲突对青少年主观幸福感的影响。

关键词 父母婚姻冲突，主观幸福感，同胞关系，基本心理需要满足

The Impact of Interparental Conflict on Adolescents' Subjective Well-Being: the Role of Sibling Relationship and Basic Psychological Satisfaction Needs

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Abstract: After the comprehensive two child policy, two-child families and sibling relationship has getting increasing focus of domestic research. The quality of parents' marriage is an important factor affecting the parenting and the development of adolescents' subjective well-being. The harmonious relationship between parents is an important source for adolescent to development their basic psychological satisfaction needs, which is beneficial to improve adolescnet's subjective well-being. Some studies have shown that parents' marital conflict will have a negative impact on adolescnet's sibling relationship, and the harmonious relationship between family members is helpful to satisfy adolescnet's basic psychological satisfaction needs. Therefore, sibling relationship and basic psychological satisfaction needs may play a chain mediating roles in the impact of interparental conflict on adolescents' subjective

well-being. In addition, some studies take the sibling relationship as a moderating variable, believing that it will buffer and aggravate the effect of interparental conflict on individual development. Therefore, sibling relationship may regulate the impact of interparental conflict on adolescents' subjective well-being and the impact of interparental conflict on adolescents' basic psychological satisfaction needs. This study takes the sibling relationship as the key point to analyze the impact and mechanism of interparental conflict on adolescents' subjective well-being. The first and second grade students of a junior middle school in Shandong Province were selected to participate in the questionnaire survey. The Parents' Marital Conflict Scale, Subjective Well-Being Scale, Basic Psychological Satisfaction Needs Satisfaction Scale and two sub dimensions of warmth and rivalry in Sibling Relationship Inventory were used as measurement tools. A total of 907 valid questionnaires were collected. The average age of participants is 12.67 ± 0.66 years. The results show that: (1) interparental conflict can significantly and negatively predict adolescents' subjective well-being. (2) Basic psychological satisfaction needs plays a partial mediating role between interparental conflict and adolescents' subjective well-being. (3) Sibling relationship (warmth and rivalry) and basic psychological satisfaction needs play a chain intermediary roles between interparental conflict and adolescents' subjective well-being. (4) Sibling rivalry moderates the impact of interparental conflict on adolescents' subjective well-being.

Keywords: interparental conflict, subjective well-being, sibling relationship, Basic Psychological Satisfaction Needs

3-6 岁亲子依恋及其共情的关系研究—父母教养方式的中介作用

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摘要 共情作为一种积极的社会情绪反应，在个体的社会化发展进程中发挥着重要的作用。学前阶段是个体社会能力发展的关键时期，家庭是幼儿最初和最重要的人际环境，因此有必要探讨家庭因素对幼儿共情能力的影响。本研究旨在考察亲子依恋、父母教养方式与幼儿共情间的关系。共选取 135 名学前期幼儿（ $M = 5.65$ 岁， $SD = 0.80$, $Range = 2.70-6.65$ ）及其父母作为被试，使用沃特斯—迪因儿童依恋行为分类卡片考察儿童的依恋行为；通过《儿童共情问卷》考察儿童的共情能力，包括情绪感染、关注他人和亲社会行为三个维度；通过《教养方式与维度问卷》考察父母教养方式，包括权威型、专制型和溺爱教养三个维度。结果表明：（1）依恋安全性与父母教养方式三维度（权威型、专制型、溺爱型）及共情中的情绪感染和亲社会行为显著相关，其中与情绪感染、专制型教养和溺爱型教养显著负相关。权威型教养与关注他人和亲社会行为显著正相关，专制型教养与情绪感染和关注他人显著正相关。（2）权威型教养方式在依恋安全性和亲社会行为之间起到部分中介作用。研究表明，家庭中父母的教养方式与依恋关系都能够对儿童的共情能力产生影响。父母应努力采用权威型教养方式，与幼儿建立安全型依恋关系，为幼儿的发展提供温暖的家庭支持。

关键词 共情，依恋，教养方式，家庭教育

现实疗法团体辅导改善初中生学业倦怠的效果

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摘要 以如何阻断压力、挫折对学业倦怠形成的影响及摆脱学业倦怠性行为反应为靶问题，以降低学业倦怠反应水平为靶目标，探究现实疗法的团体辅导活动对初中生学业倦怠的干预效果。研究采用干预组和对照组的前后测准实验设计，干预组 10 人，对照组 10 人。自编了以 WDEP 技术解决挫折、目标、意义等问题的八个主题性团体辅导活动方案，对干预组实施了每周两次、每次两小时一个主题单元共计八次的自编团体辅导活动方案，对照组没有实施任何干预活动，结果发现：干预组在学业倦怠总分上显著低于对照组，干预组前测学业倦怠总分显著高于后测。身心耗竭维度两组没有差异，但是对于干预组在身心耗竭维度上的前后测表明前测明显高于后测。在学业疏离和低成就感维度上干预组和对照组均有显著差异，均表现为干预组低于对照组，同样，在这两个维度上干预组前后测均表现出前测得分显著高于后测。这一结果在实验结束后对被试的访谈中也得到了印证：他们认为团体心理辅导活动有一定的趣味性，在团体中可以学习他人优点促进自我

成长, 喜欢参加这样的团体, 通过现实疗法知道如何制定可行的学习目标, 促进自我反思, 选择有效行为, 对自己更有信心, 学习上不再迷茫。实验结果说明以构建自主、选择和积极反馈为目的的现实疗法团体辅导对改善初中学生的学业倦怠有效, 并就该方案与其他方案相比的特点及可扩展的人群、学业倦怠成因类型等进行了讨论。

关键词 现实疗法, 团体辅导, 学业倦怠, WDEP 技术

Effects of Group Counseling Based on Reality Therapy on Academic Burnout

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Abstract: To explore the effect of group counseling of reality therapy on the academic burnout of junior middle school students, the aim of this study was to block the influence of stress and frustration on academic burnout and to get rid of the behavioral response of academic burnout, and to reduce the level of academic burnout response. The study adopted the pre-test and post test experimental design of the intervention group and the control group. The eight group counseling activities programs of different themes were compiled. Group counseling was implemented for the intervention group, while the control group did not implement any intervention activities. The results showed that the post-test scores of the intervention group were significantly lower than those of the control group on the total score of academic burnout, the dimension of cynicism, and the dimension of low sense of accomplishment. The experimental results show that the reality therapy group counseling is effective in improving the burnout of middle school students, and the characteristics of the program, the extensible population, the causes of burnout and so on are discussed.

Keywords: Reality therapy, Group counseling, Academic burnout, WDEP technology

母亲人格、爱的撤回和努力控制对学前儿童问题行为的影响机制

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摘要 爱的撤回是心理控制的一个重要维度, 它是指当儿童无法达到父母提出的某种要求或者出现某种不正当行为时, 父母不再给予儿童关爱和照顾的行为。受中国长幼尊卑的传统文化影响, 爱的撤回可能存在不同的含义。中国家庭更多地是“男主外女主内”, 母亲看护儿童的时间和形式要多于其他家庭成员, 因此中国母亲的自身特质与其教养行为得到了研究者的大量关注。同时为了更好地探究儿童发展, 研究者开始在环境与儿童特质的相互影响下, 考察父母教养方式对于不同努力控制水平儿童的差异化影响。本研究采用追踪设计对 111 名学前儿童及其母亲进行问卷调查, 旨在我国母亲爱的撤回使用较多、儿童问题行为不断激增且低龄化的社会背景下, 考察母亲人格、爱的撤回和儿童的气质与学前儿童问题行为的关系。研究结果表明: (1) 爱的撤回的消极作用在我国学前儿童群体中仍然存在。(2) 在控制了 T1 阶段学前儿童的内化、外化问题后, 只有 T1 阶段母亲的宜人性能够通过影响其爱的撤回, 间接地影响 T2 阶段学前儿童的内化、外化问题, 但不存在直接的影响效应。(3) 儿童的努力控制调节了 T1 阶段母亲爱的撤回对 T2 阶段学前儿童内化问题的影响。结论: 具有较高宜人性的母亲慎用爱的撤回能够有效降低学前儿童, 尤其是低努力控制儿童的内化问题的产生。

关键词 爱的撤回, 母亲人格, 问题行为, 努力控制, 学前儿童

Maternal Personality, love withdrawal, and effortful control on preschoolers' problem behaviors

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Abstract: Love withdrawal is an important dimension of Psychological Control, which refer to the behavior that

parents stop taking care for children when children can't meet the requirements of their parents or have some misbehavior. Influenced by Chinese traditional culture, the withdrawal of love may have different meanings. Chinese families are more likely to be "Male advocate outside, Female advocate inside", and the time and the form of mother's care for children are more than other family members. Therefore, the Chinese mother's personality and parenting behavior have attracted a lot of attention from researchers. At the same time, in order to better explore child development, researchers began to invest the differential effect of parenting on children with different levels of effort control under the perspective of individual characteristic environment interaction. The current study used a follow-up study experimental design to administer a questionnaire to 111 preschool children and their mothers. The purpose of the study was to examine the relationship between maternal personality, withdrawal of love, and child temperament and preschool children's problem behaviors in a social context where Chinese mothers often use the negative parenting style of withdrawal of love, which has led to an increase in children's problem behaviors, and where children's behaviors tend to be younger. The findings indicated that (1) the negative effects of love withdrawal are still present in the Chinese preschooler population; (2) after controlling for the internalization and externalization problems of preschool children in stage T1, only the mother's agreeableness in stage T1 can indirectly influence the internalization and externalization problems of preschool children in stage T2 by influencing their love withdrawal, but there is no direct influence effect; and (3) children's effortful control moderated the effect of T1-stage mothers' love withdrawal on T2-stage preschoolers' internalizing problems. Overall, mothers with higher agreeableness reduce the frequency of loving withdrawal can effectively reduce the development of internalization problems in preschool children, especially in low effort control children.

Keywords: Love Withdrawal, Maternal Personality, Preschool Children, Effort Control

3.3 硕士研究生论坛—应用心理学

(1) 硕士研究生论坛—应用心理学分场 1

虚拟现实环境中空间维度对多目标追踪的影响

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摘要 目的: 在目前的研究中多目标追踪范式大多都是以二维平面的形式所呈现, 主要探讨人们在平面条件下的视觉信息加工问题, 然而人们接触的真实场景是三维立体空间, 其深度知觉信息会对人们注意和追踪多个运动物体产生影响。近年来已有学者在以往的多目标追踪(Multiple Object Tracking, MOT)范式中增加立体与深度线索形成 3D MOT 范式进行研究。随着虚拟现实(Virtual Reality, VR)工具的普及, 研究者开始将 VR 技术与 3D MOT 范式相结合, 进一步引入了立体感深度与沉浸感。然而新兴的 3D MOT 与传统的 2D MOT 的关系如何仍然尚不清楚, 采用虚拟现实技术呈现三维空间信息是否有其独特的优势, 也尚不明确。因此, 有必要将传统显示屏 (Traditional Monitor Display, 简称 TMD)和 VR 头戴式显示器 (Head Mounted Display, 简称 HMD)与 2D 和 3D 的空间维度结合, 比较虚拟现实情境(VR)与传统屏幕显示下经典 MOT 范式与 3D MOT 范式追踪表现的差异。方法: 本研究以 30 名大学生为被试, 探讨空间维度与呈现方式对多目标追踪表现的影响。采用 2 (空间维度: 2D, 3D)×2 (呈现方式: 传统显示屏, VR 头戴式显示器)被试内设计, 以自适应调节速度的 MOT 范式探讨 2D 与 3D 场景中动态视觉追踪任务中的追踪表现, 使用小球运动的速度指标作为因变量, 包括速度的平均阈值, 最后四次阈值和极值, 比较虚拟现实与传统屏幕显示下 2D 与 3D 多目标追踪表现的差异。结果: 进行 2 (空间维度: 2D, 3D)×2 (呈现方式: TMD, HMD)的重复测量方差分析发现: 在平均阈值(F(1,29)

=9.910, $p = .004$, $\eta^2 = .255$)、速度极值($F(1,29)=13.454$, $p = .001$, $\eta^2 = .317$)以及最后四次阈值($F(1,29)=13.388$, $p = .001$, $\eta^2 = .302$)上均表现出空间维度的主效应显著,即三维多目标追踪的表现优于二维(M2D 平均阈值=1.160, M3D 平均阈值=1.318; M2D 最后四次=1.176, M3D 最后四次=1.370; M2D 极值=1.597, M3D 极值=1.821),而呈现方式以及交互作用均不显著。结论:三维空间信息对多目标追踪表现有促进作用,且不受 VR 头戴式显示器和传统显示器呈现方式的影响。

关键词 多目标追踪;虚拟现实;空间维度

The Influence of Spatial Dimensions on Multiple Object Tracking in Virtual Reality Environment

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Abstract: objective: In the current study multiple object tracking model mostly is presented in the form of a two-dimensional plane, this paper mainly discusses people under the condition of plane visual information processing problems, yet people contact with the real scene is a three-dimensional space, the depth perception information will affect people to pay attention to and tracking multiple motion objects. In recent years, scholars have conducted researches on the FORMATION of 3D MOT by adding 3D and depth cues in the previous Multiple Object Tracking (MOT) paradigm. With the popularity of Virtual Reality (VR) tools, researchers began to combine VR technology with THE 3D MOT paradigm, further introducing the depth of three-dimensional sense and the sense of immersion. However, it is still unclear how the emerging 3D MOT is related to the traditional 2D MOT, and whether the application of virtual reality technology to present 3D spatial information has its unique advantages. Therefore, it is necessary to combine Traditional Monitor Display (TMD) and Head Mounted Display (HMD) with 2D and 3D spatial dimensions to compare the difference in tracking performance between virtual reality situation (VR) and Traditional screen. Methods: In this study, 30 college students were selected as subjects to explore the influence of spatial dimension and presentation mode on the performance of multiple object tracking. Using 2 (spatial dimensions: 2D, 3D) x 2 (presentation: traditional display, VR head-mounted display) within subjects design, with adaptive adjusting speed of MOT paradigm of 2D and 3D dynamic visual tracking performance of tracking tasks in a scene, use the speed of the ball movement indicators as dependent variable, including the average and last four times threshold comparison, extreme value, to compare the difference of 2D and 3D MOT performance between virtual reality and traditional screen display. Results: 2 (spatial dimensions: 2D, 3D) x 2 (presentation: TMD, HMD) of repetitive measure analysis of variance is found that the average threshold ($F(1,29)=9.910$, $p = .004$, $\eta^2 = .255$), speed of extremum ($F(1,29)=13.454$, $p = .001$, $\eta^2 = .317$) on all showed significant main effect dimensions, namely the three-dimensional multi-target tracking performance is superior to two-dimensional (M2D average threshold = 1.160, M3D average threshold = 1.318; M2D last four times threshold = 1.176, M3D last four times threshold = 1.370; M2D extreme value = 1.597, M3D extreme value = 1.821), but the presentation mode and interaction were not significant. Conclusion: 3D spatial information can promote the performance of multi-target tracking, and it is not affected by VR head-mounted display and traditional display.

Keywords: Multiple Object Tracking; Virtual Reality; Spatial Dimension

突发社会事件与大众情绪的共变规律分析

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摘要 近几年, 频发的突发社会事件通过互联网在短时间内引起民众的大规模关注, 一些负性事件所引发的消极情绪也通过网络迅速扩散, 及时合理地引导大众情绪有助于维护舆情的稳定以及避免可能产生的线上线下的群体性事件。基于此, 本研究为探究突发社会事件和不同类型的大众情绪的共变规律, 选取社会影响较大的四种不同类型事件, 以“新冠疫情”事件、“长春疫苗”事件、“天津滨海爆炸”事件和“九寨沟地震”事件为例, 借助百度指数数据, 在构建代表性事件指标和不同情绪指标的基础上, 对事件和情绪的发展趋势以及事件和情绪之间、不同情绪之间的时间序列关系进行了分析。结果发现: (1) 大众对突发社会事件的关注度都经历了从爆发、衰落到消退的过程, 基本符合生命周期模型; 害怕在部分时间段内的发生轨迹与生命周期模型基本吻合; (2) 大部分的突发社会事件发生之初, 害怕和愤怒是主要的情绪反应, 而对事件的关注消退后, 悲伤和抑郁情绪升高, 抑郁在事件发展的不同阶段出现了不同程度的峰值; (3) 突发事件的关注度能在一定程度上预测事件发生后的大众情绪变化, 例如, 能够预测短期后的害怕, 以及中、长期后的悲伤和抑郁情绪; (4) 不同情绪之间也能够相互预测, 例如, 害怕和愤怒能在不同程度上预测后续的抑郁情绪, 抑郁情绪也能在不同程度上预测害怕和愤怒。该结果在一定程度上从群体层面上验证了个体的应激反应过程, 并对科学的干预和管理突发社会事件引发的大众负面情绪有一定的启发。

关键词 突发社会事件, 新冠肺炎, 大众情绪, 时间序列

Analysis of the covariation between emergent social events and public emotions

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Abstract: In recent years, emergent social events frequently attracted large-scale public attention in a very short time through the Internet, negative emotions caused by some negative events also rapidly spread through the Internet. Timely and reasonable guidance of public emotions can help maintain public opinion stability and avoid possible online and offline mass incidents. Therefore, this study aimed to explore the covariation between emergent social events and different types of public emotion. This study selected four different type events which have a significant influence on society, such as “COVID-19” event, “Changchun Vaccine Scandal” event, “Explosion accident in Tianjin Binhai New Area” event and “Earthquake in Jiuzhaigou” event. Extracting representative event index and sentiment index through Baidu index, we analyzed the correlation between emergent social events and public emotions and the correlation between different types of public emotions through time series test. The results found that public's attention to emergent social events involved in this study has gone through a process from explosion, the decline to fading. Moreover, the trajectory of fear in part of the period is consistent with the life cycle model. We also find that fear and anger are the main emotional reactions at the beginning of most emergent social events, and after the attention to the event subsides, sadness and depression increase, and depression has peaked to varying degrees at different stages of the event. Granger analyses show that most of the event indexes can predict public emotion which caused by emergent social events, such as, event indexes can predict fear in short-term, while they can predict sadness and depression in the middle and long term. Finally, different emotions can also predict each other, such as, fear and anger can more or less predict subsequent sadness and depression, and depression also can predict fear and anger. This study could verify the individual response to stress at the group level, it also has some inspirations for how to reasonably guide and manage public negative emotions caused by emergent social events.

Keywords: emergent social event, COVID-19, public emotion, time series

生命意义感量表在中蒙大学生群体间的测量等值性

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摘要 研究拟检验生命意义感量表(PIL)在中国和蒙古两国大学生群体间跨文化使用的测量等值性,使用PIL对1317名大学生(中675,蒙642)进行施测,运用验证性因素分析多组比较法进行数据分析。结果发现PIL在中蒙两国大学生群体跨文化样本间的形态等值(CFI=0.93, TLI=0.91, RMSEA=0.049)、弱等值(CFI=0.924, TLI=0.908, RMSEA=0.5)及部分强等值(CFI=0.916, TLI=0.901, RMSEA=0.052)模型拟合参数均达到相应标准,部分严格等值(CFI=0.906, TLI=0.893, RMSEA=0.054)拟合指标尚可接受。研究中PIL量表的克伦巴赫 α 系数为0.876,生活态度、生活目标、生命价值及生活自主四个维度的克伦巴赫 α 系数依次为0.649、0.669、0.724、0.675。在PIL总分上蒙古国大学生得分显著高于中国大学生($t=-7.652, p<0.01$),在生活自主维度上蒙古国大学生得分显著高于中国大学生($t=-8.573, p<0.01$),在生活态度维度上蒙古国大学生得分显著高于中国大学生($t=-6.606, p<0.01$)。PIL的四因子结构模型在中蒙两国大学生群体间具有完全形态等值性、完全弱等值性、部分强等值性以及部分严格等值性,该量表进行中、蒙大学生群体间研究时需谨慎使用。

关键词 生命意义感量表, 测量不变性, 大学生

Measurement Invariance of the Life Meaning Feeling Scale Among Chinese and Mongolian College Students

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Abstract: This study intends to test the cross-cultural equivalence of college students in China and Mongolia by means of the Purpose in life Scale (PIL). 1317 college students (Chinese 675, Mongolian 642) are measured by means of PIL, and multiple groups of comparative method of confirmative factor analysis is used for data analysis. The results show that PIL's fitting parameters of morphological equivalence (CFI=0.93, TLI=0.91, RMSEA=0.049), weak equivalence (CFI=0.924, TLI=0.908, RMSEA=0.5) and partly strong equivalence (CFI=0.916, TLI=0.901, RMSEA=0.052) between cross-cultural samples of college students from China and Mongolia all meet the corresponding standards, while partly strict equivalence (CFI=0.906, TLI=0.893, RMSEA=0.054) are acceptable. In the PIL scale, the Cronbach's alpha is 0.876, and the Cronbach's alpha of life attitude, life goal, life value and life autonomy are 0.649, 0.669, 0.724 and 0.675, respectively. On the PIL total score, Mongolian university students' score is significantly higher than that of Chinese university students ($t=-7.652, p<0.01$), higher than that of Chinese university students on the dimension of life autonomy ($t=-8.573, p<0.01$), and higher than that of Chinese university students on the dimension of life attitude ($t=-6.606, p<0.01$). The Four-factor structural model of PIL has complete morphological equivalence, completely weak equivalence, partly strong equivalence and partly strict equivalence between Chinese and Mongolian university students. This scale should be used carefully in the research between Chinese and Mongolian university students.

Keywords: Purpose in life scale, Measurement invariance, College students

大学新生成就目标定向、学习投入与学习适应的关系： 变量中心和个体中心分析

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摘要 学习适应是大学新生进入校园后面临的主要挑战之一, 学生学习适应不良易导致学业失败, 还可能

诱发一系列心理或行为问题。本研究以 578 名大学新生为研究对象,采用变量中心和个体中心相结合的技术,分析学习投入在成就目标定向与学习适应关系间的中介作用。结果表明:(1)学习投入分别在掌握趋近目标、成绩回避目标两个变量与学习适应的关系中起中介作用;(2)成就目标定向可以分为四种潜在类别:无目标型成就目标、趋近型成就目标、平均型成就目标和冲突型成就目标;(3)相对于平均型成就目标,学习投入在趋近型成就目标与学习适应之间起中介作用。研究体现了成就目标定向的多目标性,结果为大学新生成就目标定向、学习投入和学习适应之间的关系探讨提供了新视角。

关键词 大学新生,成就目标定向,学习投入,学习适应

The relationship between Achievement Goal Orientation, Work engagement and Learning Adjustment of freshmen: Variable- oriented and Person-oriented Analyses

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Abstract: After entering campus, learning adjustment becomes one of the main challenges for freshmen. Learning maladjustment could not only easily lead to students' academic failure, but also generate a series of psychological or behavioral problems. 578 freshmen (The mean age is 18.29 ± 1.04 years, 58.5% female) were recruited as participants and the combination of Variable-center and Person-center techniques was used. This study detects the mediating effect of Work engagement between achievement goal orientation and learning adjustment. The results show that: (1) Work engagement plays a mediating role between learning adjustment and mastery-approach goal, learning adjustment and performance-avoidance goal; (2) Achievement goal orientation could be divided into four potential categories: non-objective achievement goal, approach achievement goal, average achievement goal, and conflict achievement goal; (3) Compared with the average achievement goal, Work engagement plays a mediating role between the approach achievement goal and learning adjustment. The results present the multi-objective of achievement goal orientation, which could provide a new perspective for studies of the relationship between achievement goal orientation, Work engagement and learning adjustment.

Keywords: Freshmen, Achievement Goal Orientation, Work engagement, Learning Adjustment

民办高校师生关系量表编制及应用

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摘要 目的: 编制民办高校师生关系量表, 检验其信度和效度, 应用于民办高校师生关系调查。方法: 通过文献分析、半结构式访谈编制初测问卷。采用方便取样法选取民办高校学生进行预测试和正式量表测试, 并进行信效度检验。结果: 民办高校师生关系量表共包含 6 个维度共 29 个条目: 信任 (9 个条目)、互动 (4 个条目)、亲密 (5 个条目)、关心 (4 个条目)、认同 (4 个条目)、舒适度 (3 个条目)。量表的累积方差贡献率为 66.503%, 量表的内部一致性 Cronbach's α 系数为 0.942, 验证性因子分析显示量表的模型拟合度良好。结论: 量表具有良好的信效度, 作为民办高校师生关系评估工具后发现, 民办高校师生关系高于中等水平, 性别、年级差异均显著。

关键词 民办高校, 师生关系, 量表编制, 信效度检验

Establishment and Application of Private College Student-teacher Relationship Scale

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Abstract: Objective: This article developed a scale of student-teacher relationship in private colleges and tested its reliability and validity, PCSTR scale will be used for relationship between students and teachers. Methods: The preliminary questionnaire was prepared through literature analysis and semi-structured interview. The cluster sampling method was used to select the students of private colleges for the prediction test and the formal scale test, then we conduct the reliability and validity test. Results: The private college student-teacher relationship scale (PCSTR) contains 29 items in 6 dimensions: trust (9 items), interaction (4 items), intimacy (5 items), care (4 items), approval (4 items) and comfort (3 items). The total interpretation variance ratio was 66.503%, the Cronbach's coefficient was 0.942, and the confirmatory factor analysis showed that the model fitting degree of the scale was good. Conclusion: This scale has good reliability and validity. As a tool for evaluating the student-teacher relationship in private colleges, it is easy to find that found that the student-teacher relationship in private colleges is better than the average level, and the gender and grade differences are significant.

Keywords: Private college, Student-teacher relationship, Scale development, Testing of validity and reliability

亲社会态度可以减少危险驾驶行为吗？

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摘要 如何减少交通事故，增加交通安全一直是驾驶领域研究的核心问题。在影响驾驶行为的因素中，态度和情境因素是两个重要方面。高亲社会态度的群体通常具有有利于他人或者社会的行为特征，但这类驾驶员在驾驶中有何行为表现并未进行探讨。此外，车流密度是日常生活中对驾驶行为产生重要影响的常见情境因素，高车流密度会导致更加频繁的变道、超车行为，从而导致更多的交通事故，但不同特征驾驶员的驾驶行为也会有所不同。因此本研究探讨高/低亲社会态度驾驶员在高/低车流密度下的驾驶行为差异。本研究采用2(高/低亲社会态度)*2(高/低车流密度)混合设计研究变道和超车行为的亲社会态度与交通密度的交互作用。采用内隐联想测验范式测量亲社会态度，将驾驶员分为两组。要求40名被试在高、低车流密度两种情况下完成模拟驾驶任务，通过驾驶模拟器记录驾驶行为。结果表明，高车流密度导致更多的变道和超车行为。在高、低车流密度下，高亲社会态度的驾驶员均表现出了更好的驾驶能力，但在高车流密度下，低亲社会态度的驾驶员与其他辅助车辆横向距离较小，这可能增加了事故风险。本研究将亲社会态度应用于驾驶行为研究领域，一方面可以为驾驶行为差异的解释提供数据支持，另一方面为职业驾驶员的选拔、培训和干预提供了依据。

关键词 亲社会态度，车流密度，内隐联想测验，驾驶模拟器

新冠疫情期间中国重灾区大众 PTSS 发病率及影响因素： 性别差异至关重要

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摘要 新型冠状病毒肺炎（COVID-19）于2019年12月份在武汉爆发流行，其以传染性、突发性、公共性、不确定性等特点造成了广大群众的恐慌情绪。目前，COVID-19已被确定为全球关注的大流行和卫生紧急事件，并在世界范围内暴发流行。本研究的目的是，调查COVID-19爆发期间，中国重灾区大众的创伤后应激障碍症状（posttraumatic stress symptoms, PTSS）的患病率和影响因素，特别是探讨PTSS中存在的性别

差异。COVID-19 在中国爆发一个月后,我们使用基于 DSM-5 的创伤后应激障碍量表(the PTSD Checklist for DSM-5, PCL-5)以及匹兹堡睡眠质量指数(the Pittsburgh Sleep Quality Index, PSQI)中的 4 个项目,对武汉及周边城市 285 名居民的 PTSS 和睡眠质量进行了调查。主要采用层次回归分析和非参数检验对数据进行分析。结果表明,COVID-19 爆发一个月后,中国重灾区大众 PTSS 患病率为 7%,且性别差异明显。女性在重新体验、认知或情绪的负性改变和情绪高唤醒三个 PTSS 分量表得分显著高于男性。此外,主观睡眠质量较好或早醒频率较低的受试者 PTSS 发病率显著较低。本研究重点探讨和强调了由新冠疫情引起的 PTSS 的性别差异,证明了女性更容易在疫情期间患 PTSS,为后继爆发新冠疫情的国家和地区提供了信息和依据,具有重要的研究意义。基于本研究结论,建议相关卫生部门设计专业有效的心理健康服务,以帮助灾区群众(特别是生活在重灾区的群众、女性和睡眠质量差的人群)提升心理健康水平。

关键词 PTSD, 新冠疫情, 性别差异, 睡眠质量, 武汉市

Prevalence and predictors of PTSS during COVID-19 outbreak in China hardest-hit areas: Gender differences matter

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Abstract: The outbreak of COVID-19 in China in December 2019 has been identified as a pandemic and a health emergency of global concern. Our objective was to investigate the prevalence and predictors of posttraumatic stress symptoms (PTSS) in China hardest-hit areas during COVID-19 outbreak, especially exploring the gender difference existing in PTSS. One month after the December 2019 COVID-19 outbreak in Wuhan China, we surveyed PTSS and sleep qualities among 285 residents in Wuhan and surrounding cities using the PTSD Checklist for DSM-5 (PCL-5) and 4 items from the Pittsburgh Sleep Quality Index (PSQI). Hierarchical regression analysis and non-parametric test were used to analyze the data. Results indicated that the prevalence of PTSS in China hardest-hit areas a month after the COVID-19 outbreak was 7%. Women reported significant higher PTSS in the domains of re-experiencing, negative alterations in cognition or mood, and hyper-arousal. Participants with better sleep quality or less frequency of early awakenings reported lower PTSS. This study emphasized the gender difference of PTSS caused by COVID-19, proving that women are more likely to develop PTSS during COVID-19, providing information and guidance for other countries and regions during COVID-19 outbreak. Professional and effective mental health services should be designed in order to aid the psychological wellbeing of the population in affected areas, especially those living in hardest-hit areas, females and people with poor sleep quality.

Keywords: PTSD, COVID-19, Gender Differences, Sleep quality, Wuhan area

仿人机器人的心智能力对恐怖谷效应的影响

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摘要 机器人的使用已不再局限于工业制造的领域,而是逐渐走进了人们的日常生活。为提升人与机器人交互的质量,工程师设计出仿人机器人并希望通过提高其外表类人度的方法,以提升人们对机器人的喜好度。但研究发现,外表类人度在一定区间内提高而喜好度则下降,其称为恐怖谷效应。对以服务人类为目标的仿人机器人而言,除了外观以外,仿人机器人还被设计为具有一定的心智能力。就恐怖谷效应而言,虽然研究者考虑了心智能力的作用,但将其视作与外表类人度共变的中介变量,以此来揭示外表类人度影响喜好度的心理机制。然而,心智能力可独立于机器人外表而存在,其可通过机器人的行为来体现,目前鲜有研究探讨心智能力如何影响外表类人度对喜好度的作用,即心智能力如何影响恐怖谷效应。心智能力不仅有存在与否的差异,根据其在社交中的作用,心智能力可分为自身指向的心智能力和他人指向的心智能力,且基于目前智能机器人的发展趋势,其心智能力也将具有可学习性。据此,本研究依次从心智能力的存在性、指向性与可学习性三个特性出发,旨在考察仿人机器人的心智能力对恐怖谷效应的影响。针对上述问题,通过三个实

验对其进行了考察。实验1通过呈现不同的仿人机器人图片来操纵其外表类人度,并呈现描述性文字材料来操纵其心智能力的存在性(即存在与否),旨在探究心智能力存在性如何作用于外表类人度对仿人机器人喜好度的影响,即心智能力存在性对恐怖谷效应的影响。鉴于心智能力指向性的前提是存在心智能力,因此实验2采用与实验1相同的方法,在实验1存在心智能力的条件上,进一步对仿人机器人心智能力的指向性进行操纵,探究恐怖谷效应是否会因仿人机器人心智能力指向性的不同而变化。针对指向性不同的心智能力,其均存在学习发展的过程,因此实验3与实验1和实验2采用的方法相同,在实验2的基础上,加入对仿人机器人心智能力可学习性的操纵,进一步探究在不同心智能力可学习性的条件下,心智能力指向性对恐怖谷效应的影响。获得以下主要结果:(1)无论仿人机器人的心智能力存在与否,人们对高外表类人度仿人机器人的喜好度总是低于低外表类人度的仿人机器人,即均存在恐怖谷效应,但有心智能力的仿人机器人诱发的恐怖谷效应强于无心智能力的仿人机器人;(2)无论仿人机器人的心智能力指向性如何,人们对高外表类人度仿人机器人的喜好度总是低于低外表类人度的仿人机器人,即均存在恐怖谷效应,但心智能力指向性不同的仿人机器人其诱发的恐怖谷效应也不同,具体表现为相比他人指向和无指向性信息,具有自身指向心智能力的仿人机器人诱发的恐怖谷效应增强;(3)虽然具有自身指向心智能力的仿人机器人诱发的恐怖谷效应强于他人指向心智能力的条件,但该结果不受心智能力可学习性的调节。综上所述,仿人机器人所诱发的恐怖效应具有普遍性和稳定性,但若仿人机器人存在心智能力则可增强其诱发的恐怖谷效应,且该效应的增强主要是由具有自身指向的心智能力所解释,其不受仿人机器人心智能力可学习性的影响。因而,在仿人机器人的设计上,应注重考虑开发他人指向的心智能力,以避免恐怖谷效应的增强。

关键词 恐怖谷效应, 心智能力, 人机交互, 仿人机器人

汉语歧义消解加工的心理机制研究进展

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摘要 近年来,对汉语歧义消解加工的心理机制研究主要集中在词汇歧义消解和句法歧义消解两个方面。对于词汇水平的歧义研究,研究结果表明其歧义消解过程的激活抑制机制均离不开语境和意义相对频率的制约,语境会促进适当意义的激活,抑制不适当意义的激活,与意义相对频率共同作用于歧义消解加工时间进程,支持语言理解的相互作用论。尽管认知方式对个体抑制同形歧义词中与语境不一致意义的时间进程存在影响,但总体上同形歧义词歧义消解激活抑制模式相似。同音歧义词歧义消解过程则为对不适当意义的抑制作用在先,对适当意义的激活作用在后。两类歧义词的歧义消解过程因视觉/听觉呈现方式的不同而有所区别。而对于句法水平的歧义研究,研究结果则表明合适的语境除了提供语义信息,还可能保证歧义结构加工的句法自足,从而影响个体歧义消解加工的阅读策略。其中,词类歧义词歧义消解过程因采用的实验范式不同而表现不同。在接近自然阅读状态的眼动记录技术下,个体在歧义词处即时进行句法角色分配,符合基于制约的模型假设。而特殊歧义结构的歧义消解过程则受歧义结构本身相对合理性的影响,合理性较高的歧义结构甚至可以达到语义句法自足而促进句子理解。未来研究还应该加强对较长阅读文本的考察、注重研究被试的群体特点以及提高研究的生态学效度等等。

关键词 汉语, 歧义消解, 心理机制

Research progress in psychological mechanism of Chinese ambiguity resolution processing

Abstract: In recent years, the research on the psychological mechanism of Chinese ambiguity resolution mainly focuses on lexical ambiguity resolution and syntactic ambiguity resolution. For ambiguity study of lexical level, results show that the activation and inhibition mechanisms of ambiguity resolution process are inseparable from the constraints of context and meaning relative frequency. Context will promote the activation of proper meaning, and inhibit the activation of inappropriate meaning. Also, Context and meaning relative frequency act together on the processing of ambiguity resolution, which supports the interaction theory of language understanding. Although

cognitive style has an influence on the time process during which individuals suppress meaning inconsistent with context in homomorphic ambiguous words, the activation and suppression patterns of homomorphic ambiguous words are similar on the whole. In the process of homophone ambiguity resolution, the inhibition of inappropriate meaning comes first and the activation of appropriate meaning comes second. The ambiguity resolution process of two kinds of ambiguous words is different due to the different visual/auditory presentation modes. For ambiguity study of syntactic level, results show that appropriate context can not only provide semantic information, but also ensure syntactic self-sufficiency of ambiguity processing, consequently affecting the reading strategies of individual ambiguity resolution processing. Among them, syntactic category ambiguity resolution process is different because of adopting different experimental paradigms. Under the eye movement recording technique which is close to the natural reading state, individual immediately assigns syntactic roles in ambiguous words, which conforms to the constraint-based model. The ambiguity resolution process of the special ambiguity structure is affected by the relative rationality of the ambiguity structure itself, and the higher rationality of the ambiguity structure can even achieve semantic and syntactic self-sufficiency and promote sentence understanding. In the future, we should strengthen the investigation of longer reading texts, pay attention to the group characteristics of the subjects, and improve the ecological validity of the study.

Keywords: Chinese language, ambiguity resolution, psychological mechanism

大学生人际关系对网络成瘾的影响：孤独感的中介作用

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摘要 随着科学技术的发展,网络已经成为现代人主要的沟通平台和娱乐工具,而与之而来的网络成瘾现象也日益严重,人们对于网络成瘾的心理因素也开始进行研究。通过对已有研究的分析,我们发现大学生网络成瘾和人际关系、孤独感均有联系,而孤独感更是与人际关系息息相关。现实生活中,人际关系有困扰的学生可能会有孤独感的体验,而为了缓解孤独感,他们可能会倾向于上网来远离现实生活,逃避孤独感,从而产生网络成瘾的倾向。前人对于大学生网络成瘾人际关系孤独感这三者之间的关系研究不多,我们可以提出人际关系差所产生的孤独感是否会引发大学生的网络成瘾倾向这样的探讨。本文的目的:为探讨孤独感在人际关系和网络成瘾关系中的中介效应。方法:选取208名大学生(男96人,女112人),运用孤独量表(UCLA)、人际关系综合诊断量表(ICDS)和网络成瘾量表(CAIS)进行调查,并对得到的数据进行描述,相关,回归分析。结果发现:①大学生网络成瘾、人际关系与孤独感之间两两相关显著;②大学生人际关系均能正向预测孤独感($\beta=0.57, P<0.001$)和网络成瘾($\beta=0.47, P<0.001$),而孤独感可以正向预测网络成瘾($\beta=0.39, P<0.001$)。③孤独感在人际关系与网络成瘾之间的部分中介效应显著,中介效应占总效应的24.1%。研究结果提示,通过改善大学生人际关系,有助于降低大学生的孤独感,从而降低其网络成瘾程度。这提醒我们,我们应该关注当代大学生在学校中的社交情况,关心大学生在学校中的生活,学校应多开展集体活动,了解大学生的心理活动,促进学生之间的交流从而促进学生的人际关系适应。学校也应培养学生积极的社交能力,来避免因社交能力不足而产生人际困扰,孤独感增强等负面情绪,预防大学生的网络沉迷行为。

关键词 大学生, 人际关系, 孤独感, 中介效应, 网络成瘾

领悟社会支持对产后焦虑的影响：一个有调节的中介模型

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摘要 产后焦虑作为产后痛苦的一个重要组成部分,具体指的是发生在产后的一种以焦虑为主的心理疾患,它不仅危害产妇自身的身心健康,还会给婴儿、家庭乃至社会带来不良影响。尽管众多研究表明,领悟社会支持在产后焦虑的发生发展中扮演着重要的角色,然而,领悟社会支持对产后焦虑影响的潜在机制还有待深入探讨。本研究通过构建一个有调节的中介模型,旨在考察自尊在领悟社会支持与产后焦虑之间的中介作用

以及乐观在该过程中的调节作用。研究采用方便抽样方法,通过领悟社会支持量表、焦虑自评量表、自尊量表和生活定向测验问卷对从北京、山东、广东、江西四家妇幼保健院选取的 800 名产妇 ($M_{age} = 30.08$, $SD = 4.85$) 进行调查。结果发现: (1) 在控制了产妇的户口、年龄、胎次、社会经济地位后,领悟社会支持能够显著负向预测产后焦虑 ($\beta = -0.50$, $P < 0.001$); (2) 领悟社会支持、自尊、乐观和产后焦虑均呈显著负相关 ($P < 0.01$), 领悟社会支持、自尊和乐观三者两两之间存在显著正相关 ($P < 0.01$); (3) 自尊在领悟社会支持与产后焦虑的关系间起部分中介作用,中介效应值为 -0.23 [$95\%CI = (-0.28 \sim -0.19)$]; (4) 乐观调节了“领悟社会支持 $\rightarrow$ 自尊 $\rightarrow$ 产后焦虑”的后半段路径,即当产妇乐观水平较低时,自尊对产后焦虑的负向预测作用增强 [$\beta = -0.35$, $95\%CI = (-0.45 \sim -0.46)$, $P < 0.001$]; 当产妇乐观水平较高时,自尊对产后焦虑的负向预测作用减弱 [$\beta = -0.20$, $95\%CI = (-0.29 \sim -0.10)$, $P < 0.001$]。总之,研究结果证实了领悟社会支持不仅会直接影响产后焦虑,还会通过自尊的中介作用和乐观的调节作用对产后焦虑产生间接影响。基于上述发现,本研究认为产后焦虑的预防与干预不仅要关注其远端的影响因素(领悟社会支持),还要重视近端因素(自尊、乐观),以避免或减少产后抑郁情绪的发生。

关键词 领悟社会支持, 自尊, 乐观, 产后焦虑

The Effects of Perceived Social Support on Postpartum Anxiety: A Moderated Mediation Model

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Abstract : Postpartum anxiety, as an important part of postpartum pain, specifically refers to an anxiety-based psychological disorder that occurs after childbirth. Postpartum anxiety not only jeopardizes the physical and mental health of the mother, but also brings adverse effects to the baby, the family and even society. Numerous studies have shown that perceived social support played an important role in the development of postpartum anxiety. However, little was known about the potential influence mechanism of perceived social support on postpartum anxiety. By constructing a moderated mediation model, this study aimed to examine the mediating role of self-esteem in the relationship between perceived social support and postpartum anxiety, as well as the moderating role of optimism in this process. A convenience sampling method was used to survey 800 women ($M_{age} = 30.08$ years, $SD = 4.85$) within one year of giving birth selected from four maternal and child health care centers in Beijing, Shandong, Guangdong, and Jiangxi. The participants completed anonymous questionnaires including Perceived Social Support Scale, Self-Rating Anxiety Scale, Rosenberg Self-Esteem Scale and Life Orientation Test. The results indicated: (1) After controlling for maternal birthplace, age, parity, and socioeconomic status, perceived social support could significantly negative predicted postpartum anxiety ($\beta = -0.50$, $P < 0.001$). (2) Perceived social support, self-esteem and optimism were significantly negative correlated with postpartum anxiety ($P < 0.01$). There were significantly positive correlation among perceived social support, self-esteem and optimism ($P < 0.01$). (3) Self-esteem played a partially mediating role in the relationship between perceived social support and postpartum anxiety with standardized effect value of -0.23 [$95\%CI = (-0.28 \sim -0.19)$]. (4) Optimism moderated the second half of the path of “perceived social support $\rightarrow$ self-esteem $\rightarrow$ postpartum anxiety”. The effect of self-esteem on postpartum anxiety was more significant among mothers with low levels of optimism than those with high levels of optimism [$\beta = -0.35$, $95\%CI = (-0.45 \sim -0.46)$, $P < 0.001$; $\beta = -0.20$, $95\%CI = (-0.29 \sim -0.10)$, $P < 0.001$]. In conclusion, the study confirmed that perceived social support not only directly affected postpartum anxiety, but also had indirectly impact on postpartum anxiety through the mediating role of self-esteem and the moderating role of optimism. Based on these findings, this study concluded that prevention and intervention of postpartum anxiety should focus on its distal and proximal factors to avoid the occurrence of postpartum depression.

Keywords: Perceived social support, Self-esteem, Optimism, Postpartum anxiety

运动相关脑震荡影响青少年的总体症状：一项系统综述和元分析

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摘要 运动脑震荡相关文献和治疗指南对于运动相关脑震荡对青少年认知功能的影响目前尚无定论, 有的研究发现运动相关脑震荡影响青少年的认知功能, 但是有的研究并没有发现这一结果。通常采用脑震荡后立即评估和认知测试 (Immediate Post-Concussion Assessment and Cognitive Testing, ImPACT), 来测试患有运动相关脑震荡的人的认知表现。本研究结构化搜了 Medline/PubMed 和 Web of Science 数据库从 1991 年 8 月至 2021 年 3 月发表的英文文章。本研究遵循系统评价和荟萃分析的首选报告项 (Preferred Reporting Items for Systematic Review and Meta-Analyses, PRISMA) 指南。使用 Downs 和 Black (1998) 提出的标准, 确定最终纳入元分析的定量研究的方法学质量。结果: 在数据库搜索中, 确定了 1762 篇相关研究。其中, 463 篇因重复被删除, 1248 篇文章在筛选标题和摘要后被排除。留下了 50 项研究, 进一步进行全文筛选。根据我们的纳入和排除标准删除另外 21 项研究后, 有 29 项研究进入系统性文献综述。最后, 6 项研究符合元分析纳入标准且均质量良好。从总症状来看, 脑震荡组的分数明显高于对照组。然而, 语言记忆、视觉记忆、反应时间和视觉运动速度结果在统计上没有显著差异。结论: 运动相关脑震荡不影响言语记忆、视觉记忆、反应时间和视觉运动速度。脑震荡组的总症状评分较高, 但没有导致认知表现。本研究启发我们需要采取更多措施来预防青少年发生与运动相关的脑震荡, 未来的研究人员需要探索能够更具针对性且更敏感测量运动相关脑震荡对青少年认知影响的认知测验工具。

关键词 运动相关脑震荡, 青少年, 认知, 视觉记忆, ImPACT

(2) 硕士研究生论坛—应用心理学分场 2

不同知识结构图对学生科技说明文阅读理解水平的预测作用

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摘要 Kintsch 和 van Dijk (1978) 提出了建构-整合模型理论(Construction-Integration Model), 该理论认为读者在阅读过程中会形成一个合乎逻辑、有组织的文本表征, 这个文本表征也叫做知识结构(Knowledge Structure)。研究者认为提取读者的知识结构有以下三个步骤: (1) 提取概念之间关系(测量方法), (2) 形成结构图, (3) 评估该结构图的质量。一般来说, 知识结构图的不同就是测量方法的不同, 因此本研究将探讨不同测量方法对阅读理解水平的预测力。前人使用过三种比较常用的测量方法, 分别是相邻性评分(Adjacency)、关联性评分(Relatedness)和总结原文(Essay Summary)。本研究对比结果显示, 相邻性评分和关联性评分能预测阅读理解水平, 而总结原文不能够测; 另外, 相邻性评分比关联性评分更能预测阅读理解水平。其次, 本文提出了一种挑选概念词的方法, 将说明文的概念词分为核心词、主干词和细节词, 并通过验证性因子分析证实了这一假设。在此基础上, 我们对比了由不同数量概念词组成的关联性评分知识结构图对阅读能力的预测力, 结果发现当概念图主要由核心词和主干词组成时预测力最强。最后, 为了验证以上的结果是否也能在相邻性评分方法中出现, 我们进行了实验二。实验二有两个水平, 分别为只有核心词和主干词的水平一(9 个词), 和水平二(15 个词, 水平一加 6 个细节词), 结果发现在相邻性评分中, 在一定范围内, 词的数量越多预测效果越好。本研究证实了不同知识结构图对阅读理解水平的预测作用是不同的, 相邻性评分方法相比关联性评分方法可能更适用于篇章较短的文章。另外, 由于两种文本表征结构性质的不同, 概念的删减对情境模型来说是一个对结构图精简的过程, 而对文本记忆来说是一个细节缺失的过程。研究结论对后续的知识结构的研究和应用有重要的操作指导意义。

关键词 心理表征, 知识结构, 说明文, 阅读理解水平

A comparison of abilities of different knowledge structures to predict students' reading comprehension of scientific expository texts

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Abstract: Kintsch and van Dijk (1978) have introduced Construction-Integration Model to describe a logical and organizational mental representation formed during reading called Knowledge Structure (KS). Researchers have concluded that there are three steps to derive KS: (a) knowledge elicitation, (b) knowledge representation, and (c) evaluation of an individual's knowledge representation. Generally speaking, different knowledge elicitation methods derive different KSs, and therefore this research investigated the abilities of different methods to predict reading comprehension. There are three main methods commonly used to elicit knowledges: the adjacency, the relatedness and the essay summary. The result showed that the adjacency and the relatedness could predict reading comprehension and the adjacency was better than the relatedness while the essay summary failed to do so. In addition, we introduced an approach to select the terms used to derive a KS, which categorized terms into three kinds: core terms, branch terms and detail terms and validated our assumption via the confirmatory factor analysis. Based on this result, we further compared abilities of different KSs derived by different numbers of terms with the relatedness to predict reading comprehension and the result showed that the predictive ability was greatest when the terms consisted of the core and branch terms. Finally, we attempted to verify whether this result would recur in the adjacency and a distinct result was shown that the predictive abilities increased with the increasing number of terms. The results showed that different methods had different predictive abilities to reading comprehension and the adjacency was likely to predict better than the relatedness did in a short passage. Plus, due the different natures of different KSs, the deletions of terms of the relatedness meant simplification while that of the adjacency meant detail missing. These conclusions have important implications in subsequent researches and its application.

Keywords: Mental Representation, Knowledge Structure, Expository Texts, Reading Comprehension

经济流动性感知对消费行为的影响：“经济之梯”操纵方法与双向考察

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摘要 目前, 全球都面临着收入不平等、阶级固化的问题, 我国作为收入分配差距较大的国家, 脱贫攻坚和共同富裕也是迫切需要解决的问题。在此经济社会背景下, 人们主观上对于经济流动性的感知, 对于经济前景的预期以及这种感知对于消费行为的影响作用就成为富有现实意义的研究话题。经济流动性感知的概念衍生于社会流动性, 表示个体在多大程度上相信社会中的成员提升或降低相对经济地位是取决于自身的行为, 此概念是人们对于其所处社会经济流动状态具有个体化差异的主观信念。近些年来, 国外研究者们对于经济流动性感知开始逐渐关注并发现: 经济流动性感知会影响个体诸多方面的心理和行为, 并且多项研究聚焦于经济流动性感知与消费行为的结合。然而, 经济流动性感知对消费行为的影响还需要进行系统地对照研究, 如: 上行流动感知和下行流动感知的对照, 经济流动性感知的跨文化比较, 消费行为的理性和非理性地测量与比较等。本文对目前关于经济流动性感知的研究进行梳理, 分析了对经济流动性感知产生影响的因素及受到经济流动性感知影响的个体消费行为, 并且引入主观社会经济地位中“经济之梯”的概念, 对经济流动性感知的经典研究范式——“经济之梯”操纵方法和双极测量量表进行介绍。并且, 围绕经济流动性感知对消费行为的影响提出了需要进一步双向考察的对照研究理论框架, 包括上行与下行感知, 不同社会文化环境与市场场景的条件约束等。本文对经济流动性感知和消费心理学研究提供新颖的关注角度, 并且也提出了进一步研究的理论框架, 有助于研究者们围绕其进行更深入探究。

关键词 经济流动性感知, 经济之梯, 消费行为, 社会流动性

The impact of perceived economic mobility on consumer behavior: A two-way study of the "economic ladder" manipulation

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Abstract: At present, the world is faced with the problems of income inequality and class solidification. As a country with large income distribution gap, China is also in urgent need of solving the problems of poverty alleviation and common prosperity. Under this background, people's subjective perception of economic mobility, the expectation of economic prospects and the impact of this perception on consumer behavior has become a meaningful research topic. The concept of perceived economic mobility is derived from the concept of social mobility, which indicates the extent to which an individual believes that the promotion or reduction of relative economic status of members of a society depends on his or her own behavior, this concept is a subjective belief that people have individual differences in their social and economic mobility. In recent years, foreign researchers have begun to pay attention to the perception of economic mobility and found that the perception of economic mobility can affect many aspects of the individual's psychology and behavior, and a number of studies have focused on the combination of perceived economic mobility and consumer behavior. However, the effects of perceived economic mobility on consumer behavior need to be studied systematically, such as: the comparison of perceived upward mobility and perceived downward mobility, the cross-cultural comparison of perceived economic mobility, rational and irrational measurement and comparison of consumer behavior. This paper reviews the current research on the perception of economic mobility, analyzes the factors that affect the perception of economic liquidity and the individual consumption behavior influenced by the perception of economic mobility, in addition, the concept of "economic ladder" in the subjective socioeconomic status is introduced, and the classic research paradigm of perception of economic mobility —— "economic ladder" manipulation method and bipolar scale are introduced. And around the impact of economic liquidity perception on consumer behavior, a theoretical framework for comparative research needs to be further examined in both directions, including upward and downward perception, different social and cultural environment and market conditions constraints, and so on. This paper provides a new angle of view for the study of the perception of economic mobility and consumer psychology, and also puts forward a theoretical framework for further study, which will help researchers to carry out more in-depth research around it.

Keywords: perceived economic mobility, economic ladder, consumption behavior, perceived social mobility

边缘型人格偏离青少年在雨中人绘画中的压力应对特征

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摘要 目的: 探索边缘型人格偏离青少年在“雨中人”绘画中的绘画特征。方法: 对 683 名中学生进行问卷调查并分析“雨中人”中的绘画特征。依据边缘型人格偏离青少年的特点假设出 10 项可能反映压力应对相关的绘画特征。结果: 数据显示 5 项绘画特征有可能反映边缘型人格偏离青少年的压力应对方式, 这类青少年在压力应对主题中会更多的出现画面过大、有闪电、雨中无助、无地平线、伞过小。结论: 雨中人绘画可以作为评估边缘型人格偏离青少年的压力应对机制的工具。

关键词 青少年; 边缘型人格偏离; 雨中人; 压力应对

DAPR Drawing Characteristics about Stress Coping of Teenagers with Borderline Personality Dysfunction

Abstract: Objective: To explore the characteristics of Draw-a-Person-in-the-Rain (DAPR) which reflecting the stress coping in teenagers with borderline personality dysfunction. Methods: 683 teenager students were involved in the current study. The Borderline Personality Diagnostic (BPD) sub-scale of Personality Diagnostic Questionnaire-4 + (PDQ - 4 +) was used to assess the borderline personality dysfunction of teenagers. The Draw -a-Person-in-the-Rain (DAPR) was used to analyze the drawing characteristics about stress coping topic of teenagers. Results: The logistic equation analysis showed 5 drawings characteristics could well predict the stress coping topic of teenagers with borderline personality dysfunction. Further, compared with their peers, teenagers with borderline personality dysfunction showed a more frequency of bigger picture, flashing lighting, helpless in the rain, no ground baseline, relatively smaller umbrella in their drawing characteristics about stress coping topic. Conclusion: It suggests that 5drawing characteristics of Draw -a-Person-in-the-Rain (DAPR), such as bigger picture, flashing lighting, helpless in the rain, no ground baseline, relatively smaller umbrella, may be correlated with the stress coping mechanism of teenagers with borderline personality dysfunction. DAPR can be used as a tool to evaluate the stress coping mechanism of teenagers with borderline personality dysfunction.

Keywords: teenager, borderline personality dysfunction, Draw-a-Person-in-the-Rain (DAPR), stress coping

“拉人下马”不如“训妒为驹”：自我控制与解释水平对妒忌的影响

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摘 要 妒忌是指个体在进行向上社会比较的过程中,发现优势他人拥有自己渴望的能力或物品时产生的一种不愉快的情感体验。妒忌分为善意妒忌和恶意妒忌,两者是彼此独立存在的情绪体验。与善意妒忌相比,恶意妒忌更可能带来一系列消极结果。因此,有必要揭示影响善意妒忌和恶意妒忌的因素,并制定相应的策略,以减少恶意妒忌对社会的潜在危害。鉴于已有研究发现,低控制感导致高妒忌、以及产生较少的善意妒忌,可以推断自我控制可能是妒忌、善意妒忌、恶意妒忌背后的一项重要影响因素。此外,解释水平理论认为个体表征事物有高低水平之分。高解释水平相较于低解释水平个体具有更高的自我控制。那么,解释水平对低自控个体妒忌、善意妒忌、恶意妒忌的影响是一个具有重要意义和新颖的研究课题。本研究旨在探讨自我控制对妒忌程度、善意和恶意妒忌类型的影响,并明确低自我控制状态下,解释水平是否能对妒忌程度、类型进行影响。预实验检验设计的匹配任务的有效性,探究匹配任务中被试对小A(创造的虚拟优势他人)真实性评价以及小A是否满足与被试的高相似性,同时检验自我损耗任务的有效性。结果表明,高相似组比低相似组认为小A更真实地存在、小A与自己更相似;高自我损耗组比低自控损耗组认为损耗更高,匹配任务启动有效。实验1运用匹配任务采用内隐与外显两种方式探讨自我控制和妒忌程度及类型的关系。结果发现,高自我损耗组产生较高的妒忌且为恶意妒忌;低自我损耗组产生较低的妒忌且为善意妒忌,表明较低自我控制是引发大学生恶意妒忌的重要因素。实验2则进一步考察在自我损耗高(即自我控制低)时,解释水平对妒忌程度和类型的影响。结果发现,在高自我损耗状态下,低解释水平组加深了恶意妒忌,而高解释水平组产生了善意妒忌,且比低解释水平表征个体产生更少妒忌,这表明高解释水平能够使低自控状态的大学生产生更少的妒忌、且产生善意而非恶意妒忌。本研究结果表明,高自控引起较低的妒忌且为善意妒忌,较低自控则引发较高的妒忌且为恶意妒忌;即使在低自控状况下,高解能改善妒忌、提升善意妒忌、抑制恶意妒忌。这启示需警觉自控对妒忌的影响,即使过度损耗了自我,也可利用解释水平对妒忌进行扬善抑恶。

关键词 妒忌, 善意妒忌, 恶意妒忌, 自我控制, 解释水平

The Impact of Self-Control and Construal Level on Envy of College Students

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Abstract: Envy is an unpleasant experience generated when an individual finds that others have the ability or goods he desires in the process of upward social comparison. There are two types of envy: benign envy and malicious envy. They are independent emotional experiences. Compared with benign envy, malicious envy is more likely to bring about a series of negative outcomes. Therefore, it is necessary to reveal the influencing factors of benign envy and malicious envy, and formulate corresponding strategies to reduce the potential harm of malicious envy to society. In view of the existing research that low sense of control leads to high envy and less benign envy, we can conclude that self-control may be an important factor behind envy, benign envy and malicious envy. In addition, the construal level theory holds that there are different levels of individual representation. Individuals with high construal level had higher self-control than those with low construal level. The effect of construal level on benign envy and malicious envy in low self-control individuals is an important and novel research topic. The purpose of this study was to investigate the effects of self-control on envy levels, benign and malicious envy types, and to determine whether the effect of low self-control on degree and types of envy could be moderated by construal levels. The preliminary experiment was designed to examine the effectiveness of matching task priming. The purpose of this experiment is to let the subjects evaluate the possibility of A's (who is a fictitious dominant individuality) real existence and whether student A is similar to the subjects, and the effectiveness of the Stroop task. The results showed that compared with the low similarity condition group, the high similarity condition group thought the existence of A was more real, and they were more similar to small A. Compared with the low ego depletion group, the high ego depletion group thought the ego depletion was higher. These results indicate that the matching task manipulated effectively. In Experiment 1, the relationship between self-control and the degree and type of envy was investigated by implicit and explicit matching tasks. The results of this experiment show that the participants with high self-control had a lower degree of envy and benign envy, while the participants with low self-control had a higher degree of envy and malicious envy. This shows that low self-control is an important factor of malicious envy. Experiment 2 further explored the influence of construal level on the degree and type of envy in the case of high ego depletion (that is, the self-control is low). The results showed that in the high ego depletion condition, the subjects in the low construal level group had malicious envy, the participants in the high construal level group had benign envy. Participants with high construal level had less envy and produce less envy than those with low construal level. This shows that high construal level can make individuals with low self-control produce benign but not malicious envy. These results indicate that high self-control leads to lower degree of benign envy, while low self-control leads to higher degree of malicious envy. Under the condition of low self-control, high construal level but not low construal level can improve envy, enhance the benign envy and suppress the malicious envy. This suggests that individuals should be alert to the influence of self-control on envy, and use the construal level to promote the benign envy and suppress the malicious envy even in the condition of excessive ego depletion.

Keywords: construal level, self-control, benign envy, malicious envy, college students

丧亲青少年反刍与创伤后成长的关系：生命意义感的中介作用

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摘 要 家人去世是人生中难以避免的创伤事件, 一般认为经历这类创伤事件会给个体带来悲伤、抑郁、问题行为等消极影响。然而哀伤的双过程模型(the Dual Process Model of Bereavement; Stroebe&Schut, 1999)认为,

哀伤过程的日常经验除了这种丧失导向,还存在恢复导向,后者指个体专注生活的改变和适应新的角色等积极方面,也即是发生了创伤后成长。Calhoun, Tedeschi, Cann 和 Hanks (2010)提出的哀伤背景下的成长模型(A model of growth in grief)认为,创伤后成长指个体与主要生活危机事件做斗争后所发生的积极改变,包括自我觉知的改变、人际体验的改变、生命价值的改变等三大方面。有研究发现,反刍和生命意义感是影响创伤后成长产生的重要因素。为考察侵入性反刍、主动反刍与创伤后成长之间的关系、以及寻求意义感和存在意义感在上述关系中的中介作用,本研究采用创伤生活事件问卷、反刍问卷、生命意义感量表以及创伤后成长问卷对 887 名经历过家人去世的青少年进行调查。使用 SPSS22.0 进行数据的描述性统计和相关分析,使用 Mplus7.4 构建结构方程模型考察中介效应。结果表明:(1)侵入性反刍与创伤后成长呈显著负相关,侵入性反刍也可通过存在意义感的中介作用影响创伤后成长,侵入性反刍不能通过寻求意义感的中介作用对创伤后成长产生影响;(2)主动反刍与创伤后成长呈显著正相关,主动反刍还可分别通过存在意义感、寻求意义感的单独中介作用对创伤后成长产生影响,主动反刍还可通过寻求意义感至存在意义感的链式中介作用对创伤后成长发挥作用。结果提示对于丧亲青少年可引导其进行主动反刍以完善生命意义感,从而克服丧亲事件给其带来的负面影响,在将来更好的成长。

关键词 青少年,反刍,生命意义感,创伤后成长

The Relationship between Rumination and Posttraumatic Growth among Bereavement Adolescents: Mediating Role of Meaning in Life

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Abstract: Death of a family member is an unavoidable traumatic event in life. Although such events may cause sad reactions to individuals, they may also promote some positive changes, such as posttraumatic growth. Posttraumatic growth refers to the positive changes that occur after individuals struggle with major life crisis events, including perceived changes in self, changed sense of relationships with others, and changed philosophy of life. Previous studies have found rumination is an important factor affecting post-traumatic growth, but the mechanism is not clear. Some studies have found that rumination affects the search for meaning of life, which meaning in life plays a protective role on individual mental health. Therefore, the purpose of this study was to get better insights into the association between rumination and posttraumatic growth, and to test the possible mediating role of the meaning in life. 887 adolescents (434 males) who have experienced the death of their families members participated in the study. All the participants were 15-19 years old. The scale of lifetime incidence of traumatic events-student form, the meaning in life questionnaire, the event related rumination inventory and posttraumatic growth inventory were used to survey adolescent students. The event related rumination inventory includes two dimensions of intrusive rumination and deliberate rumination, and the meaning in life questionnaire includes presence of meaning and search for meaning in life. The data was analyzed by SPSS22.0 and Mplus7.4. The mediating roles would be assessed by using structural equation model, wherein the painful degree of traumatic would be controlled because its importance. The main results were as following: (1) deliberate rumination had a total positive effect on posttraumatic growth, intrusive rumination had a total negative effect on posttraumatic growth. (2) Presence of meaning mediated the relationship between intrusive rumination and posttraumatic growth. Specifically, the effect of intrusive rumination on presence of meaning was $.33(p < 0.001)$, and the effect of presence of meaning on posttraumatic growth was $.39(p < 0.001)$, showing that intrusive rumination lessened posttraumatic growth through the mediating role of presence of meaning. (3) Presence of meaning mediated the relationship between deliberate rumination and posttraumatic growth. Specifically, the effect of deliberate rumination on presence of meaning was $.30(p < 0.001)$, and the effect of presence of meaning on posttraumatic growth was $.39(p < 0.001)$, showing that deliberate rumination strengthened posttraumatic growth through the mediating role of presence of meaning. (4) Search for meaning

mediated the relationship between deliberate rumination and posttraumatic growth. Specifically, the effect of deliberate rumination on search for meaning was .16($p < 0.01$), and the effect of search for meaning on posttraumatic growth was .12($p < 0.01$), showing that deliberate rumination strengthened posttraumatic growth through the mediating role of search for meaning. (5) Presence of meaning and search for meaning serially mediated the relationship between deliberate rumination and posttraumatic growth. Summary, intrusive rumination has indirect and negative effect on posttraumatic growth by presence of meaning, deliberate rumination has indirect and positive effect on posttraumatic growth by presence of meaning and search for meaning. Therefore, it is essential to improve the meaning in life through deliberate rumination in order to realize posttraumatic growth.

Keywords: teenagers, rumination, meaning in life, posttraumatic growth

个体权力感对道德圈的影响研究

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摘要 权力与道德的关系是权力研究的重要主题。已有研究主要从行为和社会认知过程出发分析权力如何影响个体的道德行为, 本研究试图从道德认知结构即道德圈 (Moral Circle) 的变化出发, 分析权力如何影响个体的道德行为表现和社会认知过程。不仅如此, 已有研究主要将个体道德行为局限于人际和群际之间。随着人类道德世界的不断扩展, 越来越多的非人类实体被纳入人们的道德关怀中, 判断一个行为道德与否的标准已不再局限于该行为对人类的影响, 已有权力与道德关系的研究已难以全面地概括当前的道德范畴。为了深入了解权力与道德的关系以及弥补当前研究的不足, 本研究以道德圈为切入点, 探究个体权力感是否影响其道德圈, 权力感影响道德圈的中介机制以及权力感影响道德圈的限定条件。研究一包括三项研究。研究 1a 和研究 1b 分别以回忆启动任务、想象启动任务启动被试不同水平的权力感, 以探究权力感与道德圈之间的关系。结果均发现, 与低权力感个体相比, 高权力感个体的道德圈广度和深度更小。为验证研究 1a 和研究 1b 中道德圈的变化确实是由于权力感水平不同造成的, 研究 1c 引入了权力合法性的概念, 探究在权力来源的合法/不合法情况下权力感与道德圈之间的关系。结果发现, 权力的来源特征即权力合法性改变后, 权力感与道德圈之间的关系也随之发生改变: 当权力合法时, 与低权力感个体相比, 高权力感个体道德圈广度和深度更小; 当权力不合法时, 与低权力感个体相比, 高权力感个体道德圈广度和深度更大。这说明权力感确实能够引起道德圈的变化, 并且权力合法性是高权力感个体道德圈广度和深度小于低权力感个体的限定条件。研究二采用角色扮演任务, 探讨了道德注意性在权力感对道德圈影响中的中介作用。结果表明, 道德注意性在权力感对道德圈广度和深度影响中起完全中介作用, 与低权力感个体相比, 高权力感个体道德注意性更低, 由此减小了其道德圈的广度和深度。研究三采用角色扮演任务, 操纵了高权力感个体对权力的机会/责任建构, 探讨了高权力感个体对权力的机会/责任建构在权力感对道德圈影响中的作用。结果发现, 与低权力感个体相比, 将权力建构为机会的高权力感个体表现出较小的道德圈广度和深度, 而将权力建构为责任的高权力感个体的道德圈广度和深度与低权力感个体间没有差异。综上所述, 本研究发现, 权力感减小了个体道德圈的广度和深度, 且道德注意性在权力感对道德圈的影响中起完全中介作用。权力减小道德圈的效应还受到权力合法性与权力建构的影响。权力减小道德圈的效应限于拥有合法权力的高权力者身上, 对于权力来源不合法的高权力者而言权力扩大了其道德圈。高权力者对权力的机会/责任建构对其道德圈也产生影响, 当高权力感个体将权力建构为机会时, 与低权力感个体相比, 其道德圈广度和深度相对更小; 而当高权力感个体将权力建构为责任时, 与低权力感个体相比, 其道德圈广度和深度并未表现出减小的趋势。此外, 本研究还探讨了研究意义、不足及未来研究方向。

关键词 权力感 权力合法性 道德圈 道德注意性 权力建构

多种心理稳定性干预模式对冬季两项运动的心理效应分析

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摘要 目的: 冬季两项运动是越野滑雪与小口径运动步枪射击相结合的冬季奥运会竞技比赛项目。运动员

在比赛中同时承受高速滑行时的高强度运动负荷刺激，又要最快速度的完成由动到静的转变，且追求尽可能短时间内的高命中率。是一个既要考虑速度又要考虑稳定性的运动项目。本文通过总结归纳几种较为流行且效果明显的心理干预方式，以探讨不同心理干预方式所达到的心理效益。方法：本研究通过查阅文献收集心理干预影响技巧性运动项目、速度型运动项目的相关研究，进行总结、比较，以得出冬季两项运动中最行之有效的心理干预方法。（1）生物反馈训练：可以改变运动员心率变异性（HRV），体现在总功率和低频功率上，生物反馈训练可有效提高运动员的竞赛成绩，高频功率的增长率可负向有效预测射击运动员的竞赛成绩，实证研究显示，生物反馈训练可以改变副交感神经的兴奋性进而提升运动员的竞赛成绩。（2）正念训练：我国学者姒刚彦根据我国社会文化提出正念-接受-觉悟-投入训练（The mindfulness-acceptance-insight-commitment, MAIC）正念训练是指一种自我意识的认知、调节和接纳的心理过程和康复手段。实证研究表明，正念训练可有效提升运动员的心理流畅性、提高运动表现。（3）目标设定训练：根据个人不同的处理运动任务的方式，基于成绩目标的两种观点展开的心理训练方式。一些运动领域的文献指出，顶峰表现可能与运动员对任务相关目标的适应性有关。（4）表象训练：表象训练的原理通过充分利用运动中的视觉、听觉、触压觉、平衡觉等所带给感觉器官的感受，将动作完成的结果传入大脑，在脑中反复推演，从而创造新的运动形象和运动情景。研究表明，表象训练不仅能达到身体训练的效果，在技术质量及效果方面强于单纯的身体训练，运动表象训练是促进技能学习和运动表现的有效手段。

关键词 冬季两项，心理干预，心理效益

Analysis of psychological effects of various psychological stability intervention modes on biathlon

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Abstract : Biathlon is a combination of cross-country skiing and small-bore sport rifle shooting at the Winter Olympics. Athletes in the competition at the same time under the high intensity of the sports load when sliding, and to complete the transition from dynamic to static at the fastest speed, and the pursuit of a high hit rate in the shortest time possible is a sports project that should consider both speed and stability. This paper summarizes several popular and effective psychological intervention methods to explore the psychological benefits achieved by different psychological intervention methods. In this study, by consulting literature and collecting related studies on psychological intervention affecting skill sports events and speed sports events, we summarize and compare them, in order to find the most effective psychological intervention method in biathlon. (1) Biofeedback training: you can change the athlete's heart rate variability (HRV), reflect on the total power and low-frequency power, biofeedback training can effectively improve the athletes' competition performance, the growth rate of high frequency power can be negative to effectively predict the shooters competition results, the empirical research shows that biofeedback training can change the parasympathetic nerve excitability and enhance the competition of athletes results. (2) Mindfulness training: Based on The social culture of our country, Gangyan Si, a Chinese scholar, proposed The mindfulness-acceptance-insights-commitment (MAIC) training, which is a psychological process and rehabilitation means of cognitive adjustment and acceptance of self-awareness Empirical studies show that mindfulness training can effectively improve athletes' mental fluency and athletic performance. (3) Goal setting training: psychological training based on two perspectives of performance goals, depending on how individuals approach athletic tasks. Some sports literature suggests that achieving peak performance may be related to an athlete's adaptability to task-related goals. (4) Image training: The principle of image training is to make full use of the feeling of sensory organs brought by visual sense, auditory sense, touch sense, balance sense and so on in the movement. The result of the movement is transferred to the brain and repeated deduction in the brain, so as to create a new movement image and movement scene The research shows that image training can not only achieve the effect of physical training, but also is better than physical training in terms of technical quality and effect. Motor image training is an effective means to promote skill learning and athletic performance.

Keywords: Biathlon, Psychological intervention, Psychological benefits

自闭症儿童焦虑评估工具的系统评价

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摘要 背景 焦虑是自闭症谱系障碍 (autism spectrum disorder, ASD) 最常见的共患疾病之一, 研究表明焦虑会加重 ASD 儿童的功能缺陷, 因此, 准确识别和评估 ASD 儿童的焦虑十分重要。但是由于两者症状的重叠以及 ASD 儿童语言和认知功能的限制, 准确评估 ASD 儿童的焦虑十分困难。目前学者已开发了多种多样的 ASD 儿童焦虑的测量工具, 了解其各自的特点将十分有助于研究者和实践者选择恰当工具。目的 对国内外 ASD 儿童焦虑评估工具进行系统评价, 并为实践和研究提出建议。方法 计算机检索 PubMed、Web of Science、SCOPUS、CINAHL、PsycInfo、The Cochrane Library、CNKI 中国知网、万方等数据库, 外文数据检索时间从 2010 年 1 月-2021 年 3 月, 中文数据库检索时间从建库以来到 2021 年 3 月。纳入以 ASD 儿童 (年龄小于 18 岁) 为对象并且文献主题为焦虑测量工具编制和/或性能测定的文献, 评估工具的类型、测量方式、计分方式、适用人群、量表维度、条目、心理测量学特性、灵敏度和特异性等方面的特征。结果 最终纳入 35 篇外文文献、15 个儿童焦虑测量工具。这 15 个工具中, 有 10 个是为典型发育儿童制定的焦虑评估工具, 有 5 个专门为 ASD 个体改编制定的工具。为典型发育儿童制定的焦虑评估工具在 ASD 儿童中使用, 评定者间信度较差, 结构效度较差。与之相比, 专门为 ASD 个体改编制定的工具信效度方面表现较好。结论 国外有较多研究关注焦虑评估工具在 ASD 儿童中使用的适用性和信效度, 但国内仍缺乏相关研究。与专门为 ASD 儿童制定的焦虑评估工具相比, 为典型发育儿童制定的焦虑评估工具在 ASD 儿童中的适用性较差, 未来的研究需进一步对其进行验证改编, 以更好的适用于 ASD 儿童。而专门为 ASD 儿童制定的焦虑评估工具虽然表现较好, 但是大多数工具开发的时间较短, 仍需要进一步进行检验。

关键词 孤独症谱系障碍, 焦虑, 评估工具

Systematic Evaluation of Anxiety Assessment Tools for Children with Autism Spectrum Disorder

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Abstract: Background Anxiety is one of the most common comorbidities of autism spectrum disorder (ASD). Studies have shown that anxiety can aggravate the functional deficits of children with ASD. Therefore, it is very important to accurately identify and evaluate the anxiety of children with ASD. However, due to the overlap of symptoms and the limitation of communication and cognitive function in children with ASD, it is very difficult to accurately evaluate the anxiety of children with ASD. At present, scholars have developed a variety of anxiety assessment tools for children with ASD. Understanding their respective characteristics will be very helpful for researchers and practitioners to choose appropriate tools. Objectives To systematically evaluate the anxiety assessment tools for children with ASD at home and abroad, and put forward suggestions for practice and research. Methods PubMed, web of science, Scopus, CINAHL, PsycINFO, the Cochrane Library, CNKI, Wanfang and other databases were searched by computer. The retrieval time of foreign language data is from January 2010 to March 2021, and the retrieval time of Chinese database is from the establishment of the database to March 2021. We included studies on the development of anxiety assessment tools and/or performance measurement. In addition, these studies must target ASD children (younger than 18 years old). Analyze measurement methods, scoring methods, applicable population, scale dimensions and items, frequency of use, psychometric characteristics, sensitivity and specificity of assessment tools. Results Finally, 35 foreign literature and 15 children's anxiety measurement tools were included. Among the 15

tools, 10 are anxiety assessment tools for typical developing children, and 5 are specially adapted for ASD individuals. When the anxiety assessment tool developed for typical developmental children is used in ASD children, the inter-rater reliability and structural validity are poor. In contrast, the tools specially adapted for ASD individuals perform better in terms of reliability and validity Conclusion At present, many studies abroad pay attention to the applicability, reliability and validity of anxiety assessment tools in ASD population, but there is still a lack of relevant research in China. Compared with the anxiety assessment tools specially developed for ASD children, the anxiety assessment tools developed for typical developmental children have poor applicability in ASD children. Future studies need to further verify and adapt it to better apply to ASD children. Although the anxiety assessment tools specially developed for ASD children perform well, most of them have been developed for a short time and still need to be further tested.

Keywords: Autism spectrum disorders, Anxiety, Assessment tools

认知负荷和时间压力对欺诈决策的影响

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摘 要 大学生作为虚拟社交的主力军, 享受着互联网诸多便利的同时, 也成为了网络诈骗的主要对象。依据 360 的《2018 年大学生人群受骗情况分析》, 大学生最容易被骗的网络诈骗类型是虚假兼职刷单, 另外, 恶意程序、理财投资骗局、网络博彩与身份冒充等均为常见骗局类型。个体对于欺诈的易感程度定义为欺诈易感性, 是本研究中用于衡量被试欺诈决策意愿的指标。在先前的研究中, 认知负荷和时间压力是两个影响欺诈易感性较为重要的因素。本研究使用实验室实验探究了在新型网络诈骗场景(亲友借钱、兼职刷单、咸鱼购物、客服来电和游戏交易)下, 认知负荷和时间压力对大学生的欺诈决策行为的影响。在正式实验中, 被试观看编制好的不同网络场景下的图像对话互动材料, 并在最后选择自己的转账意愿。这些网络诈骗场景均为主试自己编制, 并且每个场景都有其真实版本(现实中存在的情景)和欺诈版本(网络诈骗中才会出现的情景)。实验结果发现, 在实验室中, 认知负荷主效应边缘显著, 在认知负荷下被试的欺诈易感性有降低的趋势, 这表明认知负荷下被试会更不容易受骗, 更不愿意做出向骗子转账的行为; 时间压力的主效应显著, 时间压力下被试的欺诈易感性会更高, 更容易被骗。另外, 在本实验中, 在高认知负荷下时间压力的效应会更显著。

关键词 大学生, 网络诈骗, 欺诈易感性

The impact of cognitive load and time pressure on fraud decision making

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Abstract: As the main force of virtual sociality, college students enjoy many conveniences of the Internet, but also become the main target of Internet fraud. According to the "Analysis on the situation of college students being cheated in 2018" by 360, the most vulnerable type of online fraud for college students is false part-time job fraud. In addition, malicious programs, financial investment fraud, online gambling and identity impersonation are common types of fraud. The individual's susceptibility to fraud is defined as the fraud susceptibility, which is used to measure the participants' fraud decision-making intention in this study. In previous studies, cognitive load and time pressure are two important factors affecting the susceptibility to fraud. This study uses laboratory experiments to explore the impact of cognitive load and time pressure on College Students' fraud decision-making behavior under new online fraud scenarios (relatives and friends borrowing, part-time bill brushing, salted fish shopping, customer service calls and game trading). In the formal experiment, the subjects watched the prepared interactive materials of image dialogue in different network scenes, and chose their own transfer intention at the end. These network fraud scenarios

are mainly designed by the author, and each scenario has its own real version (the situation in reality) and fraud Version (the situation only appears in the network fraud). The results show that in the laboratory, the edge of the main effect of cognitive load is significant. Under the cognitive load, the subjects' fraud susceptibility has a decreasing trend, which indicates that the subjects under the cognitive load are less likely to be cheated and are more reluctant to transfer money to cheaters; The main effect of time pressure is significant. Under time pressure, the subjects are more susceptible to fraud and are more likely to be cheated. In addition, in this experiment, the effect of time stress is more significant under high cognitive load.

Keywords: College students, Internet fraud, Fraud susceptibility

学习投入、专业认同与医学生评教的路径关系： 基于自我决定理论的中介模型

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摘要 目的 探究医学生评教与学习投入、专业认同的关系, 了解学习投入、专业认同对医学生评教的作用机制, 为医学院校教学质量改革提供新的对策。方法 采用随机整群抽样法在某医科大学抽取6个班级, 共317名医学生, 使用医学生评教问卷、大学生学习投入问卷、大学生专业认同问卷进行调查, 通过SPSS 21.0 进行数据处理。结果 不同年级、志愿填报方式与就业前景的医学生在评教结果上差异显著(年级 $F=7.512$, $p<0.01$, 志愿 $F=7.263$, $p<0.01$, 就业前景 $t=2.319$, $p<0.05$); 医学生评教与学习投入、专业认同显著正相关(r 分别为0.588、0.611, p 均 <0.001); 学习投入显著正向预测医学生评教($\beta=0.34$, $p<0.001$); 专业认同在学习投入与医学生评教间起完全中介作用, 中介效应占比79.41%。结论 高校应提供支持学生发挥自主性和能力的条件, 促进他们的动机内化整合, 提高专业认同程度, 从而提升他们对教学质量的评价。

关键词 医学生, 学生评教, 学习投入, 专业认同, 自我决定理论

The Relationship Between Learning Engagement, Speciality Identity and Medical Students' Evaluation of Teaching: A Mediation Model Based on Self-Determination Theory

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Abstract: Purpose: To explore the relationship between learning engagement, speciality identity and medical students' evaluation of teaching, to understand the mechanism of learning engagement and speciality identity on medical students' evaluation of teaching, and to provide new countermeasures for teaching quality reform in medical universities. Method: A total of 317 medical students from 6 classes in a medical university were selected by the random cluster sampling method. The questionnaires were conducted by the medical students' teaching evaluation questionnaire, the college students' speciality identity questionnaire and the college students' learning engagement questionnaire. The data were processed by SPSS 21.0 statistical software package. Result: There were significant differences in teaching evaluation among medical students of different grades, application forms and employment prospects (F grade =7.512, $p<0.01$, F application =7.263, $p<0.01$, t prospect =2.319, $p<0.05$); There was a significant positive correlation between medical students' evaluation of teaching and learning engagement and speciality identity ($r=0.588, 0.611, p<0.001$); Learning engagement significantly positively predicts medical students' evaluation of teaching ($\beta=0.34, p<0.001$); Speciality identity plays a completely mediating role in the relationship between learning engagement and medical students' evaluation of teaching, with the mediating effect accounting for 79.41%. Conclusion: Universities should provide conditions to support students to give full play to their autonomy and ability, promote their motivation internalization and integration, improve the degree of professional identity, so as

to improve their evaluation of teaching quality.

Keyword: Medical students, Student evaluation of teaching, Learning engagement, Speciality identity, Self-Determination Theory

(3) 硕士研究生论坛—应用心理学分场 3

双语情景下的语言储蓄假说：不同语言影响未来取向及跨期折扣？

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摘 要 随着全球化进程的推进, 全球超过半数的人口已经成为了双语使用者, 探究使用不同语言对决策的影响是不容忽视的一大现实问题。跨期决策主要涉及不同时期的收益和成本的权衡, 基于语言学中“语言塑造思维”的萨丕尔-沃尔夫假说 (Sapir-Whorf hypothesis), Chen(2011)提出的语言储蓄假说 (Linguistics-saving hypothesis) 也发现: 强未来时态标识的母语 (即动词需要根据未来时态进行变换) 可能减少了个体未来导向的行为, 也影响了个体的跨期决策偏好。前人研究已表明, 短暂地使用其他语言也会对个体的风险决策及时间取向产生影响。据此, 本研究假设: 语言储蓄假说在双语情景下仍然适用, 即当母语是弱未来时态标识语言 (如中文) 的个体, 使用强未来时态标识的外语 (如英文) 时, 由于英文语法强调“现在时”与“未来时”的不同, 使用英文就可能会使得个体的未来时间取向更低、对未来事件的感知更为遥远, 从而产生更大的跨期折扣率。研究 1 采用单因素被试间设计 (中文组 114 人, 英文组 78 人), 利用跨期选择量表及未来取向应对量表分别测量被试的折扣率及未来时间取向, 结果发现: 相较使用中文, 中文母语者在使用英文时的未来时间取向更低 ($p = .006$, Cohen's $d = 0.398$, $BF_{10} = 3.852$), 但两组在跨期折扣率上的差异未达显著 ($p = .198$, Cohen's $d = 0.190$, $BF_{10} = 0.347$)。研究 2 (中文组 215 人, 英文组 208 人) 改用跨期匹配任务, 得到的结果与研究 1 一致: 中文母语者在使用英文时的未来时间取向更低 ($p < .001$, Cohen's $f = 0.364$, $BF_{10} > 100$), 但语言对跨期折扣率 ($p = .362$, Cohen's $f = 0.045$, $BF_{10} = 0.179$)、主观时间知觉的影响不显著 ($p = .560$, Cohen's $f = 0.032$, $BF_{10} = 0.139$)。本研究部分支持了双语情境下的语言储蓄假说, 表明语言对跨期决策的影响不仅体现在母语的长期影响, 即使是短暂的语言转换也可能对个体的未来取向产生影响。但本研究暂未发现语言对跨期折扣率、主观时间知觉的影响, 这可能是由于除时间因素外, 跨期折扣率可能还受到了其他因素 (如: 冲动性人格) 的影响。未来研究可从其双语情境进一步探寻双语储蓄假说的内部机制。

关键词 外语效应, 语言储蓄假说, 未来取向, 跨期决策, 主观时间知觉

Linguistic-saving hypothesis among bilinguals: Do different languages impact future orientation and intertemporal discounting?

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Abstract: With the rapid rise in globalization, over half of the world's population is now bilingual. Thus, whether using different languages has an impact on the decision of individuals is an essential question worth investigating. In intertemporal decisions, individuals are frequently required to calculate the trade-offs between smaller sooner rewards and larger later rewards to make a choice. The Sapir-Whorf hypothesis proposed that language may strongly influence individuals' worldview. Chen's (2011) linguistic-saving hypothesis (LSH) also found that a native language with strong future-time reference (FTR) may lead individuals to be less likely to do future-oriented behaviors, which may also impact their intertemporal preference. Previous studies showed that using different languages in a short term

impacted the risk decision and time orientation of individuals. Accordingly, the current study hypothesized that the LSH still works in a bilingual context. In detail, for low-FTR language native speakers (i.e., Chinese), using a high-FTR foreign language (i.e., English) may make them less future-oriented, perceive future events as more distant, and have higher intertemporal discount rate. In Study 1, with a single-factor between-group design (Chinese group: $n = 114$; English group: $n = 78$), we used the Monetary Choice Questionnaire and the Future-oriented Coping Inventory to measure participants' intertemporal discount rate and future orientation, respectively. Results suggested that compared with the Chinese group, participants in the English group had a significantly lower future orientation ($p = .006$, Cohen's $d = 0.398$, $BF_{10} = 3.85$), but the group difference of discount rate was not significant ($p = .198$, Cohen's $d = 0.190$, $BF_{10} = 0.347$). With the matching-based intertemporal decision task as a different measurement of discounting, Study 2 found similar results with Study 1. Specifically, participants had a lower future orientation when using English ($p < .001$, Cohen's $f = 0.364$, $BF_{10} > 100$), but the effect of language on discounting ($p = .362$, Cohen's $f = 0.045$, $BF_{10} = 0.179$) and subjective time perception ($p = .560$, Cohen's $f = 0.032$, $BF_{10} = 0.129$) was non-significant. The current study partially supports the linguistic-saving hypothesis in a bilingual context, suggesting that the effect of language on intertemporal decision may not only be reflected by the long-term effect of one's native language, because even an instantaneous change of language may also impact the future orientation of individuals. However, our study did not provide evidence to support the language effect on discount rate or subjective time perception. A possible reason is that discount rate is determined by some other factors (e.g., impulsive personality) aside from our measured variables related to future time. Future studies could try to explore the inner mechanism of the bilingual-saving hypothesis from other perspectives and other different bilingual contexts.

Keywords: Foreign language effect, Linguistic-saving hypothesis, future orientation, intertemporal decision, subjective time perception

深圳青少年 24 小时活动水平和积极心理的关系：一项大样本调查

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摘要 目的: 睡眠、屏幕时间和身体活动, 这三种健康相关的行为以不同的比例分配在一天 24 小时内, 被称为“24 小时活动”。越来越多研究结果表明, 24 小时活动的时间分配和青少年的心理问题(例如, 抑郁症状)有关, 但关于 24 小时活动水平与积极心理健康之间关系的研究仍相对较少。2018 年我国首部《中国儿童青少年身体活动指南》发布, 但尚未对睡眠时间提出建议。因此, 本研究基于得到广泛认可的《加拿大 24 小时儿童 24 小时活动指南》(以下简称指南), 旨在探讨睡眠睡眠、屏幕使用指南和中高强度运动指南的达标情况是否与中国青少年的积极心理健康有关。方法: 采用分层抽样方法选取来自深圳 9 个学区 135 所学校的中小學生进行问卷调查, 收集 24 小时活动时间、积极心理健康指标(主观幸福感、积极品质和心理韧性)以及社会人口学资料, 最终获得包含 67281 名中小學生(平均年龄 13.0 岁)的有效样本。依据指南评定被试的 24 小时活动水平。采用广义线性模型分析 24 小时活动水平与积极心理健康的关系, 并探究两者关系是否因性别和学段而异。结果: 总体而言, 相比于达标 0 条指南, 达到 1、2 或 3 条指南的被试都具有更高水平的主观幸福感、积极品质和心理韧性, 而且指南达标数与积极心理指标的关系呈现出剂量效应, 即达标数越多, 被试越有可能报告更高水平的主观幸福感、心理韧性和积极品质。具体而言, 24 小时活动水平与主观幸福感的关系具有性别和学段差异, 与心理韧性的关系具有学段差异。结论: 达到指南的活动水平与积极心理总体上呈显著正相关, 具体关系因性别和学段而异。提升青少年的 24 小时活动指南达标率, 可能有助于心理健康的积极发展。

关键词 青少年, 身体活动, 屏幕时间, 睡眠, 主观幸福感, 心理韧性, 积极发展

Associations between meeting 24-hour movement guidelines and psychological well-being of Chinese adolescents: Findings from a large sample survey

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Abstract: Background and objective: 24-hour movement guidelines (24HMG) have been released in 2016 with the goal to improve the overall well-being of children and youth. In addition to physical health benefits, increasing research support that meeting 24HMG is also related to adolescent mental health. However, studies on the relationship between meeting 24HMG and psychological well-being are scarce. There are two perspectives for psychological well-being: hedonic well-being and eudaimonic well-being. This study aims to explore whether meeting 24HMG was related to both hedonic well-being and eudaimonic well-being among Chinese adolescents. Methods: Using a stratified sampling method, we selected 135 primary and middle school students from 9 school districts in Shenzhen for a questionnaire survey. Data regarding adherence to 24HMG, hedonic well-being indicators (subjective well-being), eudaimonic well-being (resilience and positive youth development [PYD]), and sociodemographic variables were collected. Finally, 67281 primary and middle school students (mean age: 13.0 years old) were retained for the analytical sample. Generalized linear models were used to analyze the relationship between meeting 24HMG and psychological well-being in total, gender-stratified, and grade-stratified samples. Results: In general, compared with meeting none recommendations in 24HMG, participants who met 1, 2, or 3 recommendations had higher levels of subjective well-being, resilience, and PYD. All three psychological well-being indicators improved as the number of recommendations met increased, presenting a dose-response pattern. The associations between meeting 24-HMG with subjective well-being varied between genders and grades, and the associations with resilience varied between grades. Conclusion: Meeting 24HMG was positively associated with psychological well-being among Chinese adolescents. Encouraging adolescents to meet 24HMG may be a promising approach in mental health promotion.

Keywords: adolescents, physical activity, screen time, sleep, subjective well-being, resilience, positive development

独处行为及其影响因素的潜在转变分析：一项纵向数据的研究

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摘要 在这个信息快速交流的时代, 个体时常会陷入到随时保持人际关系的状态, 需要时刻塑造和约束自己的行为。当个体频繁出现在社交场合中时, 会承受来自社会和自身的压力, 从而使个体更想要从人群中脱离, 以寻求独处的时光。已经有越来越多的研究者开始关注个体的独处行为。但是以往的研究主要基于变量为中心, 即通过对项目得分进行加和的方式来判断个体偏好独处行为的程度, 这种做法往往会忽视那些在总分上相近的个体可能在量表的作答模式上完全不同, 此外也很少有研究关注独处行为在个体发展过程中的动态变化。因此, 基于上述的分析, 本研究采用潜在剖面分析和潜在转变分析的方法探讨了大学生独处行为的潜在类别以及独处类别随时间的发展规律。本研究采用独处行为量表对在校大学生进行了间隔为半个月的3次问卷调查, 最终获得有效数据258份, 采用SPSS 26.0和Mplus 8.0对数据进行了分析。研究结果显示: (1) Harman单因子结果显示三个时间点的数据不存在共同方法偏差, 第一公因子的解释率分别为26.97%、31.22%和30.47%。(2) 潜在剖面分析的结果表明3个类别的模型拟合良好, 可以将其命名为积极独处型、居中型和高独处型, 积极独处型的被试仅在积极独处维度有较高的作答概率, 居中型被试在积极独处维度的作答概

率最低，在孤僻和社交回避维度的作答概率处于中间状态，高独处型被试在积极独处、孤僻和社交回避维度的作答概率最高。（3）潜在转变分析的结果显示，积极独处型和居中型被试稳定性较强，在 T1、T2 时间点下保持原组的概率分别是 56%和 60%，在 T2、T3 时间点下保持原组的概率分别是 84%和 86%，高独处型的被试在 T1 到 T2 时间下，以及 T2 到 T3 时间下有 47%和 35%的概率向居中型转变。（4）计算不同性别组下的独处潜在类别发生率以及转变概率，结果表明 T1 时间下独处行为潜在类别的发生率以及各个类别发生转变的概率存在性别差异。本研究揭示了个体独处行为的潜在类别及其变化的规律，同时考察了性别的差异，为未来相关领域的研究提供了一定的启示和建议。

关键词 独处行为，潜在剖面分析，潜在转变分析，性别差异

Latent Transition Analysis of the Solitude Behavior and Its Influencing Factors: A Study of Longitudinal Data

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Abstract: In this era of rapid information exchange, individuals always fall into the state of maintaining interpersonal relationship at any time, and need to restrict and shape their behavior at all times. Individuals will bear the pressure from society and themselves when they frequently appear in social occasions, so that they want to separate from crowd. More and more researchers have begun to pay attention to individuals' solitude behaviors. Previous studies on solitude behaviors of individuals are mainly based on variable as the center, and the severity of solitude behavior was judged by sum scores of items. However, it is often ignored that individuals with similar total scores might be completely different in the response pattern of the scale. In addition, few studies will pay attention to dynamic changes of solitude behaviors in the process of individual development. Therefore, based on the above analysis, this study plan to explore latent classes of college students' solitude behaviors and development pattern among these classes as the time goes by across the latent profile analysis (LPA) and latent transition analysis (LTA). Solitude Behaviors Scale for Short Version (SBS-S) were used to conduct the measurement. The paper questionnaires were distributed in the university campus three times in half a month. Finally, 258 valid data were finally obtained. Data analysis was conducted with Mplus 8.0 and SPSS 24.0. The results showed that: (1) Harman's single-factor method was used to conduct the testing of common method bias and the results showed that there were no significant common method biases in this study. variances explained by the first common factor at T1, T2 and T3 time points were 26.97%, 31.22% and 30.47% respectively. (2) 3-class models were suitable for measurement data at three time points and these classes could be named positive solitude type, moderate solitude type and high solitude type respectively. Positive solitude type performed better only in positive solitude dimension, moderate solitude type had the lowest response probabilities in positive solitude dimension and the medium response probabilities in eccentricity and social avoidance dimensions, and high solitude type performed best in positive solitude, eccentricity and social avoidance dimensions. (3) According to LTA, individuals of positive solitude type and moderate solitude type had stronger stability. The probabilities of maintaining original classes were 56% and 60% during T1 to T2, 84% and 86% during T2 to T3. Individuals of high solitude type had 47% and 35% probabilities turned into moderate solitude type during T1 to T2 and T2 to T3. (4) The incidence and transition probability under different gender groups were calculated. The results showed that there were gender differences in the incidence of latent classes and the transition probability of each class. This study reveals the latent classes and changes of individual's solitude behaviors, and examines the influence of gender differences, which provides some enlightenment and suggestions for future research in related fields.

精神分裂症患者家属照料负担与患者生活质量的关系： 家属情绪表达与患者感知到的情绪表达的链式中介效应

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摘要 背景: 精神分裂症作为常见的精神障碍一直受到临床实践与学术研究的关注。随着研究的不断推进, 有两个趋势值得讨论, 第一, 越来越多的临床工作者不再把症状改善作为唯一的目标, 而是将患者视为基本的人去关心他们的生活质量; 第二, 研究的视角不再局限于患者本身, 更多去关注患者所处的系统。对于稳定期的患者来说, 他们大多与家人同住, 由家人照料, 家庭系统是影响患者愈后的重要因素。家属的情绪表达作为一个重要的家庭因素已被不少研究发现与精神分裂症患者的复发率密切相关, 但目前少有研究探讨其与患者生活质量的关系, 也较少有研究从患者方出发, 探索其感受到的情绪表达与其愈后的关系。此外, 照料精神分裂症患者是一项耗费心力的工作, 这往往会让家属有较大的照料负担。当家属主观感受的照料负担水平更高时, 家属可能会对患者有更高的情绪表达, 从而影响患者的生活质量。基于以上, 本研究尝试探索家属照料负担与患者生活质量的关系, 并检验家属情绪表达、患者感知到的情绪表达在其中的链式中介作用。方法: 采用调查法收集数据。被试为处于恢复期的精神分裂症患者(能够理解施测内容并回答)及其家属(与患者同住, 并且是患者的主要照料者)。家属自我报告内容为照料负担、情绪表达(包含批评和情绪过度卷入两个维度); 患者自我报告内容为感知到的情绪表达、生活质量(包含生理、心理、社会关系三个维度)。最终共 135 份数据纳入分析, 患者平均年龄为 42.78 岁($SD = 8.06$), 家属平均年龄为 66.28 岁($SD = 11.19$)。使用 SPSS25.0 和 Mplus7.0 对数据进行整理与分析。结果: 1) 在控制了患者的性别、年龄、受教育程度、是否有工作、是否服药之后, 家属的照料负担能够显著地负向预测患者生活质量的生理维度($\beta = -0.39, p < 0.001$)、心理维度($\beta = -0.35, p < 0.001$)、社会关系维度($\beta = -0.18, p = 0.046$)。2) 以家属的批评和患者感知到的批评作为中介变量进行链式中介分析, 结果发现: 批评和患者感知到的批评在家属照料负担与生活质量三个维度之间的链式中介作用均不成立, 家属照料负担能够正向地预测批评($\beta = 0.60, p < 0.001$), 批评能够正向预测患者感知到的批评($\beta = 0.64, p < 0.001$), 但患者感知到的批评对生活质量的预测不显著。3) 以家属的情绪过度卷入和患者感知到的情绪过度卷入作为中介变量进行链式中介分析, 结果发现: 情绪过度卷入和患者感知到的情绪过度卷入在家属照料负担与生活质量生理维度之间的中介作用成立; 情绪过度卷入和患者感知到的情绪过度卷入在家属照料负担与生活质量心理维度之间的中介作用成立; 情绪过度卷入和患者感知到的情绪过度卷入在家属照料负担与生活质量社会关系维度之间的中介作用不成立。结论与启示: 当家属的照料负担越重时, 家属的情绪表达水平也越高(包括情绪过度卷入和批评), 患者的生活质量也会受到一定影响。这提示, 促进患者的生活质量可从减轻家属照料负担入手, 例如通过构建社区心理服务体系, 为精神分裂症患者家庭提供其所需要的服务。此外, 相比批评, 家属的情绪过度卷入(过分担心患者)似乎更值得关注, 未来研究可进一步区分情绪表达的不同侧面对学生的影响。

关键词 精神分裂症, 照料负担, 生活质量, 情绪表达

Care Burden and Schizophrenia Patients' Quality of Life: Chain Mediating Effects of Expressed emotion and Perceived Expressed Emotion

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Abstract: Background: As a typical mental disorder, schizophrenia has gotten much attention from clinical practice and academic research. Nowadays, symptom elimination is no longer the only goal of schizophrenia treatment. The social adaptation of patients and their quality of life have also become the focus of intervention. The concentrate also broadens from the individual-level factors to their multi-level factors, especially their living systems. Most schizophrenia outpatients are taken care of by their family members after discharge. Thus, the family system has a significant impact on their recovery. Expressed emotion, as a crucial family-level factor, is closely related to schizophrenia patients' relapse. However, less study paid attention to its relationship with patients' quality of life, and not much study included patients' perceived expressed emotion as a worth variable. Meanwhile, take care of people with schizophrenia is not effortless work. Their caregivers may suffer from their care burden. A high level of care burden may bring a high level of expressed emotion, which results in poor quality of life of patients. Based on the above, the current study aimed to explore the relationship between caregivers' care burden and patients' quality of life and the chain mediating effect of expressed emotion and perceived expressed emotion. Methods: Participants were outpatients and patients' primary caregivers. The caregiver finished questionnaires that measured their care burden and expressed emotion (two subscales: emotion over-involvement, criticism), while the patient answered questionnaires that measured their perceived expressed emotion and quality of life (three subscales: physical domain, psychological domain, and social relationship domain). Finally, 135 pair data were analyzed. The average age of patients was 42.78 years (SD = 8.06), and the average age of family members was 66.28 years (SD = 11.19). Data were analyzed with SPSS 25.0 and Mplus 7.0.

Results: Care burden was negatively related to patients quality of life, including physical domain ($\beta = -0.39$, $p < 0.001$), psychological domain ($\beta = -0.35$, $p < 0.001$), and social relationship domain ($\beta = -0.18$, $p = 0.046$), with patients' sex, age, educational level, employ, and medication-taking as covariates. The chain mediating effect of criticism and perceived criticism between care burden and quality of life was not significant. However, care burden was positively related to criticism ($\beta = 0.60$, $p < 0.001$) and criticism was positively related to patients' perceived criticism ($\beta = 0.64$, $p < 0.001$). The chain mediating effect of emotion over-involvement and perceived emotion over-involvement between care burden and the physical domain was significant; the chain effect of expressed emotion and perceived expressed emotion between care burden and the psychological domain was significant; the chain effect of expressed emotion and perceived expressed emotion between care burden and social relationship domain was not significant. Conclusion and implication: In schizophrenia families, caregivers' high burden was related to a high level of expressed emotion (including emotion over-involvement and criticism), which resulted in patients' poor quality of life. It indicated that releasing caregivers' burden could be an effective way to improve patients' quality of life. Specific services should be available in the community to help schizophrenia families. Besides, the emotion overinvolvement domain seemed to be more impactful on patients' quality of life. Future studies could distinguish the different impacts of expressed emotions' sub-domains.

Keywords: schizophrenia, care burden, quality of life, expressed emotion

疫情期间流动人口个体抗逆力对家庭抗逆力的影响： 基于纵向的主客体互倚模型

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摘要 新冠肺炎疫情爆发期间, 居家隔离对流动家庭的心理健康状况带来极大挑战, 流动家庭除了父母与孩子朝夕相处的亲子压力之外, 还面临着家庭收入减少、再就业难等现实压力, 目前大多研究多以问题视角关注流动家庭的困境。本研究从积极和系统的视角出发, 基于家庭抗逆力结构特征, 探讨疫情期间流动家庭(父母和子女)个体抗逆力及其家庭抗逆力的关系。采用纵向的主客体互倚模型对 136 户江苏流动家庭父母及其子女, 应用疫情媒体暴露问卷、个体抗逆力量表(CD-RISC)、家庭抗逆力量表(FRAS)于 2020 年 2 月中旬(T1)、3 月上旬(T2)两个时间点进行线上的问卷调查。结果发现: (1) 子女家庭抗逆力得分显著高于其父母的家庭抗逆力得分; (2) 控制疫情媒体暴露后, T1 父母和孩子自身的个体抗逆力对其 T2 家庭抗逆力的主体效应显著, T1 孩子个体抗逆力对 T2 父母家庭抗逆力的客体效应显著。研究结果揭示了在流动家庭内部, 父母和孩子对家庭抗逆力的感知存在显著差异; 孩子个体抗逆力对家庭抗逆力有积极作用, 父母家庭抗逆力既受自身个体抗逆力影响, 也受孩子个体抗逆力的影响。因此, 在家庭教育和相关实践活动中, 关注和开发儿童积极特质和抗逆力对于促进流动家庭(父母和子女)的适应将会是更为有效的途径。

关键词 流动家庭, 个体抗逆力, 家庭抗逆力, 主客体互倚模型

The Relationships of Individual Resilience and Family Resilience of Migrant Families during COVID-19 in China: A Longitudinal Actor-partner Interdependence Model

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Abstract: During the peak period of COVID-19 in China, children and parents were self-isolating at home. With factory shutdowns and school closures, migrant families which lay in a relatively disadvantageous situation in society had been facing with great challenges. Spending too much time together to some extent brought parent-child pressure to the family. Besides, migrant families also faced the problems of reduced income, difficulties in reemployment and other family stress. Previous study had mainly focused on problems in the adaptive process of migrant families in adversity. Based on the key attributes of Family Resilience Theory (FRT), family resilience was affected by individual traits such as individual resilience. Therefore, this current study explored the relationships between individual resilience and family resilience of parents and children in migrant families during COVID-19 from a positive and systematic perspective. 136 migrant families in Jiangsu province were recruited to participate this survey. A parent and a child in the family were asked to complete the epidemic media exposure questionnaire and the Connor-Davidson Resilience Scale (CD-RISC) in mid-February, 2020 (the peak of the outbreak, T1), and the shortened Chinese version of the Family Resilience Assessment Scale (FRAS) in early March (the outbreak started to ease, T2). Using the approach of the longitudinal actor-partner interdependence model, the results showed that: (1) The family resilience of children was significantly higher than that of their parents; (2) After controlling the epidemic media exposure, the individual resilience of parents and children had a significant actor effect on their own family resilience, and the individual resilience of children had a significant partner effect on their parents' family resilience. These findings revealed that, within the migrant family, there were differences in the perception of family resilience between parents and children. What's more, parents' family resilience was not only affected by their own individual resilience, but also affected by their children' individual resilience. This study provided targeted implication for migrant family intervention programs to improve children's individual resilience to enhance the whole family resilience.

Keywords: migrant family, individual resilience, family resilience, the longitudinal actor-partner interdependence

Flight or Fight? The Effects of Entitativity on Strategies of Individual Mobility and Social Competition

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Abstract: Group members often take different identity enhancement strategies to improve their unfavorable situations and achieve positive image. Previous research on determinants of identity enhancement strategies has been conducted mainly from intergroup perspective, and overlooked the role of the fundamental group characteristic. To fill this gap, three studies (two pre-registered) were conducted to examine the effects of entitativity, namely the extent to which a group has a real existence rather than is merely a collection of individuals, on the strategies of individual mobility and social competition. Across three studies, we manipulated the level of ingroup entitativity and measured self-reported intention of (Studies 1-2) and behavioral choices of (Study 3) individual mobility and social competition. The results indicated that members of groups with high (versus low) entitativity were less likely to adopt the strategy of individual mobility and more likely to adopt the strategy of social competition. More importantly, these effects were observed under both intergroup (Studies 1 and 3) and non-intergroup contexts (Studies 2 and 3). The current research not only advances research on identity enhancement strategies but also provides practical implications for group improvement and intergroup relations.

Keywords: entitativity, individual mobility, social competition, devaluation context, pre-registered

基于复杂网络的重大突发事件公众情绪与政府形象研究 ——以新冠肺炎疫情微博大数据为例

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摘要 微博作为一种重要的信息传播媒介，对重大突发事件中信息的发布和传播起着至关重要的作用。官方微博信息公开的及时性和透明性可以降低公众对疫情风险的感知，从而增加公众的积极情绪体验，提高公众对政府的认可度。但是政府和媒体公示的信息内容复杂多样，尚不明确哪些信息对民众的情绪和政府认可度会产生显著影响。基于此，本研究以新冠肺炎疫情为例，使用大数据和网络分析的方法探究影响民众情绪和对政府评价的话题指标，并建构微博话题的网络模型，探究影响公众情绪和政府认可度的中心性话题，以利于政府未来在重大突发事件中有效调控公众情绪，提高公众对政府的积极评价。本研究利用 Python 爬虫，以“疫情”、“确诊”、“肺炎”等为关键词，爬取武汉、石家庄疫情“封城”期间相关微博共 20 万条。首先，对数据进行人工清洗，删除重复内容和商业广告；其次，对剩余数据进行人工标记，删除所研究的 11 个话题指标外的微博，最终得到 69098 条微博。再将 11 个话题指标分别归入政府、民众、媒体三个维度。以分布在政府、民众、媒体中的 11 个话题指标为对象，建立 Lasso 偏相关网络来研究政府、民众、媒体的网络特征。结果发现：（1）在强度中心性上突出的指标有疫情动态、科普答疑，说明这两个指标对周围局部网络话题指标的影响能力较强；（2）在接近中心性上突出的话题指标是疫情动态、国外对比和科普答疑，说明这三个指标是话题网络最中心的指标，在整个网络中影响的话题指标最多，“控制”其他话题的能力最强；（3）在介数中心性上突出的指标有疫情动态、科普答疑，说明这两个指标处于许多其他两点之间的路径上，是调节其他话题之间的“桥梁”；④“疫情动态”是政府通过媒体联结公众的主要“枢纽”，也是影响和控制整个话题网络最中心的指标。“国外对比”次之。总体上，直接影响民众情绪的话题指标有：疫情动态、国外对比、线上求助；直接影响对政府评价的话题指标有：辟谣、科普答疑。因此，未来在重大突发事件中政府从五个方面可以提升公众积极情绪：①政府多及时、透明地通过官媒发布事件动态；②媒体多进行国内外动态和举措的报道的对比，让公众感受到党和政府真真切切的执政为民；③政府开辟便民有效的直通公众的倡议求助渠道，在把握网民的诉求的同时，防止公众因在公共网络上宣泄不满从而将负面情绪相互传染，引爆

舆情；④提升公众对政府的信任度和满意度，才能减少公众对政府工作的对抗和负性情绪。同时政府可以从三个方面提升政府形象：①重视以“三权合作”为机制的应急科普；②政府及时、科学的通过官媒开展辟谣工作，缓解公众负性情绪；③政府减少政务失误率并且重视网络舆论战场。摒弃捂、瞒、压的社会治理方法。

关键词 大数据，网络分析，公众情绪，政府积极评价，COVID-19

强制隔离戒毒人员情感体验对毒品渴求的影响：学历水平的调节作用

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摘要 研究目的：本研究旨在探索强制隔离戒毒人员（以下简称强戒人员）在接受强制隔离戒毒期间的情感体验与毒品渴求之间的关系，并在此基础上提出调节模型，考察学历水平对该关系的调节效应。研究方法：使用采用问卷法调查南昌市强戒所 221 名强戒人员，首先对其学历水平进行调查，再使用《强迫性毒品使用量表》、《焦虑自评量表》、《抑郁自评量表》及《心理韧性量表》对其在强制隔离戒毒过程中的毒品渴求和情感体验进行调查。研究结果：（1）不同学历水平的强戒人员在焦虑、抑郁及心理韧性情感体验上的得分均存在显著差异；（2）不同学历的强戒人员对焦虑情感和毒品渴求的调节效应具有统计学意义；数据表明，抑郁情感和毒品渴求的条件主效应显著，且学历水平对抑郁情感和毒品渴求的调节效应具有统计学意义；心理韧性和毒品渴求的条件主效应显著，且学历水平对心理韧性和毒品渴求的调节效应具有统计学意义。研究结论：（1）高学历强戒人员在焦虑和抑郁情感体验对毒品渴求均存在显著的预测作用；（2）低学历强戒人员在心理韧性情感体验维度对于毒品渴求有显著的预测作用。

关键词 强制隔离戒毒人员，情感体验，毒品渴求，学历水平，调节作用

The effect of emotional experience on drug craving among drug addicts in mandatory segregation: the moderating effect of educational level

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Abstract: Study purpose: The purpose of this study was to explore the relationship between the emotional experience and drug craving of forced isolation drug addicts (hereafter referred to as forced isolation drug addicts) while undergoing forced isolation drug addiction treatment, and on this basis, to propose a moderating model to examine the moderating effect of educational level on this relationship. Methodology: A questionnaire was used to investigate 221 ex-prisoners in the Nanchang City Rehabilitation Center, and their educational level was investigated first, and then their drug craving and emotional experience during compulsory isolation withdrawal were investigated using the Compulsive Drug Use Scale, Anxiety Self-Rating Scale, Depression Self-Rating Scale, and Mental Toughness Scale. The results of the study showed that (1) there were significant differences in the scores of anxiety, depression and mental toughness among the ex-prisoners with different education levels; (2) the moderating effects of different education levels on anxiety and drug craving were statistically significant; the data indicated that the main effects of depression and drug craving were significant, and the moderating effects of education levels on depression and drug craving were statistically significant; the moderating effects of mental toughness and drug craving were statistically significant; the moderating effects of anxiety and drug craving were statistically significant. The data showed that the conditional main effects of mental toughness and drug craving were significant, and the moderating effects of education level on mental toughness and drug craving were statistically significant. The study concludes that (1) there is a significant predictive effect of anxiety and depression on drug craving among the highly educated rehabilitants, and (2) there is a significant predictive effect of mental toughness on drug craving among the low educated rehabilitants.

Keywords : Compulsory isolation detainees, Affective experience, Drug craving, Educational level, Moderating

网络谣言辟谣方式及其辟谣效果关系的元分析研究

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摘要 本研究利用元分析的方法, 梳理国内外已有研究, 分析网络谣言辟谣方式在辟谣效果影响中的主效应, 并考察各调节变量在辟谣方式与辟谣效果关系中产生的作用, 为将来制定合适的辟谣方法提供实证依据。通过国内外文献检索, 纳入符合要求的文献 24 篇, 包含 93 个效应量。调节效应分析表明, 网络谣言辟谣方式与辟谣效果的关系受到辟谣时间、辟谣方式、谣言材料类型的调节。未来研究可以进一步探讨认知接种方式对辟谣效果影响研究, 开发生态效度更高、相关性更高的认知接种工具, 并且重点考察年龄、性别等内部因素对网络谣言辟谣方式与辟谣效果关系的影响。

关键词 网络谣言, 谣言的持续影响效应, 假新闻, 认知接种, 事后干预

A Meta-Analysis on the Efficacy of Countering Online-misinformation

Abstract: This meta-analysis investigated the factors underlying different ways to counter online misinformation. Since misinformation can have a huge impact on people's lives such as leading to biased decisions, countering online misinformation serves as an important goal in misinformation research. This meta-analysis ($n = 24$, $k = 93$). The analysis of the moderating effect shows that the relationship between the ways of countering misinformation and their effects is moderated by the time, the ways and the types of rumor materials. Future research can further explore the impact of cognitive vaccination on the effect of misinformation denial, develop mental vaccination tools with higher ecological validity, and focus on the impact of age on the relationship between online misinformation denial modes and effect.

Keywords: online misinformation, continued influence, debunking, inoculation, efficacy.

首次心理咨询中的动作同步与工作同盟的关系研究 ——基于动作同步的分析

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摘要 动作同步的研究是一个新兴的研究领域, 基于视频的动作能量分析为测量心理咨询过程中的动作同步提供了高效、客观的工具。本研究以动作能量分析为分析软件, 以工作同盟量表简版修订版和常规临床咨询效果评估表为研究量表, 旨在探讨心理咨询过程和闲聊过程、新手咨询师的咨询过程和有经验咨询师的咨询过程以及新手咨询师的咨询过程和有经验咨询师的闲聊过程中的工作同盟、咨询效果和动作同步的差异以及三者之间的关系。通过相关、独立样本 t 检验、配对样本 t 检验、回归分析等统计检验方法, 结果表明: (1) 咨询组在工作同盟总分上和目标维度上显著高于闲聊组; (2) 有经验咨询组在工作同盟总分上和任务维度上显著高于新手咨询组; (3) 新手咨询组在工作同盟目标维度上显著高于有经验闲聊组; (4) 有经验咨询组在 15-35 分钟咨询师带领条件的动作同步上显著低于新手咨询组; (5) 新手咨询组在 0-15 分钟咨询师带领条件的动作同步上显著高于有经验闲聊组; (6) 15-35 分钟咨询师带领条件的动作同步对咨询效果的症状维度得分变化具有正向预测作用; (7) 0-15 分钟咨询师带领条件的动作同步对工作同盟的目标维度具有正向预测作用。研究证实了动作同步与工作同盟之间的相关性, 发现了高水平动作同步对更好的工作同盟以及症状恶化的预测作用, 为更好地理解心理咨询过程、指导心理咨询实践做出了贡献。

关键词 动作同步, 动作能量分析, 工作同盟, 咨询效果

The association between behavioral synchronization and working alliance during the first psychological counselling session: A study based on Motion Energy Analysis

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Abstract: Behavioral synchronization is an emerging research field in which video-based motion energy analysis provides an efficient and objective tool for measuring behavioral synchrony in the process of psychological counselling. This study uses motion energy analysis as analyzing tools and Working Alliance Inventory-Short Form Revised (WAI-SR) and Clinical Outcomes in Routine Evaluation-Outcome Measure (CORE-OM) as questionnaires. This study aims to find out the differences in working alliance, therapeutic outcome and behavioral synchrony between psychological counselling process and chatting process, novice psychological counselling process and experienced psychological counselling process, and novice counselling process and experienced chatting process, as well as the relationships between the three variables. Using statistical testing methods like correlation test, independent-samples T test, dependent-samples T test and regression analysis, this study finds: (1) Counselling group ranks higher in the total score of working alliance and the goal dimension of working alliance than chatting group; (2) Experienced counselling group ranks higher in the total score of working alliance and the task dimension of working alliance than novice counselling group; (3) Novice counselling group ranks higher in the goal dimension of working alliance than experienced chatting group; (4) Experienced counselling group ranks lower in the 15-35 minute therapist-lead synchrony than novice counselling group; (5) Novice counselling group ranks higher in the 0-15 minute therapist-lead synchrony than experienced chatting group; (6) The 15-35 minute therapist-lead synchrony can positively predict the change of scores in the symptom dimension of therapeutic outcome; (7) The 0-15 minute therapist-lead synchrony can positively predict the goal dimension of working alliance. This study confirms the association between behavioral synchrony and working alliance. It also finds that higher levels of behavioral synchrony can predict better working alliance and the deterioration of symptoms. Therefore, this study makes contributions to the better understanding of psychological counselling process and offers guidance to psychological counselling practice.

Keywords: behavioral synchrony, motion energy analysis, working alliance, therapeutic outcome

初中生体育锻炼与主观幸福感的关系：一个链式中介模型

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摘要 目的：探讨体育锻炼、领悟社会支持、身体锻炼自我效能感和主观幸福感之间的关系。方法：采用《体育锻炼等级量表》《领悟社会支持量表》《身体锻炼自我效能感量表》《主观幸福感量表》对初中生 1510 人进行团体心理测量。结果：1) 体育锻炼与领悟社会支持、身体锻炼自我效能感及主观幸福感之间存在正相关；2) 领悟社会支持和身体锻炼自我效能感在体育锻炼和主观幸福感之间起显著的中介作用。结论：1) 体育锻炼显著正向预测初中生主观幸福感；2) 体育锻炼通过领悟社会支持和身体锻炼自我效能感的中介作用间接影响初中生主观幸福感，含三条路径：领悟社会支持、身体锻炼自我效能感的单独中介作用及领悟社会支持-身体锻炼自我效能感的链式中介作用。

关键词 体育锻炼，主观幸福感，领悟社会支持，身体锻炼自我效能感，初中生

3.4 博士研究生论坛—基础心理学

(1) 博士研究生论坛—基础心理学分场 1

基于群组视角观点采择的认知机制 ——来自视觉观点采择范式的证据

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摘要 本研究采用视觉观点采择范式, 通过 5 项实验探讨了人们是否及如何在群组视角进行观点采择。结果发现: (1) 只有在目标对象为虚拟人物时, 在自我视角信息与群组视角信息不一致条件下, 被试对自我视角信息判断速度显著慢于一致条件, 即表现出自动采择群组视角的观点过程; (2) 仅当群组被视为一个有机的实体(高群组实体性)时, 人们才自动采择群组视角的观点, 且对群组某个成员的观点采择不受群组实体性的影响。以上结果表明, 人们可基于群组视角自动采择其观点。研究所揭示的结果不仅有利于理解人们采择群组视角信息的加工机制, 且对深入理解个体心智和群组心智的关系具有重要的启发意义。

关键词 视觉观点采择, 群组, 实体性, 自动化过程

The cognitive mechanism of taking group's perspective: Evidence from a visual perspective-taking task

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Abstract: Since the surroundings seen by others during social interaction is usually different from what the self sees, it is important to understand the information from the perspective of others. A large number of studies had shown that since the early childhood, people already have the ability to taking other's perspective, and the process of perspective taking is suggested to be automatic. However, in previous studies, an isolated person was widely emphasized as the computed entity in visual perspective taking, and the groups are everywhere, hence people also need to engage in social interactions with groups. When interacting with different groups, it is also necessary to be able to perceive the problem from the group's perspective. Nevertheless, few studies have explored whether and how people taking group's perspective from a group level. In view of the fact that either a group or an individual can be seen as a cognitive unit, and taking perspective from the individual's level can be automatic, this study hypothesized that people can automatically take group's perspective. Based on the adapted version of a visual perspective-taking task, this study explored whether people would automatically take group's perspective from the group level, through five experiments. The main results are as follows: (1) People only automatically took group's perspective when the computed entity consists of social individuals, and it cannot be explained by the physical orientation of head. (2) Group entitativity influenced the automatic computation of taking group's perspective, and only when the group was perceived as an unified entity (i.e., high group entitativity), people automatically take group's perspective. (3) Taking group member's perspective at the individual level was not modulated by the group entitativity. Hence, what we can conclude is that people can automatically take group's perspective at the group level. This finding is not only helpful for understanding the processing mechanism about how people compute what the group sees, but also have an important role in understanding the relationship between individual's mind and group's mind.

Keywords: visual perspective taking, groups, entitativity, automatic process

特质焦虑与无法容忍不确定性的神经相关分离： 来自静息状态脑电图的证据

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摘要 目的:以特质焦虑(TA)和无法容忍不确定性(IU)为中心的框架对理解焦虑有重要意义。我们进行了两个实验来探讨 TA 和 IU 的行为-神经科学联系。方法:首先收集大样本受试者的状态-特质焦虑量表-特制版(STAI-T)、无法容忍不确定性量表-简版(IUS-12)和贝克焦虑量表(BAI)得分,并探讨它们之间的关系。随后,我们选择高 TA (HTA)个体、高 IU (HIU)个体和对照组(CG)来比较他们静息状态的脑电图微状态特征。结果:在行为上,TA 和 IU 均与 BAI 显著相关,但它们彼此相关关系不显著。此外,HTA 中微状态类 B 的出现率和贡献率以及微状态 B 类与 C 类之间的转移概率都小于 CG; HIU 中的微状态类 A 的贡献率、微状态类 A 的持续时间和微状态 A 类与 C 类转换概率均高于 CG。结论:TA 和 IU 是两个与焦虑相关但相对独立的特征,HTA 的神经基础主要表现为视觉网络和 aDMN,而 HIU 的神经基础主要表现在语言网络和 aDMN。意义:在神经水平分离 TA 和 IU 的初步努力可以为更好地理解焦虑的发展提供证据。

关键词 特质焦虑, 不确定性不容忍, 静息状态脑电图, 微状态分析

Neural Correlation Dissociation of Trait Anxiety and Intolerance of Uncertainty: Insights from Resting-state EEG

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Abstract: Objective: The framework centered on trait anxiety (TA) and intolerance of uncertainty (IU) is of significance for understanding anxiety. We conducted two experiments to explore the behavior-neuroscience association of TA and IU. Methods: We first collected the TA scores, IU scores, and Beck Anxiety Inventory (BAI) scores of a large sample of subjects and explored their relationships. Subsequently, we selected high TA (HTA) individuals, high IU (HIU) individuals, and a control group (CG) to compare their resting-state EEG microstates characteristics. Results: Behaviorally, both TA and IU were significantly correlated with BAI, but they were relatively separate. Furthermore, the occurrence and contribution of class B and the transition probability between class B and class C in HTA were smaller than in CG; the contribution and duration of class A and the transition probability between class A and class C in HIU were higher than in CG. Conclusions: TA and IU are two anxiety-related but relatively independent traits, which are mainly reflected in the visual network and aDMN as the neural underpinning of HTA, while the neural basis of HIU is mainly manifested in the language network and aDMN. Significance: Initial efforts to dissociate TA and IU at the neural level could provide evidence for a better understanding of the development of anxiety.

Keywords: trait anxiety, intolerance of uncertainty, resting-state EEG, microstate

基于题组的计算机化多阶段自适应测验

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摘要 许多教育测试程序要求测验在统计约束上保持平行并满足一定的内容属性。计算机化多阶段自适应测验(MST)作为纸笔测验和计算机化自适应测验(CAT)的“折中”,基于自动组卷算法(ATA)可以组装平行的测验形式。MST因其自身的优势受到许多大规模测验的青睐,如美国注册会计师考试(CPA)、美国研究生入学考试中(GRE)等。MST同CAT一致,也依赖于模型假设。但在心理或教育测验中,经常出现局部项目依赖性(LID)。若直接使用标准项目反应理论(IRT)模型去拟合存在局部项目依赖性的反应数据会导

致诸多问题。因此, 本文将题组反应模型 (TRM) 和双因子模型 (BM) 应用到题组测验的 MST 中, 通过模拟研究和应用研究探究 TRM 和 BM 在 MST 中的准确性和影响因素, 并与忽略题组效应的标准 IRT 模型进行对比。本研究的主要思路是: 先假设被试在 MST 施测过程中的作答受 LID 影响, 后续采用考虑/不考虑 LID 的 IRT 模型对作答数据进行分析, 最后再根据参数估计值与“真值”之间的差异来呈现和探讨 LID 对测验结果所带来的影响。具体而言: 采用 TRM 作为真实模型生成作答数据, 分别采用标准 IRT 模型、TRM、BM 分析被试的作答数据。为简化研究且不失一般性, 假设每个模块中的 LID 方差大小相同, 考察 LID 的大小为小、中、大三种情况。本研究将两类自动组卷算法的代表性算法用于组卷平行面板, 即: 标准化加权绝对离差启发法 (NWADH)、混合整数编程 (MIP)。本研究采用三个常用的路由规则将被试路由到下一阶段的合适的模块, 即: 最大 Fisher 信息量 (MFI) 法、人数平均分配 (DPI) 法、临近 (proximity) 法。通过上述实验设计以期探究 MST 在不同条件下受 LID 的影响情况。研究的评价指标包括组卷质量和参数返真性两方面。组卷质量方面, 采用非统计约束违背率 ($\bar{v}$) 作为面板非统计约束管理的评价指标; 采用均方差 (MSD) 作为面板平行性的评价指标。均方误差 (MSE)、偏差 (Bias) 作为被试能力参数返真性的评价指标。结果表明: (1) 采用 MIP 进行平行面板的组卷效果优于 NWADH; (2) 采用 TRM、BM 分析被试的作答数据相较于标准 IRT 模型更能处理 LID 对 MST 的影响; (3) MST 中, 路由规则为 proximity 法的被试能力参数返真性结果优于 DPI 法、MFI 法; (4) 随着 LID 的增大, 被试能力参数返真性变得越差。综上所述, 使用 TRM、BM 分析数据可以在一定程度上缓解 LID 对 MST 的危害。本研究对于提高测验分析结果的准确性和科学性具有一定的指导意义。

关键词 计算机化多阶段自适应测验, 局部项目依赖性, 题组反应模型, 双因子模型

Testlet-Based Multistage Testing

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Abstract: Many educational testing programs require that different test forms should be parallel in terms of their statistical and content-related properties. As module level adaptive testing designs, Multistage testing (MST) can assemble parallel test forms based on the automated test assembly (ATA) algorithms. Due to its advantages, MST is receiving increasingly popularity and is used by several major testing programs (e.g., CPA and GRE) as an alternative adaptive test design. Consistent with CAT, MST also relies on item response theory (IRT) model assumptions. Whereas local item dependence (LID) usually exists in several psychological or educational tests. Failure to meet local independence assumption could produce many problems. Thus, the purpose of this study is that using testlet response model (TRM) and bifactor model (BM) to relieve the perniciousness of LID in testlet-based MST. A simulation study based on simulated-data was conducted to investigate the performance of the testlet-based MST under different conditions, with manipulation of the four factors: the magnitudes of LID (low, moderate, and high), the ATA (normalized weighted absolute deviation heuristic [NWADH] and mixed-integer programming [MIP]), the routing rule (approximate maximum information [AMI], defined population intervals [DPI], and proximity method) and the parameter estimation model (two-parameter logistic model [2PLM], TRM, and BM). In addition, a simulation study based on real-data was conducted to discuss the practicality of TRM and BM in testlet-based MST with English assessment data. Both the simulation-data and real-data analysis were compared with the testlet-based MST when analyzing the response data based on the 2PLM, which ignored the testlet effects. In this study, some evaluation criteria were calculated to evaluate the test assembly quality and parameter recovery. Specifically, constraint management and panels parallelism were used to check the test assembly quality. Besides, bias, mean squared error (MSE), and correlation between truth and estimates were used to test the recovery of person parameters. Results indicated that (1) the MIP had a better performance than the NWADH in the non-statistical constraints for testlet-based MST; (2) the overall performance of using TRM and BM to analyze the response data of test takers were better than that of 2PLM; (3) the measurement accuracy of using the proximity method as routing rule in MST was better than that of DPI method and AMI method; (4) as the increase of the magnitudes of LID, the recovery of person

parameters is worse. In conclusion, using TRM and BM can relieve a part of perniciousness of LID in testlet-based MST. This study has some significance for improving the accuracy of test results.

Keywords: multistage testing, local item dependence, testlet response model, bifactor model

高社会经济地位提升男性而非女性的疫情信心： 旁海马灰质体积的预测作用

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摘要 背景:家庭社会经济地位 (socioeconomic status, SES) 是由个体或父母的收入及受教育水平等社会因素的综合,是影响个体认知神经发展的重要环境因素。相较于来自高 SES 家庭的个体,来自低 SES 家庭的个体会面临更多的物质与非物质资源的不确定性因素,比如食物匮乏、父母教养质量差、家庭混乱等。而作为突发的公共卫生事件,新型冠状病毒 (COVID-19) 具有快速传播及一定的死亡率等特点。面对此次疫情,群众不可避免地会产生威胁感与不确定性。因此,本研究旨在探索家庭社会经济地位如何影响个体面对疫情时的信心水平。**方法** 本研究的数据采集于两个不同的时间点。首先在疫情爆发之前 (2019 年 9 月 17 日-2020 年 1 月 11 日), 606 名 (年龄, 19.36 ± 0.82) 大一新生接受结构像扫描,同时收集其人口统计学信息,包括 SES。其次在中国疫情爆发的高峰期 (2020 年 2 月 1 日-2020 年 2 月 28 日), 对同一批被试进行疫情信心的追踪调查。**结果** 调节效应分析发现,家庭社会经济地位和性别的交互作用可以显著预测个体的疫情信心水平。具体而言,在男性群体中,个体的疫情信心程度会随着 SES 的提升而提升;而在女性群体中,SES 无法显著预测疫情信心。此外,基于体素的形态学分析 (voxel-based morphometry, VBM) 技术发现,SES 水平更高的个体,其皮上区域的灰质体积越低,包括左侧额中回、左侧楔叶、双侧顶叶。而皮下脑区却呈现出更高的灰质体积,包括左侧小脑、右侧颞中回、左侧旁海马。更重要的是,进一步的调节效应分析发现:和行为结果类似,与 SES 相关的大脑形态学特征和性别之间的交互作用会显著预测疫情信心。即,左侧旁海马的灰质体积会提升男性的信心水平,但是这一关系在女性中并不显著。值得注意的是,其他与 SES 相关的大脑灰质体积与性别之间无显著的调节作用。**结论** 本研究揭示了家庭社会经济地位在预测个体面对疫情时信心水平的性别差异,及其潜在神经基础。在疫情防控过程中,需要针对不同人群的心理健康进行干预,尤其是来自于低 SES 家庭的个体和女性,以增强其应对疫情的信心水平。

关键词 家庭社会经济地位, 性别, 疫情信心, 基于体素的形态学分析技术

Higher socioeconomic status strengthens confidence facing the COVID-19 pandemic for the males rather than females: the predictive role of gray matter volumes in parahippocampus

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Abstract: Socioeconomic status (SES) has a large impact on the way individuals respond to the environmental threats. However, less is known about how SES links to personal confidence in confronting COVID-19 and the underlying neural mechanisms. To this end, we assessed self-confidence in coping with this pandemic on 606 participants during its peak in China (Feb. 21, 2020 – Feb. 28, 2020), who underwent magnetic resonance imaging (MRI) scanning before the outbreak (Sept. 17, 2019 – Jan. 11, 2020). We found that males, rather than females, showed heightened confidence levels as SES increased. Furthermore, a moderation analysis showed a similar interaction effect: greater gray matter volumes in parahippocampus predicted higher confidence for males but not for females. Overall, current

study revealed the deficient psychological resources for specific population (i.e., women) to cope with pandemic.

Keywords: Socioeconomic status, gender difference, confidence, voxel-based morphometry, COVID-19

自我矛盾的神经基础：一项 ERP 研究

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摘要 我们生活在一个充满矛盾的世界里, 每天需要面对各种各样的矛盾。文化心理学研究发现, 东方人更能容忍矛盾的存在, 并通过中庸、妥协等方式整合矛盾的方面。在自我领域, 东方人的自我概念中包含了更多矛盾的内容(如既外向又内向)。目前已有大量行为研究支持了自我矛盾现象的存在, 并揭示了其对心理适应等重要变量的影响, 但对于其神经机制的研究仍然十分有限。本文利用脑电技术, 结合自主开发的自我参照范式, 探索自我矛盾加工是否具有独特的神经表征。基于线性混合模型的事件相关电位分析显示, 自我矛盾加工的效应主要体现在晚成分(N2、N450、P3)上, 而中线脑区的 N450 在自我矛盾加工中的激活程度与辩证自我量表得分呈显著正相关。本研究首次揭示了自我矛盾加工在脑电完成成分上的独特表征, 并进一步印证了皮质中线在自我矛盾加工中的作用。

关键词 自我矛盾, 自我参照效应, 事件相关电位, 晚成分, DSS

The Neural Basis of self-ambivalence: An ERP Study

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Abstract: We live in a world full of contradictions, and dealing with conflicting information is a task we face every day. Oriental people are more tolerant of contradictions and integrate the contradictory aspects by means of middle ground and compromise. In the self domain, the Oriental self-concept contains more contradictory elements (e.g., both extroverted and introverted). A large body of behavioral research has supported the existence of the self-ambivalence phenomenon and revealed its influence on important variables such as psychological adaptation, but research on its neural mechanisms is still limited. This paper explores whether self-ambivalence processing has a unique neural representation using EEG techniques in conjunction with an independently developed self reference paradigm. Analysis of event-related potentials based on a linear mixed model showed that the effects of self-ambivalence processing were mainly on the late components (N2, N450, P3), and the activation of N450 in the midline brain regions in self-ambivalence processing was significantly and positively correlated with dialectical self scale scores. The present study reveals for the first time a unique representation of self-ambivalence processing on the EEG completion score and further corroborates the role of the cortical midline in self-ambivalence.

Keywords: self-ambivalence, Self-reference effect, Event-related potential, late components, DSS

金钱拟人化对个体捐赠意愿的影响

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摘要 目的: 本研究旨在探讨金钱拟人化如何影响个人捐赠意愿的问题, 特别是捐赠受益人类型对于金钱

拟人化捐赠的具体影响。方法：实验 1 采用 2（货币拟人化：拟人化 vs. 非拟人化）×2（捐赠受益人：儿童 vs. 成人）的组间设计，调查了金钱拟人化和同理心对慈善捐赠的影响、机制及受益者类型的调节作用。被试在观看有（或无）拟人化特征的金钱图片后，观看一则儿童（或成人）听障患者的捐赠广告并表明其捐赠意愿。此外，实验 1 还测量了被试对金钱的感知温暖和能力以及被试的共情水平。实验 2 旨在探讨受试者的经验类型（残疾或疾病）对金钱拟人化效应的影响。实验 2 使用单因素组间设计（金钱拟人化组 vs. 非金钱拟人化组）。操纵程序与实验 1 完全相同，之后所有被试阅读一则帮助患尘肺病的成年人的捐赠广告并表明自己的捐赠意愿。实验 2 还测量了被试对捐赠行为的感知影响力。实验 3 使用功能性近红外光谱(fNIRS)证实了实验 1 的结果，并进一步区分金钱和拟人化二者各自的作用。采用了 2（拟人化：存在 vs. 不存在）×2（刺激类型：金钱 vs. 产品）的组间设计。在观看不同的刺激图片后，被试阅读儿童捐赠材料并回答与实验 1 相同的捐赠问题。在实验 3 全程，被试均佩戴 fNIRS 设备以检测其额下回和眶额叶皮层的激活情况。结果：实验 1 的结果发现，金钱拟人化组的被试捐赠意愿显著高于非金钱拟人化组，并且该过程由幻想共情中介。此外，这种金钱拟人化效应在受益人是儿童时更显著。实验 2 的结果发现，当受益人是患病的成年人时，金钱拟人化并没有增强人们的同情心和捐赠意愿。实验 2 还证实感知影响力对成年受益人的捐赠意愿的显著正向影响。实验 3 的结果表明，在金钱拟人化的条件下，左侧额下回的激活显著高于其他三组，说明只有金钱和拟人化结合才能显著增强共情。结论：本研究表明，金钱拟人化促进了个人的捐赠意愿，这是由幻想的移情反应中介的。捐赠受益人（儿童与成人）会调节这种影响。将行为测量与 fNIRS 相结合，本研究丰富了货币和拟人化的相关文献及研究方法。研究结果对慈善事业有实际意义。

关键词 金钱拟人化，共情反应，捐赠受益人，消费者神经科学

Donation Beneficiary Matters: Effect of Money Anthropomorphism on Donation Intention

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Abstract: Objects: This research aims to explore how money anthropomorphism affects donate intention, especially the specific influence of the type of donation beneficiaries on the money anthropomorphism donations. Method: Study 1 adopts a 2 (currency personification: personification vs. non-personification) × 2 (donation beneficiaries: children vs. adults) between-subject design of to investigate the influence and mechanism of money anthropomorphism and empathy on donate intention, and the moderating role of beneficiary types in this process. Participants saw a donation advertisement for hearing-impaired children (or adults) after watching pictures of money with (or without) anthropomorphic features and indicated their donate intention. In addition, Study 1 also measured perceived warmth and competence to money and the subjects' empathy. Study 2 aims to explore the influence of the beneficiary's experience type (disability or illness) on the money anthropomorphism effect. Study 2 used a one-factor between-subject design (money anthropomorphism group vs. non-money anthropomorphism group). The manipulation was the same as Study 1. Then, all subjects read a donation advertisement which aimed to help adults suffering from pneumoconiosis and indicated their donate intention. Study 2 also measured participants' perceived influence on the donation. Study 3 used functional near-infrared spectroscopy (fNIRS) to confirm the results of Study 1, and further distinguished the respective roles of money and anthropomorphism. A 2 (anthropomorphism: existence vs. non-existence) × 2 (stimulus type: money vs. product) between-subject design was adopted. After watching different stimulus pictures, the participants read the donated materials aimed to help children and answered the same donation questions as in Study 1. Throughout Study 3, the participants wore the fNIRS device to detect the activation of their inferior frontal gyrus and orbitofrontal cortex. Results: The results of Study 1 found that donate intention in the money anthropomorphism group was significantly higher than that in the non-money anthropomorphism group, and the process was mediated by fantasy empathy. In addition, the money anthropomorphism effect is more pronounced when the beneficiary is a child. The results of Study 2 showed that when the beneficiary is an adult with

illness, the money anthropomorphism did not enhance empathy and donate intention significantly. Study 2 also confirmed the significant positive impact of perceived impact on the donation intention for adult beneficiaries. The results of Study 3 show that under the condition of money anthropomorphism, the activation in the left inferior frontal gyrus is significantly higher than the other three groups, indicating that only the combination of money and anthropomorphism can significantly enhance empathy. Conclusion: This research shows that the money anthropomorphism promotes donate intention, which is mediated by the fantasy empathy. Donation beneficiaries (children vs. adults) can moderate this impact. Combining behavioral measurement with fNIRS, this research enriches the literature and research methods related to currency and personification. Findings of this research have great practical implications for charity.

Keywords: money anthropomorphism, empathic response, donation beneficiary, consumer neuroscience

第二语言词汇习得年龄效应及其与母语词汇习得年龄的关系

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摘要 词汇的习得年龄(age of acquisition, AoA)效应是指早期习得的词汇比晚期习得的词汇加工速度更快, 正确率更高。该效应在第一语言(first language, 一语, L1)上已经得到了广泛地验证, 但在第二语言(second language, 二语, L2)当中的研究较少, L2AoA 效应是否存在及其与 L1AoA 是什么关系尚不清楚。本研究旨在考察中国英语学习者, 英语词汇习得的年龄效应及其与汉语翻译对等词习得年龄的关系。实验 1 和实验 2 正交地操纵了 L2AoA (早和晚) 和 L1AoA (早和晚), 均采用词汇判断任务, 记录被试的反应时和正确率。实验 1 和 2 的不同之处在于填充词: 实验 1 的填充词为正字法不合法、不能发音的非词, 被试仅通过浅层的正字法加工就能做出判断; 实验 2 的填充词为正字法合法、能发音的非词, 被试需要较多的语义加工才能做出真假词的判断, 填充词的变换能让我们考察在语义和正字法加工阶段下的 L2AoA 效应。实验 1 发现存在早习得词语正确率高于晚习得词语的数据趋势。实验 2 发现早习得词语的反应时短于、正确率高于晚习得词语。在两个实验中, L1AoA 的主效应以及二者的交互作用均不显著。这表明 L2AoA 独立于 L1AoA 影响二语词汇的加工, 该效应不仅来源于正字法加工阶段, 还来源于语义加工阶段。但是根据 Dirix 和 Duyck (2017), 实验 1 和 2 没有发现 L1AoA 对 L2AoA 效应的影响可能是因为实验材料的词长较短(约 5.7 个字母)。为此, 实验 3 采用大样本的词语材料结合词汇判断任务, 在包含更多的实验材料和变量的情况下考察 L2 AoA 效应。实验结果发现, L2AoA 的主效应显著, 更重要的是 L2AoA, L1AoA 和词长的三重交互作用显著: 在长词上(至少 10 个字母), L2AoA 的效应仅在 L1AoA 较早时显著, 即只有当汉语翻译对等词是早习得时, 英语词汇的 AoA 才会影响被试的词汇判断; 在短词上, L2AoA 的显著效应不受到 L1AoA 的影响。综合三个实验的结果, 第二语言的词汇习得年龄效应影响词形和语义加工阶段。当二语词汇为长词时, 该效应会受到母语词汇习得年龄的影响, 在语义加工水平上。语义假设和任意映射假设的观点均不能单独解释本研究的结果, 我们认为在解释二语词汇习得年龄效应时, 不仅要综合这两种假设, 还需要考虑二语词汇通达和表征的特征。

关键词 习得年龄, 第二语言, 词汇加工, 词长

The second language age of acquisition effect and its relationship with the first language age of acquisition

Abstract: The age of acquisition (AoA) effect refers to that words acquired earlier are processed more quickly and correctly than words acquired later, and this AoA effect in the first language (L1) has been widely accepted. However, the role of AoA in the second language (L2) and its relationship with L1 AoA remains controversial. In the present study, we aimed to examine the AoA effect of English words and its relationship with the AoA of Chinese equivalent words among Chinese English learners. In Experiments 1 and 2, L2 AoA and L1 AoA were manipulated, and a lexical decision task was adopted. The filler words in the lexical decision task were orthographically illegal in Experiment 1, where more word form processing was required. However, legal fillers were chosen in Experiment 2, where more

semantic activation was needed to make lexical decision. In Experiment 1, there was a tendency that early acquired L2 words were processed more accurately than late acquired L2 words. In Experiment 2, early acquired L2 words were identified faster and more accurately than late acquired L2 words. In both experiments, the L2 AoA effect was not influenced by L1 AoA. These results showed that the L2 AoA effect can be independently observed at the semantic and orthographic representational levels. However, according to the evidence of Dirix and Duyck (2017), the lack of influence of L1 AoA on the L2 AoA effect might be caused by the short word length (about 5.7 letters). Consequently, in Experiment 3 we adopted a mega study and lexical decision task, including a large amount of stimuli and multiple variables. We found a significant main effect of L2 AoA and a marginally significant main effect of L1 AoA. More importantly, a significant three-way interaction of L2 AoA, L1 AoA, and word length was obtained, i.e., for long words, the L2 AoA effect was significant only when L1 AoA was early, that is, the AoA of English words affected the word judgment only when Chinese equivalent words were acquired earlier; however, for short words, the significant L2 AoA effect was not influenced by L1 AoA. Taken together, L2 AoA affects both word form and semantic processing levels. L2 AoA effect was influenced by L1 AoA when the word length was long at the semantic processing level. Regarding the mechanism of L2 AoA effect, the results indicate an integration of Semantic and Arbitrary Mapping Hypotheses, as well as the characteristics of L2 lexical representation and access.

Keywords: age of acquisition, second language, word processing, word length

神经功能连接组编码新型冠状病毒引发的肺炎疫情中的创伤后应激压力障碍转化风险

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摘要 新型冠状病毒引发的肺炎大流行病在袭击了全球, 并给全球人类造成了空前的损失和压力。而另一方面, 新冠疫情大流行病造成的精神健康障碍, 尤其是创伤后应激压力障碍, 正日益受到更多的关注。因此, 如果提前预测暴露在新冠疫情这场应激事件中个体产生创伤后应激压力障碍的高风险是目前亟待解决的核心问题。在新冠疫情爆发前(2019年9月-2020年1月), 本研究扫描了1211名健康成年人的静息态神经影像, 并在中国疫情的高峰期(2020年2月21-28日)对这些被试的创伤后应激压力障碍症状进行了后测。因此, 本研究基于伪前瞻性队列设计, 尝试利用疫情前的神经功能连接组特征预测个体在疫情中创伤后应激压力障碍产生转化的风险。本研究流行病学调查的结果发现, 5.60%的被试满足创伤后应激压力障碍的临床标准, 而12.00%的被试被发现存在较严重的创伤后应激压力障碍症状。基于深度学习模型, 本研究发现, 被试疫情前的神经功能连接组状态能够准确地预测性识别被试是否会在疫情中转化创伤后应激压力障碍(准确率=76.19%; 敏感性=71.43%; 特异性=80.95%)。本研究进一步的构建了基于神经连接组的预测模型, 结果发现, 疫情前的神经连接组状态还能够同时预测创伤后应激压力障碍患者症状的严重程度。因此, 本研究首先证实了新冠疫情的确造成了被试的创伤后应激压力障碍的转化, 并且第一次揭示了, 我们可以通过个体的神经连接组预备状态预测个体在新冠疫情中转化创伤后应激压力障碍的风险。

关键词 新型冠状病毒引发的肺炎疫情;创伤后应激压力障碍;深度学习;神经连接组

伴童年创伤抑郁症患者中枢执行系统损害 与氢质子磁共振波谱研究苗

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摘要 目的：童年创伤是抑郁症的重要风险因子。伴与不伴童年创伤的抑郁症发病机制可能有所不同。童年创伤和抑郁症独立造成的认知损害交集于工作记忆，而工作记忆的核心为中枢执行系统。中枢执行系统损害与额叶、基底节等脑区异常密切相关。因此，本研究比较伴与不伴童年创伤抑郁症患者中枢执行系统，检测前额叶白质、前扣带回皮质、壳核和小脑的生化代谢指标，探索童年创伤对抑郁症患者中枢执行系统功能和脑生化代谢的影响，为揭示抑郁症发病机制提供新证据。方法：根据 DSM-5 诊断标准，共入组 107 例未经治疗的 18-50 岁抑郁症患者，招募 55 名不伴童年创伤的健康对照（HC）。研究的第一部分入组 62 例抑郁症患者，根据童年创伤问卷，分为 32 例伴童年创伤组（CT）、30 例不伴童年创伤组（NCT），招募 30 名 HC，采用 Stroop 范式、2-back 范式、任务转换范式检测中枢执行系统的抑制、刷新和转换功能。第二部分入组 CT 组 37 例，NCT 组 35 例，HC 组 30 名，通过氢质子磁共振波谱（Hydrogen Proton Magnetic Resonance Spectroscopy, MRS）检测前额叶白质、前扣带回皮质、壳核和小脑的 N-乙酰天门冬氨酸（NAA），胆碱（Cho），肌酸（Cr），比较组间的 NAA/Cr 和 Cho/Cr 比值。第一、二部分中，有 11 例 CT 组患者共同完成了中枢执行系统与 MRS 检测，以分析二者的相关。结果：CT 组抑制正确率低于 HC 组（ $p=0.035$ ）；CT 组刷新正确率低于 NCT 组与 HC 组（ $p=0.028$, $p<0.001$ ）。CT 组与 NCT 差异在于左侧前扣带回皮质的 Cho/Cr：NCT 组在左侧前扣带回皮质的 Cho/Cr 高于 CT 组与 HC 组，而 CT 组高于 HC 组（ $p=0.044$, $p<0.001$, $p=0.014$ ）。病例组（NCT 和 CT 组）与 HC 组差异在于双侧 ACC、双侧壳核、双侧小脑的 NAA/Cr 和 Cho/Cr（均 $p<0.05$ ）。刷新反应时与左侧 ACC、左侧小脑的 NAA/Cr 呈显著负相关（ $r=-0.779$; $r=-0.707$ ）。结论：伴童年创伤抑郁症患者的中枢执行系统损害更为严重，表现在抑制和刷新功能。童年创伤可能抑制了抑郁症患者左侧前扣带回皮质神经元的膜磷脂代谢而加重抑郁。前扣带回皮质-壳核-小脑环路的脑代谢异常与抑郁症发病和中枢执行系统损害密切相关。

关键词 抑郁症，童年创伤，中枢执行系统，氢质子磁共振波谱，前扣带回皮质-壳核-小脑环路

Central Executive System impairing and Hydrogen Proton Magnetic Resonance Spectroscopy in Major Depressive Disorder patients with childhood trauma

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Abstract: Objective: Childhood trauma (CT) is closely related to the onset of Major Depressive Disorder (MDD). In recent years, studies have found that patients with MDD have extensive cognitive impairment. Working memory impairment is an important clinical feature. It is closely related to abnormal structure and function of frontal lobe, basal ganglia and other brain regions. However, the effect of childhood trauma on the working memory system and brain metabolism of MDD patients is still unclear. Therefore, this study analyzed and compared the Central Executive System (CES) function in MDD patients with and without childhood trauma at prefrontal white matter (PWM), anterior cingulate cortex (ACC), putamen and cerebellum to explore the effects of childhood trauma on the function of CES and brain biochemical metabolism in patients with MDD. Methods: According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition: (DSM-5), 107 untreated MDD patients and 55 healthy controls were recruited. In the first part, 62 MDD patients were enrolled and screened for childhood trauma according to Childhood Trauma Questionnaire (CTQ), and were eventually divided into 32 patients in the group with Childhood Trauma (CT group) and 30 patients in the group without Childhood Trauma (NCT group). During the same period, 30

healthy controls without childhood trauma were recruited as healthy control group (HC group). Stroop paradigm, 2-back paradigm and task-switching paradigm were used to evaluate the CES functions, including inhibitory function, refresh function and switching function. In the second part, 72 MDD patients were included, including 37 in the CT group, 35 in the NCT group, and 30 in the HC group. Detection N-acetylaspartate(NAA), choline (Choline, Cho), creatine (Cr) of PWM, ACC, putamen and cerebellum by Hydrogen Proton Magnetic Resonance Spectroscopy (¹H-MRS) technology, calculate and compare the NAA/Cr and Cho/Cr ratios among the three groups. Last, 11 patients with childhood trauma who completed the CES test and ¹H-MRS were analyzed to explore the correlation between CES and brain biochemical metabolic indexes. Results: The incidence of childhood trauma in MDD patients was 54.2%, 45.2% in males and 57.9% in females. Emotional neglect was the most common childhood trauma (41.1%). For CES, the inhibition accuracy of CT group was 91.58%, lower than that of HC group (94.54%)($p=0.035$). The updating accuracy of CT group was 62.86%, which was lower than that of NCT group (73.06%) and HC group (80.78%) ($p=0.028$, $p<0.001$). There were no significant differences among the other groups. In the aspect of brain metabolism, the differences between the three groups were concentrated in ACC, putamen and cerebellum. The difference between the CT and the NCT group was reflected in ACC. Notable results are the NAA/Cr of the CT and the NCT group were both lower in bilateral ACC than HC group (all $p<0.001$); The Cho/Cr in left ACC of NCT group was higher than CT and HC group, and CT group was higher than HC group ($p=0.044$, $p<0.001$, $p=0.014$). The Cho/Cr of right ACC in CT and NCT groups was higher than HC group ($p=0.042$, $p=0.001$). Third, the NAA/Cr in the CT group and the NCT group were both lower than HC group (all $p<0.05$). Cho/Cr in both CT and NCT groups was higher than HC group (all $p<0.05$). Last, the NAA/Cr in bilateral cerebellum of CT and NCT group was higher than that of HC group (all $p<0.001$); The bilateral cerebellum Cho/Cr in CT and NCT groups was lower than that in HC group (all $p<0.05$). In the CT group, the inhibition accuracy was negatively correlated with the Cho/Cr of left PWM ($r=-0.764$, $p=0.017$); Refreshing response time was negatively correlated with left ACC and left cerebellum NAA/Cr ($r=-0.779$, $p=0.013$; $r=-0.707$, $p=0.033$), significantly negatively correlated with Cho/Cr of left PWM ($r=-0.746$, $p=0.021$). Switching accuracy was negatively correlated with the NAA/Cr ratio in the right putamen ($r=-0.695$, $p=0.038$). Switching response time was significantly positively correlated with the Cho/Cr of right ACC and negatively correlated with the Cho/Cr of left putamen ($r=0.738$, $p=0.023$; $r=-0.733$, $p=0.025$). Conclusion: The detection rate of childhood trauma is higher in the patients with MDD, and the CES impairment of the MDD patients is more serious than that of the patients without childhood trauma, which is manifested in the inhibitory function and refresh function. The abnormal brain metabolism in patients with MDD mainly exists in the anterior cingulate gyrus cortex-putamen-cerebellar circuit. Childhood trauma has a long-lasting and significant impact, causing an abnormal decrease in the membrane choline metabolism of the left anterior cingulate cortex in patients with MDD. Abnormal metabolism of the ACC-putamen-cerebellar circuit plays an important role in the pathogenesis of MDD, and the abnormal metabolism of this circuit is closely related to the impairment of CES.

Keywords: Major Depressive Disorder, Childhood trauma, Central executive system, Hydrogen Proton Magnetic Resonance Spectroscopy, ACC-putamen-cerebellar circuit

享乐目标唤起影响食物信息加工的 ERP 研究：基于双系统模型

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摘 要 个体在进食过程中可以获得快感, 满足自身享乐需求。当享乐目标唤起时, 个体往往容易产生冲动进食行为。饮食对人类的生存具有重要意义, 除了满足能量需求, 个体还可以在进食过程中获得快感, 满足自身享乐需求。当享乐目标唤起时, 个体往往容易产生冲动进食行为。以往研究大多探讨肥胖个体对食物信息的认知加工, 而较少从体重正常个体的角度关注享乐目标的唤起对食物信息的认知加工机制。本研究基于双系统模型, 从自动系统的注意偏向和自我调节系统的抑制控制两方面, 探究享乐目标的唤起对食物信息认知加工的影响。研究采用点探测范式、双选择 oddball 任务范式, 结合事件相关电位(ERP)技术, 构建 2(享乐

目标唤起状态：唤起、未唤起)×2(图片类型：高热量食物图片、非食物图片)被试内实验设计，通过两个 ERP 实验考察享乐目标驱动冲动进食行为背后的神经机制。实验一使用点探测范式，具体探究享乐目标唤起对食物信息注意偏向的影响。结果发现，在享乐目标唤起条件下，高热量食物图片比非食物图片诱发了更大的 N1 波幅。实验二使用双选择 oddball 范式，具体探究享乐目标唤起对食物信息抑制控制的影响。结果发现，在享乐目标唤起条件下，高热量食物图片比非食物图片诱发了更大的 P3 波幅。这表明当唤起享乐目标时，个体对高热量食物图片表现出早期注意偏向的增强，且对高热量食物图片存在反应抑制缺陷。本研究从神经层面证明了享乐性进食行为是冲动系统和反应系统共同作用的结果，从享乐性进食行为的角度支持了双系统模型在饮食中的应用。

关键词 享乐目标，双系统模型，注意偏向，抑制控制，ERP

An ERP study on the impact of hedonistic goal arousal on food information processing: Based on a two-system model

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Abstract: Individuals can get pleasure in the process of eating to meet their enjoyment needs. When the hedonistic goal is aroused, individuals tend to have impulsive eating behavior. Most of the previous studies focused on the cognitive processing of food information in obese individuals, but few focused on the cognitive processing mechanism of food information in hedonistic goal arousal from the perspective of normal weight individuals. Based on a two-system model, this study explored the effect of hedonistic goal arousal on the cognitive processing of food information from two aspects: the attentional bias of the automatic system and the inhibitory control of the self-regulating system. This research used a point-detection task and a two-choice oddball task, combined the technique of event related potential (ERP) to build two 2 (pleasure arousal state goals: Arouse, Not arouse) × 2 (picture type: High calorie food pictures, Non-food pictures) within-subjects design. Two ERP experiments were conducted to investigate the neural mechanisms behind hedonic goal-driven impulsive eating behavior. In experiment 1, the effect of hedonistic goal arousal on attentional bias of food information was explored using point detection paradigm. The results showed that under the hedonistic goal arousal condition, the high-calorie food pictures evoked greater N1 amplitude than the non-food pictures. Experiment 2 used two-choice oddball paradigm to investigate the effect of hedonic goal arousal on inhibitory control of food cues. The results showed that under the hedonistic goal arousal condition, the high-calorie food pictures evoked greater P3 amplitude than the non-food pictures. The results showed that when the hedonistic goal was evoked, the individuals showed an early attentional bias enhanced to the high-calorie food pictures, and had a response inhibition defect to the high-calorie food pictures. This study proves that hedonic eating behavior is the result of the interaction between the impulsive system and the reactive system from the neurologic level, and supports the application of the two-system model in eating behavior from the perspective of hedonic eating behavior.

Keywords: Hedonic goal, Two-system model, Attentional bias, Inhibitory control, ERP

(2) 博士研究生论坛—基础心理学分场 2

基于脑功能连接组的健康老年人信任倾向预测

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摘要 信任倾向是一项重要的社会功能。与常规认知功能的老化模式不同, 它并没有呈现出随年龄增长而下降的趋势; 相反地, 随着年龄的增长, 老年人表现出更积极的信任倾向, 并且在特定脑区上也有更强的激活。然而健康老年人在非任务态下的信任倾向脑网络及其与认知和非认知表现之间的关系尚不清楚。本研究收集了 83 名健康老年人 (64.51 ± 6.86) 的静息态功能磁共振影像, 以及他们在一轮信任游戏和神经心理学测试 (如认知测试, 睡眠问卷, 情绪测量) 上的测试成绩。本研究采用 268 节点的脑图谱模板构建个体的全脑功能连接 (Functional connectivity, FC) 矩阵, 基于脑功能连接组的预测建模 (Connectome-based prediction modeling, CPM) 对健康老年人的信任倾向进行预测。CPM 能识别与信任倾向相关的正性和负性脑网络, 其中正性和负性网络分别由与信任倾向存在正相关或负相关的功能连接构成, 同时计算各个网络的总连接强度对信任倾向的预测能力。此外本研究采用模拟损伤的方法来考察特定脑区的功能连接缺失对行为预测的影响。最后为了探讨信任倾向与认知和非认知表现的关系, 本研究使用回归分析分别考察信任倾向及其总网络强度与神经心理学测试成绩的关联。CPM 的结果表明, 只有负性网络能显著预测老年人的信任倾向。而在负性网络中, 顶叶的节点特别是颞顶联合区存在最多的相关连接。模拟损伤分析表明, 顶叶和颞叶的功能连接缺失会显著降低模型的预测力。最后回归分析表明, 信任倾向及其负性网络的总连接强度仅与睡眠质量有相关, 与认知能力测试无关。上诉结果表明, 顶叶和颞叶的功能连接在预测老年人的信任倾向中有着重要的作用, 而这与既往研究中发现的年轻人信任倾向的神经机制存在差异。相较于认知功能, 信任倾向可能与非认知特征特别是睡眠的关系更密切。综上所述, 本研究支持前人的观点, 亲社会行为例如信任倾向及其潜在的神经机制可能具有与一般认知功能不同的老化模式。

关键词 基于脑功能连接组的预测建模, 信任倾向, 静息态功能磁共振影像, 功能连接, 老化

Connectome-based prediction of trust propensity in healthy older adults

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Abstract: As a crucial social function, trust propensity does not decrease with age like general cognitive functions; it exhibits a positive bias with age and often enhances neural activity in specific brain areas. However, the task-free network of trust propensity and its relationship with cognitive and non-cognitive characteristics in healthy older adults is still unknown. In this study, we tested 83 healthy older adults (64.51 ± 6.86) who completed a resting-state functional magnetic resonance imaging (rs-fMRI) scan, a one-round trust game, and psychological control measures (e.g., cognitive tests, sleep questionnaire, and emotional measurements). We applied connectome-based prediction modeling (CPM) to predict trust propensity in healthy older adults based on whole-brain functional connectivity (FC), implementing a 268-node. CPM identifies the positive and negative network consisting of the FC that positively/negatively correlates with trust propensity and examines the prediction power of their total strength. Further, we performed a simulated lesion analysis to investigate the contribution on FC of specific lobes. Finally, we conducted a regression analysis separately between trust propensity and its total network strength to other

questionnaires' scores to investigate their relationship with cognitive/non-cognitive characteristics. Our CPM results showed that only the negative network significantly predicted the trust propensity in healthy older adults. The nodes of the parietal lobe, especially the temporal-parietal junction, provided the greatest amount of connectivity in this network. Our lesion analysis indicated that the loss on FC of the parietal and temporal lobes significantly decreased the prediction power. Finally, the regression analysis revealed that trust propensity and the total strength of its negative network were only significantly associated with sleep quality but not with cognitive ability measures. These findings indicated that the prediction of trust propensity in healthy older adults with high contribution of FC in parietal and temporal lobe represented different neural patterns to younger adults as reported in previous studies. Trust as a social function might be independent of cognitive decline and non-cognitive problems —especially sleep quality might more be associated with trust in healthy older adults. In conclusion, our study supports that a prosocial behavior such as trust propensity and its underlying neural mechanism might have a different aging pattern to general cognitive function.

Keywords: Connectome-based predictive modeling, Trust propensity, Resting-state fMRI, Functional connectivity, Aging

定向线索在孤独症者生命知觉中的作用：基于眼动的研究

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摘 要 生命知觉(perception of animacy)指人们通过各种线索将环境中即使没有生命的客体识别为具有自我意识以及交互行为的生命体的过程。有研究者发现了一种定向优势现象，即当物体朝向与其运动方向保持恒定关系时会显著提高个体的生命知觉，在本研究中我们将这种恒定关系称为定向线索。有关孤独症谱系障碍者(Autism Spectrum Disorder, ASD)的研究表明，他们与典型发展(Typical Development, TD)个体相似，在定向线索条件中时有较好的表现。这一结果与以往研究相矛盾。因此本文在追逐检测范式的刺激材料上稍作更改，通过两个实验来探讨定向线索在 ASD 者生命知觉中的作用。另外，我们通过使用眼动技术探究了定向优势效应对两类被试的低水平视觉加工过程与高水平的行为判断过程是否存在相同的影响。实验一采用 2(被试类型：TD 被试、ASD 被试)×3(追逐精度：15°、45°、75°)×3(方向线索：无方向、定向、非定向)的三因素混合实验设计，其中被试类型为被试间变量。通过比较三种方向线索，考察了定向线索是否在 ASD 者的生命知觉中存在优势作用。实验二采用 2(被试类型：TD 被试、ASD 被试)×3(追逐精度：15°、45°、75°)×3(定向线索：正向、逆向、垂直)的三因素混合实验设计。考察了不同定向线索对 ASD 者生命知觉的影响。结果表明，在追逐精度较高的情况下，两组均存在定向优势效应。ASD 者具有局部加工的视觉搜索策略，且在追逐检测过程中缺乏注意力。不同定向线索对 ASD 被试的任务表现没有显著影响，但 TD 组在正向的定向线索条件下的追逐检测正确率显著高于其他两个条件。本研究初步证明了定向线索在 ASD 者生命知觉中的作用与 TD 个体存在差异。ASD 者可能存在物理化的加工方式，使得其难以利用定向线索中所包含的社会信息提升追逐检测正确率。

关键词 孤独症谱系障碍，生命知觉，定向线索，视觉加工

The Role of Oriented Cues in Animacy Perception of Individuals with Autism Spectrum Disorder: Research Based on Eye Movement

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Abstract: The automatic and effortless perception of shapes as interacting in social relationships is termed animacy perception. Some researchers have found an oriented advantage, that is, when the object orientation and its motion direction maintain a constant relationship, it will significantly improve the individual's animacy perception. In this study, we call this constant relationship as oriented cues. Studies of autistic spectrum disorder (ASD) have shown that they are similar to individuals with typical development (TD) and perform better in oriented conditions. This result

contradict previous studies. Therefore, our research made a slight change on the stimulus material of the chase detection paradigm and conducted two experiments to explore the role of directional cues in the animacy perception of individuals of ASD. In addition, through the use of eye movement technology, we explored whether oriented advantage has the same influence on the low-level visual processing and the high-level behavioral judgment process of two groups. Experiment 1 used a three-factor mixed experimental design of 2(group: TD, ASD)×3(chasing subtlety: 15°, 45°, 75°)×3(directional cues: no-cues, oriented and non-directional), in which group was an inter-subject variable. By comparing three kinds of directional cues, we investigated whether oriented cues have a dominant role in the animacy perception of individuals with ASD. In experiment 2, the effects of different oriented cues on animacy perception of ASD were investigated by using a three-factor mixed experimental design of 2(group: TD, ASD)×3(chasing subtlety: 15°, 45°, 75°)×3(oriented cues: front, reverse and vertical). The results showed that when the chasing subtlety was high, there was an oriented advantage effect in both groups. Individuals with ASD had a locally processed visual search strategy, and they lacked attention during the chase detection process. Different oriented cues had no significant effect on ASD group. However, the accuracy of TD group in the front cues condition was significantly higher than that in the other two conditions. This study initially proved that the role of oriented cues in animacy perception of individuals with ASD was different from that of TD individuals. Individuals with ASD may have physical processing methods, which makes it difficult for them to use social information contained in oriented cues to improve the accuracy of chase detection.

Keywords: autism spectrum disorder, animacy perception, oriented cues, visual processing

条件推理中不同前提呈现顺序相关的脑功能网络： 一项动态因果模型研究

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摘要 条件推理是指人们将给定的条件规则（大前提）与相关信息（小前提）相结合进行演绎推断。以往的研究发现反转前提可以有效地促进否定后件式推理（条件推理的一种形式），这也被称为前提顺序效应。然而，后续的实验研究却并未发现这种效应。因此，为了检验前提顺序效应，并且进一步揭示条件推理的认知机制，我们招募了健康的志愿者作为实验被试，并将其随机分配为传统/反转前提顺序组，使用功能磁共振成像（fMRI）评估被试完成视觉呈现的条件推理任务（MP/MT）时的大脑血氧水平的变化。结果发现，反转条件激活了更多与工作记忆相关的脑区，包括角回（Angular, BA39）、楔前叶（Precuneus, BA7）、顶下小叶（Inferior Parietal Lobule, IPL）和额中回（Middle Frontal Gyrus, MFG）。此外，我们使用两组被试在完成条件推理任务下的共同激活的脑图谱来定义感兴趣区域（ROI），包括右半球的内侧额叶（medial frontal gyrus, MeFG）、颞区的海马回（hippocampus）、小脑（cerebellum）、枕中回（middle occipital gyrus, MOG）和左半球的枕下回（inferior occipital gyrus, IOG），并建立动态因果模型（DCM）用于有效连接分析，由贝叶斯模型选择得到最优化模型的内在连接结果显示，在IOG→MOG、海马回→IOG、海马回→小脑这些连接中，反转组的连接强度比传统组更强。这些结果似乎表明，反转组被试在前提呈现阶段投入了更多的努力和注意资源，而反转组中与工作记忆相关的大脑区域活动的增加也反映了个体推理过程是社会适应的结果。根据心理模型理论，前提信息的呈现顺序将决定构建心理模型的信息输入顺序，反转前提会导致两种条件下结果的分离。根据我们的结果，在两个条件下，被试可能以不同的模式整合信息，这在一定程度上支持心理模型理论。

关键词 条件推理；前提顺序；有效连接；动态因果模型

Brain Functional Networks Involved in Different Premise Order in Conditional Reasoning: A Dynamic Causal Model Study

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Abstract: Conditional reasoning is defined as the reasoner combining a given conditional rule (major premise) and the relevant information (minor premise) to make a deduction. Previous studies have reported that reversing the premises can effectively promote modus tollens (MT) reasoning (a form of conditional reasoning), but subsequent experimental studies have found no such effect. Therefore, to further examine this premise order effect and reveal the cognitive mechanism of conditional reasoning, we asked two groups of healthy volunteers (traditional and inverted premise order groups) to evaluate a set of visually presented conditional tasks (MP/MT) under fMRI. The results indicated that the inverted condition activated more brain regions associated with working memory, including the angular gyrus (BA39), precuneus (BA7), IPL, and MFG. The resulting common activation map was used to define the regions of interest (ROI) and perform dynamic causal modeling (DCM) for the effective connectivity analysis, containing the medial frontal gyrus (MeFG), hippocampus of the temporal gyrus, cerebellum, and middle occipital gyrus (MOG) in the right hemisphere and inferior occipital gyrus (IOG) in the left hemisphere. The results of intrinsic connections in the optimal model selected by Bayesian model selection showed that the connection strength was stronger in inverted group rather than in traditional group under the connection IOG → MOG, hippocampus in temporal gyrus → IOG, and hippocampus in temporal gyrus → cerebellum. These results indicated that the participants in inverted group are likely to put in more effort and attention resources in the stage of premise presentation. The increase in the activity of brain regions related to working memory in the inverted group also reflects that the individual reasoning process is the result of social adaptation. According to the mental model theory, the order in which the premise information is presented determines the order in which the information is input to construct the mental model. Reversing the premise will lead to the separation of the results under the two conditions. According to our results, the subjects may integrate information in different patterns under the two conditions, which supports the mental model theory to a certain extent.

Keywords: conditional reasoning, premise order, effective connectivity, Dynamic Causal Modeling

利兹食物偏好问卷适应中国文化的改编 及验证一项行为与近红外研究

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摘要 中国肥胖人口较多, 同时很多人存在饮食问题, 因此关于食物奖赏、食物抑制和营养相关的研究成为热点, 但是国内目前没有食物奖赏测量的相关范式。然而, 利兹食物偏好问卷已经在海外广泛应用, 并且已经被十几个国家翻译推广。因此, 本研究的目的就是对利兹食物偏好问卷进行本土化的改编, 翻译及验证。同时利用近红外手段, 探究食物奖赏行为指标与食物奖赏脑区激活的关系。招募 80 名参与者: 年龄从 18 岁到 40 岁, 不吸烟和饮酒, 没有心血管和代谢疾病。我们整理分类了 4 类 (高脂咸, 高脂甜, 低脂咸, 低脂甜) 共 40 种中国特色食物的营养信息, 拍摄了标准化的食物图片, 制作了评分问卷筛选出每组 4 张, 共 16 张食物图片作为实验材料, 分别应用于利兹食物偏好问卷和食物图片线索范式。我们在基线完成了身体活动量问卷和荷兰饮食问卷的测量, 分别在午/晚饭前后通过利兹食物偏好问卷测量四类食物的四种食物奖赏值以及利用近红外监测在完成视觉食物线索范式时前额脑区激活变化。结果表明: 进食过后食欲降低, 对高脂甜食, 高脂咸食, 低脂咸食外显喜欢和外显渴望降低, 对高脂甜食和高脂咸食相对偏好和内隐渴望降低, 对低脂甜食相对偏好和内隐渴望升高。同时在观看高脂咸食时背外侧前额叶激活增加, 也发现了在观看不同类别时前额叶脑区与对应食物类别奖赏得分的相关。因此本实验通过替换中国本土化特色的食物图片, 改编翻译了利

兹食物偏好问卷，并且通过实验进行了验证了该实验范式的有效性，同时借助近红外仪器也进一步探究了行为背后的大脑激活特征变化，为国内食物营养领域相关研究者提供了一个新的研究手段。

关键词 食物奖赏，利兹食物偏好问卷，近红外，营养

Adaptation and validation of the Leeds Food Preference Questionnaire to Chinese culture _ a behavior and fNIRS study

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Abstract: There is a large number of obese people in China and many people have dietary problems, so the research on food reward, food suppression and nutrition has become a hot topic, but there is no relevant paradigm of food reward measurement in China. However, the Leeds Food Preference Questionnaire (LFPQ) is widely used abroad and has been translated and promoted in more than a dozen countries. Therefore, the purpose of this study is to localize, translate and verify the Leeds Food Preference Questionnaire. At the same time, the Functional Near-Infrared Spectroscopy (fNIRS) method was used to explore the relationship between food reward behavior indicators and food reward brain activation. Eighty participants were recruited: ages 18 to 40, no smoking and drinking, and free of cardiovascular and metabolic diseases. We sort out the 4 categories (high-fat savoury, low-fat savoury, high-fat sweet and low-fat sweet), a total of 40 kinds of Chinese characteristics food nutrition information, The standardized food pictures were taken, the scoring questionnaire was made, and 4 pictures in each group were selected, a total of 16 food pictures were used as experimental materials respectively applied to Leeds food preference questionnaire and visual food cues paradigm. We completed the Ohysical Activity questionnaire and the Dutch Eating Behavior Questionnaire at baseline. The Leeds Food Preference Questionnaire measured four food reward values for four food categories and the changes of prefrontal brain activation when completing the visual food cue paradigm were monitored by fNIRS before and after lunch/dinner. The results showed that: after food consumption, subjective sensation of appetite decreased, explicit preference and explicit wanting for high-fat sweet food, high-fat savoury food and low-fat savoury food decreased, relative preference and implicit wanting for high-fat sweet food and high-fat savoury food decreased, while relative preference and implicit wanting for low-fat sweet food increased. At the same time, dorsolateral prefrontal activation was increased when viewing high-fat savoury foods, and the prefrontal region was also found to be associated with reward values for different food categories. This experiment by replacing Chinese localization characteristics of food pictures, adapted to translate the Leeds Food Preference Questionnaire, At the same time, the changes of brain activation characteristics behind behavior are further explored with the help of fNIRS, which provides a new research means for domestic researchers in the field of food and nutrition.

Keywords: Food reward, LFPQ, fNIRS, nutrition

情绪调节惊吓范式的时域及频域加工特征

摘要 情绪调节惊吓范式(The emotion-modulated startle paradigm, EMS)作为测量情绪加工的重要方法，了解其神经指标所表征的心理过程对于情绪测量意义重大。本研究通过在 EMS 范式中对比惊吓声音刺激出现之后的 Probe P300 指标与被动观看图片时 EPN、P300、LPP 指标的关系，表明 Probe P300 表征动机性注意加工过程。而施加惊吓声音后的神经振荡分析表明，Beta 频段的神经振荡能量在情绪性前景和中性前景之间差异显著，这提示 EMS 范式下的 Beta 振荡可作为区分情绪唤醒度的一个重要指标。我们的研究还发现，在 Beta 频段的神经振荡体现为 ERS，这表明在该范式下进行情绪加工时，大脑处于抑制的神经状态。总的来说，本实验研究结果有助于明确 EMS 范式下的各指标作为情绪加工的衡量标准。

关键词: EMS 范式，Probe P300，Beta 振荡，ERS

Time-domain and frequency-domain processing characteristics of the emotion-modulated startle paradigm

Abstract: The emotion-modulated startle paradigm (EMS) is an important method for measuring emotion processing, and understanding the mental processes characterized by its neural indicators is significant for emotion measurement. In this study, by comparing Probe P300 indicators after the appearance of startle sound stimuli with EPN, P300, and LPP indicators during passive picture viewing in the EMS paradigm, we showed that Probe P300 characterizes motivated attentional processing. And the analysis of neural oscillations after the application of startle sounds showed that the energy of neural oscillations in the Beta band differed significantly between emotional and neutral prospects, suggesting that Beta oscillations in the EMS paradigm could be an important indicator for differentiating the degree of emotional arousal. Our study also found that neural oscillations in the Beta band were reflected as ERS, suggesting that the brain is in an inhibited neural state when emotional processing is performed in this paradigm. Overall, the results of the present experimental study help to clarify each indicator in the EMS paradigm as a measure of emotional processing.

Keywords: EMS Paradigm, Probe P300, Beta Oscillation, ERS

操作动作表征对孤独症者动觉运动想象的影响

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摘要 孤独症谱系障碍者通常表现出社交障碍, 但是运动障碍可能是未来孤独症谱系障碍诊断最有用的预测指标。动觉运动想象可以反映实际的运动表现, 并激活与操作动作表征加工相同的脑区。但是, 操作动作表征是否会影响动觉运动想象还不清楚。本研究采用偏侧判断任务测量个体的动觉运动想象能力, 并通过眼动指标对两组被试加工策略的差异进行探索。研究对象包括 22 名 16-38 岁的孤独症谱系障碍者和 22 名 16-25 岁年龄、性别和智力相匹配的典型发展个体。实验一以正确和不正确的功能性动作图片为材料, 为 2 (组别: ASD 组、TD 组) × 2 (条件: 正确功能动作、错误功能动作) × 4 (角度: 0°、60°、120°、180°) 三因素混合实验设计。实验二通过设置结构性和功能性动作条件增加动作异常程度, 为 2 (组别: ASD 组、TD 组) × 2 (条件: 正确动作、错误动作) × 4 (角度: 0°、60°、120°、180°) 三因素混合实验设计。反应时间和总注视时间的数据分析表明孤独症谱系障碍者存在促进效应和生物力学效应, 其动觉运动想象可以通过加工错误操作动作表征得到改善。除此之外, 孤独症谱系障碍者的物体注视比率更大, 表明其是物体中心加工策略, 而典型发展个体是手部中心加工策略。本研究结果建议制定孤独症谱系障碍者运动障碍的干预方案时, 应考虑教具的操作性和功能性, 还要注意生动性和真实性。最后, 使用双通路模型并结合具身理论和定制思维假设对研究结果进行了解释。

关键词 孤独症谱系障碍; 操作动作表征; 动觉运动想象; 运动障碍

Effect of Action Representation on Kinesthetic Motor Imagery in Autism Spectrum Disorder

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Abstract: Individuals with autism spectrum disorder (ASD) show impairments in reciprocal social communication, and motor deficits may be the most useful predictors of a future ASD diagnosis. Kinesthetic motor imagery (KMI) can reflect the actual motor performance and activate the same brain area as action representation. However, whether the action representation can affect KMI is still unclear. We adopted laterality judgment tasks to measure the KMI ability and investigate the difference between the two groups processing strategy. The current study included 22 participants with ASD aged 16-38 and 22 typical developing (TD) participants aged 16-25 matched for age, gender,

and intelligence. Experiment 1 used correct and incorrect functional action pictures as material, the experiment used a 2×2×4 factorial design with group (ASD vs. TD)×condition (correct functional-based action, incorrect functional-based action; experiment 2: correct action, incorrect action)×angle (0°, 60°, 120°, and 180°). In Experiment 2, changes in the abnormal degree of action by adding the structural- and functional action condition, the experiment used a 2×2×4 factorial design with group (ASD vs. TD)×condition (correct action, incorrect action)×angle (0°, 60°, 120°, and 180°). The reaction time and fixation duration data revealed both promoting effect and biomechanical effect. KMI in people with ASD can be improved by perceiving the incorrect action representation. Further more, the object fixation index was more extensive in individuals with ASD, the results established that people with ASD are object-centered in laterality judgment tasks while the people with TD are hand-centered. The results of this study suggest that when developing interventional teaching aids for the KMI ability, the perception of action representation should be considered. Particular attention should be paid to the materials' authenticity and biological nature as stimuli. Intervention plans should involve both structural and functional actions. Finally, the results of the study are explained by the dual-route theory, the embodied cognition theory and the enactive mind theory.

Keywords: Autism spectrum disorder; Action representation; Kinesthetic motor imagery; Motor deficit

新冠疫情背景下人们如何采纳信息：信息源的作用

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摘要 本研究旨在探索人们在新冠疫情背景下如何采纳信息。2020年,世界各地的人们都经受了新冠疫情的巨大灾难。无论在疫情抑或是其他突发危机事件中,人们所面对的很多信息都是不准确、不完整,以及不断变化的。然而,人们需要做出快速而准确的决策,一些日常的简单决策此时甚至可能直接威胁到人们的生命。那么在这种情境下,人们如何采纳信息并做出决策呢?我们通过3个实验来回答这一问题。在实验1中,我们发现人们在新冠疫情相关决策中偏好向专家寻求信息,在非新冠疫情相关决策中偏好向朋友寻求信息。在实验2中,我们在信息内容和信息源同时出现的情况下探索了人们的信息采纳偏好,其结果显示信息源的效应具有稳定性。并且我们还发现,危险程度是决策背景(新冠疫情相关,非新冠疫情相关)影响信息源偏好(专家,朋友)的内在机制。在实验3中,我们证明了无论决策重要性高或低,决策背景对信息源偏好的影响都保持稳定。这些实验稳定地证明了信息源在信息采纳中的关键作用。具体而言,人们在新冠疫情相关决策中偏好来自专家的信息,在非新冠疫情相关决策中偏好来自朋友的信息。我们的发现为理解新冠疫情背景下人们如何采纳信息做出了重要贡献,即人是有限理性的决策者,我们在进行信息采纳时更多依赖信息源而非信息内容本身。

关键词 信息源, 新冠疫情, 信息采纳, 危险, 决策。

How Do People Prefer to Take Information in the Context of COVID-19?

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Abstract: This article aims to explore how people prefer to take information in the context of COVID-19. People worldwide have been suffering from the COVID-19 in 2020. No matter in this pandemic or other emergency crises, much of information that people face may be inaccurate, incomplete, and changeable. However, fast and sound decisions are required, and even ordinary decisions may threaten people's lives. In such circumstances, how do people take information to make their decisions? We report the results of 3 studies to answer this question. In Study 1,

we found that people preferred to seek information from experts for COVID-19-related decisions and information from friends for non-COVID-19-related decisions. In Study 2, we examined the preference for taking information when the information content and source were presented concurrently, suggesting stability of the effect of the information source, and found that danger functioned as the mechanism underlying the effect of decision context on preferences for the information source. In Study 3, we demonstrated that the effect of decision context was stable regardless of decision importance was high or low. The present studies steadily demonstrated that information source played a core role in information taking. In particular, people prefer to take information from experts for COVID-19-related decisions, while prefer to take information from friends for non-COVID-19-related decisions. Our findings present an important contribution to the understanding of how people take information in the context of COVID-19, namely that people are indeed bounded-rational choosers and we rely more on the information source rather than the information content per se in information taking.

Keywords: information source, COVID-19, information taking, danger, decision

最优化决策者的记忆容量与低估决策时间之间的关系

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摘要 时间估计对于决策效率而言至关重要。过量的时间投入会显著地影响决策的效率, 而决策的效率又是决策中“最优”的重要组成部分。但最优化者在追求“最优”的过程中, 往往倾向于在决策中投入更多的时间。为探讨出现这种悖论的原因, 本研究旨在探讨决策过程中最优化倾向对时间估计的影响, 并进一步研究这种影响的产生机理, 即记忆容量在其中的中介作用。本研究共包含三个实验: 实验 1A 探究了日常真实决策情境中最优化者与满意化者的时间估计差异; 实验 1B 排除了真实时长这一实验 1A 中的额外变量, 设置了低负荷决策情境, 并探究了低负荷决策情境中最优化者与满意化者的时间估计差异, 进一步分析最优化倾向对时间估计的影响; 实验 2 引入了记忆容量一变量, 并探究了其在最优化倾向对时间估计的影响中的中介作用; 实验 3 通过启动最优化心态与满意化心态, 再一次验证了实验 2 得出的中介模型的稳定性, 并进一步分析最优化心态对记忆的影响模式。主要研究结果: (1) 在日常真实决策情境中, 相较于满意化决策者, 最优化决策者更倾向于低估自己决策投入的时间; (2) 在低负荷决策情境中, 当控制决策时长不存在显著差异时, 最优化决策者仍更倾向于低估自己决策投入的时间。 (3) 记忆容量中介了最优化倾向对决策中时间估计的影响。具体而言, 最优化决策者记忆容量更小, 所以低估时间。此中介作用不仅存在于拥有更高最优化倾向的最优化决策者中, 同样存在于仅被启动最优化心态的参与者中, 反映了最优化倾向影响记忆容量的因果关系。本研究的结果揭示了最优化倾向对时间估计的影响机制, 为最优化悖论提供了一个新的解释视角。所谓的最优化悖论并不是真正的悖论, 而是因为最优化决策者低估了他们在决策上投入的时间, 其根源是他们对于决策信息的记忆容量比满意化决策者小。因此, 最优化决策者在决策上花费的时间总是比他们预期的要多, 这可能就是为什么最优化决策者无论得到怎样的决策结果都会感到消极的深层原因。

关键词 最优化倾向, 时间估计, 记忆容量, 中介作用, 决策

How Does Maximization Link to Time Underestimation: Memory Decline as the Mediator

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Abstract : This study aims to explore how maximization operates in time estimation in decision-making. We conducted three studies to examine the difference between maximizers' and satisficers' time estimation and explored

the mechanism underlying the effect of maximization on time estimation. We found that maximizers underestimate the time spent in the present decision tasks. Regarding the mechanism, we demonstrated that memory storage-size serves as the mediator between maximization and time estimation. More specifically, maximizers' memory storage-size of special attributes of decision alternatives becomes smaller than satisficers' in the decision process, which leads to their underestimation of decision time. The findings of this research contribute to the maximization literature by demonstrating how maximizers estimate the time spent in the decision process and provide a new perspective on why maximizers always invest more time but feel negatively regarding their decision outcomes, that is because they underestimate the time used in decision-making rather than they do not care about the time.

Keywords: maximization, time estimation, memory storage-size, mediating effect, decision-making

公平规范遵守的性别差异及其神经机制

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摘要 社会规范作为社会对个体行为的期望,影响着人们的决策行为。公平规范可以内化为个人意识表现出自愿公平遵守行为,同时惩罚威胁也会使人们执行公平规范。前人研究发现,不同情境下的公平规范遵守行为有不同的神经基础,但以往的研究并未关注到性别差异。在本研究中,我们采用独裁者范式与最后通牒变式,结合功能磁共振成像(fMRI)去探索不同公平规范遵守中的神经性别差异。我们招募了55名被试(27名女性),采用2(性别:女,男)*3(情境:自愿情境,惩罚情境,惩罚后自愿情境)混合设计,在被试进行分配任务的同时进行功能核磁共振成像扫描。结果发现,尽管男性和女性表现出相同的行为模式,但在不同规范遵守条件下,神经激活模式存在性别差异。具体表现在:与女性相比,男性在自愿情境下表现出更强的颞顶联合区、楔前叶、后侧扣带回皮质、眶额皮层和颞中皮层的激活,而这种神经差异在惩罚后自愿情境下消失了。有趣的是,采用广义心理生理交互分析(gPPI)发现,右侧背外侧前额叶皮层(rDLPFC)和右侧背侧前岛叶(rdAI)的功能连接可能反映了直觉公平规范的遵守,并且其连接强度在不同情境下的变化受性别因素的调节。研究结果表明,对于女性而言,自愿遵守公平规范似乎更偏向于直觉性行为,而对于男性而言,在不同条件下均会对情境信息进行加工从而做出决策。此外,惩罚使得人们的决策都倾向于策略计算,但这种转变在女性中更为明显。我们的研究结果使得我们对公平规范遵守行为的神经回路及性别差异有了更深入的理解。这些结果对表现出异常规范遵守行为的精神或神经疾病的理解具有重要意义。

关键词 公平规范遵守, 惩罚, 性别差异, 神经机制, 功能连接

Sex-based Difference in Fairness Norm Compliance and Its Neural Mechanisms

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Abstract: As a social expectation of individual behavior, social norms affect people's decision-making behavior. Humans often comply with fairness norms, either voluntarily, or through external threats, such as sanctions. The literature has demonstrated that there is a unique neural activity for voluntary and sanction-based compliance with fairness norms. Nevertheless, it overlooked potential sex-based differences. Biological sex can be a salient factor in this context, given sex-based differences in functions of brain regions involved in social compliance and decision-making. Here, we combined the dictator game and ultimatum game with functional magnetic resonance imaging (fMRI) to bridge this gap and identify how males' neural activity differs from females' in response to different norm compliance conditions (voluntary, sanction-based, and voluntary post-sanctions). Fifty-five adults (27 females) were examined. We found between sexes differences in neural activation in different norm compliance conditions, although men and women showed the same behavioral pattern. Compared to females, males showed stronger activation in TPJ, precuneus, PCC, OFC and mid temporal cortex while in the voluntary fairness compliance

condition. This neural difference disappeared in the voluntary post-punishment condition. The generalized psychophysiological interaction analysis suggested that the connection of right dorsolateral prefrontal cortex (rDLPFC) and right dorsal anterior insular (rdAI) may mediate intuitive fairness norm compliance; it differed between the norm compliance conditions and between the sexes. Specifically, for females, voluntary fairness norm compliance seemed to be motivated intrinsically, and for males, it was more pragmatic. Moreover, punishment tilted the decisions toward strategic calculations in both sexes, but this shift was stronger in females. Our findings provide a better understanding of the neural circuitry of fairness norm compliance, and how it differs between males and females. They have important implications for future investigations of psychiatric and neurological disorders that manifest in abnormal norm compliance.

Keywords: Fairness norm compliance, Punishment, Sex-based difference, Neural mechanisms, Neural circuitry

表征方式偏好对晚期双语者二语词汇通达的影响

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摘要 词汇习得贯穿二语学习过程始终, 处于整个二语习得的基础和中心位置。目前, 二语词汇习得应用研究结论仍存在诸多矛盾, 语言学习本身和学习者心理加工方面尚未得到公认的理论模型。国内外相关研究的不足之处在于注重心理词库与概念系统关联方式的静态描绘, 而忽视了二语词汇语义联结母语中介到概念中介的动态发展机制解读(如, BIA 模型), 同时也忽视了学习者个体差异的重要作用(如, RHM 模型)。根据双重编码理论(DCT)的观点, 不同个体具有明确且稳定的表征方式偏好。晚期双语者二语词汇学习的母语中介特点使得学习者中表象与言语偏好者之间可能存在通达路径和相应效率差异。本研究通过 4 个实验, 检验表征方式偏好与传统研究中惯用的二语熟练度、认知风格因素相比较对于晚期双语者二语词汇通达研究的重要性, 验证表征方式偏好对晚期双语者二语词汇通达的影响, 并验证不同表征方式偏好的晚期双语者二语词汇通达母语中介到概念中介发展的差异。实验 1-4 的结果证实了不同二语通达模式的存在和表征方式偏好对晚期双语者二语词汇通达效率和中介路径转换的影响。

关键词 表征方式偏好, 母语中介, 概念中介, 二语词汇通达, 中介路径转换

The Effect of Representational Preference on Second Language Lexical Access in Late Bilinguals

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Abstract: At present, there are still many contradictions in the research results of second language vocabulary acquisition studies, and there is no commonly accepted theoretical model for language learning and learners' psychological processing. The shortcoming of relevant researches at home and abroad is that they focus on the static description of the relation between mental lexicon and conceptual system while ignoring the dynamic development mechanism of the semantic connection between first and second language vocabulary (e.g., BIA model), as well as the important role of individual differences in learners (e.g., RHM model). According to the dual coding theory (DCT), different individuals have clear and stable representational preferences (i.e., verbal or visual). Because of the L1-mediation feature of L2 vocabulary learning in late bilinguals, there may be differences in access paths and corresponding efficiency between learners of verbal or visual preferences. In this study, four experiments were conducted to examine the importance of representational preference, compared with traditional factors such as second language proficiency and cognitive style, in the study of second language lexical access in late bilinguals to verify the effect of representational preference on second language lexical access in late bilinguals. We also examined the

different pathways of lexical access to L1- and concept-mediated development in late bilinguals with visual or verbal preference. The results of experiments 1-4 confirmed the effect of representational preference on lexical access and L1- to concept-mediation conversion differences in late bilinguals.

Keywords: representational preference, L1-mediation, concept-mediation, second language vocabulary access, L1- to concept-mediation conversion

3.5 博士研究生论坛—发展与教育心理学

(1) 博士研究生论坛—发展与教育心理学分场 1

中国早期青少年独处偏好的发展轨迹与心理适应的关系

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摘 要 独处偏好 (preference for solitude) 指的是, 个体主动独处的积极意愿和态度, 伴随着较低的社会趋近动机和较低的社交回避动机, 而社会互动对于个体的心理适应以及心理健康具有重要的作用, 尤其儿童青少年阶段, 因此在该阶段独处偏好水平越高的个体的心理健康和心理适应水平越低, 且这一现象在青少年早期阶段达到顶峰。据此, 了解早期青少年的独处偏好特点有利于更好的促进个体的心理适应, 但以往研究多数采用横向研究, 并没有从纵向视角对独处偏好的特点进行探究。因此本研究目的探究早期青少年独处偏好的发展轨迹特点以及不同发展模式对心理适应的影响。本研究调查 1247 人 (M 年龄 = 13.07 岁, 男生 641 名), 从 7 年级追踪到 9 年级。采用混合增长模型 (Growth Mixture Model) 进行数据分析, 结果显示: (1) 早期青少年的独处偏好的发展轨迹可以分为三组: 高初始—稳定组 (56 人, 4.5%)、低初始—快增长组 (14 人, 1.1%) 和中初始—慢增长组 (1177 人, 94.5%); (2) 较高初始—稳定组和低初始—快增长组, 中初始—慢增长组更显著的负向预测九年级的孤独感、抑郁和社交焦虑。据了解, 该研究是当前首次对早期青少年独处偏好的发展轨迹异质性及其对心理适应影响的探索, 为不同独处偏好水平的早期青少年的心理适应提供理论指导。

关键词 独处偏好;孤独感;抑郁;社交焦虑;发展轨迹

Developmental Trajectories of Preference for Solitude Among Adolescents in China: Associations with Psychological Adjustment

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Abstract: This study examined trajectories of preference for solitude (PFS) and their associations with psychological adjustment (loneliness, depression and social anxiety) in Chinese adolescents. Participants were 1, 247 adolescents (641 boys), initially in 7th grade (Mage=13.70 years) in China. Participants provided self-reports of PFS once a year

for three years. Additionally, participants reported their loneliness, depression and social anxiety at Time 3 (in the last year). Among the results, three distinct groups of PFS trajectories were identified: High-Stable, Moderate-Increasing, Low-Increasing. Moreover, participants in the different trajectory groups were at differential risk for psychological adjustment, such as depressive symptoms, loneliness and social anxiety at Time 3. These results highlight the benefits and costs of examining the development of PFS and the unique ways that PFS develop among Chinese youth as they progress through early adolescence.

Keywords: preference for solitude, loneliness, depressive symptom, social anxiety, developmental trajectories

亲隔代协同抚养者教养压力与儿童消极情绪的关系： 严厉管教的中介

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摘要 亲隔代协同抚养在现今中国家庭抚养方式中的比例已接近 80%，逐渐成为儿童的主流抚养形式，探究此种抚养方式对儿童发展的影响势在必行。研究立足中国特色的亲隔代协同抚养家庭，探讨亲隔代协同抚养者教养压力、严厉管教和儿童消极情绪的关系。选取北京市 4 所小学 8-11 岁亲隔代协同抚养儿童共 219 例，采用教养压力问卷、严厉管教问卷和消极情绪量表对母亲、（外）祖母和儿童进行施测。结果发现：（1）母亲比祖母体验到更多的亲职愁苦和困难儿童压力，采用更加严厉的管教，但母亲与外祖母的教养压力和严厉管教水平均没有显著差异。父系和母系隔代抚养者参与抚养儿童的消极情绪没有显著差异；（2）亲隔代协同抚养者教养压力对儿童消极情绪均无显著预测；（3）母亲教养压力的作用会溢出到祖母的严厉管教，进而正向预测儿童消极情绪。但母亲与外祖母的教养压力对彼此的严厉管教均无显著预测作用。研究针对两类家庭中互动模式的不同提出了内外祖母角色差异性假说。研究可为发展亲隔代协同抚养家庭教育方案提供依据，针对性地为该类家庭提供帮助。

关键词 亲隔代协同抚养，教养压力，严厉管教，儿童消极情绪

The Parental and Grandparental Caregivers' Parenting Stress and Child Negative Emotion: The Mediating Role of Harsh Discipline

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Abstract: Nearly 80% of families have grandparents involved in raising children and it has gradually become the mainstream parenting model in China. Therefore, it is imperative to explore the influence of this parenting model on children's development. This study, based on the Chinese parent-grandparent co-parenting families, examined the linkage between parenting stress, harsh discipline and children's negative emotions. Participants comprised 219 children aged 8-11 of 4 primary schools in Beijing, China. Children's mother and grandmother were included as well. Results revealed that mothers experienced more stress of parental distress as well as difficult child and adopted more harsh discipline than paternal grandmothers. Yet, mothers and maternal grandmothers reported similar intensity of parenting stress and harsh discipline in all dimensions. There was no significant difference in child negative emotion in the families in which paternal and maternal grandmothers were involved. Additionally, caregivers' parenting stress had no significant effect on child negative emotion. Furthermore, the effect of mothers' parenting stress spilled over to paternal grandmothers' harsh discipline, which in turn predicted child negative emotion. However, neither mothers' nor maternal grandmothers' parenting stress associated with their own or partners' harsh discipline. Based on the results, the study proposed the Paternal and Maternal Grandmother-Role-Difference Hypothesis. The current study was beneficial to develop future family-based education guidance for parents-grandparents co-parenting families and provided targeted assistance to such families.

Keywords: Parent-grandparent co-parenting, Parenting stress, Harsh discipline, Child negative emotion.

认知重评对消极情绪记忆定向遗忘的影响

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摘要 本研究采用项目法定向遗忘范式, 探讨了认知重评对消极情绪图片定向遗忘的影响。行为结果发现, TBF-r 的比率显著高于 TBR-r 的比率, 即出现了与定向遗忘效应相反的结果。ERP 的结果显示, 编码阶段 250-350ms, 认知重评组忘记指令比自由观看组的波幅更正。再认阶段, 认知重评组 TBR-r 项目比正确拒绝新项目(CR)的波幅更正, 诱发了额区(P200, 160-240ms)和顶区(LPC, 500-800ms)的新旧效应。同时, TBF-r 比 CR 波幅更正, 引发了顶区与回忆相关的新旧效应。但自由观看组只有 TBF-r 项目比 CR 的波幅更正, 表现出了额区 P200 和顶区的 LPC 新旧效应。以上结果表明, 认知重评不仅使忘记指令的项目投入更多资源进行抑制, 而且通过增强与熟悉(P200)和回忆(LPC)有关的提取过程提升了记住和忘记项目的记忆表现, 消除了消极情绪图片的定向遗忘效应。

关键词 认知重评, 消极情绪记忆, 定向遗忘, 新旧效应

Effects of cognitive reappraisal on the directed forgetting of negative emotion memory

Abstract : This study adopts the item-method directed forgetting paradigm to explore the effects of cognitive reappraisal on the intentional forgetting of negative emotion pictures. Behavioral results showed that the recognition of TBF-r (to-be-forgotten but remembered) was significantly greater than TBR-r (to-be-remembered and remembered) in recognition test, which is the opposite of the directed forgetting effect. Event-related potential (ERP) results showed that in the 250–350 ms of cue presentation, the F-cue of the cognitive reappraisal condition elicited more positive activity than passive viewing. In the test phase, TBR-r items of the cognitive reappraisal condition evoked more positive ERP than CR (correctly rejected unseen items in the study phase) items, which induced the old/new effect of the frontal (P200, 160–240 ms) and parietal regions (LPC (late positive component), 500–800 ms). At the same time, the mean amplitudes of TBF-r items are more positive than those of CR items, which triggers the old/new effects related to recall in the parietal scalp. However, in the passive viewing condition, only the TBF-r items had more positive activity than the CR items, showing the old/new effects of P200 in the frontal scalp and the LPC old/new effects in the parietal scalp. The above results show that cognitive reappraisal not only makes the items that forget cues invest more resources to suppress them, but also improves the memory performance of remembering and forgetting items by enhancing the retrieval process related to familiarity (P200) and recall (LPC), and eliminates the directed forgetting effect of negative emotion pictures.

Keywords: Cognitive reappraisal, Negative emotion memory, Directed forgetting, Old/new effect, ERP

How do bystanders react to Cyberbullying? The Influence of Family Emotional Expressiveness on Cyberbullying Bystander's behavior: Mediating Roles of Empathy and Rural-Urban Differences

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Abstract : Studies in the traditional bullying field have proved the important role of bystanders in solving bullying incidents. However, few studies have explored what factors influence bystander behavior in cyberbullying and the process of influence. The Broaden-and Build Theory and Water Pressure Model proposes that family emotional expression creates the overall emotional atmosphere of the family, and plays an important role in the individual's

ability to empathize, prosocial behavior or problem behavior. This study used two time points data based on emotional socialization theory to investigate the direct impact of family positive and negative emotional expressiveness on the bystander behaviors in cyberbullying, as well as the mediating role of empathy and rural-urban differences. 769 students ($M = 17.85$, $SD = 1.46$) from 7 middle and high schools in Hunan province were investigated by using the Family Emotional Expression Questionnaire (FEQ), Basic Empathy Scale (BES) and Cyberbullying Bystander Inventory. The results showed that: (1) On the one hand, family positive emotional expressiveness directly and positively predicted middle school students' positive bystander behavior, and negatively predicted assistant's behavior. On the other hand, family negative emotional expressiveness directly and negatively predicted middle school students' protect behaviors; (2) Empathy played a mediating role in the family emotional expressiveness and bystander behavior. Specifically, family positive emotional expressiveness predicted observer's behavior through cognitive empathy; (3) There were significant differences in the influence mechanism between urban and rural areas. In the urban sample, family positive emotional expression negatively predicted observer's behavior through the mediating role of cognitive empathy. In the rural sample, family positive emotional expression positively predicted protective behavior through the mediating role of emotional empathy. The research is helpful to understand the influence mechanism of the emotional expression of important family members on the behavior of middle school students' cyberbullying bystander, which has some practical significance to reduce the spread and harm of cyberbullying.

Keywords: family emotional expressiveness, empathy, cyberbullying, bystander behavior, middle school students

汉语发展性阅读障碍儿童的预测模型 ——基于遗传算法优化的误差反向传递神经网络

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摘要 对发展性阅读障碍的识别或诊断一直是个困难的问题, 并且传统的逻辑回归预测模型存在一定的缺陷。本研究基于 399 名儿童(187 名儿童发展性阅读障碍和 212 名正常发展儿童, 7~13 岁)的数据, 构建了一个经遗传算法优化的误差反向传递神经网络模型, 用来预测中国儿童是否患有阅读障碍。结果发现, 模型的总体预测准确率约为 94%, 并且各项预测指标均优于基础的误差反向传递神经网络和逻辑回归模型。其中, 阅读准确性对预测汉语发展性阅读障碍的贡献最大, 语音意识、拒绝假字正确率、语素意识、阅读流畅性、数字快速命名和拒绝非字反应时对预测汉语发展性阅读障碍也具有重要的贡献。

关键词 中国儿童, 发展性阅读障碍, 预测模型, 误差反向传递神经网络, 遗传算法

工作记忆对儿童和成人观点采择过程的影响

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摘要 观点采择是社会认知的核心能力之一, 在个体社会化过程中有着重要作用。视觉观点采择的完成涉及计算过程(对他人观点的加工过程)和选择过程(区分自己和他人观点并做出正确反应的过程)。以往研究发现, 在成人被试中, 言语工作记忆对计算过程和选择过程都有影响, 且对计算过程影响更显著。但儿童的视觉观点采择能力和工作记忆都处在发展过程中, 他们在完成观点采择任务时是否受言语工作记忆的影响却不得而知。另一方面, 由于观点采择能力与空间能力相关, 个体在完成视觉观点采择任务时对空间工作记忆的依赖情况也需证据支持。因此, 本研究选取 9 岁左右儿童和大学生两组被试, 通过考察他们在单任务条件下和双任务条件下的观点采择能力, 探讨在不同年龄阶段下言语和空间工作记忆对视觉观点采择任务的影响。

关键词 观点采择, 计算过程, 选择过程, 言语工作记忆, 空间工作记忆

情绪觉察能力对情绪性时间知觉的影响——来自 ERP 的证据

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摘要 情绪觉察是识别与描述自己和他人的情绪的能力, 是引发情绪体验的生理心理过程: 情绪觉察者识别情绪时会无意识模仿情绪, 模仿通过生理反馈导致觉察者产生与诱发者相同的情绪体验。在此过程中, 情绪的无意识模仿起关键作用, 情绪觉察能力反映个体的模仿水平, 模仿直接影响个体的情绪体验。在情绪体验中, 个体对时间估计产生的影响称为情绪性时间知觉, 以往研究发现, 模仿是影响情绪性时间知觉的重要影响因素。因此, 本研究直接考察高、低情绪觉察能力对情绪性时间知觉的影响。实验采用 2 (情绪觉察能力: 高/低) × 3 (时距: 490ms/700ms/910ms) 的混合实验设计。以 42 名大学生为被试, 从电生理角度探讨了高低情绪觉察能力对时间知觉的影响。研究采用时间泛化法, 先让被试学习标准刺激的呈现时间, 随后判断情绪性面孔呈现的时间与标准刺激比是长于、短于还是等于, 记录整个实验过程的 EEG。ERP 数据发现: 面孔识别早期 N100 和 P200 成分上, 高情绪觉察能力个体的平均波幅显著大于低情绪觉察能力; 在长时距 (700ms 和 910ms) 的判断中, 高情绪觉察比低情绪觉察能力个体引发的 LPP 波幅更大。实验的行为结果也表明, 低情绪觉察能力个体比高情绪觉察能力个体更容易高估时距, 对时距判断的正确率低于高情绪觉察能力个体。这些结果表明, 高低情绪觉察能力对情绪性时间知觉的影响不仅在情绪识别的早期存在差异, 并且在晚期加工阶段差异也显著, 也就是说情绪觉察能力对情绪性时间知觉产生了影响。

关键词 情绪觉察, 情绪体验, 模仿, 情绪性时间知觉

The influence of emotional awareness on time perception: Evidence from Event-related Potentials

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Abstract: Previous studies have found participants overestimated the emotional stimulus(negative/positive) compared with the neutral emotion, which can be explained by the arousal mechanism. The participants have individual differences on perceiving emotion, that is, the high emotional awareness with high emotion arousal, vice versa. This study extended existing findings by exploring the influence of emotional awareness on time perception in a temporal generalization task, and recorded electroencephalographic (EEG) signals. The behavior result showed that in the positive emotion, the high group made more overestimation than the low group, but had no difference on the neutral or negative emotion. ERP results showed that on the positive emotion, the high group elicited larger VPP amplitudes than the low, but they had no difference on neutral and negative emotion; the contingent negative variation (CNV) component showed that on the positive emotion pictures(positive/negative), the amplitudes of the high group was larger than the low, however, they had no difference on the neutral emotion. This study has suggested that the high emotional awareness would produced a higher physiological arousal when they estimated the time duration of emotional pictures, and then they made a greater time overestimation. This result had provide evidence in support of the relationship between emotional awareness and time perception.

Keyword: overestimated, emotional stimulus, arousal mechanism, emotional awareness, time perception

有无意识状态下分心、认知重评和表达抑制策略的效果比较

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摘要 情绪调节是指当情绪调节的目标被激活后, 对正性和负性的情绪强度以及情绪的持续时间进行调整的过程。为达到情绪调节的目的, 人们必须有效地使用情绪调节策略。情绪调节策略是指在情绪产生的不同

阶段,个体为了调控自己产生何种情绪、如何体验和表达这些情绪而采取的一些惯用方式。以往研究多关注于有意识地使用某种情绪调节策略是否可以有效地调控情绪,但情绪调节也可以在无意识的状态下进行。将情绪进行动态划分,可分为三部分:生理唤醒、情绪体验和情绪表达。以往研究通常将被试自我报告的主观情绪体验作为情绪调节效果的测量指标,缺少对情绪的全面测量。因此,本研究旨在有意识和无意识两种状态下探讨分心、认知重评和表达抑制三种典型的情绪调节策略在调节负性情绪的生理反应、主观体验和行为反应三方面上的调节效果。本研究选取了140名大学生作为被试,采用2(意识状态:有意识、无意识)×3(情绪调节策略:分心、认知重评、表达抑制)的被试间设计,用句子整理任务范式启动被试无意识状态下的认知重评和表达抑制策略,用白噪音干扰的方式启动被试无意识状态下的分心策略,用指导语启动被试有意识状态下的三种调节策略,考察意识状态对情绪策略调节效果的影响。结果发现:(1)分心策略在有意识状态下均能有效降低个体由负性情绪所引发的生理反应、主观体验和行为反应。(2)认知重评策略在无意识状态下仅能有效降低个体的生理反应,但在有意识状态下,可以有效下调情绪的三个方面。(3)表达抑制策略在无意识状态下仅能有效降低个体的生理反应,在有意识状态下可以有效降低个体的生理反应和行为反应。结果表明,无意识状态下,分心策略的调节效果要优于认知重评和表达抑制策略。有意识状态下,分心和认知重评策略的调节效果要优于表达抑制策略。

关键词 意识状态,分心,认知重评,表达抑制

Comparison of the Emotion Regulation Effects of Distraction, Reappraisal and Expression Suppression in Conscious and Unconscious States

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Abstract: Emotion regulation refers to the process of adjusting the emotional intensity and duration of positive and negative emotions after the target of emotion regulation is activated. In order to achieve the goal successfully, people must effectively use emotion regulation strategies. Emotion regulation strategy refers to some idiomatic ways that individuals adopt in order to regulate what kind of emotions they produce, how to experience and express these emotions in different stages of emotional production. Previous studies have focused on using emotional regulation strategies consciously can effectively regulate emotions, but emotional regulation can also be carried out in an unconscious state. The dynamic division of emotions can be divided into three parts: physiological arousal, emotional experience and emotional expression. In previous studies, subjects' self-reported emotional experience was usually used as a measurement index of the effect of emotion regulation, which lacks a comprehensive measure of emotion. Therefore, we investigated the emotion regulation effects of distraction, cognitive reappraisal and expression suppression on negative emotional physiological response, subjective experience and external behavioral response in two states of consciousness. 140 college students were selected as the subject to participate in this study. The design of the study is 2(conscious state: conscious, unconscious) × 3(emotion regulation strategy: distraction, cognitive reappraisal, expression suppression) between-subject design. In order to find the impact of conscious state on emotion regulation strategy, a scrambled sentence task was used to activate the subjects' unconscious cognitive reappraisal and expression suppression, while white noise interference was used to activate unconscious distraction. On the other hand, instructions were used to activate conscious emotion regulation strategies. The main findings were: (1) Distraction can effectively down-regulate the negative physiological reaction, subjective experience and behavioral response under the unconscious and conscious state. (2) Under the unconscious state, cognitive reappraisal can only effectively reduce the negative physiological response of individuals, but under the conscious state, it can effectively

lower three indicators. (3) The expression suppression can only effectively reduce the negative physiological responses of individuals in the unconscious state, and can effectively reduce the negative physiological and behavioral responses of individuals in the conscious state. The results show that under the unconscious state, distraction is more effective than cognitive reappraisal and expression suppression, while under the conscious state, distraction and cognitive reappraisal are more effective than expression suppression.

Keywords: consciousness, distraction, cognitive appraisal, expression suppression

“真与美”微笑真实性对面孔吸引力评价的影响

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摘 要 面孔吸引力是指目标面孔所能诱发出他人积极情绪体验的程度以及驱使他人产生接近的意愿, 是非常重要的人际交往信息。吸引力加强反应理论提出微笑的表情可以增加面孔的吸引力。然而, 表情具有真实和伪装之分, 那么微笑表情的真实性是否会影响人们对他人面孔吸引力的评价呢? 本研究首先收集制作个体真实微笑状态与伪装微笑状态下的表情图片, 以此作为实验刺激材料。然后采用图片感知任务范式, 考察表情真实性对面孔吸引力评价的影响, 同时结合眼动追踪技术, 进一步探讨表情真实性对面孔吸引力评价影响的视觉加工情况。结果发现, 表情的真实性会影响个体对面孔吸引力的评价。具体表现为: 个体对面孔吸引力的评价中, 真实微笑与伪装微笑的评分差异显著, 被试对真实微笑的评分显著高于伪装微笑。对鼻子、眼睛、嘴巴三个区域的眼动数据进行分析, 结果发现被试对三个区域注视总时间从长到短依次为眼睛、鼻子和嘴巴。被试在真实微笑的嘴巴区域的总注视时间显著低于伪装微笑的嘴巴区域; 被试在真实微笑的嘴巴区域的注视点百分比显著低于伪装微笑的嘴巴区域。结论: 人们对面孔吸引力的评价会受到对方表情真实性的影响, 相比于有着伪装微笑的面孔人们倾向于认为有着真实微笑的面孔更具有吸引力。这与中国文化的价值追求具有一致性, 正所谓“不精不诚, 不能动人”。而嘴巴在真实与伪装微笑面孔吸引力评价中有关键作用, 与真实表情相比伪装表情需要消耗更多的注意资源。

关键词 真实, 伪装, 面孔吸引力

The Influence of Smile Expressions Authenticity on Facial Attractiveness

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Abstract: Background: Facial attractiveness refers to the extent to which a target face induces positive feelings in others and the willingness that drive others to approach. It is an important indicator of social intercourse. The theory of attraction enhancement response suggests that smiling expressions could increase the facial attractiveness. However, the expressions could be classified into genuine and fake. The authenticity of expressions maybe have an effect on facial attractiveness. Purpose: Therefore, we aim to investigate the effects of genuine and fake smiles on the judgement of facial attractiveness. Methods: In this study, we first collected and produced genuine and fake smiles pictures and they were used as stimulus materials. Then, we used picture perception task paradigm and eye movements technology to explore the question. Results: The main effect of the authenticity of facial expressions was significant, and the score of genuine expressions was significantly higher than that of fake expressions. In the analysis of the eye movement data, the three areas for a total fixation time from long to short were eyes, nose and mouth. The total fixation time and the fixation rate in the mouth area of the genuine smile was significantly lower than that in the mouth area of the fake smile. Conclusion: These findings suggest that the facial attractiveness was influenced by the expressions authenticity, and the genuine smiles were perceived as more attractive than fake smiles. This is consistent

with the value pursuit of Chinese culture, which is “neither refined nor sincere, nor moving”. The mouth plays a key role in judging the attractiveness of genuine and fake smiling faces, and fake expression require more attention than genuine ones.

Keywords: genuine, fake, facial attractiveness

4-6 年级数困儿童表象旋转的眼动机制

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摘要 以 4-6 年级的数困儿童和数学学习正常儿童为研究对象, 比较两类儿童表象旋转的反应时及眼动特点, 探讨数困儿童在几何图形表象旋转中的眼动机制。结果发现: (1) 数困儿童具有正常的表象旋转能力, 但差于数学学习正常儿童。(2) 数困儿童的表象旋转出现偏离正位效应。(3) 数困儿童能够提取符号线索促进表象旋转的认知加工, 表明他们具备从事物本身提取、归纳总结、概括信息的能力。(4) 数困儿童的眼动区域矩形面积更大、注视点持续时间更长、眼跳时间更长、眼跳距离更大、眼动轨迹更为杂乱, 表明数困儿童对认知加工资源缺乏良好的控制能力, 付出了更多的认知加工资源。研究结果为数困儿童的几何图形教育提供借鉴。

关键词 数困儿童; 表象; 表象旋转; 眼动机制

The Mechanism of Image Rotation Eye Movement in Children with Mathematics Learning Difficulties in 4th to 6th Grades

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Abstract: 180 children with math learning difficulties and normal children in grade 4-6 were selected. To compare the reaction time and eye movement characteristics of two kinds of children in the image rotation. The results show that: (1) the children with mathematical learning difficulties have normal image rotation ability, but it is worse than that of the children with mathematical learning difficulties. (2) Deviation from positive effect appears in the representation rotation of children with mathematical learning difficulties. (3) Children with learning difficulties in mathematics can extract symbolic clues to promote the cognitive processing of imagery rotation, indicating that they have the ability to extract, summarize and summarize information from things themselves. (4) The rectangles of the eye movement area of the children with difficulty in learning mathematics were larger, the fixation point duration was longer, the saccade duration was longer, the saccade distance was larger, and the eye movement trajectory was more chaotic, indicating that the children with difficulty in learning mathematics lacked good control over the cognitive processing resources and paid more cognitive processing resources. The results of this study provide a reference for the geometry education of children with mathematical learning difficulties.

Keywords: mathematical learning difficulties children, imagery, imagery rotation, eye movement mechanism

(2) 博士研究生论坛—发展与教育心理学分场 2

无意识的内隐记忆是否自动化？ ——对提取干扰对内隐记忆影响的元分析

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摘 要 采用元分析方法考察提取干扰是否会影响内隐记忆，通过文献搜索，共纳入 18 篇文献和 34 个独立效应量，总样本量 1247 人。结果发现：(1) 提取干扰对内隐记忆影响的总体效应量 $d=0.56$, $95\%CI=[0.47, 0.65]$, $Z=13.26$, $p<0.001$ ，说明提取干扰对内隐记忆有中等程度且显著的影响。(2) 分组异质性检验结果显示，将效应量分为知觉启动和概念启动、识别式和产生式这四类都可以分别共享一个独立的效应量， Q 知觉 (19)=28.09, $p=0.07$, $I^2=32.37$, $\sigma^2=0.04$, Q 概念 (6)=10.82, $p=0.09$, $I^2=44.56$, $\sigma^2=0.07$; QW 识别式 (15)=13.57, $p=0.56$, $I^2=3.78$, $\sigma^2=0.003$; QW 产生式 (10)=16.61, $p=0.09$, $I^2=39.80$, $\sigma^2=0.06$ 。(3) 亚组分析显示，识别式测验的效应量明显大于产生式测验， $Q(1)=10.61$, $p=0.001$, d 识别=0.63, d 产生=0.26。综上，提取干扰对内隐记忆的影响的总体效应量中等且显著大于 0，因此，无意识的内隐记忆是并非完全自动化的加工。但是，提取干扰对不同类型内隐记忆的影响还是存在差异，主要表现在识别式和产生式之间。

关键词 提取干扰，知觉启动，概念启动，识别式启动，产生式启动，元分析

Is unconscious implicit memory automated?

-- A meta-analysis of retrieval interference on implicit memory

Abstract: The method of meta-analysis was used to investigate whether the retrieval interference would affect implicit memory. Through literature search, a total of 18 literatures and 34 independent effects were included, with a total sample size of 1247 people. The results showed that: (1) the total amount of effect of retrieval interference on implicit memory was $d=0.56$, $95\%CI=[0.47, 0.65]$, $Z=13.26$, $p<0.001$, indicating that retrieval interference had a moderate and significant effect on implicit memory. (2) The results of grouping heterogeneity test show that the four types of effect size can share an independent effect size, $Q_{\text{perception}}(19)=28.09$, $p=0.07$, $I^2=32.37$, $\sigma^2=0.04$, $Q_{\text{concept}}(6)=10.82$, $p=0.09$, $I^2=44.56$, $\sigma^2=0.07$; $Q_{\text{identification}}(15)=13.57$, $p=0.56$, $I^2=3.78$, $\sigma^2=0.003$; $Q_{\text{production}}(10)=16.61$, $p=0.09$, $I^2=39.80$, $\sigma^2=0.06$. (3) Subgroup analysis showed that the effect size of recognition test was significantly larger than that of production test, $Q(1)=10.61$, $p=0.001$, $d_{\text{identification}}=0.63$, $d_{\text{production}}=0.26$. In conclusion, the overall effect size of the influence of retrieval interference on implicit memory was moderate and significantly greater than zero. Therefore, unconscious implicit memory is not completely automatic processing. However, the effects of retrieval interference on different types of implicit memory are different, mainly between recognition and generation.

Keywords: retrieval interference, perceptual priming, conceptual priming, identification priming, generation priming, meta-analysis

中国大学生网络利他行为变迁的横断历史研究

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摘 要 为探讨我国大学生网络利他行为水平随年代变化的趋势及性别差异，运用横断历史研究法对 2008 至 2018 年间的 48 篇测量我国大学生网络利他行为的有关文献（共 31241 名大学生）进行元分析。结果表明：

(1) 网络利他行为水平在这 11 年间有缓慢的上升趋势；(2) 网络利他行为整体的性别差异显著，男大学生网络利他行为水平上升更快；(3) 我国大学生网络利他行为水平与互联网现状、社会威胁和经济状况三方面的 9 项社会指标的相关系数显著，社会变迁可有效预测大学生网络利他行为。

关键词 大学生, 网络利他行为, 横断历史研究, 变迁, 社会指标。

A Cross-temporal Meta-analysis of Changes in Chinese College Students' Internet Altruistic Behavior

Abstract : To explore the changes in Chinese college students' internet altruistic behavior level and its gender difference, we used the cross-temporal meta-analysis to analyze 48 papers (31241 Chinese college students) measuring the internet altruistic behavior from 2008 to 2018. The results showed as following: (1) In the past 11 years, the overall level of internet altruistic behavior had slow upward trend; (2) The overall scores of internet altruistic behavior has obvious gender differences, and the increasing trend was more salient with male students than with their female counterparts; (3) Correlations between internet altruistic behavior and nine social indices of Internet status, social threats and economic states were positive, suggesting that social changes can effectively predict college students' online altruistic behavior.

Keywords: college students; internet altruistic behavior; cross-temporal meta-analysis; social change; social indices.

小学生学业拖延易感性的认知因素及其作用机制

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摘 要 学业拖延具有明显的个体差异性, 在面临相同学业任务时, 一些个体产生拖延, 而一些个体则不会产生拖延。本研究以拖延的时间决策模型为理论基础, 采用行为量表和任务范式考察了 5048 名 3-6 年级小学生的学业拖延及相关变量, 探究影响小学生学业拖延行为的认知易感性因素以及其在拖延决策中的作用。研究结果发现, 小学生学业拖延的认知易感性因素包括: 自我控制、情绪调节、时间管理, 具体表现在自我控制能力差、情绪调节困难、时间管理不足的个体在面对学业任务时更容易选择拖延行为; 不同年级主导学业拖延形成的认知易感性因素是不同的, 情绪调节在小学低年级中起主导作用, 自我控制在小学中年级中起主导作用, 时间管理在小学高年级中起主导作用; 学业拖延易感性高的个体在拖延决策过程中有着更多的负性情绪体验和更少的正性结果价值, 使其在拖延决策中更倾向于选择拖延行为; 认知易感性因素通过影响拖延决策的任务效用和结果效用进而影响个体的拖延倾向, 具体表现在自我控制可以通过降低任务的负性情绪体验, 增加正性结果价值来减少学业拖延行为; 情绪调节困难的个体更容易在面对负性情绪体验时选择拖延。本研究一方面较为系统考察了小学生学业拖延的认知易感性因素, 对于解释拖延所存在的个体差异、探明拖延形成及其发展认知机制具有较高的科学价值; 另一方面从拖延的时间决策模型出发探究认知易感性因素在学业拖延决策上的作用机制, 对于学业拖延行为的早期预防和干预也具有直接的现实意义。

关键词 学业拖延, 易感性, 时间决策模型, 认知因素。

Cognitive Factors and its Mechanism of Elementary Student's Vulnerability to Academic Procrastination

Abstract : Academic procrastination has individual differences. When faced with the same academic task, some individuals procrastinate, while some individuals do not. Based on the temporal decision model of procrastination (TDM), the study explored the vulnerability cognitive factors influencing academic procrastination behavior, and its role in procrastination decision-making by using scale to measure academic procrastination behavior and other ability in 5048 primary students. The results show that: (1) Self-control, emotion regulation and time management is the cognitive vulnerability factors of student's academic procrastination. Specifically, individuals with poor ability of self-control, difficulty in emotion regulation and insufficient time management are more likely to choose to procrastinate; (2) The cognitive vulnerability factors leading to academic procrastination are different in different grades. Among them, emotional regulation plays a leading role in the formation of academic procrastination in the lower grade of primary school, self-control plays a leading role in the middle grade, and time management plays a

leading role in the higher grade; (3) Individuals with high vulnerability to academic procrastination have more negative emotional experience and less positive outcome value in the process of decision-making, which makes them to choose procrastination; (4) Cognitive vulnerability factors affect procrastination tendency by influencing task utility and outcome utility. Specifically, self-control can reduce academic procrastination behavior by reducing negative emotional experience of the task and increasing positive outcome value. Individuals with difficulty in emotion regulation are more likely to procrastinate in the negative emotional experience. On the one hand, this study investigates the cognitive vulnerability factors of academic procrastination in primary student, which has important scientific value for explaining the individual differences of procrastination and exploring the cognitive mechanism of procrastination development. On the other hand, based on the time decision-making model of procrastination, it is of direct practical significance for the prevention and intervention of procrastination to explore the mechanism of cognitive factors in procrastination.

Keywords: Academic procrastination, Vulnerability, Cognitive factors, Temporal decision model.

电子游戏中虚拟化身对个体亲社会行为的影响

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摘要 电子游戏是人青睐的娱乐方式之一。研究者发现电子游戏中的亲社会属性影响玩家游戏后的亲社会行为。电子游戏中的虚拟化身是能被自己和其他玩家实时看到的自我呈现方式, 能通过化身线索(化身形象和化身行为)影响个体的自我概念和行为, 但目前关于虚拟化身对亲社会行为影响的研究较少, 研究结论也存在着争议。本文基于一般学习模型和普罗透斯效应, 通过两个研究探讨了电子游戏的虚拟化身对个体亲社会行为的影响及心理机制。研究一以 501 名《英雄联盟》或《王者荣耀》游戏玩家进行了问卷调查。结果发现, 在控制了性别、年龄、电子游戏经验、宜人性的前提下, 合作化身使用经验与个体的亲社会行为倾向呈显著正相关, 化身认同和特质同理心在合作化身使用经验和亲社会行为倾向之间起并行中介作用。研究二以 156 名无《守望先锋》游戏经验的女大学生为被试, 采用 2(化身形象: 邪恶/正义)×2(化身行为: 攻击对手/治疗队友)的两因素组间实验设计, 探讨了虚拟化身对亲社会行为(求助任务)、状态同理心(故事情境任务)和化身认同的影响。结果发现: (1) 化身形象对化身认同的主效应显著, 使用正义化身形象的被试比使用邪恶形象化身的被试具有更高水平的化身认同; (2) 化身行为对化身认同、状态同理心和亲社会行为的主效应显著, 与操作化身攻击对手的被试相比, 操作化身治疗队友的被试具有更高水平的化身认同、状态同理心和亲社会行为; (3) 化身认同在化身行为和亲社会行为之间的中介作用呈边缘显著。本研究发现电子游戏中的虚拟化身会对个体的亲社会行为造成影响, 并通过特质同理心和化身认同的中介作用来实现。但在严格控制材料短时实验研究中, 中介效应并不显著。本研究对电子游戏中的虚拟化身对个体亲社会行为的影响及其内在机制进行了深度探讨, 并对今后的研究提出合理的展望。

关键词 电子游戏, 虚拟化身, 亲社会行为, 同理心, 化身认同

The Impact of Virtual Avatars on Individuals' Prosocial Behaviors in Video Games

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Abstract: video games have become one of the most popular entertainment activities for young people now. Previous research found that prosocial characteristics of the video games can influence individuals' prosocial behaviors. Virtual avatar in video games refers to the way of self-presentation that can be seen by oneself and other players in

real-time. Virtual avatars can influence the self-concept and behavior of individuals through avatar clues (avatar appearance and avatar behavior). However, there are few researches on the impact of virtual avatars on prosocial behaviors. Based on the General Learning Model and Proteus Effects, this article explores the impact of virtual avatars of video games on individuals' prosocial behaviors and psychological mechanisms through two studies. Study 1 used a questionnaire survey was conducted among 501 gamers of "League of Legends" or "Honor of Kings". The results showed that: under the premise of controlling gender, age, video game experience, and agreeableness, the cooperative avatar experience positively predicts the prosocial behavior tendency of individuals, and avatar identity and trait empathy was a mediator in the relationship between them. Study 2 designed a two-factor experimental design of 2 (avatar image: evil/justice) $\times$ 2 (avatar behavior: attacking opponents/healing teammates) to investigate virtual avatar on the inclusion of aggression in prosocial behaviors (help-seeking tasks), state empathy (story-situation tasks), and avatar identification. 156 subjects were randomly assigned to use avatars representing justice or evil to attack opponents or heal teammates. The results showed that: (1) Compared with the justice appearance, evil appearance had a more significant effect on the avatar identity. (2) Compared with attacking opponents, healing teammates had a more significant effect on the avatar identity, state empathy, and prosocial behavior. (3) The mediating role of avatar identity between avatar behavior and prosocial behavior is marginal significance, while state empathy is not significant. The present research found that virtual avatars will effect individuals' prosocial behaviors and this is achieved through the mediating role of trait empathy and avatar identification. However, under strict control of the experimental materials, the short-term effects' underlying mechanisms is unclear. Finally, this research has conducted an in-depth discussion on the impact of virtual avatars in video games on individual prosocial behaviors and their internal mechanisms and put forward reasonable prospects for future research.

Keywords: Video Game, Virtual Avatar, Prosocial Behaviour, Empathy, Avatar Identification

留守儿童心理健康水平变迁的横断历史研究

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摘要 目的: 为了探讨我国留守儿童心理健康水平随年代的变迁, 以及相关的影响因素是什么? 方法: 在知网、万方、维普三个中文数据库中分别以“留守儿童”“留守孩”与“心理健康”“心理健康诊断测验”“MHT”任意字段匹配进行检索, 共检索到 10031 篇文献, 根据筛选标准, 最终纳入文献 102 篇。采用横断历史研究方法对 102 篇使用心理健康诊断标准化量表的研究数据进行元分析。结果: (1) 留守儿童与非留守儿童的心理健康水平随年代变化不大但有差异, 且留守儿童较非留守儿童心理健康水平更差, 其中最为明显的就是学习焦虑: 非留守儿童的学习焦虑随年代明显下降, 而留守儿童的心理焦虑却随着年代有上升的趋势; 无论是留守儿童还是非留守儿童他们的孤独感都在随年代不断增加。(2) 留守男生、女生的心理健康水平随年代呈下降趋势, 其中留守男生下降的幅度较为明显, 但是留守男生的心理健康水平仍较高; 时代变化所产生的不良环境对留守男生的影响更大, (3) 留守小学生的心理健康水平随年代明显下降, 而留守初中生则变化不大, 且留守小学生与留守初中生心理健康水平差异不大; (4) 其他监护类型 (缺乏有效的双亲监护) 的留守儿童心理健康水平随年代明显下降, 而单亲监护的留守儿童心理健康水平随年代变化不大, 但是两种监护类型的留守儿童心理健康水平均低于双亲监护的非留守儿童, 两种类型的留守儿童之间不存在显著差异。

关键词 留守儿童, 心理健康, 心理健康诊断测验量表, 横断历史研究, 元分析

A cross-sectional historical study on the Change of mental health level of left-behind children

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Abstract: A cross-sectional historical study was conducted on 102 articles from 2004 to 2017 that used the Mental Health Test (MHT) to measure the mental health level of left-behind children and non-left-behind children in China (a total of 82,169 subjects). The results showed that: (1) The mental health level of left-behind children and non-left-behind children does not change much with age, but there is a difference, and the mental health level of left-behind children is worse than that of non-left-behind children. The most obvious one is learning anxiety. The learning anxiety of non-left-behind children decreases obviously with the age, while the psychological anxiety of left-behind children tends to rise with the age. No matter left-behind children or non-left-behind children, their loneliness is increasing with The Times; (2) The mental health level of both left-behind boys and left-behind girls has decreased significantly with age, among which left-behind boys have decreased significantly. Meta-analysis results show that left-behind boys have a higher mental health level. (3) The mental health level of left-behind primary school students decreases with age, and the mental health level of left-behind junior high school students does not change much with age. The results of the meta-analysis show that there is little difference in the mental health level between left-behind primary school students and left-behind junior high school students. (4) single guardianship of left-behind children's mental health s changed little, other types of guardianship left-behind children's mental health obviously drops, s component analysis results show that the two types of guardianship of left-behind children's psychological health level is lower than parents care left-behind children, soldiers do not exist significant differences between two kinds of left-behind children.

Keywords: left-behind children; Mental health; Mental Health Test Scale; Cross-sectional historical study; A meta-analysis

二语词汇习得中的积极效价偏向：来自汉语情感成语的证据

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摘要 积极效价偏向表明在熟悉情绪词中说话者对积极词反应更快。但很少研究者关注情绪词在学习阶段是否也会出现积极效价偏向。在本研究中，我们报告了两个正式实验，研究汉语为二语的双语者在学习汉语情感成语时是否表现出积极效价偏向，以及语义对积极效价偏向和情感信息的影响。在正式实验之前，汉语为二语的双语者需要学习汉语情感成语并以较高的正确率通过了汉语情感成语测试，之后参加正式实验。实验一采用效价判断任务探究在学习阶段，双语者对情感成语是否表现出积极效价偏向。实验二采用语义相关判断任务，进一步探讨语义对积极效价偏向和情绪信息的影响。实验结果表明，情感成语的学习过程中存在着积极效价偏向，语义调节着积极效价偏向和积极的信息加工。综上所述，在汉语情感成语的学习过程中积极的效价偏向被习得，并受到语义信息的调节。

关键词 汉语为二语的双语者，积极效价偏向，汉语情感成语，语义信息

Positive valence bias in L2 vocabulary acquisition: Evidence from Chinese emotion idioms

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Abstract: Positive valence bias indicates speakers respond faster to positive than negative information in emotion words they had learned and used in the natural context for a long time. Few researchers paid attention to which phase when positive valence bias was acquired in the learning process or used in real context for emotion words. In this study, we reported two formal experiments on speakers learning Chinese as a second language (CSL) to investigate positive valence bias in the learning process of new Chinese emotion idioms and the effect of semantics on positive valence bias and emotion information. CSL speakers, who had acquired new Chinese emotion idioms and passed the test for learned Chinese idioms with a high accuracy rate before formal experiments, could participate in Experiment 1 later and Experiment 2. In Experiment 1, target materials were new Chinese idioms with positive and negative information. Positive valence bias in the learning process of new Chinese idioms was investigated in valence judgments. Experiment 2 used a semantic relatedness decision task to explore further semantics' effect on positive valence bias and emotion information. Results of two experiments showed that positive valence bias appeared in the learning process of emotion idioms, and semantics conditionally influenced positive valence bias and positive information processing. In summary, positive valence bias has been acquired in the learning process of new Chinese idioms and modulated by semantic information.

Keywords: Chinese as second language learners, positive valence bias, Chinese emotion idioms, semantic information

学龄儿童心理行为问题与执行功能不同成分关系的追踪研究： 基于双因子模型的交叉滞后模型分析

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摘要 心理行为问题, 如内化和外化行为问题, 在学龄儿童中普遍存在, 其与执行功能的关系是儿童心理健康领域的重要研究问题。已有研究多将内化和外化问题视为两种分离的概念结构, 而忽略了内外化问题的内在联系。基于双因子模型提出的心理健康一般病理因子 (General p) 假设为认识这一问题提供了崭新视角。为深入探索儿童心理行为问题的一般病理因子和内外化问题与抑制控制、工作记忆和认知灵活性等执行功能不同成分的发展关联, 本研究采用间隔一年的追踪设计, 对 1639 名 6 - 13 岁儿童进行两个时间点的测量, 儿童的内外化问题由家长报告困难与长处问卷 (SDQ) 父母版 (基线: Cronbach' s α 系数 0.778, 第二年: Cronbach' s α 系数 0.792) 来评估, 执行功能由儿童完成执行功能任务来评估。研究结果显示, 1) 在基线和第二年的追踪测量中, 双因子模型 (general p、独特内化和外化因子) 的拟合均优于单因子 (精神病理因子) 和两因子 (内化和外化因子) 模型, 且该双因子结构具有跨时间测量一致性。这表明双因子模型比传统的两因子模型或单因子模型能更好地表征学龄儿童心理行为问题的结构。2) 在整体和不同年龄组中, 儿童在基线期更强的抑制控制功能显著预测一年后更少的外化问题, 但基线期外化问题并不能预测一年后的抑制控制功能。3) 在整体和大多数年龄组中, 儿童在基线期更高水平的认知灵活性显著预测一年后更低水平的 general p, 反之也成立。4) 在整体和不同年龄组中, 儿童的工作记忆与外化问题和 general p 均不存在显著的相互预测。5) 执行功能 3 个成分和双因子模型中的独特内化问题均不存在互相预测关系。本研究不仅在学龄儿童中验证了双因子模型可较表征心理行为问题的内在结构, 而且第一次揭示出学龄儿童认知灵活性与 general p 的关系。本研究为理解儿童心理行为问题的发展机制及其预防和干预提供了新证据。

关键词 心理行为问题, General p, 执行功能, 双因子模型, 交叉滞后模型

The Longitudinal Associations between Psychiatric Problems and Different Components of Executive Function in School-age Children: Cross-Lagged Analysis Based on Bifactor Model

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Abstract: Psychiatric problems, such as internalizing and externalizing behavioral problems, are prevalent in school-age children. The association with executive function and psychological behavioral is an important research issue. Most previous studies treated externalizing and internalizing problems as two separate structures, ignoring the co-occurrence between them. The general psychopathological (general p) based on the bifactor model provides a new perspective to understand this problem. The aim of this study is to examine the association with general p, internalizing and externalizing problems and the different components of executive function, such as inhibitory control, working memory and cognitive flexibility. This study used cross-lagged modeling to examine the dynamic relations between general and specific factors and executive functions. This study used one-year longitudinal design and 1639 children aged 6–13 years were measured at two time points, children internalizing and externalizing problems were assessed by their parents completed the Strengths and Difficulties Questionnaire (SDQ) (baseline: Cronbach's α coefficient = 0.778, follow-up: Cronbach's α coefficient = 0.792), while the executive functions (inhibitory control, working memory and cognitive flexibility) were self-reported by participants. Results showed that 1) At both the baseline and the second year of measurement, the bifactor model was better than the traditional two-factor model or general-factor model. And measurement invariance of the bi-factor structure was established across one year, which indicates that the bifactor model can better characterize the structure of the psychological behavioral problems than the traditional two-factor model general-factor model. 2) Inhibitory control at baseline significantly negatively predicted the externalizing problem one year later for the whole sample and across various age groups, not vice versa. 3) Cognitive flexibility and general p mutually predict each other for the whole sample and most of age bands after controlling gender and parental education. 4) In contrast, working memory at baseline did not significantly predict the externalized problem one year later or the general p, nor did the psychopathological factors at baseline significantly predict working memory one year later. 5) There was no significant correlation between the three components of executive function and the unique internalization problems. This study not only supported the validity of the bi-factor model in capturing the structure of psychiatric problems in children, but initially revealed the relations between poor cognitive flexibility and general p. This study provided emerging evidence for understanding the development mechanism of mental behavior problems in children as well as its prevention and intervention.

Keywords: Psychiatric problems, General p, Executive function, Bifactor model, Cross-lagged model

理解阅读困难与数学困难的共患：工作记忆不同成分缺陷特征比较

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摘要 阅读困难和数学困难是学龄儿童常见的神经发育问题, 且高频共患。已有研究很少关注阅读-数学困难的共发、分离相关的认知技能缺陷模式。工作记忆是对信息进行加工和储存的能力, 包括语音储存、复杂记忆广度和抑制、更新和转换等中央执行功能的多种成分, 在阅读和数学等高级认知活动中具有重要作用。阅读困难和数学困难均可能存在工作记忆缺陷, 然而阅读困难和数学困难共发及分离与不同领域、不同成分的工作记忆有何关联模式, 目前尚不清楚。为此, 本研究拟系统比较阅读困难及数学困难共发及分离的3类

儿童在工作记忆不同领域和成分上的缺陷特征,通过系统检验广泛性、严重性和独立性缺陷等重要假设,探讨阅读和数学困难共发与分离的认知机制。我们结合教师提名、学校成绩与成就测验,通过对 811 名小学五年级儿童(平均年龄 11.02 岁, $SD = .52$)阅读及数学能力的两轮筛查,识别出 23 名阅读数学困难共患儿童,单纯阅读或数学困难的儿童各 15 及 21 名,另有 36 名儿童为正常对照组,不同组别儿童年龄和一般认知能力差异不显著。研究所使用阅读、数学、工作记忆任务的信息系数(Cronbach's α)均高于 0.76。结果表明,阅读和数学困难共患儿童语音储存、复杂工作记忆、抑制、更新和转换表现显著低于正常同龄儿童,且与语言和数字材料无关。同时,阅读和数学困难共患儿童语义抑制、转移和转换表现显著差于同龄单纯阅读或数学困难儿童。个体缺陷分析显示,转换缺陷为阅读和数学困难共患儿童所独有。我们结合共享与分离病因模型和共患假说,讨论了阅读和数学困难共患与分离的认知机制及对阅读、数学困难诊断与干预的启示。

关键词 工作记忆, 阅读数学困难, 广泛性缺陷假设, 严重性缺陷假设, 独立性缺陷假设

Understanding the Comorbidity of Reading and Mathematics Learning Difficulties: The Working Memory Deficit Profiles

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Abstract: Reading difficulties and mathematics learning difficulties are common neurodevelopmental problems, that often co-occurred in school-age children. Previous studies have paid little attention to the patterns of cognitive skill deficits associated with the comorbidity and dissociation of reading and mathematics difficulties. Working memory refers to the capacity to process and store information, including phonological storage, complex memory span and central executive function such as inhibition, update, and shifting. Working memory plays an important role in reading, mathematics and other advanced cognitive activities. Both reading and mathematics difficulties show working memory deficits. However, the relationship between the comorbidity and dissociation of reading and mathematics difficulties within different domains and components of working memory is still unclear. Therefore, this study aims to systematically compare the deficit characteristics of different domains and components of working memory among three types of children with reading and mathematics difficulties. By testing the broader, severe, and specific deficits hypotheses, we explored the cognitive mechanism of the coexistence and separation of reading and mathematics difficulties. Eight hundred and eleven children at Grade 5 (mean age 11.02 years, $SD = .52$) in Beijing completed the screening tests, including two times' assessments in reading and mathematics achievement and teacher nomination. 23 children were classified as co-occurred reading and mathematics difficulties (RDMD), 15 children were reading difficulties (RD) alone and 21 children were mathematics difficulties (MD) alone. 36 children were selected as the typical controlled group (TD). There was no significant difference in age and general cognitive ability among different groups. The Cronbach's α of reading, mathematics and working memory tasks were all higher than 0.76. The comorbid RDMD group showed significantly lower performances than the TC group in phonological storage, complex memory span, inhibition, update and shifting, irrespective of language and numerical materials. Moreover, the comorbid RDMD group performed the poorest semantic inhibition, update and shifting when comparing with the RD alone and MD alone groups. Individual deficit analysis indicated a unique shift deficit for the comorbid RDMD group while neither the RD alone group nor the MD alone group showed such a deficit. Based on the correlated liabilities model and the hypothesis of comorbidity, this paper explores the cognitive mechanism of comorbidity and dissociation of reading and mathematics difficulties and its implications on the diagnosis and intervention.

Keywords: Working Memory, Reading and Mathematics Difficulties, Broader Deficits Hypothesis, Severe Deficits Hypothesis, Specific Deficits Hypothesis

家庭功能与儿童品行问题关系的一项纵向研究： 以个体内反应时变异为指标的注意控制的调节作用

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摘要 以往研究主要从个体间水平上探究家庭环境，以个体内反应时变异（intraindividual response time variability, IIRTV）为指标的注意控制和儿童外化问题间的关系，很少关注从个体内水平来探讨家庭环境、IIRTV 和儿童外化问题之间的关系，尤其是品行问题。基于家庭系统理论与个体-环境交互作用理论，本研究采用多水平模型进行分析，探讨以 IIRTV 为指标的注意控制和家庭功能如何共同预测 6-9 岁儿童品行问题。研究选取 236 名一年级学生为被试，对其进行为期三年的追踪研究。采用 go/no-go 任务测量儿童的注意控制。采用父母报告的家庭适应性与亲密度量表中文版（FACES II-CV）和长处与困难问卷（SDQ-CV）测量家庭功能及儿童品行问题。结果发现：（1）在儿童个体内变化水平上，儿童品行问题随家庭功能的变化而变化，家庭功能能够负向预测儿童品行问题；（2）在儿童个体间变化水平上，IIRTV 与家庭功能能够显著交互预测儿童品行问题发展的个体差异；（3）只有在那些较低水平家庭功能的儿童中，较大的 IIRTV 能够显著预测儿童在一到三年级之间更多的品行问题，而当家庭功能较好时，IIRTV 和品行问题之间不存在显著相关。此外，表现出较大 IIRTV 水平的儿童对家庭功能的负面影响更加敏感，符合素质压力模型。研究结果表明较差的家庭功能和较低水平的注意控制（较大的 IIRTV）对品行问题有较强的预测作用，而较高水平的注意控制（较小的 IIRTV）能缓冲较差的家庭环境给儿童带来的不良影响。

关键词 品行问题，注意控制，家庭功能，多水平分析，IIRTV

The Longitudinal Relationships between Family Functioning and Children's Conduct Problems: The Moderating Role of Attentional Control Indexed by Intraindividual Response Time Variability

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Abstract: Previous studies have examined the association among family environment, children's attentional control indexed by intraindividual reaction time variability (IIRTV), and externalizing problems, which mainly focused on between-child comparisons. There are few studies exploring within-child associations among the family environment, IIRTV, and children's externalizing problems, especially for conduct problems. The present study examined how children's attentional control indexed by IIRTV, and family functioning jointly predict children's conduct problems from ages 6 to 9 years old at the within- and between-child levels. Data came from 236 children who participated in a longitudinal study and collected at Grade 1, Grade 2, and Grade 3. Children completed the Go/No-go task to assess their IIRTV. Children's parents completed the Chinese version of the Family Adaptability and Cohesion Scale (FACES II-CV) and the Strengths and Difficulties Questionnaire (SDQ-CV) to assess family functioning and children's conduct problems, respectively. The results indicated that (1) within-child changes in conduct problems were negatively correlated with within-child changes in family functioning, and the improvement of family functioning would predict the decrease in children's conduct problems; (2) on the between-child level, IIRTV and its interaction with family functioning significantly predict individual differences in the development of conduct problems; (3) the association between conduct problems and IIRTV was significant at lower values of family functioning. Children who showed greater levels of IIRTV were particularly sensitive to the negative effects of family functioning, which was consistent with the diathesis-stress model. The present study exhibited that poor family functioning and attentional control indexed by greater IIRTV are stronger predictors of conduct problems while better

attentional control indexed by lower IIRTV could buffer the adverse effects of poor family environment.

Keywords: conduct problems, attentional control, family functioning, multilevel analysis, IIRTV

一般认知能力、批判性思维与学业成就的关系:交叉滞后的研究

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摘要 批判性思维与学业成就是学生学习的两大重要方面, 两者之间不仅存在横断的相关关系, 同时也可能存在动态的相互影响。而五、六年级的学生面临小学升初中的关键时期, 其认知发展阶段也正处在具体运算阶段到形式运算阶段的转折期, 思维水平和学业成就的动态作用强度也可能发生一定的变化, 基于此, 本研究旨在探讨批判性思维在四到六年级小学生中的发展变化, 以及批判性思维与学业成就之间的动态相互影响。此外, 现有研究表明无论是批判性思维还是学业成就, 都与基础性的一般认知能力有关, 因此, 在探讨两者的相互作用关系时, 一般认知能力是不可忽视的因素。本研究同时考虑把一般认知能力纳入了研究框架中, 探讨批判性思维、学业成就和一般认知能力之间的动态相互影响。研究对象来自华中科技大学附属小学学生, 对 160 名小学生 (男生 81 人, 女生 79 人) 从四年级 ($M_{age} = 9.37$, $SD = 0.484$) 到六年级, 每年 12 月进行一次追踪测量, 在各时间点上, 对学生的批判性思维和一般认知能力进行了测量, 并获取每学期学生的期末考试成绩作为学业成就指标, 最后采用 SPSS26.0 进行描述统计和相关分析, 运用 Mplus8.0 进行潜增长模型(LGCM)、自回归交叉滞后模型(CLPM)和随机截距交叉滞后模型(RI-CLPM)的构建。本研究主要发现如下: (1) 附小四~六年级小学生批判性思维的发展趋势总体呈现出向上增长的线性趋势, 且批判性思维总分处于中等偏上水平。(2) 学业成就和批判性思维之间的动态影响表现为学业成就显著预测批判性思维的单向、滞后影响, 然而, 这种影响随时间减弱。(3) 控制被试间稳定性后, 学业成就和批判性思维在第二年和第三年存在交叉滞后作用, 即使在加入了一般认知能力之后, 结果依然稳定。

关键词 批判性思维, 学业成就, 一般认知能力, 小学生

The relationship between general cognitive ability, critical thinking, and academic achievement: A Cross-Lagged study

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Abstract: Critical thinking and academic achievement are two important aspects of students' learning. There is not only a cross-sectional correlation between them, but also a dynamic interaction between them. However, the fifth and sixth graders are in the transition stage from primary school to middle school, and their cognitive development stage is in the transition period from concrete operation to formal operation. The intensity of the dynamic effect of thinking level and academic achievement may also change to some extent. Based on this, the purpose of this study is to explore the development and change of critical thinking among students in fourth grade to sixth grade, and the dynamic interaction between critical thinking and academic achievement. In addition, it has been proved that both critical thinking and academic achievement are related to basic general cognitive ability. Therefore, general cognitive ability cannot be ignored when discussing the interaction between the two variables. This study also considered the general cognitive ability into the research framework, to explore the dynamic interaction between critical thinking, academic achievement and general cognitive ability.

The data of this study were collected from the primary school students affiliated to Huazhong University of Science and Technology. From fourth grade ($M_{age} = 9.37$, $SD = 0.484$) to sixth grade, 160 primary school students (81 boys and 79 girls) were tracked and measured in December every year. At each time point, the final exam scores of students in this semester were obtained as the academic achievement indicators. Finally, SPSS26.0 was used for

descriptive statistics and correlation analysis. The Latent Growth Curve Modeling (LGCM), The Autoregressive Cross-Lagged Panel Model (CLPM) and The Random Intercept Cross-Lagged Panel Model (RI-CLPM) were constructed by MPLUS 8.0. The main findings of this study are as follows : (1) The development trend of critical thinking of students from fourth grade to sixth grade of affiliated primary school shows a linear upward trend, and the total score of critical thinking is above the average level. (2) The dynamic influence between academic achievement and school shows a linear upward trend, and the total score of critical thinking is above the average level. (2) The dynamic influence between academic achievement and critical thinking is manifested as that academic achievement significantly predicts the one-way and delayed influence of critical thinking, however, this influence decreases with time. (3) After controlling for interparticipant stability, there is an cross-lagged interaction between academic achievement and critical thinking in the second and third years, the results remained stable even after accounting for general cognitive abilities.

Keywords: critical thinking, academic achievement, general cognitive ability, pupils

青少年不同欺凌角色的识别和预测——基于决策树的研究

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摘 要 校园欺凌是发生在同伴群体间的故意地、反复地、有针对性地身体、言语、关系和心理攻击 (Olweus, 1993)。校园欺凌在全球广泛存在, 联合国教科文组织发布的数据显示, 全球有 32% 的学生近一个月内, 至少一次被学校的同龄人欺凌, 每 3 个学生中就有 1 个曾遭受过同学的欺凌。而在国内, 基于 2018 年北京-上海-江苏-浙江的四省市 PISA 数据显示中国约有 48.2% 的学生经历过校园欺凌, 约有 17.7% 的学生在近一年内频繁遭受校园欺凌 (申燕妮, 辛涛, 张佳慧, & 林喆, 2020), 受欺凌是导致包括自杀、精神障碍等一系列身心健康问题的重要风险因素 (Danese & Tan, 2014)。减少校园欺凌不仅关系到青少年的健康发展, 也关系到国家未来的人力资本。因此, 如何准确识别预测个体是否会受欺凌、是否成为欺凌者就成为一个重要研究课题。本研究基于 2543 名中学生的两次追踪数据, 首先使用潜类别分析基于欺凌/受欺凌同伴提名对青少年进行欺凌角色分类, 然后使用卡方自动交互检测 (CHAID) 决策树方法识别预测不同校园欺凌角色的因素。研究结果显示: (1) 基于潜类别分析可以将校园欺凌角色分为四类: 欺凌者、受欺凌者、欺凌-受欺凌者和未参与者; (2) 决策树分析显示, 在是否会成为欺凌者中, 偏差同伴、受欢迎度和父母参与是主要预测变量, 训练集正确率为 83.4%, 检验集正确率为 83.3%; 在是否会成为受欺凌者中, 外貌、抑郁状态、公正世界信念和问题行为是主要测验变量, 训练集正确率为 85.7%, 检验集正确率为 84.8%; 在是否会成为欺凌-受欺凌者中, 个体是学业成绩、父母参与、外貌和问题行为是主要预测变量, 训练集正确率为 91.3%, 检验集正确率为 92.9%。确定不同校园欺凌角色的预测因素有助于提前预测个体未来的欺凌/受欺凌情况, 提前做出保护性措施, 防止和降低校园欺凌的发生, 促进青少年健康成长。

关键词 青少年, 校园欺凌, 欺凌角色, 决策树

(3) 博士研究生论坛—发展与教育心理学分场 3

网络游戏化身面孔的注意偏向研究

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摘 要 基于自我扩展理论和化身-自我关联性模型, 通过两项行为实验分别考察网络游戏化身面孔的注意加工特点和影响因素。实验一采用点探测任务同时考察了注意定向和注意维持两种可能导致注意偏向的加工成分, 通过比较 32 名游戏玩家的反应时和正确率发现: 当出现在有效线索位置时, 化身面孔、自我面孔、名人面孔和中性图片的任务反应时差异不显著; 当出现在无效线索位置时, 化身面孔和自我面孔的任务反应时要显著慢于中性图片。这表明网络游戏化身面孔与自我面孔都表现出注意转移困难这一注意偏向, 但未表现出

注意定向加速。实验二采用视觉搜索任务考察了网络游戏化身面孔注意偏向的影响因素,通过比较 37 名网络游戏玩家对熟悉化身面孔、不熟悉化身面孔、有吸引力化身面孔和没有吸引力化身面孔的搜索速度来判断网络游戏化身面孔的熟悉度和吸引力对其注意偏向的影响。结果发现:玩家在搜索熟悉化身面孔时的速度要显著快于不熟悉化身面孔,搜索有吸引力化身面孔与没有吸引力化身面孔时的反应时差异不显著。这表明,化身面孔的熟悉度会影响个体的注意偏向,玩家对自己更加熟悉的化身具有注意偏向。本研究将自我相关信息的注意加工优势从现实生活中的面孔、人名等拓展到了网络虚拟环境中,证实网络游戏化身作为虚拟自我相关信息和现实生活中的高自我相关信息一样具有注意加工优势的同时,还比较了具有不同属性的化身面孔的注意加工特点,这对帮助个体理解虚拟自我相关信息对自我建构和认知加工的影响具有重要作用。

关键词 网络游戏化身,自我,注意偏向,熟悉度,吸引力

Attentional Bias towards Avatar Face in Online Games

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Abstract: Based on the self-expansion theory and avatar-self-relevance model, this study investigated the attention processing characteristics and influencing factors of avatars in online games through two behavioral experiments. In experiment 1, the spatial cue task was used to compare the difference of 32 players between the attentional processing results of avatar-face, self-face and famous-face and the neutral picture, and the four types of pictures will appear in the effective clue position and the invalid clue position respectively. Through the spatial cue task paradigm, attention orientation and attention transfer were also investigated. Results showed that there was no significant difference in the response of avatar-face, self-face and famous-face and neutral picture under the condition of effective clues. In the null cue condition, the response time of the avatar-face and the self-face was significantly slower than that of the neutral picture. This indicates that the online game avatar-face shows the same attention bias as the self-face, and the mechanism leading to the occurrence of attention bias is impaired attentional disengagement rather than attention orientation. In experiment 2, visual search task was used to investigate the effects of familiarity and attractiveness on the attentional bias of avatars, through comparing the search speed of 37 players to familiar, not familiar, attractive and unattractive avatar face. The results showed that search response of familiar avatars was significantly faster than that of unfamiliar avatars. However, there was no significant difference between the response of attractive avatars and that of unattractive avatars. This indicates that the familiarity of the avatar-face will affect the attention processing speed of the individual, and the more familiar the avatar is, the closer it is to the self. This study expands the attention processing advantage on self-related information from real life self-related information to virtual self-related information. The spatial cue task is used to distinguish two components of attention processing, and the mechanism of attention bias between avatar-face and self-face is clarified. Avatar-face attention bias in online games is reflected in that once noticed, it is difficult to remove, and this attention processing is affected by players' familiarity with the avatar-face. This study not only provides evidence for avatar-self-relevance model and self-extension theory, but also plays an important role in helping individuals understand the influence of self-awareness and self-construction on individuals' social information processing.

Keywords: Online games avatars, Self, Attentional bias, Familiarity, Attractiveness

A Parallel Latent Growth Model of Preference for Solitude and Depressive Symptoms among Chinese Early Adolescents

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Abstract: The goal of this study was to explore longitudinal and parallel associations between preference for solitude and symptoms of depression among Chinese early adolescents. Participants were 853 adolescents (48.4 % female; Mage= 14.65 years, SD =0.54) from mainland China, who completed self-report assessments of preference for solitude and depressive symptoms at three time-points (from grade 7 through grade 9). Among the findings, results from parallel latent growth modelling suggested that higher initial levels of preference for solitude at Grade7 negatively predicted the slope of adolescents' depressive symptoms. This indicates that higher levels of preference for solitude at Grade 7 predicted a slower increase in adolescents' depressive symptoms levels over three years. Implications are discussed that consider the adaptive mechanism of preference for solitude among Chinese adolescents in the development of depressive symptoms.

Keywords: preference for solitude, depressive symptoms, parallel changes, early adolescence

BDNF 基因 rs6265 多态性与父母严厉管教对学前儿童工作记忆的交互影响

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摘要 工作记忆是执行功能的重要组成部分, 已有研究分别探讨了基因与家庭环境因素对儿童工作记忆发展的影响, 但基因与家庭环境因素如何交互影响儿童的工作记忆发展, 目前尚缺少研究。本研究以 632 名学前儿童 (平均年龄 = 5.11 岁, SD = 0.97) 为被试, 通过家长报告的《亲子冲突解决策略量表》测量学前儿童父母的严厉管教水平, 通过儿童完成科斯基木任务考察儿童的工作记忆能力, 从唾液样本中提取 DNA 进行分型, 获得 BDNF 基因 rs6265 位点多态性, 从而考察 BDNF 基因 rs6265 多态性与父母严厉管教对学前儿童工作记忆的交互影响。研究结果显示, 性别与 BDNF 基因 rs6265 多态性对学前儿童工作记忆的交互作用显著, BDNF 基因 rs6265 多态性可显著预测男孩工作记忆水平, 对女孩工作记忆预测不显著 (携带 CC 基因型的男孩其工作记忆成绩显著好于 TT/TC 基因型男孩, 携带不同基因型的女孩其工作记忆成绩没有显著差异)。尤其是研究发现, 在控制了年龄、社会经济地位后, BDNF 基因 rs6265 多态性与父母严厉管教对学前儿童工作记忆的交互作用显著。具体而言, 携带 CC 基因型儿童的工作记忆成绩在高父母严厉管教条件下显著降低, 而低父母严厉管教条件下其工作记忆没有受影响。对于携带 TT/TC 基因型儿童, 其工作记忆成绩在不同父母严厉管教条件下没有显著差异。研究结果支持了素质-压力模型假设, 表明 CC 型基因是一个消极环境脆弱性因子。

关键词 rs6265 多态性, 严厉管教, 工作记忆, 基因-环境交互作用

Interaction effects between BDNF gene rs6265 polymorphism and parental harsh discipline on preschoolers' working memory performance

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Abstract: Working memory (WM) is one of the main components of executive functions that allows to process, store and update information, to accomplish a task. It has been shown that WM is affected both by genetic polymorphisms

and by environmental factors. However, less is known about how genes interact with family environment to affect children's WM performance. To address this question, the current study examined how BDNF gene rs6265 polymorphisms interacted with parental harsh discipline to impact on preschoolers' WM performance. Six hundred and thirty two preschool children (Mage = 5.11, SD = 0.97) completed the Digits Corsi Blocks Task to assess their WM performance. Their parents were asked to fill out the Parent-Child Conflict Tactics Scale (CTSPC) to assess parental harsh discipline. The genomic DNA of preschoolers was extracted from their saliva samples, PCR primers were designed using MassARRAY Assay Design Suite V2.0. Results showed that gender significantly interacted with BDNF gene rs6265 polymorphism to predict preschoolers' working memory. Specifically, BDNF gene rs6265 polymorphism could significantly predict boys' but not girls' working memory performance (The performance of boys with CC genotype was significantly better than that of boys with other genotypes, while there was no significant difference of girls with different genotypes). Moreover, After controlling for age, socioeconomic status (SES), results showed that the BDNF rs6265 polymorphism significantly interacted with parental harsh discipline to impact on preschoolers' WM performance, and CC genotype is a sensitivity factor to the environmental influence. The results support the hypothesis of diathesis-stress model, and indicating that CC genotype is a vulnerability factor to the negative environmental influence. The findings of the present study enrich the literature on the association between BDNF rs6265 polymorphism and parental harsh discipline in preschoolers' WM performance, and expands our knowledge about the G×E underpinnings of children's executive function.

Keywords: rs6265 polymorphism, parental harsh discipline, working memory, gene-environment

孤独症儿童阅读能力不平衡假说： 中文阅读能力发展的不同特征及其影响因素

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摘要 阅读能够有效提高孤独症儿童的独立性，增加社交词汇量，扩大兴趣范围，并让他们更好地理解 and 参与社会活动。以往关于孤独症儿童阅读能力水平的研究表明其阅读技能发展存在很大的异质性。为了解中文孤独症儿童的阅读能力发展特征及其影响因素，本研究对 157 名 3-11 岁的孤独症儿童 ($M = 6.68, SD = 1.54$) 的中文阅读能力以及与阅读相关的语言和认知技能进行测查。研究结果发现，孤独症儿童的中文阅读能力发展存在 4 种类别：第 1 类“善读者” ($N = 33$) 表现为字词解码及相关的语言和认知技能均表现良好；第 2 类“善解码者” ($N = 61$) 表现为字词解码能力、语音意识和语素意识较好，但语言理解相对较弱；第 3 类“弱解码者” ($N = 43$) 表现为字词解码能力较弱，语言理解处于平均水平；第 4 类“弱读者” ($N = 20$) 表现为字词解码及相关的语言和认知技能上均表现较弱。尤其值得注意的是，“善解码者”和“弱解码者”在阅读技能的发展上存在能力间的不平衡状态。研究进一步分析了不同类别下影响孤独症儿童阅读能力的关键因素，结果显示：在控制年龄和非言语智力后，正字法意识能够显著预测第 1 类孤独症儿童词汇阅读，语素结构意识显著预测第 2 类孤独症儿童的词汇阅读能力，第 3 类孤独症儿童的词汇阅读无显著预测因素，而语音意识是第 4 类孤独症儿童词汇阅读的唯一显著预测因素。本研究清晰地识别出孤独症儿童在中文阅读发展上呈现四种不同的类别，并且在字词解码、语言理解和与阅读相关的能力上表现出不平衡的发展特征。对于不同阅读能力特征的孤独症儿童，其阅读能力的影响因素存在差异。这些发现有助于深入了解影响孤独症儿童的阅读发展的特异性因素，进而提供对不同孤独症亚群体更有针对性的早期阅读干预。

关键词 字词解码，语言理解，正字法意识，语素意识，语音意识

The Reading Imbalance hypothesis of Autism: Distinct Reading Profiles in Chinese Children with Autism and the Early Correlates

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Abstract: Literacy provides a whole world of possibilities and greater understanding. Better reading skills could improve autistic children's independence, increase vocabulary for social communication, expand interests, and also allow them greater understanding and participation in society. This study aims to identify the profiles of autistic children's reading ability and examine the variability in cognitive and linguistic skills among different profiles. 157 children with autism spectrum disorder (ASD) aged 3-11 ($M = 6.68$, $SD = 1.54$) were tested on Chinese reading ability and reading-related language and cognitive skills. Results showed that there were four reading profiles among Chinese ASD children: Profile 1 "good reader" ($N = 33$) performed well in all reading skills; Profile 2 "good decoder" ($N = 61$) showed intact word decoding ability, but relatively weak language comprehension; Profile 3 "poor decoder" ($N = 43$) performed weak in word decoding, but their language comprehension was at the average level; Profile 4 "poor reader" ($N = 20$) performed poor in all the skills. It is worth noting that there was an imbalance in the development of reading skills in Profile 2 and Profile 3. Further analyzed showed different key factors affecting the reading ability of ASD children under different profiles. Specifically, after controlling age and nonverbal intelligence, orthographic awareness significantly predicted word reading in Profile 1; morphological awareness significantly predicted word reading in Profile 2; In Profile 3, nothing significantly predicted word reading ability, and phonological awareness emerged as the only predictor of word reading in Profile 4. The findings clearly identified four different Chinese reading profiles in children with ASD, and further demonstrated reading imbalance in word decoding, language comprehension, and reading-related abilities. It is valuable for clinicians and educators to be able to understand children with ASD could be categorized into different profiles before examining the influencing factors so that more targeted intervention can be implemented.

Keywords: word decoding, language comprehension, orthographic awareness, morphological awareness, phonological awareness

依附歧义和动名兼类词歧义的句法解歧过程：来自眼动的证据

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摘 要 暂时句法歧义的句法解歧的核心问题是读者在遇到歧义时是否即时构建初始句法分析。策略性粗浅加工假说认为读者是否构建初始句法分析取决于阅读理解任务：如果歧义影响阅读理解任务，读者则即时构建一个最简单的初始句法分析；如果歧义不影响阅读理解任务，读者则不构建初始句法分析直至出现解歧信息。随机性多通道模型认为读者即时构建初始句法分析，但初始句法分析的数量受阅读理解任务影响：如果歧义影响阅读理解任务，读者只构建一个初始句法分析；如果歧义不影响阅读理解任务，读者则构建所有可能的初始句法分析。本研究考察依附歧义和动名兼类词歧义的句法解歧过程，探讨此问题。其中，依附歧义影响阅读理解任务，动名兼类词歧义不影响阅读理解任务。实验为 2 （依附歧义：有、无） $\times 2$ （动名兼类词词性：动词、名词）被试内设计，共 24 组实验材料，用 EyeLink1000 车载式眼动仪记录 48 名大学生阅读句子的眼动过程。结果发现：（1）在动词区域的首次注视时间和凝视时间，有依附歧义条件短于无依附歧义条件；在动词区域的第二遍阅读时间和解歧区 1、2 的凝视时间和回视路径时间，有依附歧义条件长于无依附歧义条件，表明歧义影响阅读理解任务时读者构建了一个初始句法分析。（2）在解歧区 1、2 的各眼动指标，兼类词作动词条件和作名词条件无差异，表明歧义不影响阅读理解任务时读者没有构建初始句法分析。（3）

在解歧区 2 的第二遍阅读时间,有依附歧义条件下,兼类词作名词条件短于作动词条件;无依附歧义条件下,兼类词作名词条件和作动词条件无差异,表明读者是否构建初始句法分析取决于阅读理解任务。结果支持策略性粗浅加工假说。

关键词 句法解歧,策略性粗浅加工假说,随机性多通道模型,依附歧义,动名兼类词歧义

Syntactic Ambiguity Resolution of Attachment Ambiguity and Noun-Verb Ambiguity: Evidence from Eye Movements

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Abstract: In syntactic ambiguity resolution of sentences with temporary syntactic ambiguities, an important question is whether readers adopt an initial syntactic analysis when faced with ambiguities. The strategic underspecification account suggests that whether readers adopt an initial syntactic analysis depends on the comprehension task: the comprehenders adopt an initial syntactic analysis if the comprehension task force the parser to disambiguate; while they underspecify the ambiguity without an initial syntactic analysis if the comprehension task does not require ambiguity resolution. The stochastic multiple-channel model suggests that the comprehenders immediately establish one or more initial syntactic analyses in separate processing channels and the number of initial analyses vary with the comprehension task: the parser stops after one initial syntactic analysis has been built if the comprehension task does not require more than one interpretation; while the parser may choose to wait for all permissible structure to be built when faced with ambiguities. In order to investigate whether the initial syntactic analysis is adopted selectively or obligatorily, the present study examined both attachment ambiguity interfering the comprehension task and noun-verb ambiguity with little relation to the comprehension task. To be specific, a 2 (attachment ambiguity: with, without) $\times 2$ (noun-verb ambiguity: verb, noun) within-subject design was adopted. Eye movements of 48 native Chinese speakers were recorded by the Eyelink 1000 eye tracker. Each participant read 24 experimental sentences, followed by a comprehension question. The results showed that sentences with attachment ambiguity caused shorter first fixation duration and gaze duration than sentences without attachment ambiguity in the verb region, but longer second-pass reading time in the verb region and more gaze duration and regression path duration in the disambiguation regions, which suggests the adoption of an initial syntactic analysis when the comprehension task requires ambiguity resolution. There was no main effect of noun-verb ambiguity in the disambiguation regions, indicating a underspecified processing without an initial syntactic analysis when the comprehension task does not require ambiguity resolution. In addition, an interaction between attachment ambiguity and noun-verb ambiguity was also observed in second-pass reading time in the disambiguation region. In sentences with attachment ambiguity, there was shorter second-pass reading time when noun-verb ambiguity was disambiguated as noun than when disambiguated as verb. However, in sentences without attachment ambiguity, there was no significant difference in second-pass reading time between them. This interaction suggests a dependency on the comprehension task when readers make the decision of whether adopt an initial syntactic analysis. In conclusion, these findings are in line with the strategic underspecification account and suggest that readers selectively adopt an initial syntactic analysis.

Keywords: syntactic ambiguity resolution, the strategic underspecification account, the stochastic multiple-channel model, attachment ambiguity, noun-verb ambiguity

媒体多任务经验影响内隐记忆：基于限制眼动范式的研究

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摘要 已有研究发现重度媒体多任务者（Heavy Media Multitaskers, HMMs）的注意力、外显记忆等认知功能受损，但其对内隐记忆的影响尚不明确。本研究采用背景线索效应这一内隐记忆范式，结合限制眼动技术，考察聚焦式注意和分布式注意条件下不同媒体多任务经验者的内隐记忆特点。实验1招募33名大学生，采用《媒体使用问卷》将其分为重度媒体多任务经验者（HMMs）和轻度媒体多任务经验（light media multitaskers, LMMs）两组。学习阶段，被试自由观看场景并搜索目标（聚焦式注意）；测试阶段，被试的注视点被限制在场景中心，只能使用外周视野搜索目标（分布式注意）。结果发现，学习阶段两组被试均习得了背景线索效应；测试阶段仅HMMs组保持了背景线索效应。实验2重新招募35名大学生，分为HMMs和LMMs两组。与实验1相反，学习阶段限制眼动，测试阶段自由观看。结果发现，学习阶段只有HMMs组习得了背景线索效应，测试阶段两组均表现出了背景线索效应。综合以上结果，在分布式注意条件下，HMMs在学习和测试阶段均表现出背景线索效应，LMMs均不能表现出背景线索效应；在聚焦式注意条件下，两者的表现没有差异。结果证明媒体多任务经验并未损害个体的内隐记忆，且HMMs在分布式注意任务中有更好的内隐记忆表现。

关键词 媒体多任务，内隐记忆，眼动，分布式注意

Effects of media multitasking experience on implicit memory: based on a restricted eye movement study

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Abstract: Previous studies found that heavy media multitaskers (HMMs) had worse interference filtering and explicit memory performance but the relationship between media multitasking and implicit memory is unclear. This study adopts the contextual cueing effect paradigm, combined with the restricted eye movement paradigm to investigate whether there are differences in implicit memory performance of subjects with different media multitasking experience under different attentional conditions. In Experiment 1, 33 college students were recruited and divided into two groups: heavy media multitaskers and light media multitaskers (LMMs) by using the media use questionnaire. In the learning stage, subjects were allowed to observe the scene and search for the target freely (focused attention); In the testing stage, subjects were asked to maintain fixation on the central cross while performing the visual search task using peripheral vision (distributed attention). The results showed that both groups showed contextual cueing effect in the learning stage. But in the testing stage, only HMMs group maintained the contextual cueing effect. In Experiment 2, 35 college students were recruited and grouped according to the media multitasking experience. In contrast to experiment 1, in the learning stage, subjects were asked to maintain fixation on the central cross; In the testing stage, subjects were allowed observe the scene freely. The results showed that only HMMs group showed contextual cueing effect in the learning stage, while both groups showed contextual cueing effect in the testing stage. In sum, under the condition of distributed attention, heavy media multitaskers showed contextual cueing effect in both the learning and testing stages, while light media multitaskers could not show contextual cueing effect; Under the condition of focused attention, there was no difference between the two groups. The results show that media multitasking experience does not impair implicit memory, and heavy media multitaskers have better implicit memory performance under distributed attention condition.

Keywords: Media multitasking, implicit memory, eye movement, distributed attention

汉语作为第二语言阅读习得的认知影响因素研究：一项元分析

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摘要 汉语作为第二语言 (Chinese as a second/foreign language, CSL/CFL) 不管是在国内还是在国际上的地位都越来越重要。已有研究发现语音意识、语素意识、正字法意识、快速命名等认知因素对字母语言和汉语阅读均有重要的作用,但在不同母语背景的被试中,不同的认知因素对阅读的作用仍存在争议。此外,之前的元分析主要针对英语母语或者汉语母语者被试,多从语音意识、语素意识方面考察它们对阅读的影响,而对正字法意识和快速命名则鲜有研究。本研究全面考察了在 CSL/CFL 学习者中,四种认知因素对汉语阅读能力的影响,并检验了年龄和学习时长两个调节变量的作用。通过对中英文数据库进行检索,共获得 989 篇文献,后经摘要筛查、全文筛查,最后纳入元分析 42 项研究。异质性检验显示,在语音意识、语素意识和正字法意识与阅读的关系中采用随机效应模型,快速命名与阅读的关系中采用固定效应模型,结果发现: (1) CSL/CFL 学习者的语音意识、语素意识、正字法意识与汉字阅读之间均呈显著正相关,快速命名与汉字阅读之间呈显著负相关; (2) 在语音意识与汉字阅读的关系中,年龄的调节作用边缘显著,成年学习者语音意识与汉字阅读的相关性高于儿童学习者; (3) 在语音意识与汉字阅读的关系中,学习时间的调节作用显著,初学者语音意识与汉字阅读的相关性显著高于长时学习者。研究表明,汉语二语学习者的汉语认知因素与汉语阅读关系密切,且年龄和暴露于汉语环境的时间会对语音意识与阅读产生影响。研究结果帮助我们对 CSL/CFL 学习有更好的理解,并且可以提出有针对性的语言训练。

关键词 汉语作为第二语言, 认知因素, 汉语阅读, 元分析

Influencing Cognitive factors of reading acquisition of Chinese as a second/foreign language: A meta-analysis

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Abstract: Chinese has been more important as a second or foreign language (CSL/CFL) both inside and outside China. Previous studies have found the effect of cognitive factors (e.g. phonological awareness, morphological awareness, orthographic awareness and rapid automatized naming) on reading ability both in alphabetic language and Chinese, but the role of different cognitive factors in reading acquisition of Chinese as a second/foreign language remains unexplored. Prior meta-analyses on the relationship between cognitive factors and reading have been conducted primarily in native English-speaking or Mandarin-speaking children. The purpose of the present meta-analysis was to examine the relationship between four cognitive factors and Chinese word reading in learners of Chinese as a second/foreign language. We searched in computerized databases for studies published both in English and Chinese. A total of 989 articles, 42 independent samples met the criteria for meta-analysis and were included in the final meta-analysis. Results revealed that (a) three random-effects model analyses (PA, MA, OA) and a fixed effects model (RAN) revealed a moderate relationship between PA, MA, OA, RAN and Chinese word reading in L2 Chinese learners; (b) in the correlation analysis of PA and Chinese word reading, the moderating effect of age on both was marginally significant. The correlation between PA and Chinese word reading was slightly stronger in the CSL/CFL adults learning group than in the children group; (c) a moderating effect of learning time on the relationship between PA and Chinese word reading: PA and Chinese word reading correlated more strongly for beginning learners than for advanced learners. These results suggest the importance of cognitive factors in the acquisition of Chinese word reading as a second language. Results also shed lights on the impact of age and learning time on the influence from phonological awareness to CSL/CFL reading.

Keywords: Chinese as a second/foreign language, cognitive factors, Chinese word reading, meta-analysis

依恋与择偶-养育权衡中资源分配的静态和动态关系

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摘要 目的: 本研究以依恋理论和生活史理论为基础, 考察依恋是否预测择偶-养育权衡中的资源分配。方法: 本研究分别开展了一个横向研究和一个纵向研究。在研究 1 中, 通过滚雪球的方式在网络上共招募到 1086 名成年人完成了依恋状态、短期择偶态度和婴儿照料态度(代表择偶和养育的投入)的测量。在研究 2 中, 对 945 名大学新生在入学转折期的过程中, 进行了每月一次共四次追踪测试。测试量表同研究 1。然后采用潜增长模型衡量个体内和个体间的不同纵向变化, 以及不同变量之间不同纵向变化的关系。结果: 路径模型结果显示, 安全依恋状态同时负向预测短期择偶态度且正向预测婴儿照料态度, 同时短期择偶态度和婴儿照料态度呈负相关。群组分析结果显示上述依恋对择偶-养育权衡中的作用在父母群体和非父母群体中没有差异(研究 1)。纵向研究中发现, 在大学入学转折期中, 安全依恋水平和婴儿照料态度呈线性下降趋势, 回避依恋状态和短期择偶态度线性增长。此外多元潜增长模型显示, 安全依恋和回避依恋的变化速率能同时预测短期择偶态度和婴儿照料态度的变化速率, 但这两个因变量的变化速率之间不相关(研究 2)。结论: 本研究结果揭示了依恋在择偶-养育权衡资源分配上的预测能力, 支持了依恋理论和生活史理论的整合观点(即安全依恋的个体更多采取慢生活史策略, 反之亦然)。此外, 纵向研究强调了这种整合观点的动态本质, 即依恋状态会随着环境变化而快速产生变化, 进而带来个体资源配置的变化。

关键词 依恋, 生活史理论, 短期择偶态度, 婴儿照料态度, 择偶-养育权衡

The Static and Dynamic Associations between Attachment and the Allocation of Resources in Mating-Parenting Trade-offs

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Abstract: Objective: Building on existing work associating attachment theory and Life History Theory (LHT), we examined whether attachment predicts the allocation of resources in the mating-parenting trade-off. Method: We tested this in two studies, one cross-sectional and one longitudinal. In Study 1, 1086 adults recruited via snowball sampling online, completed measures of state attachment, short-term mating attitude, and baby-nurturance attitude (representing investment in mating vs. parenting efforts). In study 2, 945 freshmen students were assessed four times during their transition to college, once a month. Latent growth models were employed to capture within-individual changes across time and between-individual different changes. Results: The path model showed that attachment security negatively predicted short-term mating attitudes and positively predicted baby-nurturance attitudes simultaneously while short-term mating attitudes and baby-nurturance attitudes were negatively correlated. The role of attachment was similar across parents and non-parents (Study 1). Longitudinal results showed a decrease in attachment security levels and baby-nurturance attitudes and an increase in attachment avoidance and short-term mating attitudes during the transition to college, which is known to be a stressful period. Multivariate latent growth model showed that change rates of short-term mating attitudes and baby-nurturance attitudes were simultaneously predicted by the change rates of security and avoidance but the change rates of the two dependent variables were not related to each other (Study 2). Conclusions: Our findings shed light on attachment's utility to predict resource allocation in the mating-parenting trade-off, supporting an integrated view of attachment and LHT (i.e., secure attachment facilitates endorsement of slow LHS and vice versa). Our longitudinal study highlights the dynamical nature of this integration, with rapid changes in attachment in response to changes in the environment, being followed

by changes in the allocation of resources.

Keywords: Attachment, Life history theory, Short-term mating attitudes, Baby-nurturance attitudes, Mating-parenting trade-off

同伴侵害和青少年抑郁： 公正世界信念的中介作用与班级侵害水平的调节作用

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摘要 大量研究表明同伴侵害是青少年抑郁的重要风险因素，但是同伴侵害对抑郁起作用的中介和调节机制较少有研究涉及。本研究基于“破碎假设理论（shattered assumptions theory）”和“生态系统理论”，对来自 47 个班级的 2551 青少年（初测年龄为 12.99 ± 0.61 ，52.2%男生）进行了为期半年的追踪调查，考察公正世界信念在同伴侵害与抑郁之间的中介作用，以及班级侵害水平对该中介机制的调节作用。多水平模型分析表明：（1）在控制了性别、班级规模和基线抑郁水平后，同伴侵害对抑郁有显著的正向预测作用；（2）个人公正世界信念在同伴侵害和抑郁之间起部分中介作用，而一般公正世界信念的中介作用不显著；（3）虽然同伴侵害和班级侵害的交互作用均能显著预测青少年的一般公正世界信念和个人公正世界信念，但班级侵害水平调节了“同伴侵害→个人公正世界信念→抑郁”这一中介机制的前半段路径。具体表现为，当班级侵害水平低时，同伴侵害显著负向预测个人公正世界信念，进而增加青少年的抑郁症状，而当班级侵害水平高时，这一中介效应不显著。研究结果揭示了同伴侵害“如何”以及“何时”影响青少年的抑郁。这启示相关的教育实践工作者要特别关注处于健康班级环境（班级侵害水平低）中受侵害青少年的个人公正世界信念，通过相应的措施对这些青少年的公正世界信念进行干预，从而降低他们的抑郁水平。

关键词 同伴侵害，抑郁，公正世界信念，班级侵害水平，健康环境悖论

The relationship between peer victimization and adolescent depressive symptoms: The mediating role of belief in a just world and the moderating role of the classroom-level victimization

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Abstract: A large number of studies have shown that peer victimization is an important risk factor for depression among adolescents, but the mechanisms behind the association between peer victimization and depressive symptoms are rarely studied. Based on shattered assumptions theory and person-context fit theoretical theory, the present study aimed to extend previous studies on the relationship between peer victimization and depressive symptoms by examining the mediating role of belief in a just world and the moderating role of the classroom-level victimization. Using a short-term longitudinal design, two-wave data were obtained from 2551 adolescents (initial age 12.99 ± 0.61 , 52.2% boys) from 47 classes over six-months. Multi-level model analysis showed that: (1) after controlling for gender, class size, and baseline depressive symptom level, peer victimization had a significant positive effect on depressive symptoms; (2) personal belief in a just world mediated the relationship between peer victimization and depression, while the mediating role of the general belief in a just world was not significant; (3) the mediation was moderated by the classroom-level victimization, when the classroom-level victimization was low, peer victimization was negatively related to personal belief in a just world, which in turn increased the depressive symptoms of adolescents. However, this mediation effect was not significant when the classroom-level victimization was high. The findings contribute to our understanding of how and when peer victimization impacts youth depressive symptoms, which suggested that relevant education practitioners should pay additional attention to the victimized adolescents' personal belief in a just world especially when the classroom-level victimization is low.

Keywords: peer victimization, depressive symptoms, belief in a just world, classroom-level victimization, healthy context paradox

3.6 博士研究生论坛—应用心理学

(1) 博士研究生论坛——应用心理学分场 1

基于增长混合模型的胃肠道肿瘤患者围术期 心理压力变化轨迹及与恢复质量的关系

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摘要 目的: 了解胃肠道肿瘤患者围术期心理压力的不同亚组的变化轨迹, 并探讨恢复质量在不同亚组间的差异。方法: 本研究为纵向随访研究, 主要收集了在山东省某三级甲等医院拟行手术的 203 例胃肠道肿瘤患者。于术前 1-3 日, 术后 1-3 日, 术后 3-5 日, 术后 7-9 日及出院前这五个时间点收集患者的心理压力及恢复质量得分。采用增长混合模型分析围术期心理压力变化的不同亚组, 单因素方差分析探讨不同亚组的围术期恢复质量的差异及 LSD 进行事后检验。结果: 本研究共识别 3 个亚组, 分别是低压力下降组, 中压力平稳组及中压力上升组。恢复质量在三个亚组间存在差异; 中压力上升组和平稳组的恢复质量均比低压力下降组差, 且中压力上升组于术后 7-9 日及出院前的恢复质量比中压力平稳组的更差。**结论:** 胃肠道肿瘤患者的围术期心理压力变化轨迹存在异质性, 心理压力低的个体围术期恢复质量更好。本研究提示我们尽早识别压力较高的个体并对其进行适当的心理护理可能是提高围术期恢复质量一个行之有效的方法。

关键词 胃肠道肿瘤, 围手术期, 心理压力, 恢复质量, 增长混合模型

Association between trajectories of psychological stress and quality of recovery in patients with gastrointestinal cancer during perioperative period: A latent growth mixture modeling approach

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Abstract: Objective: to investigate trajectories of the potential subgroups of psychological stress in patients with gastrointestinal cancer, and to explore the difference of recovery quality in different subgroups. Methods: This study was a longitudinal follow-up study and 203 patients with gastrointestinal cancer who were to undergo surgery in a tertiary hospital in Shandong province, China were recruited. The scores of psychological stress and recovery quality of the patients were collected at the 1-3 days before surgery, 1-3 days after surgery, 3-5 days after surgery, 7-9 days after surgery and before discharge. The growth mixture model was used to analyze the trajectories of the potential subgroups of psychological stress during perioperative period. One-way analysis of variance was used to investigate the difference of recovery quality in different subgroups and LSD test was used to perform post hoc tests. Results: There were 3 subgroups are identified: low-decreasing stress group, moderate-stable stress group and moderate-increasing stress group. The recovery quality was different among the three subgroups. Specifically, recovery quality of the low-decreasing stress group was the best, and that of the moderate-stable stress group and increasing group were bad. In addition, the recovery quality of the moderate-increasing stress group was worse than that of the moderate-stable stress group at the 7-9 days after surgery and before discharge. Conclusion: The trajectory of psychological stress is heterogeneous among patients with gastrointestinal cancer during perioperative period, and individuals with low psychological stress have better recovery quality. This study suggests that early identification of

individuals with high stress and appropriate psychological care may be an effective way to improve the quality of recovery during perioperative period.

Keywords: Gastrointestinal cancer, Perioperative period, Psychological stress, Quality of recovery, Growth mixture model

心理战“疫”：风险认知对乐观的影响

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摘要 面对席卷全球的新冠肺炎疫情，如何进行心态调控是常态化疫情防控背景下的重要问题。通过四个研究探讨了在新冠肺炎疫情爆发及常态化疫情防控的背景下，疫情风险认知对乐观和幸福感的影響，并进一步考察这一影响的机制及控制感和负性情绪在其中的作用。研究1对国内疫情爆发后一周内的599个横断面数据样本进行结构方程模型分析，发现疫情风险认知通过控制感-情绪的链式中介作用影响幸福感；研究2通过文字启动对流行病不同高、低风险的感知，发现高风险认知会降低乐观程度；研究3在控制了当前的健康状态、离疫情中心距离、最近的确诊病例等因素后，进一步验证了控制感的中介作用；研究4在疫情进入稳定趋势的一年后重复了研究3的实验并加入了负性情绪的测量，验证了控制感-情绪的链式中介模型：高风险认知通过降低控制感，进而引发更强的消极情绪从而降低乐观和幸福感。本研究有助于深入理解应对疫情时的心理变化及机制，并对如何在后疫情时代中维持心理幸福感具有较强的实践启示，对通过加强信息公开度、增强信任等措施降低风险认知的措施提供了干预指导。

关键词 新冠疫情，风险认知，控制感，负性情绪，乐观

Coping with the Coronavirus Pandemic: Risk Perception Predicts Life Optimism

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Abstract: Given that the coronavirus pandemic has become a serious concern around the world, how can optimism be maintained in an outbreak of a collective pandemic? We proposed that perceived control and negative affect could contribute to explaining optimism in the face of the pandemic. In Study 1, a large-scale cross-sectional design ($N = 599$) showed the effect of risk perception on life optimism and the serial mediating effect of perceived control-negative affect through structural equation modeling. Then, Study 2 ($N = 191$) ascertained the causality between risk perception for an epidemic and life optimism with experimental manipulations. Finally, Study 3 ($N = 186$) and Study 4 ($N = 217$) further revealed that the effect of risk perception on optimism could be extended to overall subjective well-being and confirmed the serial mediation model of perceived control and negative affect. Together, these findings indicated that during an influenza epidemic, risk perception could affect life optimism. Moreover, perceived control and negative affect were notable factors contributing to this link. Measures strengthening publicity and transparency regarding recovery rates and boosting trust among citizens should be taken to reduce public perceptions of risk and promote an optimistic attitude about life.

Keywords: COVID-19, Risk perception, Perceived control, Negative affect, Optimism

正念和心理资本对乳腺癌患者心理健康的影响 —基于多项式回归与响应面分析

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摘要 目的: 基于情绪调节的双加工模型, 探讨正念(外显情绪调节)和心理资本(内隐情绪调节)的一致性对乳腺癌患者化疗期心理健康的作用, 并探明正性情绪在其关系间的中介效应。方法: 以方便抽样的方法, 选取2020年5月—2020年11月在山东省某三级甲等肿瘤专科医院行化疗的522例乳腺癌患者作为研究对象, 使用一般资料调查表、生活质量(SF-8)-心理健康分量表、积极心理资本量表(PPQ)、正念注意觉知量表(MAAS)和正性情绪量表(PAS)进行问卷调查。采用SPSS 22.0及插件RSA 3.0.30进行多项式回归和响应面分析。结果: 化疗期乳腺癌患者正念-心理资本为一致性匹配时, 高正念-高心理资本对个体心理健康的正向作用更强(一致性线的斜率为0.540, $P < 0.001$); 当正念-心理资本为差异性匹配时, 低心理资本-高正念对心理健康的负向作用更明显(不一致性线的斜率为-0.338, $P < 0.001$), 不一致线的曲率未达显著水平, 说明心理健康并未随着正念-心理资本一致性程度的增加而升高, 即正念-心理资本一致并不一定比不一致好。另外, 正性情绪在正念-心理资本匹配对心理健康的关系中起中介作用, 效应为0.131, 其95%的置信区间为(0.085, 0.169), 不包含0。结论: 医务人员在化疗期乳腺癌患者进行心理干预时, 要适时进行评估和调整, 以最大程度实现积极心理资源的一致性匹配, 促进其更好的心理健康。

关键词 乳腺癌患者, 心理资本, 正念, 一致性, 响应面分析

The effect of mindfulness and psychological capital on the mental health of breast cancer patients —based on polynomial regression and response surface analysis

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Abstract: Objective: Based on the dual-process model of emotion regulation, this study explored the effect of the congruence between mindfulness (explicit emotion regulation) and psychological capital (implicit emotion regulation) on the mental health of breast cancer patients undergoing chemotherapy, and examined the mediating effect of positive emotion in their relationship. Methods: A convenient sampling method was used, and 522 breast cancer patients receiving chemotherapy in a tertiary A cancer hospital in Shandong province from May 2020 to November 2020 were enrolled. The measurements included the general questionnaire, Short Form-8 (SF-8) Health Survey-Mental Subscale, Mindful Attention Awareness Scale (MAAS), Positive Psychological Capital (PPQ), and Positive Affect Scale (PAS). Statistical analysis was performed using SPSS 22.0 and RSA 3.0.30 software. Polynomial regression and response surface analysis were mainly conducted to explore the relationship between variables. Results: In the cases of congruence, mental health was better when mindfulness and psychological capital were both high instead of being both low (The slope of the congruence was 0.540, $P < 0.001$); In the cases of incongruence, poorer mental health was found in breast cancer patients with low psychological capital-high mindfulness, compared with those who had high psychological capital-low mindfulness among breast cancer patients undergoing chemotherapy (The slope of the incongruence was -0.338, $P < 0.001$). The curvature of the incongruence did not reach a significant level, indicating that mental health did not increase with the increase of the degree of congruence between mindfulness and psychological capital, that is, congruence between mindfulness and psychological capital was not necessarily better than incongruence. In addition, positive emotion played a mediating role in the relationship between mindfulness-psychological capital and mental health among breast cancer patients during chemotherapy. The indirect effect was 0.131, and the bootstrapped 95% CI did not include zero (0.085, 0.169). Conclusions: Medical

professionals should evaluate the breast cancer patients appropriately, and then conduct psychological intervention for them, so as to achieve the maximum use of positive psychological resources and promote their better mental health.

Keywords: Breast cancer patients, Mindfulness, Psychological capital, Congruence, Response surface analysis

最优化择偶：职业女性的择偶标准、最优化倾向和关系满意度

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摘要 择偶是一种复杂决策, 择偶的结果直接影响到其亲密关系的满意度, 一个人的决策风格对其择偶标准和择偶质量都会产生影响。过往研究基于性别、年龄、城乡等不同群体对择偶标准做了较多的探讨, 但基于最优化决策风格的差异, 探究职业女性的择偶标准及其关系质量是一个全新的视角。本研究通过当地妇联, 调查了国内某一线城市分布在不同行业的 849 名职业女性。我们采用问卷法收集了长期择偶标准、最优化倾向、对其配偶在择偶标准上的实际评分、其配偶的最优化倾向、工作家庭平衡和职业成就等信息。择偶标准分为能力、性格、人品、外貌、经济地位、家庭背景、健康状况和教育水平八个维度, 基本概括了当今我国主流的择偶关键词。结果发现: 最优化倾向高的职业女性与其伴侣的关系满意度更高, 对其伴侣最优化倾向评价也越高。相对于最优化倾向评分较低的女性群体, 评分较高的群体在配偶实际评分与其择偶标准之间的差异较小, 差异显著的维度较少, 并能够正向预测其关系满意度。研究说明了不同决策风格的女性在择偶标准中关注不同的维度, 高最优化倾向的职业女性在择偶过程中妥协更少, 也对关系质量更为满意。此外, 高最优化倾向的职业女性在工作家庭平衡和职业成就感上的得分也比最优化倾向较低的女性群体更高。本研究的结论为长期择偶和决策风格相关的工作提供了一种新颖的女性视角。

关键词 择偶标准, 决策风格, 最优化倾向, 关系满意度

Maximizing the Mating Selection: Mating Preference, Maximizing Tendencies and Relationship Satisfaction of Professional Women

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Abstract: This study explored the influence of maximizing decision-making style on female mating preferences and long-term relationship satisfaction. Mating selection is an important decision in life. Decision-making styles divide people into two groups based on their maximizing tendency, and it may influence mating preferences, long-term relationship satisfaction of women. This study examined mating preferences and relationship satisfaction from the perspective of decision-making style. A three-wave study investigated 849 female participants from Women's Federation in China about their maximizing tendency, relationship quality, mating preferences, and the actual ratings on partners. The mating preferences conclude eight aspects: ability, personality, moral quality, appearance, economic status, family background, health, and education. The results showed that the higher maximizing tendency, the smaller difference between the actual score of the partner and ideal mating preferences, as well the fewer aspects with significant differences. Besides, maximizing tendency can positively predict the relationship satisfaction. Thus, female maximizers have less compromises in the process of mate selection and are more satisfied with the quality of the relationship. Female maximizers in long-term mating behavior could be more adaptive and lead to better relationship satisfaction. This study provided a novel perspective from female's view for long-term mate selection and decision-making style.

Keywords: Mating Preference, Decision-making Style, Maximizing Tendency, Relationship Satisfaction, Intimate Relationships

群体中的亲环境行为：基于社会认同过程视角

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摘要 亲环境行为是个体以一定的环境价值观为基础而表现出来的对环境有利的行为。以往有关亲环境行为的理论大多以个体的视角来分析亲环境行为产生的原因及心理机制。亲环境行为如何生成不仅要从个体的认知视角去解读，也要从群体认知的视角去阐释。社会认同是人类以“我们”而不是“我”来定义自我的能力，使人们以集体的方式去思考和行动，社会认同理论强调社会认同对群体行为的解释作用。亲环境行为的社会认同模型运用社会认同的方法，从集体的层面来分析亲环境行为发生的原因，深入探讨了社会认同过程如何影响大规模环境危机的评估和行为反应，通过对社会认同过程中内群体认同、内群体规范与目标、集体效能感、情感与动机等与亲环境行为关系的深入探讨，提高了对亲环境行为的理论解释框架。亲环境的社会认同理论提供了一条从群体层面探究亲环境行为生成机制的新路径。文章介绍了亲环境的社会认同理论提出的依据，对该理论中社会认同各核心变量与亲环境行为间的关系进行了深入分析，从社会认同过程的视角揭示了亲环境行为的形成机制，并基于理论提出促进人们亲环境行为的具体措施，为全球性环境治理提供了新的治理路径。

关键词 亲环境行为，环境问题，社会认同，群体规范

Pro-environmental behavior in groups: The perspective of social identity process

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Abstract: Pro-environment behavior is an individual's behavior which is beneficial to the environment based on certain environmental values. In the past, most of the previous theories on Pro-environmental behavior analyzed the causes and psychological mechanism of Pro-environmental behavior from the perspective of individual. How to generate Pro-environmental behavior should be interpreted not only from the perspective of individual cognition, but also from the perspective of group cognition. Social identity is the ability of human beings to define themselves by "we" instead of "I", which makes people think and act in a collective way. Social identity theory emphasizes the explanatory role of social identity on group behavior. The social identity model of Pro-environmental behavior uses the method of social identity to analyze the causes of Pro-environmental behavior from the collective level, and discusses how the process of social identification affects the assessment and behavior response of large-scale environmental crisis. The paper analyzes the relationship between the process of social identity and pro-environment behavior, such as inner group identity, internal group norms and objectives, collective efficacy, emotion and motivation. The further study of the relationship improves the theoretical framework for the interpretation of Pro-environmental behavior. This paper introduces the basis of Pro-environmental social identity theory, analyzes the relationship between the core variables of social identity and pro-environmental behavior, reveals the formation mechanism of Pro-environmental behavior from the perspective of social identity process, and puts forward specific measures to promote people's Pro-environmental behavior based on the theory, which provides a new governance path for global environmental governance.

keyword: Pro-environment behavior, environmental problems, social identity, group norms

志愿动机对工作旺盛感的影响：工作倦怠和心理资本的中介作用

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摘要 工作旺盛感是一种个体在工作中感到精力充沛，同时又能学习的心理状态。已有研究表明，个体内部动机对工作旺盛感和志愿动机有重要影响，但动机的作用有待进一步探索。本研究以自我决定理论为基础，

考察了工作倦怠和心理资本对志愿动机和工作旺盛感的中介作用。采用志愿功能动机量表、Maslach 倦怠量表、PsyCap 问卷和工作旺盛感量表对 349 名新冠肺炎疫情期间参加心理援助志愿活动的志愿者进行测试。研究结果支持工作倦怠和心理资本在志愿动机与工作旺盛感的关系中起中介作用。研究结果对志愿活动的开展具有重要意义。

关键词 志愿者动机, 工作旺盛感, 工作倦怠, 心理资本, 志愿者

The Effect of Volunteer Motivation on Thriving at Work: The Mediating Roles of Job Burnout and Psychological Capital

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Abstract: Thriving at work is a type of psychological state in which an individual feels vigor and learning at the same time in work. Previous studies have shown that individual internal motivation has an important effect on thriving at work and volunteer motivation, but the role of motivation remain to be further explored. Based self-determination theory, this study tested the mediating effects of job burnout and psychological capital on volunteer motivation and thriving at work. A total of 349 volunteers who participated in psychological assistance volunteer activities during the COVID-19 pandemic were tested using the Volunteer Function Motivation Inventory, Maslach Burnout Inventory, PsyCap Questionnaire and Thriving at work scale. Results support a mediating relationship of job burnout and psychological capital in the relationship between volunteer motivation and thriving at work. The results have significance for the development of voluntary activities.

Keywords: volunteer motivation, thriving at work, job burnout, psychological capital, volunteer.

老年人与青年人的共情差异

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摘要 目的: 从青年期到老年期, 有关共情能力发展的研究结果并不统一。本研究尝试从自评问卷的共情测量与基于行为任务表现的共情测量 2 种角度, 对比研究老年人和青年人在认知共情和情绪共情上的差异, 并且进一步探索了对于积极情绪和消极情绪老年人和青年人的共情差异。方法: 研究一采用人际反应指数量表 (IRI), 以 280 名老年人和 304 名青年人为研究对象, 探究了两个年龄组被试基于自评问卷的共情差异。研究二使用多维共情测试 (MET) 中文版, 以 51 名老年人和 58 名青年人为研究对象, 比较了两个年龄组被试基于图片刺激任务的共情差异。结果: 研究显示, ①与青年人相比, 无论是基于自评问卷还是行为任务, 老年人的认知共情均出现显著下降 ($t_{PI} = -3.42, p < 0.001$; $t = -7.51, p < 0.001$); ②与青年人相比, 老年人对消极情绪刺激的情绪共情也出现显著下降 ($t = -3.91, p < 0.001$), 但老年人对积极情绪刺激的情绪共情并无显著变化 ($t = -0.55, p = 0.584$); ③老年人对积极情绪的情绪共情要显著高于对消极情绪的情绪共情 ($t = 5.47, p < 0.001$), 而青年人对积极与消极 2 种效价的情绪共情则无显著差异 ($t = 0.04, p = 0.607$; $t = 0.04, p = 0.281$)。

关键词 共情, 积极情绪, 消极情绪, 老年人, 青年人

Empathy Differences Between the Elderly and the Young

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Abstract: Objective: From adolescence to old age, research results on the development of empathy are not consistent. This study attempted to compare the differences in cognitive empathy and emotional empathy between the elderly and young people from perspectives of self-assessment questionnaire and behavioral task performance. Furthermore, this study explored the empathy differences between the elderly and the young for positive emotions and negative

emotions. Method: In study 1, we recruited 280 older participants and 304 younger participants using the Interpersonal Reaction Index Scale to characterize the empathy differences between the two age groups based on self-assessment questionnaire. In study 2, we recruited 51 older participants and 58 younger participants using Chinese version of the Multifaceted Empathy Test (MET) to explore the empathy differences between the two age groups based on behavioral task performance. Results: The study showed that: ① compared with the young group, whether it is based on self-assessment questionnaire or behavioral task performance, the cognitive empathy of the elderly decreased significantly ($t_{PI} = -3.42, p < 0.001$; $t = -7.51, p < 0.001$), ② compared with the young group, the emotional empathy for negative emotional stimuli of the elderly also decreased significantly ($t = -3.91, p < 0.001$), however, the emotional empathy for positive emotional stimuli of the elderly did not change significantly ($t = -0.55, p = 0.584$), ③ the emotional empathy for positive emotions of the elderly was significantly higher than negative emotions ($t = 5.47, p < 0.001$), while there was no significant difference between emotional empathy for positive and negative valences of the young group ($t = 0.04, p = 0.607$; $t = 0.04, p = 0.281$).

Keywords: empathy, positive emotion, negative emotion, the elderly, the young

个体动机和认知因素对电信诈骗受害易感性的影响

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摘要 迅速发展的互联网技术,尤其在移动端技术,在给用户带来便利的同时,也增大了受骗的可能性。电信诈骗的非接触性使其不受时空限制,涉及地域范围广,被害人数众多。截至2020年,全国已有6省,电信诈骗案件率占比超过50%,直接经济损失巨大,2020年疫情席卷全球,线上生活方式常态化,多样化,这同时,也提供了较之以往更强、更大的线上诈骗的暴露环境,反欺诈更成为一个重要议题。人是欺诈环节中最为薄弱而又最为关键的一环,了解个体在欺诈场景中的决策过程是反欺诈的重要切入点。近期有关欺诈的心理学研究多关注于个体和情景因素如何影响欺诈应答(例如,钓鱼邮件的回复),但群体特性的研究较难应用于个体受骗易感性(人们过往的受骗经历和对即时性骗局的参与意图)的识别。本研究中通过计算建模的方式,探索了个体心理特征、社会人口学特征与受骗易感性的关系;同时把个体特征作为模型输入,构筑了个体受骗易感性预测模型。本研究旨在提供一个受骗易感性影响因素的解释框架,从心理学的角度对为什么特定群体更易落入骗局陷阱提供更加全面的理解。研究结果显示,心理特征(例如认知特点、人格、自我控制等)能有效预测个体受骗易感性(二分类模型F1值为0.89),而人口学特征对个体受骗易感性的预测效果较差(二分类模型F1值为0.69)。整合人口学特征和心理特征作为模型输入,采用支持向量机(SVM)算法的预测模型表现最好,F1值达到了0.91。随后,我们通过特征重要性分析对预测模型进行解释。结果显示认知特征在个体受骗易感性识别中占据主导地位,而其它个体特征对个体受骗易感性存在不同程度的影响。综上,本研究通过机器学习建模方法探索了不同个体特征与受骗易感性之间的关系;同时构筑和优化了受骗易感性识别模型,用以预测个体是否容易受骗。本研究也为未来个性化的欺诈干预方案形成和公众教育措施提供了重要参考。

关键词 受骗易感性, 风险感知收益, 批判性思维, 机器学习

The effects of individual's motivation and cognitive factors on internet fraud victimization: Based on machine learning methods

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Abstract: The rapid expansion of Internet technology, especially in mobile terminal, facilitated great convenience to social communication, however, this expansion also increased the possibility of being deceived. The non-contact nature of the online communication makes online scam free from time and space restrictions, involving a large number of crossing geographical victims and caused it difficult to trail. As of 2020, there have been already 6

provinces in the country, with a telecommunication fraud case rate accounting for more than 50%, and caused a huge direct financial loss. Human are the most critical but weakest link in fraud. Understanding the decision-making process of individuals in fraud scenarios is an important entry point for anti-fraud. Recent psychological research on fraud has mostly focused on how individual and contextual factors affect fraud responses (for example, responses to phishing emails), but the results on group characteristics detection is difficult to apply to the identification of individuals' susceptibility to fraud. In this study, we explored the relationship between individual psychological characteristics, sociodemographic characteristics, and susceptibility to fraud (people's past deception experience and immediate participation intention of the scam) through computational modeling. At the same time, individual characteristics were used as model input to construct individual susceptibility to fraud prediction model. This study aimed to provide an explanatory framework for the factors affecting the susceptibility to fraud, and to provide a more comprehensive understanding of why certain groups are more likely to fall into deception traps from a psychological perspective. The results indicated that psychological characteristics (such as cognitive characteristics, personality, self-control, compliance with fraud strategies, etc.) effectively predicted the individual's susceptibility to fraud (F1 value of the binary classification model was 0.89), while demographic characteristics had a poor prediction effect on the individual's susceptibility to fraud (the F1 value of the two-class model is 0.69). Integrating demographic and psychological characteristics as input to the model, the prediction model performed best using the support vector machine (SVM) algorithm, with an F1 value of 0.91. Then, we explained the prediction model through feature importance analysis. The results suggested that cognitive characteristics occupied a dominant position in the identification of individuals' susceptibility to fraud, while other individual characteristics had varying degrees of influence on individuals' susceptibility to fraud. In summary, this study explored the relationship between different individual characteristics and susceptibility to fraud through machine learning modeling methods. At the same time, it constructed and optimized the identification model of susceptibility to fraud to predict whether an individual is vulnerable to being deceived. This study also provided an important reference for the formation of personalized fraud intervention programs and public education measures in the future.

Keywords: Fraud, Critical thinking, Perceived benefits, Machine learning

短暂的药物相关线索暴露提升海洛因戒断者的主动性控制

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摘要 药物使用通常由对药物的接近动机所驱动（即，用药欲望），这种动机会被环境中的药物相关刺激所诱发。越来越多研究者开始认可情绪和动机状态会调控认知控制。一些研究者发现暴露于药物相关线索会降低药物使用者随后的反应抑制。然而，认知控制的双机制理论区分了主动性控制和反应性控制两个不同的模块。当前研究想考察药物相关线索对海洛因戒断者主动性控制的影响。33名男性海洛因戒断者完成了一个AX-CPT任务的调整版本，通过在每个试次之前呈现一张中性或海洛因相关图片。结果显示：相比中性图片，海洛因相关图片条件下海洛因戒断者的主动性控制表现更好。这些结果表明药物相关接近动机上调药物使用者的认知控制功能，这与药物寻求和使用的可能性增加有关。

关键词 海洛因，药物相关线索，主动性控制，反应性控制，认知控制

Transient exposure to drug-related cues enhances proactive control in heroin abstiners

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Abstract : Drug use is often driven by approach motivation for drugs (i.e. drug desire), which is triggered by drug-related stimuli in the environment. It is becoming increasingly appreciated that emotional and motivational

states can modulate cognitive control. Some researchers have found that exposure to drug-related cues can reduce subsequent response inhibition. However, the dual mechanisms of control framework differentiates proactive and reactive control modes. The present study aimed to investigate how drug-related cues modulate proactive control in heroin abstiners (HAs). Thirty-three male HAs completed a modified version of the AX-Continuous Performance Task (AX-CPT), in which a neutral or a heroin-related picture was randomly and briefly presented before each trial. The results showed that the HAs had improved proactive control following exposure to heroin-related pictures compared to neutral pictures. The findings suggest that drug-related approach motivation can up-regulate cognitive control function of drug users.

Keywords: heroin, drug-related cues, proactive control, reactive control, cognitive control

PTSD 青少年对威胁信息的注意偏向：一项眼动研究

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摘要 注意偏向是指个体在面临真实的或实验诱发的威胁刺激时，对其持续地分配更多的注意资源，具体包含注意警觉、注意脱离困难和注意回避三个成分。本研究利用眼动追踪技术，选取负性图片、中性图片、正性图片、轻度地震图片和高度地震图片为实验材料，在点探测任务中探讨了 61 名 13~17 岁震后 PTSD 青少年对威胁图片的注意偏向。结果发现，在首次注视时间上，相比负性图片，震后 PTSD 青少年对高度地震图片的首次注视时间更长；在总注视时间指标或总注视时间百分比上，相比中性图片，震后 PTSD 青少年对负性图片的总注视时间更短或总注视时间百分比更小。研究结果表明，（1）震后 PTSD 青少年对高度地震信息的注意偏向存在特异性加工；（2）震后 PTSD 青少年对创伤刺激的注意偏向特异性发生了泛化。

关键词 注意偏向，创伤后应激障碍，眼动追踪，威胁刺激

Attentional bias of PTSD teenagers to threat information: an eye movement study

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Abstract: Attentional bias, which contains facilitated attention, difficulty in attention disengagement and attentional avoidance, refers to the situation that individuals continuously allocate attentional resources to threats. This study utilized eye tracking technology to record the eye movements of sixty-one PTSD teenagers (age: 13~17) after the earthquake in the dot probe task, and delineated their attention bias towards threatening pictures. Participants viewed paired pictures for 500ms, which are threat related pictures and neutral pictures. The results showed that teenagers with PTSD had a longer first fixation duration on high-lever earthquake pictures when comparing with negative pictures. Furthermore, compared with neutral pictures, they have shorter total fixation time or smaller percentage of total fixation time on negative pictures. These results showed that (1) PTSD adolescents after earthquake have specific processing of the attentional bias to high-level earthquake information; (2) The attentional bias specific to traumatic stimuli has generalized in PTSD adolescents after earthquake.

Keywords: attentional bias, PTSD, eye tracking, threat stimuli.

为什么大家不想打疫苗？

新冠疫苗接种意图的调查及随机对照干预研究

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摘要 由于当前全球新冠肺炎大流行, 数百万人的健康和生活条件受到损害。根据 WHO 的数据, 截止至北京时间 6 月 9 日 19 时 08 分, 全球累计新冠肺炎确诊病例 1.7360 亿例, 累计死亡病例 374.2653 万例。因此, 各国都在竞相开发并接种对抗冠状病毒的疫苗, 以限制其传播。接种新型冠状病毒疫苗可有效提高个体免疫力, 控制新型冠状病毒的传播, 且副作用相对较轻。因此, 了解后疫情时代个体的接种意愿对政府制定促进接种行为的政策具有重要意义。本研究首先调查中国公众的疫苗接种意图情况, 其次使用文本分析探究人们拒绝接种疫苗的原因, 同时本研究也调查阴谋论是否会影响公众的接种意愿。最后, 本研究进行随机对照实验 (Randomized Controlled Trial) 研究, 拟检验基于健康行为过程模型 (Health Action Process Approach, HAPA) 的干预能否有效提高个体接种疫苗意愿。研究发现: (1) 在中国, 67.8% 的人想接种新冠疫苗, 17.5% 的人不想接种, 人们不想接种疫苗的原因包括: 1) 接种疫苗是不必要的, 2) 担心副作用, 3) 担心安全性, 4) 担心有效性, 5) 疫苗在病毒变异时不起作用, 6) 疫苗不够成熟; 对新冠疫苗成熟度的担忧首次成为不愿接种其他疫苗的原因。(2) 阴谋论无法预测个体的新冠疫苗接种意图。(3) 基于 HAPA 的意图干预可以有效改善个体新冠疫苗接种意愿, 但对其疫苗计划和行为的影响有限, 符合 HAPA 模型。

关键词 新冠病毒, 疫苗接种, 意图, 调查, 干预

Why Do People Not Want to Get Vaccinated? A Survey and Randomized Controlled Trial study on The Intention of COVID-19 Vaccination

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Abstract: As a result of the current global COVID-19 pandemic, the health and living conditions of millions of people have been compromised. According to the World Health Organization (WHO), a total of 173.6 million COVID-19 cases and 3,742,653 deaths have been confirmed globally as of 19:08 on June 9, Beijing time. As a result, countries are racing to develop and vaccinate against the COVID-19 to limit its spread. The COVID-19 vaccine can effectively improve individual immunity and control the transmission of COVID-19 with relatively mild side effects. Therefore, it is of great significance to understand individuals' willingness to vaccinate in the post-epidemic era for governments to formulate policies to promote vaccination behavior. This study first investigated the vaccination intentions of the Chinese public, then used text analysis to explore the reasons why people refused to be vaccinated, and the study also investigated whether conspiracy theory could affect the public's vaccination intentions. Finally, a Randomized Controlled Trial was conducted in this study to test whether the intervention based on Health Action Process Approach (HAPA) could effectively improve individuals' willingness to be vaccinated. This study found several results. (1) In China, 67.8% individuals wanted to vaccinate COVID-19 vaccine, and 17.5% individuals did not want to vaccinate. The reasons for individuals not wanting to be vaccinated included 1) vaccinations are unnecessary, 2) concern about side effects, 3) concern about safety, 4) concern about effectiveness, 5) the vaccine does not work if the virus mutates, 6) lack of maturity. Concerns about the maturity for COVID-19 vaccine have emerged for the first time

as a reason not willing to vaccinate against other vaccines. (2) Conspiracy brief did not predict individual's COVID-19 vaccination intentions. (3) HAPA-based intentional interventions can effectively improve individuals' COVID-19 vaccination intentions, but the effects on their planning and behavior for vaccine are limited.

Keywords: COVID-19, vaccination, intention, survey, intervention

(2) 博士研究生论坛——应用心理学分场 2

上场前的“强迫动作”有用吗？仪式化行为提升自我控制

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摘要 研究背景：赛场上，观众不但可以看到运动员精彩纷呈的运动动作，还可以看到形形色色的仪式化行为。心理学研究者一般将仪式化行为看作以僵化、刻板和重复为特征的行为(Foster et al., 2006; Rossano, 2012)，包含 3 个核心成分(Brooks et al., 2016; Hobson, Schroeder, et al., 2017)：物理属性的流程式动作、心理属性的符号象征意义以及区别于习惯行为的非功能化。综合以往研究发现仪式化行为影响自我控制证据不一致，最重要的原因是仪式化行为对不同领域不同类型的自我控制影响可能存在差异，而与运动项目的分类更为契合的是坚持性和抑制性自我控制的划分方式(李丹阳, 2019; 李丹阳, 张力为, 2020; 张烨, 张力为, 2017)。为检验表现前的仪式化行为是否对自我控制有用、对何种类型的自我控制作用更大以及仪式化行为的物理和心理属性何者发挥着重要作用？研究方法：通过 3 项系列研究来检验上述科学问题，研究 1 和研究 2 为平行研究，分别选用了坚持性自我控制的靠墙静蹲任务和抑制性自我控制的冲刺跑任务，采用二因素混合 3(行为类型：仪式化行为 vs. 随机行为 vs. 控制组)*2(测量次序：前测 vs. 后测)的实验设计；研究 3 对这一问题进行重复检验并对仪式化行为的核心成分进行操纵，采用三因素混合 2(物理属性：有结构化 vs. 无结构化)*2(心理属性：有符号意义 vs. 无符号意义)*2(测量次序：前测 vs. 后测)实验设计。研究结果：研究 1 发现仪式化行为对坚持性自我控制无显著影响($F(2, 116)=1.87, p=.159, \eta_p^2=0.031$)；研究 2 发现仪式化行为对抑制性自我控制任务中的抢跑次数的降低有用($F(2, 117)=5.02, p=.008, \eta_p^2=0.079$)；研究 3 得到相似结果，并支持了仪式化行为的心理属性在提升抑制性自我控制中扮演着重要作用($F(1, 101)=7.43, p=.008, \eta_p^2=0.069$)。研究结论：仪式化行为是真实存在的“赛前强心剂”而非单纯的“强迫动作”。仪式化行为对自我控制的提高作用因类别而异，其对抑制性自我控制的提升作用较稳健。仪式化行为的心理属性可作为其提升抑制性自我控制作用的重要解释机制。本研究对自我控制的力量模型和仪式化行为的有关理论进行了检验和整合，可帮助我们更好地理解运动员仪式化行为背后的心理功能。

关键词 仪式化行为，自我控制，坚持性自我控制，抑制性自我控制，自我损耗

Does pregame “compulsive action” really help athletes? Ritualized behavior enhances self-control

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Abstract: Background: Spectators at sporting events see not only skills displayed but also various forms of ritualized behavior exhibited by athletes. Psychology researchers generally view ritualized behavior as behavior characterized by rigidity, stereotyping, and repetition (Foster, Weigand, & Baines, 2006; Rossano, 2012), researchers have identified three core components of ritualized behavior (Brooks et al., 2016; Hobson et al., 2017): process-like actions (physical feature), symbolic expression (psychological feature) and lack direct instrumental purpose, which distinguishes it from habitual behavior. The most important reason for the inconsistency in the evidence for the impact of ritualized behavior on self-control is the possible difference in the effects of ritualized behavior on different types of self-control in different domains. The classification of self-control into persistent and inhibitory types is more compatible with sports than are other classifications (Li, 2019; Li & Zhang, 2020; Zhang & Zhang, 2017). To test whether the ritualized behavior before performance is useful for self-control, what type of self-control is more

effective, and which physical and psychological attributes of the ritualized behavior play an important role? Method: Three series of studies were conducted to test the above-mentioned scientific issues. Study 1 and Study 2 are parallel studies, the wall-sit task with persistent self-control and the task of sprinting with inhibitory self-control were selected respectively, using a two-factor mixed design 2 (measurement order: pretest vs. posttest) $\times$ 3 (behavior type: ritualized behavior vs. random behavior vs. control group) experimental design; Study 3 repeated tests on this question and the core of ritualized behavior. A three-factor mixed 2 (measurement order: pretest vs. posttest) $\times$ 2 (physical feature: structured vs. unstructured) $\times$ 2 (psychological feature: symbolic meaning vs. no symbolic meaning) design was used. Results: Research 1 found that ritualized behaviors had no significant effect on persistent self-control ($F(2, 116)=1.87, p=.159, \eta_p^2=0.031$); Research 2 found that ritualized behaviors played an important role in inhibitory self-control tasks The reduction in the number of start-ups is useful ($F(2, 117) = 5.02, p = .008, \eta_p^2 = 0.079$); Study 3 has similar results, ritualized behavior enhanced inhibitory self-control, and this effect was mainly reflected in the feature of symbolic meaning ($F(1,101) = 7.43, p = .008, \eta_p^2 = 0.069$). Conclusion: Ritualized behavior is a real “pregame booster” rather than a mere “compulsive action.” The enhancing effect of ritualized behavior on self-control varies depending on the type of self-control, with a robust effect on inhibitory self-control. The psychological feature of ritualized behavior may serve as an important explanatory mechanism for its enhancing effect on inhibitory self-control. The present study also verified and integrated the theories related to the strength model of self-control and ritualized behavior, which can help us better understand the psychological functions behind the ritualized behaviors of athletes.

Keywords: Ritualized behavior, self-control, persistent self-control, inhibitory self-control, ego depletion

元分析量化自悯训练在创伤后应激障碍中的作用与特征

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摘要 目的: 自悯 (self-compassion) 是一种健康的自我观念, 指当面临个人失败和面对心理或生理痛苦时, 对自己的一种宽容、友善的态度倾向。自悯训练对治疗创伤后应激障碍 (PTSD) 有极大的潜力和临床价值。然而由于干预方式、样本等差异, 前人研究出现了不一致的结果。本研究采用元分析的方式系统性回顾并量化自悯训练对 PTSD 的作用。方法 对数据库进行系统地搜索后, 纳入了 12 篇符合条件的文献。提取文献中 PTSD 症状水平作为因变量。结果 自悯训练对 PTSD 有中等程度的保护作用 ($SMD = -0.65$), 而且这个结果中的大部分研究是临床样本 (8/12 个)。更重要的是, 自悯训练次数越多, 它对 PTSD 的缓解效果越好 ($p < 0.001$)。自悯的基线水平以及训练前后的自悯水平改变量与训练后的 PTSD 没有关系。结论 元分析结果细化了自悯训练对 PTSD 的作用, 为优化训练方式提供了思路。

元分析注册编号: PROSPERO CRD42020208663

关键词 自悯, 干预, PTSD, 创伤后应激, 元分析

Investigating the influence of self-compassion focused interventions on posttraumatic stress: A systematic review and meta-analysis

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Abstract: Objectives Self-compassion focused interventions may be able to decrease posttraumatic stress symptoms. However, previous studies demonstrated mixed effects in which a series of confounders were not systematically quantified. In this study, a systematic review with meta-analysis was conducted to quantify the effects of self-compassion focused therapies on posttraumatic stress disorder. Methods Twelve eligible studies were included after a systematic search of databases. Outcome measures were extracted for posttraumatic stress disorder. Results Our data indicated a medium protective effect on posttraumatic stress symptoms ($SMD = -0.65$), with most of the studies (8/12) coming from clinical settings. More importantly, longer interventions were associated with better posttraumatic stress outcomes ($p < 0.001$). Baseline or changes in self-compassion scores were not associated with posttraumatic stress outcomes post interventions. Conclusions Overall, findings from this meta-analysis quantified the complex influence of self-compassion focused interventions on posttraumatic stress symptoms and may provide insights for optimizing intervention strategies. Systematic review and meta-analysis registration: PROSPERO CRD42020208663

Keywords: self-compassion; intervention; PTSD; posttraumatic stress; meta-analysis

中国老年人失能的潜在发展轨迹：一项全国性纵向研究

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摘要 目的: 老年人口的不断增加已成为当今社会发展中的一个突出的问题。作为一项重要的健康指标, 老年人的日常生活活动 (Activities of Daily Living, ADL) 功能的发展趋势引起了科研工作者、政策制定者以及政府部门的兴趣。考虑到前人不同研究中对老年人 ADL 缺失的发展趋势的研究结果存在不一致的现象, 我们在一个历时 12 年的研究中探讨 ADL 缺失的潜在发展模式以及影响这些轨迹的因素。方法: 本研究采用中国纵向健康长寿调查 (Chinese Longitudinal Healthy Longevity Survey, CLHLS) 五个波次的纵向数据集 (2002—2014 年), 其中包括 1,654 名 65 岁及以上的中国老年人。在本研究中, 我们统一使用 Katz 指数量表测量老年人的 ADL 失能情况, 该量表可以反应 ADL 失能的程度, 在量表中洗澡被认为是最困难的 ADL, 吃饭是最容易的 ADL。我们使用纳入非时变协变量的混合增长模型 (Growth Mixture Model, GMM) 来识别老年人 ADL 失能的潜在发展轨迹以及影响这些轨迹的风险因素和保护因素。结果: 我们把在 12 年间保持各项 ADL 功能都正常的老年人 ($N = 1,140$) 视为 ADL 功能健全的老年人。在剩余的 ADL 失能老年人样本 ($N = 514$) 中, 我们识别了两个潜在的增长类型: 轻微增长组和快速增长组。进一步的研究结果表明, 快速增长组中较少做家务、患有中风或痴呆的老年人比例显著大于轻度增长组。结论: 在一定程度上, 做家务有助于老年人

保持正常的 ADL 功能。而中风或痴呆，或者两者共病可能加速老年人晚年 ADL 失能的恶化。

关键词 中国老年人，日常生活活动，混合增长模型，非时变协变量

The Potential Different Development Patterns of Disability among Elderly People in China: A Nationwide Longitudinal Study

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Abstract: Background: The acceleration of population aging has brought a lot of attention to the disability among older populations, but existing results about the development patterns of disability were largely mixed. The current study aimed to identify the potential different development patterns of disability and the influential factors using a large, nationally representative sample of the Chinese elderly. Methods: We adopted a five-wave longitudinal dataset from the Chinese Longitudinal Healthy Longevity Survey (CLHLS), and a total of 1,654 elderly aged 65 and over were obtained. Disability was measured using the Katz index scale which graded individuals on a scale of difficulty to carry out the activities of daily living (ADL). We utilized the conditional growth mixture model (GMM) with time-invariant covariates to identify various development patterns and associated factors.

Results: Compared with those without disability ($n=1,140$), individuals living with ADL disability ($n=514$) were more likely to be old, female, or Han ethnic, eat more healthy food and suffer from chronic disease. Two groups with distinct developmental trajectories of ADL disability were identified among those with ADL disability, including the Slightly Increasing and the Quickly Increasing groups. People who did less housework ($OR=0.33$, 95% CI: 0.12–0.90; $p=0.030$), suffered from stroke ($OR=5.39$, 95% CI: 1.43 – 20.35; $p=0.013$) or dementia ($OR=10.29$, 95% CI: 1.01–104.44; $p=0.049$) were more likely to be classified into the Quickly Increasing group. Conclusion: There existed two development patterns of ADL disability among the Chinese elderly. Besides, doing housework could help prevent the deterioration of disability to some extent, and suffering from stroke or dementia may accelerate the deterioration of ADL ability in later years. The findings provided implications for public health interventions.

Keywords: Chinese elderly, Disability, Activities of daily living, Growth mixture model

视觉搜索中风味引发对关联颜色的注意偏向

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摘要 人们常将特定的颜色与风味联系起来形成色味联结，并可根据食物或饮料的颜色而对其风味产生预期。最近的研究表明，人们也可对具有某种风味标签的食品包装的颜色产生预期并由这种预期引导对这种风味标签进行视觉搜索。但是，真实风味对颜色信息加工的调控作用尚不清楚，本研究通过两个视觉搜索实验对此进行探究。实验 1 探究了真实的风味对视觉搜索的影响。任务要求被试先品尝饮料再对具有特定形状的靶子进行视觉搜索，而风味线索会提示靶子的颜色。当风味线索所提示的靶子颜色是与该风味关联的颜色时，被试的视觉搜索速度变快。如果风味线索所提示的靶子颜色与该风味不关联，而与该风味关联的颜色也没有出现在画面中，那么风味线索可以加速视觉搜索。但是，如果与该风味关联的颜色出现在干扰项上，那么风味线索就无法促进视觉搜索，体现了被试对该颜色的注意偏向。实验 2 则探究了想象的风味对视觉搜索的影响。任务要求被试在看到水果名称后想象其风味，再对具有特定形状特征的靶子进行视觉搜索。结果表明，

被试对形状靶子的视觉搜索在靶子颜色与他们想象的风味关联时比不关联时更快,说明想象的风味也可以通过有关联的靶子颜色而促进视觉搜索。总之,两个实验的结果一致表明,无论是真实的还是想象的风味,都会引发个体对关联颜色的注意偏向,体现了风味信息对颜色信息加工的调控。本研究揭示了味觉刺激对视觉注意的影响,为色味交互提供了新的实验证据,也为进一步探讨跨通道影响的心理与神经机制奠定了基础。

关键词 色味联结,跨通道影响,风味,想象,注意偏向

Flavors Bias Attention towards Associated Colors in Visual Search

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Abstract: People tend to associate a color with a certain flavor to establish color-flavor associations, and generate flavor expectations about a food or beverage based on its color. Recent research has shown that people can generate color expectations about a food packaging based on its flavor label to guide visual search for this flavor label. However, it remains unclear how flavors modulate color processing. Therefore, we conducted two visual search experiments to address this issue. Experiment 1 was designed to test the influence of an actual flavor. We used a peristaltic pump to deliver a certain amount of fruit-flavored beverage or tasteless purified water to the participants' mouths, followed by a shape-based visual search task. Half of the participants were informed that the strawberry and pineapple flavors were always followed by targets in the associated colors; whereas the rest of them were informed that the strawberry and pineapple flavors were always followed by targets in the non-associated colors; and the tasteless purified water was not predictive of the color of the shape target. Consequently, their search times were speeded when the target appeared in a flavor-associated color, or when the target appeared in a non-associated color but the flavor-associated color was absent from the display. However, the flavor cue did not facilitate visual search if the distractor was presented in the flavor-associated color, thus indicative of prioritized attention to this associated color. Experiment 2 was designed to test the influence of an imagined flavor on visual search. The participants were instructed asked to imagine the flavor of a fruit upon seeing its name, followed by a shape-based visual search task. When they were searching for the shape target, the color associated with the imagined flavor might appear on the target or the distractor, or was absent from the display. In the latter two cases, the shape target had a color that was not associated with the imagined flavor. Consequently, searching for a shape-defined target was faster when its color was associated with the imagined flavor than otherwise. These results suggest that an imagined flavor could facilitate visual search when it was associated with the target color. Collectively, the results of both experiments consistently revealed attentional bias towards flavor-associated colors in shape-based visual search, regardless of whether the flavor was actually experienced or only imagined. These findings demonstrate how flavor cues could modulate visual information processing. Our findings provide empirical evidence regarding color-flavor interactions by showing the influence of gustatory cues on visual attention, which allows us to further investigate the underlying mechanisms and neural basis of crossmodal influence in follow-up research.

Keywords: color-flavor associations, crossmodal influence, flavor; imagination, attentional bias

反复想象消费食物对感官特异性厌腻的影响

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摘要 在短时间内反复食用某种食物会使人们对它的喜爱和想吃程度下降,这种现象被称为感官特异性厌腻。本研究通过三个实验探讨个体在反复想象食用不同的食物后,是否会影响其他具有相似特征的食物喜爱或想吃程度。实验一中,被试被随机分为两组,他们分别需要反复想象食用薯片和青苹果,并在想象三次和想象三十次后评价对其他食物的喜爱和想吃程度。结果表明,反复想象食用薯片使得被试对其他金黄色食物的喜爱程度和想吃程度也显著下降,但是他们对绿色食物的喜爱和想吃程度并没有显著改变;而反复想象食用青苹果使被试对于金黄色和绿色食物的喜爱程度均显著降低。实验二中,被试需要反复想象食用菠萝,

结果发现反复想象食用菠萝使被试对金黄色和绿色食物的喜爱程度都显著降低,这与实验一中想象食用青苹果的结果模式一致。实验三中,被试需要反复想象食用金黄色的蛋糕,结果发现反复想象食用蛋糕使被试对金黄色食物的喜欢和想吃程度显著降低,但是他们对于绿色食物的喜欢和想吃程度并没有显著改变,这与实验一中想象薯片的结果模式一致。总的来说,本研究的结果说明反复想象食用某种食物会导致对于其他食物的厌腻,而食物热量可能是影响不同厌腻结果模式的原因,这一结果对于助推个体做出更健康的食物选择具有启发意义。。

关键词 想象消费, 感官特异性厌腻, 食物选择, 多感官助推

The influence of repeated imagined consumption on sensory-specific satiety

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Abstract: Compared to uneaten foods, repeated consumption of a certain food within a short period of time can reduce people's liking of and wanting for this food, a phenomenon referred to as sensory-specific satiety. We conducted three behavioral experiments to examine whether repeatedly imagining consuming a certain food would influence people's liking of and wanting for other foods. In Experiment 1, two groups of participants were asked to repeatedly imagine consuming potato chips and green apples, and to rate their liking of and wanting for other golden yellow- or green-colored foods after 3 and 30 rounds of imagined consumption. Consequently, repeatedly imagining eating potato chips decreased the participants' liking of and wanting for other foods in the golden yellow color, whereas no such results were observed for green-colored foods. By contrast, repeatedly imagining eating green apples decreased the participants' liking of the foods in both golden yellow and green colors. Considering that the potato chips and green apples differed in color, basic taste, and energy-density, we conducted two more experiments. In Experiment 2, the participants were asked to repeatedly imagine consuming pineapples, and they showed similar results with the apple group of Experiment 1. In Experiment 3, the participants were asked to repeatedly imagine eating cakes in the golden yellow color, and they showed similar result patterns with the potato chip group of Experiment 1. Collectively, the findings of the present study suggest that repeatedly imagining consuming energy-dense foods might decrease an individual's liking of and wanting for other energy-dense foods, but would not change their desire to eat healthy foods. These findings have direct implications in the practice of nudging consumers towards healthier food choices.

Keywords: imagined consumption, sensory-specific satiety, food choices, multisensory nudging

个体短时记忆水平对选择过载效应的影响及其材料特异性

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摘要 本研究旨在探讨个体短时记忆水平对选择过载效应的影响。实验1招募了193名被试,采用不同的薯片口味作为实验材料,通过问卷调查的方式考察了不同大小选择集下个体情绪体验的差异。结果发现与面对较小选择集的被试相比,面对较大选择集的被试经历了更多的负面情绪。实验2以风景图片作为实验材料,使用风景图片再认任务来测量其短时记忆水平。结果进一步证实了选择过载效应的存在,并发现了图片再认水平对选择过载效应的影响,即与高图片再认水平的个体相比,低图片再认水平的个体表现出更明显的选择过载效应。实验3采用了相同的风景图片作为材料,使用经典的数字记忆任务测查了个体的数字短时记忆水平。结果虽然发现了选择过载效应,然而并没有发现数字短时记忆水平对风景图片的选择过载效应有与实验2中相似的影响。因此,个体短时记忆水平对选择过载效应的影响可能具有材料的特异性。

关键词 选择过载效应 认知负荷 短时记忆

The influence of individual short-term memory level on choice overload effect and its material specificity

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Abstract: In every field of modern society, people are faced with a wealth of choices. Too many choices may have strong negative consequences, such as decreased satisfaction, increased regret, reduced purchase behavior, and so on, which is called the choice overload effect. At present, researchers generally believe that cognitive load is the main reason for the choice overload effect of individuals, and individuals' short-term memory level, as an important manifestation of cognitive load, will have a certain influence on the choice overload effect. Therefore, this study aims to explore the influence of individual short-term memory level on the choice overload effect. In Study 1, 193 subjects were recruited and different potato chip tastes were used as experimental materials. The differences of individual emotional experience under different choice sets were investigated by questionnaire. The results showed that the subjects who were presented with a larger set of choices experienced more negative emotions, especially difficulty and frustrating, than those who were presented with a smaller set of choices. In Study 2, landscape images were used as the experimental material, and short-term memory was measured by landscape image recognition task. The results further confirmed the existence of the choice overload effect and found the effect of image recognition level on the choice overload effect, that is, the individuals with low image recognition level exhibited more obvious choice overload effect than those with high image recognition level. Study 3 used the same landscape images as the material, using the classic number memory task to measure the individual's numerical short-term memory level. Results showed that, although the choice overload effect was found, the effect of digital short-term memory level on the choice overload effect of landscape images was not similar to that in Study 2. Therefore, the influence of individual short-term memory level on the choice overload effect may be material specific.

Keywords: choice overload effect, cognitive load, short-term memory

广泛性焦虑症状的动态网络

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摘 要 近年来新兴的网络理论认为精神障碍产生于症状间直接的相互作用。探究广泛性焦虑(GAD) 症状间动态关系对我们理解 GAD 的发生和维持以及实施更精准有效的预防和干预具有重要意义。然而, GAD 症状间的动态关系目前尚未见报道。本研究纳入广泛性焦虑障碍量表(GAD-7) 评分 ≥ 10 分且自我报告无精神障碍病史者共 115 人(60 名男性)。使用完整的精神障碍诊断与统计手册第五版(DSM-5) 中 GAD 症状诊断标准项目(共 8 项) 评估被试每天的 GAD 症状, 持续 50 天。使用 mlVAR (multilevel VAR) 模型来获得 GAD 症状间的时间网络(temporal network) 和同时期网络(contemporaneous network)。尤其关注时间网络中每个症状的外强度(out-strength) 以及同时期网络中每个症状的强度中心性(strength)。在时间网络中, 症状间的关联较为密切且所有关联都是正性的。“睡眠问题”、“不安或激动或紧张”和“容易疲倦”分别在两个时间网络中展现出了最高的外强度。在同时期网络中, 症状间的关联较为密切且所有关联都是正性的。“不能控制担忧”在两个同时期网络中均展现出最高的强度中心性, “睡眠问题”均展现出最低的强度中心性。另外, 时间网络中出现了一些有趣的症状间恶性循环, 如“不安或激动或紧张”、“容易疲倦”和“注意力不能集中或头脑一片空白”之间的反馈回路。本研究揭示了 GAD 症状之间的动态相互作用以及对整个症状网络起重要作用的症状, 并发现了“睡眠问题”与其他症状之间的关系以及一些有趣的症状间恶性循环。本研究表明网络模型可以加深我们对 GAD 症状间动态关系的理解, 并为发展和完善 GAD 预防和干预手段提供

了一定依据。

关键词 广泛性焦虑, 症状, 网络分析, 经验取样法

Dynamic networks of generalized anxiety disorder symptoms

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Abstract: In recent years, the emerging network theory holds that mental disorders arise from the direct interaction between symptoms. Exploring the dynamic relationship between symptoms of generalized anxiety (GAD) is of great significance for us to understand the occurrence and maintenance of GAD and to carry out more accurate and effective prevention and intervention. However, the dynamic relationship between GAD symptoms have not been reported. A sample of participants ($n = 115$, male = 60) with elevated GAD-7 scores ($GAD-7 \geq 10$) and without previous history of mental disorder participated in an online daily diary study in which they reported their GAD symptoms (eight symptoms) based on DSM-5 diagnostic criteria for 50 consecutive days. We used a multilevel VAR model to obtain temporal and contemporaneous networks. We pay special attention to the out-strength of each symptom in temporal networks and the strength of each symptom in contemporaneous networks. In temporal networks, all of the edges are positive. "Sleep disturbance", "restlessness" and "fatigue" had the highest out-strength in the two temporal networks respectively. In contemporaneous networks, all of the edges are positive. "Uncontrollable worry" had the highest strength in the both two contemporaneous networks and "sleep disturbance" had the lowest strength in the both two contemporaneous networks. In addition, there are some interesting vicious cycles in the temporal networks, such as the vicious cycles between "restlessness", "fatigue" and "difficulty concentrating". The present study reveals the dynamic interaction between GAD symptoms and the symptoms that play important roles in the entire symptoms network, and finds the relationship between "sleep disturbance" and other symptoms as well as some interesting symptomatic vicious cycles. This study indicates that the network model can deepen our understanding of dynamic relationship between GAD symptoms, and provides some references for the development and improvement of GAD prevention and intervention methods.

Keywords: Generalized anxiety disorder, Symptom, Network analysis, Experience sampling methodology

关系对政府职员受贿决策的影响

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摘要 腐败是影响全球各国政治和经济的重大现实问题。尽管已有大量研究考察了腐败的影响因素和心理机制, 但很少有研究从受贿和行贿双方关系的角度出发探讨受贿决策过程和心理机制, 尤其在人情关系文化比较突出的中国和东亚社会, 这个问题更重要。本研究通过 4 个行为实验, 首次从行/受贿双方关系出发, 考察了关系(直接关系和间接关系)对政府职员受贿决策影响及其内在心理机制。实验 1 探讨直接关系对政府职员受贿决策的影响; 实验 2 进一步考察信任、道德、责任义务和感情四种因素在其中的中介效应; 实验 3 和 4 则进一步探讨间接关系对受贿决策的影响及其内在心理机制。实验结果表明, 无论直接关系还是间接关系, 关系越近, 政府职员受贿概率越大; 风险和数额越大, 关系效应越弱。更进一步, 直接关系和间接关系影响受贿决策的心理机制存在差异。在直接关系条件下, 关系越近, 政府职员对行贿者越信任, 同时感觉越有责任和义务帮助他们, 导致受贿概率越高; 然而, 间接关系条件下, 接受贿赂的原因则仅仅由信任驱动。道德和感情机制在关系对政府职员受贿决策的影响中则没有显著作用。总之, 关系对政府职员受贿决策有重要影响, 而且不同类型关系的影响机制存在差异。以上结果不仅对于腐败的心理机制探索有一定的理论意义, 而且对于中国现实反腐有较为重要的参考价值。

关键词：受贿决策，直接关系，间接关系，信任，责任和义务

How Guanxi influences government employees' bribe-taking decisions

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Abstract: Corruption is a major issue impairing the politics and economy of countries around the world. Although a large number of studies have examined the influencing factors and psychological mechanisms of corruption, few studies investigated the bribery decision-making process from the perspective of the relationship between bribe-takers and bribe-givers (Guanxi). Especially in East Asian societies (represented by China) where the culture of Guanxi is deep-rooted, Guanxi may have an important impact on bribe-taking decisions. We used 4 studies to examine how direct and indirect Guanxi influence government employees' bribe-taking decisions and explore the underlying psychological mechanisms for the first time. Experiment 1 and 2 explored how the direct Guanxi influenced the government employees' bribery decisions and investigated the mediating effects of four factors: trust, morality, responsibility-obligation and affection; Experiment 3 and 4 further investigated the influence and the psychological mechanisms of indirect Guanxi on bribery decisions. Results showed that the closer the Guanxi, the higher the probability of receiving a bribe; and as the risk and amount increased, the effect of Guanxi decreased. More importantly, the results showed that although direct and indirect Guanxi affected the bribe-taking probability similarly, the underlying mechanisms were different. Specifically, government employees accepted more bribes from those who had closer direct Guanxi because they trusted them more, and felt more responsible and obligated to help them; however, the reason for accepting more bribes from those who had closer indirect Guanxi was only driven by trust. The role of morality and affection in the relationship between Guanxi and bribery was not significant. Taken together, Guanxi has a significant impact on government employees' bribe-taking decisions, and the psychological mechanisms vary across different types of Guanxi. These results not only have a theoretical significance for understanding the psychological mechanisms of corruption, but also have important practical values for anti-corruption in China.

Keywords: Bribe-taking decision, Direct Guanxi, Indirect Guanxi, Trust, Responsibility-obligation

指定的和显现的领导者对团体创造力的影响： 一项近红外超扫描研究

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摘要 本研究采用基于近红外的超扫描技术，探讨了事先指定和自由显现的领导者对团体创造力、团体成员互动及脑间同步性（IBS）的影响。被试被随机分入三人讨论小组完成一个现实情境相关的创造性问题解决任务，同时记录其大脑活动。行为结果发现，显现领导者比指定领导者有更高的领导角色认同感。显现领导者条件下的团体新颖性和团体观点聚合度显著高于指定领导者条件。显现领导者条件下领导者的流畅性和灵活性得分显著均高于追随者，且显现领导者在上述指标得分均显著高于指定领导者。显现领导者条件下领导者-追随者（LF）配对的观点采择度显著高于追随者-追随者（FF）。脑成像结果表明，显现领导者条件下 LF 配对在右侧颞叶及右侧顶叶的 IBS 增量均显著高于指定领导者，且 LF 的 IBS 与创造性任务表现呈显著正相关。上述结果表明，显现领导者能生成更多数量和种类的观点，有助于促进团体成员间的观点交换和利用，继而帮助提升团体创造力。

关键词 团体创造力，领导者-追随者关系，社会互动，近红外超扫描技术，脑间活动同步性。

The Effects of Appointed and Emerging Leader on Group Creativity: A fNIRS-based Hyperscanning Study

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Abstract: Using the fNIRS-based hyperscanning technology, the current study explored how appointed (Condition A) and emerging (Condition E) leaders affect leader-follower creative performance, interaction pattern, and interpersonal brain synchronization (IBS) during group creative discussion. Participants were randomly assigned into three-person discussion groups to complete a real-world related creative problem-solving task. In the meantime, the fNIRS equipment was used to record the brain activity in the right temporal-parietal region of three subjects simultaneously. The behavioral results indicated that emerging leaders had a higher level of leader role identity than the appointed leader. The group originality and group convergence were significantly higher on Condition E than the Condition A. Only on Condition E, leaders' fluency and flexibility scores were significantly higher than the followers. Further, emerging leaders' fluency and flexibility scores were significantly higher than the appointed leaders. What's more, the perspective-taking between leader-followers (LF) was significantly higher than that between follower-follower (FF) only on Condition E. The neuroimaging results showed that significantly higher IBS increment of LF evoked in the right temporal cortex and right parietal cortex on Condition E than Condition A. The IBS increment of LF in those regions is also positively correlated with multiple creative performance indexes. Our findings suggested that emerging leaders could produce more quantities and categories of ideas, which was beneficial to the idea exchange between group members, leading to higher group creative performance.

Keywords: group creativity, leader-follower relationship, social interaction, fNIRS-based hyperscanning, interpersonal brain synchronization

Upward social comparison sensitivity on teachers' emotional exhaustion: A moderated moderation model of self-esteem and gender

Abstract: Drawing on the conservation of resources theory, the present study aimed to extend the work on individual differences in the relationship between upward social comparison sensitivity and emotional exhaustion in a sample of teachers, by examining the interaction effects of self-esteem and gender difference. 681 teachers completed a self-reported questionnaire including the Upward Social Comparison Sensitivity scale, the Self-Esteem Scale, and the Maslach Burnout Inventory-Educators Survey (MBI-ES) sub-scale. Results based on a moderated moderation model indicated that (1) upward social comparison sensitivity was positively correlated to emotional exhaustion, (2) self-esteem moderate the relationship between upward social comparative sensitivity and emotional exhaustion, (3) there is a significant gender difference in self-esteem of moderating effect the relationship between upward social comparative sensitivity and emotional exhaustion. These findings contribute to the understanding of how upward social comparison sensitivity predicts teachers' emotional exhaustion, and provide practical implications for prevention and intervention programs to protect teachers' mental health in the school setting.

Keywords: upward social comparison sensitivity, teachers' emotional exhaustion, self-esteem, gender differences

(3) 博士研究生论坛——应用心理学分场 3

不同正念练习方式对射击运动中的自我控制的影响 ——以虚拟现实下的十米气手枪比赛为例

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摘要 射击运动是一项对运动员自我控制能力要求极高的项目, 尤其对气手枪项目来讲, 在高压下重复完成高质量规范技术动作的专项能力以及保持稳定情绪和坚强意志力的自我控制能力是制胜的两大关键。

目的 本研究旨在通过一项随机对照实验, 探究一次短时不同方式的正念练习对射击运动过程中被试的情绪控制和行为控制的不同影响, 为设计具有运动项目特异性的正念训练提供科学依据。**方法** 采用 2×4 的混合实验设计, 被试内因素: 2 水平(前测、后测), 被试间因素: 4 水平(10 分钟正念观呼吸、开放觉察练习、正念慈心练习、对照组)。采用 G*Power3.1 计算样本量为 136 名, 实验共招募被试 162 名, 随机分配到四个不同的组别, 最终纳入分析的样本为 139。实验采用虚拟现实模拟真实的十米气手枪决赛, 收集被试在基线和前后测比赛过程中的心理准备李克特量(MRF-3)得分、心率变异性(HRV)的时域和频域指标以及被试的持枪坚持时长和射击总环数。**结果** 本研究的虚拟现实射击比赛场景有效的诱发了被试的比赛压力, 与基线相比被试在进入比赛场景后的认知焦虑($F_{(1, 138)} = 104.872, p = .000, \eta_p^2 = 0.275$)、躯体焦虑($F_{(1, 138)} = 90.508, p = .000, \eta_p^2 = 0.247$)均显著上升, 状态自信心($F_{(1, 138)} = 41.495, p = .000, \eta_p^2 = 0.131$)显著下降; 以平均心率为因变量, 两因素交互效应显著($F_{(3, 135)} = 8.996, p = .000, \eta_p^2 = 0.167$), 简单效应检验发现, 开放觉察组的后测平均心率显著低于对照组 $p = .003$, 95% CI [2.506, 17.290], 其余无显著差异; 而在 LF/HF 上的简单效应分析显示, 在后测的 LF/HF 指标上, 观呼吸组和开放觉察组均显著低于对照组, 前者 $p = .020$, 95% CI [0.403, 7.099], 后者 $p = .000$, 95% CI [1.935, 8.952]; 同样, 在持枪时长上两阶交互作用显著($F_{(3, 135)} = 4.262, p = .007, \eta_p^2 = 0.087$), 简单效应检验结果显示, 在后测举枪坚持总时长上, 观呼吸组显著长于对照组 $p = .000$, 95% CI [-211.023, -50.933], 正念慈心组也发现了相同结果 $p = .016$, 95% CI [-176.615, -11.683]; 最后, 在射击总环数上, 两阶交互作用不显著($F_{(3, 135)} = 1.361, p = .257, \eta_p^2 = 0.029$)。**结论** 对于十米气手枪项目, 开放监控的正念练习更有利于情绪控制; 聚焦注意的正念练习更有利于行为控制。

关键词 正念训练, 射击, 自我控制, 运动表现

Influence of different mindfulness exercises on self-control in shooting —Taking the 10-meter air pistol competition under virtual reality as an example

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Abstract: Shooting is an event that requires high self-control ability of athletes. The excellent performance of shooting requires two key factors: (1) the special technical ability to repeatedly complete high-quality and standardized technical actions under high-intensity load, (2) the self-control ability to maintain stable emotion and strong willpower. Objective To explore the different effects of a short-term mindfulness exercise in different ways on the subjects' emotional control and behavior control in the process of shooting through a RCT experiment. Therefore, provides a reference for the shooting team to design a scientific and effective mindfulness training and also an evidence for the mechanism of mindfulness in improving shooting performance. Methods A mixed experimental design of 2×4, the within-subjects factor: 2 levels (pre-test and post-test), and the between-subjects factor: 4 levels (10 minutes mindfulness breathing, sound awareness practice, mindfulness compassion practice, control group). The

sample size was 136 calculated by Gpower3.1, So we finally recruited 140 subjects and randomly assigned to four different groups. Participants were asked to complete two 10 meter air pistol shooting finals under virtual reality, and we collected the Self-assessment score of subjects on Mental Readiness Form-Likert (MRF-3) , and also time and frequency domain indexes of heart rate variability (HRV), as well as the subjects' gun holding duration and the shooting rings at baseline and during the competition. Results The virtual reality shooting competition scene in this study effectively induced the competition pressure of the subjects. Compared with the baseline, the subjects' cognitive anxiety after entering the competition scene($F_{(1, 138)} = 104.872, p = .000, \eta_p^2 = 0.275$), physical anxiety($F_{(1, 138)} = 90.508, p = .000, \eta_p^2 = 0.247$), state self-confidence($F_{(1, 138)} = 41.495, p = .000, \eta_p^2 = 0.131$) decreased significantly; Taking the average heart rate as the dependent variable, the interaction effect of the two factors was significant ($F_{(3, 135)} = 8.996, p = .000, \eta_p^2 = 0.167$), the simple effect test found that the post test average heart rate in the open awareness group was significantly lower than that in the control group $p = .003$, 95% CI [2.506, 17.290], and there was no significant difference in the rest; The simple effect analysis on LF / HF showed that in the post-test LF / HF index, the respiratory observation group and open awareness group were significantly lower than the control group, the former $p = .020$, 95% CI [0.403, 7.099], and the latter $p = .000$, 95% CI [1.935, 8.952]; Similarly, the two-order interaction is significant in the gun holding duration ($F_{(3, 135)} = 4.262, p = .007, \eta_p^2 = 0.087$), the results of simple effect test showed that the total duration of gun lifting in the post-test group was significantly longer than that in the control group, $p = .000$, 95% CI [-211.023, -50.933], and the same results were also found in the mindfulness compassion group, $p = .016$, 95% CI [-176.615, -11.683]; Finally, on the total number of firing rings, the two-order interaction is not significant ($F_{(3, 135)} = 1.361, p = .257, \eta_p^2 = 0.029$). Conclusion For 10-meter air pistol, open monitoring mindfulness practice is more conducive to improve emotional control; Attention focused mindfulness practice is more effective for improving behavior control.

Keywords: Mindfulness training, Shooting, Sport performance, Self-control

中国式幽默的结构及其在组织中的应用

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摘 要 立足于中国本土文化, 本文通过四个研究探索了中国人的幽默人格结构及其在组织管理领域中的应用价值。研究一按照人格词汇学假设, 通过现代汉语词典与开放式问卷获得有关中国人幽默的人格词汇 41 个。研究二通过探索性因素分析 ($N = 330$) 和验证性因素分析 ($N = 330$), 发现中国人的幽默人格具体包括 27 个词汇, 分为 5 个因子: 平易近人、生动活泼、聪明才智、心思灵敏、诙谐逗趣, 并且中国人幽默人格及其 5 个因子的内部一致性系数均达到了心理学统计中的基本要求。另外, 相关性分析显示, 中国人的幽默人格与大五人格中的外倾性、宜人性、尽责性、开放性显著正相关, 与神经质负相关, 与幽默气质基础中的高兴正相关、坏心情负相关、与严肃无显著相关, 说明中国人的幽默人格量表具有良好的效标关联效度。研究三对比了中($N = 657$)美($N = 604$)两国被试对幽默人格的认知差异, 发现中国被试在平易近人、生动活泼、聪明才智、心思灵敏上的得分显著高于美国被试, 美国被试在诙谐逗趣上的得分显著高于中国被试, 说明两国被试对幽默的理解存在文化差异。研究四探索了中国人的幽默人格在组织管理中的实际应用, 收集的数据来自中国的本土化企业, 分两个时间点完成 ($N = 430$), 结果表明领导的幽默人格可以正向预测下属的工作绩效、创造力、工作幸福感, 负向预测下属的离职倾向。本研究既可以有效补充中国人的幽默人格方面的相关理论, 同时还具备一定的实际应用价值, 可以为进一步理解中国人的幽默提供参考。

关键词 幽默, 人格, 领导, 文化

The Chinese Humor Personality Structure and its Application in Organization

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Abstract: Based on Chinese traditional culture, this research explored the Chinese humor personality structure and its application in organization through four studies. According to the hypothesis of personality lexicology, Study 1 obtained 41 personality vocabularies related to Chinese humor through Modern Chinese Dictionary and open-ended questionnaires. Study 2 conducted the exploratory factor analysis ($N = 330$) and confirmatory factor analysis ($N = 330$) and found that the Chinese humor personality structure includes 27 vocabularies and 5 factors: Approachable, Lively, Intelligent, Nimble, Jocular. Moreover, the internal consistency coefficients of Chinese humor personality and its five factors reached the basic requirements in psychological statistics and correlation analysis showed that Chinese humor personality is significantly positively correlated with extraversion, agreeableness, conscientiousness, openness, and happiness, negatively correlated with neuroticism and bad mood, indicating that the Chinese Humor Personality Scale has good criterion-related validity. Study 3 compared the differences in the perception of humor personality between Chinese ($N = 657$) and American ($N = 604$) participants and found that there are cultural differences in the understanding of humor between the two cultures. Study 4 explored the application of Chinese humorous personality in organizational, data was collected from localized companies in China and was completed in two time points. The results showed that the leader humor personality can positively predict employees' work performance, creativity, and job well-being, and negatively predict employees' turnover tendency. This research not only supplement the relevant theories of Chinese humor personality, but also has certain practical implication.

Keywords: humor, personality, leader, culture

外显和内隐公正世界信念对亲社会行为的影响 ——共有取向的中介作用

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摘要 公正世界信念是人们普遍持有的一种信念, 即人们相信自己生活在一个公正的世界里, 在这个世界里人们得其所应得, 所得即应得。已有研究多聚焦于公正世界信念在个体层面上的功能, 指出有较高公正世界信念的人们常常会归咎和责备不公正的受害者, 从而应对不公正带来的威胁并保持心理健康。然而, 已有研究却很少从社会层面考虑公正世界信念的作用, 对公正世界信念与亲社会行为的关系的探讨也未能获得一致的结论。因此, 本研究试图发掘公正世界信念的积极社会功能, 探讨了公正世界信念对个体亲社会行为的影响及其内部机制。本研究构建了以公共取向为中介的亲社会行为与个人/一般公正世界信念关系模型。研究一采用线上问卷调查的方式 ($n=203$), 使用 Dalbert 等人编制的公正世界信念量表和 Rushton 等人编制的利他精神自陈量表, 分别测量了被试的个人/一般公正世界信念水平与其过去的亲社会行为水平; 还使用了 Clark 等人的共有关系取向量表考察了被试的共有取向水平。研究结果显示个体的个人公正世界信念和一般公正世界信念水平都能够正向预测其亲社会行为, 并且共有取向起到了中介作用。考虑到许多研究者曾指出公正世界信念应是一种内隐构念, 并且主观报告的公正世界信念可能会受到社会赞许性的影响。因此研究二招募被试到实验室 ($n=159$), 采用了内隐联想测验 (IAT) 范式测量了被试内隐的个人/一般公正世界信念, 并考察了被试的内隐信念对其实际捐款行为的影响。结果发现个体的内隐个人公正世界信念和内隐一般公正世界信念也能够通过公共取向正向预测其捐款行为, 即人们越相信世界是公平的, 他们的共有取向就越高, 随后他们就越愿意向抗战老兵捐款给。被试的内隐公正世界信念也能够正向预测亲社会行为, 被试的公正世界信念越高, 越有可能向退伍老兵的捐款行为。综合两个研究的结果, 我们认为公正世界信念确实具有积极社会功能, 它可以通过提高人们的共有取向来促使人们做出更多的亲社会行为。

关键词 个人公正世界信念, 一般公正世界信念, 亲社会行为, 共有取向, 内隐联想测验

The Effect of Explicit and Implicit Just World Belief on Prosocial Behavior via Communal Orientation

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Abstract: Belief in a Just World (BJW) is a belief widely held by people who tend to believe that the world is fair and individuals get what they deserve and deserve what they get. The previous studies mostly focused on the function of BJW at the individual level, pointed out that individuals with high BJW often blamed and belittled the victims, so that they could effectively respond to the threats and maintain their mental health. However, previous studies rarely considered the function of BJW at the social level, for instance, the discussion on the relationship between BJW and prosocial behavior has still failed to reach a consistent conclusion. Therefore, the present research attempted to find out the positive social functions of BJW by exploring the effect of BJW on prosocial behaviors, and its internal mechanisms. This research investigated the mediating role of communal orientation in the relation between prosocial behavior and personal BJW (PBJW) as well as general BJW (GBJW). In Study 1 (n=203), an online questionnaire was used to measure participants' explicit BJW, prosocial behavior and communal orientation. The results showed that the explicit PBJW and GBJW positively affected prosocial behavior, and communal orientation played a mediating role. Considering that BJW was often conceptualized as an implicit construct, in Study 2 (n=159), the Implicit Association Test (IAT) was used to measure the implicit PBJW and GBJW, and examine the effect of them on actual donation behavior. The results showed that the implicit PBJW and GBJW positively predicted prosocial behavior via communal orientation. The more people believed in a just world, the higher their communal orientation, and subsequently, the more willing they were to donate to veterans. Based on the results of two studies, this research suggests that PBJW and GBJW should have a positive social function to some extent.

Keywords: PBJW, GBJW, Prosocial behavior, Communal Orientation, Implicit Association Test

女性甲基苯丙胺依赖者药物渴求与食物奖赏的关系

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摘要 食物奖赏和药物依赖有共通的神经基础, 药物依赖人群其奖赏功能受损, 表现在吸食阶段对于食物奖赏的敏感性降低和药物奖赏的敏感性增加, 然而依赖者在戒断期间进食量增加, 存在肥胖风险。同时在动物实验中发现, 甜食具有相较成瘾性药物更高的奖赏效应。因此, 本研究的目的是探讨女性甲基苯丙胺依赖者药物渴求与食物奖赏、食欲及身体成分的关系, 并且初步探讨了甜食对药物渴求的影响。通过问卷从 150 名被试筛选出 33 名符合 DSM-5 甲基苯丙胺 (MA) 依赖标准的女性被试, 在饥饿状态下测量包括瘦素、胃饥饿素、内源性大麻素的食欲激素, 通过视觉模拟量表 (VAS) 测量其食欲状态及药物渴求, 通过利兹食物偏好问卷测量食物奖赏得分, 通过问卷测量其药物依赖相关数据, 通过身体成分仪测量其身体成分指标, 并且在饱腹状态下再次测量除食欲激素外的各项指标, 探究药物依赖相关信息与食物奖赏、食欲、身体成分之间的关系。基于探究的结果进一步通过甜食巧克力干预探究食物奖赏及药物渴求的变化及之间的联系。相关分析发现自主报告的药物渴求与第一次接触毒品年龄、接触毒品频率以及每次用量呈正相关; 同时药物渴求与 BMI、体脂率、基础代谢呈正相关。巧克力干预发现, 在进食巧克力后, MA 渴求降低, 饱腹感增加, 而且对高脂甜食的食物奖赏得分降低。同时食用巧克力后对于高脂肪甜食的隐渴与进食巧克力前后 MA 渴求均呈正相关。因此, 本研究发现了甲基苯丙胺依赖者药物渴求与身体成分的关系, 表明 MA 戒断人群因为药物依赖存在肥胖风险; 同时发现了药物渴求与甜食渴求的正相关关系, 对于甜食的渴望一方面可以作为侧面反映药物渴求程度的指标, 另外同时也可以作为 MA 依赖者甜食干预的依据, 可能是 MA 药物依赖的一种创新的治疗干预手段。

关键词 食物奖赏, 药物渴求, 甲基苯丙胺依赖, 甜食, 近红外

Association between drug craving and food reward in women with methamphetamine dependence

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Abstract: Food reward and drug dependence share a common neural basis. The reward function of drug dependent people is impaired, which is manifested in the decrease of sensitivity to food reward and the increase of sensitivity to drug reward in the dependence stage. However, the consumption of foods increases during withdrawal, which is at the risk of obesity. In animal studies, sweets have been found to be more rewarding than addictive drugs. Therefore, the purpose of this study was to explore the relationship between drug craving and food reward, appetite and body composition in female with methamphetamine dependence, and to explore the effect of sweets on drug craving. 33 female subjects who met the DSM-5 methamphetamine (MA) dependence criteria were selected from 150 subjects through the questionnaire. The appetite hormones including leptin, ghrelin and endogenous cannabinoid were measured in the hungry state, their appetite state and drug craving were measured by visual analogue scale (VAS), and the food reward values were measured by Leeds Food Preference Questionnaire, the data related to drug dependence were measured by questionnaire, the body composition indexes were measured by body composition instrument, and the indexes other than appetite hormone and body composition were measured again in the state of satiety, so as to explore the relationship between drug dependence related information and food reward, appetite and body composition. Based on the results of the study, we further explored the changes and relationship between food reward and drug craving through sweet food of chocolate intervention. Correlation analysis showed that self-reported drug craving was positively correlated with the age of first drug exposure, frequency of drug exposure and dosage used each time; At the same time, drug craving was positively correlated with BMI, body fat rate and basic metabolism. Chocolate intervention found that after eating chocolate, MA craving decreased, satiety increased, and food reward values for high-fat sweet food decreased. At the same time, the implicit wanting for high-fat sweets after eating chocolate was positively correlated with MA craving before and after eating chocolate. Therefore, this study found the positive relationship between drug craving and body composition of methamphetamine dependent people, indicating that MA withdrawal people are at risk of obesity because of drug dependence; At the same time, we found a positive correlation between drug craving and sweet food craving. On the one hand, sweet food craving can be used as an indicator to reflect the degree of drug craving, on the other hand, it can also be used as a basis for sweet food intervention for MA addicts, which may be an innovative therapeutic intervention for MA drug dependence.

Keywords: Food reward, drug craving, methamphetamine dependence, sweet food, fNIRS

疫情中老年人生命意义感和健康防疫行为的机制研究 ——疫情风险感知的中介作用和健康权威他人控制点的调节作用

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摘要 自2019年末至今, 一场全球性的公共卫生安全突发事件——新型冠状病毒肺炎(COVID-19)因它的传染性和严重性给人们的生活带来了巨大的改变, 人们的健康相关行为也在发生潜在的变化。佩戴口罩、保持社交距离、注意清洁及消毒和注射疫苗等预防性的健康行为被强调是降低COVID-19传染性的最重要策略之一。老年人描述为特别易受冠状病毒感染的同质群体, 因此对老年人在疫情期间的健康防疫行为进行探究至关重要。老年人更高水平的生命意义感与更好的健康、更少参与健康风险行为和更多参与健康促进行为有关。许多认知因素有助于在疾病爆发期间采取健康保护行为, 其中感知风险已经成为此类行为的预测指标。

高龄者倾向于对权威他人如医生有更强的信任，年龄越高则健康控制点为权威他人的得分越高。本研究旨在探讨老年人在疫情中的生命意义感对疫情爆发后健康行为的影响，并探讨疫情风险感知的中介作用和健康权威他人控制点的调节作用。本研究招募了 273 位 55 岁以上老年人，以疫情中的生命意义感问卷、疫情风险感知问卷、多维度健康心理控制点问卷和疫情前后健康行为问卷为研究工具，前后间隔一个月重复施测以上问卷。使用 SPSS 中的 PROCESS macro 进行分析发现：当控制了 T1 疫情前健康行为习惯、性别、年龄和受教育程度后，T2 的疫情风险感知对 T1 的生命意义感和 T2 的健康防疫行为有显著的中介作用。T1 的健康权威他人控制对中介效应的后半段有显著的调节作用，简单斜率分析发现，相较低健康权威他人控制的个体而言，高健康权威他人控制的老年个体具有较大的疫情风险感知-疫情爆发后健康行为的斜率。本研究揭示了在突发性公共卫生事件下老年群体的生命意义感与健康行为的关系及其内在机制，拓展了健康信念模型，对于在重大突发性公共卫生事件下如何更好地预防和干预老年群体的健康行为具有一定的实践指导意义。

关键词 COVID-19, 生命意义感, 疫情风险感知, 健康心理控制点, 健康防疫行为

The Mechanism of Meaning in Life and Prevention Health Behaviors during COVID-19 Pandemic among Older Adults: The Mediating Role of Risk Perception and the Moderating Role of Powerful Others Health Locus of Control

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Abstract: Since late 2019, COVID-19, a global public health security emergency, has been dramatically changing people's lives and potentially changing health-related behaviors due to its infectivity and severity. Preventive health behaviours such as wearing masks, social distancing, cleaning and disinfection, and vaccination were highlighted as one of the most important strategies to reduce the infectivity of COVID-19. The older adults have been described as a homogenous group particularly vulnerable to coronavirus infection, so it is important to explore their health prevention behavior during the outbreak. Higher levels of meaning in life in older adults are associated with better health, less participation in health-risk behaviours and more participation in health-promoting behaviours. Many cognitive factors contribute to health protective behaviour during disease outbreaks, where perceived risk has become a predictor of such behaviour. Older people tend to have stronger trust in powerful others, such as doctors, and the older the age, the higher the score of health locus controlled by powerful others. The purpose of this study was to explore the impact of the older adults' meaning in life during the outbreak on post-outbreak health behavior, and to explore the mediating role of the epidemic risk perception and the moderating role of the control points of others in health authority. In this study, 273 older adults over 55 years old were recruited. The questionnaire on meaning in life in the epidemic, epidemic risk perception, multidimensional health locus of control questionnaire and health behavior questionnaire before and after the epidemic were used as research tools. The above questionnaires were repeated one month after the epidemic. PROCESS Macro in SPSS was used to analyze the data and it was found that the epidemic risk perception in T2 had a significant mediating effect on meaning in life at T1 and health prevention behavior at T2 after controlling for health behavior habits before the outbreak, gender, age and education level. Health locus of control by powerful others had a significant moderating effect on the second half of the mediating effect. Simple slope analysis showed that the older adults with high health locus of control by powerful others had a larger slope of the epidemic risk perception and post-outbreak health behavior than the individuals with low health locus of control by powerful others. This study revealed the relationship between the meaning in life and health behavior of the older adults and its internal mechanism under the emergency public health events, and expanded the health belief model, which has a certain practical guiding significance for how to better prevent and intervene the health behavior of the older adults under the emergency public health events.

Keywords: COVID-19, meaning in life, epidemic risk perception, multidimensional health locus of control, healthy epidemic prevention behavior

后疫情时代酒店员工的情绪劳动对旅客歧视知觉及再住意愿的影响

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摘要 虽然国内新冠疫情得到良好的控制,但是多地疫情的散点爆发持续地影响到酒店行业的复苏,来自疫区的旅客难免在服务场所遭受到歧视,最常见的是酒店将来自疫区和非疫区的旅客差别对待,这有可能会增加疫区旅客的歧视知觉,还会降低其对酒店的再住意愿。另一方面,已有研究发现服务人员的情绪劳动策略会对旅客的情绪和态度产生影响,具体来说,深层表演策略会带给旅客积极情绪,浅层表演策略则会给旅客带来消极情绪,但这两种情绪劳动策略究竟会对旅客的歧视知觉及再住意愿产生何种影响却有待探究。据此,本文的两个研究分别采用问卷调查和行为实验,来探究酒店员工的情绪劳动策略对旅客歧视知觉及再住意愿的影响,两个研究均为组间实验设计。研究1以疫情中高风险区的205名经常旅行的个体为样本,采用文字剧本先后呈现歧视刺激与不同情绪劳动干预,并通过问卷调查歧视知觉和再住意愿,结果发现深层表演情绪劳动策略会降低歧视知觉并提高再住意愿,浅层表演情绪劳动策略则会提高歧视知觉并降低再住意愿。研究2进一步采用现场实验来探究不同情绪劳动策略对48名来自中高风险疫区旅客歧视知觉的干预效果。呈现歧视刺激的同时,采用心理旋转的反应时作为判断歧视知觉唤醒的指标。接着,酒店前台员工分别采用两种情绪劳动策略干预成功诱发歧视知觉后的旅客,并测量不同情绪劳动策略对旅客的歧视知觉与再住意愿的影响,结果同样验证了研究1的结论。最后,本研究为酒店行业培训与促进员工进行深层情绪劳动服务提出了若干切实可行的建议,以提升疫情风险区旅客的再住意愿并降低其歧视知觉。

关键词 情绪劳动, 歧视知觉, 浅层表演, 深层表演, 再住意愿, 后疫情时代

The Impact of Emotional Labor of Hotel Employees on Perceived Discrimination and Revisit Intention of Guests in the Post COVID-19 Era

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Abstract: Although COVID-19 in China has been controlled well, many new COVID-19 cases emerge in different areas which continually delays the hospitality industry recovery. On one hand, it is common to see that hotels treat tourists from affected and non-affected areas differently, which may increase the perception of discrimination among tourists in affected areas and reduce their revisit intention of the hotel. On the other hand, it has been found that the emotional labor strategy has an impact on the emotion and attitudes of tourists. Specifically, deep acting of the frontline employee will lead to the positive emotion of tourists and vice versa, surface acting will lead to negative emotion. However, it has not been revealed how emotional labor strategy influences tourists' perceived discrimination and revisit intention. We tested it using survey data and behavioral experiments in two studies which both are between-subjects designs. In study1, survey data were collected from 205 frequent travelers in high or middle-risk areas using an online survey platform. Next, we used text scripts to stimulate perceived discrimination and employed two emotional labor strategy interventions. And the respondents assessed their perceived discrimination and revisit intention through questionnaires. Results show that the deep acting of frontline employees will reduce perceived discrimination and boost the revisit intention of tourists. And the surface acting of frontline employees will boost the perceived discrimination and reduce the revisit intention of tourists. In study 2, 48 participants were from high-risk or middle-risk areas and took part in a field experiment to explore the two emotional labor strategy intervention effects on perceived discrimination of tourists. First, a two-step mental rotation task combining mental rotation trials and perceived discrimination sentences was conducted. And reaction time is used as an indicator to judge the awakening

of perceived discrimination. Next, frontline employees used two emotional labor strategies to intervene with participants who were successfully awakened by the perception of discrimination and measured their perceived discrimination and revisit intention. Moreover, the result of study 2 is the same as that of study 1. Finally, the study puts forward some practical implications for training and promoting deep acting strategy to enhance revisit intention and reduce perceived discrimination of tourists from high-risk or middle-risk areas.

Keywords: emotion labor, perceived discrimination, surface acting, deep acting, revisit intention, the post-COVID-19 era

新冠疫情心理援助团体督导中的重要议题与督导焦点

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摘要 目的: 探究新冠疫情下心理援助团体督导的重要议题和督导焦点。方法: 对教育部华中师范大学心理援助热线平台的 21 名咨询师进行访谈, 搜集重要督导片段, 分析重要督导片段的议题和督导焦点。结果: ①新冠疫情心理援助团体督导的议题主要分为 3 类, 分别为应对疑难个案(危机个案、疑病个案、性骚扰个案等)、处理咨询师个人议题和讨论心理援助基本设置; ②督导中最关注的督导焦点是历程化技能; ③不同议题下督导焦点不同, 应对疑难个案的督导更关注历程化技能和概念化技能, 处理咨询师个人议题的督导更关注个人化技能, 而讨论心理援助设置的督导对三个督导焦点的关注较平均。结论: 团体督导对于咨询师开展心理援助具有重要价值, 需要在后续心理援助中继续得到重视。

关键词 心理援助, 团体督导, 重要议题, 督导焦点

Important Issues and Focus of the Group Supervision in COVID-19 Psychological Assistance

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Abstract: This study explores the issues and focus of group supervision in COVID-19 psychological assistance. Interviews were conducted with 21 counselors from the psychological assistance hotline platform of Central China Normal University, Ministry of Education, to collect important supervisory episodes and analyze the issues and focus of the important supervisory episodes. The results showed that the topics for the supervision of COVID-19 psychological assistance groups were divided into three categories: dealing with difficult cases (crisis cases, hypochondria cases, sexual harassment cases, etc.), dealing with personal issues of counselors, and discussing basic psychological assistance Settings. The focus of supervision is procedural skills. The supervisors dealing with difficult cases paid more attention to the process skills and conceptualization skills, the supervisors dealing with the personal issues of consultants paid more attention to the personal skills, while the supervisors discussing the setting of psychological assistance paid more attention to the three focus on the average. The conclusion is that group supervision is of great value to counselors in carrying out psychological assistance and should be paid more attention to in the follow-up psychological assistance.

Keywords: psychological assistance, group supervision, issues, focus

太极拳对执行功能的积极作用解释了流体智力的改善: 来自横向研究和纵向干预的证据

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摘要 执行功能和流体智力是两个重要的额叶功能, 容易受衰老影响。太极拳作为一种身心锻炼被认为可以预防认知老化。然而, 太极拳是否对老年人执行功能的基本组成部分(抑制、刷新和转换)也有类似的积极作

用并不确定。此外,目前尚不清楚太极对基本执行功能成分的改善是否能够解释高阶流体智力的改善。研究 1 包括基于大样本健康老年人的横断面设计。模型结果表明,在控制年龄和受教育程度后,太极拳练习体验对流体智力、更新和抑制有显著的正向影响。此外,太极拳对流体智力的抑制和更新均有中介作用。研究 2 对一组新手和一组有经验的人进行了为期 12 个月的太极干预。结果表明,只有新手组在抑制和流体智力方面表现出显著的改善。然而,在控制抑制改善后,流体智力的改善不再显著。这些结果揭示了身心锻炼预防老年人流动智力下降的潜在路径。

关键词 流动智力, 执行功能, 身心训练

Executive function benefits of Tai Chi explain improvements in fluid intelligence: Cross-sectional evaluation and longitudinal intervention

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Abstract: Executive function and fluid intelligence are two of the crucial frontal lobe functions susceptible to aging. Tai Chi as a mind-body exercise has been proposed for preventing cognitive aging. However, whether Tai Chi has similarly beneficial effects on basic components of executive function (inhibition, updating and shifting) in older adults remains underspecified. Moreover, it is not currently known whether Tai Chi-induced improvements in basic executive function components are able to explain improvements in higher-order fluid intelligence. Study 1 included a cross-sectional design based on a large sample of healthy older adults. Modeling results showed that experience of Tai Chi exercises exerted significantly positive effects on fluid intelligence, updating and inhibition after controlling for age and education. Furthermore, both inhibition and updating mediated effects of Tai Chi on fluid intelligence. Study 2 carried out a 12-month Tai Chi intervention on a novice group and an experienced group. Results indicated that only the novice group exhibited significant improvements in inhibition and fluid intelligence. However, improvements in fluid intelligence were no longer significant after controlling for improvements in inhibition. These results shed lights into the underlying path of mind-body exercises in preventing declines of older adults' fluid intelligence.

Keywords: fluid intelligence, executive function, mind-body training

社会拒绝敏感性对急性应激反应的预测

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摘要 对环境中的急性应激源做出适应性反应对个体的健康甚至生存至关重要。适当的急性应激反应可以帮助个体快速调动生理心理资源应对应激源, 恢复内稳态。而过度的急性应激反应会影响个体的认知绩效, 甚至造成病理性后果如创伤后应激障碍、焦虑症和心血管疾病等。本研究结合主观的问卷和客观的事件相关电位(event-related potentials, ERP)技术, 通过测量个体的社会拒绝敏感性特质和非应激状态下的拒绝情绪加工作为预测指标; 采用经典的特里尔社会应激测试(Trier Social Stress Test, TSST)作为实验室应激源, 诱发主观情绪反应、交感神经-肾上腺髓质系统反应(比如心率反应)和下丘脑-脑垂体-肾上腺皮质轴反应(皮质醇反应)作为被预测指标, 来考察社会拒绝敏感性对急性应激反应的预测作用。本研究首先采用社会拒绝敏感性问卷评估社会拒绝敏感性特质, 结果显示: 主观报告社会拒绝敏感性水平越高的个体, 在 TSST 情景下的主观控制感越小、状态焦虑和负性情绪反应程度越大。并进一步在非应激状态下通过 ERP 技术记录社会拒绝词语诱发的认知神经效应, 结果显示, 在非应激状态下社会拒绝词语与中性词语 P3 差异波波幅越大, 急性应激下的心率反应程度和皮质醇反应程度越大。研究结果表明, 社会拒绝敏感性越高的个体, 其急性应激反应越大。社会拒绝敏感性可能是应激相关心理障碍早期识别的指标和干预的靶点。

关键词 急性应激, 社会拒绝, 事件相关电位技术

Social Rejection Sensitivity Predicts Acute Stress Responses

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Abstract: The adaptive response to acute stressors in the environment is critical to individuals' health and even survival. Appropriate responses to acute stressors can help individuals quickly mobilize physiological and psychological resources to cope with stressors and recover homeostasis. The present study measured individuals' indices of trait social rejection sensitivity and rejection emotion processing in a non-stressful state with a combination of self-reported questionnaire and electrophysiological (event-related potentials, ERP) approach as predictors; subjective affect, sympathetic adrenal medulla (heart rate) and hypothalamus pituitary-adrenal (cortisol) responses to the standardized laboratory acute stressor (Trier Social Stress Test, TSST) as outcome, to investigate the predictive effects of social rejection sensitivity, on reactivity to the acute stressor. This study used the social rejection sensitivity questionnaire to assess trait social rejection sensitivity. The results showed that individuals with higher level of social rejection sensitivity showed lower subjective controllability, less increase of state anxiety and negative affect induced by TSST. Furthermore, neurocognitive effect induced by rejecting emotional stimulus (rejecting words) was recorded with ERP approach. The results showed that individuals with larger amplitude of P3 towards rejecting words relative to neutral words performed higher heart rate and cortisol reactivity induced by the acute stressor. It suggested that individuals with higher sensitivity to social rejection show higher reactivity to acute stress. Social rejection sensitivity could possibly be used as an indicator of early identification of stress-related mental disorders and a target for their intervention.

Keywords: acute stress, social rejection, event-related potentials technique

Effect of Fixed Mindset: How does Motivational Climate at Work Influence Employee's Knowledge Hiding?

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Abstract: Previous research suggests that a fixed mindset is positively related to knowledge hiding. However, we argue that this relationship depends on the motivational climate, which reverses the effect of a fixed mindset. Specifically, we explore two motivational climates, namely performance and mastery climate, moderate the relationship between fixed mindset and knowledge hiding, such that under the condition of high-performance climate and high-mastery climate, fixed mindset would have contrary effects on knowledge hiding. Drawing on the social learning theory, we explore the opposite signs of the relationship between fixed mindset and knowledge hiding by examining the boundary condition of two-dimensional motivational climate. We conducted a field study of 461 R&D personnel from 8 enterprises and research institutes in China to test our hypothesized model. The results showed that performance climate negatively moderated the relationship between a fixed mindset and knowledge hiding, and mastery climate positively moderated a fixed mindset and knowledge hiding. Furthermore, we include creativity as an essential outcome of knowledge hiding and explore the distal consequence of the moderation effect of a fixed mindset. The results also demonstrated that performance climate negatively moderated the indirect influence of a fixed mindset on creativity via knowledge hiding, and mastery climate positively moderated the indirect effect of fixed mindset on creativity through knowledge hiding. Such results highlight that the perception of the motivational climate affects the direct relationship between a fixed mindset and knowledge hiding and the indirect relationship between a fixed mindset and creativity. Theoretical and practical implications are also discussed.

Keywords: fixed mindset, knowledge hiding, performance climate, mastery climate, creativity

4.分组口头报告

4.1 教育心理专业委员会

(1) “教育心理专业委员会”口头报告分场 1

教学视频中教师注视和手势对学习效果的影響：来自眼动的证据

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摘要 为了进一步提高教学视频中教师对学生学习的增强和促进作用, 越来越多的研究者开始关注影响视频学习效果的因素 (Mayer, 2020)。研究者开始关注教师的哪些社会线索 (眼神注视, 手势, 面部表情) 可以提高学生的学习成绩和知识掌握。本研究以眼动追踪技术为支持, 并结合学习者的主观体验 (准社会交往, 感知难度, 心理努力, 认知负荷等) 以探究视频学习中不同类型手势和引导注视对学习成绩和学习体验的影响。实验采用 2 (引导注视, 无引导注视) × 3 (具体引导手势, 一般引导手势, 无手势) 被试间实验设计, 共招募 138 名大学生被试。结果表明, 在保持测验和迁移测验上, 手势的主效应显著, 具体手势 (即手指向具体的知识点) 的测验成绩要好于一般手势 (即手指向整个学习材料) 和无手势。眼神注视的主效应不显著, 眼神注视与手势交互作用不显著。眼动的结果也表明, 具体手势组的学生对关键材料区域的注意要多于一般手势和无手势, 一般手势和无手势没有差异, 引导注视和无注视没有差异。而在主观体验上本研究各组差异均不显著。该研究与 Li 等人 (2019) 研究一致, 即具体引导手势才可以促进学生的学习成绩, 支持了多媒体学习的社会代理理论。未来研究应探讨更多类型的手势对学习的作用, 以验证上述结果的发现。同时, 教师在使用社会线索时应尽可能地突出关键知识的内容 (如使用具体引导手势), 这样才能提升学生的学习成绩。

关键词 视频学习, 注视, 手势, 准社会交往, 多媒体学习

Effect of teacher gaze and gesture on learning effect in teaching videos: evidence from eye movement

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Abstract: In order to further improve the role of teachers in teaching video in the enhancement and promotion of students' learning, more and more researchers began to pay attention to the factors that affect the effectiveness of video learning (Mayer, 2020). Researchers began to explore which social cues (eye gaze, gesture, facial expression) teachers can use to improve students' academic performance and knowledge. This study is supported by eye tracking technology and combines the subjective experiences of learners (parasocial interaction, perceived difficulty, mental effort, cognitive load, etc.) to explore the effects of different types of gestures and guide gaze on learning achievement and learning experience in video learning. Experiments using 2 (guide gaze, no guide gaze) × 3 (specific guide gesture, general guide gesture, no gesture) by the between-subject experimental design, a total of 138 college students were recruited. The results showed that the main effect of gestures was significant in the retention test and transfer test, and the test results of specific gestures (i.e., finger to specific knowledge points) were better than that of general gestures (i.e., fingers to the entire learning material) and no gestures. The main effect of eye gaze is not significant, and the interaction between eye gaze and gesture is not significant. Eye movement results also showed

that students in specific gesture groups paid more attention to key material areas than general gestures and no gestures, there was no difference between general gestures and no gestures, and no difference between guided and no gaze. On the subjective experience, the differences between the groups in this study were not significant. The study is consistent with li et al. (2019) research, that is, specific guide gestures can promote students' academic performance, supporting social agent theory in multimedia learning. Future studies should explore the role of more types of gestures in learning to validate the findings of these results. At the same time, teachers should use social cues to highlight as much as possible the content of key knowledge (such as the use of specific guidance gestures) in order to improve students' academic performance.

Keywords: video learning, gaze, gesture, parasocial interaction, multimedia learning

不同学习策略对小学生学习动机的影响: AR 多媒体学习与传统文本学习是一致的吗?

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摘 要 近年来对于小学生学习情况的研究重点聚焦在非智力因素上, 如对学习动机、学习策略、教学环境等的研究, 这些非智力因素确实都对学习效果产生了影响, 并彼此之间具有相互影响。小学阶段是培养学生形成积极学习动机的重要阶段, 激发学生的学习动机是教学的重要任务之一。另外, AR 多媒体技术应用到学习科学领域, 形成了新颖、有效的 AR 多媒体学习方式。本研究探索了不同学习材料与学习策略对学习动机的影响, 探讨了重复学习、提取练习和自我生成绘图三种学习策略在 AR 多媒体与传统文本两种不同学习材料的呈现下对学习动机起到的作用。实验选取河北省 60 名小学生, 采用 2(学习材料: AR 材料、文本材料)×3(学习策略: 重复学习、提取练习、自我生成绘图)的被试间设计。学习动机为因变量, 采用小学生学习动机问卷进行测量, 该问卷包括表层动机、深层动机及成就动机 3 个维度。研究结果发现: (1) 在表层动机上, 年龄主效应显著, 9 岁学生比 8 岁学生具有更高的表层动机; (2) 不同学习策略对深层动机的影响差异显著, 其中使用提取练习策略的学生深层动机最高, 重复学习策略次之, 自我生成绘图策略最低; (3) 对于成就动机来说, 不同性别之间差异显著, 女生成就目标显著高于男生; 学习材料与学习策略的交互作用显著, 以 AR 材料进行学习时, 重复学习策略组的学生成就动机最高, 提取练习策略最低; 以文本材料进行学习时, 提取练习策略组成就动机最高, 重复学习策略最低, 自我生成绘图策略居中。可以看出, 随年龄增长应付检查或考试等表层学习动机有增强的趋势, 提取练习策略引发学生思考回忆促使学生保有较高的深层学习动机, AR 多媒体材料和文本材料学习分别与不同的学习策略相结合会对学生的成就动机产生不同的影响。

关键词 AR 多媒体学习, 文本学习, 学习策略, 学习动机

The Influence of Different Learning Strategies on Primary School Students' Learning Motivation: Is AR Multimedia Learning Consistent with Traditional Text Learning?

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Abstract: In recent years, the research on primary school students' learning focuses on non-intellectual factors, such as learning motivation, learning strategies, teaching environment, etc. These non-intellectual factors do have an impact on learning, and interact with each other. Primary school stage is a key period to cultivate students' positive learning motivation, and stimulating students' learning motivation is one of the important tasks of teaching. In addition, the application of AR multimedia technology to the field of learning science has formed a novel and effective AR multimedia learning mode. This study explored the effects of different learning materials and learning strategies on learning motivation, to assess the roles of restudying strategy, retrieval practicing strategy and self-generated drawing strategy on learning motivation under the presentation of two different learning materials, AR

multimedia and traditional text. In this experiment, 60 students in Hebei Province were selected, and a 2(learning material: AR material, text material)×3(learning strategy: restudying strategy, retrieval practicing strategy, self-generated drawing strategy)between-subjects design was adopted. The elementary school students' learning motivation questionnaire is used to measure the dependent variable, learning motivation, and it includes three dimensions: surface motivation, deep motivation and achievement motivation. The results showed that: (1) the main effect of age on surface motivation was significant, and the 9-year-old students had higher surface motivation than the 8-year-old students; (2) There were significant differences in the effects of different learning strategies on deep motivation, among which the retrieval practicing strategy has aroused the highest deep motivation, the restudying strategy was the second, and the self-generated drawing strategy was the lowest. (3) In terms of achievement motivation, there are significant differences between genders, and girls' achievement goals are significantly higher than boys'; The interaction between learning materials and learning strategies was significant. When learning with AR materials, the achievement motivation of students in the restudying strategy group was the highest, and the retrieval practicing strategy was the lowest. When learning with text materials, the retrieval practicing strategy has inspired the highest achievement motivation, the restudying strategy was the lowest, and the self-generated drawing strategy was in the middle. It can be seen that, along with the age growth, students' surface motivation to deal with inspection or examination has a tendency to increase; the retrieval practicing strategy causes students to think and recall, and promotes students to maintain higher deep motivation for learning; in addition, learning by AR multimedia material and text material combined with different learning strategies will have different effects on students' achievement motivation.

Keywords: AR multimedia learning, text learning, learning strategy, learning motivation

触屏对幼儿词语学习的影响：交互性的作用

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摘要 随着近年来网络技术的不断发展，触屏媒体已经成为家庭必不可少的通讯和娱乐设备(Rideout & Robb, 2020)。触屏媒体是一种新兴的交互式技术媒体，使用者通过手指操作屏幕内容达到控制的目的。然而，在新冠病毒肆虐的背景下，线下教育遭遇前所未有的挑战，这在一定程度上推动了触屏媒体作为教育设备的应用，并已经逐步渗透到幼儿的日常生活和学习中，成为幼儿非常重要的学习工具。为了探究触屏媒体是否真的能够帮助幼儿学习，本研究采用单因素三水平被试间设计，以“布布识字”App为学习材料，将76名5-6岁幼儿($M = 68.21$ 月, $SD = 3.57$)随机分配到触屏教学组、面对面教学组和视频观看组三个条件下学习“马、象”等8个汉字，以此来考察触屏媒体对幼儿学习的有效性。在触屏组中，使用“布布识字”App教幼儿认识汉字，观看组使用触屏组的录屏版学习相同内容，而面对面组则采用将触屏组app的关键场景截取制成字卡由教学者现场对幼儿进行教学。结果发现，触屏交互教学组幼儿的回忆效率和再认效率显著好于视频观看组，面对面教学组幼儿的回忆效率和再认效率显著好于触屏交互教学组和视频观看教学组。对幼儿在汉字学习过程中的跟读行为分析发现，面对面教学组的总跟读次数显著多于触屏教学组和视频教学组；即面对面组幼儿的教学互动水平最高。结论认为，触屏媒体的交互性有助于幼儿学习汉字，且触屏交互教学的效果好于视频观看教学；但相较于具备社会性交互的面对面教学而言，触屏媒体所具备技术性交互在对幼儿学习效果与总体教学互动上仍有差距。

关键词 触屏，交互性，幼儿，学习

Touchscreen and children's word learning: The role of interaction

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Abstract: With the continuous development of network technology in recent years, touch screen media has become an indispensable communication and entertainment device for families (Rideout & Robb, 2020). Touchscreen is an

emerging interactive technology media, users could control the screen through their fingers. However, under the outbreak of the COVID-2019, traditional offline education has encountered unprecedented challenges, which promotes touchscreen as educational devices. Touchscreen has gradually penetrated into children's daily life and learning. In order to explore whether touchscreen could really help children to learn, this study adopted a between-subject design. Using "BuBu Literacy" App as the learning material, 76 children aged 5-6 ($M = 68.21$ months, $SD = 3.57$) were randomly assigned to touchscreen interactive teaching group, face-to-face teaching group and video teaching group to learn eight Chinese characters, so as to investigate the effectiveness of touch screen media on children's learning and whether it still has advantages over video teaching and face to face teaching. For the touchscreen interaction group, children used an App "BuBu Literacy", while the video watching group used the recorded version of the touchscreen group. What's more, for the face-to-face teaching group, children were taught by using the same word cards which were captured from the screen. Results showed that children's recall efficiency and recognition efficiency in the touchscreen interactive teaching group were better than those in the video watching group, Children's recall efficiency and recognition efficiency in the face-to-face teaching group were better than those in the touchscreen teaching group and the video watching group. As for the total number of repeat reading, results showed that the total number of repeat reading in the face-to-face teaching group was significantly more than the touchscreen interactive group and the video watching group. The face-to-face group had the highest level of teaching interaction. Our conclusion was that touchscreen media was helpful for children to learn Chinese characters. The effect of touchscreen interactive teaching is better than that of video viewing teaching. However, compared with face-to-face teaching with social interaction, there is still a gap between the technical interaction of touchscreen on children's learning.

Key words: touchscreen; interactivity; children; learning

触屏媒体中交互类型对幼儿字词学习的影响

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摘要 触屏媒体(如: iPad)作为一种新兴的媒体形式具有巨大的教育潜力, 幼儿可以使用简单的动作直观地对屏幕内容进行操作, 这种直接交互性是触屏媒体区别于传统媒体的最突出的特征。在以往的研究中已经证明交互性对幼儿学习的促进作用, 但是对交互的类型关注较少。本研究主要探讨触屏交互性的不同类型(点击、拖拽)对幼儿词汇学习的影响, 实验采用单因素三水平(拖拽交互、点击交互、观看无交互)被试间设计, 采用自主设计的 app 教授 10 个具有连续意义的英文单词, 被试为 74 名 5-6 岁的幼儿 ($M = 68.27$ 月, $SD = 4.21$)。实验流程分为先前知识测验、干预阶段、学习结果测验(包括自由回忆任务、线索回忆任务、再认任务)三个阶段, 整个实验过程大约持续 15 分钟。结果发现, 在自由回忆成绩上, 拖拽组幼儿的表现要好于点击组和观看组, 点击组和观看组没有显著差异; 在线索回忆成绩上, 拖拽组幼儿的表现要好于观看无交互组, 拖拽组和点击组没有显著差异; 在再认任务上, 拖拽组和点击组的成绩都好于观看无交互组的成绩, 拖拽组和点击组在再认任务的成绩不存在显著差异, 但是都要高于随机概率水平; 在任务总得分(回忆+再认)上, 拖拽组的成绩要好于点击组和观看组。研究证明在幼儿学习具有连续意义的单词时, 与触屏媒体的交互(点击、拖拽)都可以帮助儿童单词知识的习得, 但拖拽交互的学习效果更优于点击交互。

关键词 触屏媒体, 交互类型, 幼儿, 词汇学习

Touch screen media on children's word learning:

The role of interactivity

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Abstract: Touch-screen media, as a new media form, has great educational potential. Children can use simple actions

to intuitively operate the content of the screen, this kind of direct interaction is the most prominent characteristic that distinguishes touchscreen media from traditional media. Previous studies have proved the promoting effect of interactivity on children's learning, but less attention has been paid to the type of interactivity. The experiment mainly investigated different interaction types such as click and drag would have an impact on children's vocabulary learning. Using one-factor, between-subject three-level design, with an app that teach children word knowledge for learning materials, seventy-four 5 to 6 years old children ($M = 68.27$ months, $SD = 4.21$) were randomly assigned to drag interaction group, click interaction group, watch no interaction group, children were expected to learn ten words that have a continuous meaning. The experiment lasted about 15 minutes and was divided into three stages: the prior knowledge phase, the intervention phase, the learning outcome test (including free recall task, cue recall task, recognition task). The results showed that children in the drag group performed better than those in the click group and the watch group on free recall task, there was no significant difference between the click group and the watch group. In cue recall task, children in the drag group performed better than those in the non-interaction group, there was no significant difference between the drag group and the click group. In recognition task, the scores of drag and click group were better than those of non-interaction group. There was no significant difference in the scores of drag and click group in recognition task, but both of them were higher than random probability level. The drag group scored better than the click group and the watch group on the total score of the task (recall + recognition). The study proves that when learning words with continuous meaning, interaction with touchscreen media (click and drag) can help children acquire word knowledge, but using drag interaction that matches words is more conducive to the acquisition of word knowledge for children.

Keywords: touch screen media, interaction type, young children, vocabulary learning

在线学习目标对大学生学习投入的影响： 教师人际行为和学习动机的作用

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摘要 由于在线教育的快速发展和广泛应用, 参加网络在线学习课程的学生人数大幅增长, 如何确保学生在线学习的质量引起了越来越多人的关注。基于在线学习环境, 本研究通过 HTML 设计的在线学习网页来模拟真实的学习环境, 采用问卷法和实验法的方式在自我决定理论的框架下探讨在线学习目标和教师人际行为对学习投入的影响, 以及学习动机在其中的作用。研究发现: (1) 课程目标指导语能够启动学生对内部目标和外部目标的重要性, 但并未发现内部目标条件下的大学生比外部目标条件下有更高的在线学习的内部动机、学习投入和学业成绩; (2) 课程评价指导语能够启动学生对教师人际行为的感知, 教师支持条件下大学生的在线学习内部动机比教师阻碍条件下更高; (3) 内部动机在大学生在线学习内部目标对学习投入的正向预测作用中起完全中介作用; (4) 内部动机在大学生在线学习内部目标对迁移成绩的负向预测作用中起完全中介作用; (5) 教师阻碍在内部目标到学习投入的直接路径中起调节作用。教师阻碍程度越强, 内部目标对学习投入的预测作用随之增强。上述发现为认识在线学习过程中教学目标内容和教师行为因素对学习投入的影响, 并在此基础上优化在线教学设计、提升在线学习质量提供了新的思路和证据。

关键词 在线学习, 目标内容, 人际行为, 学习动机, 学习投入

The Effects of Online Learning Goals on Learning Engagement of College Students:

The Role of Interpersonal Behaviors and Learning Motivation

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Abstract: Due to the rapid development and wide application of online education, the number of students participating in online learning courses has increased significantly, and how to ensure the quality of students' online learning has attracted more and more people's attention. Based on the online learning environment, this study simulated the real learning environment by using the HTML designed online learning web page, and explored the influence of online learning goals and teachers' interpersonal behavior on learning engagement under the framework of self-determination theory, as well as the role of learning motivation. The results showed that: (1) the course objective instruction can initiate the importance of internal and external goals, but it did not show that the internal motivation, learning engagement and academic performance of the students under the condition of internal goal were higher than those under the condition of external goal. (2) Curriculum evaluation guidelines can activate students' perception of teachers' interpersonal behavior, and the internal motivation of online learning of college students under teacher support condition was higher than that under teacher obstruction condition; (3) Internal motivation played a fully mediating role in predicting the positive effect of online learning internal goals on learning engagement; (4) Internal motivation played a fully mediating role in predicting the negative effect of college students' online learning internal goals on their migration performance; (5) Teacher obstruction played a moderating role in the direct path from internal goals to learning engagement. The stronger the degree of teacher obstruction, the stronger the predictive effect of internal goals on learning engagement. These findings provided new ideas and evidence for understanding the influence of teaching objectives and teachers' behavioral factors on learning engagement in online learning, and on this basis, to optimize online teaching design and improve the quality of online learning.

Keywords: Online Learning, Goal contents, Interpersonal Behaviors, Learning motivation, Learning Engagement

多媒体学习中情绪代理的促进作用：学习者个体特征的影响

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摘要 本研究的目的是探讨在线多媒体课程中教学代理的情绪(快乐或中性)是否会影响学习过程和学习结果, 以及情绪代理的影响是否取决于学习者的情绪调节策略和他们的先验知识。在3个实验中, 大学生被要求观看与突触传递相关的教学动画, 其中包括积极代理(微笑表情和热情的声音)或中性代理(中性表情和平静的声音), 然后进行情绪、动机、学习结果的测试。在三个实验中, 积极代理组比中性代理组报告了更多的积极情绪($d = 0.70, 0.46 \& 0.60$)和更高的动机水平($d = 0.76, 0.49 \& 0.51$)。然而, 在屏幕上添加一个积极代理并没有提高学习表现, 一个可能的原因可能是即时测验不够灵敏, 无法检测出学习表现的提高。此外, 在实验2中, 学习者的情绪调节策略调节了情绪代理对学习者的积极情绪的促进作用。具体来说, 积极代理增加了使用表达抑制策略的学生的积极情绪($d = 0.99$), 但没有增加使用认知重评策略的学生的积极情绪($d = 0.13$)。在实验3中, 情绪代理的效果不受学习者先验知识的影响, 即具有高先验知识的学习者报告了更多的积极情绪($d = 0.56$)、更高的动机水平($d = 0.66$), 并且在保持($d = 2.3$)和迁移($d = 1.29$)的学习结果测试中优于低先验知识的学习者。研究结果支持多媒体学习的认知情感理论(CATLM), 即学生从积极代理中学习会有更多的快乐和动机, 比之于中性代理。

关键词 情绪代理, 多媒体学习, 情绪, 动机, 学习

Benefits of affective pedagogical agent in multimedia instruction: the effects of individual characteristics of learners

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Abstract: The goal of the present study is to explore whether the affective state (happy or neutral) of a pedagogical agent (PA) in an online multimedia lesson yields different learning processes and outcomes, and whether the effects of affective PAs depend on the learner's emotion regulation strategy and their prior knowledge. In 3 experiments, college students were asked to view a narrated animation about synaptic transmission that included either a happy PA (smiling expression and enthusiastic voice) or a neutral PA (neutral expression and calm voice) and subsequently took emotions, motivation, cognitive outcomes tests. Across three experiments, the happy PA group reported more positive emotions ($d = 0.70, 0.46$ and 0.60) and higher levels of motivation ($d = 0.76, 0.49$ and 0.51) than the neutral PA group. However, adding a happy PA to the screen did not improve performance, one possible reason might be that an immediate test was not sensitive enough to detect the improvement in performance. In addition, in Experiment 2, learners' emotion regulation strategy moderated the effectiveness of affective PA on positive emotions in learners. Specifically, happy PA increased the positive emotions of students who used expressive suppression strategy ($d = 0.99$) but not those who used cognitive reappraisal strategy ($d = 0.13$). In Experiment 3, the effectiveness of affective PA was not moderated by learner's prior knowledge. And learners with high prior knowledge reported more positive emotions ($d = 0.56$), higher levels of motivation ($d = 0.66$) and performed better on learning outcome tests of retention ($d = 2.3$) and transfer ($d = 1.29$) than those with low prior knowledge. Results support the cognitive affective theory of learning with media (CATLM) that students are happier and more motivated when they learn from happy PA than from neutral PA.

Keywords: emotional pedagogical agent, multimedia learning, emotions, motivation, learning

(2) “教育心理专业委员会”口头报告分场 2

父母卷入的协同发展轨迹对小学生学业成绩、行为和情绪问题的影响

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摘要 父母卷入对儿童学业、行为和认知的发展发挥着极其重要的作用。父母卷入是一个多维的概念, 父母卷入在儿童成长过程中不是单一、静态的结构, 而是由多种父母卷入方式共同形成的动态结构。因此, 不同的父母卷入方式的发展轨迹可能存在异质性。另外, 有研究表明父母卷入是儿童学业、行为和情感问题的保护因素, 不同父母卷入方式对儿童的学业、行为和情感问题的影响可能存在差异。基于此, 本研究探讨小学生七种父母卷入方式(信息技巧、时间精力、父母信念、父母效能感、学校邀请、教师邀请和孩子邀请)的协同发展轨迹, 以及父母卷入轨迹对小学生学业成绩、行为问题(网络欺负行为和违纪行为)和情绪问题(焦虑和抑郁)的影响。本研究对广东省 13 所小学的 3553 名 3 年级和 4 年级的小学生($M_{age}=9.90, SD=0.72$; 男生 53.9%)进行了为期两年 4 波段的纵向追踪研究, 使用平行过程潜在类别增长曲线模型(PP-LCGM)对数据进行分析。结果显示, (1)小学生父母卷入协同发展轨迹共有 4 种亚组: 分别为中等偏低稳定组(16.83%)、低稳定组(9.97%)、中等偏高增长组(43.89%)和高增长组(29.32%); (2)多元 logistic 回归分析发现, 相比于其他三个组, 高增长组的学生学业、行为和情绪问题最少, 具体表现为更好的学业成绩、更少的网络欺负行为和违纪行为, 更低的焦虑和抑郁水平。中等偏高增长组的学生其学业、行为和情绪的表现仅次于高

增长组的学生。相比与其他两个组，中等偏低稳定组的学生和低稳定组的学生们的学业成绩更差，表现出更多的违纪行为和更高的焦虑和抑郁水平，但是网络欺负行为与中等偏高增长组学生的表现没有显著差异。本研究结果揭示了小学生父母卷入的发展轨迹及其亚组群体，同时考察了父母卷入的不同亚组对学生学业成绩、行为问题和情绪问题的影响，为预防儿童出现学业、行为和情绪问题提供依据和有效的指导。

关键词 父母卷入轨迹，学业成绩，行为问题，情绪问题，小学生

Co-Development Trajectories of Parental Involvement as Predictors of Academic Achievement, Behavioral and Emotional Problems in Elementary School Children

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Abstract: Parental involvement plays an extremely important role in children's academic, behavioral and cognitive development. Parental involvement has been proved to be a multidimensional concept. And different parental involvement are not single and static in the process of children's growth, but multiple patterns of parental involvement jointly participate to form a dynamic structure. Therefore, there may be heterogeneity in developmental trajectories of different parental involvement patterns. In addition, studies have shown that parental involvement is an important protective factor for children's academic, behavioral and emotional problems, and different patterns of parental involvement may have different effects on children's academic, behavioral and emotional problems. This study explored the co-development trajectories of seven parental involvement patterns (skills and knowledge, time and energy, parent beliefs, parental efficacy, school invitations, child invitations and teacher invitations) in elementary school children, and the impact of these trajectories on elementary school children's academic achievement, behavioral problems (delinquent behavior and cyberbullying behavior) and emotional problems (anxiety and depression). A total of 3553 schoolchildren ($M_{age}=9.90$, $SD=0.72$; Male = 53.9%) were surveyed from 13 elementary schools in Guangdong province tracking over 2 years to get 4-wave data. The data were analyzed by parallel process latent class growth model (PP-LCGM). The results showed that there were 4 co-development trajectories of parental involvement: Incongruent-Moderately low (16.83%), Incongruent-Low (9.97%), Incongruent-Moderately high (43.89%) and Congruent-High (29.32%). Multiple logistic regression analysis found that, compared with the other three classes, schoolchildren in Congruent-High class had the fewest academic, behavioral and emotional problems, which were specifically manifested by better academic achievement, less delinquent behaviors and cyberbullying behaviors, and lower levels of anxiety and depression. The academic, behavioral and emotional performance of schoolchildren in Incongruent-Moderately high class was second only to Congruent-High class. Schoolchildren in Incongruent-Moderately low and Incongruent-Low showed more academic, behavioral and emotional problems. Specifically, compared with the other two classes, their academic achievement was worse and showed more delinquent behaviors and higher levels of anxiety and depression, but there is no significant difference in cyberbullying behavior from Incongruent-Moderately high class. The results of this study revealed co-development parental involvement trajectories of elementary schoolchildren, and examined the influence of these trajectories on elementary school children's academic achievement, behavioral problems, so as to provide evidence and effective guidance for the prevention of children's academic, behavioral and emotional problems.

Keywords: Parental involvement trajectory, Academic achievement, Behavioral problems, Emotional problems, Elementary school children

情绪智力与生涯适应力：心理韧性和特质正念的作用

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摘要 生涯适应力作为一种社会心理资源，是个体为适应职场环境变化而改变自身的能力，受个体特征的影响。生涯建构理论认为，生涯适应力不仅是个体应对职场工作任务和自身角色转变的重要心理资源，还是个体取得职业成功的核心因素。情绪智力同生涯适应力一样，是个体成功适应职场的关键社会心理资源。尽管以往研究发现情绪智力能正向预测个体的生涯适应力，但情绪智力与生涯适应力之间的中介机制和调节机制却仍未明确。因此，本研究构建了一个有调节的中介模型，既考察心理韧性在情绪智力与生涯适应力关系间的中介作用，也考察该过程是否受特质正念的调节。采用问卷调查法，以 730 名大学生（男 171 人，女 559 人，平均年龄为 19.77±1.52 岁）为研究对象，探讨情绪智力影响大学生生涯适应力的作用机制。结果发现：

（1）各变量之间不存在共同方法偏差，且情绪智力、心理韧性、特质正念与生涯适应力两两呈正相关；（2）控制性别和年龄后，情绪智力能正向预测大学生的生涯适应力，且心理韧性在情绪智力和生涯适应力的关系之间起部分中介作用；（3）上述中介过程受特质正念的调节。在特质正念的高、低水平下，情绪智力对心理韧性的正向预测作用均显著。在高特质正念的大学生中，情绪智力对心理韧性的预测作用更强。研究结果表明，我们既可以通过提高情绪智力提高大学生的心理韧性，进而改善其生涯适应力，也可以通过提高大学生的特质正念水平来增强其情绪智力对自身心理韧性的积极影响。研究结果揭示了情绪智力影响生涯适应力的内在机制，为提高大学生生涯适应力提供实证依据。

关键词 大学生，情绪智力，心理韧性，特质正念，生涯适应力

Emotional Intelligence and Career Adaptability: The Role of Resilience and Trait Mindfulness

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Abstract: Career adaptation refers to the social psychological resources that individuals change themselves to adapt to the workplace environment, which is influenced by individual characteristics. In the light of Career Construction Theory, career adaptability is not only an important psychological resource for an individual to cope with the job tasks and change his role, but also a core factor for an individual to achieve career success. Emotional intelligence, like career adaptability, is the key social psychological resource for an individual to successfully adapt to the workplace. Although previous studies have found that emotional intelligence can positively predict an individual's career adaptability, the mediating and regulating mechanisms between emotional intelligence and career adaptability are still unclear. Therefore, this study constructs a moderating mediating model to examine the mediating role of resilience in the relationship between emotional intelligence and career adaptability, as well as whether the process is regulated by trait mindfulness. A total of 730 college students (171 males and 559 females, with an average age of 19.77%) were investigated by questionnaire (± 52 years old) as the research object, to explore the effect mechanism of emotional intelligence on College Students' career adaptability. The results show that: (1) there is no common method bias among the variables, and emotional intelligence, resilience, trait mindfulness are positively correlated with career adaptability; (2) After controlling gender and age, emotional intelligence positively predicted college students' career adaptability; resilience partially mediated the relationship between emotional intelligence and career adaptability; (3) The mediating effect of resilience was moderated by trait mindfulness. Compared with the college students who with low mindfulness, the resilience of the college students that with high trait mindfulness has a closer relationship with their career adaptability. The results show that we can not only improve the psychological resilience of college students by improving their emotional intelligence, and then improve their career adaptability, but also enhance the positive impact of their emotional intelligence on their psychological resilience by improving their trait mindfulness. These results are beneficial to reveal the mechanisms of college students' career adaptability, and have and provide

empirical evidence for developing programs to improve college students' career adaptability.

Keywords: college student, emotional intelligence, resilience, trait mindfulness, career adaptability

学生问题行为必然会加剧教师倦怠吗? ERI 调节学生感恩对教师倦怠的保护作用

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摘要 教师是一个充满压力的工作, 国内外的研究发现教师倦怠的发生率很高。教师倦怠是影响教师和学生身心发展的重要因素, 因此研究教师倦怠的成因和机制具有重要的现实意义。本研究基于缓冲效应模型 (buffer effect model) 和付出-回报失衡模型 (the effort-reward imbalance model, 简称 ERI), 构建了一个有调节的中介模型, 考察了学生问题行为对教师倦怠的影响, 以及学生感恩的中介作用和 ERI 的调节作用。以 441 名教师为被试, 采用问卷法对其职业倦怠、付出-回报失衡、观察到的学生问题行为和学生感恩进行调查。结果发现: (1) 在控制了性别、年龄和所教阶段后, 学生问题行为正向预测教师倦怠及其各维度 (情绪耗竭、去个性化和低个人成就感)。(2) 学生感恩在学生问题行为和教师倦怠之间起部分中介作用, 尤其是在教师倦怠的情绪耗竭和去个性化维度。(3) ERI 在学生感恩与教师倦怠 (去个性化维度) 的关系中起到调节作用, 具体表现为: 当教师的付出-回报失衡严重时 ($ERI \geq 2$), 学生感恩对教师倦怠的影响不显著。而当教师付出-回报失衡不严重时 ($ERI < 2$), 学生感恩对教师倦怠的保护作用更大。只有教师的 ERI 较低时, 学生感恩才能显著降低教师的倦怠水平。这一结果有利于从理论上进一步阐明教师倦怠的影响机制, 对改善教师职业倦怠以及促进其健康发展具有启示意义。

关键词 教师倦怠, 付出-回报失衡, 学生感恩, 学生问题行为, 有调节的中介

Does student problem behavior necessarily aggravate teacher burnout? ERI moderates the protective effect of student gratitude on teacher burnout

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Abstract: Teacher is a stressful job. Studies at home and abroad show that teachers have a high incidence of suffering job burnout. Teacher burnout is an important factor affecting the physical and mental development of teachers and students, so it is of great practical significance to study the causes and mechanisms of teacher burnout. Based on the buffer effect model and effort-reward imbalance (ERI) model, the present study was to test the impact of student problem behavior on teacher burnout, the mediating effect of student gratitude, and the moderating effect of ERI using a moderated mediation analysis. A sample of 441 teachers completed measures of teacher burnout, student problem behavior, student gratitude, and ERI. Results showed that (1) After controlling for gender, age and type of school, student problem behavior positively predicted teacher burnout. (2) student gratitude significantly partially mediated the association between student problem behavior and job burnout, especially their emotional exhaustion and depersonalization. (3) ERI moderated the mediated effect of student gratitude. Specifically, for teachers with low ERI ($ERI < 2$), student gratitude can significantly reduce their teacher burnout/depersonalization; on the contrary, for teachers with high ERI ($ERI \geq 2$), student gratitude has no significant protective effect on teacher burnout/depersonalization. In particular, for teachers with low ERI ($ERI < 2$), the protecting effect of student gratitude on job burnout is enhanced. The findings contribute to the further clarification of the influence mechanism

of teacher burnout in theory and provide directions for improving teacher burnout and promoting the healthy development of teachers.

Keywords: teacher burnout, ERI, student gratitude, student problem behavior, moderated mediation

同伴交互情境中随迁儿童与城市儿童的人际态度： 群际接触的干预效应

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摘 要 随迁儿童作为城市化进程中涌现出的特殊群体, 在城市融入的过程中需面对许多困难和挑战, 其中同伴关系对于随迁儿童来说尤为重要, 是帮助他们更好地融入城市的重要突破点。但目前随迁儿童与城市儿童同伴关系的现状却不乐观, 以往研究大多将随迁儿童与城市儿童同伴关系较差的原因归结于随迁儿童对城市儿童的歧视知觉水平较高以及消极的元刻板印象。然而, 人际关系是一个双向交互的过程, 互动双方的人际态度都会对二者的关系产生影响。基于此, 本研究基于群际情绪-刻板印象-行为趋向系统模型, 从随迁儿童和城市儿童的交互视角出发, 通过两项研究探讨随迁儿童与城市儿童对彼此的人际态度(认知、情感和行为)特性, 寻找影响二者关系不佳的态度原因, 并探索改善两群体对彼此态度的有效方法。研究获得如下主要结果: (1)对于城市儿童来说, 他们对内外群体在认知和情感层面均无差异, 但在行为上表现出了对内群体同伴更高的交往意愿; 对于随迁儿童来说, 他们在认知评价、情感反应和行为倾向上均表现出了内群体偏好, 对内群体同伴胜任力和热情度评分更高, 情绪更积极, 并且更愿意和与其具有相同身份的随迁儿童互动。(2)直接接触方法干预有效, 可提升城市儿童和随迁儿童对彼此的人际态度。就随迁儿童而言, 与城市儿童直接接触可提升对城市儿童的积极认知评价、情感反应以及行为倾向, 起到改善人际态度的目的; 对于城市儿童来说, 与随迁儿童直接接触可提升其对随迁儿童的人际态度。该研究提示, 学校可从随迁儿童和城市儿童双视角制定有利于人际态度改善的活动和管理措施, 为随迁儿童和城市儿童创造可积极互动的活动和校园氛围, 以帮助随迁儿童更好地融入城市。

关键词 随迁儿童, 城市儿童, 人际态度, 群际接触。

The Interpersonal Attitudes of Migrant Children and Urban Children in the Context of Peer Interaction: Intervention Effect of Intergroup Contact

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Abstract: As a special group emerging in the process of urbanization, migrant children face much difficulties and challenges in the process of urban integration. Among them, companionship is particularly important for migrant children, and it is important points to help them better integrate into the city. However, the current status of the companion relationship between migrant children and urban children is not optimistic. Previous studies have often attributed the poorer companionship between migrant children and urban children to their higher level of discrimination against urban children and negative meta-stereotypes. However, interpersonal relationships are a two-way interactive process. The interpersonal attitude of both parties will have an impact on the relationship between them. Based on this, this research uses the Behaviors from Intergroup Affect and Stereotypes Map as the theoretical basis, starting from the interactive perspective of the migrant children and urban children, and through two studies exploring the characteristics of the interpersonal attitudes (cognition, emotion and behavior) of the migrant children and urban children towards each other, looking for the reasons for the poor relationship between them, and exploring effective ways to improve the attitudes of the two groups towards each other, in order to promote their

friendly interactions, help migrant children to better integrate into the city life. The main results of the research were as follows: (1) For urban children, they had no difference in cognition and affection between the inner and outer groups, but they showed a higher willingness to communicate with their peers in the inner group in behavior; for migrant children, they showed in-group preferences in cognitive evaluation, emotional response and behavioral tendencies. They had higher scores of competence and enthusiasm for in-group peers, were more emotional, and were more willing to interact with migrant children with the same identity. (2) As a method of direct inter-group contact, the intervention effect of the fast friends procedure was effective, and it could improve the interpersonal attitude of urban children and migrant children towards each other. As far as migrant children were concerned, direct contact with urban children could improve their positive cognitive evaluation, emotional response, and behavioral tendencies to improve interpersonal attitudes; for urban children, direct contact with migrant children could improve their interpersonal attitude towards migrant children, and in the sub-dimension of interpersonal attitude, in addition to disgusting emotions, intervention effects existed. According to the research conclusions obtained in this study, it is suggested that schools should formulate activities and management measures that are conducive to the improvement of interpersonal attitudes from the dual perspectives of migrant children and urban children, and create positive interaction activities and campus atmosphere for migrant children and urban children to improve the interpersonal attitude and relationship between them, so as to help the migrant children to better integrate into the city.

Keywords: migrant children, urban children, interpersonal attitude, intergroup contact

教师消极情绪表达对学习者的反馈寻求动机的影响 ——教师印象评价的中介作用

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摘要 以培养学生的核心素养为导向，在教师的合理指导下激发学生的主动性，让学生成为知识的主动寻求者而非被动接收者，是当前学校教育的重心。研究者认为，学习者的反馈寻求行为是学习主动性的具体表现，指个体在学习活动中不断寻求评价的过程，有助于调整错误行为，巩固正确行为，提升学习效果。研究发现，教师在互动过程中表达出的情绪，会对学习者反馈寻求行为产生重要影响，但该结论在不同文化中存在差异，且这一结果可能与互动过程中学生对教师的印象评价有关。例如，与美国学生相比，俄罗斯学生在接受到教师消极情绪表达的反馈后，会更倾向于向该教师寻求反馈。为探究中国文化背景下教师情绪表达对学习者的反馈寻求动机的影响，并探究教师印象评价（热情、能力）在这一关系中的作用，本研究设立了两个实验对该问题进行探究。实验1考察了教师情绪效价对学生反馈寻求动机的影响，结果发现，接受教师消极情绪表达的被试，反馈寻求动机显著低于积极组和控制组。实验2进一步考察教师印象评价（热情、能力）两维度在教师情绪影响学生反馈寻求中的作用，结果发现，教师印象评价（热情、能力）在消极情绪表达影响反馈寻求中起完全中介作用。本研究结果表明，当教师在互动过程中向学生表现出消极情绪时，学生对该教师的印象评价降低，进而减少向该教师寻求反馈的动机。研究揭示了教师情绪表达影响学习者反馈寻求的模式，为理解师生交互的作用机制提供了新的研究思路。

关键词 情绪表达，反馈寻求动机，热情，能力，情绪效价

The Influence of Teachers' Negative Expression of Emotions on Learners' Feedback-seeking Motivation ——The Mediating Role of Teachers' Impression Evaluation

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Abstract: Oriented by cultivating students' core competencies, stimulating students' initiative under the reasonable guidance of teachers, and making students become active seekers of knowledge rather than passive receivers,

becoming the focus of current school education. Researchers believe that the feedback-seeking behavior of learners is a concrete manifestation of learning initiative, which refers to the process of individuals seeking evaluation in learning activities. Feedback seeking behavior helps to adjust wrong behaviors, consolidate correct behaviors, and enhance learning performance. Current studies have found that the emotions expressed by teachers during the interaction process have an important impact on learners' feedback seeking behavior, but the conclusion vary in different cultures, and this result may be related to students' impression evaluation of teachers during the interaction process. For example, compared with American students, Russian students are more inclined to seek feedback from the teacher after receiving feedback with the teacher's negative emotions. In order to explore the influence of teachers' emotional expression on learners' feedback seeking motivation in the context of Chinese culture, and to explore the role of teachers' impression evaluation (warmth and competence) in this relationship, this study set up two experiments to explore this issue. In experiment 1, we investigated the influence of teachers' emotional valence on students' feedback seeking motivation. The results showed that the feedback seeking motivation of the participants receiving negative emotional expression was significantly lower than that of the positive group and the control group. In experiment 2, the influence of teacher's impression evaluation (warmth and competence) on students' feedback seeking was further investigated. The results showed that teacher's impression evaluation (warmth and competence) played a fully mediating role in the influence of negative emotional expression on feedback seeking. The results of this study show that when teachers show negative emotions to students in the process of interaction, student' impression evaluation of the teacher is worse, thereby reducing the motivation to seek feedback from the teacher. The research reveals the mode that teachers' emotional expression affects learners' feedback seeking motivation and provides new research ideas for understanding the mechanism of teacher-student interaction.

Keywords: emotional expression, feedback seeking motivation, warmth, competence, emotional valence

职业认同对教师职业幸福感的影响： 工作投入与社会支持的链式中介作用

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摘 要 随着时代与科技的迅猛发展与教师职业的特点，教师的职业幸福感面临着巨大的挑战，大量研究证实，职业认同是维持教师职业幸福感的保护性因素，但这种关系背后的内部机制却众说纷纭，主要集中在个体主观能动性 with 客观现实条件两方面，因此，探索教师职业幸福感的潜在机制，设计有效的改善方案是十分必要的。本研究引入工作投入和社会支持两个变量来研究教师职业认同与职业幸福感的关系以及之间可能存在的内在关系，相关研究表明，工作投入与社会支持对教师职业幸福感有促进作用，因此，本研究旨在探讨工作投入和社会支持是否对职业认同与职业幸福感的关系起中介作用。本研究采用魏淑华等人(2013)编制的教师职业认同量表、Schaufell 和 Bakker(2004)编制的简版工作投入量表(UWES-9)、肖水源等人(1994)编制的社会支持评定量表(SSRS)、赵斌等人（2012）编制的教师职业幸福感量表对来自江西、浙江、四川、上海、青海、湖北、湖南、辽宁、福建等省份的 6772 名教师（包括中学、小学及幼儿园）进行问卷测量。剔除无效数据后，共收集到 6114 份有效数据。研究采用 SPSS24.0 结合 Hayes 最新编制的 SPSS 宏(PROCESS)和 Mplus8.3 统计软件对数据进行统计分析和模型检验。各量表的信度良好，本研究不存在严重的共同方法偏差。研究结果发现：（1）职业认同与工作投入（ $r=0.52, p<0.001$ ）、社会支持（ $r=0.31, p<0.001$ ）、职业幸福感（ $r=0.55, p<0.001$ ）均呈显著正相关，职业幸福感与工作投入（ $r=0.75, p<0.001$ ）、社会支持（ $r=0.50, p<0.001$ ）呈显著正相关，工作投入与社会支持（ $r=0.44, p<0.001$ ）呈显著正相关；（2）职业认同对教师职业幸福感有正向预测作用（ $\beta=0.682, p<0.001$ ）。（3）工作投入是职业认同与职业幸福感的中介变量（ $0.347<\text{BootCI}<0.460$ ），工作投入的中介效应值为 $0.408(p<0.001)$ ；社会支持是职业认同与职业幸福感的中介变量（ $0.008<\text{BootCI}<0.016$ ），社会支持中介效应值为 $0.013(p<0.001)$ 。（4）职业认同还能通过工作投入和社会支持的链式中介作用对教师的职业幸福感产生影响（ $0.005<\text{BootCI}<0.009$ ），其中介效应值为 $0.007(p<0.001)$ 。研究结果进一步解释了教师职业认同对职业幸福感的内部机制，为通过提教师工作投入和提高社会支持干预教师职业幸福感提供了实证研究的

依据。

关键词 中小学教师, 职业认同, 职业投入, 社会支持, 职业幸福感

The Effects of Professional Identity on Teachers' Occupational well-being: The chain mediating effect of Work Engagement and Social Support

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Abstract: With the rapid development of the times and technology, and the characteristics of teachers' profession, teachers' occupational well-being is facing great challenges. A large number of studies have confirmed that professional identity is a protective factor to maintain teachers' occupational well-being, but there are different opinions on the internal mechanism behind this relationship, which mainly focuses on individual subjective initiative and objective realistic conditions. It is very necessary to explore the potential mechanism of teachers' occupational well-being and design effective improvement schemes. This study introduces two variables, work engagement and social support, to study the relationship between teachers' professional identity and occupational well-being and the possible internal relationship between them. Relevant studies show that work engagement and social support can promote teachers' occupational well-being, the purpose of this study is to explore whether work engagement and social support play a mediating role in the relationship between professional identity and occupational well-being. In this study, 6772 teachers (including primary schools, middle schools and kindergartens) from Jiangxi, Zhejiang, Sichuan, Shanghai, Qinghai, Hubei, Hunan, Liaoning, Fujian, China were assessed with the teacher's professional identity scale compiled by Wei Shuhua et al. (2013), the simplified work engagement scale (UWES-9) compiled by Schaufeli and Bakker (2004), the social support rating scale (SSRS) compiled by Xiao Shuiyuan et al. (1994) and the teacher's occupational well-being scale compiled by Zhao Bin et al. (2012). After excluding the invalid data, a total of 6114 valid data were collected to investigate the effect of teachers' professional identity on occupational well-being, as well as the intermediary role of work engagement and social support. SPSS 24.0 and Mplus 8.3 statistical software were used for data analysis and model validation. There was no serious common method biases and all questionnaires have adequate reliability and validity. The results show that: (1) teachers' professional identity was significantly positively correlated with work engagement ($r=0.52, p<0.001$), social support ($r=0.31, p<0.001$) and occupational well-being ($r=0.55, p<0.001$); teachers' work engagement was positively correlated with social support ($r=0.75, p<0.001$) and occupational well-being ($r=0.50, p<0.001$); social support was significantly positively correlated with occupational well-being ($r=0.44, p<0.001$). (2) professional identity can significantly positively predict teachers' occupational well-being ($\beta=0.682, p<0.001$). (3) work engagement mediated the relationship between professional identity and occupational well-being ($0.347 < \text{bootci} < 0.460$), the mediating effect of work engagement was $0.408 (p<0.001)$; social support mediated the relationship between professional identity and occupational well-being ($0.008 < \text{bootci} < 0.016$), the mediating effect of social support was $0.013 (p<0.001)$. (4) professional identity can also have an impact on teachers' occupational well-being through the chain intermediary of work engagement and social support ($0.005 < \text{bootci} < 0.009$), the mediating effect was $0.007 (p<0.001)$. The results further explain the internal mechanism of the influence of teachers' professional identity on occupational well-being, and provided a reference of empirical research for intervention of teachers' occupational well-being by improving teachers' work engagement and social support.

Keywords: Primary and Secondary School Teachers, Professional Identity, Work Engagement, Social Support, Occupational well-being

关键词 创造力, 问题解决, 合作推理讨论, 中学生, 教学干预

(3) “教育心理专业委员会”口头报告分场 3

测试策略元认知错觉产生的机制

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摘要 背景：学习策略与元认知错觉均为国内外心理学研究的重点领域。关于元认知错觉，已有研究大多关注知觉信息对元认知错觉的影响，而较少探讨学习策略与元认知错觉之间的关系。测试策略作为教学活动中常用的学习策略，已有上百年的研究历史。以往研究表明测试策略是一种有效的学习策略，但是学习者却往往认为测试（相对于重学）并不能带来更好的学习效果。该现象出现的可能原因是学习者产生了测试策略元认知错觉。目的：本研究通过三个实验探讨（1）学习者是否存在测试策略元认知错觉；（2）测试策略元认知错觉产生的机制。方法：实验一招募 40 名被试，采用被试内设计，以逐项学习判断为因变量，探讨学习者是否存在测试策略元认知错觉；实验二采用观察者范式考察信念在测试策略元认知错觉产生中的作用；实验三探讨流畅性在测试策略元认知错觉产生中的作用。实验二招募被试 120 名，实验三招募被试 48 名。结果：实验一发现测试策略的逐项学习判断成绩显著低于重学策略，而回忆成绩显著高于重学策略，表明被试存在测试策略元认知错觉。实验二发现，在测试策略条件下，学习者的预计回忆个数显著多于重学策略条件下，表明学习者拥有正确的信念，即测试优于重学。实验三发现，被试报告的测试策略困难程度显著高于重学策略，但是，在测试策略条件下，被试的回忆成绩显著好于重学策略条件下，表明学习过程中的不流畅可能是学习者测试策略元认知错觉产生的原因。结论：学习者存在测试策略元认知错觉；测试策略应用过程中的不流畅性可能是测试策略元认知错觉产生的机制。

关键词 测试策略，元认知错觉，信念，流畅性

The Mechanism of Testing Strategy's Metacognitive Illusion

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Abstract: *Rationale:* Learning strategies and metacognitive illusions are the focus of psychological research at home and abroad. As for metacognitive illusion, most of the existing studies focus on the effect of perceptual information on metacognitive illusion, but seldom discuss the relationship between learning strategies and metacognitive illusion. As a common learning strategy in teaching activities, testing strategy has been studied for more than one hundred years. Previous studies have shown that testing strategy is an effective learning strategy. But learners often believe that testing (compared to restudy) has not a better effect. The possible reason for this result is that learners have the metacognitive illusion of testing strategy. *Objective:* Three experiments were conducted to investigate (1) whether learners had metacognitive illusions of testing strategy; (2) to test the mechanism of testing strategy metacognitive illusion. *Methods:* Forty participants were recruited in experiment 1. And the within-subject design was used to investigate whether learners had metacognitive illusions of testing strategies. In experiment 2, the observer paradigm was used to investigate the role of belief in the mechanism of strategic metacognitive illusion. Experiment 3 explored the effect of fluency on the metacognitive illusion of test strategy. 120 subjects were recruited for experiment 2 and 48 subjects were recruited for experiment 3. *Results:* Experiment 1 found that the performance of the test strategy was significantly lower than that of the relearning strategy, while the performance of recall was significantly higher than that of the relearning strategy, indicating that participants had metacognitive illusion of the test strategy. Experiment 2 found that under the condition of testing strategy, learners' expected recall number was significantly higher than that under the relearning strategy, indicating that learners had the right belief, that is, testing was better than relearning. Experiment 3 found that the difficulty of the testing strategy was significantly higher than that of the relearning strategy. However, the recall performance of the participants under the testing strategy condition was significantly better than that under the relearning strategy condition, suggesting that the fluency in the learning

process may be the cause of the metacognitive illusion of the learners during the testing strategy. *Conclusion:* Learners have the testing strategy metacognitive illusion; The fluency in the application of testing strategies may be the mechanism of the metacognitive illusion of testing strategies.

Keywords: Testing Strategy, Metacognitive Illusion, Belief, Fluency

不同视知觉特征的抑制控制对儿童和成人非符号数量加工的影响

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摘要 点阵数量比较任务常被用来考察个体的非符号数量加工能力,点阵的视知觉特征会影响被试对非符号数量的加工。以往研究在非符号数量比较任务中发现了数量和视知觉特征之间的一致性效应,这种一致性效应的出现是由于被试需要抑制与数量信息无关的视知觉特征。但有研究未能观察到一致性效应,这让人们对抑制控制在非符号数量加工能力中的关键作用产生了质疑。我们以70名小学1至2年级儿童(7~9岁)和60名成人(19~25岁)为研究对象,采用负启动范式,探讨儿童和成人在进行点阵数量判断时是否受到点阵的视知觉特征,包括点阵的凸包、累积表面积的影响。结果发现,不论儿童还是成人在控制了点阵凸包或累积表面积的非符号数量比较任务中都出现了负启动效应:即与中性条件的点阵数量比较任务相比,不一致条件的点阵数量比较任务的反应时更长、正确率更低。并且,相对于成人,儿童产生的负启动效应更大。这些结果表明,在儿童和成人的点阵数量判断任务中都需要抑制与数量不相关的凸包和累积表面积等点阵的视知觉信息。并且儿童比成人更容易受到点阵的视知觉特征的影响,这可能是因为儿童的抑制控制能力尚未发展完全。本研究首次采用负启动范式揭示点阵凸包和累积表面积等视知觉特征对点阵数量比较的影响,为抑制控制在非符号数量加工中的作用提供依据,并揭示了抑制控制能力的年龄发展特征,表明非符号数量认知发展在一定程度上依赖于抑制控制能力的提高。

关键词 非符号数量加工, 抑制控制, 负启动范式, 点阵数量比较

Effects of inhibitory control of different visual properties on non-symbolic numerosity processing in children and adults

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Abstract: The non-symbolic numerosity comparison task is often used to investigate individuals' ability to process non-symbolic numbers. The visual properties of dot arrays will affect the processing of non-symbolic numbers. Previous studies have found congruency effect between numerosity and visual properties in non-symbolic numerosity comparison task. This congruency effect occurs because participants need to inhibit visual properties unrelated to numerosity information. However, some studies failed to observe the congruency effect, which cast doubt on the key role of inhibitory control in the processing ability of non-symbolic numbers. Seventy primary school children in grades 1 to 2 (ages 7 to 9) and 60 adults (ages 19 to 25) participated in the current study. The negative priming paradigm was used to investigate whether children and adults were affected by the visual properties of dot arrays, including the convex hull and total surface area of dot arrays. The results showed that both children and adults had negative priming effect when the convex hull and total surface area were controlled in the non-symbolic numerosity comparison task, that is, the reaction time and accuracy of the non-symbolic numerosity task under the incongruent condition were longer and lower than that under neutral condition. In addition, the negative priming effect was greater in children than in adults. These results suggested that both children and adults need to inhibit numbers-independent visual properties (such as convex hull and total surface area) in non-symbolic numerosity

comparison task. Moreover, children are more likely to be affected by the visual properties of dot arrays than adults, which may be because children's inhibitory control ability has not been fully developed. In this study, the negative priming paradigm was used for the first time to reveal the effects of visual properties such as convex hull and total surface area on non-symbolic numerosity comparison task. This study provides evidence for the role of inhibitory control in non-symbolic numerosity processing, and reveals the age-related developmental characteristics of inhibitory control ability, which indicates that the cognitive development of non-symbolic numerosity depends on the improvement of inhibitory control ability to some extent.

Keywords: Non-symbolic numerosity process, Inhibition control, Negative priming paradigm, Non-symbolic numerosity comparison

生成性绘图与合作对高中生科学知识学习的影响

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摘要 学习者生成性绘图是在学习一些较为复杂的科学知识时, 学习者将学习内容以图画的形式表达出来, 以提高对学习内容的理解从而提升学习效果的一种学习策略, 能够促进学习者对科学文本知识的表征和深层理解。合作学习是为了达成共同的学习目标而进行的互助式学习活动, 小组成员间的互动可以帮助个体理解和重组信息, 有利于学习的同时也能使同伴关系更加积极。目前关于学习者生成性绘图的研究主要集中在个体学习领域, 本研究将合作学习与学习者生成性绘图相结合, 探讨生成性绘图和合作对高中生科学知识学习的影响。实验1以52名高一年级学生为被试, 采用单因素(绘图组、阅读组)被试间设计来验证生成性绘图对学习效果以及认知负荷等主观体验的影响。结果表明, 绘图组学习者的保持和迁移测验成绩均显著高于阅读组, 且绘图组学习者的内在认知负荷更低。实验2以113名高一年级学生为被试, 采用2(绘图、阅读)×2(合作、个体)被试间设计来探讨生成性绘图与合作对学习效果和学习者主观体验的影响。结果发现, 在保持和迁移测验上, 绘图的主效应均显著, 绘图组学习者的保持和迁移测验成绩均显著高于阅读组; 合作的主效应均显著, 合作组学习者的保持和迁移测验成绩均显著高于个体组; 绘图和合作的交互作用均不显著。表明生成性绘图和合作都可以有效促进高中生科学知识的学习效果。此外, 在主观体验上, 绘图和合作都能够显著降低学习者的内在认知负荷, 合作还能显著降低学习者的外在认知负荷并提高学习者的相关认知负荷和学习兴趣。未来的研究可以拓宽研究对象的范围和研究材料的类型。例如, 探讨生成性绘图和合作两种学习策略对不同年级学习者和不同科目学习内容的作用, 深入挖掘两种学习策略的优势。

关键词 生成性绘图, 合作学习, 科学知识, 高中生

The Effects of Learner-Generated Drawing and Cooperative Learning on Scientific Knowledge Learning of High School Students

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Abstract: Learner-generated drawing is a learning strategy for learners to express the learning content in the form of pictures in order to improve their understanding of the learning content and improve their learning effect when they are learning some complex scientific knowledge. It can promote learners' representation and deep understanding of scientific text knowledge. Cooperative learning is a mutual learning activity for the purpose of achieving common learning goals, the interaction between group members can help individuals understand and reorganize information, which is conducive to learning and can also make the partner relationship more positive. Most of the research about learner-generated drawing focused on individual learning settings, this study combines cooperative learning with learner-generated drawing to explore the impact of generative drawing and cooperation on high school students' scientific knowledge learning. In Experiment 1, 52 senior high school students were selected as subjects, and a single factor (drawing group vs. reading group) between-subjects design was employed to investigate whether

learner-generated drawing can facilitate learning and the influence on subjective experience such as cognitive load and interest. The results showed that learners in the drawing group had significantly higher retention and transfer test scores than those in the reading group, and learners in the drawing group reported lower internal cognitive load. In Experiment 2, 113 senior high school students were selected as subjects, and a 2 (drawing vs. reading) $\times$ 2 (individual learning vs. collaborative learning) between-subjects design was employed to investigate the effects of generative drawing and cooperation on scientific knowledge learning of high school students. The results showed that the main effects of drawing were significant on retention and transfer tests, and the scores of the drawing group were significantly higher than those of the reading group. The main effect of cooperation was significant. The retention and transfer test scores of cooperative learners were significantly higher than those of individual learners. The interaction between drawing and cooperation was not significant. The results show that both learner-generated drawing and cooperation can effectively promote the learning effect of high school students. In addition, in terms of subjective experience, both drawing and cooperation can significantly reduce learners' internal cognitive load, while cooperation can also reduce learners' external cognitive load and improve learners' relevant cognitive load and learning interest. Future research could broaden the range of subjects and the types of materials studied. For example, future research can explore the effects of generative mapping and cooperative learning strategies on learning content of learners at different grades and different subjects, and dig into the advantages of the two learning strategies.

Keywords: learner-generated drawing, cooperative learning, scientific knowledge, high school students

小学生基于分数测量子概念的数字线表征研究

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摘要 分数数字线表征不仅是儿童分数数量理解的衡量依据, 更深层反映了儿童分数“测量”子概念的形成过程。研究以分数测量概念为背景, 主要探讨数字线类型及年级对分数数字线表征的影响。实验选取了 287 名 4-6 年级儿童在 0-1、0-2 和 0-1/3 三种数字线上对常见分数 (含等值分数) 进行位置标注。结果表明: (1) 年级是影响不同类型数字线上分数表征精确性的重要因素, 4 年级学生分数数字线表征精确性不稳定, 5 年级是表征精确性的变化发展阶段, 6 年级学生分数表征精确性的差异减少, 趋于完善水平。(2) 分子分母大小是等值分数识别的外部干扰因素, 共同单位建构是内部认知要素。(3) 单位是影响分数数字线表征的核心要素, 其次是数字线的范围, “分率分数概念”导致了不适宜数字线范围的存在。

关键词 小学生, 分数, 数字线, 测量子概念

Research on The Number Line Representation of Pupils Based on The Measure Sub-construct of Fraction

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Abstract: The representation of mental number line is not only the measurement of children's fraction magnitude understanding, but also the process of forming the measure sub-construct of fraction. Based on the measure interpretation of fraction, the research mainly discusses the influence of number line type and grade on the representation of fraction. This study examined the performance of 287 fourth to sixth graders signing the common fraction (including equivalent fractions) on 0-1, 0-2 and 0-1 / 3 number lines. The results show that: (a) The grade is an important factor affecting the accuracy of fraction representation on different types of number line. The accuracy of the fourth grade students' fraction representation is not stable, the accuracy of the fifth grade students' fraction representation has changed dramatically, and the difference of the accuracy of the sixth grade students' fraction

representation decreases and tends to be accurate. (b) The magnitude of numerator and denominator is the external interference factor of equivalent fractions recognition, and the construction of common unit fraction is the internal cognitive factor. (c) The unit is the key factor that affects the representation of fractional number line, followed by the range of number line. The concept of ratio fraction leads to the existence of unsuitable range of number line.

Keywords: Primary school students, Fraction, Number line, The measure Sub-construct

同伴对话中认知水平和社交策略的交互影响

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摘要 课堂对话 (classroom discourse) 塑造了学生的学习经验与结果。在师生对话之外, 由同伴主导的小组讨论已被证实能够促进学生的阅读理解和批判性思维, 并提升学习成绩。然而, 学界在探讨小组讨论对学生认知发展的影响之外, 少有关同伴对话的社交属性, 更鲜有研究讨论在同伴对话的互动过程中认知与社交两个发展维度之间的交互作用。对该交互作用的研究将有助于教育研究者和实践者进一步了解小组讨论对青少年综合发展的影响, 为在学科教学过程中实现德育和认知发展的双重教育目的提供参考和借鉴。基于小组讨论实践, 本研究改编了 ICAP 理论框架 (Chi, 2009), 将学生之间的对话依据认知水平界定了四种认知对话模式: 被动 (passive), 积极倾听 (active listening) 主动 (active) 和交互 (interactive)。针对学生在讨论中采取的社交策略, 借鉴 CSR 合作社交推理 (Collaborative Social Reasoning, Lin et al., 2021) 的设计理念, 本研究提出三种社交对话模式: 同伴支持 (social support), 彼此尊重 (mutual respect), 以及平等参与 (equal participation)。研究样本为 120 名美国中部地区的五年级学生。他们组成 20 个小组, 每组 5-7 人, 经过三次小组讨论, 共产生 8673 个学生对话。小组讨论的每一个议题都改编自一个包含社交冲突的适龄读物, 可从多条线索和视角进行开放式讨论。小组内学生两两之间的对话基于每一种认知或社交对话模式分别构建出一个对话网络。推断性社交网络分析 (即随机指数模型, ERGMs) 的结果显示说话者的认知水平不仅与其所运用的社交策略相关, 还受到同伴对其运用的社交策略的影响。即说话者社交策略的运用与其高阶认知对话模式呈显著正相关; 被同伴支持仅与较低水平的认知对话模式相关; 而收到彼此尊重 (在尊重的前提下提出异见) 或平等参与 (邀请同学发言) 的社交对话模式是一把双刃剑——虽然可能促进高阶认知对话模式, 但也与最低水平的认知对话模式相关。本研究以微观的视角展示了小组讨论过程中认知和社会性两个维度的动态交互, 证实了以认知发展为导向的课堂对话可对学生全面发展所发挥的重要意义。

关键词 课堂对话, 小组合作讨论, 认知水平/认知对话模式, 社交策略/社交对话模式

Interweaving Relations between Cognitive and Social Dialogue Patterns during Small Group Discussions

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Abstract: Classroom discourse has been known for shaping students' learning experiences and outcomes. Small group discussions are known for their potential to promote reading comprehension, critical thinking, and argumentative skills. As a social activity, however, less study has examined the social processes of dialogues besides the cognitive aspect of reasoning. Addressing this gap is important to deepen scholarly understandings and to optimize educational practices in promoting adolescents' socio-emotional development alongside their cognitive skills and academic achievement. This study took a fine-grained approach to understand students' levels of cognitive engagement (i.e., cognitive dialogue patterns) and their use of social strategies (i.e., social dialogue patterns) turn-by-turn during collaborative small group discussions. Based on dialogues students initiated to and received from peers, four types of cognitive dialogue patterns (i.e., passive, listening, active, and interactive) were identified

adapted from Chi's ICAP framework (Chi, 2009) and three types of social dialogue patterns (i.e., social support, mutual respect, and equal participation) were identified based on social norms of Collaborative Social Reasonings (Lin et al., 2021). Participants were 120 fifth graders in a public elementary school serving middle-class families in the Midwest of the U.S. These students formed 20 discussion groups. Their three discussions generated 8,673 speaking turns, each of which was coded as one type of cognitive dialogue pattern and one type of social dialogue pattern. A dialogic network was constructed for each group based on each type of the cognitive and the social dialogue patterns. Results of exponential random graph models (ERGMs) showed that speakers' cognitive dialogue patterns were associated with social dialogue patterns they initiated as speakers and social dialogue patterns they received from group members as addressees. Our findings provided suggestions to the practice that teachers might foster students' cognitive engagement by encouraging them to explicitly acknowledge peers' ideas, and that teachers should be cautious when students uncritically agree with each other. This study demonstrated the interweaving relations between cognitive and social processes during dialogues between peers, which evidenced the multi-faced roles of instructional practices in promoting socio-emotional skills along with facilitating cognitive development.

Keywords: Classroom discourse, Collaborative small group discussions, Cognitive engagement/cognitive dialogue patterns, Social strategies/social dialogue patterns

数学焦虑个体的负性注意偏向：电生理学证据

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摘要 数学焦虑 (math anxiety) 指个体处理数字或数学相关情境时的一种消极情绪反应。注意偏向 (attentional bias) 指相对于中性刺激, 人们能够更快且更准确地将注意锁定到环境中的威胁刺激。虽然前人初步证据表明数学焦虑个体存在着对数学有关信息的负性注意偏向, 但目前的国内外相关研究却发现高数学焦虑 (HMA) 个体在注意偏向上的表现有所不同, 在数学相关信息提示条件下, HMA 个体反应更快或更慢。这些不同的结果很可能反映了注意偏向的不同成分: 注意易化、注意脱离困难和注意回避。本研究结合了行为和 ERP 指标, 通过两个实验探究数学焦虑成人负性注意偏向的具体表现特征。研究选取 830 名非数学专业在校大学生, 根据数学焦虑得分选取 HMA 组 (32 人, 其中男生 8 名) 和 LMA 组 (低数学焦虑, 29 人, 其中男生 9 名)。实验一通过情绪启动任务, 设置四种不同提示条件 (积极、中性、消极、数学相关), 探究 HMA 个体对数学有关信息是否存在注意偏向; 实验二通过点探测任务, 设置中性、一致、不一致三种条件, 并将目标刺激的呈现时间设置长、短两种条件, 探究数学焦虑个体所表现出的注意偏向特征。结果发现: (1) HMA 组对情绪启动词语的评分显著低于 LMA 组, 且 HMA 组对数学相关词语的评分与消极词语无差异, LMA 组对数学相关词语的评分与中性词语无差异; (2) HMA 组的反应时更短; (3) HMA 组与 LMA 组之间的 N2pc 成分幅值无显著差异; HMA 组的 LPP 成分峰值显著更大; HMA 组的 SPCN 成分幅值显著更小, 且刺激呈现时间较长条件下, 两组间的幅值无显著差异。上述结果表明: (1) HMA 个体存在对数学相关词语、数字的注意偏向, 总体表现为注意回避; (2) HMA 个体倾向于将数学相关词语归类为消极词语, 而 LMA 个体倾向于将其归类为中性词语; (3) 在目标刺激呈现中期, HAM 个体存在对数字的注意脱离困难, 晚期则表现为注意回避, 显示其可能将数学相关信息视为威胁性刺激。

关键词 数学焦虑, 注意偏向, 注意控制理论, 情绪启动范式, 点探测范式

Negative Attentional Bias in Math Anxiety Individuals: Electrophysiological Evidence

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Abstract: Math anxiety is the negative emotional response to math stimuli and situations. Attentional bias refers to a high level of attentional allocation to threatening stimuli compared to neutral ones. Whereas some evidence exists that

math anxiety individuals have a negative attentional bias towards math-related information, no research has attempted to investigate why individuals with high math anxiety (HMA) have different performances in attentional bias. These different results are likely to correlated with different components of attentional bias: attention facilitation, attention disengagement difficulty and attention avoidance. Across 2 experiments, the current study explored math anxiety individuals' performance characteristics of negative attention bias. A total of 830 non-mathematics college students participated in these experiments. They were selected into HMA group (N=32, 8 boys) and LMA group (individuals with low math anxiety, N=29, 9 boys) according to math anxiety scores. In experiment 1, participants completed an emotional priming task. Positive, neutral, negative and math-related words were presented as primes to test whether HMA individuals show attentional bias towards math-related information. In experiment 2, subjects were required to perform dot-probe tasks which including neutral, consistent and inconsistent conditions. The presentation time of the target stimuli was set to be shorter and longer to examine attention bias characteristics shown by math anxiety individuals under different presentation time. The results showed that: (1) HMA participants had lower ratings across all priming words than their LMA peers. HMA subjects showed no difference in rating the math-related words and the negative words and LMA subjects showed no difference in rating the math-related and neutral words. (2) HMA participates were faster to respond than their LMA counterparts. (3) There was no significant difference in N2pc amplitudes between HMA and LMA groups. Participates with HMA showed greater amplitudes of LPP relative to their counterparts with LMA. HMA group showed smaller SPCN compared with LMA and there was no significant difference in SPCN amplitudes between the two groups when the presentation time was longer. Together, these findings demonstrate that: (1) HMA individuals have attentional bias towards math-related words and numbers, and their overall performance is attention avoidance.(2) HMA individuals tend to classify math-related words as negative words, while LMA individuals tend to classify them as neutral words.(3) HMA individuals have difficulty in detaching their attention from numbers in the middle stage of the target stimulus presenting period and they show attention avoidance in the late stage, suggesting that they may regard the math-related information as threatening stimuli.

Keywords: math anxiety, attentional bias, attentional control theory, emotional priming paradigm, dot probe paradigm

(4) “教育心理专业委员会”口头报告分场 4

家师关系与小学生学校态度：师生关系的中介作用及父母差异

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摘 要 家庭和学校是小学生成长的重要环境，家校合作能够改进学校教育质量、提升家庭教育水平、帮助儿童获取教育成果，已成为国内外教育改革的重要举措。良好的家师关系是家校合作的基础，有利于形成教育合力、促进学生全面发展。家师关系包含主观的家师关系质量和客观的家师联系频率，根据社会资本理论，家师关系对小学生的学校态度具有重要影响。学校态度指学生对学校所持的评价和行为倾向，包括学校喜欢和学校回避两方面。根据生态系统理论，由于家师关系与小学生学校态度属于不同子系统，因此师生关系可能在其间起到中介作用。本研究采用家师关系量表、师生关系量表和学校态度量表，对北京 1366 名小学四年级学生及其父母进行连续两年的调查，旨在探讨父母报告的家师关系对小学生学校态度的影响，以及师生关系的中介作用，并探讨父母差异。结果发现：（1）父亲和母亲报告的家师关系质量均能负向预测学校回避，家师联系频率均能负向预测学校喜欢。（2）母亲报告的家师关系质量能正向预测学校喜欢、家师联系频率能正向预测学校回避，而父亲报告的这两条路径均不显著，存在父母差异。（3）父亲和母亲报告的家师关系质量能够通过师生关系正向预测学校喜欢，负向预测学校回避。研究提示：（1）家师良好关系的建立比客观的联系频率更具意义，因此学校和教师不能只着眼于家师联系频率是否满足学校的要求，更要注重良好关系的建立；（2）教师与家长的联系频率要适度，避免“有问题才联系”和“过度侵扰”；（3）师生关系对学生的学

校喜欢等积极发展具有重要意义,教师要关注与学生良好关系的建立。

关键词 家师关系质量, 家师联系频率, 师生关系, 学校态度, 父母差异

Influence of parent-teacher partnership on students' school attitude in the primary school: The mediating role of student-teacher relationship and the difference between parents

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Abstract: School-home collaboration can improve the quality of both school and family education, and help children obtain educational achievement, which makes it become a vital measure in education reform. The parent-teacher partnership is the basis of school-home cooperation, including both subjective relationships and objective contacts between families and teachers. The parent-teacher partnership contributes to a joint educational force and all-round developed students. According to Social capital theory, the parent-teacher partnership has an important influence on students' school attitudes, the evaluation and behavioral tendencies to schools, which include school preference and school avoidance. Since parent-teacher partnership and school attitude belong to different sub-systems in terms of Systems-ecological theory, the student-teacher relationship may play a role between them. This study is to examine how parent-teacher partnership and student-teacher relationships are related to student's school attitudes in primary school and distinguish the difference between parents. 1366 four-grade students and their parents of Beijing were recruited to filled in scales at two points, the results indicated that: (1) the quality of parent-teacher relationship reported by parents had a negative influence on school avoidance, while the frequency of parent-teacher contact negatively affected school preference. (2) The quality of the parent-teacher relationship reported by mothers negatively predicted school preference, and their frequency of parent-teacher contact positively predicted school avoidance. However, these two pathways reported by fathers were not significant. (3) For both parents, the student-teacher relationship played a mediated role in parent-teacher relationship quality and school attitude. The results provide some suggestions: (1) Compared with objective contacts, the subjective relationship quality is more meaningful, and educators should pay more attention to it. (2) The frequency of contacts between teachers and parents should be appropriate to avoid "contact only when there is a problem" or "excessive intrusion". (3) The student-teacher relationship makes a significant impact on student's development, such as school preference, so teachers are supposed to involve themselves in establishing good relationships with students.

Keywords: parent-teacher relationship, parent-teacher contact, student-teacher relationship, school attitude, parents' difference

通过合作推理讨论促进中学生创造性问题解决

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摘要 随着机器学习、人工智能等领域的发展,现代社会对高创造力人才的需求剧增,在中小学阶段培养学生的创造力是当代教育的迫切要求。然而,在应试教育背景之下,如何在常规的课程设置中通过有效的教学干预手段来提高学生的创造性思维仍然是一个很大的挑战。合作推理讨论 (Anderson et al., 1998) 是一种以学生为中心的互动式教学法,在课堂上教师引导学生就争议性话题进行开放式讨论,学生结合阅读材料和自身经验形成观点并论证,倾听彼此并挑战同学的观点,形成对问题多角度的思考 (马淑凤等, 2016)。虽然合作推理讨论并非专门针对创造力培养,但是越来越多的创造力研究表明:“创造力是一个复杂的动态系统,在这个系统中创造性的想法通过个人和社会环境之间的持续互动涌现出来”(Kupers, Lehmann-Wermser,

McPherson &, van Geert, 2019), 合作推理论正是提供了这样一个有利于创造力发展的社会学习情境。因此, 本研究考察了合作推理论对学生创造性问题解决的影响, 从流畅性、灵活性、新颖性和适用性四个方面探讨了合作推理论对儿童在不同类型(社交类、工具类、应急类)的问题解决任务中的创造力表现。本研究以河北一所县级中学 8 个班的 474 名七年级学生为研究对象, 将班级随机分配到实验组与对照组中(各 4 个班), 并在实验组班级中开展了 8 次合作推理论。研究结果发现, 参与了合作推理论的中学生与对照组的中学生相比在创造性问题解决中表现更好。具体表现为参与了合作推理论的学生相较于对照组的学生提出了更多的方案(流畅性), 而且他们提出的方案种类更丰富(灵活性)、想法更独特(新颖性), 以及对现实情境更加实用(适用性)。此外, 在问题解决的类型方面, 参与了合作推理论的中学生在社交类问题情境中的表现最佳。这些研究结果表明合作推理论对中学生的创造性问题解决有明显促进作用。本研究为创造力培养领域提供了一种新思路, 即通过构建有助于儿童社会互动的合作学习情境来促进创新性想法的涌现, 从而培养学生在真实社交情境下的创造性思维。

Promoting Creative Problem-Solving through Collaborative Reasoning

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Abstract: Learning engagement refers to a mental state of hard work, enthusiasm, and progress shown by students. This positive learning statement is conducive to stimulating students' learning potential, enhancing learning happiness, and improving learning achievement. Studies have found that perceived class climate was closely related to primary school students' learning engagement, but the specific mechanism and conditions of perceived class climate need to be explored. Under the guidance of the child development system theory, this study proposes a moderated mediation model to test the mediating role of psychological capital between perceived class climate and primary school students' learning engagement, and the moderator role of class cadres status in the process. This study used a self-report method to survey 818 (432 boys) primary school students from fifth to sixth grade by the Learning Engagement Scale, My Class Questionnaire and the Psychological Capital Questionnaire. The results showed that: (1) after controlling for grade and gender, perceived class climate significantly predicted primary school students' learning engagement ($\beta = 0.42, p < 0.001$); (2) psychological capital played a partial mediating role in the relationship between perceived class climate and primary school students' learning engagement; (3) class cadres status significantly moderated the first half of the mediation path ($\beta = -0.10, 95\% \text{ CI} = [-0.29, -0.01]$). Specifically, compared to primary school students who were class cadres ($\beta = 0.21, 95\% \text{ CI} = [0.14, 0.29]$), the mediating effect played a greater part on primary school students who were not class cadres ($\beta = 0.32, 95\% \text{ CI} = [0.26, 0.37]$). According to the ecosystem theory, the present study reveals the multiple influencing factors of primary school students' learning engagement from the individual level (psychological capital, class cadres status) and micro-system level (perceived class climate), which provides insights into the improvement of primary school students' learning engagement.

Keywords: primary school students' learning engagement, perceived class climate, psychological capital, class cadres status

学困生的学业发展：刻板印象威胁的视角

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摘要 自上世纪 80 年代以来, 对学困生的“标签化”现象得到了广泛探讨, 它内在包含着对学困生的消极刻板印象。基于刻板印象威胁的动机经验模型, 消极刻板印象会以刻板印象威胁的形式对学困生的表现产生

消极影响。因此,本研究试图探讨以下问题:(1)对学习困难青少年的消极刻板印象有什么特点?这些消极刻板印象是否会对学困生的学业表现产生刻板印象威胁?(2)日常性学业弹性作为积极学业适应的重要指标,是否会受到刻板印象威胁的影响?(3)成就目标定向在刻板印象威胁与日常性学业弹性的关系中是否起到中介作用?(4)个体特征和情境线索是否对刻板印象威胁与日常性学业弹性的关系起到调节作用?针对以上问题,本研究结合通过5个研究探讨了学困生刻板印象威胁的现象、作用机制和作用条件,并得出以下结果:研究1探讨了青少年对学困生的消极刻板印象的特点。结果表明,高中生对学困生存在显著的消极刻板印象,它表现在学习能力、意志品质、学习态度、学习方法、情绪体验、行为表现六个方面。研究2以120名学困生为被试,检验刻板印象威胁对学困生学业表现的影响,结果表明,刻板印象威胁对学困生随后的学习表现具有显著的负向预测作用,且这一效应主要存在于学业认同程度较高的学困生中。研究3~5以305名学困生为被试,探讨刻板印象威胁与日常性学业弹性的关系、作用机制和作用条件。结果表明,学困生知觉到的刻板印象威胁对其日常性学业弹性具有负向预测作用,且这一作用可以通过掌握目标的中介作用来实现。任务难度和学业认同水平会调节刻板印象威胁对学困生日常性学业弹性的影响。总之,本研究验证了刻板印象威胁对学困生学业表现的消极影响、作用机制和作用条件。这一研究强调环境对于学困生学业发展的重要作用以及动机在其中的中介作用。凸显学生的积极社会身份、提供多元的评价体系、开设针对性的心理健康课程,这些途径可能有利于减少学困生遭遇的刻板印象威胁。

关键词 学习困难,刻板印象威胁,学业成就,日常性学业弹性,成就目标定向

Academic performance of students with learning disabilities: From the perspective of stereotype threat

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Abstract: Since 1980s, the labeling of learning disabled students has been widely discussed, which inherently contains negative stereotypes toward learning disabled students. Based on motivational experience model of stereotype threat, negative stereotypes take effect on learning disabled students' performance via stereotype threat. Thus, the present study tried to discuss the following questions. First, what are the characters of negative stereotypes to learning disabled students among high school students? Second, can these negative stereotypes influence learning disabled students' academic performance via stereotype threat? Third, what is the role of achievement motivation in the relation between stereotype threat and academic performance? Fourth, what is the role of academic identity in the mediation model of stereotype threat effect? Targeted at these questions, this study used 5 studies to investigate the phenomenon of stereotype threat among learning disabled students and its mediators and moderators. The present study found the following results: Study 1 investigated the negative stereotypes among learning disabled adolescents. The results showed that negative stereotypes toward learning disabled students were common among high school students, which was reflected on the dimensions of learning ability, willpower and motivation, learning attitudes, learning methods, emotional experience, and behavioral performance. Study 2 examined the influence of stereotype threat on learning disabled students' academic performance using a sample of 120 learning disabled students. Results showed that negative stereotype can take effect on learning disabled students' academic performance via stereotype threat in a self-fulfilling way. Academic identity moderated the effect of stereotype threat on later academic performance, that is, stereotype threat impaired students' academic performance among high academically identified students while it did not significantly predict academic performance among low academically identified students. Study 3~5 investigated the relation between stereotype threat and everyday academic resilience as well as the mediators and moderators between this relation using a sample of 305 participants. The results showed that stereotype threat is negatively predictive of students' everyday academic resilience and their relationship is mediated by mastery goal. Task difficulty and academic identity moderated the relationship between stereotype threat and everyday

academic resilience. To sum up, the present study put forward an integrative motivational model of stereotype threat effect on learning disabled students. This study emphasizes the significant role of positive environment on the academic development of learning disabled students. Creating a good school and class atmosphere, providing a pluralistic evaluation system, and highlighting students' positive social identity may be effective routes to reduce stereotype threat among learning disabled students.

Keywords: learning disability, stereotype threat, academic achievement, everyday academic resilience, achievement goal orientation

父母学业支持与学业心理控制对初中生学业动机及学业情绪的影响： 一项短期纵向研究

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摘要 学业动机和学业情绪是青少年在学业领域的两个重要发展指标，不仅影响他们对学业任务的努力和坚持性，更与青少年的心理健康紧密联系。大量研究发现，父母学业投入对儿童的学业发展具有重要影响。然而，这些研究多以学业成就为发展指标，较少关注青少年的学业动机和学业情绪。其次，现有研究多在西方文化背景下开展，较少在中国文化背景下探讨父母学业投入。基于此，本研究聚焦于中国家庭中父母的学业支持与学业心理控制，探究其对青少年学业动机和学业情绪的影响。本研究对西安市某中学八年级学生进行问卷调查（ $N=474$ ），分别于学期初（T1）和学期中（T2）追踪测量父母学业支持和学业心理控制、学业动机（表现趋近目标、表现回避目标、掌握目标、学业效能感）和学业情绪（愉悦、自信、自豪、愤怒、焦虑、羞愧、无助、厌烦）。分层回归结果显示：1）控制了学生性别、T1 成绩排名和 T1 学业动机后，T1 的父母学业支持正向预测 T2 的掌握目标（ $\beta = 0.127, p < 0.01$ ）和学业效能感（ $\beta = 0.128, p < 0.001$ ），而 T1 的父母学业心理控制正向预测 T2 的表现趋近目标（ $\beta = 0.137, p < 0.001$ ）和表现回避目标（ $\beta = 0.139, p < 0.01$ ）；2）控制了学生性别、T1 成绩排名和 T1 学业情绪后，T1 的父母学业支持正向预测愉悦（ $\beta = 0.135, p < 0.001$ ）、自信（ $\beta = 0.152, p < 0.001$ ）、自豪（ $\beta = 0.134, p < 0.001$ ）这三种积极学业情绪，负向预测愤怒（ $\beta = -0.109, p < 0.01$ ）、焦虑（ $\beta = -0.128, p < 0.01$ ）、无助（ $\beta = -0.102, p < 0.01$ ）、厌烦（ $\beta = -0.109, p < 0.01$ ）这四种消极学业情绪，父母学业心理控制则正向预测自豪（ $\beta = 0.094, p < 0.01$ ）和羞愧（ $\beta = 0.076, p < 0.05$ ）这两种学业情绪。以上研究结果表明，父母学业支持能够促进青少年内在学业动机，同时增加青少年的积极学业情绪，减少消极学业情绪。此外，尽管父母学业心理控制水平会激发青少年的羞愧学业情绪，但同时也会引发他们的自豪学业情绪，并增强外在学业动机，从而说明父母学业心理控制对青少年学业动机和学业情绪这两个方面仍具有较积极的影响。

关键词 父母学业支持，父母学业心理控制，学业动机，学业情绪，青少年

The Influences of Parental Academic Help and Psychological Control on Middle-School Students' Academic Motivations and Emotions: A Short-Term Longitudinal Study

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Abstract: Academic motivations and academic emotions are two important indicators of adolescents' academic development, which not only influence adolescents' effort and persistence on academic tasks, but are also closely related to their mental health. A number of studies have demonstrated that parental academic involvement plays an important role in children's academic development. Most of these studies, however, paid attention to adolescents' academic achievement, while academic motivations and academic emotions were almost ignored. In addition, most of existing research were carried out in the context of Western culture, but seldom explored parental academic involvement in the Chinese culture. To fill these gaps, the current research focused on parental academic help and

academic psychological control in Chinese families, and aimed to investigate their impacts on adolescents' *academic motivations* and *academic emotions*. Students in Grade 8 of a middle school in Xi'an, Shaanxi Province ($N = 474$) participated in the research. Students' *perceived parental academic help* and *academic psychological control*, *academic motivations* (performance-approach goal orientation, performance-avoid goal orientation, mastery goal orientation, academic efficacy) and *academic emotions* (enjoy, hope, pride, anger, anxiety, shame, helplessness, boredom) were tracked and measured at the beginning of the semester (T1) and the middle of the semester (T2) respectively. The hierarchical regression results showed that: 1) With gender, ranking (T1) and *academic motivations* (T1) controlled, *perceived parental academic help* at T1 positively predicted adolescents' mastery goal ($\beta = 0.127, p < 0.01$) and academic efficacy ($\beta = 0.128, p < 0.001$) at T2, and *perceived parental psychological control* at T1 positively predicted performance-approach goal ($\beta = 0.137, p < 0.001$) and performance-avoidance goal ($\beta = 0.139, p < 0.01$) at T2. 2) With gender, ranking (T1) and *academic emotions* (T1) controlled, *perceived parental academic help* at T1 positively predicted positive *academic emotions* at T2 listed as enjoy ($\beta = 0.135, p < 0.001$), hope ($\beta = 0.152, p < 0.001$) and pride ($\beta = 0.134, p < 0.001$), while negatively predicted negative *academic emotions* at T2 listed as anger ($\beta = -0.109, p < 0.01$), anxiety ($\beta = -0.128, p < 0.01$), helplessness ($\beta = -0.102, p < 0.01$) and boredom ($\beta = -0.109, p < 0.01$), and *perceived parental psychological control* at T1 positively predicted pride ($\beta = 0.094, p < 0.01$) and shame ($\beta = 0.076, p < 0.05$) at T2. These findings indicate that *parental academic help* can promote adolescents' internal *academic motivations*, increase the positive *academic emotions*, and reduce the negative *academic emotions*. Meanwhile, though *parental academic psychological control* can inspire adolescents' *academic emotions* of shame, it also activate their positive *academic emotions* and external *academic motivations*, thus indicating that *parental academic psychological control* generally have positive effects on adolescents' *academic motivations* and *academic emotions*.

Keywords: parental academic help, parental academic psychological control, academic motivations, academic emotions, adolescent

感知班级氛围与小学生学习投入的关系：一个有调节的中介模型

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摘 要 学习投入是学生表现出来的为学习努力付出、热情饱满、奋进向上的心理状态，这一积极学习状态有利于激发学生的学习潜力，提升学习幸福感，促进学习成就。研究发现，感知班级氛围与小学生学习投入存在密切联系，但感知班级氛围发挥作用的具体机制及作用条件有待探讨。本研究基于儿童发展系统理论，构建了一个有调节的中介效应模型，检验心理资本在感知班级氛围与小学生学习投入之间的中介作用，以及班干部身份对上述中介路径的调节作用。本研究采用自我报告的方式，运用学习投入量表、我的班级问卷及中小学心理资本问卷调查了 818（男生 432）名五年级至六年级的小学生。研究结果表明：（1）在控制了年级、性别后，感知班级氛围能够显著正向预测小学生的学习投入 ($\beta = 0.42, p < 0.001$)，即小学生感知班级氛围水平越高，其学习投入也会提高；（2）心理资本在感知班级氛围和小学生学习投入之间起部分中介作用；（3）班干部身份显著调节中介路径的前半段 ($\beta = -0.10, 95\% CI = [-0.29, -0.01]$)，即相对于担任班干部的小学生 ($\beta = 0.21, 95\% CI = [0.14, 0.29]$)，该中介效应对非班干部的小学生作用更大 ($\beta = 0.32, 95\% CI = [0.26, 0.37]$)。基于生态系统理论，本研究从个体层面（心理资本、班干部身份）与微系统层面（感知班级氛围）揭示了小学生的学习投入的多重影响因素，对提高小学生的学习投入具有一定现实指导意义。

关键词 小学生的学习投入，感知班级氛围，心理资本，班干部身份

Perceived Class Climate and Learning Engagement of Primary School Students: A Moderated Mediation Model

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Abstract: Learning engagement refers to a mental state of hard work, enthusiasm, and progress shown by students. This positive learning statement is conducive to stimulating students' learning potential, enhancing learning happiness, and improving learning achievement. Studies have found that perceived class climate was closely related to primary school students' learning engagement, but the specific mechanism and conditions of perceived class climate need to be explored. Under the guidance of the child development system theory, this study proposes a moderated mediation model to test the mediating role of psychological capital between perceived class climate and primary school students' learning engagement, and the moderator role of class cadres status in the process. This study used a self-report method to survey 818 (432 boys) primary school students from fifth to sixth grade by the Learning Engagement Scale, My Class Questionnaire and the Psychological Capital Questionnaire. The results showed that: (1) after controlling for grade and gender, perceived class climate significantly predicted primary school students' learning engagement ($\beta = 0.42, p < 0.001$); (2) psychological capital played a partial mediating role in the relationship between perceived class climate and primary school students' learning engagement; (3) class cadres status significantly moderated the first half of the mediation path ($\beta = -0.10, 95\% \text{ CI} = [-0.29, -0.01]$). Specifically, compared to primary school students who were class cadres ($\beta = 0.21, 95\% \text{ CI} = [0.14, 0.29]$), the mediating effect played a greater part on primary school students who were not class cadres ($\beta = 0.32, 95\% \text{ CI} = [0.26, 0.37]$). According to the ecosystem theory, the present study reveals the multiple influencing factors of primary school students' learning engagement from the individual level (psychological capital, class cadres status) and micro-system level (perceived class climate), which provides insights into the improvement of primary school students' learning engagement.

Keywords: primary school students' learning engagement, perceived class climate, psychological capital, class cadres status

小学高年级学业情绪对学业成绩的影响：一项交叉滞后研究

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摘要 学业情绪几乎存在于学习的全过程，且对个体的学业成绩和心理健康起重要影响。以往研究发现学业情绪对学业成绩起显著的预测作用，积极的学业情绪对学业成绩产生积极的促进作用，而消极的学业情绪对学业成绩产生着复杂的、双重的作用。另外，根据控制-价值理论，学业情绪的产生主要来源于对学习任务的评估和控制评估。个体学业成绩的好坏又作为评估的重要因素，使个体评估后产生相对应的学业情绪，这一点也符合认知-动机模型的支持。那么，学业情绪和学业成绩之间的作用 and 影响机制究竟为何？此外，根据控制-价值理论，个体的学业情绪和学业成绩之间除直接的影响外，还存在如学习动机和学习策略等其他因素的影响，这些因素是否在学业情绪和学业成绩之间存在着稳定的影响作用？以往研究多集中在中学阶段，而小学高年级阶段的个体由于大脑皮层和神经系统发育还不成熟，情绪的自我调节能力不强，情绪对其产生的影响更大，更需给予关注和指导。基于此，本研究为探讨小学高年级学生的学业情绪与学业成绩之间的纵向联系及内在作用机制，综合考虑学习动机和学习策略两个因素为自我调节学习，将其作为中介变量。从河南省郑州市某小学抽取 401 名五、六年级学生，对其进行为期半年的追踪研究。结果发现：（1）T1 高兴和 T2 学业成绩存在显著的纵向联系，T1 焦虑与 T2 学业成绩不存在显著的纵向联系；（2）在同一时间上，自

我调节学习在积极的学业情绪和学业成绩之间发挥部分中介作用，而自我调节学习在消极的学业情绪和学业成绩之间发挥完全中介作用；（3）在不同时间点上，自我调节学习的中介作用机制仍然成立，表明自我调节学习的中介作用具有跨时间的稳定性。该结果强调了学业情绪对学业成绩变化具有重要作用，也为从学业情绪和自我调节学习角度来促进学习者的学业成绩提供了初步证据。

关键词 学业情绪，自我调节学习，学业成绩

The Effect of Academic Emotion on Academic Achievement among High-grade Students in Primary School: A Cross-lag Study

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Abstract : Academic emotion almost exists in the whole process of learning, and has an important impact on individual's academic performance and mental health. Previous studies have found that academic emotion plays a significant role in predicting academic achievement, positive academic emotion plays a positive role in promoting academic achievement, and negative academic emotion plays a complex and dual role in academic achievement. What's more, according to the control-value theory, academic emotion mainly comes from the value assessment and control assessment of learning tasks. As an important factor in the evaluation, the individual's academic performance produces the corresponding academic emotion after the evaluation, which is also consistent with the support of the cognitive-motivation model. Then, what is the effect and influencing mechanism between academic emotion and academic achievement? In addition, according to the control-value theory, apart from the direct influence, there are also other factors such as learning motivation and learning strategies. Do these factors have a stable influence on the relationship between academic emotion and academic achievement? Most previous studies focused on the middle school stage, but individuals in the upper primary school stage are not mature in the development of cerebral cortex and nervous system, and their emotional self-regulation ability is not strong. Emotions have a greater impact on them, so more attention and guidance are needed. Based on this, in order to explore the longitudinal connection and internal mechanism between academic emotion and academic achievement of senior primary school students, this study comprehensively considered the two factors of learning motivation and learning strategy as self-regulating learning, and took them as the mediating variables. 401 students in grade five and six were selected from a primary school in Zhengzhou, Henan province, and the follow-up study was conducted for half a year. The results showed that : (1) there was a significant longitudinal association between T1 happiness and T2 academic achievement, but there was no significant longitudinal association between T1 anxiety and T2 academic achievement; (2) At the same time, self-regulated learning played a partial mediating role between positive academic emotion and academic achievement, while self-regulated learning played a full mediating role between negative academic emotion and academic achievement; (3) The mediating effect of self-regulated learning remained valid at different time points, indicating that the mediating effect of self-regulated learning was stable across time. The results emphasize that academic emotion plays an important role in the change of academic achievement, and provide preliminary evidence for the improvement of academic achievement from the perspective of academic emotion and self-regulating learning.

Keywords: Academic emotion; Self-regulated learning; Academic performance

(5) “教育心理专业委员会”口头报告分场 5

歧视知觉对易地扶贫搬迁青少年自伤的影响： 同伴侵害与体验回避的链式中介作用

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摘 要 自伤 (self-injury) 是指个体在没有自杀意图的情况下, 故意对自己身体的各个部位进行伤害, 致使身体出现流血或疼痛的行为。易地扶贫搬迁青少年脱离了原来熟悉的生活和社会环境, 很可能在新环境下产生不安全感, 进而发生自伤行为。已有研究发现, 歧视知觉与青少年产生自伤行为有密切关系, 但歧视知觉通过何种路径对青少年的自伤产生影响? 鲜有研究探讨。经文献分析发现, 同伴侵害和体验回避可能在歧视知觉与青少年自伤之间发挥重要的作用。基于此, 本研究的主要目的在于探究歧视知觉对易地扶贫搬迁青少年自伤行为产生的影响, 并考察同伴侵害与体验回避在二者之间的作用机制。本研究采用青少年自我伤害行为问卷、歧视知觉问卷、多维同伴侵害量表以及接纳与行动问卷 (第二版) 对 356 名易地扶贫搬迁青少年进行调查, 并运用 SPSS24.0 和 Mplus7.4 对数据进行统计分析。研究结果发现: (1) 歧视知觉、同伴侵害、体验回避、青少年自伤两两之间均呈显著正相关; (2) 歧视知觉对易地扶贫搬迁青少年自伤的直接预测作用显著 ($\beta=0.31, P<0.001$); (3) 加入同伴侵害和体验回避两个中介变量后, 同伴侵害、体验回避能正向预测易地扶贫搬迁青少年自伤 ($\beta=0.25, P<0.001$; $\beta=0.33, P<0.001$), 歧视知觉、同伴侵害正向预测体验回避 ($\beta=0.43, P<0.001$; $\beta=0.19, P<0.001$), 歧视知觉正向预测同伴侵害 ($\beta=0.45, P<0.001$), 而歧视知觉对易地扶贫搬迁青少年自伤的直接效应不显著 ($P>0.05$)。同伴侵害在歧视知觉与易地扶贫搬迁青少年自伤之间的中介效果量为 0.35, 体验回避在歧视知觉与易地扶贫搬迁青少年自伤之间的中介效果量为 0.45, 同伴侵害和体验回避在歧视知觉与易地扶贫搬迁青少年自伤之间的中介效果量为 0.10, 结论: 歧视知觉对易地扶贫搬迁青少年自伤有直接影响; 歧视知觉还能通过同伴侵害和体验回避各自的中介效益及二者的链式中介效应对易地扶贫搬迁青少年自伤产生间接影响。

关键词 易地扶贫搬迁青少年, 歧视知觉, 同伴侵害, 体验回避, 自伤

The impact of discrimination perception on self injury of relocated youths for poverty alleviation: the chain mediating role of peer aggression and experience avoidance

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Abstract: Self injury refers to the behavior that an individual intentionally injures each part of his body without suicidal intention, resulting in bleeding or pain. Relocated youths for poverty alleviation are divorced from the familiar life and social environment, and are likely to have a sense of insecurity in the new environment, resulting in self injury. Previous studies have found that there is a close relationship between discrimination perception and adolescents' self injury behavior, but what path does discrimination perception affect adolescents' self injury? There are few studies. Through literature analysis, it is found that peer aggression and experience avoidance may play an important role in the relationship between discrimination perception and adolescent self injury. Based on this, the main purpose of this study is to explore the impact of discrimination perception on self injury behavior of relocated youths for poverty alleviation, and to investigate the mechanism between peer aggression and experience avoidance. In this study, 356 relocated youths for poverty alleviation were investigated by adolescent self injury behavior questionnaire, discrimination perception questionnaire, multidimensional peer aggression scale and acceptance and

action questionnaire (Second Edition), and the data were statistically analyzed by spss24.0 and mplus7.4. The results show that:(1) There is a significant positive correlation between discrimination perception, peer aggression, experience avoidance and adolescents' self injury; (2) Discrimination perception has a significant direct predictive effect on self-injury of relocated youths for poverty alleviation($\beta=0.31, P<0.001$); (3) After adding the two mediating variables of peer aggression and experience avoidance, peer aggression and experience avoidance can positively predict the self injury of relocated youths for poverty alleviation($\beta=0.25, P<0.001$; $\beta=0.33, P<0.001$), discrimination perception and peer aggression positively predicted experience avoidance($\beta=0.43, P<0.001$; $\beta=0.19, P<0.001$), discrimination perception positively predicted peer aggression($\beta=0.45, P<0.001$), while the direct effect of discrimination perception on relocated youths for poverty alleviation was not significant($P>0.05$). The mediating effect of peer aggression on discrimination perception and self injury of relocated youths for poverty alleviation is 0.35, the mediating effect of experience avoidance on discrimination perception and self injury of relocated youths for poverty alleviation is 0.45, and the mediating effect of peer aggression and experience avoidance on discrimination perception and self injury of relocated youths for poverty alleviation is 0.10, Conclusion: the perception of discrimination has a direct impact on the self injury of relocated adolescents; Discrimination perception can also have an indirect impact on the self injury behavior of relocated youths for poverty alleviation through their respective intermediary benefits of peer aggression and experience avoidance and their chain intermediary effect.

Keywords: relocated youths for poverty alleviation, discrimination perception, peer aggression, experience avoidance, self injury

压力与青少年抑郁、自伤：自我批评与自我同情的调节作用

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摘要 青少年时期是抑郁和非自杀性自伤（non-suicidal self-injury）行为的高发时期，其中非自杀性自伤行为（简称“自伤”）指个体在无自杀意图的情况下直接、故意地伤害自己身体组织的行为。抑郁和自伤均为个体因素与环境因素共同作用的结果，并且二者具有相近的产生机制，但鲜有研究对二者共同影响因素发挥作用的差异性进行研究。本研究以 959 名青少年（ $M_{age}=13.46, SD=0.57$ ）为研究对象，考察了压力性生活事件与青少年抑郁及自伤行为的关系，并探究了自我批评与自我同情在压力与抑郁以及压力与自伤之间的关系中是否发挥不同的调节作用。研究使用青少年生活事件量表、自我批评与自我肯定形式量表（The Forms of Self-Criticism/Self-Reassuring Scale, FSCSR）中的自我不足和自我憎恨自量表、自我同情量表（the Self-compassion Scale, SCS）、流调中心抑郁量表（the Center for Epidemiologic Studies Depression Scale for Children, CES-DC）及青少年自我伤害问卷分别对青少年的生活压力事件、自我批评、自我同情、抑郁与自伤行为进行测量。结果显示：（1）在控制年龄、性别和主观社会经济地位后，压力性生活事件、自我批评与自我同情对青少年抑郁和自伤行为均有显著的直接预测作用；（2）压力性生活事件与自我批评交互作用于青少年抑郁和自伤，个体自我批评水平越高，压力生活事件对抑郁和自伤的预测作用越强；（3）自我同情在压力生活事件与自我批评对青少年抑郁的不利影响中无显著调节作用，但是在压力生活事件与自我批评对自伤的影响中发挥了显著的缓冲作用。无论自我批评水平高低，自我同情水平较低的青少年均易受压力生活事件的影响而产生自伤行为；而当青少年自我同情水平较高时，压力生活事件仅对高自我批评个体的自伤行为有预测作用，对低自我批评个体的自伤无显著预测作用。研究结论：抑郁和自伤行为均受生活压力和自我批评的消极影响，并且自我同情对青少年抑郁和自伤的保护作用不同。具体而言，自我同情对压力和自我批评对抑郁的不利影响未发挥显著的缓冲作用，而仅对自伤行为具有有效的保护作用。

关键词 压力性生活事件，自我批评，自我同情，抑郁，自伤行为

Self-compassion buffers the negative effect of stressful life events on adolescent non-suicidal self-injury, but not on depression

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Abstract: Symptoms of depression increase during adolescence as do non-suicidal self-injurious behaviors (NSSI). NSSI refers to the direct, deliberate destruction of one's body tissue in the absence of intent to die. Both individual and environmental factors have been involved in depression and NSSI. A comprehensive body of research has identified depressive symptoms as a typical correlate of NSSI, however, there is a lack of clarity about the common and differential pathways to NSSI and depressive symptoms. The present study investigated the main and interacted effects of stressful life events, self-criticism, self-compassion on depressive symptoms and NSSI in 959 adolescents ($M_{age} = 13.46$, $SD = 0.57$). Stressful life events, self-criticism, self-compassion, depressive symptoms, and NSSI were evaluated by Adolescent Self-Rating Life Events Check List (ASLEC), the Hated Self and Inadequate Self subscales of the Forms of Self-Criticism/ Self-reassuring Scale (FSCSR), the Self-Compassion Scale (SCS), the Center for Epidemiologic Studies Depression Scale for Children (CES-DC) and the modified version of the Adolescents Self-Harm Scale (DSHS), respectively. The results showed that: (1) After controlling for adolescents' age, gender, and subjective socioeconomic status, stressed life events, self-criticism, and self-compassion all had significant direct predictive effects on depressive symptoms and NSSI; (2) There were significant two-way interaction effects of stressful life events and self-criticism on depression, as well as NSSI. The higher the level of self-criticism, the stronger the predictive effect of stressful life events on depression and NSSI; (3) Self-compassion showed no significant moderating effect on the negative effects of stressful life events and self-criticism on depression, but played a significant buffering effect on the negative effects of stress and self-criticism on NSSI. For adolescents with low self-compassion, stressful life events were significantly and positively related to NSSI in both the lower and higher self-criticism groups. In the case of adolescents with higher self-compassion, the association between stressful life events and NSSI was significant only for those with high self-criticism, but not for those with low self-criticism. Conclusion: Both depression and NSSI are negatively associated with life stress and self-criticism, but the protective roles of self-compassion in these associations were different. These findings highlight the buffering role of self-compassion in the associations between stressful life events, self-criticism, and NSSI, and suggest the different protective mechanisms of depression and NSSI.

Keywords: stressful life events, self-criticism, self-compassion, adolescent NSSI, depressive symptoms

中学生校园欺凌与睡眠质量： 社交焦虑的中介作用及留守经历的调节作用

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摘要 近年来，青少年睡眠问题已成为家-校-社共同关注的热点，睡眠质量下滑也是存在于青少年群体中较为普遍的现象。长期的压力和消极情绪不仅直接地影响青少年的身心发展，还会通过降低睡眠质量、减损心理资源等方式间接地影响青少年。中学阶段的学习与生活主要在学校及家庭环境中，校园欺凌和留守家庭经历是中学生群体中较为常见的人际压力源，故而成为研究影响青少年睡眠质量问题的重要因素。本研究采用中学生校园欺凌问卷、匹兹堡睡眠质量指数量表以及社交焦虑量表，选取辽宁省共 758 名中学生进行调查研究。运用 SPSS 22.0 和 AMOS 24.0 软件对收集到的数据进行统计处理及分析。研究得出，（1）传统欺凌、网络欺凌、睡眠质量与社交焦虑两两之间均存在显著的正相关（ $p < 0.01$ ）；（2）传统/网络欺凌能显著正向预测睡眠质量；（3）社交焦虑在传统/网络欺凌与睡眠质量的关系中起部分中介作用；（4）在网络欺凌模型中，社交焦虑的中介作用存在留守经历的差异，而在传统欺凌模型中，留守经历的差异不显著。研究结果表明，

校园欺凌是中学生心理及行为问题的重要风险因素，不仅对中学生产生直接的影响，还可以通过社交焦虑这一中介因素影响睡眠质量。所以促进中学生睡眠质量的提升，既要重视校园欺凌伤害的疏导，也要重视中学生社交焦虑的缓解，有效区分不同类型欺凌对不同群体的伤害差异，为中学生校园欺凌及其危害性的预防和干预提供了参考。

关键词 传统欺凌，网络欺凌，睡眠质量，社交焦虑，留守经历

School bullying and sleep quality among middle school students: the mediating role of social anxiety and the moderating role of left-behind experiences

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Abstract: In recent years, sleep problems in adolescents have caused the attention of parents, schools and society. At the same time, the decline of sleep quality is a common phenomenon among adolescents. Long-term stress and negative emotions not only directly affect the physical and mental development of adolescents, but also indirectly affect them by reducing sleep quality and mental resources. The study and life of middle school students are mainly in the school and family environment, school bullying and left-behind experiences are common interpersonal stressors. Therefore, they have become important factors affecting adolescents' sleep quality problems. A total of 758 middle school students in Liaoning Province were investigated by using the School Bullying Questionnaires, Pittsburgh Sleep Quality Index and Social Anxiety Scale. SPSS 22.0 and AMOS 24.0 software were used for statistical processing and analysis of the collected data. The results showed that: (1) Traditional bullying, cyberbullying, sleep quality and social anxiety had significant positive correlations ($p < 0.01$); (2) Traditional bullying/Cyberbullying significantly positively predicted sleep quality; (3) Social anxiety played a partially mediating role in the relationship between traditional bullying/cyberbullying and sleep quality; (4) In the cyberbullying model, the mediating effect of social anxiety is different from that of left-behind experiences, while in the traditional bullying model, the difference of left-behind experiences is not significant. The results reveal that school bullying is an important risk factor for high school students' psychological and behavioral problems. It not only has a direct impact on high school students, but also affects sleep quality through social anxiety as a mediating factor. Therefore, to promote the improvement of sleep quality of middle school students, we should not only pay attention to the treatment of school bullying injury, but also focus on the alleviation of social anxiety of middle school students. We should effectively distinguish the difference of different types of bullying injury to different groups. In this way, we can provide reference for the prevention and intervention of school bullying.

Keywords: Traditional bullying, Cyberbullying, Sleep Quality, Social Anxiety, Left-behind experience

初中生感知压力对网络成瘾的影响： 互联网使用预期和抑制控制的链式中介作用

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摘要 目的：随着互联网技术高速发展，线上教学平台的使用增加，使得青少年更容易自由接触到网络。网络成瘾，是个体无法控制自己对互联网的使用，导致在日常生活中出现一系列负面结果，如学习成绩差、人际关系差、焦虑、抑郁。当个体感知到的压力过大时，个体会寻求压力的释放。而网络便利性和可得性成了步入青春期的初中生释放和缓解压力的第一选择。本研究旨在探讨初中生感知压力对网络成瘾影响的作用机制，即互联网使用预期（回避期待、正强化期待）和抑制控制在初中生感知压力与网络成瘾中的链式中介

作用,探讨青少年中网络成瘾的作用机制。方法:采用《压力知觉量表》、《S-IAT 量表》、《互联网使用预期量表(IUES)》、《儿童执行功能评定量表》对 480 名初中生进行调查。结果表明:(1)感知压力对网络成瘾的直接作用显著,即压力越大,初中生网络成瘾情况越严重;(2)互联网使用预期(回避期待、正强化期待)在初中生感知压力与网络成瘾中间起中介作用;(3)互联网使用预期(回避期待、正强化期待)和抑制控制在初中生感知压力和网络成瘾中间起链式中介作用。结论:感知压力不仅可以直接影响初中生的网络成瘾,也可以通过互联网使用预期(回避期待、正强化期待)和抑制控制对网络成瘾产生间接影响。研究揭示了初中生感知压力与网络成瘾的关系及其作用机制,对如何预防青少年网络成瘾有一定指导意义。

关键词 感知压力,互联网使用预期,抑制控制,网络成瘾

The Effect of Perceived Stress on Internet Addiction among Junior Middle School Students: The Chain Mediating Role of Internet Use expectation and Inhibition Control

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Abstract: PURPOSE: With the rapid development of Internet technology, the use of online teaching platforms has increased, making it easier for teenagers to have free access to the Internet. Internet addiction refers to an individual's inability to control his or her use of the Internet, which leads to a series of negative outcomes in daily life, such as poor academic performance, poor interpersonal relationship, anxiety and depression. When the individual feels too much pressure, the individual will seek to release the pressure. The convenience and availability of the Internet has become the first choice for junior high school students to release and relieve stress as they enter adolescence. The purpose of this study was to explore the mechanism of the effect of perceived pressure on Internet addiction among junior high school students, namely, the chain mediating effect of Internet use expectation (avoidance expectation, positive reinforcement expectation) and inhibitory control on perceived pressure and Internet addiction among junior high school students, and to explore the mechanism of Internet addiction among adolescents. METHODS: The Stress Perception Scale, S-IAT scale, Internet Use Expectancy Scale (IUES), and Child Executive Functioning Rating Scale were used to investigate 480 middle school students. RESULTS: (1) The direct effect of perceived pressure on Internet addiction is significant, that is, the greater the pressure, the more serious the Internet addiction of junior high school students; (2) Internet use expectation (avoidance expectation and positive reinforcement expectation) mediated the perceived stress and Internet addiction among junior middle school students; (3) Internet use expectation (avoidance expectation, positive reinforcement expectation) and inhibitory control play a chain mediation role between perceived stress and Internet addiction among junior middle school students. CONCLUSION: Perceived pressure can not only directly affect Internet addiction in junior middle school students, but also indirectly through Internet use expectations (avoidance expectations, positive reinforcement expectations) and inhibitory control. This study reveals the relationship between perceived pressure and Internet addiction and its mechanism, which has certain guiding significance on how to prevent Internet addiction among teenagers.

Keywords: Internet Addiction, Perceived stress, Internet use expectancies, inhibition control

早期亲子分离与大学生抑郁的发展轨迹：副交感神经活动的作用

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摘要 父母外出务工带来的早期亲子分离经历会对个体身心发展的多个方面产生消极影响,且这种影响会持续到个体步入大学阶段。有研究表明,与无亲子分离经历大学生相比,有亲子分离经历大学生的抑郁水平更高。在这一背景下,揭示早期亲子分离对个体抑郁发展的持续影响,探究能够降低早期亲子分离消极影响的因素及作用机制就成为亟待解决的重要科学问题。然而,已有研究主要采用横断设计,难以探明先前的亲子分

离对个体抑郁发展轨迹的影响,并且对于早期亲子分离影响个体发展的生物-环境作用机制还缺少系统深入的实证研究。本研究以 251 名大一学生为被试,采用个别访谈法确定大学生的早期亲子分离经历,运用 Biopac MP160 型生理多导仪采集大学生在静息状态和压力任务下的副交感神经活动水平(以窦性心率不齐为指标, RSA),并分别在其入学第一学期、新冠肺炎疫情居家隔离期间、疫情结束后返校复学和学期期末对其抑郁水平进行了历时 1 年的 4 次追踪测试。采用潜变量增长模型考察早期亲子分离(分离形式和分离时长)、副交感神经活动对大学生抑郁发展轨迹的预测作用及其性别差异。结果发现:(1)大学生抑郁呈递减趋势,起始水平存在显著的个体差异,而变化速度不存在显著个体差异,且起始水平和变化速度不存在显著关联;(2)早期经历亲子分离大学生的抑郁初始水平显著高于无亲子分离经历的大学生,这种关联存在于具有中等 RSA 反应性和较高 RSA 反应性的女生,以及具有中等 RSA 反应性和较低 RSA 反应性的男生群体之中;(3)早期的亲子分离时长显著正向预测大学生抑郁的初始水平,但是这种关联仅存在于具有中等 RSA 反应性和较高 RSA 反应性的女生群体之中。这表明,早期的亲子分离经历与大学生抑郁的初始水平存在关联,这种关联因副交感神经活动水平和性别的不同而有所差异。

关键词 亲子分离经历,分离时长,副交感神经活动,大学生抑郁,潜变量增长模型

Early Parent-child Separation and the Trajectories of Depressive Symptoms of College Students: The Moderating Role of Parasympathetic Activity

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Abstract: The early experience of parent-child separation, caused by parents' rural-to-urban migrations has a negative impact on many aspects of individual psychosocial adaptation. In addition, this harm will continue to the university stage. Some studies have shown that, compared with college students without parent-child separation experience, college students with parent-child separation experience reported higher level of depression. In this context, it has become an important science research issue to reveal the continuous impact of early parent-child separation on the individual depression development. Besides, exploring the factors and mechanisms that can reduce the negative impact of early parent-child separation experience is also necessary. However, previous studies mainly used cross-sectional research, which was difficult to reveal the impact of early parent-child separation on the development trajectory of individual depression. Meanwhile, there is still a lack of systematic and profound empirical research on the biological-environmental mechanisms of the effect of parent-child separation on the development of depression in college students. A total of 251 college students participated in the current study. We determined the early parent-child separation experience of college students by individual interview. Parasympathetic nervous system activity (measured by sinus arrhythmia, RSA) was assessed during baseline and reactivity to a challenging task using a Biopac system (MP 160, Biopac System) in laboratory. In their first semester in college, home quarantine during the epidemic of coronavirus pneumonia, first return to school after the outbreak, at the end of term, We conducted four follow-up tests on their depression level over a year. The purpose of this study was to use Latent growth curve modeling (LGCM) to examine the predictive effects of early parent-child separation (separation form and separation duration) and parasympathetic nerve activity on the development trajectories of depression in college students and the gender differences. The results indicated that: (1) The depression of college students showed a decreasing trend, there were significant individual differences in the initial level, but there was no significant individual difference in the change speed, and there was no significant correlation between the initial level of depression and the change speed; (2) The initial level of depression of college students who experienced early parent-child separation was significantly higher than that of college students without parent-child separation, but this association existed in girls with moderate and higher RSA reactivity and boys with moderate and lower RSA reactivity. (2) Parent-child separation duration significantly positively predicted the initial level of depression of

college students, but this association only existed in girls with moderate and higher RSA reactivity. These results indicate that the early parent-child separation experience is associated with the initial level of depression in college students, and this association varies with the level of parasympathetic nerve activity and gender.

Keywords: parent-child separation, separation duration, parasympathetic nervous system activity, college students depression, Latent growth curve modeling

(6) “教育心理专业委员会”口头报告分场 6

图文距离对图文加工的影响：来自眼动的证据

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摘 要 空间邻近效应指的是图文信息邻近呈现会比远离呈现更有助于学习。但以往研究对于图文位置的操作缺少量化指标, 导致不同研究之间操作不一致(e.g. Beege et al., 2019; de Koning et al., 2020), 这可能会对研究结果产生影响。此外, 阅读的研究发现, 学习者能够从副中央凹视觉区提取信息并利用该信息提前加工后面的文本信息, 但不能从边缘视觉区中提取有效信息(Rayner, 1998; 2009; 张慢慢 等, 2020), 因此本研究结合人类阅读中的视觉加工特点, 将图文距离划分为副中央凹距离和边缘视觉区距离, 结合眼动追踪技术和多种测量认知负荷的方法, 考察图文距离对图文信息加工过程、认知负荷、效果及图文加工策略的影响。实验 1 以简单的图文卡片判断任务作为图文加工任务, 要求被试判断图文卡片在哪个维度上相同, 采用 2(图文距离: 副中央凹距离、边缘视觉区距离)×2(图文相同维度数: 0、1)被试内设计; 实验 2 以复杂的闪电形成原理为图文学习材料, 采用单因素两水平(图文距离: 副中央凹距离、边缘视觉区距离)被试间设计。结果发现, 在实验 1 中, 副中央凹距离条件下的卡片判断任务表现好于边缘视觉区条件, 图文整合眼跳次数显著高于边缘视觉区条件; 但两组在认知负荷上差异不显著。实验 2 同样发现副中央凹组的保持测验和迁移测验得分更高, 图文整合眼跳次数更高, 认知负荷更低; 中介效应分析发现, 图文整合眼跳次数在图文距离对保持测验的影响中起着中介作用。结论认为: (1) 基于人类视觉区信息加工特点划分的图文距离(副中央凹距离和边缘视觉区距离)会对图文加工过程产生影响, 副中央凹距离条件下引起更多的图文间眼跳。(2) 图文距离影响图文加工策略及效果。在副中央凹距离条件下, 被试更多地通过眼跳获取信息, 认知负荷更低, 图文加工效果更好; 在边缘视觉区条件下, 被试更多地从大脑中提取信息, 认知负荷更高, 图文加工效果更差。本研究结合简单和复杂的图文加工任务验证了空间邻近效应, 为未来研究提供了参考。

关键词 空间邻近效应; 图文距离; 图文加工; 眼跳; 认知负荷

The effect of text-picture distance on text-picture process: Evidence from eye-movement

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Abstract: Spatial contiguity effect refers that people learn more deeply from a multimedia material when corresponding text and picture are presented near rather than far from each other. However, most of the previous studies lacked quantitative definition for the distance between text and picture, leading to inconsistent operations among different studies, which may confuse the results (e.g. Beege et al., 2019; de Koning et al., 2020). In addition, studies on reading have found that learners can extract information from the parafoveal visual area and use this information to pre-process subsequent text information, but they cannot extract relevant information from the

peripheral visual area (Rayner, 1998, 2009; Zhang et al., 2020). Based on this, our research divided the text-picture distance into the parafoveal visual distance and the peripheral visual distance. We used the eye tracking technology and different kinds of methods for measuring the cognitive load, to explore the effect of distance on the text-picture process, including the eye-movement, cognitive load, performance and the trade-off between the perceptually intensive strategy and the memory intensive strategy while processing the text-picture information. In Experiment 1, a basic paradigm wherein participants made similarity judgments of one text card and one picture card was used as a simple text-picture process task, and we adopted a 2(text-picture distance: parafoveal visual distance, peripheral visual distance) $\times$ 2(card similarity: no similarity, one similarity) within-subject design. In Experiment 2, the more complex learning material (lightning formation lesson) was used as a text-picture learning material, and we adopted a one-way between-subject design which varied the text-picture distance into the parafoveal visual distance and the peripheral visual distance. Both of the experiments measured the eye-movements, cognitive load and the process performance. In Experiment 1, we found that, participant in the parafoveal distance condition got higher score and responded quicker than those in the peripheral vision area condition, and their eye-movement (i.e. integrative transitions between text and picture card) was significantly higher than the peripheral vision area group. But there was no significant difference in cognitive load between the two groups. Similarly, Experiment 2 found that the parafoveal group scored higher on the retention test and the transfer test, and have more integrative transitions and lower cognitive load than another group. In addition, the mediating effect analysis showed that the integrative transitions between text and picture played a mediating role in the effect of text-picture distance on retention test. The results show that: (1) The text-picture distance based on the characteristics of different visual areas (parafoveal distance and peripheral visual area distance) has an effect on the text-picture processing, information in the parafoveal distance lead to more text-picture integrative transitions. (2) The text-picture distance affects the trade-off between gaze and working memory use, which further influences the performance of the text-picture process. To be specific, when text and picture are presented in the parafoveal visual area, subjects prefer the perceptually intensive strategy to perform better, that is, they acquired more information through saccades. On the contrary, in the peripheral visual distance condition, subjects prefer the memory intensive strategy, they used “knowledge-in-the-head” to replace “knowledge-in-the-world”, so the cognitive load was higher, which may harm to their performance. Our results replicate and extend existing findings of the spatial contiguity effect, and provide reference for future research.

Keywords: spatial contiguity effect; text-picture distance; text-picture processing; integrative transitions; cognitive load

记忆的垂直空间隐喻表征及其对词汇学习的影响

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摘要 随着具身思潮的发展，越来越多的理论方法已经认可了身体可能是塑造诸如记忆等高级认知功能的关键。目前，记忆的具身效应研究往往是借助情感效应概念的隐喻表征，较少有实验脱离情感背景探讨长时记忆中更直接简单的隐喻联结。本研究从语言文化中垂直空间方位与记忆遗忘概念的隐喻表达出发，采用实验法在 236 名大学生中，考察了中性条件下长时记忆的垂直空间隐喻表征，探讨了垂直空间知觉对词汇学习的影响。实验 1 采用迫选法，在明确要求被试将置于垂直空间方位上下的希腊词选入或剔除出记忆清单时，发现被试倾向于将垂直空间上方位的词选入记忆列表，而将垂直空间下方位的词剔除出记忆列表，以上选择均显著高于随机选择概率。实验 2 加入记忆指令，对实验材料做垂直空间方位呈现，结果发现，在自然记忆条件下，当单字呈现在屏幕上方时更容易记忆，当单字呈现在屏幕下方时更容易遗忘。实验 3、4 引入有意遗忘范式，在编码与提取阶段操纵与隐喻一致或不一致的材料呈现与反应方式，结果发现，在编码阶段，针对指示记忆的单字执行与隐喻一致的行为，可以提升词汇学习效果，而执行不一致的行为，将导致回忆结果变差；在提取阶段，针对指示遗忘的单字执行与隐喻一致的行为，可以促进词汇检索，执行不一致的行为，则会加剧反应时长。四个实验的结果已经从两个角度：记忆与遗忘的抽象概念和加工过程；两种情境：自然记

忆和指令记忆；三个阶段：记忆前的选择阶段、记忆编码阶段和记忆提取阶段证明了语言中使用的“上空间方位对应记忆，下空间方位对应遗忘”的隐喻联结具有心理现实性，并且这种隐喻联结会受到记忆指令和记忆确定程度的影响，作用于词汇学习结果。未来应进一步探究该隐喻联结背后的机制与影响因素，以便在日常教学中，有效利用记忆的垂直空间隐喻以提升学生的词汇记忆效果。

关键词 记忆，隐喻，空间，有意遗忘，词汇学习

The Vertical Spatial Metaphor Representation of Memory and Its Influence on Word learning

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Abstract: With the development of embodied thought, an ever-increasing number of different theoretical approaches have endorsed the view that the body is key to shaping higher level cognitive functions such as memory. At present, studies on embodied effects of memory often rely on the metaphorical representation of the concept of affective valence, and few studies have explored more direct and simple metaphorical associations in long-term memory without emotional context. Starting from the metaphorical representation of vertical spatial orientation and memory forgetting concepts in language culture, the vertical spatial metaphor representation of long-term memory in neutral condition was investigated in 236 college students by experimental method, and this study further explores the influence of vertical spatial perception on word learning. Study 1 was a forced-choice task in which participants were asked to select or remove Greek words above or below the vertical spatial orientation from a memory list. The results showed that the subjects tended to select the words in the upper vertical space into the memory list, while the words in the lower vertical space were excluded from the memory list, and the above choices were significantly higher than the random selection probability. Experiment 2 added memory instructions and the experimental materials were presented in vertical spatial orientation. The results showed that under the natural memory condition, the words were easier to be remembered when they were presented at the top of the screen, and easier to be forgotten when they were presented at the bottom of the screen. Introduced deliberately forgotten paradigm in experiment 3, 4, Manipulating the presentation of materials and response mode that are consistent with or inconsistent with metaphors in the encoding and extraction stages. The results showed that, in the encoding stage, the performance of vocabulary learning was improved by performing the behavior consistent with the metaphor, while the performance of inconsistent behavior was worse for the word indicating memory. In the extraction stage, word retrieval was enhanced by performing the behavior consistent with the metaphor for the forgetting word, while the behavior inconsistent with the metaphor would increase the response time. The results of the four experiments have proved that there is psychological reality of “Memory is up, forgetting is down”, and this metaphorical association can be influenced by memory instruction and the degree of memory certainty, which affects the vocabulary learning results from two perspectives: abstract concepts and processing of memory and forgetting; Two situations: natural memory and instruction memory and three stages: the selection stage before memory, the encoding stage and the retrieving stage. In the future, it is necessary to further explore the mechanism and influencing factors behind the metaphorical connection, so as to effectively use the vertical spatial metaphor in memory in daily teaching to improve students' vocabulary memory effect.

Keywords: memory, metaphor, space, directed forgetting, word learning

工作记忆对知识整合加工过程的影响

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摘要 知识整合是指个体把从两个或多个分离但相关的情节中习得的信息结合起来生成新的知识。目前，关于工作记忆是否会影响知识整合尚无清晰的认识。如果工作记忆影响整合表现，那么它在知识整合加工过程的哪个阶段发挥作用？据此，本研究将通过三个实验，从行为和脑电两个层面探索这些问题。实验一采用分离句子范式，从行为层面考察高、低广度组被试通过整合分离但相关的主干事实对，自我生成新知识的表现。结果发现，高广度组被试整合事实生成成绩显著好于低广度组被试，表明工作记忆差异会影响被试的知识整合表现。此外，相对于低广度组被试，高广度组被试对主干事实的加工时间更长、回忆成绩更好；且被试的整合表现与主干事实回忆成绩、加工时间呈显著正相关。表明工作记忆广度影响被试编码主干事实，进而影响整合表现。实验二和实验三结合事件相关电位（ERP）技术，试图从认知机制角度探讨工作记忆在知识整合具体加工过程中的作用。实验二采用再认探测法，考察了工作记忆对重新激活加工进程的影响。结果显示，在词组 1 位置处，高、低广度组被试均在主干事实 2 后呈现探测句比主干事实 2 前呈现条件下的反应时更快、诱发的 N400 更小，表明被试在学习主干事实 2 后确实重新激活了先前习得的相关主干事实 1，且重新激活是基于主干事实间的共同元素迅速发生的。高广度组被试相对于低广度组被试，对探测句的正确率更高、反应时更快、诱发的 N400 更小，表明工作记忆广度会影响重新激活阶段。实验三采用整合事实判断任务，结合 ERP 技术，探讨高、低广度组被试自我生成新知识的加工进程。结果发现，工作记忆广度与整合事实陈述类型交互作用显著。高广度组被试，错误陈述整合事实比正确陈述整合事实条件诱发了更大的 P600，而对于低广度组被试，两种陈述条件下诱发的 P600 没有显著差异。表明高广度组被试能迅速将整合事实纳入语义知识库，并更好地检测到错误陈述整合事实句子中不一致词。

关键词 知识整合，加工过程，工作记忆

The Influence of Working Memory on the Process of Knowledge Integration

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Abstract: Knowledge integration means self-generation of new knowledge through integration of information acquired in two (or more) separate but related learning episodes. Whether working memory will affect the performance of knowledge integration and its role on the process of knowledge integration is worthy of further investigation. Therefore, this study will explore these issues through three experiments from two levels of behavior and EEG. Experiment 1 adopted the separated sentence paradigm to investigate whether there were significant differences in the performance of self-derivation of the high and low span group participants. The results found that self-derived the integration fact performance in the high span group were significantly better than those in the low span group, indicating that working memory does affect the knowledge integration performance. Further the stem facts recall performance in the high span participants were significantly better than those in the low span group, and the processing time of the stem fact were more longer. The self-derivation performance through integration were significantly correlated to the level of stem facts memory and the processing time of the stem fact. It shows that working memory affect encoding the stem facts, and affect the self-derivation through integration. Experiment 2 and Experiment 3 use event-related potential (ERP) technology to explore the role of working memory in the processing of knowledge integration. Experiment 2 investigated whether there were differences in the reactivation processing activities of the participants in different working memory span by manipulating the position of the stem fact 1 as the probe sentence. Since the time course of reactivation is not yet clear, the probe sentence is divided into four phrases (phrase 1, phrase 2, phrase 3, and phrase 4) to explore the time course of probe sentence. The results show that at the position of phrase 1, the participants presented the probing sentence after the stem fact 2 compared with the probing

sentence before the stem fact 2 induced a smaller N400, suggesting that the participants were indeed reactivated after learning the stem fact 2. Compared with the participants in the low span, the high span response to the probe sentence showed a smaller N400, indicating that working memory will affect the reactivation stage. Experiment 3 uses integrated fact-judgment tasks, combined with ERP technology, to explore the time course of integrating. It was found that the working memory had a significant interaction with the statement type. In the high span participants, the misrepresentation of the integrated facts induced a greater P600 than the correct statement of the facts. For the low span participants, there was no significant difference in P600 induced by the statement of integrated facts. The high span participants can quickly incorporate the integrated facts into the semantic knowledge base, and better detect the abnormal words in the misstatement integrated fact sentences.

Keywords: Knowledge integration, Cognitive Processing, Working memory

汉字学习促进面孔加工能力：来自文盲和非文盲的证据

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摘要 神经元征用假说认为, 阅读是人类演化过程中新近产生的文化产物, 因此大脑皮层需要征用原用于其他功能(如加工面孔)的脑区处理视觉文字系统。神经影像学及电生理学的证据表明, 阅读经验的获得能重塑人类加工与语言刺激(如文字)及非语言刺激(如面孔)相关的脑结构及功能。整体加工是理解客体识别机制的重要窗口, 而已有的行为研究也发现, 阅读经验获得将影响面孔的整体加工。例如 Ventura 等人(2013)采用完整组合面孔范式发现, 阅读经验增加能够降低面孔的整体加工; Cao 等人(2019)采用空间距离范式发现, 阅读经验的获得能促进个体对面孔特征之间空间距离的再认绩效。迄今为止关于阅读经验如何影响面孔整体加工的研究仍然较少; 这些有限的研究使用了不同的实验范式, 而这些范式可能揭示客体整体加工的不同机制(Richler & Gauthier, 2014)。因此, 在客体加工领域内其他重要的研究范式(如面孔倒置范式)中是否仍然能够观察到相似的阅读经验效应, 仍然是需要探讨的问题。本研究采用两个实验先后探讨阅读经验习得对客体倒置效应的影响(实验一), 以及空间频率信息在其中的调制作用(实验二)。面孔倒置效应是指, 个体在识别倒立面孔时的绩效显著低于识别正立面孔的绩效, 且面孔的倒置效应比非面孔刺激的倒置效应更大(Yin & Robert, K., 1969)。实验一采用 2 (被试类别: 文盲 / 非文盲) * 2 (刺激类别: 面孔 / 房屋) * 2 (方向: 正立/倒立)混合实验设计。其中被试类别为组间变量, 刺激类别和方向为组内变量。招募文盲被试 15 人(14 名女性, 平均年龄=64.4 岁)及与其年龄匹配的非文盲 15 人(14 名女性, 平均年龄=61.0 岁)。结果发现: (1) 在正确率上, 被试类别和刺激类别的交互作用显著, 非文盲面孔识别的正确率显著高于文盲, 而两组被试在房屋刺激的识别正确率上不存在显著差异; 被试类别和方向的交互作用显著, 总的看来, 非文盲对正立刺激的识别正确率显著高于文盲, 但对倒立刺激的识别正确率与文盲无显著差异; 三因素间的交互效应不显著。(2) 在反应时上, 仅发现刺激类别和方向的主效应。这表明, 阅读经验会调制面孔的整体加工。实验二采用类似实验一的实验设计(除将刺激类别更换为空间频率: 高空间频率 / 低空间频率, 组内变量)。招募文盲被试 11 人(10 名女性, 平均年龄=63.3 岁)及非文盲 11 人(11 名女性, 平均年龄=61.0 岁)。结果发现: (1) 在正确率上, 被试类型与方向的交互作用显著, 即正立条件下, 非文盲的正确率显著高于文盲, 而倒立条件下, 被试类型差异不显著。(2) 在反应时上, 被试类别和空间频率的交互作用显著, 即高空间频率下, 非文盲反应速度显著慢于文盲(边缘性显著: $p = 0.057$), 低空间频率上, 被试类型差异不显著。这表明, 阅读经验能够促进面孔的倒置效应程度, 且不受空间频率的调制。总之, 两项实验发现共同支持学习汉字促进面孔的整体加工的观点。

关键词 阅读经验, 刺激类别, 空间频率, 整体加工, 神经元征用假说

Learning Chinese characters promotes face processing: Evidence from illiterate and illiterate adults

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Abstract: Neural recycling hypothesis holds that our brain requires to recycle these neural infrastructures dedicated originally to different, but available and similar functions (such as faces) to deal with scripts system, a newly cultural invention of human beings, over evolutionary history. Converging evidence from neuroimaging and electrophysiological studies suggests that literacy acquisition can reshape the structures and functions of human brain in processing linguistic stimuli (such as words) and even non-linguistic stimuli (such as faces). Configural processing is an important window to understand the mechanism of object recognition, and a few existing behavioral research also found that learning to read affects configural processing of faces. For instance, using the complete composite-face paradigm, Ventura et al. (2013) found that the increase in reading experience could automatically reduce configural processing of faces; Cao et al. (2019) used the spatial distance paradigm to manipulate the spaces between facial features and find that literacy acquisition could promote the recognition performance of configural processing when faces had the same key facial features but different spacing distance between them. However, there are still few studies on how literacy affects the composite face processing, in which different experimental paradigms may tap into different mechanisms underlying configural objects processing (Richler & Gauthier, 2014). Therefore, whether similar literacy effects on objects processing could still be observed in other important experimental paradigms (e.g., face inversion paradigm) is still unexplored. In the present study, two experiments were conducted to investigate the effect of literacy on object inversion effect (Experiment 1) and the modulating effect of spatial frequency (Experiment 2). Face inversion effect refers to the fact that the performance of an individual in recognizing an inverted face is significantly lower than that of an upright face, and the face inversion effect is greater than that of other stimuli (Yin & Robert, 1969). In Experiment 1, 2 (Subject group: illiterate / literate) * 2 (Stimuli category: face / house) * 2 (Orientation: upright / inverted) mixed experimental design was used with the Stimuli category and Orientation as within-subjects factors, and Subject group as one between-subjects factor. Fifteen illiterates (14 females, $M_{age} = 64.4$ years) and 15 literates (14 females, $M_{age} = 61.0$ years) were recruited. The results showed that: (1) On accuracy, the interaction between Subject group and Stimuli category was present, that is, the accuracy of literates was significantly higher than that of illiterates for faces, however there was no distinction between Subject group for houses. The interaction between Subject group and Orientation was significant, that is, the accuracy is significantly higher for literates than for illiterates in upright orientation, while no significant difference was observed between both groups in inverted orientation. A triple interaction among these variables was not observed. (2) On response time, the main effects of Stimuli category and Orientation were found. This suggests literacy could modulate configural-face processing. In Experiment 2, the design was similar to experiment 1 (except that Stimulus category was changed into Spatial frequency with within-subjects variable: high spatial frequency / low spatial frequency). Eleven illiterates (10 females, $M_{age} = 63.3$ years) and 11 literates (11 females, $M_{age} = 61.0$ years) were recruited. The results showed that: (1) On accuracy, the main effects of Subject group, Orientation and Spatial frequency were found. In addition, the interaction between Subject group and Orientation was significant, that is, the accuracy of literates was significantly higher than that of illiterates for upright condition, while no significant difference between both groups for inverted condition was observed. (2) On response time, there was a significant interaction between Subject group and Spatial frequency, that is, for high spatial frequency condition, the response time was marginally significantly slower for literates than for illiterate; there was no significant difference between both groups for low spatial frequency condition. This shows that literacy could promote the degree of face inversion effect regardless of spatial frequencies. In conclusion, the findings of two experiments together support the view that literacy promotes

configural-face processing.

Keywords: literacy, stimuli category, spatial frequency, configural processing, neural recycling hypothesis

词汇阅读中视觉干扰效应及影响因素

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摘要 日常生活中个体阅读孤立词汇的情境较为少见, 视觉词汇大多伴随其它文字材料(如文本阅读)或其它视觉材料同时出现, 涉及多个刺激的同时加工。以往关于多视觉刺激同时加工的研究主要集中在工作记忆领域, 发现视野内呈现材料的数量及材料间的视觉相似性均会对个体的工作记忆产生影响。尽管过往研究对多刺激呈现条件下材料数量和材料间视觉相似性对视觉材料工作记忆的影响进行了较多探讨, 但与工作记忆不同, 文字阅读是对目标文字的即时性加工, 无需在工作记忆系统中对信息进行长时间的保持。因此, 词汇阅读如何受到视野内刺激的影响尚不清楚。为了探讨该问题, 本研究通过三个实验, 分别以中文词语、面孔图片和韩文假词为干扰材料, 采用词汇判断任务, 探讨了词汇阅读中视觉干扰效应及影响因素。结果发现, 干扰刺激的数量和干扰刺激与目标词汇的类别一致性均会对词汇阅读产生影响。具体而言, 在中文词语的干扰条件下, 干扰材料的数量会对词汇阅读产生显著影响, 有干扰条件下的词汇判断速度显著慢于无干扰条件。此外, 干扰材料与目标材料的类别一致性也会对词汇阅读产生显著影响。相比于不同类别的干扰材料, 同类别的干扰材料会对词汇阅读速度产生更强的干扰效应。进一步研究发现, 干扰材料与目标材料的类别一致性效应不会受到干扰材料与目标材料视觉相似性的影响。这些结果可能反映了同类别多个刺激的加工需要在该类别的特异性脑区内竞争加工资源, 说明干扰材料与目标材料的类别一致性对目标词汇的阅读具有重要影响。

关键词 词汇判断任务, 词汇阅读, 视觉干扰效应, 类别特异性加工, 汉字加工

Visual Interference and its Influencing Factors in Word Reading

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Abstract: In daily life, it is rare for individuals to read isolated words, while most visual words appear together with other text materials (such as text reading) or other visual materials, which involves the simultaneous processing of multiple stimuli. Previous studies on simultaneous processing of multiple visual stimuli have focused on working memory. It has been found that the number of materials presented in the visual field and the visual similarity between the materials have an impact on individual working memory. However, unlike working memory, text reading is a real-time processing of the target text and does not need to maintain the information in the working memory system for a long time. Therefore, it is not clear how vocabulary reading is affected by intraocular stimuli. In order to investigate this problem, this study conducted three experiments, using Chinese words, face pictures and Korean false words as interference materials, respectively, using a lexical decision task to explore the visual interference effects and influencing factors in word reading. The results showed that both the number of stimuli and the consistency between the stimuli and target words had an effect on word reading. Specifically, in the condition of interference of Chinese words, the amount of interference material has a significant impact on word reading, and the speed of lexical decision in the condition of interference is significantly slower than that in the condition of no interference. In addition, the category consistency between the interference material and the target material also has a significant impact on word reading. Compared with different types of interference materials, the same type of interference materials have a stronger interference effect on word reading speed. Furthermore, it is found that the category consistency effect of the interfering material and the target material is not affected by the visual similarity between the interfering material and the target material. These results may reflect that the processing of multiple stimuli of the same category needs to compete for processing resources in the brain region specific to the same category, indicating that the category consistency of the interference material and the target material has an important effect on the reading of target words.

Keywords: lexical decision task, word reading, visual interference effect, category-specific processing, Chinese word processing

4.2 发展心理专业委员会

(1) “发展心理专业委员会”口头报告分场 1

母婴的生理共同调节预测学步儿的恐惧调节

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摘要 情绪调节能力对儿童的发展和适应具有重要意义, 其中对恐惧情绪的调节能够有效预测儿童的社会退缩、焦虑等。然而, 儿童在早期尚未具有独立的自我调节能力, 依赖来自抚养者的外在的调节。根据亲子相互调节模型和生物行为同步性模型, 亲子互动过程中, 母婴在行为、生理状态上存在相互调节、相互影响、相互预测的关系, 即亲子共同调节; 通过亲子互动中的共同调节, 儿童逐步锻炼、发展出更好的自我调节能力。本研究探究了母婴互动中的生理共同调节能否预测学步儿的恐惧调节。研究采用追踪设计, 6 个月时, 母婴参与冻脸范式 (120 个母子对), 母婴的生理指标 RSA 呼吸性窦性心率不齐 (一个常用的生理调节指标) 通过心电信号测量; 2 岁时, 儿童参与一系列诱发儿童恐惧情绪的情境例如男陌生人接近、小丑, 儿童的恐惧调节能力由观察编码得到 (恐惧的表情和肢体动作, 情绪调节行为)。采用多水平模型估计亲子对在冻脸范式恢复阶段的生理共同调节, 即在亲子对对内水平, 母婴的生理指标随着时间变化在多大程度上是可以相互预测的。通过贝叶斯方法得到母婴生理共同调节的系数。采用路径分析, 检验母婴生理共调对学步儿的恐惧调节的预测作用。结果显示: (1) 总体上, 母婴对的呼吸性窦性心率不齐存在显著的相互预测的关系, 共同调节系数显著; (2) 母婴生理共同调节能够显著地负向预测恐惧诱发情境中儿童的恐惧情绪水平, 显著地预测儿童更多的注意力导向的情绪调节行为, 更少的抚养者导向的情绪调节行为。母婴生理共同调节能够预测学步儿更好的恐惧调节能力。研究结果支持了早期亲子共同调节对儿童自我调节的促进作用, 亲子在生理状态上的相互调节和影响能够锻炼儿童的情绪调节能力。

关键词 母婴互动, 共同调节, 呼吸性窦性心率不齐, 恐惧, 自我调节

Mother-infant physiological coregulation predicts toddler' fear regulation

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Abstract: Emotion regulation is important for children's development and adjustment, among which fear regulation ability can effectively predict children's social withdrawal and anxiety. However, children can't self-regulate independently in the early stage, and they rely on the external regulation from caregivers. According to the parent-child mutual regulation model and the bio-behavioral synchrony model, during mother-child interaction, the mother and child regulate, influence and predict each other at the behavioral and physiological levels, that is mother-child co-regulation; through this co-regulation, children gradually exercise and develop self-regulation ability. This study examined whether the physiological co-regulation during the mother-infant interaction can predict toddlers' fear regulation. The study adopted a longitudinal design. At 6 months, mothers and infants participated in the still-face paradigm (120 mother-infant dyads), while the mother and infant's RSA (respiratory sinus arrhythmia, a commonly used physiological regulation index) was measured by ECG signals. At 2 years old, children engaged in a series of fear-eliciting episodes like stranger approach and clown episodes, while children's fear regulation was obtained by observation coding (fear expressions, body movements, and emotion regulation behaviors). A multi-level

model was used to estimate the mother-infant physiological co-regulation at the recovery phase of the still-face paradigm. Coregulation measured the degree to which the physiological states of the mother and the infants could predict each other at the within-dyad level. A Bayesian method was used to obtain the mother-infant co-regulation coefficient. Path analysis was used to test the predictive effect of mother-infant physiological co-regulation on toddlers' fear regulation. The results showed that: (1) On average, mother-infant respiratory sinus arrhythmia during interaction could predict each other significantly; (2) mother-infant physiological co-regulation can significantly negatively predict toddlers' fear levels during fear-eliciting episodes, significantly predicts toddlers' more attention-oriented emotion regulation behaviors and fewer caregiver-oriented emotion regulation behaviors. The mother-infant physiological co-regulation can predict more effective fear regulation of toddlers. These findings support the benefits of early mother-child co-regulation on self-regulation of children. Children's emotion regulation ability could be developed during mother-child interaction, through the mutual regulation and influence of physiological states.

Keywords: mother-infant interaction, coregulation, respiratory sinus arrhythmia, fear, self-regulation

4~6 岁儿童第三方惩罚行为的发展及其与情绪的关系

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摘要 第三方惩罚行为是指给予违反社会规范的人一个消极结果，尽管惩罚者自身没有直接地被违反社会规范的行为所影响。进行惩罚的个体自身没有受到不公平的对待，自身利益并未受到来自他人的所害，是非利益相关的第三方，这种惩罚不是考虑自身的利益，并且有时候还需要付出一定的代价，这种形式即为第三方惩罚。研究从不公平规避理论出发考察 4~6 岁学前儿童第三方惩罚行为的发展特点，采用最后通牒博弈范式变式，由提议者提出不公平或公平的分配提议，儿童作为第三方代替接受者做出决策，儿童对分配提议的拒绝作为第三方惩罚的外显指标，考察不利不公平($N=180$)与有利不公平情境下($N=180$)第三方惩罚的年龄发展特点，关注有无代价及分配结果对儿童第三方惩罚行为的影响，对比两种情境下第三方惩罚的发展轨迹及快速发展期，考察儿童在两种情境下对不公平分配的情绪与惩罚决策的关系。研究结果显示：4 岁儿童已经具有第三方惩罚行为，随着年龄的发展呈现显著上升的趋势，5~6 岁儿童第三方惩罚行为发展较为稳定，儿童的第三方惩罚主要是针对不公平的分配结果，并在一定程度上受到自身代价的影响。不利不公平情境下的第三方惩罚行为和消极情绪高于有利不公平情境下的惩罚行为和情绪得分。不公平分配结果会引发儿童更多的消极情绪，不利不公平下情绪均高于有利不公平条件下的得分，惩罚行为能够有效的减少儿童的消极情绪。

关键词 儿童，第三方惩罚，有利不公平，不利不公平

The Development of Third Party Punishment and Its Relationship with Emotion in Children Aged 4-6 Years

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Abstract: Third-party punishment refers to actions that inflict harm against an individual and that are motivated by that individual's violation of social norms. when punishers are not personally affected by the unfair behavior and when punishment is costly. One striking feature of human social behavior is third-party punishment. Based on the theory of unfair circumvention, this paper investigates the development characteristics of the third-party punishment behavior of preschool children aged 4-6 years. The ultimatum game paradigm is used. The proposer puts forward unfair or fair distribution proposals. Children as the third party make decisions instead of the recipients. Children's rejection of distribution proposals is taken as the explicit index of third-party punishment, An investigation of the age development of third party penalties between advantageous unfair ($N=180$) and disadvantageous unfair situations

($N=180$). we manipulated whether punishment required subjects to pay personal costs, comparison of the development trajectory and rapid development period of the three party punishment under the two situations. The relationship between emotional caused by unfair distribution of children and punishment decisions in two situations. Finally, we investigated whether children would be equally likely to punish any unequal resource allocations, or whether they would show more sensitivity to inequity when it resulted from selfishness than generosity. Our results show that children aged 4 to 6 have developed a willingness to punish unequal allocations in a third-party context. A sensitivity to cost is present in 4-year-olds and appears to be stable across 5 to 6 year old. Children are sensitive to costs, as they punish less when punishment entails personal sacrifice. Importantly, despite the personal sacrifice, 5 to 6 years old children systematically punish unfair behavior. Moreover, these children are sensitive to the direction of inequity: they are more likely to reject selfish unequal allocations compared to generous unequal allocations. There are significant differences in emotion induced by different distribution results. Punishment can effectively reduce the negative emotions of children, third party punishment and emotion scores in disadvantage unfair situation higher than advantage unfair.

Keywords: Children, Third Party Punishment, Favorable Unfair, Unfavorable Unfair

谁来做选择？选择自由对儿童亲社会行为的影响

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摘要 儿童亲社会行为（如分享、助人等）的发展一直是儿童道德发展的重要话题。以往研究发现选择自由（自主做选择，或他人做选择）对儿童亲社会行为有重要影响，但少有研究考虑为儿童做选择的成人与儿童的情感亲密程度、以及成人选择的合理性等对儿童亲社会行为的影响。本研究以 4-5 岁学龄前儿童为对象，探究选择自由及做选择的人物与儿童之间的关系以及选择的合理性对儿童亲社会行为的影响。实验一招募 70 名 4-5 岁儿童及其母亲，实验二招募 84 名 4-5 岁儿童。实验一中，所有儿童均面临一个要不要给玩偶（小猴）分享贴纸的选择，我们将儿童随机分配到三个条件中，面临三种不同的选择情境：在自主选择情境中，儿童自己决定是否将贴纸分享给玩偶；在母亲选择情境和主试选择情境中，儿童的母亲或主试要求儿童必须分享。接下来，主试测量儿童分享时的心情，并测量儿童在一个新的分享情境（即，面对一个新的玩偶小象时）的分享行为（分享的贴纸数量，0-3 个）。除此之外，自主选择组和母亲选择组的儿童母亲填写测量母子关系的问卷。结果发现，虽然三组中儿童分享行为没有明显差异，但母子关系亲密程度显著影响儿童分享时的心情（ $\beta=-0.54, SE=0.02, t=-2.49, p<.05$ ）：母子关系亲密的儿童在母亲选择条件下跟自主选择条件下一样快乐，而关系疏远的儿童在母亲选择条件下的快乐体验降低。实验二与实验一的方法基本一致，但选择条件改为，自主选择、母亲合理选择（母亲解释分享的理由）及母亲不合理选择（强制分享，不解释分享的理由）三种条件。结果发现，在初次（与小猴玩偶）分享中，母亲合理选择和不合理选择下的分享人数均显著高于自主选择的分享人数（ $F(2, 80)=8.47, p<.05$ ），然而，在面对新的分享对象（小象）时，母亲合理选择组的儿童给新玩偶（小象）的分享数量最多，而自主选择组和母亲不合理选择组的儿童分享数量则较低。综上所述，拥有选择的自由与遵从关系亲密的成人的选择都会让儿童的分享心情更积极；选择自由不会促进儿童的后续分享行为，而成人合理的选择和指导会促进儿童后续表现出更慷慨的分享行为。本研究对培养学龄前儿童的亲社会行为具有重要意义。

关键词 亲社会行为，选择，社会认知发展，学龄前儿童发展

Who Makes the Choice?

The Influence of Choice Freedom on Children's Prosocial Behavior

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Abstract : The development of children's prosocial behaviors (e.g., helping, sharing) is an important topic in children's moral development. Previous studies have revealed that the freedom to make choices (whether children make choices for themselves or other people make choices for them) has important influence on children's prosocial behaviours. However, few studies have investigated the impacts of the relatedness between the child and the adult who makes choices for them, and the rationality of adult choice on children's prosocial behaviors. Across two studies, we investigated how the freedom of making choices, the relatedness between children and the adults who make choices for them and the rationality of choices influenced children's prosocial behaviours. In study 1, 70 children aged 4-5 and their mothers were recruited, and in Study 2, 84 children aged 4-5 were recruited. In Study 1, children faced a decision of whether to share a sticker with a puppet (monkey). Children were randomly assigned to one of three conditions: In self-choice condition, child could decide for themselves whether to share or not; in mother-choice condition, the child's mother instructed the child to share, and in the experimenter-choice condition, the experimenter instructed the child to share. After this, we measured children's feelings in the sharing task, and measured children's sharing behaviours in a novel sharing context where children needed to decide how many stickers (0-3) to share with a new puppet (elephant). Meanwhile, mothers in self-choice condition and mother-choice condition were asked to fill out questionnaires about child-mother relatedness. Results showed that although there was no significant difference on children's sharing behaviours in three conditions, the strength of relatedness between children and mothers had a significant influence on children's sharing feelings($\beta=-0.54$, $SE=0.016$, $t=-2.488$, $p<.05$): children who felt closely related to their mother in the mother-choice condition demonstrated as positive feelings when sharing as those in the self-choice condition, but children who felt distant to their mother had more negative feelings after sharing in mother-choice condition than in the self-choice condition. In Study 2, we employed similar methods in addition to changing the three conditions to self-choice condition, mother reasonable-choice condition (mother explained the reason for the sharing choice) and mother unreasonable-choice condition (mother forced the child to make choice without explaining the reason). Results demonstrated that when asked to share with the first puppet, children were significantly more likely to share in the mother reasonable-choice condition and the mother unreasonable-choice condition than those in the self-choice condition($F(2, 80)=8.47$, $p<.05$). Nevertheless, when asked to share with a new puppet (elephant), children in mother reasonable-choice condition shared more stickers with the puppet (elephant) than children in the self-choice condition and the mother unreasonable-choice condition. In summary, having the freedom to make choices and following choices made by adults who have high relatedness with children can both lead to more positive feelings in sharing. The freedom to make choices does not improve subsequent prosocial behaviours, while adults' reasonable choices and guidance are helpful to facilitate subsequent sharing behaviours. This research is of great significance to the development of preschoolers' prosocial behaviours.

Keywords: prosocial behavior, choice, social cognitive development, preschoolers

3-7 岁幼儿气质类型新探：基于潜在剖面分析

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摘 要 气质是个体出生后最早表现出来的一种比较明显而稳定的个性特征, 是儿童的行为表现方式, 与儿

童问题行为等密切相关。张雨青等人通过对托马斯、切斯的问卷修订,将我国儿童气质划分为难养型,启动缓慢型,中间偏易型,易养型,中间偏难型五个类型。经典的气质类型虽然被广泛应用,但其分类依据还有待探讨。近年来,潜在剖面分析被认为是最可靠的分类方式,可以通过拟合指数更科学的对变量进行划分。因此,为进一步考察幼儿不同分类方法下的气质类型与问题行为的关系,本研究采用了《NYLS3-7岁儿童气质问卷》对大连市区内811名正常幼儿的气质类型进行了测查,并采用潜在剖面分析的方法对其进行分析。结果发现:幼儿气质可分为三个潜在类别:非适应型、中间型、适应型,所占比例分别为38.96%、46.24%、14.80%。非适应型幼儿在品行问题、学习问题、心身问题、冲动多动、焦虑问题以及多动指数上得分均高于中间型幼儿和适应型幼儿。而在经典气质类型下,易养型幼儿与中间偏易养型幼儿在各问题行为维度上均无显著差异,难养型幼儿、中间偏难养型幼儿以及启动缓慢型幼儿在问题行为不同维度上也无显著差异。结论:幼儿气质类型可分为三类:非适应型、中间型、适应型,且在问题行为水平表现出差异。

关键词 潜在剖面分析, 气质, 问题行为, 幼儿

Temperament types of 3-7-Year-old children: Based on potential profile analysis

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Abstract: Temperament is one of the most obvious and stable personality characteristics after birth, which is closely related to children's problem behavior. According to the revision of Thomas and Chess' questionnaire, domestic scholars divide Chinese children's temperament into five types: difficult, slow to warm up, intermediate low types, easy and intermediate high types. Although classical temperament types are widely used, their classification basis remains to be explored. In recent years, the latent profile analysis is considered to be the most reliable classification method, and the variables can be divided more scientifically by fitting index. Therefore, in order to further investigate the relationship between temperament types and problem behaviors under different classification methods, The New York Longitudinal Study Parent Temperament Questionnaire was used to investigate the characteristics and type distribution of temperament in 811 3-7years old children in Dalian China. And the latent profile analysis method is used to analyze it. The results showed that children's temperament can be divided into three potential categories: non adaptive, intermediate and adaptive, accounting for 38.96%, 46.24% and 14.80% respectively. Non adaptive children have higher scores in behavior problems, learning problems, psychosomatic problems, impulsive hyperactivity, anxiety problems and hyperactivity index than intermediate children and adaptive children. In the classic temperament type, there is no significant difference in the dimensions of problem behavior between easy and intermediate low types, and there is no significant difference in the dimensions of problem behavior between difficult, intermediate high types and slow to warm up. Conclusion: Children's temperament can be divided into three types: non adaptive, intermediate and adaptive, and there are differences in the level of problem behavior.

Keywords: latent profile analysis, types of temperament, problem behavior, child

幼儿攻击者的懊悔表现对受害者宽恕的影响：旁观者的调节作用

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摘要 宽恕作为一种积极心理品质,不仅有利于减少人际冲突,而且有助于缓解受害者所遭受的心理伤害。在攻击或欺凌事件中,促成受害者对攻击者的宽恕是一种有效的冲突处理策略。已有研究表明,成人或青少年攻击者的懊悔表现是促成受害者宽恕的重要因素,且其中关键的认知能力基础是正确解读攻击者悔意的心理理论能力。心理理论能力发展的敏感期是幼儿期,然而,鲜有研究尝试在幼儿群体中揭示攻击者懊悔表现与受害者宽恕的关系。此外,在集体主义文化的人际互动中,旁观者通常发挥着重要的影响作用。受害者对旁观者看待自己宽恕攻击者与否的行为过程,可能是对幼儿心理理论能力的更高要求。鉴于此,本研究尝试在幼儿群体中探究攻击者的懊悔表现对受害者宽恕的影响,并考察不同类型旁观者的可能调节作用。整群选

取 120 名 4.5-5.5 岁的幼儿被试, 采用经典的懊悔与宽恕行为实验范式: “撕图画”游戏、理解“懊悔”、资源分配任务。整个研究包含四组实验, 每组实验由 30 名被试参与。实验一在无旁观者条件下, 以分配“花朵”的数量作为宽恕的衡量标准, 考察懊悔对幼儿宽恕的影响; 实验二、三、四分别在教师旁观、好朋友旁观、陌生人旁观条件下, 考察旁观者身份对宽恕水平的影响作用结果表明: (1) 我国 4 岁半至 5 岁半的幼儿能够分辨、理解攻击者的懊悔表现, 对懊悔者的宽恕水平显著高于对不懊悔者。(2) 当有旁观者在场时, 幼儿同样能够分辨、理解攻击者的懊悔表现, 对懊悔者的宽恕水平显著高于对不懊悔者。(3) 旁观者类型的不同会引发幼儿宽恕行为的显著差异: 教师旁观时, 幼儿对无懊悔攻击者的宽恕水平增加, 但与无旁观者条件下差异不显著; 好朋友旁观时, 幼儿对不懊悔者的宽恕水平最高, 且与无旁观者条件下存在显著差异; 陌生人旁观时, 幼儿对不懊悔者的宽恕水平最低, 但无旁观者条件下的宽恕水平差异不显著。本文结合幼儿特点与集体主义文化特点对以上结果进行了讨论与反思。

关键词 幼儿, 懊悔, 宽恕, 旁观者

The effect of aggressor remorse on victim forgiveness in young children: the moderating role of bystanders

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Abstract: As a positive psychological quality, forgiveness not only helps to reduce interpersonal conflict, but also helps to alleviate the psychological damage suffered by the victims. Facilitating forgiveness of the victim towards the aggressor is an effective conflict management strategy in an aggressive or bullying incident. Studies have shown that remorse in adult or adolescent aggressor is an important factor in facilitating forgiveness by victims. And the key cognitive basis is the ability to correctly interpret aggressor's remorse in theory of mind. The sensitive period of theory of mind development is early childhood. However, few studies have attempted to reveal the relationship between aggressor remorse and victim forgiveness in young children. In addition, bystanders played an important role in interpersonal interactions in the context of collectivism culture. The process by which the victim perceives whether he or she forgives the aggressor to the bystanders may be a higher requirement for children's theoretical ability of mind. In view of this, this study attempted to explore the effect of aggressor remorse on victim forgiveness. Moreover, this study investigated the possible moderating effects of different types of bystanders in a group of young children. A total of 120 children aged 4.5 to 5.5 years were enrolled in this study. A classic paradigm of remorse and forgiveness was used: including "tear picture" game, the process of understanding "remorse" and resource distribution task. The study consisted of four sets of experiments, each with 30 participants. In experiment 1, when bystanders were watching, the number of distributed "flowers" was used as a measure of forgiveness, and the effect of remorse on forgiveness was investigated. In experiment 2-4, the effects of bystander types on forgiveness level were investigated under the conditions of bystanders are teachers, friends and strangers. The results showed that: (1) Chinese children aged 4 and a half to 5 and a half years could distinguish and understand the remorse of the aggressor, and the level of forgiveness for the remorseful aggressor was significantly higher than neutral aggressor. (2) In the presence of bystanders, the children were also able to distinguish and understand the remorse of the aggressor, and the level of forgiveness for the remorseful aggressor was significantly higher than that for the non-remorseful aggressor. (3) Different types of bystanders could lead to significant differences in children's forgiveness behavior: when the teacher was watching, children's forgiveness level to the non-remorseful aggressor increased, but the difference was not significant compared with the condition of no bystanders; When the friend was watching, children showed the highest level of forgiveness to the non-remorseful person, which was significantly different from the condition of no bystanders. When the stranger was watching, children showed the lowest forgiveness level to the non-remorseful aggressor, but the difference was not significant compared with the condition of no bystanders. This paper discussed and reflected on the above results based on the characteristics of children and collectivism culture.

Keywords: Young children, remorse, forgiveness, bystanders

儿童害羞与认知偏差的相互关系

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摘要 尽管大多数人都体验过害羞情绪, 但人群中仅有 10-16% 的人属于害羞气质。本研究主要关注的是害羞气质。先前研究表明害羞与认知偏差 (如, 判断偏差和解释偏差) 具有密切联系, 但是这些研究基本都是通过横断研究在西方人群或中国大学生群体中开展的, 得到的研究结果可能不具有很好的稳定性, 也不具有较强的准因果关系, 而且不能推广到中国儿童群体中。因此, 本研究旨在通过纵向调查考察儿童害羞与其对社会事件的判断和解释偏差之间的稳定性和准因果关系。采用儿童害羞问卷、消极社会事件可能性与代价问卷和模糊社会情境问卷追踪调查河南省固始县 1112 名四五年级小学生, 每半年调查一次, 共追踪调查三次 (T1、T2、T3)。在 T1 时, 四年级 485 人, 五年级 627 人, 男生 681 人 (61.24%), 女生 431 人 (38.76%), 被试年龄在 8-14 岁之间 ($M = 10.29$, $SD = 0.87$)。本研究对所得数据进行交叉滞后分析, 结果发现: (1) 儿童的害羞、对消极社会事件的可能性判断和代价判断以及对模糊社会情境的威胁解释在三次测量中都具有中等程度稳定性; (2) 儿童害羞可以显著正向预测其随后每次测量的可能性和代价判断; 可能性和代价判断只能显著正向预测最后一次测量的害羞, 且预测作用小于害羞对它们的预测作用。即, 儿童害羞与判断偏差存在相互预测的关系, 但害羞对可能性与代价判断的预测作用占主导地位; (3) 儿童害羞可以显著正向预测其随后每次测量的威胁解释, 但威胁解释对随后害羞无显著预测作用。

关键词 儿童, 害羞, 判断偏差, 解释偏差, 交叉滞后分析

The Mutual Relationships between Shyness and Cognitive Bias among Children

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Abstract: Although most of people have experienced shyness as a contextual emotion, shyness temperament is found in about 10-16% of the population. In this research, we focused on shyness temperament. Previous research suggested that there're close associations between shyness and cognitive bias (e.g., judgement bias and interpretation bias). However, these studies are basically carried out in the Western population or Chinese college students through cross-sectional investigations, and the research results may not be very stable or have strong quasi-causal relationships, and can not be generalized to the Chinese children. Therefore, the purpose of this study was to examine the stable and quasi-causal relationships between children's shyness and their biases in judging and interpreting social events through a longitudinal survey. The Children Shyness Questionnaire, the Possibility/Cost of Negative Social Events Questionnaire, and Ambiguous Social Situation Questionnaire were used to investigate 1112 fourth and fifth grade primary school students in Gushi County, Henan province. Data were collected every six months, and three-wave data were collected in total (T1, T2, T3). At T1, there were 485 students in the fourth grade, 627 students in the fifth grade, 681 boys (61.24%) and 431 girls (38.76%). The age of the participants was between 8 and 14 years old ($M = 10.29$, $SD = 0.87$). In this study, cross-lagged analysis was performed on the collected data. The results showed that: (1) Children's shyness, probability judgment and cost judgment of negative social events, and the threat interpretation of ambiguous social situations were all moderately stable in three times of measurements; (2) children's shyness significantly and positively predicted every subsequent probability judgment and cost judgment. While probability and cost judgment can only significantly and positively predict T3shyness, and the predictive effect is less

than the predictive effect of shyness on them. That is, children's shyness and judgment bias have a mutual predictive relationship, but shyness has a dominant role in predicting probability and cost judgment; (3) children's shyness significantly and positively predicted every subsequent threat interpretation, but threat interpretation had no significant predictive effect on shyness.

Keywords: Children, Shyness, Judgement Bias, Interpretation Bias, Cross-lagged analysis

(2) “发展心理专业委员会”口头报告分场 2

农村学龄前儿童心理理论的发展特点：社会领域理论的视角

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摘 要 社会领域理论（Social Domain Theory）主张儿童的社会认知包括道德、习俗和个人领域。道德领域有关公平和权利，具有强制性、普遍性、不可变性，如不能随便骂人。习俗领域对人际互动起调节作用，具有情境相对性和可变性，如不同社会制度下的风俗习惯。个人领域通常涉及个人的自我选择和自主性，较少受权威等因素的影响。心理理论（Theory of Mind, ToM）涉及个体对他人和自身心理状态的认知。对不同领域的社会理解以及心理理论的发展是个体社会性发展的重要组成部分，个体的行为不仅受其愿望、信念等基本心理状态的影响，同时也会受到其所处的道德、习俗或个人等领域的社会规则的调节和制约。有研究显示，农村学龄前儿童所处的生活环境对其心理理论的发展有一定的影响，但这些研究通常仅聚焦于个人领域，缺少跨领域的综合证据。本研究以 924 名 3-6 岁农村儿童为对象，采用故事-问题法，通过“规则意识”、“知道与否”和“错误信念”等任务考察了其在道德、习俗和个人领域内心理理论的发展特点。结果发现，在道德领域和习俗领域方面年龄的主效应显著， $F(3, 920) = 26.63, p < 0.001, \eta_p^2 = 0.08$ ， $F(3, 920) = 41.15, p < 0.001, \eta_p^2 = 0.12$ ，即 $\text{ToM}_6 \text{ 岁组} > \text{ToM}_5 \text{ 岁组} > \text{ToM}_4 \text{ 岁组} > \text{ToM}_3 \text{ 岁组}$ 。“知道与否”信念上也出现了年龄效应， $F(3, 920) = 84.39, p < 0.001, \eta_p^2 = 0.22$ ，即 $\text{ToM}_6 \text{ 岁组} > \text{ToM}_5 \text{ 岁组} > \text{ToM}_4 \text{ 岁组} > \text{ToM}_3 \text{ 岁组}$ 。直言错误信念和内容错误信念同样存在显著的年龄差异， $F(3, 920) = 46.11, p < 0.001, \eta_p^2 = 0.13$ ， $F(3, 920) = 38.54, p < 0.001, \eta_p^2 = 0.11$ ，二者均表现为 $\text{ToM}_6 \text{ 岁组} > \text{ToM}_5 \text{ 岁组} > \text{ToM}_4 \text{ 岁组}$ 和 $\text{ToM}_3 \text{ 岁组}$ ，但 3 岁组和 4 岁组的表现无显著差异。结果表明，农村地区学龄前儿童的心理理论发展水平随年龄不断增长，不同年龄间差异较大。值得注意的是，3 岁和 4 岁儿童在错误信念理解上差异较小，但在道德和习俗领域中心理理论差异较大，说明不同领域中心理理论的发展水平存有年龄差异，道德和习俗领域中心理理论发展水平趋于一致，但个人领域中心理理论在儿童早期分化较晚。

关键词 农村，学龄前儿童，社会规则领域理论，心理理论

Features of the Development of Theory of Mind for Rural Preschool Children: A Perspective of Social Rules Domain Theory

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Abstract: The social rules domain theory suggests that children's social cognition includes moral, conventional, and personal domains. The moral domain is related to fairness and rights, with mandatory, universal, immutable (e.g., Should not curse freely). The conventional domain regulates interpersonal interactions and is contextually relative and variable. The personal domain is usually concerned with individual self-choice and autonomy and is less influenced by factors such as authority. Theory of mind (ToM) involves the perception of the mental states of others and oneself. Social understanding of different domains and the development of the theory of mind are important components of an individual's social development, whose behavior is not only influenced by their basic psychological

states such as aspirations and beliefs but is also regulated and restricted by the social rules of the moral, conventional or personal domains in which they live. Some studies have shown that the living environment in which rural preschoolers live has an impact on the development of the theory of mind, but these studies usually focus only on the personal domain and lack comprehensive evidence across domains. Using a story-question method, the present study examined the developmental features of the theory of mind in the domains of morality, convention, and personal in 924 rural children aged 3-6 years. A significant main effect of age was found in the moral and conventional domains, $F(3, 920) = 26.63, p < 0.001, \eta_p^2 = 0.08$, $F(3, 920) = 41.15, p < 0.001, \eta_p^2 = 0.12$. Highest performance in the 6 years old group and worst performance in the 3 years old group ($\text{ToM}_{6\text{-year-old}} > \text{ToM}_{5\text{-year-old}} > \text{ToM}_{4\text{-year-old}} > \text{ToM}_{3\text{-year-old}}$). There was also an age effect on the understanding of knowing, $F(3, 920) = 84.39, p < 0.001, \eta_p^2 = 0.22$ ($\text{ToM}_{6\text{-year-old}} > \text{ToM}_{5\text{-year-old}} > \text{ToM}_{4\text{-year-old}} > \text{ToM}_{3\text{-year-old}}$). A significant main effect of age was also found when we analyzed straightforward false beliefs and content false beliefs, $F(3, 920) = 46.11, p < 0.001, \eta_p^2 = 0.13$, $F(3, 920) = 38.54, p < 0.001, \eta_p^2 = 0.11$, both of which performed better in the 6-year-old group than in the other groups, and the 5-year-old group performed better than the 4-year-old and 3-year-old groups, but there was no significant difference in performance between the 4 and 3-year-old groups. The results showed that the developmental level of theory of mind among preschool children in rural areas increased with age and varied considerably between ages. It was interesting to note that the differences between 3- and 4-year-old groups in their understanding of false beliefs were small, but the differences in theory of mind in the moral and conventional domains were large, suggesting that there were age differences in the level of development of the theory of mind in different social domains, with a convergence in the moral and conventional domains, but a late divergence in the theory of mind in the personal domain in early childhood.

Keywords: rural, preschool children, social rules domain theory, theory of mind

3-4 岁儿童空间再定向中对局部角度信息的表征

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摘要 空间再定向是人类拥有的一项重要认知能力。研究者们普遍认同整体几何线索的使用在再定向中具有明显优势, 并有研究表明儿童只能建立起局部几何信息与目标位置的直接联系, 难以依赖局部几何线索进行再定向(综述可参见 Lee & Spelke, 2010)。但由于传统的再定向任务并没有分离任务空间中的整体与局部几何信息, 儿童在再定向过程中是否表征了局部几何信息一直存在争论。本研究采用新创的再定向-局部位置选择任务, 对任务空间的整体与局部几何信息进行分离, 考察儿童在空间再定向中对局部角度信息的表征。研究的有效被试为 20 名 3 岁儿童和 22 名 4 岁儿童。实验采用 2 (年龄) × 3 (任务类型) 混合实验设计, 其中任务类型为被试内变量, 所有被试需要完成三种任务: ①再定向任务: 儿童看到贴纸被藏在菱形空间中的某个角落, 随后通过闭眼旋转的方式完成失向, 再睁开眼睛找回贴纸; ②再定向-局部位置选择任务: 流程与再定向任务一致, 但在儿童失向过程中, 菱形空间被拆解成四个“八”型片段, 并重新摆放; ③局部位置再认任务: 流程与再定向任务一致, 但任务环境为再定向-局部位置选择任务中使用的“八”型片段阵列。结果发现, 儿童在再定向任务中的正确搜索比例(正确率, 0.81 ± 0.03)显著高于再定向-局部位置选择任务(0.61 ± 0.06)和局部位置再认任务(0.62 ± 0.04)。4 岁儿童正确搜索的比例(0.74 ± 0.04)总体上高于 3 岁儿童(0.63 ± 0.04), 但只有在再定向-局部位置选择任务中, 4 岁儿童的正确率显著地高于 3 岁儿童。将 3、4 岁儿童在各任务中的正确率与随机水平相比较, 结果发现: 3 岁儿童在再定向-局部位置选择任务中的表现与随机水平没有差异, 在局部位置选择任务中的正确率与随机水平具有边缘显著差异, 但在再定向任务中的表现显著高于随机水平; 4 岁儿童在三种任务条件下的正确率均高于随机水平。研究结果表明, 3、4 岁儿童具备表征空间中局部角度信息的能力, 但只有 4 岁儿童可以自发地在空间再定向过程中形成对空间局部角度信息的表征。

关键词 儿童, 空间再定向, 局部线索, 角度, 几何线索

Three-and Four-year-old Children's Representation of Local Angle Information in Reorientation

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Abstract: Reorientation is an essential ability for humans. It is widely accepted that global geometric cues have priority for use in reorientation. And some studies suggest that, for young children, local geometric cues could only be used as direct cues (beacon) to signal a specific location but not used to specify the orientation (see Lee & Spelke, 2010, for a review). However, since the classic reorientation task mixes global and local geometric information, it is still debatable whether children represent local geometric information during reorientation. Adopting a new paradigm, in which global geometric information and local geometric information were not integrated, we investigated young children's representation of local angle information during reorientation. Participants included 20 3-year-old children and 22 4-year-old children. The experiment followed a 2 (Age)×3 (Task type) mixed factorial design. All participants were tested individually, and they completed three tasks. (a) A reorientation task. The child watched the experimenter hide a sticker in a predetermined corner in a rhombic enclosure and then was blindfolded and spun by the experimenter until disoriented. After disorientation, the child was asked to search for the sticker. (b) A reorientation-local recognition task. The procedure was identical to that of the reorientation task. But during disorientation, the rhombic enclosure was changed into a fragmented array consisted of four '∧' isolated corners. (c) A local recognition task. The procedure was also identical to that of the reorientation task. But the task was conducted in the fragmented array used in the reorientation-local recognition task. Results show that children's mean proportion of correct first search (accuracy) was significantly higher in the reorientation task (0.81 ± 0.03) than in the reorientation-local recognition task (0.61 ± 0.06) and in the local recognition task (0.62 ± 0.04). In general, 4-year-old children (0.74 ± 0.04) performed better than 3-year-old children (0.63 ± 0.04). However, 4-year-old children performed significantly better than 3-year-old children only in the reorientation-local recognition task. To further evaluate 3- and 4-year-old children's performance, their accuracies were compared with chance. Results revealed that 3-year-old children's accuracy in the reorientation-local recognition task did not differ from chance. Their accuracy in the local recognition task was marginally above chance and their accuracy in the reorientation task was significantly above chance. Four-year-old children's accuracies in all tasks were significantly above chance. Our results suggest that although both 3- and 4-year-old children were able to represent the location based on local angle information, only 4-year-old children spontaneously form a representation of local angle information during reorientation.

Keywords: Children, Reorientation, Local cues, Angle, Global cues

阅读障碍个体视觉广度缺陷的调节因素：来自元分析的证据

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摘要 视觉注意广度 (visual attention span, VAS) 是指在一次短暂的注视时间里可以被同时平行加工的视觉刺激数量。目前, 关于阅读障碍者是否存在视觉注意广度缺陷、视觉注意广度缺陷是否独立于语音缺陷、视觉注意广度缺陷是阅读障碍产生的原因还是结果等问题依旧存在很大争议。本研究对包含阅读障碍组和正常控制组的视觉注意广度相关文献进行了元分析, 共纳入 32 篇文章 (英文 30 篇, 中文 2 篇), 包含 56 项研究, 2299 名被试。总效应检验表明, 阅读障碍存在明显的视觉注意广度缺陷, 阅读障碍组的视觉注意广度较正常组差 ($g = -0.57$)。刺激类型 (言语刺激/非言语刺激)、对照组匹配类别 (年龄匹配/阅读能力匹配)、语言 (法语/汉语/英语/荷兰语/德语/其他语言) 对阅读障碍的视觉注意广度缺陷具有显著的调节作用, 被试年龄 (6-18 岁/18 岁及以上) 和任务类型 (整体报告/部分报告/N-Back) 不会对视觉注意广度的组间差异产生影响。

阅读障碍组的言语（字母、数字、汉字等）视觉注意广度显著差于正常组，而非言语（图形、颜色等）视觉注意广度与正常组没有显著差异（ $Q_b = 11.43, p = 0.0007$ ）。与年龄匹配的正常组进行比较，阅读障碍组的视觉注意广度明显更差，而与阅读匹配的正常组相比，阅读障碍组的视觉注意广度与正常组相似（ $Q_b = 9.46, p = 0.002$ ）。法语、荷兰语和汉语的阅读障碍表现出明显的视觉注意广度缺陷，而英语、德语、葡萄牙语和希腊语的阅读障碍没有表现出视觉注意广度缺陷（ $Q_b = 40.54, p < 0.0001$ ）。总的来说，本研究表明阅读障碍存在视觉注意广度缺陷，并且视觉注意广度缺陷不独立于语音缺陷，可能是阅读障碍语音缺陷导致的结果而非阅读障碍产生的原因。

关键词 视觉注意广度，阅读障碍，言语，非言语，元分析

Moderators of visual attention span deficits in developmental dyslexia: evidence from meta-analysis

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Abstract: Visual attention (VA) span is the number of distinct visual elements which can be processed in parallel in a multi-element array. At present, it is still in debate about whether visual attention span deficit exists in dyslexia, whether visual attention span deficit is independent of phonological deficit, and whether visual attention span deficit is the cause or result of dyslexia. A meta-analysis from studies about visual attention span in dyslexia group and control group was conducted, including 32 articles (30 in English and 2 in Chinese), 56 studies and 2299 subjects. Collectively, the visual attention span of dyslexic individuals presented a moderate pooled effect size ($g = -0.57$), which was significantly worse than typically developing individuals, indicating obvious visual attention span deficits in dyslexia. Stimulus type (verbal/ nonverbal stimulus), control group type (age matched/ reading matched) and language (French/ Chinese/ English/ Dutch/ German/ other languages) had significant moderating effects on visual attention span deficit of dyslexia. The age of subjects with dyslexia (6-18 years old/ 18 years old and above) and task type (global report/ partial report/ n-back) did not have influence on the group differences of visual attention span. The verbal (letters, numbers, Chinese characters, etc.) VAS of dyslexic individuals was significantly lower than that of typically developing individuals, while there was no significant difference in nonverbal (graphics, colors, etc.) VAS between dyslexic individuals and typically developing individuals ($Q_b = 11.43, p = 0.0007$); Compared with the age-matched control group, the visual attention span of the dyslexic individuals was significantly worse, while the visual attention span of the dyslexic individuals was similar to that of the reading-matched control group ($Q_b = 9.46, p = 0.002$); French, Dutch and Chinese dyslexia performed worse than the control group in the visual attention span task, while English, German, Portuguese or Greek dyslexia did not show visual attention span deficit ($Q_b = 40.54, p < 0.0001$). In general, this study suggests that individuals with dyslexia do exist visual attention span deficit, and visual attention span deficit is not independent of phonological deficit, which may be the result of phonological deficit rather than the cause of dyslexia.

Keywords: visual attention span, dyslexia, verbal, nonverbal, meta-analysis

威胁刺激的攻击性和可爱度对幼儿无意视盲的影响

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摘要 人们对情绪性刺激的注意加工存在着“负性偏向”和“正性偏向”这两种调节假说。威胁刺激是一类可以激发人们负性情绪的刺激，研究表明，当威胁刺激呈现出攻击的姿态时，它们更容易捕获人们的注意；也有一些证据表明，可爱的刺激物可以唤起人们的正性情绪，从而更可能被注意到。然而，对于幼儿群体，威

胁刺激常常以可爱的卡通形象出现,那么,威胁刺激的攻击性(负性情绪相关特质)和可爱度(正性情绪相关特质)如何影响幼儿的注意偏向?本研究将基于无意视盲的研究范式,采用2(攻击姿势:攻击姿势,非攻击姿势)×3(可爱程度:高,中,低)的二因素混合实验设计,考察了180名5-6岁幼儿($M_{age}=75.99$ 月, $SD_{age}=3.17$,男女各半)对不同形态的威胁刺激蛇的注意加工特征。结果显示:(1)可爱度的主效应显著,高可爱度的蛇比中性可爱度的蛇更容易被觉察到,但这种偏向只存在于女生;(2)攻击性主效应不显著,无论是男生还是女生,对呈现出攻击姿态的蛇的觉察率并没有显著高于非攻击姿态的蛇。与中性可爱度蛇相比,高可爱度的蛇和低可爱度的蛇更容易被发现,且非攻击性高可爱度蛇(正性情绪最高)比攻击性低可爱度蛇(负性情绪最高)更容易被发现。这意味着幼儿对情绪唤醒度高的威胁刺激更敏感,对正性情绪的敏感度要高于负性情绪,存在对情绪性刺激的“正性偏向”。

关键词 威胁刺激,可爱度,攻击性,无意视盲

The effect of striking posture and cuteness of the threat-relevant stimuli on young children's inattention blindness

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Abstract: There are two hypotheses for the attentional processing of emotional stimuli: "negative bias" and "positive bias". Threatening stimuli are a category of stimuli that can evoke negative emotions, and previous studies have found that threatening stimuli are more likely to capture attention when they are presented in a striking posture; there is also some evidence that cute stimuli can evoke positive emotions and are more likely to be noticed. However, for young children, threatening stimuli often appear as cute cartoon images, so how do the striking posture (negative emotion related) and cuteness (positive emotion related) of threatening stimuli affect young children's attentional bias? This study will use a two-factor mixed experimental design of 2 (striking posture: striking posture, non-striking posture) × 3 (cuteness: high, medium, low) to examine the attentional processing characteristics of young children to different forms of snakes by an inattention blindness paradigm. A total of 180 children aged 5-6 years ($M_{age}=75.99$ months, $SD_{age}=3.17$, 90 boys) were selected. The results showed that: (1) the main effect of cuteness was significant, and snakes with high cuteness were more likely to be detected than those with neutral cuteness, but this bias was only present in girls; (2) the main effect of striking posture was not significant, and both boys and girls didn't have significantly higher detect rates for snakes presenting an aggressive posture than for those in a non-aggressive posture. Snakes with high cuteness and low cuteness were more likely to be detected than those with neutral cuteness, and non-aggressive posture high cuteness snakes (highest positive emotions) were more likely to be detected than aggressive posture low cuteness snakes (highest negative emotions). This implies that people are more sensitive to threatening stimuli with higher emotional arousal and more sensitive to stimuli with high positive emotions, and that there is a "positive bias".

Keywords: threat-relevant stimuli, cuteness, striking posture, inattention blindness

家庭读写环境在 3-6 岁儿童汉字阅读发展中的作用

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摘 要 家庭读写环境是影响儿童早期读写发展的重要因素。然而, 少有研究在较大年龄范围的学前儿童中探查家庭阅读环境对汉语阅读能力的作用。本研究的主要目的是检验家庭读写环境对 3-6 岁儿童汉字阅读能力的作用。此外, 根据前人研究, 我们也将儿童的读写兴趣这一影响读写发展的重要因素纳入到对儿童家庭读写环境的测查中。本研究从北京和上海的 4 所幼儿园中随机选取了 223 名儿童, 采用汉字识别任务测查儿

童的汉字阅读能力。同时,由儿童父母完成家庭读写环境问卷,以调查儿童的家庭读写环境特征。结果发现,不同年龄儿童的家庭读写环境存在显著差异,早期的家庭读写环境可能会随着儿童年龄的增长而发生变化。层次回归分析结果显示,家庭读写环境对早期汉字阅读能力的作用在不同年龄的儿童中表现出了不同的模式。具体来说,父母阅读教育以及儿童的文字兴趣对4岁儿童的汉字阅读能力均有独立贡献。家庭阅读资源能够独立解释6岁儿童汉字阅读能力中的变异。此外,父母阅读教育对6岁儿童的汉字阅读能力有着边缘显著的作用。本研究从早期汉语阅读发展的角度为家庭读写环境模型的理论提供了重要证据。研究结果同时也说明,在测查早期的家庭读写环境时,纳入儿童的读写兴趣这一因素是十分重要的。

关键词 家庭读写环境, 学前儿童, 汉字阅读, 读写兴趣, 早期阅读发展

The Varied Influence of the Home Literacy Environment on Chinese Preschoolers' Word Reading Skills

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Abstract: An early home literacy environment is essential to children's later literacy development. However, few studies have explored the influence of the home literacy environment on Chinese reading in preschoolers across a wide age range. The present study mainly investigated the home literacy environment's effect on Chinese word reading in 3- to 6-year-old children. Additionally, children's literacy interest, which is important for reading development and interacts with the home literacy environment, was also measured. Two hundred twenty-three children were recruited and completed a Chinese character recognition task, and their parents were asked to rate the children's home literacy environment. The results showed that the home literacy environment changed significantly with children's age, suggesting that the home literacy environment may change over time. Hierarchical regression analyses revealed that the home literacy environment's effect on Chinese word reading showed different patterns across age groups. Specifically, parent reading instruction and children's interest in print played unique roles in the Chinese word reading of 4-year-old children. Moreover, home reading resources independently contributed to 6-year-olds' word reading scores, with a marginally significant effect of parent reading instruction. The results provided important evidence for the home literacy model in early Chinese word reading development and highlighted the necessity of incorporating children's literacy interest into investigations of the early home literacy environment.

Keywords: home literacy environment, preschooler, Chinese word reading, children's literacy interest, early reading development

(3) “发展心理专业委员会”口头报告分场3

数字游戏化认知训练对神经发育性障碍儿童核心认知能力的影响： 一项元分析

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摘要 神经发育性障碍是由大脑发育异常引起的早发性障碍, 在患有神经发育障碍的儿童中, 注意缺陷/多动障碍和特殊学习障碍(如, 发展性阅读障碍、发展性计算障碍)儿童会较多地接受认知训练。近年来, 数字游戏化认知训练被广泛应用于特殊儿童干预。然而, 关于数字游戏化认知训练对神经发育性障碍儿童认知

能力影响的相关研究结果仍存在争议。因此，有必要运用元分析方法对数字游戏化认知训练的有效性进行研究。本研究发现，在不区分神经发育性障碍的不同类型时，数字游戏化认知训练对神经发育性障碍儿童核心认知能力有显著的即时性效果，并且这种干预效果具有一定的保持性（干预结束3个月后）。然而，在区分神经发育性障碍的不同类型时，数字游戏化认知训练对注意缺陷/多动障碍儿童和阅读障碍儿童的认知能力有显著的干预效果，而对计算障碍儿童的干预效果仅边缘显著。同时，在注意缺陷/多动障碍儿童和阅读障碍儿童中，数字游戏化认知训练的远迁移效应显著。此外，本文还发现训练效果不仅受游戏化形式的影响，还受训练内容的影响。未来应针对不同类型神经发育性障碍儿童的核心缺陷设计数字游戏化认知训练，以有效地提高其认知技能，帮助其更好地应对学业挑战。

关键词 神经发育性障碍儿童，数字游戏化认知训练，元分析

Effectiveness of digital game-based trainings on core cognitive abilities in children with neurodevelopmental disorders: A meta-analysis

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Abstract : Neurodevelopmental disorders (NDDs) are early onset disorders which result from abnormal brain development. In those suffering neurodevelopmental disorders, individuals with attention-deficit/hyperactivity disorder (ADHD) and specific learning disorders (SLD), such as developmental dyslexia and developmental dyscalculia are often treated with cognitive trainings. In recent years, digital game-based cognitive trainings have been used in training children with special needs. However, relevant results of previous literatures regarding the effects of digital game-based trainings on cognitive abilities in children with NDDs have still been controversial. So, it is crucial to use the meta-analysis method to provide a quantitative summary of the effectiveness of digital game-based trainings. Our study found the digital game-based trainings could efficiently increase overall performance on core cognitive domains of all the children with NDDs both immediately after training (post-test) and within a period less than 3 months (short-term follow-up test). However, when taking the different type of neurodevelopmental disorders into consideration, we found that digital game-based trainings were more efficient for children with ADHD and dyslexia than for children with dyscalculia. Meanwhile, the far-transfer effects of digital game-based trainings were found in children with ADHD and dyslexia. Moreover, we found that not only the game-features, but also the training content contributed to training effect. Digital game-based trainings more specially targeting on the critical deficits of children with different type of NDDs should be designed in the future to help them improve cognitive skills more efficiently, as well as better cope with academic challenges.

Keywords: Neurodevelopmental disorders, digital game-based cognitive trainings, the meta-analysis method

提取练习是最有效的记忆方法吗?基于 5-6 岁幼儿的研究

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摘要 学习是记忆的基础，有效的学习方法可以让记忆更容易。尽管之前的研究已经发现，与集中学习和分散学习相比，需要测试的提取练习更能改善个体的长时记忆，但这种效果是否适用于幼儿尚不清楚。因此，本研究主要探讨了对幼儿记忆最有效的学习方法。50 名 5-6 岁幼儿分别通过集中学习、分散学习和提取练习学习了 24 个生僻词。在每一种学习方法中，分别测量短时间延迟 3 min 和长时间延迟 1 天或 5 天的词汇记忆

表现。结果表明,无论是短时记忆还是长时记忆,分散学习都优于提取练习和集中学习。此外,分散学习和提取练习显示出一种特殊的记忆现象——“记忆回涨”,即记忆随着时间的延迟而增加,而集中学习并没有出现这种现象。更重要的是,项目分析发现记忆的增加主要是通过记忆测试中增加词汇项目的唤起,几乎没有受到词汇遗忘的影响。综上所述,这些发现表明分散学习是幼儿教育环境中最有效的记忆方法。因此,如果要最大限度地提高孩子的记忆力,如何安排学习时间和计划是必须考虑的问题。

关键词 分散学习,提取练习,记忆回涨,时间延迟

Is the retrieval practice the most effective method to memorize? Not in young children aged 5 and 6 years

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Abstract: Learning is fundamental to memory, and an effective learning method can make it easier to memorize with less effort. Although previous studies have found that retrieval practice that requiring test improves long-term memory more than massed learning and spaced learning, less clear is whether the effect generalizes to young children. In this study, we examined the most effective learning method for children's memory. Fifty children aged 5 and 6 years learned 24 unfamiliar words in massed learning, spaced learning, and retrieval practice respectively. And in each learning method, the recall test was used to measure the memory performance in a short-time delay of 3 min and a long-time delay of 1 day or 5 days. The results indicated that spaced learning performed better than retrieval practice and massed relearning regardless of short-term or long-term memory. Moreover, spaced learning and retrieval practice showed hypermnesia, a special memory phenomenon that an increase in memory with time delay, but massed relearning did not. More importantly, the item fate analyses found that the increase of memory was driven mainly by increasing the recovery of items during the recall test, and was barely affected by the forgetting of items. Together, these findings suggested that spaced learning was the most effective method to memorize in young children's educational settings. Thus, how to arrange learning time and plan should be taken into account if maximizing children's memory.

Key words: spaced learning, retrieval practice, hypermnesia, time delay

青少年在合作学习中的同伴互助行为研究

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摘要 青少年在群体中的亲社会行为表现有助于促进良好的同伴关系构建,能够有效防止校园欺凌行为的发生(Padilla-Walker & Carlo, 2015)。本研究着眼于青少年在合作学习过程中展现的帮助、合作、关心、同情等亲社会行为,探究了青少年同伴互助行为的发生和发展机制。研究对象是河北省某县级中学的22名七年级学生(8名男生,14名女生),这些学生分别组成包含了7,7,8名学生的三个小组参与学生主导的合作推理讨论(Anderson et al, 1998),每个小组各进行了7次讨论。平均时长27.5分钟,共577.6分钟。本研究对21个小组讨论视频进行了同伴互助行为的编码,最终形成5110条编码,包含四个类别:行为支持(345条)、情感支持(633条)、认知支持(3505条)和讨论促进行为(如管理发言顺序;627条)。结果发现:(1)从第一次到第七次合作讨论青少年展现的同伴互助行为总体呈上升趋势,由7.33次每分钟上升至10.15次每分钟。其中,认知支持行为的上升趋势与总体保持一致,由3.81次每分钟上升至7.56次每分钟,增长了将近一倍。(2)不同性别学生之间的互助行为呈现出显著差别:在情感支持上,同性间的互助行为是异性间的

2.93 倍；在认知支持上，异性间的互助行为是同性间的 1.53 倍，其中女生间的认知支持行为（ $M=13.87$ ）明显低于其他类别（ $M=33.64$ ）。（3）互助行为在合作学习过程中随时间的变化趋势分析发现，讨论促进行为在讨论初期呈现较大比例（ $T1=23.35\%$ ），但是随着讨论的进行，讨论促进行为的比例逐渐减小（ $T5=8.79\%$ ），认知支持的比例逐渐增加（由 57.61% 上升至 75.21%），并在讨论后期保持稳定。研究结果表明随合作学习次数的增加，青少年能够更加自主地管理小组讨论，逐渐将合作的重点放在内容学习上，且随讨论的进行小组成员在认知任务上的投入越来越高，反映了自我调节学习能力的增强。同伴互助行为在性别上的差异表明小组结构中的性别平衡有利于认知支持行为的发生。本研究通过对即时性行为的视频编码揭示了青少年群体中的同伴互助行为模式，为探究合作学习过程中影响同伴关系变化的内在机制提供了新的方法和思路。

关键词 合作推理论，青少年，同伴互助行为，视频编码

Adolescents' Helping Behaviors during Collaborative Reasoning Discussions

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Abstract: Previous studies have confirmed that prosocial behaviors are associated with the creation of positive peer relationships among adolescents (Padilla-Walker & Carlo, 2015). This study focuses on adolescents' helping behaviors during collaborative discussions to investigate the emergence and development of prosocial behaviors. The study included 22 seventh graders (8 boys and 14 girls) in a rural middle school in north China. These students formed three groups to participate in seven Collaborative Reasoning (CR; Anderson et al, 1998) discussions, with each group having seven, seven, and eight students respectively. All the CR discussions were videotaped—the total discussion time was 577.6 minutes and each discussion was averagely 27.51 minutes. Four types of helping behaviors were coded in the 21 CR discussions and a total of 5,110 helping behaviors were identified: behavioral support behaviors (345), emotional support behaviors (633), cognitive support behaviors (3505), and discussion facilitating behaviors (627). The results showed that adolescents' total number of helping behaviors increased from the first discussion to the seventh discussion, with the lowest being 7.33 per minute and the highest being 10.15 per minute. In particular, the number of cognitive support behaviors increased from 3.81 per minute to 7.56 per minute, nearly doubled. Adolescents' helping behaviors differed among gender groups. Emotional support behaviors were more likely to occur in the “boy-to-boy” and “girl-to-girl” groups, while cognitive support behaviors were more likely to occur in the “girl-to-boy” and “boy-to-girl” groups and less likely to occur in the “girl-to-girl” group as compared to the other three types of relationships. Adolescents' helping behaviors were tracked over the course of each discussion. The result indicated that the percentage of discussion facilitating behaviors decreased as the discussion progressed (from 23.35% to 8.79%), while the percentage of cognitive support behaviors increased and remained high (from 57.61% to 75.21%) till the end of the discussion. These findings suggest that adolescents presented different types of helping behaviors during collaborative group work. In this process, students became more effective in discussion management and were able to devote more time to cognitively support their peers in the collaborative discussion. The differences in helping behaviors among gender groups implied that gender balance could facilitate the emergence of cognitive behaviors in collaborative groups. Overall, this study revealed the development pattern of adolescents' helping behaviors during collaborative discussions and its effect on students' self-regulated learning. The implication

is that adolescents' social development can be studied through moment-to-moment coding of social behaviors in authentic learning settings.

Keywords: Collaborative Reasoning, adolescents, helping behaviors, video coding

初中生、高中生和大学生的内源与外源错误记忆

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摘要 错误记忆指记得未学的内容或混淆记忆来源, 可分为内源和外源错误记忆。以往研究多关注儿童和老年记忆发展, 较少关注青少年。该研究考察了 92 名初中生、98 名高中生、90 名大学生的内源和外源错误记忆。内源记忆任务中, 学习 12 列词表 (每列含 8 个语义相关词, 如: 做梦、打盹、休息等), 随后自由回忆。真实回忆指写出已学词 (如: 做梦) 的总数, 内源错误回忆指写出不在词表中但语义相关词 (如: 睡觉) 的总数。外源记忆任务含以下三阶段。第一, 原始事件, 看到两个事件 (各含 50 张图片, 如某图: 手机放在裤子后兜)。第二, 事后信息, 读两个事件的文字陈述 (各含 50 句话)。每个年龄组的被试随机分半为实验组和控制组。实验组看到虚假信息 (其中 24 句与原事件不一致, 如: 手机放在裤子侧兜), 而控制组看到准确信息。第三, 再认测验, 所有被试需根据原始事件图片进行再认 (如题目: 在图片中看到手机放在裤子哪里? 选项: 后兜、侧兜、前兜)。真实再认指选择原图片信息 (如, 后兜) 的比率。对于实验组, 外源错误再认指选择虚假信息 (如, 侧兜) 的比率, 无关再认指选择无关信息 (如, 前兜) 的比率。对于控制组, 除准确信息之外的两个选项分别被记为两类无关再认 (如, 侧兜、前兜)。结果发现: 1) 内源记忆任务: 初中生的真实回忆低于高中生和大学生, 初高中学生的错误回忆低于大学生。与大学生相比, 中学生记忆的语义网络未发展成熟, 内源错误记忆较少。2) 外源记忆任务: 虚假信息效应显著, 实验组的外源错误再认高于无关再认, 实验组对错误信息项目的再认率高于控制组。初高中生比大学生更易受虚假信息影响, 在记忆中对信息源监控弱, 外源错误记忆较多。总之, 青春期内外源错误记忆的发展趋势具有差异, 随年龄增长, 内源错误记忆上升, 外源错误记忆下降。该结果支持记忆的激活监控理论, 错误记忆体现了记忆中语义网络激活和信息源监控失败。该研究对理解记忆发展规律和教育司法实践具有理论和应用价值。

关键词 青少年, 记忆发展, 错误记忆, 自由回忆, 虚假信息

Endogenous and exogenous false memories in junior, senior high school and college students

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Abstract: False memory refers to the memory distortion that were never experienced or people confuse the source of memory, including endogenous or exogenous false memories. Previous memory development studies have focused on children and older adults rather than adolescents. The current study examined the endogenous and exogenous false memories in 92 junior high school students, 98 senior high school students, and 90 college students. In the endogenous memory task, participants studied 12 lists of 8 semantically-related words (e.g., "Dream", "Nap", and "Rest"), and were asked to take a free recall task later. True recall refers to the total number of studied words that have been recalled (e.g., "Dream"). False recall refers to the total number of semantically-related unstudied words that have been recalled (e.g., "Sleep"). The exogenous memory task involves three stages. First, during the original event stage, participants saw two events (50 pictures for each event, e.g., "The man took away her phone and put it into his pants' back pocket"). Second, during the post-event information stage, participants were asked to read narrations of these two events (50 sentences for each event). Participants in each age group were randomly divided

into two groups (i.e., experimental group and control group). Participants in the experimental group read misinformation (24 sentences were inconsistent with original pictures, e.g., “The man took away her phone and put it into his pants’ side pocket”), whereas participants in the control group read accurate narrations. Third, during the recognition test stage, all participants were asked to take a memory task based on what they saw in the original pictures (e.g., “Which pocket of his pants did the man put the phone into?”, options: “Back pocket”, “Side pocket”, “Front pocket”). True recognition refers to the rate of choosing details presented in the picture (e.g., “Back pocket”). For the experimental group, misinformation false recognition refers to the rate of choosing misinformation presented in the narration (e.g., “Side pocket”), and foil recognition refers to the rate of choosing foil detail (e.g., “Front pocket”). For the control group, foil recognition refers to two foil choices (e.g., “Side pocket” and “Front pocket”), respectively. Results show that: 1) In the endogenous memory task, true recall in junior high school students was lower than those in senior high school students and in college students, while false recall in junior and senior high school students was lower than those in college students. Compared with college students, the semantic network of junior and senior high school students’ memory is immature, and thus they have fewer endogenous false memory. 2) In the exogenous memory task, the misinformation effect was significant. In the experimental group, misinformation false recognition was higher than foil recognition. For the choice rate of post-event misinformation items, the misinformation group was higher than the control group. Compared with college students, the junior and senior high school students were more susceptible to misinformation, and their source monitoring ability were weak, and thus they have more exogenous false memory. In short, there were different development trends in endogenous and exogenous false memories. From adolescence to young adulthood, endogenous false memory increases with age, but exogenous false memory decreases with age. These results support memory activation-monitoring theory. False memory reflects the activation of semantic network and failure of source monitoring. This study has theoretical values for understanding memory development, and practical values for educational and legal practice.

Keywords: adolescents, memory development, false memory, free recall, misinformation

社会工作记忆训练提升个体的心理理论和观点采择能力

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摘要 社会工作记忆是指在大脑中编码和存储社会信息的能力。社会工作记忆可以正向预测心理理论, 并且社会工作记忆训练不仅可以提高个体的社会工作记忆容量, 还能提高其观点采择能力。目前尚未有研究系统探查社会工作记忆训练对个体心理理论的提升效果。因此, 我们试图探究以下问题: (1) 社会工作记忆与心理理论、观点采择的关系; (2) 社会工作记忆训练能否提升个体的核心社会认知能力? 我们设置了社会工作记忆条件和认知工作记忆条件, 其中社会工作记忆条件分为3组, 分别以生物运动光点、工具性身体姿势和情绪性身体姿势为训练材料, 对照组以矩形方块为训练材料。84名18-22岁的大学生参加了为期4周的训练, 每周3次, 每次大约30分钟。每次训练15组, 每组有(20+n)个试次。结果显示, 生物运动和情绪性身体姿势条件下, 被试的社会工作记忆容量与情感心理理论呈显著的正相关, 并且两组的社会工作记忆容量与观点采择能力之间也有显著的正相关关系。经过训练后, 每组都提高了本身的工作记忆容量, 此外工具性身体姿势条件下生物运动工作记忆、认知工作记忆均有显著提高; 情绪性身体姿势条件下还提高了工具性身体姿势工作记忆容量。进一步分析远迁移效应发现, 训练后四组的心理理论和观点采择能力均有显著提升。这些结果说明, 社会工作记忆训练不仅可以提高成人的社会工作记忆量, 还可以提高未经训练的认知工作记忆, 而认知工作记忆训练后并没有迁移到社会工作记忆。与此同时, 四组训练后的核心社会认知能力均有显著提升, 但是组间差异并不明显。这一方面说明社会性和认知性的工作记忆训练都有可能促进个体的心理理论和观点采择能力的提升, 但另一方面也有可能是由于成人的心理理论和观点采择能力已经发展的较为成熟, 训练后的提升可能是重复测量或者是练习效应造成的。

关键词 社会工作记忆训练, 成人, 心理理论, 观点采择

Social working memory training improves theory of mind and perspective-taking

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Abstract: Social working memory(SWM) refers to the ability to encode and store social information in the brain. SWM can positively predict the theory of mind(ToM), and SWM training can not only improve the individual's SWM capacity, but also improve perspective-taking. So far, to our knowledge, no studies have systematically investigated the effect of SWM training on the enhancement of ToM. Therefore, we tried to explore the following questions: (1) The relationship between SWM, ToM and perspective-taking; (2) Can SWM training improve the individual's ToM and perspective-taking? There were two experimental conditions in our study: SWM training condition and cognitive working memory(CWM) training condition. The SWM training condition consisted with three groups. We used the point-light display of biological motion(BM), instrumental body posture and emotional body posture as the SWM training material, and used rectangular block as the CWM training material. Eighty-four college students, aged 18 to 22, were trained 3 times per week and 30 minutes each time. The whole training lasted 4 weeks. There were 15 blocks per training session, and each block had (20 + n) trials. The results showed that under the conditions of BM and emotional body posture, there was a significant positive correlation between SWM capacity and emotional ToM, and there was also a significant positive correlation between SWM capacity and perspective-taking ability in both groups. After the training, the WM capacity of each group increased. In addition, the BM-WM and CWM capacity were significantly improved in the instrumental body posture condition. Emotional body posture group also increased the capacity of instrumental body posture WM. Further analysis of the distal transfer effect found that the ToM and perspective-taking ability of the four groups were significantly improved after training. These findings indicate that SWM training can not only improve the SWM of adults, but also improve their untrained CWM. However, the effect of CWM training fail to transfer to SWM. At the same time, ToM and perspective-taking ability of the four groups improved significantly after training, but there was no significant difference among the groups. This finding shows that both social and cognitive working memory training may enhance the ToM and perspective-taking ability. It is worth noting that due to the mature development of the ToM and perspective-taking ability in adults, the improvement after training may be caused by repeated measurement or the effect of practice.

Keywords: social working memory training, adults, theory of mind, perspective-taking

知觉显著性对儿童加工意外威胁刺激的影响：基于眼动的证据

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摘要 快速觉察威胁刺激对幼儿的生命安全起着重要的作用，已有研究认为，幼儿对预期的威胁刺激可能存在优先加工的注意偏向，但当威胁刺激在意外条件下呈现，幼儿对这类刺激的注意加工存在怎样的特点，刺激的知觉显著性如何影响加工过程？本研究采用经典的无意视盲范式，通过 2（刺激类型：威胁刺激、非威胁刺激）×2（知觉显著性：高、低）被试间完全随机设计，结合眼动技术，考察了 88 名幼儿（75.16±3.12 个月，男生 38 名）在不同知觉显著性条件下对威胁刺激蛇与非威胁刺激蜥蜴的注意加工特点。结果表明：（1）幼儿在两种知觉显著性条件下对意外的威胁刺激蛇与非威胁刺激蜥蜴的觉察率均不存在显著的差异；（2）对于意外威胁刺激蛇，知觉显著性对刺激的觉察率有重要影响，显著性越高，觉察率越高；知觉显著性对注视点个数与时长存在显著影响，高显著性蛇的注视点个数与注视时长显著多于低显著性蛇；（3）对于意外非威胁性刺激蜥蜴，知觉显著性对觉察率不存在显著影响；知觉显著性对注视点个数和注视时长不存在显著影响。

当前结果表明, 虽然幼儿对意外威胁刺激蛇不存在直接的注意偏向, 但知觉显著性与意外刺激的关系结果显示, 幼儿加工意外威胁刺激蛇与意外非威胁刺激蜥蜴的注意过程存在一定的差异, 刺激的颜色这种知觉显著性特征对加工意外威胁刺激蛇存在显著的影响, 但对意外非威胁刺激蜥蜴不存在显著影响。

关键词 意外威胁刺激, 注意偏向, 儿童, 无意视盲, 眼动

The Effect of Perceptual Salience on Children's Perception of Unexpected Threat Stimuli: Evidence from Eye Movements

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Abstract: Rapid detection of threat-relevant stimuli plays an important role in children's safety. Previous studies suggest that children may have an attentional bias to the expected threat-relevant stimuli, but when the threat-relevant stimuli are presented under unexpected conditions, do children also have stable attentional bias to these stimuli? Perceptual salience, as a factor that has an important influence on attention under unexpected conditions, how dose it affect children's perception of unexpected threat stimuli? We employed 88 young children (75.16 ± 3.12 months, 38 boys), who were randomly designed with 2 (type of stimulus: threatening stimulus, non-threatening stimulus) $\times$ 2 (perceptual salience: high perceptual significance and low perceptual significance) to explore the attention perception of threatening stimulus and non-threatening stimulus, snake and lizard in current study, under different perceptual significance. The results show that: 1) There was no significant difference on the perception rate of threatening and non-threatening stimulus in two perceptual significance conditions. 2) For the threatening stimulus snake, perceptual salience had an important impact on the perception rate of threat stimuli, the higher the significance, the higher the perception rate. Also, perceptual salience had an important influence on the number of gaze points and gaze duration for the threatening stimulus snake, the number of gaze points and gaze duration for the snake of high significance are significantly higher than those snake of low significance. 3) For the non-threatening stimulus lizard, perceptual salience had no significant influence on the perception rate, and also had no significant influence on the number of gaze points and gaze duration. As the current results show, although children don't have direct attentional bias towards unexpected threatening stimulus snake, the relationship between perceptual salience and unexpected stimuli shows that there is a certain difference in the attention process of threatening stimulus snake and non-threatening stimulus lizard under unexpected conditions. The color of the stimulus is a perceptually significant feature that has a significant effect on the processing of unexpected threatening stimulus snake, but has no significant effect on the unexpected non-threatening stimulus lizard.

Keywords : Unexpected Threat-relevant Stimulus, Attention Bias, Preschoolers, Inattentional Blindness, Eye Movements

(4) “发展心理专业委员会”口头报告分场 4

父母教育期望对青少年未来教育规划的影响：学业成绩的调节作用

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摘 要 未来教育规划是个体对未来教育建构机会并实现教育计划的过程, 主要包括探索和投入两个方面。未来教育规划对于青少年当前的适应及顺利过渡到成年期具有重要意义。已有研究表明, 父母教育期望是青少年未来教育规划的重要相关因素, 而这些研究是基于横断数据的结果, 对于父母教育期望对青少年教育未来取向的长期纵向影响模式尚不清楚。同时, 父母教育期望对青少年未来规划影响的作用机制尚不清楚。基于此, 本研究以 605 名高中生为被试, 以青少年教育未来取向问卷、父母教育期望量表和学业成绩自评定量表为测量工具, 采用间隔一年的追踪研究设计, 探讨父母的教育期望对青少年教育期望的纵向影响, 并检验学业成绩对二者关系的调节作用。在控制了 T1 的性别、年龄、家庭社会经济地位等变量后, 结果发现: (1) T1 的父母教育期望能正向预测高中生 T2 的教育规划, T1 的学业成绩能正向预测 T2 的教育规划。即, 父母教育期望更高及学业成绩评定更高的高中生一年后有着更高的教育探索与教育投入行为; (2) T1 的学业成绩在 T2 的父母教育期望与教育规划中起调节作用。进一步的简单斜率检验结果表明, 学业成绩越高, 父母教育期望对教育规划的预测作用越强。这些结果表明, 在对青少年教育规划的干预工作中, 要重视父母教育期望及学生学业成绩的作用。

关键词 规划, 父母教育期望, 学业成绩, 调节作用

The Effect of Parental Educational Expectation on future education planning among Chinese adolescents: The Moderating Role of Academic Achievement

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Abstract: Future education planning refers to a process which individual constructs education plans and realizes these education plans, including exploration and commitment. Extant studies indicated that future education planning is vital to various aspects of adolescents' current and later adjustment. Cross-sectional research has documented that parental educational expectation play an important role in adolescents' future education planning. However, little is known about the longitudinal association between parental educational expectation and future education planning. Additionally, the mechanisms that potentially account for such relationship remain uncertain. The current study aimed to examine the longitudinal moderating role of academic achievement in the relationship between parental educational expectation and future education planning. All participants in the study were senior high school students from four middle schools in Shandong province. A number of 719 students participated in this study at T1 and the final sample completed in both two waves were 605. The mean age of valid participants was 16.01 years ($SD = 0.59$) at T1, with 54.5% boys. Participants filled out the Future Orientation Questionnaire, Parental Educational Expectation Questionnaire, and the Self-rated Academic Achievement Questionnaire. After controlling for gender, age, and SES at T1, the results indicated that (1) Parental educational expectation and academic achievement at T1 can positively predict senior high school students' future education planning at T2. Thus, students with high parental educational expectation or high academic achievement have more active educational exploration and commitment; (2) The relation between parental educational expectation and future education planning at T2 was moderated by academic

achievement at T1. Simple slope test further indicated that the specific link between parental educational expectation and future education planning was stronger for students with high academic achievement. The findings indicated that high level of parental educational expectation and academic achievement was of great importance for senior high school students' future education planning.

Keywords: planning, parental educational expectation, academic achievement, moderating

青少年早期升学过渡期内外化问题共发模式及其转变

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摘要 内外化问题与儿童青少年日后适应发展密切相关, 探究内外化问题发展相关因素具有重要意义。鉴于内外化问题发展以及二者间的组合存在一定的个体差异和复杂性, 有必要以个体定向视角进行考察, 以期获得更全面、准确的结果。青少年早期升学过渡期在个体发展阶段中具有特殊性, 内外化问题发展可能表现出更为特别的变化。因此, 本研究聚焦于青少年早期升学过渡期, 采用潜剖面分析(LPA)和潜转变分析(LTA)考察内外化问题共发模式及其稳定性和变化性, 并采用逻辑回归考察各内外化问题共发模式的特点及内外化问题共发模式发展变化的影响因素。本研究以 2136 名小学 6 年级学生及其父亲或母亲为被试, 在初一年级时进行追踪测量。本研究的内外化问题、父母教养(父母温情、专制控制、监控)、家庭社会经济地位均由父母报告, 同伴地位(同伴拒绝、同伴接纳)采用同伴提名法测量。结果发现:(1) 升学过渡期内, 存在四种内外化问题共发模式亚组: 低问题组、低外化-中内化组、高外化-中内化组、中外化-高内化组。(2) 综合升学过渡期前后两个时间点, 父母温情是区分不同内外化问题共发模式最重要、关键的因素。(3) 在升学过渡前后, 各内外化问题共发模式具有中至高水平的稳定性、低至中水平的变化性。(4) 性别、升学过渡期前一时间点的父母温情和同伴拒绝、升学过渡期间父母专制控制变化量、父母温情变化量、同伴拒绝能够影响儿童青少年内外化问题共发模式的转变。本研究结果扩充了本领域的研究发现, 为内外化问题及其共发发展的预防和干预策略的研发提供了理论基础。

关键词 青少年早期升学过渡, 内外化问题共发模式, 潜转变分析, 父母教养, 同伴地位

Co-occurrence Patterns of Internalizing and Externalizing Problems and their Transitions during the School Transition Period in Early Adolescence

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Abstract: It has significant importance to explore the relevant factors of the development of children and adolescent internalizing and externalizing problems, because the close link between these problems and future developmental outcomes. Given the individual differences and complexities in the development of internalizing and externalizing problems and the combination of the both, it is necessary to investigate from the individual-orientated perspective in order to obtain more comprehensive and accurate results. Due to the specificity of the school transition in early adolescence, the development of internalizing and externalizing problems may show special changes. Therefore, this study focusing on the school transition in early adolescence, used latent profile analysis and latent transition analysis to investigate the co-occurrence patterns of internalizing and externalizing problems and their stability and change respectively, and used logistic regression to investigate the characteristics of the co-occurrence patterns of internalizing and externalizing problems and the influencing factors of the changes of the co-occurrence patterns of internalizing and externalizing problems. In addition, this study also examined the relationships between gender and family socioeconomic status and the co-occurrence patterns of internalizing and externalizing problems and their changes. This study recruited 2,136 primary school sixth graders and their parents as participants, who were evaluated again one year later. In this study, internalizing and externalizing problems, parenting (warmth,

authoritarian control, monitoring/supervision) and family socioeconomic status (SES) were all reported by parents, while peer status (peer rejection, peer acceptance) were measured by peer nomination method. Findings were as follows: (1) During the transition into secondary school, there were four co-occurrence patterns of internalizing and externalizing problems: low problem class, low externalizing-medium internalizing class, high externalizing-medium internalizing class, and medium externalizing-high internalizing class. (2) On both time points, parental warmth was the most strong factor to distinguish different co-occurrence patterns of internalizing and externalizing problems. (3) During the transition into secondary school, the co-occurrence patterns of internalizing and externalizing problems had a medium to high level of the stability and a low to medium level of transitions. (4) Gender, parental warmth and peer rejection in the time point before the transition into secondary school, changes in parental authoritarian control, changes in parental warmth, and changes in peer rejection during transition into secondary school could influence the changes of the co-occurrence patterns of internalizing and externalizing problems. The results of this study extended the findings in this field and provided a theoretical basis for the research and development of prevention and intervention strategies for internalizing and externalizing problems and their co-development.

Keywords: school transition, co-occurrence patterns of internalizing and externalizing problems, latent transition analysis, parenting, peer status

小学儿童教师支持、数学态度和数学焦虑的纵向联系： 三年追踪研究

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摘要 数学焦虑是儿童青少年常见的负性学业情绪之一, 它不仅与消极学业后果关联, 还会导致个体避免选择 STEM (科学、技术、工程、数学) 领域相关工作。为及早预防和减少数学焦虑, 有必要揭示儿童数学焦虑与其潜在的个体与环境影响因素间的动态作用机制。本研究使用感知到的数学教师支持、数学态度和儿童数学焦虑量表, 对 1802 名小学三、四年级儿童进行了为期三年的追踪研究, 通过构建交叉滞后模型, 以揭示儿童感知到的数学教师支持、数学态度和数学焦虑间的交互作用机制。主要研究发现为: (1) 在同一时间点, 儿童感知到的数学教师支持与数学态度呈显著正相关, 与数学焦虑显著负相关, 同时数学态度与数学焦虑呈显著负相关; (2) 数学态度和数学焦虑间存在稳定的双向纵向联系, T1 数学态度显著负向预测 T2 数学焦虑, 同时 T1 数学焦虑显著负向预测 T2 数学态度, 从 T2 到 T3 二者之间的关系呈相同模式; (3) 感知到数学教师支持与数学态度、数学教师支持与数学焦虑间的纵向关系是单向且稳定的, T1 数学教师支持不能预测 T2 数学态度和 T2 数学焦虑, 但 T1 数学态度对 T2 数学教师支持的正向预测和 T1 数学焦虑对 T2 数学教师支持的负向预测均显著, 从 T2 到 T3, 三者间的纵向关系呈相同模式。本研究首次从纵向角度初步揭示了数学教师支持、数学态度和小学儿童数学焦虑间的动态联系, 并强调了数学态度对数学焦虑变化的积极影响, 为后续旨在降低数学焦虑风险的干预实践提供了理论支撑。

关键词 小学儿童, 数学焦虑, 感知到的数学教师支持, 数学态度

Relationships among Teacher Support, Attitude toward Mathematics and Math Anxiety in Primary School Children: A Three-year Longitudinal Study

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Abstract: Math anxiety is one of the most common negative academic emotions in children and adolescents. It is not only associated with negative academic consequences, but also leads individuals to avoid choosing STEM (Science, Technology, Engineering, Mathematics) related work. In order to prevent and reduce math anxiety as soon as possible, it is necessary to reveal the dynamic mechanism between children's math anxiety and its potential individual and

environmental factors. Using the Perceived Math Teacher Support, Attitudes toward Mathematics and Math Anxiety Scale for children, this study tracked 1802 students of grade 3 and 4 for three years, and constructed a cross-lag model to reveal the interaction mechanism among elementary school children's perceived mathematics teacher support, math attitude and math anxiety. The main findings are as follows: (1) Primary school children's perceived math teacher support is positively correlated with attitude toward mathematics, negatively correlated with math anxiety, and there was a significant negative correlation between attitude toward mathematics and math anxiety. (2) The longitudinal relationship between attitude toward mathematics and math anxiety is bidirectional and stable. T1 attitude toward mathematics significantly negatively predicts T2 math anxiety, while T1 math anxiety significantly negatively predicts T2 attitude toward mathematics; from T2 to T3, the relationship between the two shows the same pattern. (3) The longitudinal relationships among perceived math teacher support, attitude toward mathematics and math anxiety is unidirectional and stable. T1 perceived math teacher support can not predict T2 attitude toward mathematics and T2 math anxiety, but the positive prediction of T1 attitude toward mathematics on T2 perceived math teacher support and the negative prediction of T1 math anxiety on T2 perceived math teacher support were significant. From T2 to T3, the longitudinal relationships among the three showed the same pattern. This study reveals the dynamic relationships among perceived math teacher support, attitude toward mathematics and math anxiety from a longitudinal perspective for the first time, and emphasizes the positive impact of attitude toward mathematics on primary school children's math anxiety, which provides theoretical support for the subsequent intervention practice to reduce the risk of math anxiety.

Keywords: Primary school children, math anxiety, perceived math teacher support, attitude toward mathematics

小学儿童父母教育卷入、COMT 基因 rs4680 多态性与数学焦虑的关系

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摘要 为探究 COMT 基因 rs4680 多态性与父亲/母亲教育卷入是否对儿童数学焦虑存在基因与环境交互影响, 使用小学生父母教育卷入行为问卷、儿童数学焦虑量表和 DNA 分型技术, 对山东省潍坊市某小学三到六年级的 594 名小学生及父母进行调查。综合运用传统回归分析和内部验证性分析, 结果表明: (1) 父亲教育卷入和母亲教育卷入的性别主效应显著, 父母对女生数学学习的参与程度明显高于男生; (2) 父亲教育卷入的年级主效应显著, 具体表现为父亲教育卷入在四至六年级上呈显著上升趋势; (3) 儿童数学焦虑的年级主效应显著, 除四、五年级的数学焦虑差异不显著外, 其他年级的数学焦虑两两差异均显著, 整体上呈现出随年级升高而不断降低的趋势; (4) 在父亲教育卷入模型中, 父亲教育卷入的主效应显著, rs4680 多态性对儿童数学焦虑的主效应以及两者交互效应不显著; (5) 在母亲教育卷入模型中, 母亲教育卷入的主效应显著, rs4680 多态性与母亲教育卷入的交互作用对儿童数学焦虑的预测作用显著; (6) 当母亲教育卷入较高时, GG 基因型儿童的数学焦虑水平显著低于 A 等位基因儿童; 当母亲教育卷入较低时, GG 基因型儿童的数学焦虑水平表现出高于 A 等位基因儿童的趋势, 但差异未达到显著性水平。本研究有助于从理论上清晰理解小学儿童数学焦虑变化的成因, 揭示数学焦虑的底层遗传机制, 亦能为实际教育教学提供方向, 便于指导父母和教师在与学生的互动中产生传递有效信息, 形成恰当有效的指导措施。

关键词 儿童数学焦虑, 父母教育卷入, COMT 基因 rs4680 多态性, 基因×环境交互

The Linkages of Parental Involvement, COMT rs4680

Polymorphism with Children's Math Anxiety in Primary School

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Abstract: To investigate whether the COMT rs4680 polymorphism and parental involvement have significant gene-environment interactions with children's math anxiety(MA), this study used primary school parental education involvement behavior questionnaire, children's math anxiety scale and DNA typing Technology, surveyed 594 elementary school students and their parents in the third to sixth grades of a primary school in Weifang City, Shandong Province. Combining traditional regression analysis and internal confirmatory analysis, the results show that:(1) The main gender effect of paternal involvement and maternal involvement is significant, and parental involvement in mathematics learning for girls is higher than that for boys; (2)The primary effect of paternal involvement in grades is significant, which is specifically manifested in a significant upward trend in father education involvement in grades four, five, and six; (3)The main effect of children's math anxiety in grades is significant. Except for the difference in math anxiety between fourth grade and fifth grade children, there is a significant difference between the math anxieties of other grades, showing a trend of decreasing with the increase of grade as a whole; (4)In the paternal involvement model, the main effect of paternal involvement is significant, and the main effect of rs4680 polymorphism on children's mathematical anxiety and the interaction between the two is not significant; (5)In the maternal involvement model, the main effect of maternal involvement is significant, and the interaction between the rs4680 polymorphism and maternal involvement has a significant predictive effect on children's mathematical anxiety; (6)When maternal involvement is involved, GG genotype children's math anxiety level is significantly lower than A allele children; when maternal involvement is low, GG genotype children's math anxiety level is higher than A allele children, But the difference did not reach a significant level. This research not only helps to clearly understand the causes of mathematics anxiety changes in elementary school children and to reveal the underlying genetic mechanism of mathematics anxiety in theory, but also can provide directions for practical education and teaching, thus guiding parents and teachers how to produce transmission from interaction with students. Effective information, grasp the potential influencing factors of children's math anxiety, and form appropriate and effective guidance measures.

Keywords: children's math anxiety, parental involvement, COMT rs4680 polymorphism, G×E

小学儿童数学焦虑的潜在类别转变及其父母教育卷入效应： 三年纵向考察

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摘要 数学焦虑指个体在解决与数学有关的问题时，出现的不安、紧张、畏惧等焦虑状态和负性情绪反应。当代发展心理学家 Lerner 提出的发展情境理论强调个体发展的异质性，Rubinsten 等人(2018)近期提出数学焦虑的生物-心理-社会动态发展模型进一步认为数学焦虑受到个体自身因素(如遗传倾向、神经生理倾向等)与环境因素(如父母教养方式、教师态度)相互作用，处于不断的发展变化之中。但前人数学焦虑研究罕见探索儿童数学焦虑的潜在类别及其随时间的转变情况。本研究采用潜在剖面分析(LPA)和潜在转变分析(LTA)考察小学阶段儿童数学焦虑的潜在类别及其随时间的发展转变情况，并采用逻辑回归考察父母教育卷入在小学儿童数学焦虑类别转变中的作用。以 1720 名三、四年级儿童为被试，对其数学焦虑和感知到的父母教育卷入进行三次追踪，每次间隔一年。将儿童的数学成绩、考试焦虑、年级、性别作为协变量控制。结果表明：(1)小学儿童数学焦虑存在低数学焦虑组、高数学评估焦虑组和高数学获得焦虑组三种异质性类别；(2)随时间的推移，高数学评估焦虑组儿童倾向于向低数学焦虑组转变，高数学获得焦虑组倾向于向高数学评估焦虑组转变，而低数学焦虑组稳定性较强；(3)父亲教育卷入($B = -0.45, SE = 0.15, p = 0.003, OR = 0.64$)和母亲教育卷入($B = -0.94, SE = 0.19, p < 0.001, OR = 0.39$)对儿童数学焦虑由低数学焦虑组向高数学评估焦虑组的转变具有负向预测作用；母亲教育卷入促使儿童数学焦虑由高数学评估焦虑组向高数学获得焦虑组转变($B = 0.52, SE = 0.21, p = 0.01, OR = 1.68$)，该预测效应主要体现在男生身上；父亲教育卷入促使儿童数学焦虑由高数学获得焦虑组向

低数学焦虑组转变($B = 0.66, SE = 0.27, p = 0.02, OR = 1.93$), 该预测效应主要体现在女生身上。本研究从纵向角度首次揭示父亲/母亲教育卷入对儿童数学焦虑类别转变的预测作用, 会因不同的数学焦虑类别而异。上述研究发现为从个体异质性角度看待儿童数学焦虑提供了重要参考。

关键词 小学儿童, 数学焦虑, 父母教育卷入, 潜在转变分析, 纵向研究

Transition of Latent Classes of Children's Mathematics Anxiety in Primary School and the Distinctive Effects of Parental Educational Involvement: A Three-wave Longitudinal Study

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Abstract: Mathematics anxiety refers to the anxiety state, such as anxiety, tension and fear, and negative emotional response when individuals solve mathematics-related problems. Developmental Contextualism proposed by contemporary developmental psychologist Lerner emphasizes the heterogeneity of individual development. Further, the dynamic developmental bio-psycho-social model of mathematical anxiety holds that the interaction between individual factors and environmental factors makes the development of individuals' mathematics anxiety heterogeneity. As individual factors and environmental factors are constantly developing and changing, the developmental trajectories of mathematics anxiety are dynamic. However, there were few studies to examine the latent classes of mathematics anxiety and the development and transitions of it from a longitudinal perspective. Moreover, parental educational involvement as one of important environmental factors might predict the transitions of mathematics anxiety over time. Thus, person-centered approach, including Latent Profile Analysis (LPA) and Latent Transition Analysis (LTA) was used to solve these two problems in this study. 1720 students of grade three and grade four in county primary schools were selected as participants. *Children's Mathematics Anxiety Scale* compiled by Chiu and Henry (1990) and revised by Geng and Chen (2005) and *Questionnaire on Parental Involvement Behavior of Primary School Students* compiled by Wu, Han, Wei, and Luo (2013) were used to measure children's mathematics anxiety and their perceived parental educational involvement separately three times over three years. Children's mathematics achievement, test anxiety, grade and gender were taken as covariates. Some valuable results were obtained as follows. (1) There were three different subgroups of mathematics anxiety in primary school children, including low mathematics anxiety group, high mathematics evaluation anxiety group and high mathematics acquisition anxiety group; (2) As time went by high mathematics evaluation anxiety group tended to change to low mathematics anxiety group, high mathematics acquisition anxiety group tended to change to high mathematics evaluation anxiety group, and low mathematics anxiety group were relatively stability; (3) Father involvement ($B = -0.45, SE = 0.15, p = 0.003, OR = 0.64$) and mother involvement ($B = -0.94, SE = 0.19, p < 0.001, OR = 0.39$) had a negative predictive effect on the transition of children's mathematics anxiety from low math anxiety group to high math evaluation anxiety group. Mother involvement was able to promote the change of children's mathematics anxiety from high mathematics evaluation anxiety group to high mathematics acquisition anxiety group ($B = 0.52, SE = 0.21, p = 0.01, OR = 1.68$), which was mainly in boys. Positive father involvement could promote the change of children's mathematics anxiety from high mathematics acquisition anxiety group to low mathematics anxiety group ($B = 0.66, SE = 0.27, p = 0.02, OR = 1.93$), which was mainly in girls. The findings of this study distinguished the predictive effect of father/mother involvement on the transition of different mathematics anxiety subtypes from a longitudinal perspective. Our findings provide an important reference for viewing children's mathematics anxiety from the perspective of individual heterogeneity.

Keywords: primary school children, mathematics anxiety, parental educational involvement, latent transition analysis, longitudinal study

新冠疫情期间母亲教养投入与儿童返校后心理与学习适应的关系： 日常节律的中介作用

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摘要 以往研究发现, 父母的教养投入对儿童心理及学习适应均有正向预测作用。新冠疫情期间的实证研究也发现, 规律的日常活动可以作为保护因素, 缓冲疫情给儿童带来的不良影响。新冠疫情所造成的学校停课, 使儿童经历了长达一学期的居家学习状态。在这期间, 母亲的教养投入存在哪些表现? 对儿童返校后的行为及心理适应结果会带来哪些影响? 围绕以上问题, 本研究采用追踪设计, 分别在疫情隔离期间(T1: 2020年4月)和一年后(T2: 2021年4月)收集母亲教养投入、学生心理与学习适应以及日常节律数据。研究被试为565名4-8年级学生($M_{age} = 12.77$, $SD_{age} = 1.47$)及其母亲($M_{age} = 39.82$, $SD_{age} = 4.59$)。其中, 母亲报告了疫情期间的教养投入, 以及疫情期间(T1)和返校后(T2)儿童的日常活动节律, 儿童报告了疫情期间(T1)和返校后(T2)的抑郁症状和考试成绩(T2)。结构方程模型结果表明: 1) 在控制了T1的儿童抑郁症状后, 疫情期间母亲的活动休闲投入、学习指导投入, 均可以正向预测疫情期(T1)儿童的日常活动, 并随后正向预测返校后(T2)儿童的日常活动, 进而正向预测儿童返校后(T2)的考试成绩, 负向预测T2的抑郁症状; 2) 疫情期间母亲的活动休闲投入和学习指导投入, 还通过疫情期(T1)儿童的日常活动, 直接正向预测了返校后(T2)儿童的考试成绩, 但这一中介路径在儿童抑郁症状中不显著。研究为了解新冠疫情期间母亲教养投入与儿童后续心理行为发展结果之间的关系提供了实证证据。

关键词 母亲教养投入, 日常节律, 抑郁症状, 学习成绩, 新冠疫情

The Relationship Between Maternal Involvement in the COVID-19 and Children's Psychological and Academic Adjustment: The Mediation Role of Daily Routines

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Abstract: Previous studies suggested that more parental involvement was associated with better academic and psychological adjustment. Studies during the COVID-19 pandemic have also found that regular daily routines acted as a protective factor to buffer children from psychological maladjustment. Due to the closure of schools during the quarantine, children had been studying at home for up to a semester. The current study aims to explore the following questions: which aspect of parental involvement would show during the COVID-19 stay-at-home period? What would be the effects of parental involvement on children's academic and psychological adjustment after students returning to school? Data were collected from 565 students ($M_{age} = 12.77$, $SD_{age} = 1.47$) in grades 4-8 and their mother ($M_{age} = 39.82$, $SD_{age} = 4.59$) during the COVID-19 outbreak (T1: April 2020) and after returning to school (T2: April 2021). Children reported depressive symptoms (T1&T2) and academic achievement (T1). Mothers reported maternal involvement during the COVID-19 stay-at-home period and children's daily routines (T1&T2). The result of the structural equation model found that: 1) after controlling for T1 depressive symptoms of children, maternal involvement in both activity and study positively predicted T1 children's daily routines, which further positively predicted T2 children's daily routines, and then in turn positively predicted T2 children's academic achievement and negatively predicted T2 children's depressive symptoms. 3) Maternal involvement in both activity and study also directly predicted T2 children's academic achievement through T1 children's daily routines. However, this mediation

effect of daily routines was not found in the relationship between maternal involvement and children's depressive symptoms. This study provides empirical evidence to understand the relationship between maternal involvement during the COVID-19 and children's subsequent psychological and behavioral development outcomes.

Keywords: Maternal Involvement, Daily Routines, Depressive Symptoms, Academic Achievement, COVID-19

(5) “发展心理专业委员会”口头报告分场 5

儿童社交淡漠与抑郁感的发展轨迹： 基于平行潜变量增长模型

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摘要 社会退缩是指个体从社会交往活动中抽离而表现出独处的行为, 不同水平的社交回避和社交趋近动机的组合将其划分为多种亚型——害羞, 社交回避与社交淡漠, 其中较低的社交回避和较低的趋近动机构成了社交淡漠。已有研究表明, 社交淡漠显著正向预测儿童青少年的抑郁感水平。然而, 很少有研究关注抑郁感对儿童社交淡漠的发展产生的影响, 同时以往研究多是从横断研究的角度出发, 缺乏对两者之间发展轨迹关系的考察。本研究采用自我报告和同伴报告结合的方式, 对 609 名 3~4 年级儿童的社交淡漠和抑郁感水平进行为期 3 年共 3 次的追踪调查, 使用两种追踪数据分析方法探讨社交淡漠和抑郁感之间是否存在相互预测作用及发展轨迹是否存在共变关系。首先, 采用交叉滞后模型考察在控制变量自身稳定性后, 社交淡漠和抑郁感水平在三次测量里是否能够相互预测。研究结果表明: 第一年和第二年的抑郁感水平均能正向预测相应的后测社交淡漠水平; 而第一年和第二年的社交淡漠水平则无法预测相应的后测的抑郁感水平。其次, 采用平行潜变量增长模型探究儿童社交淡漠和抑郁感发展轨迹中起始水平和发展速度之间的关系。结果表明: 抑郁感的起始水平可以正向预测社交淡漠的发展速度, 具体表现为, 当儿童的抑郁感的起始水平较高 (均值之上一个标准差) 时, 社交淡漠上升速度未达显著水平; 而当儿童的抑郁感的起始水平较低 (均值以下一个标准差) 时, 社交淡漠发展速度显著下降。本研究的结果为从发展的视角理解中国儿童社交淡漠与抑郁感之间的动态相互关系提供了有价值的信息, 同时也为儿童社交问题的干预提供一定的指导。

关键词 社交淡漠, 抑郁感, 潜变量增长模型, 追踪研究

Trajectories of Unsociability and Depression Symptoms among Chinese Children: A Parallel Latent Growth Model Study

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Abstract: Social withdrawal denotes the process by which individuals remove themselves from opportunities for social interaction. Different underlying social-approach and social-avoidance motivations have been proposed to account for the various subtypes of socially withdrawn behaviors. Unsociability is conceptualized as resulting from both low social-approach and low social-avoidance motivations. In Chinese society, unsociability poses a risk to adolescents' psychological adjustment. Studies have shown that unsociable adolescents experience increased psychological adjustment difficulties, including low self-worth, and depressive symptoms and loneliness. However, little is known about the contributions of adjustment experiences to the development of unsociability. Moreover, these studies almost based on cross-sectional design, the dynamic relations between children's unsociability and depression

symptoms have not been tested. This study examined reciprocal contributions between unsociability and depression symptoms as well as their developmental patterns. Longitudinal data were collected once a year from Grade 3 to Grade 4 for 609 children from multiple sources. Results of cross lagged model showed (1) depression symptoms have positive effects on later unsociability, whereas unsociability doesn't have such effects. Parallel process latent growth modeling revealed that (2) initial level of depression symptoms positively associated with the development rate of unsociability. Furthermore, children with higher initial level of depression (1 SD above the mean) had a positive but nonsignificant growth in unsociability, and children with lower initial level of depression (1 SD below the mean) had a negative growth in unsociability. The present study would provide valuable information about the relations between unsociability and depression symptoms from a developmental perspective in a non-Western context.

Keywords: unsociability, depression, latent growth model, longitudinal study

亲子冲突、不良同伴交往与青少年网络游戏成瘾的关系： OXTR 基因 rs53576 多态性的调节作用

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摘 要 根据中国互联网络信息中心（CNNIC）颁布的《2020 年全国未成年人互联网使用情况研究报告》，我国未成年网民规模达到 1.83 亿，玩网络游戏的未成年网民比例高达 62.5%，在工作日和周末玩游戏日均超过 2 小时的未成年人分别为 13.2%和 23.8%。可见，我国拥有庞大的青少年网民规模，并且青少年网民的游戏使用率居高不下。尽管网络游戏已成为人们最流行的休闲娱乐方式，但对身心尚未成熟的青少年而言，过度沉迷于网络游戏很可能发展为网络游戏成瘾（Internet gaming disorder, IGD）。亲子关系是家庭环境系统的重要组成部分，并且亲子关系的发展具有重要的遗传基础。催产素受体基因（oxytocin receptor, OXTR）是亲子关系发展的重要候选基因。已有研究证实亲子冲突是青少年 IGD 的风险因素之一。然而，目前考察亲子冲突是如何影响男女青少年 IGD 的研究非常有限，也甚少研究揭示基因如何与环境交互作用于男女青少年 IGD。基于社会学习理论和基因×环境交互作用视角（G×E），本研究构建了一个有调节的中介模型来检验不良同伴关系是否在亲子冲突与男女青少年 IGD 的关系间起中介作用，以及该中介效应能否被 OXTR 基因 rs53576 多态性所调节。共 469 名青少年匿名参与问卷调查。研究结果发现：1）不良同伴关系在亲子冲突与青少年男生女生 IGD 的关系间起显著的中介作用；2）OXTR 基因 rs53576 多态性在“亲子冲突 → 不良同伴关系 → 女生 IGD”这一中介路径中起调节作用。具体而言，调节效应在 AA 基因型女生中显著，在 AG/GG 基因型女生中不显著，同时，这一调节效应在男生中均不显著。本次研究发现进一步揭示了青少年网络游戏成瘾的影响因素、发生过程和基因遗传机制，为日后干预方案的制定和治疗提供了更多实证依据。

关键词 亲子冲突，不良同伴关系，网络游戏成瘾，OXTR 基因 rs53576 多态性，青少年

Parent-adolescent conflict, deviant peer affiliation and adolescents internet gaming disorder: The moderating role of OXTR gene rs53576 polymorphism

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Abstract: According to the report of 2020 the China research report on Internet use of minors by China Internet Network Information Center (CNNIC), the number of Chinese underage internet users reached 183 million. Besides, the rate of playing online game account for 62.5%, and the rate of using online game more than 2 hours on workday and weekend account for 13.2% and 23.8%, respectively. It was clear that China had a large number of adolescents internet users, and the utilization rate of game stay high. Internet games have become the most popular way of leisure and entertainment for people. However, for adolescents who physical and psychological development is immature, excessive addiction to internet games is likely to develop into internet gaming disorder (IGD). Parent-adolescent

relationship is an important part of family environment system. Moreover, parent-adolescent relationship has an important genetic basis. The oxytocin receptor (OXTR) is a candidate gene for the development of parent-adolescent relationship. Previous studies have indicated that parent-adolescent conflict was one of the risk factors for adolescent IGD. But there has been limited research examining how parent-adolescent conflict affects IGD in both male and female adolescents. Also, few studies have explored how genes interact with the environment to male and female adolescents with IGD. Based on Social Learning Theory and the perspective of Gene-Environment (G×E) interactions, this study constructs a moderated mediation model to test whether deviant peer affiliation play a mediating role of the association between parent-adolescent conflict and IGD in both male and female adolescents, and this mediating process whether moderated by OXTR gene rs53576 polymorphism. A sample of 469 adolescents anonymously responded to a set of questionnaires. Finally, the current study found that: 1) deviant peer affiliation significantly mediated the association between parent-adolescent conflict and IGD in both male and female adolescents; 2) OXTR gene rs53576 polymorphism could moderated the mediating path of “parent-adolescent conflict → deviant peer affiliation → female adolescent IGD”. Specifically, the moderating effect was significant for female adolescents with AA genotype, while nonsignificant for adolescents with AG and GG genotype. In addition, the moderating effect nonsignificant for male adolescents. The present study further revealed the impact factor, occurrence process and genetic mechanism of adolescent IGD, which provide more empirical evidence for the formulation and treatment of intervention programs in the future.

Keywords : parent-adolescent conflict, deviant peer affiliation, internet gaming disorder, OXTR gene rs53576 polymorphism, adolescent

同伴侵害对青少年抑郁症状的影响： 一般自我概念和友谊亲密性的纵向作用

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摘 要 青少年抑郁是青少年时期的主要精神障碍之一, 探讨青少年抑郁的影响因素具有重要意义。在众多的因素中, 同伴受害对青少年的抑郁产生和发展具有广泛而深远的影响。为了探讨同伴侵害对青少年抑郁症状的长期影响作用及其作用机制, 本研究对 458 名 ($M_{\text{年龄}}=11.34$ 岁, $SD_{\text{年龄}}=0.58$ 岁, 213 名男生) 6 年级的学生进行为期三年的追踪调查。被试分别在六年级、七年级和八年级报告受到欺负、一般自我概念、抑郁症状和友谊亲密度等情况。在此基础上采用 *Mplus* 7.4 软件, 构建纵向的有调节的中介模型。主要数据结果表明: (1) 在控制了性别和抑郁症状的先前水平后, 一般自我概念(T2)在同伴侵害(T1)与青少年的抑郁症状(T3)中起到中介作用, 中介效应量为 0.07, 95%CI [0.03, 0.12]。 (2) 友谊亲密性(T1)在上述中介作用中起着调节作用, $\beta=0.11$, $p<.05$ 。具体来说, 只有当青少年感知的友谊亲密性(T1)水平较低时, 同伴侵害(T1)能通过通过一般自我概念(T2)显著预测其抑郁症状水平(T3), $\beta=0.05$, $p<.05$, 95%CI [0.02, 0.14]。本研究不仅验证了同伴侵害对青少年抑郁症状的长时影响, 更揭示了一般自我概念和友谊亲密性在其中的重要作用, 为预防同伴侵害对青少年心理健康发展的不利影响提供一定的指导和帮助。

关键词 同伴侵害, 一般自我概念, 抑郁症状, 友谊亲密性, 纵向的有调节的中介模型

How Peer Victimization Influences Chinese Adolescents' Depressive Symptoms: The Longitudinal Effects of General Self-Concept and Friendship Intimacy

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Abstract: As a major mental disorder during the adolescent period, youth depression is considered a serious public health problem. Therefore, it is salient to investigate the influencing factor of youth depression. Peer victimization is of particular interest among numerous factors as it is associated with depression closely (for a review, Reijntjes et al., 2010). Hence, this study aims to test a conceptual model using a longitudinal design that adolescents' general self-concept mediates the association between peer victimization and depression symptoms and friendship intimacy moderates the relations between peer victimization and general self-concept. Participants were $N = 458$ ($M_{age} = 11.34$ years, $SD_{age} = 0.58$ year, 213 boys at Time 1) sixth-grade students recruited from two randomly selected public schools in Shanghai, People's Republic of China. Adolescents reported on peer victimization, general self-concept, friendship intimacy, and depressive symptoms when they were in sixth grade, seventh grade, and eighth grade respectively. The main results show that (1) After controlling gender and previous depressive symptoms levels, peer victimization at Time 1 could predict adolescents' depressive symptoms at Time 3 through general self-concept at Time 2, the mediating effect is 0.07, 95%CI [0.03, 0.12]. (2) Friendship intimacy at Time 1 played a moderating role in the indirect pathway from peer victimization at Time 1 to depressive symptoms at Time 3 through general self-concept at Time 2, $\beta = 0.11$, $p < .05$. To be specific, the mediating role of general self-concept was only significant among adolescents who had lower friendship intimacy levels, $\beta = 0.05$, $p < .05$, 95%CI [0.02, 0.14]. Figuring out the mechanism underlying how peer victimization influence adolescents' depression symptom could provide efficient guidance and help for the implementation of intervention plans.

Keywords: peer victimization, general self-concept, depressive symptoms, friendship intimacy, longitudinal moderated mediation model.

同伴关系、社交自我概念和抑郁症状之间的双向关联： 一项 5 年纵向研究

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摘要 同伴关系与抑郁症状间存在双向关联, 但两者间存在的潜在作用机制尚不清晰。现有理论和研究表明, 同伴关系与社交自我概念及社交自我概念与抑郁症状间存在双向关联。但鲜有研究考察三者间动态单向或双向影响及三者间可能存在的间接影响。基于此, 本研究以 1952 名五年级儿童为被试 (平均年龄 11.31 ± 0.49 岁; 男生 1009 名), 进行每年一次, 持续时间五年的追踪调查, 考察同伴关系、社交自我概念与抑郁症状间的纵向关联及其性别差异、年龄差异。采用同伴提名法测量同伴拒绝, 自我报告法测量同伴侵害、社交自我概念和抑郁症状。交叉滞后模型结果发现: (1) 5 年级和 8 年级的同伴侵害能够预测随后一年的抑郁症状, 5~8 年级的抑郁症状均能够预测随后一年的同伴侵害, 未发现同伴拒绝与抑郁间联系; (2) 6 年级的社交自我概念能够预测 7 年级的同伴拒绝, 5、7、8 年级的社交自我概念能预测随后的同伴侵害, 未发现同伴关系对社交自我概念的预测; (3) 社交自我概念与抑郁症状间存在双向关联; (4) 抑郁能够通过社交自我概念影响同伴拒绝, 未发现同伴拒绝通过社交自我概念影响抑郁; (5) 抑郁能够通过社交自我概念影响同伴侵害, 未发现同伴侵害通过社交自我概念影响抑郁。模型未发现三者关系的性别差异和年龄差异。本研究发现了抑郁通过社交自我概念间接影响同伴关系, 为症状驱动假说提供了证据。

关键词 同伴拒绝, 同伴侵害, 社交自我概念, 抑郁症状, 交叉滞后

Transactional Associations Among Peer Relationships, Social Self-concept, and Depressive Symptoms: A 5 - year longitudinal study

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Abstract: There are reciprocal associations between peer relationships and depressive symptoms, but the potential mechanisms of these associations are still unclear. Existing theories and research indicated that peer relationships were bidirectional associated with social self-concept, social self-concept was bidirectional associated with depressive symptoms. However, there is a dearth of research investigating dynamic unidirectional or bidirectional effect and indirect effect among peer relationships, social self-concept, and depressive symptoms. Participants were 1,952 children (Mage = 11.3 ± 0.49 years; 1,099 boys) being followed from Grade 5 to Grade 9 annually. Peer rejection was measured by peer nomination, peer victimization, social self-concept, and depressive symptoms were measured by self-report. Results from cross-lagged model were as follows: (1) peer victimization at Grade 5 and Grade 8 predicted subsequent depressive symptoms, depressive symptoms from Grade 5 to Grade 8 predicted subsequent peer victimization, but no association was found between peer rejection and depressive symptoms; (2) social self-concept at Grade 6 predicted subsequent peer rejection, social self-concept at Grade 5, 7, and 8 predicted subsequent peer victimization, but peer relationships did not predict social self-concept was found; (3) social self-concept were bidirectional associated with depressive symptoms; (4) depressive symptoms had indirect effect through social self-concept on peer rejection, no indirect effect was found that peer rejection predicted depressive symptoms via social self-concept; (5) depressive symptoms predicted peer victimization via social self-concept, no indirect effect was found that peer victimization predicted depressive symptoms via social self-concept. The model found no gender or age differences among peer relationships, social self-concept, and depressive symptoms. This study found depressive symptoms predicted peer relationships via social self-concepts, these results provided evidence for the symptom-driven hypothesis.

Keywords: peer rejection, peer victimization, social self-concept, depressive symptoms, cross-lagged analysis

儿童青少年同伴侵害与敌意归因的关系--一项交叉滞后分析

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摘要 同伴侵害 (Peer Victimization) 是指个体遭受同伴攻击的经历。敌意归因 (Hostile Attribution Bias) 是指在模糊的激惹情境中个体对他人的意图做出敌意解释的倾向。敌意归因与同伴侵害间存在显著正向关联。然而, 目前尚缺乏考察二者间关系方向的纵向研究。遭受同伴侵害的经历可能会使个体建构不信任的图式, 这种不信任的图式会使儿童青少年在模糊的激惹情境中对同伴的意图做出敌意解释。敌意归因也可能预测同伴侵害, 具有敌意归因的儿童往往会表现出损害同伴群体功能的攻击或其它问题行为, 使得周围同伴可能会通过攻击的方式惩罚这些儿童, 故而遭受同伴侵害。此外, 同伴侵害和敌意归因间的关系还可能存在类型特异性。本研究以 1015 名 4、7 年级的儿童青少年 (平均年龄 13.33±1.55 岁, 男生 536 人, 四年级 505 人) 为研究对象, 进行间隔一年的短期追踪测量, 采用交叉滞后分析考察同伴侵害和敌意归因间的关系方向及其性别差异、学段差异。采用自我报告与同伴提名对同伴侵害进行测量, 采用自我报告对敌意归因进行测量。结果发现, 自我报告和同伴提名的同伴侵害均能显著预测下一个时间点的敌意归因, 但敌意归因不能显著预测随后的同伴侵害。同伴侵害与敌意归因之间的关系不存在类型特异性。同伴侵害与敌意归因之间的关系具有跨性别与学段的一致性。本研究结果提示我们, 同伴侵害是影响个体认知发展的重要风险因素, 它会使儿童青少年对世界及周围的环境抱有消极看法。故而干预研究者应对此高度重视, 否则可能会影响对儿童青少年

世界观、价值观的培养，长此以往导致个体反社会等不良行为的发生发展。同时，敌意归因并非是个体的遭受侵害的致因，因此将遭受侵害的原因仅归咎于儿童青少年自身的做法不值得提倡。

关键词 同伴侵害，敌意归因，交叉滞后分析

A Cross-Lagged Analysis of Associations between Peer Victimization and Hostile Attribution Bias

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Abstract: Peer victimization refers to children's experience of being a target of aggressive behavior from peers. Hostile attribution bias (HAB) is a tendency to interpret the intent of others as hostile in ambiguous situations. Existing studies have shown that there is a positive correlation between peer victimization and HAB. However, because of the lack of longitudinal studies, it is unclear the relational direction of them. The experience of peer victimization may cause a change in schema, for example, one's beliefs about trust, which may lead to the attribution of hostility in ambiguous provocative situations. HAB may also predict peer victimization. Children with hostile attributions tend to show maladjusted behavior such as aggression. As a result, they may be less socially accepted and more likely to be the targets of peer victimization. Furthermore, the relationship between peer victimization and HAB may be type-specific. Participants included 1015 fourth and seventh grade students (mean age=13.33±1.55 years old at wave 1, 536 males, 505 fourth graders). This study used one-year short-term longitudinal design and cross-lagged modeling to examine the relational direction between HAB and peer victimization. Meanwhile, gender differences and grade difference in associations between peer victimization and HAB were also taken into account. Peer victimization was rated by self-report and peer nomination; HAB was measured by self-report. Findings were as follows: Both self-report and peer nomination of peer victimization at time 1 could predict subsequent HAB; but HAB couldn't predict subsequent peer victimization. There was no type-specific relationship between peer victimization and HAB. The relationship between peer victimization and HAB had no significant gender difference and no grade difference. The results of this study suggest that peer victimization is an important risk factor for cognitive development. It will make individuals hold a negative view of the world and the surrounding environment. If no attention and intervention is paid to this, it may even affect the world outlook and values of children and adolescents, and in the long run, individuals will have anti-social and other negative behaviors. At the same time, the HAB is not the antecedent of peer victimization, therefore, schools, teachers should pay attention to that it is not worth advocating to attribute the victimization to children and adolescents themselves.

Keywords: peer victimization, hostile attribution bias, Cross-Lagged Analysis

儿童中期至青少年早期孤独感、抑郁症状和社交焦虑的联合发展轨迹及其与自杀意念的关系

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摘要 孤独感、抑郁症状和社交焦虑是儿童和青少年最常见的内化问题，这些内化问题经常同时发生，这种同时发生预示着更低的心理社会功能（例如，自杀风险的增加）。自杀意念被认为是自杀行为的主要前兆。自杀的逃避理论认为，负面情绪（例如抑郁症状）与自杀意念有关。此外，自杀的人际理论认为，与不良人际关系相关的归属感受挫（例如，孤独和社交焦虑）会增加一个人的自杀风险。然而，关于青少年向青春期

过渡期间孤独感、抑郁症状和社会焦虑的共同发展轨迹，以及确定的轨迹如何与随时间变化的自杀意念相关，我们知之甚少。因此，本研究旨在确定(a)从童年中期到青春早期早期的孤独感、抑郁症状和社交焦虑的异质性共同发展轨迹，以及(b)所确定的不同轨迹与青少年随时间变化的自杀意念的关系。来自中国南方地区的643名小学生参加了六次重复测量。第一次测量时间的平均年龄为9.01岁，SD=0.75，男生占55.2%。结果表明，孤独感、抑郁症状和社交焦虑存在五种不同的联合发展轨迹：一致低组（孤独感、抑郁症状和社交焦虑最初是低水平，随后下降；占总体45.1%）、中等偏低，且以孤独感和抑郁症状为主组（孤独感、抑郁症状最初是中等水平，随后稳定；而社交焦虑最初是低水平，随后稳定；占总体15.7%）、中等，且以孤独感和抑郁症状为主组（孤独感和抑郁症状随时间推移先上升后下降，但仍保持在较高水平；而社交焦虑症状一直保持中等水平；占总体4.2%）、中等偏低，且以社交焦虑为主组（孤独感和抑郁症状最初是低水平，随后稳定或下降；而社交焦虑最初是中等水平，随后增加；占总体24.9%）、一致高组（孤独感、抑郁症状和社交焦虑最初是高水平，随后稳定或增加；占总体10.1%）。持续经历两到三种内化问题的青少年的自杀意念水平最高，持续经历一种主要内化问题的青少年的自杀意念水平是次高，持续经历三种低水平的内化问题的青少年的自杀意念最低。研究结果对于内化问题和自杀意念的预防和干预工作具有重要启示。

关键词 孤独感，抑郁症状，社交焦虑，联合发展轨迹，自杀意念

Co-Developmental Trajectories of Loneliness, Depressive symptoms, and Social Anxiety from Middle Childhood to Early Adolescence and Their Relationship with Suicidal Ideation

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Abstract: Loneliness, depressive symptoms and social anxiety are among the most prevalent internalizing problems in children and adolescents. These internalizing problems often co-occur, and this co-occurrence indicates lower psychosocial functioning (e.g., an increased risk of suicide). Suicidal ideation is considered to be a major precursor of suicidal behaviors. The escape theory of suicide suggests that negative emotions (e.g., depressive symptoms) are related to suicidal ideation. Moreover, the interpersonal theory of suicide posits that thwarted belongingness associated with poor interpersonal relationships (e.g., loneliness and social anxiety) contributes to one's risk for suicide. Nevertheless, little is known about the co-developmental trajectories of loneliness, depressive symptoms, and social anxiety among youth during the transition into adolescence and how identified trajectories are associated with time-varying suicidal ideation. This study thus aimed to determine the (a) heterogeneous co-developmental trajectories of loneliness, depressive symptoms, and social anxiety from middle childhood to early adolescence, and (b) associations between the identified, distinct trajectories and youth's time-varying suicidal ideation. A total of 643 elementary school students from southern China completed six repeated measures. The average age of participants at the first wave was 9.01 years, SD = 0.75, and boys accounted for 55.2% of sample. Five distinct joint developmental trajectories of loneliness, depressive symptoms and social anxiety were found: the congruent-low group (loneliness, depressive symptoms, and social anxiety are initially low and subsequently decreasing, accounting for 45.1% of the total), the moderately low with predominant loneliness and depressive symptoms group (loneliness and depressive symptoms are initially moderate and subsequently stable, whereas social anxiety are initially low and subsequently stable, 15.7%), the moderate with predominant loneliness and depressive symptoms group (loneliness and depressive symptoms are initially increasing followed by a slight decrease, but still remained at a relatively high level, whereas social anxiety is initially moderate and subsequently stable, 4.2%), the moderately low with predominant social anxiety group (loneliness and depressive symptoms are initially low and subsequently stable or decreasing, whereas

social anxiety is initially moderate and subsequently increasing, 24.9%), the congruent-high group (loneliness, depressive symptoms, and social anxiety are initially high and subsequently stable or increasing, 10.1%). The highest suicidal ideation was observed among adolescents who persistently experienced two or three internalizing problems, followed by those who persistently experienced one predominant internalizing problem, and finally, adolescents who persistently experienced low levels of all three types of internalizing problems. These findings have important implications for the prevention and intervention of internalizing problems and suicidal ideation.

Keywords: Loneliness, depressive symptoms, social anxiety, co-developmental trajectories, suicidal ideation

(6) “发展心理专业委员会”口头报告分场 6

二孩家庭父母偏爱的特点及其与青少年问题行为的关系

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摘要 随着二孩家庭的逐渐增多, 父母偏爱日益受到社会各界的关注。父母偏爱是指父母教养或被认为教养某一个或某几个子女的方式更加积极(Brody et al., 1998), 是一种普遍存在的消极教养现象(Oliver & Pike, 2018)。本研究以 1655 名二孩家庭的青少年为研究对象, 其中男孩 751 名(占 45.4%)、女孩 904 名(占 54.6%), 大孩 1015 名(占 61.3%)、二孩 640 名(占 38.7%), 被试平均年龄为 13.18 岁($SD = 1.34$), 同胞年龄差为 7.05 ± 3.52 岁。研究采用同胞差异经历量表 (SIDE-C) 分别对父亲偏爱和母亲偏爱进行测量, 儿童抑郁量表(简版) (CDI-S) 以及攻击行为问卷 (AQ) 分别对青少年抑郁和攻击行为进行测量。结果发现: (1) 二孩家庭中, 父亲偏爱和母亲偏爱的整体水平均较低, 且二者没有显著差异; (2) 父、母偏爱均存在显著的群体差异, 具体表现为: 男孩报告父母更偏爱自己, 女孩报告父母更偏爱同胞; 大孩报告父亲偏爱自己, 母亲偏爱同胞, 二孩报告父亲偏爱同胞, 母亲偏爱自己; 高同胞年龄差组(10 岁以上, 占 14.1%) 青少年报告父母更偏爱自己, 中(6-10 岁, 占 53.4%)、低(0-5 岁, 占 31.6%) 同胞年龄差组青少年则均报告父母更偏爱同胞; (3) 在控制青少年性别、年龄、家庭 SES 之后, 父亲偏爱和母亲偏爱均对青少年问题行为有显著影响, 且与青少年问题行为的关系均为不规则 U 型曲线关系: 当父母偏爱同胞或中高程度偏爱自己时, 青少年问题行为水平均较高; 当父母较低程度偏爱自己时, 青少年问题行为水平最低。

关键词 二孩家庭, 父母偏爱, 问题行为

The Characteristics of Parental Favoritism in Two-child Families and Its Relationship with Adolescents' Behavior Problems

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Abstract: With the implementation of the universal two-child policy, the number of two-child families in China has been increasing. At the same time, the problems of parental favoritism that followed has become increasingly serious. Parental favoritism is a common phenomenon in which parents treat, or are perceived to treat one or some of their children more positively than their other children (Brody et al., 1998). Data in this study were collected from 1655 adolescents from two-child families who were in grades 7 to grades 10. And the sample includes 751 boys and 904 girls, and 1015 older siblings and 640 younger siblings. The mean age of these participants was 13.18 years ($SD =$

1.34). The sibling age difference was 7.05 ± 3.52 years. Parent favoritism was measured by Sibling Inventory of Differential Experience-Chinese Version (Daniels & Plomin, 198; Ong & Tan, 2018). Aggressive behavior was measured using the Aggression Questionnaire (Bush & Perry 1992), and depression was measured using the Children's Depression Inventory-Short Version (Kovacs, 1992). The main findings are as follows: (1) There was no significant difference between paternal favoritism and maternal favoritism, and both paternal favoritism and maternal favoritism were in a lower level. (2) There were significant group differences in maternal and paternal favoritism. The specific manifestations were as follows: a) boys reported that parents favor themselves more, while girls reported that parents favor their siblings more; b) first-born children reported that father favors themselves more while mother favor their siblings more, in contrast, second-born children reported that father favor their siblings more and mother favor themselves more; c) adolescents in large-sibling-age-difference group reported that parents favor themselves more, and the adolescents in middle-sibling-age-difference group and small-sibling-age-difference group reported that parents favor their siblings more. (3) Both paternal favoritism and maternal favoritism had significant effects on adolescents' behavior problems, and their relationship with adolescents' behavior problems both were partial U-curvilinear. Parenting that both strongly favors and strongly disfavors the adolescents was associated with higher levels of behavior problems, compared with the more moderate range of parental favoritism.

Keywords: Two-child family, Parental favoritism, Behavior problems

同性恋者内化同性恋嫌恶与孤独感的关系： 一个有调节的中介模型

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摘 要 内化同性恋嫌恶是指同性恋者经历对外界偏见的内化过程后，所形成的对自身性取向的负性态度。作为在同性恋群体中广泛存在的一种典型心理特征，内化同性恋嫌恶是损害同性恋者心理健康的关键因素，其中孤独感是高内化同性恋嫌恶群体普遍存在的心理健康问题。社会生态视角强调从社会文化的角度去探究同性恋者心理健康作用机制。在中国“严父慈母”的传统教养观念下，父亲拒绝和母亲过度保护可能是同性恋群体面临的两种典型的家庭教养环境。母亲守门员效应认为母亲的教养态度与行为对父亲教养投入有重要的影响。基于此，本研究建立了有调节的中介模型，考察了父亲拒绝在内化同性恋嫌恶与同性恋者孤独感关系间的中介作用，以及该过程是否受母亲过度保护的调节。通过问卷调查法，使用内化同性恋嫌恶量表、孤独感量表和父母教养方式问卷简式中文修订版对 229 名同性恋者进行调查，结果发现：(1)在控制性别、年龄、父母婚姻状况和家庭社会经济地位后，内化同性恋嫌恶与孤独感呈显著正相关；(2)父亲拒绝在内化同性恋嫌恶与孤独感之间起部分中介作用；(3)母亲过度保护调节了父亲拒绝中介内化同性恋嫌恶与孤独感关系的前半段路径，即相对于低水平的母亲过度保护，高水平的母亲过度保护会加剧父亲拒绝教养。因此，同性恋群体内化同性恋嫌恶对孤独感的影响是有调节的中介效应。本研究在同性恋群体内化同性恋嫌恶与孤独感的关系中验证了母亲守门员效应，启示母亲应给予父亲更多参与子女教育的机会，避免因过度关爱导致“关门效应”出现，为同性恋群体营造支持性的家庭环境，从而帮助其健康成长提供了理论支撑。

关键词 同性恋者，内化同性恋嫌恶，孤独感，父亲拒绝，母亲过度保护

Internalized Homophobia and Loneliness in Homosexuals: A Moderated Mediation Model

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Abstract : Internalized homophobia refers to the negative attitude of homosexuals towards their own sexual orientation after the internalization of external prejudice. As a typical psychological feature widely existing in homosexuals, internalized homophobia is the key factor to damage the mental health of homosexuals, and loneliness

is a common mental health problem of highly internalized homophobia groups. From the perspective of social ecology, it is emphasized to explore the mechanism of mental health of homosexuals from the perspective of social culture. Under the traditional Chinese upbringing concept of "strict father and loving mother", the father's rejection and the mother's overprotection may be two typical family upbringing environments faced by homosexuals. The maternal gatekeeping effect suggests that maternal parenting attitude and behavior have an important influence on father's parenting investment. Based on this, this study established a moderated mediation model to examine the mediating role of father's rejection in the relationship between internalized homophobia and loneliness in homosexuals, and whether this process was moderated by mother's overprotection. A sample of 229 homosexuals completed measures of Internalized Homophobia Scale, Loneliness Scale and Simplified Chinese Revision of Parenting Style Questionnaire (s-EMBU-c). The results showed that: (1) after controlling for gender, age, parental marital status and family socioeconomic status, there was a significant positive correlation between internalized homophobia and loneliness; (2) father's rejection was a partial mediator between internalized homophobia and loneliness; (3) maternal overprotection moderated the first half of the pathway of paternal rejection mediating the relationship between internalized homophobia and loneliness, that is, compared with low-level mother's overprotection, high-level mother's overprotection would aggravate father's rejection. This study verified the maternal gatekeeping effect in the relationship between internalized homophobia and loneliness in the homosexuals, enlightened that the mother should give the father more opportunities to participate in children's education, avoid the "closed door effect" caused by excessive care, and provided theoretical support for the homosexuals to create a supportive family environment, so as to help them grow up healthily.

Keywords: homosexuals, internalized homophobia, loneliness, father's rejection, maternal overprotection

学业压力、自尊与青少年非自杀性自伤行为： 催产素受体基因 rs53576 多态性的调节作用

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摘要 非自杀性自伤（nonsuicidal self-injury, NSSI）是指在没有致命意图的情况下对身体组织做出故意的、直接的、不被社会接受的危害性行为，已成为当前全球性重大公共卫生问题。学业压力作为一种慢性压力源，是青少年非自杀性自伤的重要诱因，但是迄今对其内在作用机制尚不清楚。随着个体易感性研究深入到基因层面，越来越多的研究强调探究基因影响青少年非自杀性自伤的发展机制的重要性。最近研究表明，催产素受体（the oxytocin receptor gene, OXTR）基因 rs53576 多态性可能决定青少年受学业压力影响的程度。为进一步了解学业压力对青少年非自杀性自伤的影响机制以及遗传易感性，本研究选取广东省广州市和东莞市的两所普通中学的 469 名初中生作为研究对象（ $Mean_{age}=13.31$ 岁， $SD=0.47$ ）进行研究，考察自尊在学业压力与青少年非自杀性自伤的关系中的中介作用，以及催产素受体基因 rs53576 多态性在这一关系中的调节作用。研究结果显示：（1）自尊在学业压力与青少年非自杀性自伤的关系中起中介作用；（2）rs53576 多态性显著调节“学业压力→自尊→青少年非自杀性自伤”，具体表现为，AA 基因型青少年的学业压力能够显著降低自尊水平，进而增加 NSSI 的风险；而在 GG、GA 型青少年中，该中介路径不显著。本研究将有助于我们较为深刻地了解学业压力对青少年的非自杀性自伤的作用机制，为实际中的青少年非自杀性自伤干预方案研究提供了科学的指导意义。

关键词 学业压力，非自杀性自伤，自尊，OXTR 基因 rs53576 多态性，青少年

Academic Stress and Adolescent Nonsuicidal Self-injury: A Moderated Mediation Model

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Abstract: Nonsuicidal self-injury (NSSI) is defined as repetitive, intentional, direct injury of one's body tissue without suicidal intent, that is not socially accepted. It has become a serious global public health problem. As a chronic pressure, academic stress is an important risk factor of adolescent NSSI. However, the mechanism underlying the relationship between academic stress and adolescent NSSI is still unclear. As the study of individual susceptibility has gone deep into the level of gene, there is increasing evidence for the importance of gene in understanding the etiology of adolescent NSSI. Recent research has suggested that the oxytocin receptor (OXTR) gene rs53576 polymorphism could determine the degree to which adolescents are influenced by academic stress. In order to have a deep understanding of the mechanism and genetic susceptibility between academic stress and adolescent NSSI, the current study surveyed 469 teenagers ($Mean_{age}=12.81$ years, $SD=0.47$) in Guangzhou, Dongguan city to verify the mediating role of self-esteem and the moderating role of OXTR gene rs53576 polymorphism in the relationship between academic stress and adolescent NSSI. The results showed that: (1) self-esteem played a mediating role in the relationship between academic stress and adolescent NSSI; (2) this mediating mechanism was moderated by the OXTR gene rs53576 polymorphism, for adolescents with AA genotypes, academic stress was related to lower levels of self-esteem, which increased adolescent NSSI. However, this mediation effect was not observed among adolescents with GG and AG genotype. The current study contributed us to have a deeper understanding of the role of academic stress on adolescent NSSI, and provided scientific guidance for the study of adolescent NSSI intervention programs in practice.

Keywords: academic stress, nonsuicidal self-injury (NSSI), self-esteem, OXTR gene rs53576 polymorphism, adolescent

青少年冲动性的发展轨迹：界定亚群组及其影响因素

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摘 要 青少年时期是个体发展和成熟的关键时期, 经历着心理、生理等多方面的改变。已有研究表明在青少年这个特殊时期, 抑制控制的神经回路处于一个重要的发展阶段。冲动性是与抑制控制能力相关的一种人格特质, 其基本特征是对行为的负面后果敏感性较低、倾向于在充分加工信息前做出快速、无计划的反应、不考虑行为的长期后果。已有研究研究表明, 冲动性水平与青少年时期的多种问题行为密切相关, 但这些研究大多局限于局限于冲动性均值的比较, 而较少考虑到动态的发展变化。鉴于此, 本研究试图探究中国青少年冲动性的发展轨迹及其影响因素。研究以天津市某中学 210 名中学生为研究对象, 使用 Barratt 冲动性量表, 进行了间隔半年、为期一年半的三次追踪调查。首先构建无条件潜变量增长模型检验冲动性的变化趋势; 然后, 采用潜类别增长曲线分析确定冲动性发展变化的亚群组; 最后, 采用多元逻辑斯蒂回归的方法考察家庭环境亲密性、家庭环境矛盾性等因素对亚群组的影响。结果显示: (1) 各测量时间点的冲动性呈显著正相关; (2) 初中 1~2 年级青少年的冲动性水平随年龄不断增长, 总体呈现线性递增趋势; (3) 冲动性的发展变化存在 3 个起始水平及变化速度不同的亚群组, 分别为恒高组、恒低组和居中升高组; (4) 家庭环境亲密性对恒低组和居中升高组的预测作用显著; 教师支持对恒高组和居中升高组的预测作用显著; 教师支持对恒低组和居中升高组的预测作用显著。这些结果说明, 青少年冲动性的变化遵循不同的发展轨迹, 且家庭环境和学校环境是重要的影响因素, 因此应从以上两方面预防青少年与冲动性相关的问题行为的发生。

关键词 冲动性, 发展轨迹, 亚群组, 家庭环境, 学校环境

The trajectories of adolescent impulsivity: Identifying latent subgroups and risk factors

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Abstract: Adolescence is a critical period of individual development, experiencing changes in psychology, physiology and other aspects. Previous studies have shown that the neural circuits of inhibition control are in an important stage of development in this special period of adolescence. Impulsivity is a multidimensional construct characterized by deficiencies in self-control or delayed gratification, often times resulting in rash and hasty behaviors. While there are arguably multiple ways to define the construct, the most common definition describes impulsivity as a trait characterized by the tendency to act on the spur of the moment and to neglect planning for the future. Although earlier research regarded impulsivity as stable traits across time, emerging findings from longitudinal and cross-sectional research are beginning to provide evidence of its dynamic nature. This study aimed to examine the trajectory of impulsivity in Chinese adolescents and its influencing factors. A longitudinal study was conducted with 210 Chinese adolescents. Their impulsivity were examined, and three waves of data were collected. The impulsivity at each point was significantly positively correlated. The impulsivity of junior high school adolescents showed a linear growth trend. There were three subgroups with different starting levels and varying rates of change, they are high group, low group and elevated group. Family environment intimacy had a significant predictive effect on the low group and elevated group. Teacher support had a significant effect on the prediction of high group and elevation group. Teacher support had a significant predictive effect on the low group and high group. These results indicate that impulsivity changes in adolescents follow different developmental trajectories and family environment and school environment are important influencing factors, so the occurrence of impulsive-related problem behaviors in adolescents should be prevented from the above two aspects.

Keywords: impulsivity, trajectory, subgroups, family environment, school environment

压力性生活事件、抑郁症状对青少年睡眠问题的影响： 情绪调节的保护作用

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摘要 由于容易受到来自社会、学校、家庭和同伴的压力，青少年出现了许多健康问题，睡眠问题就是其中之一。近年来，青少年睡眠问题受到越来越多的关注，而压力性生活事件被发现是睡眠问题的一个风险因素。作为压力的量化概念，压力性生活事件涵盖了来自经济、工作、学习、社会关系、身体和精神疾病等领域的各种负性经历。然而，已有研究在解释压力性生活事件和青少年睡眠问题之间的作用机制方面，仍然存在很大的缺口。根据压力和疾病的阶段模型，基于大脑的压力评估可能通过情感和认知影响与健康有关的行为。因此，本研究提出，抑郁症状是压力性生活事件和青少年睡眠问题之间关系的中介因素。但是并非所有遭受压力性生活事件的大学生都会发展成抑郁症状，情绪调节是可以缓解这一路径的一个保护因素。本研究从中国广东省三所高校中招募了 356 名大学生（36.3%为男性，平均年龄=18.33 岁）匿名填写关于生活压力事件、抑郁症状、情绪调节和睡眠问题的量表。在控制了性别、年龄和社会经济地位之后，结构方程模型结

果显示, 抑郁症状部分中介了生活压力事件和睡眠问题之间的关系, 而情绪调节缓冲了压力性生活事件对抑郁症状的负面影响。也就是说, 抑郁症状是压力性生活事件与青少年睡眠问题关联的一种中介机制, 而情绪调节则影响这一机制。在了解了基本机制后, 我们建议促进情绪调节在预防和干预压力性生活事件和睡眠问题中的潜在作用。

关键词 压力性生活事件, 睡眠问题, 抑郁症状, 情绪调节

Stressful life events, depressive symptoms and adolescent sleep problems: The protective effect of emotion regulation

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Abstract: Vulnerable of stressors from society, school, family and peers, adolescents suffer from many health problems, and one of which is sleep problems. Adolescent sleep problems have received increasing attention in recent years, and stressful life events have been found to be a risk factor for sleep problems. As a quantitative construct for stress, stressful life events cover various adverse social environmental experiences coming from economic circumstances, work and academic fields, social relationships, physical and mental diseases, or other domains. However, there remains a large gap in examining factors that might explain or affect the association between stressful life events and adolescent sleep problems. According to the stage model of stress and disease, brain-based stress appraisals may affect health-relevant behaviors via affective responses and higher-level cognitions. Thus, the current study proposed depressive symptoms as the mediator of the association between stressful life events and adolescent sleep problems. Although stressful life events represent general risk factors for depression, not all university students who suffer from stressful life events will develop into depressive symptoms. Emotion regulation is one protective factor which could alleviate this path. A sample of 356 Chinese university students (36.3% males, mean age = 18.33 years, SD = 0.57) completed anonymous questionnaires regarding stressful life events, depressive symptoms, emotion regulation and sleep problem. Gender, age and socioeconomic status were included as covariates in the analyses. Structural equation models showed that depressive symptoms partially mediated the association between stressful life events and sleep problems. Meanwhile, emotion regulation buffered the negative effects of stressful life events on depressive symptoms. The findings suggest that depressive symptoms act as one mechanism by which stressful life events may be associated with adolescent sleep problems, and emotion regulation affects this mechanism. After understanding the underlying mechanism, we suggest a potential role of promoting emotion regulation in the prevention and intervention of stressful life events and sleep problems.

Keywords: stressful life events, sleep problems, depressive symptoms, emotion regulation

青少年情绪耗竭与自我同情的纵向关系

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摘要 自我同情是指个体以宽容和理解的态度看待挫折和不幸, 始终保持着对自我的友善和关切, 对个体的身心健康有着重要的保护作用。然而, 对于青少年而言, 他们往往面临着繁重的学业压力, 易引发情绪耗竭, 这已经被证明是青少年学业倦怠的开端。近年来, 有研究者提出, 高水平的倦怠可能会导致个体自我同情水平的下降, 然而并没有研究关注情绪耗竭这个学业倦怠的核心成分和自我同情不同维度之间的关系, 更没有研究从纵向发展的角度对两者间的关系进行探讨。基于此, 本研究采用短期纵向设计, 通过潜变量增长模型检验了情绪耗竭和自我同情的三个维度 (自我宽容、普遍人性、正念) 在一个完整的学习周期内的具体发展轨迹, 以及情绪耗竭的发展对自我同情各维度发展的纵向影响。本研究从西安市 3 所中学共招募到 427 名初中生进行间隔 2 个月的 3 次追踪调查, 让他们分别在开学前、期中考试前和期末考试前报告他们的情绪耗竭和自我同情水平。结果发现, 从学期开始到学期结束, 青少年的情绪耗竭随着时间的推移呈线性增长,

而自我宽容和正念则随着时间的推移呈线性递减趋势。再者，情绪耗竭的初始水平能够负向预测自我宽容、正念的初始水平，情绪耗竭的发展速度能够显著负向预测自我宽容、正念的发展速度。最后，情绪耗竭的初始水平能够负向预测自我宽容的发展速度。综上，本研究得出结论，从学期开始到学期结束，青少年感知到的情绪耗竭水平显著提升，自我宽容、正念水平显著下降，并且高水平的情绪耗竭可能是青少年自我宽容水平下降的原因。这提示我们，通过减少青少年的情绪耗竭，能够提高他们的自我同情水平，并进一步促进他们的身心健康发展。

关键词 情绪耗竭，自我同情，青少年，潜变量增长模型

The Longitudinal Relationship between Emotional Exhaustion and Self-compassion in Adolescent Students

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Abstract: Self-compassion refers to being open and understanding attitude in the face of failures or misfortune, always keeping kindness and caring attitude toward oneself, which plays an important role in protecting individual physical and psychological health. However, adolescents tend to face the burden of academic stress, and thereby results in emotional exhaustion, which has been proved to be the initial stage of academic burnout. Some researchers recently argued that high levels of burnout may result in the reduction in individual self-compassion. However, there is no research focus on the relationships between emotional exhaustion, a core component of academic burnout, and sub-components of self-compassion, as well as investigating this topic from the longitudinal perspective. Therefore, the current study adopted a short-term longitudinal design, using latent growth curve models to explore the developmental trajectories of emotional exhaustion and self-compassion (i.e. self-kindness, common humanity, mindfulness) in a complete learning cycle, and the longitudinal relations between emotional exhaustion and sub-components of self-compassion. In the current study, 427 students were recruited from 3 junior high schools in Xi'an, China. Adolescent reported their emotional exhaustion and self-compassion three times with about 2-months intervals from the beginning to the end of the semester. Our results indicated that mean level of emotional exhaustion increase over time, mean level of self-kindness and mindfulness decreased over time. Additionally, the initial levels of emotional exhaustion negatively predicted the initial levels of self-kindness and mindfulness. Changes in emotional exhaustion significantly negatively predicted changes in self-kindness and mindfulness. Finally, initial levels of emotional exhaustion negatively predicted the changes in self-kindness. Overall, the current study indicated that emotional exhaustion adolescent perceived significantly increase, and self-kindness and mindfulness decrease over time from the beginning to the end of the semester. Furthermore, high levels of emotional exhaustion may lead to the reduction of self-kindness, which suggested that alleviating the levels of emotional exhaustion can increase their self-compassion, and further promote their physiological and psychological health development.

Keywords: emotional exhaustion, self-compassion, adolescent, latent growth curve model

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父母-青少年对家庭亲密性的感知差异及其对青少年问题行为的影响： 基于 RSA 模型的分析

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摘要 家庭亲密性指家庭成员彼此之间的情感联结, 与青少年发展紧密关联。然而, 父母与青少年对家庭环境的感知往往存在分歧, 而这种分歧不能只由测量误差解释, 更反映了亲子在认知与沟通等方面主观感知的真实情况, 因而能预测青少年的心理社会适应。但是目前关于家庭亲密性亲子感知差异的探究较少, 且结论不一致。同时, 以往亲子感知差异的研究常采用差分法来进行亲子感知差异与青少年发展结果之间的关联分析, 而差分法存在数据分析冗余等问题, 且难以对亲子感知差异的方向与程度进行深入细致的分析。为克服此问题, 近期研究者采用了二项式回归来充分纳入父母与青少年双方感知的信息, 并结合响应曲面分析 (Response Surface Analysis, RSA) 对亲子感知差异进行更为形象的呈现。基于此, 本研究结合二项式回归与响应曲面分析来探讨家庭亲密性的亲子感知差异与青少年问题行为的关系, 采用家庭功能量表中的家庭亲密性分量表、特质性攻击量表与孤独感量表 (分别作为外化问题和内外问题的指标), 对 1136 个家庭的父母和青少年 (年龄 12.59 ± 1.17 岁, 其中女生 612 名) 进行考察。结果表明: (1) 青少年与父母对家庭亲密性的感知存在差异, 父母感知到的家庭亲密性更高; (2) 亲子感知一致时, 家庭亲密性能显著预测青少年的问题行为, 家庭亲密性越高, 青少年的内、外化问题越少。 (3) 亲子感知不一致时, 家庭亲密性能显著预测青少年的问题行为, 且存在性别差异。对男生而言, 亲子感知不一致时, 仅自身感知的家庭亲密性与其内、外化问题负向关联; 对女生而言, 父母和自身感知的更高的家庭亲密性均对其外化问题具有保护作用, 但仅自身感知的家庭亲密性对其内化问题具有保护作用。本研究检验了中国文化下家庭亲密性的亲子感知差异, 并支持其与青少年心理发展存在紧密关联, 这不仅丰富了以往研究, 也为家庭过程模型的本土化提供实证依据, 并提示未来研究应综合考虑多名家庭成员的感知, 以便为良好家庭关系构建及家庭功能失调的干预提供更丰富的依据。

关键词 亲子感知差异, 家庭亲密度, 问题行为, 响应曲面分析, 青少年

Parent-Adolescent Discrepancies in Family Intimacy and Adolescent Problem Behaviors: A Response Surface Analysis

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Abstract: During the stressful adolescent period, family intimacy is a particularly critical factor worth investigation, as it is closely tied to adolescent socio-emotional development. However, parents and adolescents tend to differ in their perception of family intimacy, which is solely accounted for by measurement error, but also parent-child communication and relationship quality. To strengthen cogency and validity cross studies, researchers tend to collect data from both parents and adolescents. However, informants often differ in their reports, which is traditionally regarded as measurement error. However, recent researches suggest that such informant discrepancy is meaningful in adolescent development. From this perspective, some studies have explored into informant discrepancies in family intimacy, yet the literature is insufficient and sometimes inconsistent. Moreover, researchers often adopted difference-score method with the absolute difference between informants' assessments, which is statistically

redundant, and does not consider the direction of difference. To overcome these issues, researchers recommend polynomial regression with a more-detailed analysis of informant discrepancies. Further, response surface analysis help visualize the relationship between parental report, adolescent report, and outcome variables, giving a vivid illustration on the linearity and direction of their relationship. Thus, this study examined the informant discrepancy between parents and adolescents, and explored the link between such discrepancy and adolescent problem behaviors. The current study aimed to examine the existence of informant (in)congruence in family intimacy under Chinese Culture, and further investigate its connection to adolescent problem behaviors, including both internalizing and externalizing problem behaviors. We recruited 1136 intact Chinese families with children attending elementary school or middle high school, with an average age of 12.59 years old ($SD = 1.17$) and including 612 girls, who answered a questionnaire including the family intimacy subscale of family functioning scale, trait aggression scale (as an index of externalizing problem behaviors), loneliness scale (as an index of internalizing problem behaviors), and demographic information. Then polynomial regression and response surface analysis were conducted to detect (in)congruence in reports of family intimacy between parents and adolescents, and its linkage with adolescent internalizing and externalizing problem behaviors. Besides, we analyzed boys and girls separately. The results of polynomial regression and response surface analysis indicated that: (1) parents and adolescence differed in their reports of family intimacy, and parents tended to have higher levels of family intimacy. (2) Parent-adolescent congruence in family intimacy were negatively linked to adolescent internalizing and externalizing problem behaviors, both for girls and boys. (3) Parent-adolescent incongruence in family intimacy were linked to adolescent externalizing problem behaviors, and the relations differed between adolescent girls and boys. With incongruence between adolescents and parents, adolescents' report was more strongly related with externalizing problem behaviors, especially for boys. Specifically, higher levels of family intimacy was associated with boys' less externalizing problems only when reported by boys (rather than parents), but with the reporter being parents or girls, higher family intimacy had a protective value. This study reveals the existence of parent-adolescent (in)congruence in family intimacy and its relationship with adolescent development in mainland Chinese families, implying the significance of adolescents' view and feelings in their development, sometimes even more than parents' perceptions. Thus, as researches on parent-child (in)congruence has profound meaning on adolescent clinical and developmental research, further investigation is called for.

Keywords: parent-adolescent discrepancies, family intimacy, internalizing problem, externalizing problem, response surface analysis

父母对子女父母情绪的回应方式和青少年自杀意念： 探究青少年内在情绪问题、认知重评和与父母关系质量的中介作用

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摘要 青春期是一个具有较高自杀意念风险的发展时期，而自杀意念是青少年未来自杀企图和自杀行为的重要预测指标。以往研究表明，青少年自杀与家庭环境因素有关，然而已有研究较少关注父母情绪教养与青少年自杀的关系。本研究聚焦父母情绪教养的重要维度——父母对子女负面情绪的回应（以下简称父母回应方式），通过问卷调查对父母回应方式和青少年自杀意念之间的关系以及父母回应方式对青少年自杀起作用的内在机制进行实证探究。本研究以中国青少年家庭为研究对象（ $N=4574$ ；父母：35.81%为男性， $M=44.07$ 岁；青少年：55.40%为男性， $M=16.28$ 岁）。在研究中，我们邀请父母对自身父母回应方式进行评估，并邀请青少年评估自身的内在情绪问题、认知重评和与父母的关系质量。本研究对6种类型的回应方式（即3种支持型和3种非支持型）与青少年自杀意念之间的关系，以及青少年内在心理特征（内在情绪问题、认知重评和与父母的关系质量）中介作用。结果表明，三种父母支持性的回应方式——情绪安慰、问题解决和鼓励情绪表达——负向预测青少年自杀意念；而两种非支持性的父母回应方式——惩罚回应、父母烦躁或不舒服——正向

预测青少年自杀意念。然而，非支持性父母回应方式—否认和忽视—与青少年的自杀意念之间不存在统计上显著相关。此外，本研究表明青少年的内在情绪问题和与父母关系质量在 PRCNE 和青少年的 SI 之间起到了完全中介的作用；然而父母回应方式通过青少年的认知重评间接影响青少年自杀意念的假设并没有得到证实。本研究强调父母回应方式在青少年自杀中作用，拓展了已有研究对青少年自杀意念的了解。研究结果同时强调与父母回应方式密切相关的青少年的内化问题和与父母的关系质量对于青少年自杀意念的重要性。

关键词 情绪教养，父母回应方式，负面情绪，青少年，自杀意念

Parental Response to Children's Negative Emotions and Suicidal Ideation in High-School Students: Investigating the Mediating Roles of Adolescents' Internalizing Problems, Cognitive Reappraisal, and Perceived Relationship Quality with Parents

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Abstract: Adolescence is a developmental period with a heightened risk for suicidal ideation (SI), which is a crucial indicator of adolescents' future suicide attempts and behaviors. The suicide literature has consistently implicated that many adolescents have SI due to reasons related to the family. Extant literature has paid limited attention to how parental emotion socialization (PES) relates to adolescents' SI. By focusing on parental reactions to children's negative emotions (PRNCE), which is a commonly targeted aspect of PES, this study evaluated to investigate whether PRCNE play a role in adolescents' SI and if yes through which processes that PRCNE works on SI. This research utilized data from a sample of Chinese adolescent families ($N=4574$; Parents: 35.81% was males, $M=44.07$ years old; Adolescents: 55.40% was males, $M=16.28$ years old), with parents giving their reports on PRCNE and adolescents self-evaluating their adjustment in internalizing problems, cognitive reappraisal, and perceived relationship quality with parents. We examined the relations between six types of PRCNE (i.e., three supportive ones and three non-supportive ones) and adolescents' SI, as well as analyzed the mediating roles of adolescents' adjustment. The results showed that supportive PRCNE including emotion-focused response, problem-focused response, and expression encouragement negatively predicted, while nonsupportive PRNCE containing punitive response and distress response positively predicted adolescents SI. However, no statistically significant association exists between the nonsupportive PRCNE of minimization and adolescents' SI. Moreover, adolescents' internalizing problems and perceived relationship quality with parents fully mediated the relations between PRCNE and adolescents' SI. Contrary to our hypothesis, the indirect effect of PRCNE on adolescents' SI through adolescents' cognitive reappraisal is not supported. The present research informs adolescents' SI by emphasizing the roles of PRCNE. The findings also highlight the importance of paying attention to adolescents' internalizing problems and perceived relationship quality with parents in relation to PRCNE with the aim of providing intervention for adolescents' SI.

Keywords: emotion socialization, parental reaction, negative emotions, adolescents, suicidal ideal

父母过度保护与儿童焦虑：一个有调节的中介模型

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摘要 焦虑是童年常见的心理健康问题。经历过高的、持续的焦虑的儿童容易出现学校适应不良、睡眠障碍和记忆力下降等问题，也会增加其在青春期或成年期罹患焦虑障碍、抑郁障碍和其他精神障碍的风险。以往研究表明，父母过度保护与儿童焦虑密切相关。从基本心理需要理论的视角来看，父母过度保护会阻碍

小学儿童自主需要和能力需要的满足，而需求挫折感可能是引发儿童焦虑的重要因素。当儿童心理自主性发展受阻时，可能会引起亲子冲突，从而间接引发儿童焦虑情绪。基于此，父母过度保护可能对儿童焦虑之间存在直接影响和间接影响。不同气质类型的儿童处于不利的家庭环境中时，可能会表现出不同的适应结果，气质中的努力控制成分可能在其中发挥着重要作用。先前研究发现中小学生的努力控制水平越高，其焦虑水平越低。而且高水平的努力控制可以缓冲父母消极教养行为以及消极亲子关系对小学儿童焦虑情绪的影响。基于此，父母过度保护与儿童焦虑的直接影响及其中介过程都可能受到儿童努力控制的调节。本研究采用班级整群抽样法，从山东省济南市七所普通小学选取 470 名小学儿童及其父母为被试，进行间隔一年的追踪调查。采用父母过度保护量表、亲子冲突量表、努力控制问卷和儿童焦虑量表考察父母过度保护与儿童焦虑的关系及亲子冲突的中介作用和儿童努力控制的调节作用。结果发现：（1）父亲/母亲过度保护均能显著正向预测自身与儿童的亲子冲突，父亲过度保护还可以显著正向预测母子冲突；（2）母子冲突在母亲过度保护与儿童焦虑之间起部分中介作用；母子冲突在父亲过度保护与儿童焦虑之间起完全中介作用；（3）中介模型的后半段路径受到儿童努力控制的调节，即高水平的努力控制缓冲了母子冲突对儿童焦虑的影响。

关键词 过度保护，亲子冲突，努力控制，儿童焦虑

Parental Overprotection and Children's Anxiety: A Moderated Mediating Model

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Abstract: Anxiety is a common mental health problem in childhood. Children who have experienced high and persistent anxiety are prone to problems such as school maladjustment, sleep disorder and memory decline, which also increases their risk of anxiety disorder, depression disorder, and other mental disorders. Previous studies have shown that there is a correlation between parental overprotection and child anxiety. From the perspective of the Basic Psychological Needs Theory, parental overprotection hinder the satisfaction of children's autonomy and competence need, and need frustration may be an important factor in inducing children's anxiety. When the development of children's psychological autonomy was hindered, parent-child conflict may be triggered, which indirectly triggers children's anxiety. Therefore, parental overprotection may have direct and indirect effects on children's anxiety. Children with different temperament types may show different adaptation results when they were in an unfavorable family environment, and the effort control component of temperament may play an important role in it. Previous studies have found that the higher the level of effort control of elementary and middle school students, the lower their anxiety level. A high level of effort control can buffer the influence of parents' negative parenting behavior and negative parent-child relationship on primary school children's anxiety. Therefore, the direct effects of parental overprotection and children's anxiety and their mediating processes may be moderated by children's effort control. A total of 470 primary school students and their parents from Jinan City were surveyed with cluster sampling, who were assessed again one year later. The present study was surveyed by using the Parental Overprotection Subscale of Parental Bonding Instrument, the Parent-Child Conflict Subscale of Child-Parent Relationship Scale, the Effortful Control Subscale of Early Adolescent Temperament Questionnaire and the Spence Children's Anxiety Scale. The present study investigated the association of parental overprotection and children's anxiety, exploring the mediating role of parent-child conflict and whether it was moderated by children's effortful control. The results indicated that: (1) Both paternal and maternal overprotection had significant positive predictive effect on father-child and mother-child conflict, separately; and paternal overprotection as well as had significant positive predictive effect on mother-child conflict. (2) Maternal overprotection predicted negatively children's anxiety through the partial mediating effect of mother-child conflict; paternal overprotection predicted negatively children's anxiety through the full mediating effect of mother-child conflict. (3) Children's effortful control moderated the second path of the mediation. Specifically, the high level of children's effortful control buffered the impact of mother-child conflict on children's anxiety.

Keywords: parental overprotection, parent-child conflict, effortful control, children's anxiety

粗暴养育与初中生非自杀性自伤行为的关系： 冲动性特质的中介作用和自我同情的调节作用

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摘要 为探讨初中生粗暴养育、冲动性特质、自我同情和非自杀性自伤行为的关系，采用粗暴养育问卷、冲动性特质量表、自我同情问卷和青少年自我伤害问卷对辽宁省两所学校的 954 名初一至初三年级的学生进行调查。结果显示：（1）粗暴养育显著正向预测初中生非自杀性自伤行为，冲动性特质在两者间起中介作用；（2）粗暴养育对非自杀性自伤行为的直接效应受到自我同情的调节，直接效应对低自我同情的初中生更为显著；（3）自我同情调节冲动性特质对粗暴养育与初中生非自杀性自伤行为中介过程的后半段路径，在低自我同情下，粗暴养育对非自杀性自伤行为的影响更为显著。

关键词 粗暴养育，非自杀性自伤行为，冲动性特质，自我同情，初中生

The Relationship between Harsh Parenting and NSSI of Junior Middle School Students: The Mediating Role of Impulsivity and the Moderating Role of Self-compassion Abstract

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Abstract: In order to explore the relationship between rough parenting, impulsive traits, self-compassion and NSSI behavior of junior middle school students, 954 junior middle school students from grade 1 to grade 3 in two schools in Liaoning Province were surveyed by Harsh Parenting Questionnaire, Impulsivity Personality Scale, Self-compassion Questionnaire and Adolescent Self-Injury Questionnaire. The results showed that: (1) Rough parenting significantly positively predicted junior middle school students' NSSI behavior, and impulsive traits played a mediating role between them; (2) The direct effect of rough parenting on NSSI behavior is regulated by self-compassion, and the direct effect is more significant for junior middle school students with low self-compassion; (3) Self-compassion regulates the second half of the mediating process between rough parenting and junior high school students' NSSI behavior. Under low self-compassion, rough parenting has a more significant impact on NSSI behavior.

Keywords: Rough parenting, NSSI, Impulsive, Self-compassion, Junior middle school students

家庭混乱与经济处境不利青少年共情的关系 ——皮质醇和消极反应性的作用

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摘要 随着 2020 年绝对贫困的消除，我国的脱贫攻坚事业取得了辉煌的历史性成就。为摆脱贫困的代际传递，经济处境不利青少年的身心健康发展非常值得关注。以往研究关注经济处境不利青少年的学业成绩与心理健康等，鲜有研究对如共情、合作与决策等社会认知能力进行考察；经济处境不利群体的研究局限于成年人，本研究试图探讨家庭混乱与经济处境不利青少年共情的关系，以及皮质醇与消极反应性在二者关系中的作用。根据适应校准模型（ACM, adaptive calibration model），生理应激反应系统（尤其是 HPA 轴活动）和个体的敏感性共同协调生理或心理特征的发展(Ellis & Del Giudice, 2019)。作为 HPA 轴活动的典型标记物，较低的皮质醇反映出个体对慢性压力环境的适应(Condon, 2018; Miller, Chen, & Zhou, 2007)；而消极反应性反映出个体对消极压力源的敏感程度(Abramson, Paz & Knafo-Noam, 2019)，以往研究中大多关注它的负面作用，

并未对保护性作用进行探讨。本研究采用多数据来源法对河北省原贫困县共 2 所学校 460 名的 12-17 岁青少年进行调查。采集了儿童的尿液皮质醇、家长报告的儿童消极反应性与儿童报告的消极反应性以及共情与家庭混乱。结果显示：（1）家庭混乱对两种共情的预测作用不同，家庭混乱对认知共情有显著的负向预测作用，家庭混乱越高，认知共情越低，但对情感共情的预测作用不显著。（2）皮质醇在家庭混乱与情感共情之间的关系中具有调节作用，皮质醇水平较低的青少年，家庭混乱与情感共情高度正相关，而皮质醇水平较高的青少年，家庭混乱与情感共情的相关不显著，而家庭混乱对认知共情的关系未受到皮质醇水平的影响。（3）消极反应性在家庭混乱与认知共情之间的关系中具有调节作用，家庭混乱与青少年认知共情的关系随着消极反应性的增加而减弱，而家庭混乱与情感共情的关系未受到消极反应性的影响。综上所述，皮质醇与消极反应性均可以对经济处境不利青少年的共情起到保护性作用：较低的皮质醇水平显著降低了高家庭混乱对情感共情的消极影响；而较高的消极反应性显著降低了高家庭混乱对认知共情的消极影响。

关键词 经济处境不利，家庭混乱，共情，消极反应性，皮质醇

Relationship between family chaos and empathy in economically disadvantaged adolescents: the role of cortisol and negative reactivity

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Abstract: With the elimination of absolute poverty by 2020, China has made brilliant historic achievements in poverty alleviation. In order to escape the intergenerational transmission of poverty, the physical and mental health development of economically disadvantaged adolescents is still of great concern. Previous studies have focused on the academic performance and mental health of economically disadvantaged adolescents, while few studies have examined their social cognitive abilities, such as empathy, viewpoint selection, cooperation and decision-making. Studies on the social cognitive ability of economically disadvantaged adolescents are usually limited to adults. This study attempted to explore the effects of family disorder on empathy and the moderating role of cortisol and negative reactivity in this study. According to the Adaptive Calibration Model (ACM), physiological stress response system (especially HPA axis activity) and individual sensitivity coordinate the development of various physiological and psychological characteristics (Ellis & Del Giudice, 2019). On the one hand, cortisol is a typical marker of HPA axis activity, and low cortisol reflects the adaptation of individuals to chronic stress environment (Condon, 2018). On the other hand, negative reactivity is the temperament that reflects the sensitivity of an individual to negative stressors (Abramson et al., 2019; Miller et al., 2007). Previous studies often focused on its negative effects, but did not conduct exploration on its protective effect. This study adopts the multi-source method to investigate 460 adolescents aged 12-17 years from 2 schools in the former poverty-stricken counties of Hebei Province collecting urine cortisol, parent-reported negative child reactivity and adolescent-reported negative reactivity, empathy and family chaos. The results showed that: (1) Chaos had different effects on the two kinds of empathy. Chaos had a significant predictive effect on cognitive empathy negatively, that is, the higher the degree of family chaos, the lower the cognitive empathy, but the effect on emotional empathy was not significant. (2) The cortisol played a moderating role in the effect of chaos on emotional empathy. Among the adolescents of low cortisol levels, chaos has highly positive correlation with emotional empathy. On the contrary, among the high cortisol levels of adolescents, chaos has no significant correlation with emotional empathy. And impact on cognitive empathy is not affected. (3) Negative reactivity played a moderating role in the effect of chaos on cognitive empathy. The negative effect of chaos on adolescents' cognitive empathy decreased with the increase of negative reactivity, while the effect on emotional empathy was not affected. In conclusion, these results suggest that both cortisol and negative reactivity have protective effects on empathy in economically disadvantaged adolescents. Specifically, lower cortisol levels significantly reduce the negative effects of chaos on emotional empathy. However, higher negative reactivity can significantly reduce the negative impact of chaos on cognitive empathy.

Keywords: Economic Disadvantage, Chaos, Empathy, Negative Reactivity, Cortisol

亲子分离背景下的亲子亲合、交感神经系统活动与大学生抑郁的关系

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摘 要 作为个体生命早期最为严重的不良经历，父母外出务工带来的亲子分离会显著提高个体出现抑郁的风险，且这种影响持续终生。根据发展情境论，长期的亲子分离不仅直接影响个体抑郁，还会在一定程度上改变生物和环境因素与抑郁之间的关联。在这一背景下，揭示因长期亲子分离所致的影响个体抑郁发展的生物-环境作用机制就成为发展科学中的一个重要研究问题。然而，已有研究主要关注正在发生的亲子分离和消极环境对个体抑郁的影响，相对忽视了生命早期亲子分离经历的长期作用，并且对于积极环境因素和个体神经生物因素的关注也不足。作为个体对压力的生物敏感性指标，交感神经系统活动与家庭保护因素在早期经历亲子分离个体抑郁发展中的作用已成为该领域研究的前沿问题。本研究以 210 名大学生为被试，基于有亲子分离经历和无亲子分离经历大学生的比较，以亲子亲合为积极环境指标，以交感神经系统活动为神经生物指标，系统考察了亲子亲合与大学生抑郁的关系并检验了交感神经系统活动（以皮肤电导水平反应性为测量指标，SCLR）和亲子分离在其中的调节作用。结果发现：（1）亲子亲合负向预测大学生抑郁，亲子分离经历正向预测大学生抑郁。（2）交感神经系统活动对父子亲合与大学生抑郁关系的调节作用因亲子分离经历的不同而有所差异：在有亲子分离经历大学生中，父子亲合仅在大学生的 SCLR 较低时才能负向预测其抑郁；在无亲子分离经历大学生中，父子亲合仅在大学生的 SCLR 较高时才能负向预测其抑郁。（3）亲子分离时长能够调节父子亲合与大学生抑郁的关系：只有当亲子分离时间较短时，父子亲合才能负向预测大学生抑郁。这表明，生命早期的亲子分离经历不仅能够对个体的抑郁症状产生长期影响，还能在一定程度上改变生物和环境因素与个体抑郁之间的关联。

关键词 亲子分离，亲子亲合，交感神经系统活动，大学生抑郁

The Association Between Parent-Child Cohesion, Sympathetic Nervous System Activity and College Students' Depression Under the Background of Parent-Child Separation

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Abstract: Parent-child separation, a consequence of parents' rural-to-urban migration, is considered as the most serious adverse experience of early life adversity, which put the individuals at increased risk for suffering from depression. According to developmental contextualism, prolonged parent-child separation not only directly affects individual depression, but also changes the association between biological-environmental factors and depression. In this context, it has become an important research issue in development science to reveal the biological-environmental mechanisms of depression caused by parent-child separation. However, previous studies mainly focused on the effects of ongoing parent-child separation and negative environment on individual depression, relatively ignoring the long-term effects of parent-child separation experience in early life, and paid insufficient attention to positive environmental factors and individual neurobiological factors. As an indicator of biological sensitivity to stress, the role of sympathetic nervous system activity and family protective factors in the development of depression in individuals who experienced early parent-child separation has become a frontier problem. To address these research gaps, based on the comparison between college students with parent-child separation experience and college students without parent-child separation experience, this study used parent-child cohesion as an positive environmental indicator and sympathetic nervous system activity (measured by Skin Conductance Level Reactivity, SCLR) as a neurobiological indicator to systematically investigate the biological-environmental mechanisms of the difference effect of parent-child separation on the development of depression in college students. A total of 210 college students were recruited from two universities in Shandong Province, including 135 college students with parent-child separation experience and 75 college students without parent-child separation. The results showed that: (1)

Parent-child cohesion negatively predicted depression, while parent-child separation experience positively predicted depression. (2) The moderating effect of sympathetic nervous system activity on father-child cohesion and depression varied with parent-child separation experience: Among college students with parent-child separation experience, father-child cohesion could only negatively predict depression when SCLR was lower. Among college students without parent-child separation experience, father-child cohesion was only a negative predictor of depression when SCLR was higher. (3) The parent-child separation duration could moderate the association between father-child cohesion and depression: Only when the parent-child separation duration was shorter, father-child cohesion could negatively predict depression. These results indicated that early experience of parent-child separation not only had a long-term impact on the development of individual depressive symptoms, but also changed the association between biological-environmental factors and depression to a certain extent.

Keywords: parent-child separation, parent-child cohesion, sympathetic nervous system activity, college students' depression

(8) “发展心理专业委员会”口头报告分场 8

父母积极教养方式与青少年应对方式的关系： 基于结构方程模型和潜在类别分析的探讨

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摘 要 当个体面临压力事件时, 往往会采取特定的应对方式来试图减轻自己的心理负担, 而应对方式是否选择得当决定了一个人在处理压力事件时的结果的优劣, 由此可见应对方式的重要性。在应对方式的众多潜在影响因素中, 父母教养方式的作用不容小觑, 本研究从积极心理学的角度出发, 采用父母教养方式评价量表、社会支持量表、一般自我效能感量表、简易应对方式量表对 3784 名青少年进行施测, 以探究父母积极教养方式与青少年应对方式之间的内部作用机制, 以期对育有子女的个体带来一定的启示。根据前人的理论基础, 本研究以社会支持的各子维度以及自我效能感作为中介, 构建并筛选了结构方程模型, 此外, 根据被试在简易应对方式量表上的实际作答情况, 采用潜在类别分析的方法将被试划分为不同类别, 并采用方差分析检验父母积极教养方式在不同类别的个体上有什么差异, 以探究在不同程度的父母积极教养方式下成长的个体是否会产生不同的模式来应对压力源。结果发现: (1) 父母积极教养方式与积极应对方式间存在显著正相关, 而与消极应对方式间不存在显著相关。(2) 社会支持和自我效能感在父母积极教养方式与积极应对方式的关系中起部分中介作用, 但社会支持中仅有主观支持正向预测自我效能感并进一步预测积极应对方式, 构成链式中介。(3) 潜在类别分析结果支持 4 类别模型, 4 种被试类别分别为两极型、保守型、积极型和不作为型。(4) 方差分析结果表明各类别间的父母积极教养方式得分差异显著。结论: 父母积极教养方式与消极应对方式的形成无关, 且与积极应对方式间的关系并非都是直接的, 父母积极教养方式可通过社会支持和自我效能感来间接作用于积极应对方式。此外, 社会支持中的客观支持和支持利用度并不能有效帮助个体提高自我效能感, 而主观支持却有助于个体自我效能感的提升, 从而促使个体采取更加积极的应对方式。在不同程度的父母积极教养方式下成长的个体会产生不同的应对模式。

关键词 父母积极教养方式, 自我效能感, 社会支持, 应对方式, 潜变量模型

The relationship between positive parenting style and coping style of adolescents: A study based on Structural Equation Model and Latent Class Analysis

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Abstract: Individuals always adopt specific coping style to lighten their pressure when facing the stressful events, and the coping style they chose may lead to different consequence, which shows the importance of coping styles. Previous studies prove that many factors may influence individual's coping style, and parenting style is the most important one. In the current study, 3784 adolescents took Egna Minnen av Barndoms Uppförstran (EMBU), Social Support Scale (SSS), General Self-Efficacy Scale (GSES) and Simplified Coping Style Questionnaire (SCSQ) to explore the internal mechanism underlying positive parenting style and coping style, so as to bring some enlightenment to the individuals with children. According to previous theoretical basis of many studies, social support and self-efficacy were chosen as the mediating variables, and the Structural Equation Models were constructed. In addition, we processed Latent Class Analysis according to the participants' real response to divide participants into different categories, and One-way ANOVA was used to test the difference in the scores of the positive parenting style of different categories, to clarify whether individuals growing up under different levels of positive parenting style would generate different coping patterns to face the stressful things. It was found that: (1) There was a significant correlation between positive parenting style and positive coping style, while the correlation between positive parenting style and negative coping style was not significant. (2) Social support together with self-efficacy played a partial mediating role between positive parenting style and positive coping style, but in the social support, only the subjective support predicted self-efficacy positively, and self-efficacy predicted positive coping style further, form a multiple chained mediation. (3) LCA supported C4 model, 4 categories were "bipolar", "conservative", "positive", "inactive". (4) The results of One-way ANOVA showed that there were significant differences in the scores of positive parenting style among different categories. Conclusion: The positive parenting style had nothing to do with negative coping style, while positive parenting style could indirectly predict positive coping style through the mediation which composed of social support and self-efficacy. Furthermore, objective support and support utilization could not effectively help individuals improve their self-efficacy, while subjective support did, and prompted individuals to adopt more positive coping styles. Individuals growing up under different level of positive parenting style may generate different coping patterns.

Keywords: Positive parenting style, Self-efficacy, Social support, Coping style, Latent variable models

OXTR 基因、DRD2 基因、母亲积极教养与青少年亲社会行为： 一项基因—基因—环境交互研究

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摘要 人类亲社会行为及其种系演化和个体发生发展是一个重大的科学问题, 受到科学界的高度关注。过去十几年来, 众多研究从单基因×环境交互作用(G×E)的角度考察了遗传和环境对亲社会行为的影响及其作用机制。然而, 伴随着对单基因研究局限性的认识以及对“遗传率缺失”的探索, 越来越多的研究者强调采用多基因研究范式能够更全面和准确地描绘亲社会行为的个体差异及发生机制。催产素的社会显著性假说(social

salience hypothesis)以及来自 fMRI 的研究证据表明,催产素系统(oxytocinergic system)对社会线索的敏感性依赖于其与多巴胺系统(dopaminergic system)的交互作用。由此可推知,催产素系统基因、多巴胺系统基因与环境因素可能交互影响个体的亲社会行为。基于此,本研究立足于社会显著性假说,采用基因—基因—环境($G \times G \times E$)设计,以 1080 名青少年(初次测评时 $M_{age} = 13.32 \pm 0.48$ 岁,女生占 50.4%)为被试,进行为期 2 年的追踪调查。研究分别采用教师报告、母亲报告和 DNA 分型技术测评青少年亲社会行为、母亲积极教养行为和基因型,考察催产素受体(oxytocin-receptor, *OXTR*)基因、D2 型多巴胺受体(dopamine D2 receptor, *DRD2*)基因与母亲积极教养行为对青少年亲社会行为的影响及其作用机制。结果发现:(1)控制 T1 的亲社会行为、家庭社会经济地位和性别后,*OXTR* 基因、*DRD2* 基因和母亲积极教养对青少年亲社会行为的预测作用均不显著;(2) *OXTR* 基因、*DRD2* 基因及母亲积极教养间的两者交互效应均不显著;(3) *OXTR* 基因、*DRD2* 基因与母亲积极教养行为交互影响青少年亲社会行为。具体表现为,相比其他基因型组合,同时携带 *OXTR* 基因 AA 基因型与 *DRD2* 基因 G 等位基因的青少年更易从母亲积极教养行为中获益而表现出更多的亲社会行为。本研究为亲社会行为的多基因遗传基础提供了新的证据,并且为社会显著性假说提供了支持,促进了对亲社会行为个体差异和发生机制的理解。

关键词 亲社会行为, 母亲积极教养行为, *OXTR* 基因, *DRD2* 基因, 基因—基因—环境交互作用

Interaction Among Oxytocin Receptor (*OXTR*) Gene, Dopamine D2 Receptor (*DRD2*) Gene and Maternal Positive Parenting on Adolescent Prosocial Behavior: A Gene-Gene-Environment Study

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Abstract: Prosocial behavior, that is, behavior intended to benefit others, has been linked to a variety of desirable traits, such as positive relationships, better academic performance, and psychosocial adjustment outcomes. The development of human prosocial behavior and its origin are important scientific issues, which are highly concerned by researchers. For decades, there was accumulating evidence for the importance of gene by environment interactions ($G \times E$) in understanding the origins and the mechanisms underlying prosocial behavior. However, the majority of studies have examined $G \times E$ using single loci in candidate genes, ignoring the polygenic nature of prosocial behavior. In addition, the social salience hypothesis and fMRI studies have suggested that the oxytocinergic system could regulate the salience of social cues through its interaction with the dopaminergic system. Therefore, it is possible that candidate genes involved in these two systems (i.e., oxytocin receptor gene, *OXTR* and dopamine D2 receptor gene, *DRD2*) may interact with each other in regulating the responsiveness to the environment, which in turn is related to prosocial behavior. Therefore, the present study aimed to examine the interaction among *OXTR* gene, *DRD2* gene, and maternal positive parenting on adolescents' prosocial behavior, by adopting the perspective of gene-gene-environment interactions ($G \times G \times E$). Participants were 1080 mother-offspring dyads (adolescents mean age 13.32 ± 0.48 years old at the first time point, 50.4% females) recruited from the community. Using a 2-year longitudinal design, mother-reported maternal parenting and teacher-reported prosocial behavior were collected at Time 1. At Time 2 (adolescents mean age 15.32 ± 0.48 years old, 50.4% females), saliva samples of adolescents were collected, and prosocial behaviors were also assessed by teachers. All measures showed good reliability. Genotyping in *OXTR* gene and *DRD2* gene were performed for each participant in real time with MassARRAY RT software version 3.0.0.4 and analyzed using the MassARRAY Typer software version 3.4 (Sequenom). Hierarchical regression analyses were conducted to examine the main and interactive effects of *OXTR* gene, *DRD2* gene and maternal positive parenting on adolescents' prosocial behavior. The results showed that, after controlling for gender, age, and SES, there was a significant three-way interaction among *OXTR* gene, *DRD2* gene, and maternal positive parenting on prosocial behavior. Specifically, compared to other combined genotypes of *OXTR* and *DRD2*, adolescents carrying

both AA genotype of *OXTR* gene and G allele of *DRD2* gene were more sensitive to maternal positive parenting and exhibited more prosocial behavior. However, neither main effects nor two-way interactions among *OXTR* gene, *DRD2* gene, and maternal positive parenting were significant. These findings highlight the complex polygenic underpinnings of prosocial behavior and lend support for the gene-gene-environment interactions on the development of prosocial behavior.

Keywords: prosocial behavior, maternal positive parenting, *OXTR* gene, *DRD2* gene, gene-gene-environment interaction

亲子分离对青少年应激后 HPA 轴和 RSA 的影响： 来自留守儿童的证据

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摘要 亲子分离是指缺乏监管能力的未成年人与父母双方或一方分开生活, 不能共同生活的行为。作为早期生活应激事件, 亲子分离会影响个体的正常发展。研究显示, 有亲子分离经历的成年人会出现更多的酗酒、更差的亲密关系和同伴关系以及更差的心理健康水平。尽管已有研究已经证实亲子分离对个体行为的影响, 但较少有研究关注亲子分离对个体生理的影响。HPA 轴和自主神经系统在应激过程中起主要反应的两个系统。本研究旨在探讨亲子分离对青少年应激时 HPA 轴和自主神经系统反应的影响。研究选取 118 名 12-16 岁的青少年(男: 63, 女 55), 包括亲子分离组 61 人(父母均外出半年以上)和无分离组 57 人(父母均为外出过)。所有被试进行特里尔应激测验(TSST), 并在应激测验开始前 15min, 0min 以及开始后的 10,20,35,50min 的 6 个时间点采集被试唾液并采用 ELISA 检测方法检测其中的皮质醇水平, 此外采用 Biopac 生理仪记录 TSST 前后被试的心率呼吸用于计算应激各阶段呼吸性窦性心率不齐(RSA)水平。结果显示: ①皮质醇的时间和亲子分离的主效应显著, 皮质醇在 TSST 前后呈现出了先增高后降低的应激反应, 且亲子分离组在应激后 10min, 20min, 35min 的皮质醇水平显著低于未分离组, 亲子分离组的皮质醇的反应性和调节性均显著低于未分离组; ②RSA 的时间主效应和交互作用显著, 但亲子分离的主效应不显著, 亲子分离组在演讲阶段的反应 RSA 显著高于未分离组。以上结果提示亲子分离对不同的应激反应系统产生了不同的影响。

关键词 亲子分离, 青少年, HPA 轴, 呼吸性窦性心率不齐

Enduring effect of parent-child separation on HPA and RSA to stress: a study on left-behind adolescent in China

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Abstract: Parent-child separation means that a minor who lacks guardianship ability lives separately from both parents or one of them and they could not live together. As one of the early adverse life events, parent-child separation can have a certain influence on individual development. Previous studies showed that adults with parent-child separation experience more alcoholism, worse couples and peer relationships and poor mental health.

Although many studies have pointed out the impact of parent-child separation on individual behavior, there are few studies on the physiological effects. The hypothalamic-pituitary-adrenal (HPA) axis and autonomic nerves system are central two main stress response systems. In present study, we aimed to examine whether adolescents experienced the parent-child separation had a disrupted pattern of stress responses in comparison to those lived with their parents, using cortisol as markers of HPA axis and RSA as indicators reactivity to stress. Participants were 118 adolescents (61 left behind by two parents and 57 peers living with both parents; 63 male and 55 female) aged 12 to 16. All the female subjects in this study were required in the early follicle for saliva collection. Cortisol was measured through the collection of six saliva samples via passive drool. The first two samples were collected 0 and 15 min before the Trier Social Stress Test (TSST), a well-established, standardized stress paradigm. The third, fourth, fifth and sixth samples were collected 10, 20, 35 and 50 min after the beginning of the TSST. Saliva samples were analyzed in a single batch with a high sensitivity enzyme immune assay kit (Salimetrics State College, PA, Catalogue No.1-3102). All samples were assayed in duplicates. was used to record The heart rate and respiration were recorded by Biopac physiologic instrument before and after TSST for calculating the level of respiratory sinus arrhythmia (RSA) at various stages of stress. The results showed that the main effects of time and parent-child separation were significant. The TSST elicited a robust and significant increase in cortisol. The LBA had lower cortisol responses to the TSST at 10min,20min,35min after TSST. The cortisol reactivity and recovery were lower in LBA than N-LBA.② For RSA, the main effect of parent-child separation was not significant. But the Δ RSA of LBA was significantly higher than N-LBA during speech in TSST. These results suggest that parent-child separation has different effects on different stress response systems.

Keywords: parent-child separation, adolescent, HPA axis, RSA

父母严厉管教与流动儿童焦虑的关系：父母温暖和性别的调节作用

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摘要 虽然研究者对父母严厉管教和儿童焦虑之间的关系进行了一系列理论探讨和实证研究, 并获得了一些有价值的研究结论。然而, 关于二者间关系的具体作用机制的考察较为缺乏。一些理论观点指出, 父母严厉管教有其更广泛的发生背景, 这一背景因父母对儿童积极和消极情感水平的不同而不同。这一广泛的情感背景可能通过改变亲子关系的本质或儿童的社会化意愿进而影响了父母严厉管教的效应。基于此, 我们推测, 父母温暖作为父母严厉管教发生的一个重要情感背景, 可能会缓冲父母严厉管教这一压力事件对儿童焦虑的不利影响。本研究以 477 个中国流动家庭的儿童及其父母双亲为被试, 考察父母一方温暖是否更加有助于缓解其自身严厉管教对流动儿童焦虑的不良影响, 以及是否能够缓解父母另一方的严厉管教对流动儿童焦虑的影响, 从而深入揭示父母严厉管教影响流动儿童焦虑的情感机制。研究发现, 母亲心理攻击和体罚对男孩焦虑有显著正向预测作用, 而母亲心理攻击仅对女孩焦虑有正向预测作用。此外, 父亲温暖加剧了母亲心理攻击与男孩焦虑的关系, 母亲温暖加剧了父亲体罚与女孩焦虑的关系。研究结果为“健康环境悖论”提供了部分支持, 并在一定程度上揭示了父母严厉管教影响流动儿童焦虑的情感机制。

关键词 心理攻击, 体罚, 父母温暖, 焦虑, 流动儿童

Parental harsh discipline and migrant children's anxiety in China: The moderating role of parental warmth and gender

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Abstract: Although parental harsh discipline has been found to be related to child anxiety, the mechanisms that link harsh discipline to child anxiety are not well characterized. Some theoretical points suggest that the broader emotional context may affect the effects of parental harsh discipline on child adjustment by changing the nature of parent-child relationships or children's socialization will. This study focused on one potential emotional context, parental warmth, that may moderate the associations between parental harsh discipline and migrant children's anxiety. Specifically, the present study investigated the relations between both paternal and maternal harsh discipline (psychological aggression and corporal punishment) and migrant children's anxiety and the moderating role of both parents' warmth and child gender in Chinese societies. Participants were 477 elementary school-age children and both their parents in Chinese migrant families. The results indicated that maternal but not paternal psychological aggression and corporal punishment significantly predicted boys' anxiety, and girls' anxiety was predicted by maternal but not paternal psychological aggression. Moreover, paternal warmth exacerbated the relations between maternal psychological aggression and boys' anxiety, while maternal warmth exacerbated the relations between paternal corporal punishment and girls' anxiety. The findings provide partial support for the "healthy context paradox" and highlight the importance of considering how the broader family emotional context may interact with parental harsh discipline to influence child adjustment.

Keywords: Psychological aggression, Corporal punishment, Parental warmth, Child anxiety, migrant children

5-HTR2A 基因与青少年攻击行为： 抑制控制的中介作用与母亲积极教养的调节作用

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摘要 近二十年来, 基于分子遗传学范式的研究考察了遗传因素对攻击行为的影响, 确定了攻击行为的系列风险基因及其基因—环境的交互作用机制。然而, 随着研究的深入, 基因型—行为表型的关联研究局限性日益凸显, 而内表型概念的提出与应用为探究基因型与行为表型间的关系提供了新的视角。尤其是, 研究显示基因并不直接编码攻击行为, 其功能的发挥通常需要通过影响相应的神经生化过程、气质等内表型, 且从基因型到行为表型的作用路径受到环境因素的调节。此外, 由于外显攻击和关系攻击在其预测因素、发展轨迹和适应结果方面均存在明显的差异, 区分不同形式的攻击行为考察“基因—内表型—行为”机制及环境因素的调节作用有助于更好地理解攻击行为的病因学机制。基于此, 本研究以“基因—内表型—行为”为理论框架, 以 1054 名汉族青少年 (初次测评时 $M_{age} = 13.32 \pm 0.48$ 岁, 女生占 50.1%) 为被试, 进行为期三年的追踪调查, 采用母亲报告测评积极教养行为, 青少年自我报告测评抑制控制, 同伴评定测评攻击行为, 考察抑制控制在 5-HTR2A 基因与攻击行为间的中介作用, 以及母亲积极教养行为对该中介机制的调节作用。结果发现: (1) 抑制控制在 5-HTR2A 基因与外显攻击间起中介作用, 携带 T 等位基因的个体具有较高的抑制控制能力, 进而表现出较少的外显攻击行为; 抑制控制在关系攻击模型中的中介作用不显著。(2) 母亲积极教养行为能够调节“5-HTR2A 基因—抑制控制—外显攻击”的前半路径, 表现为在高母亲积极教养行为环境中, 携带 T 等位基因的青少年的抑制控制能力显著高于 CC 基因型携带者, 进而降低了其外显攻击行为, 而在低母亲积极教养行为环境中, 这一中介效应不显著。研究结果从 5-羟色胺系统基因、抑制控制和家庭教养等方面扩展了对于

青少年攻击行为的发生机制及个体差异的科学认识，并为“基因—内表型—行为”这一理论框架提供了新的证据。

关键词 攻击行为, 5-*HTR2A*, 抑制控制, 母亲教养行为, “基因—内表型—行为”

5-*HTR2A* Gene and Adolescent Aggression: The Mediating Role of Inhibitory Control and the Moderating Role of Maternal Positive Parenting

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Abstract: For two decades, molecular genetic research on aggression has brought discoveries that advanced the etiology of aggression. However, it remains unclear how vulnerable genes operate to influence aggression. Researchers have sought to make more progress by exploring the "gene-endophenotypic-behavior" mechanism. Considering the abnormal functions of serotonin in risk of aggression, the 5-*HTR2A* gene rs6311 polymorphism have attracted much attention. In addition, theoretical considerations and new empirical evidence suggest that inhibitory control mediates the association between 5-*HTR2A* and aggressive behavior. Recent research also has suggested that parenting could determine the degree to which a child is influenced by 5-*HTR2A* gene. Therefore, the present study proposed a moderated mediation model to extend previous studies by integrating 5-*HTR2A*, inhibitory control, and maternal positive parenting in understanding the etiology of aggression. Besides, due to the differences between overt and relational aggressive behavior in developmental trajectories, antecedents, and consequences, differentiating between overt and relational aggression may help further clarify the processes by which 5-*HTR2A* gene eventuates in adolescent aggression. Participants were 1054 adolescents (50.1% females, $M_{age} = 13.32 \pm 0.48$ years at Time 1) from the longitudinal study of Chinese children and adolescents (LSCCA). Mother-reported parenting, adolescent-reported inhibitory control, and peer-rated aggressive behavior were collected at Time 1, Time 2, and Time 3 respectively. DNA was extracted from saliva and genotyping in 5-*HTR2A* genes were performed for each participant in real time with MassARRAY RT software version 3.0.0.4 and analyzed using the MassARRAY Typer software version 3.4 (Sequenom). The moderated-mediation analyses were conducted using PROCESS macro for SPSS to examine the mediating role of inhibitory control and the moderating role of maternal parenting in the longitudinal associations between 5-*HTR2A* and aggression. The results showed that: (1) Inhibitory control mediated the relationship between 5-*HTR2A* gene and overt aggression, but the mediation model did not hold for relational aggression. Specifically, compared to CC genotype carriers, individuals with T alleles showed greater inhibitory control, and in turn is related to lower levels of aggressive behavior. (2) The mediation effects were moderated by maternal positive parenting. For adolescents raised in higher levels of positive parenting, T alleles carriers reported higher levels of inhibitory control, which reduced risk for aggression, but the mediation effects were not observed among adolescents experiencing lower levels of positive parenting. The results of this study extend the scientific understanding of the mechanism of adolescent aggression and individual differences from the aspects of serotonin system gene, inhibitory control and maternal parenting. These findings suggest that overt aggression and relational aggression are likely to involve in somewhat different psychosocial mechanisms and provide new evidence for the mechanism of "gene-endophenotypic-behavior".

Keywords: aggressive behavior, 5-*HTR2A*, inhibitory control, maternal parenting, "gene-endophenotype-behavior"

农村留守家庭中家庭抗逆力与祖孙幸福感的二元关系： 关系质量的中介作用

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摘要 抗逆力是指从压力中恢复的能力，它对于提升个体的幸福感具有重要的作用。家庭抗逆力作为一种重要的家庭资源，可以增强所有家庭成员的幸福感。留守家庭主要指父母均为农村进城务工人员，孙辈留在农村由祖辈照顾的家庭。在探讨留守家庭幸福感的研究中，研究者大多仅关注个体成员幸福感的影响因素。根据家庭系统理论，家庭成员是相互依存的，单独分析任何一个成员都不足以揭示整个家庭的适应过程。据此，本研究从家庭抗逆力和家庭系统理论出发，采用成对研究探讨留守家庭中祖辈、孙辈两代人所感知的家庭抗逆力、祖孙关系与主观幸福感的相互影响。130对留守祖辈和孙辈独立完成了一份编码相同的问卷，包括家庭抗逆力、祖孙关系质量以及主观幸福感量表。相关分析结果表明，祖辈和孙辈在家庭抗逆力、祖孙关系和主观幸福感得分显著相关，两者相互依存性强。主客体互倚模型分析表明，祖辈和孙辈感知的家庭抗逆力都与自身的幸福感有直接关联，并且心理韧性在其中起着显著的部分中介作用（主体效应）。此外，祖辈家庭抗逆力能通过影响其感知的关系质量进而影响儿童的主观幸福感；类似地，孙辈家庭抗逆力能通过影响其感知的关系质量进而影响祖辈的主观幸福感（客体效应）。该研究结果在理论上丰富了家庭韧性理论和祖孙关系研究，强调家庭抗逆力和祖孙关系质量在增强祖孙幸福感中的重要作用；同时也为促进留守家庭福祉提供了实践指导，即可以通过家庭层面的干预增强家庭抗逆力，进而改善留守祖孙的关系质量，最终促进留守家庭成员整体幸福感。

关键词 留守家庭，成对研究，家庭抗逆力，祖孙关系质量，主观幸福感

4.3 理论心理学和心理学史专业委员会

（1）“理论心理学和心理学史专业委员会”口头报告分场 1

心理学元研究的理论和实践意义

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摘要 元研究是对现有研究的研究。在心理学研究日益细分化和深入化的今天，研究报告和学术论文的数量指数增加，形成了海量的文献资料，对这些文献资料进行概括、总结的再研究就是心理学的元研究。心理学元研究以整体观、系统观、生态观、动态观等深刻的理论思维方法为核心，以文献法、统计分析法、比较法等元方法为具体手段，对已有研究、研究现状和研究预测进行的系统研究。心理学元研究可以是对某一专题下的同类研究进行概括总结；也可以是把不同专题的研究整合归纳为一个整体性知识；把历史研究成果与当代研究成果整合；把不同领域成果在高位整合；把不同学派观点按统一性整合等等。通过将心理学知识视为关于心理学的整体的、动态的认识成果，对现有的心理学知识进行验证性评价，进而对离散状态的知识进行加工整理，使心理学知识理论化、结构化和系统化。这对心理学从学说林立、分歧众多、表述各异的“前科学”状态走向理论明晰、系统结构化的“科学”状态具有重要的现实意义，对学科的良好发展具有理论引导意义。目前，心理学元研究需要聚焦于以下几个领域：身心关系；心理活动过程之间的关系；心理与环境的关系；心理学与相关学科的关系。

关键词 元研究，元方法，元理论

The Theoretical and Practical Significance of Meta-study of Psychology

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Abstract: Meta-study is the study of existing research. Nowadays, with the increasing differentiation and deepening of psychological research, the number of research reports and academic papers has increased exponentially, forming a massive amount of literature materials. The restudy to summarize and summarize these literature materials is the meta-study of psychology. Psychological meta-study is a systematic study of existing research, research status and research prediction, with the core of profound theoretical thinking methods such as holistic view, system view, ecological view and dynamic view, and with the meta-methods such as literature method, statistical analysis method and comparative method as specific means. Psychological meta-study can be a summary of similar research under a particular topic; It can also be the integration of different topics into a comprehensive knowledge; Integrate historical research results with contemporary research results; Integrating achievements in different fields at a high level; Unifying different school of thought and so on. By taking psychological knowledge as a whole and dynamic cognitive result about psychology, the existing psychological knowledge is evaluated in a confirmative way, and then the discrete state knowledge is processed and sorted out, so that the psychological knowledge is theorized, structured and systematized. It is of great practical significance for psychology to move from the state of "pre-science" with many theories, many differences and different expressions to the state of "science" with clear theory and systematic structure, and it is of theoretical guiding significance for the sound development of the discipline. At present, psychological meta-study needs to focus on the following areas: mind-body relationship; The relationship between mental processes; The relationship between psychology and environment; The relationship between psychology and related disciplines.

Keywords: meta-study, metamethod, metatheory

中国心理学会史百年新论

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摘 要 经过文献查找, 作者发现中华心理学会成立于 1921 年 8 月 5 日。中华心理学会成立之后, 创办了亚洲第一份专业期刊《心理》杂志, 在北京召开纪念会并留下合影, 也陆续召开了几次学术演讲会。作者经过搜寻, 从张耀翔的后人手中获取了《心理》杂志的封面扫描件, 并对该原件的历史经历进行了富有逻辑性的想象性复原。作者对 1931 年中华心理学会筹委会、1937 年 1 月中国心理学会进行了图像学考证, 对 1948 年心理学会复会活动进行了考证。待到 1949 年之后中国心理学会才再次经过筹备, 于 1955 年 8 月正式成立。此次中国心理学会从筹备到成立, 因为原始资料的匮乏而稀见于文献。在周先庚学术档案中发现了这批资料, 为解开这一时期的中国心理学内部的人员、事务的跌宕提供了可能。1966~1977 年间的中国心理学会历经学科撤销的悲剧, 1977 年 7、8 月, 中国科学院心理研究所恢复活动。1977 年 11 月, 中国心理学会再次恢复活动, 并走上正常发展的道路。1978 年 5 月中国心理学会开展学术活动, 在杭州召开了关于评论冯特心理学、发展心理学和教育心理学的专业会议。中国心理学会发展历程中影像史料也是历史的组成部分。作为学术共同体的中国心理学会, 随着中国政治的动荡而起起伏伏。自 1977 年以来, 中国心理学走上了健康而迅猛发展的道路, 已经成为也必将成为国际心理学舞台上不可或缺的力量。改革开放以来中国心理学会取得了组织机构增长, 成为国际心理学的重要组织力量, 学术出版力量不断增强的巨大成就。中国心理学会的发展历程中学科专业意识一直维系着学科的建设与发展的动力, 推动着学科专业期刊的发展。中国心理学会历经百年艰辛的发展历程, 终于走上了正轨, 随着新的百年即将开启, 中国心理学必作为具有中国文化基因的心理科学力量, 在国家建设的方方面面做出自己的贡献!

关键词 中国心理学会史, 中华心理学会, 成立时间, 《心理》, 图像

理想心理学的背景与方法论贡献：以第二代正念干预的实证研究为例

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摘要 随着积极心理学、第二代正念干预等领域的深入发展，越来越多的心理学研究尝试研究现实中几乎不存在的理想心理，诸如天人合一、平等慈等。在此过程中，心理学实证研究也面临一系列新的方法论挑战，比如如何测量被试未经验甚至不理解的心理状态，如何衡量干预效果或进行操作检验等。因此，一种旨在指导如何研究理想心理的“理想心理学”（idealistic psychology，又译“理念心理学”）便应运而生。它不仅在研究对象（理念）、研究任务（设计、实现、评估）等宏观层面有别于传统心理学，也在更具体的研究范式层面，批判和指导具体的心理学实证研究。基于一项第二代正念干预（正念积极心理）的干预研究，理想心理学指出该研究乃至整个第二代正念干预研究普遍存在的问题：教导理想心理甚至进行相关练习，却并不期待理想心理的实现；只测量幸福感、焦虑、抑郁等一般心理学变量，并以此作为干预有效性的指标，而无法直接测量所培养的理想心理状态，也无法论证干预中培养理想心理状态的价值。这一案例表明，理想心理学基于心理学实证研究的新趋势和新挑战，其思想主张已经对心理学实证研究起到了一定促进作用；但另一方面，目前理想心理学主要批判既有研究的范式，尚需以更多实证研究实践其所推崇的新范式。

关键词 理想心理学，第二代正念干预，方法论，理论心理学，心理学史

The background and methodological contribution of Idealistic Psychology: An example of empirical study on Second-Generation Mindfulness-Based Interventions

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Abstract: With the further development in domains like positive psychology and Second-Generation Mindfulness-Based Interventions, more and more psychological studies tried to study idealistic mentalities that almost do not exist in realm, such as oneness, equal loving-kindness. During this process, empirical psychological studies faced a series of new methodological challenges, such as how to measure mental states that participants did not experience or even did not understand, how to assess the effects of interventions or conduct manipulation check. Therefore, an “idealistic psychology” that aims to guide how to study idealistic mentalities had been raised accordingly. It differs from traditional psychology not only on macro and abstract levels such as objects (ideals) and tasks (to design, achieve, evaluate), but also on micro and detailed level of research paradigm, which criticize and guide specific empirical psychological studies. Based on an interventional study on Second-Generation Mindfulness-Based Intervention (Mindfulness-Based Positive Psychology), idealistic psychology pointed out the problem of this study and of Second-Generation Mindfulness-Based Interventions in general: it taught idealistic mentalities and even did relevant practices, but it did not expect the achieve of those idealistic mentalities; it only measured general psychological variables like well-being, anxiety and depression, and used them as indicators for effects of intervention, but did not directly measured the idealistic mentalities to be cultivated, and could not justify the value of the cultivation of idealistic mentalities in intervention. This case showed that, idealistic psychology is based on the new trends and new methodological challenges in empirical psychological studies, and its ideas had facilitated the empirical psychological studies. On the other hand, currently idealistic psychology mainly criticized the studies with existed paradigms, and it still needs to apply its new paradigms with more empirical studies.

Keywords: Idealistic Psychology; Second-Generation Mindfulness-Based Interventions; Methodology; Theoretical Psychology; History of Psychology

人类共情的特质与情境变异性

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摘要 共情是当今社会心理学与情感神经科学领域备受关注的话题。通常认为, 共情和人们养育后代、道德发展以及帮助行为密切相关。虽然共情反应通常是自动产生的, 但是对于具体的个体和具体的情景, 这些反应又表现出明显的变异性。因此, 为了促进人们输出恰当的共情反应, 本文对共情变异性的类型进行了梳理, 并对其可能的演化根源和现实的作用机制进行了理论探讨。共情的变异性主要有两种: 其一为在个体间变化的特质变异性, 受复杂的生物-心理-社会因素的影响, 不同的个体具备不同的共情能力; 其二为在个体内变化的情境变异性, 表现为受共情的主体 (共情者)、客体 (共情对象) 和主客体关系, 以及社会文化和物理环境等因素的影响, 同一个体在不同的情景表现出不同的共情反应。从演化的角度而言, 共情的自动性产生于对他人处境产生快速情绪反应的演化适应压力, 并通过镜像神经元系统发挥作用。共情的特质变异性根源于母婴照料行为导致的性别差异, 是基因和环境交互作用的结果。另外, 共情意味着人们需要投入大量的认知资源 (以及其他资源), 因此人们不能随时随地对所有人产生同样的共情反应, 而必须有所区分, 这是共情情境变异性产生的根源。人们通过情境选择、注意分配和认知评价来实现对具体于共情反应的调节。

关键词 共情, 变异性, 特质, 情境, 演化

Dispositional and situational variations in human empathy

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Abstract: Empathy is one of the topics of great interest in social psychology and affective neuroscience. It is commonly believed that empathy is closely related to parenting, moral development, and helping behaviors. Although empathic responses are usually automatic, they exhibit significant variability for specific individuals and situations. Therefore, in order to facilitate the output of appropriate empathic responses, this paper sorts out the types of empathic variations and theorizes on their possible evolutionary roots and realistic mechanisms. There are two main types of empathic variations: one is dispositional variation that varies among individuals, which is influenced by complex bio-psycho-social factors, and manifesting as different individuals have different empathic abilities; the other is situational variation that varies within individuals, which is influenced by the subject (empathizer), the object (target of empathy) and the subject-object relationship, as well as the socio-cultural and physical environment, and manifesting as the same individual shows different empathic responses in Different situations exhibit different empathic responses. From an evolutionary perspective, the automaticity of empathy arises from the evolutionary adaptive stress of generating rapid emotional responses to others' situations and acts through the mirror neuron system. Dispositional variation in empathy is rooted in sex differences resulting from maternal and infant caregiving behaviors and is the result of genetic and environmental interactions. In addition, empathy implies that people need to devote a large amount of cognitive resources (and other resources), so they cannot generate the same empathic response to all people at all times and must differentiate, which is the source of situational variation. Context selection, attention allocation, and cognitive appraisal are used to regulate empathic responses specifically.

Keywords: empathy, variation, disposition, situation, evolution

4.4 普通心理和实验心理专业委员会

(1) “普通心理和实验心理专业委员会”口头报告分场 1

经颅直流电刺激对不同通道言语工作记忆的影响

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摘 要 言语工作记忆是对言语信息进行短暂的存储和操作, 它对高级的言语认知功能具有重要的影响。Baddeley 提出负责言语工作记忆加工的语音环路系统, 该系统包括语音存储和发音复述两个部分。言语信息进入语音环路加工的方式依赖于通道表征的形式: 视觉通道呈现的言语信息需要将视觉信息转换为语音信息才能进入到语音环路系统, 而听觉通道呈现的言语信息可以直接进入语音环路系统。脑成像研究发现在左侧后顶叶皮层观察到显著的言语工作记忆通道效应, 以及左侧额下回皮层对语音信息和听觉信息加工更敏感。后顶叶皮层和额下回皮层在工作记忆存储和操作过程中起着非常重要的作用。但是, 后顶叶皮层和额下回皮层与言语工作记忆通道效应之间的因果性联系缺乏系统研究。而经颅直流电刺激(tDCS)能够揭示特定脑区和认知功能之间的因果性联系, 且对提升工作记忆能力具有较高的潜能。因此, 本研究旨在通过刺激左侧后顶叶皮层和左侧额下回皮层, 观察视觉通道和听觉通道呈现的言语工作记忆提升效果。实验采取单盲的离线经颅直流电刺激的方式, 将被试随机分在阳极刺激组(后顶叶皮层刺激和额下回刺激)和伪刺激组, 接受 1.5mA 微弱电流刺激, 电刺激持续作用 20 分钟, 采集刺激前后视觉字母 3-back 和听觉字母 3-back 任务绩效。研究结果发现, 阳极 tDCS 作用于左侧后顶叶皮层能够提高视觉通道呈现的言语工作记忆表现, 而对听觉通道呈现的言语工作记忆提升效果不显著。阳极 tDCS 作用于左侧额下回皮层既能够提升视觉言语工作记忆, 还能提升听觉言语工作记忆。该研究表明, 左侧后顶叶皮层在言语工作记忆通道效应中起着重要的作用。左侧额下回皮层与不同通道言语工作记忆之间存在因果性联系。

关键词 经颅直流电刺激, 后顶叶皮层, 额下回皮层, 听觉言语工作记忆, 视觉言语工作记忆

The effect of transcranial direct current stimulation on different sensory modalities of verbal working memory

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Abstract : Verbal working memory (VWM) refers to temporary maintenance and manipulation of linguistic information in memory, allowing the brain to perform higher cognitive functions such as language comprehension. Baddeley proposed a framework for VWM, called the phonological loop, which was divided into two components known as the phonological store and articulatory rehearsal. The manner of verbal information entering the phonological loop relies on the modality of representation: visually presented verbal information must transfer visual stimuli into phonological information, whereas auditory information has a more direct route to phonological coding. Neuroimaging studies showed that significant modality effects in VWM were observed in the left posterior parietal cortex (PPC). The left inferior frontal gyrus (IFG) was more sensitive to auditory and phonological information. The PPC and IFG played an important role in maintenance and manipulation of VWM. However, it is unclear whether it exists the causal association between the PPC/IFG and different sensory modalities of verbal working memory. Therefore, the present study aimed to examine whether tDCS over the left PPC and IFG affect visual and auditory VWM updating performance using single blind design. Participants were randomly divided into three groups to

receive anodal (left PPC and left IFG) and sham tDCS, respectively. During the stimulation, a constant current of 1.5 mA was applied continuously for 20 minutes. Participants performed the visual letter 3-back task and auditory letter 3-back before and after tDCS. The results showed that stimulating the left PPC enhanced the response efficiency of visual VWM compared with sham condition, but not the auditory VWM. While anodal stimulation to the left IFG improved the response efficiency of both tasks. The present study revealed that the modality effect of VWM was observed in the left PPC. The left IFG have a causal role in different sensory modalities (visual vs. auditory) of VWM updating.

Keywords: transcranial direct current stimulation, posterior parietal cortex (PPC), inferior frontal gyrus (IFG), visual verbal working memory, auditory verbal working memory

独体字字形识别的节点数效应

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摘要 汉字字形识别是一个高度专家化的过程, 已有研究者提出了合体汉字识别的相互作用模型、经成分识别模型、多层次交互激活模型、多层次格式塔双向加工模型等认知模型。这些模型大多将汉字字形识别分为特征、部件和整字几个层次。然而, 这些模型较少深入到笔画层次以下进行讨论, 没有充分解释笔画从整字视觉刺激中分离出来的过程。汉字是由笔画构成的, 笔画的相连交叉形成了线段节点。对这些节点的提取和分析, 可能是笔画加工的起点。如果笔画分离阶段以并行方式加工, 那么节点越多, 为笔画分割提供的信息就越多, 识别越容易; 反之, 如果笔画分离串行加工, 那么节点数越多, 加工复杂度越高, 识别越难。为了检验该假设, 本研究考察了节点数量对独体汉字识别的影响。实验采用独体字作为材料, 控制字频和笔画数, 以六档(从 10 毫秒到 60 毫秒, 每 10 毫秒为一档)呈现时间, 向被试快速呈现节点数多和节点数少的两组真字, 并以多节点和少节点的两组假字作为填充材料。被试观察刺激后, 判断看到的是真字还是假字。结果表明, 被试对多节点汉字有更高的辨别力, 真字组中被试对多节点组字具有更快的反应时和更高的正确率。综上所述, 本研究发现了独体字字形识别的节点数效应, 揭示了节点数量对于汉字识别具有重要影响, 表明视觉系统以并行加工方式按照线段节点分离笔画。该发现加深了对汉字字形识别早期视觉过程的认识, 有助于开发更为完整的汉字识别认知模型。

关键词 独体字, 字形, 节点, 汉字识别

The nodes number effect in the recognition of single-element Chinese characters

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Abstract: Chinese character recognition is a highly expert process. Researchers have proposed several cognitive models for Chinese character recognition, such as recognition-by-component model, multilevel interactive activation model, model for grapheme recognition of complicated Chinese characters, and multi-level Gestalt interactive processing model. A consensus of most models is that Chinese character recognition involves three levels: features or strokes, parts and whole characters. However, these models seldom go deeper under the level of strokes, therefore how strokes were separated from other strokes remains unclear. Chinese characters are made up of strokes, which are connected and intersected to form line nodes. Theoretically, the extraction and analysis of these nodes is the first step for stroke separating. If the stroke separation is processed in parallel, then the more nodes a character has, the more information provided for the stroke segmentation, and therefore the character would be easier to recognize; on the contrary, if the strokes are separated in series, more nodes leads to higher processing complexity, thus the character would be harder to recognize. To test this hypothesis, the current study examined the effect of the number of nodes on

the recognition of Chinese characters. The experiment used single-element characters as the materials, character frequency and number of strokes were controlled. The characters were briefly presented (with duration of 6 levels: 10ms, 20ms, 30ms, 40ms, 50ms, or 60ms). Characters were chosen from two groups (high node-count and low node-count) of true characters, and two groups (high node-count and low node-count) of fake characters. After observing each character, the subjects judged whether it was a true character or a fake one. The results showed that the subjects have a higher discriminability for the characters with more nodes. Especially, for the true characters, subjects respond to high node-count characters faster and more accurate than low node-count character. In summary, this study found the nodes number effect in the recognition of single-element characters, showing that the recognition performance increased with the number of nodes a character has. This finding support the hypothesis that stroke separation were performed in parallel. This study deepens the understanding of the early visual process of Chinese character recognition, which could contribute to develop a complete cognitive model of Chinese character recognition.

Keywords: single-element Chinese character, character graphic, node, Chinese character recognition

双语产生中语言特异性控制与一般领域认知控制的适应性整合

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摘 要 一般领域认知控制与双语产生中的语言控制有着密切的关系, 双语者很大程度上依赖一般领域认知控制功能来控制两种相互冲突的语言。我们之前的研究表明, 双语者的背侧额叶脑网络和额叶-皮层下脑网络可能分别发挥着一般领域认知控制和语言特异性控制的功能。近些年的研究发现, 双语者的一般领域认知控制功能可以经过短期训练而得到提高, 进而影响到他们在语言控制任务中的行为和脑电反应。然而, 尚不清楚这一过程涉及一般领域认知控制与语言特异性控制脑网络的何种变化。本研究招募了两组同质被试, 让他们前后两次在功能性核磁共振扫描仪 (functional magnetic resonance imaging scanner) 下完成相同的语言切换任务, 在两次扫描间隔的 8 天时间里, 安排其中一组被试 (实验组) 每天接受非语言切换任务训练, 另一组被试 (控制组) 每天接受大致同等时长的颜色判断训练。本研究使用新兴的拓展统一结构方程模型 (extended unified structure equation model) 的方法进行验证性的脑网络分析, 结果发现实验组相比于控制组在额叶-皮层下网络上有更大幅度的连接强度减弱, 而在背侧额叶网络上的变化则没有显著差异。该结果表明双语者在一般领域认知控制能力提升的过程中还可能伴随着语言特异性控制与一般领域认知控制的适应性整合。本研究首次从脑网络的角度揭示了双语者语言控制机制可塑性变化。

关键词 双语者, 语言控制, 一般领域认知控制, 脑网络, 适应性整合模型

Adaptive integration of language-specific control and domain-general cognitive control in bilingual language production

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Abstract: Domain-general cognitive control is closely related to language control in bilingual language production. To a large extent, bilinguals rely on domain-general cognitive control functions to juggle two conflicting languages.

Our previous research has shown that the dorsal-frontal network and the frontal-subcortical network may underpin domain-general cognitive control and language-specific control, respectively. Research in recent years has found that domain-general cognitive control of bilinguals can be improved after short-term training, which modulates their behavior and brain activity in language control tasks. However, it remains unclear what changes this process induced in the brain networks of domain-general cognitive control and language-specific control. In the present study, two groups of homogeneous subjects were recruited and asked to perform pre and post-tests of the same language switching task during functional magnetic resonance imaging (fMRI) scanning. For each day in the interval of pre and post-tests, one group (i.e., experimental group) received training of a non-verbal switching task, and the other (i.e., control group) was arranged to perform a color judgment task at a similar amount. We adopted an emerging extended unified structure equation model (euSEM) approach to conduct a confirmatory brain network analysis. Results showed a larger decrease of connection strength in the frontal-subcortical group for the experimental group rather than the control group and no significant greater change in the dorsal-frontal network for the experimental group relative to the control group. These results indicate that the improvement of domain-general cognitive control in bilinguals may induce an adaptive integration of language-specific control and domain-general cognitive control. This study first reveals the plasticity of the language control mechanism of bilinguals from the perspective of the brain network.

Keywords: bilingualism, language control, domain-general cognitive control, brain network, adaptive integration model

不同认知方式个体的反语认知加工

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摘要 反语（Irony）是指使用与本意相反的话语来表达本意的一种非字面语言，反语加工的机制长期以来受到研究者的关注，在反语理解中存在的重要问题是，受话者何时以及如何整合语言信息和非语言信息来获得说话者的意图？作为个体差异重要维度的认知方式是影响非字面语言理解的重要非语言线索，已有研究发现，不同场认知方式个体在工作记忆、阅读理解等方面有显著差异，然而，尚未见文献从认知方式角度考察反语认知加工的机制。因此，在本研究中，通过施测“团体镶嵌图形测验”，筛选典型的场依存型和场独立型个体，探讨不同认知方式个体反语认知加工的差异及其认知神经机制。共设计2个实验，实验1，采用眼动技术，考察不同认知方式个体反语认知加工的时间进程。结果发现，场依存型个体在理解反语时比字面语用时更长且回视更多，而场独立型个体在加工反语和字面语时没有差异。实验2，采用声音材料和文本材料相结合的方式，使用ERP技术，分析反语和字面语加工过程中的N400和LPC（晚期正成分），进一步探讨不同认知方式个体反语认知加工的神经机制。结果发现，场依存型个体在加工反语时比字面语引发了更大的N400波幅，而场独立型个体在早期识别反语时未能发现反语加工代价；但与场依存型个体相比，场独立型个体在字面语和反语加工晚期都引发了更大的LPC波幅。上述结果表明，反语的理解过程受到认知方式这一个体差异变量的调节，且对反语认知加工的影响从早期阶段就开始起作用，一直持续到晚期语义整合阶段。本实验结果支持限制—满足模型。

关键词 认知方式，反语，限制—满足模型，个体差异

The Effect of Cognitive Styles on Irony Processing

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Abstract: As a kind of non-literal language, irony refers to the use of words contrary to the original meaning to express the original meaning. The mechanism of irony processing has long been the focus of researchers. The important question in the understanding of irony is when and how the recipient integrates verbal and non-verbal information to obtain the intended meaning of the speaker. As an important dimension of individual differences,

cognitive style is an important non-verbal cue that influences non-literal language comprehension. Previous studies have found that individuals with different cognitive styles have significant differences in working memory and reading comprehension, etc. However, no literature has examined the mechanism of irony cognitive processing from the perspective of cognitive style. Therefore, in this study, we screened typical field-dependent and field-independent individuals through the "group embedded figure test (EFT)", and explored the differences in the cognitive processing of irony among individuals with different cognitive styles and their cognitive neural mechanisms. This research includes two experiments: eye-movement technique was used to investigate the temporal process of ironic cognitive processing among individuals with different cognitive styles. The results show that the field dependent individuals understand irony longer and look back more frequently than the literal ones, while the field independent individuals have no difference in processing irony and literal ones. In Experiment 2, the neural mechanism of irony processing in individuals with different cognitive styles was further explored by analyzing N400 and LPC (late positive component) in the process of irony and literal language processing using the combination of sound and text materials and using ERP technology. The results showed that field dependent individuals had a larger N400 amplitude when processing irony than literal ones, while field independent individuals could not find the cost of irony processing in early recognition of irony; However, compared with the field dependent individuals, the field independent individuals caused more LPC amplitude in the late stage of literal and irony processing. The results show that the process of irony understanding is regulated by cognitive style, which is an individual variable, and the effect on irony cognitive processing starts from the early stage and continues to the late stage of semantic integration. The experimental results support the constrain-satisfaction framework.

Keywords: cognitive style, irony, constrain-satisfaction framework, individual difference

汉字整合促进联结再认与项目再认

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摘要 根据双加工理论, 情景记忆的再认由两个基本的心理过程支持: 熟悉性和回想。先前的研究发现, 熟悉性和回想这两个过程都可以支持项目再认, 而联结再认只能由回想加工所支持。近年来, 许多研究发现一种特殊情况: 当进行联结的两个部分可以被整合为一个整体时, 熟悉性也可以支持联结再认(整合效应)。汉字作为一种象形文字, 将其偏旁部首整合为一个合体字的过程与传统的整合操纵有诸多不同之处。因此, 汉字整合过程中是否依然存在这种整合效应还有待研究。除此之外, 先前的研究一致表明整合对联结再认起促进作用, 但整合对项目再认的影响还存在争议。因此, 汉字整合对项目再认的影响也是本研究要探讨的问题。本研究使用学习再认范式和具有高时间分辨率的 ERP 技术来探讨汉字整合如何影响联结再认与项目再认影响以及背后的认知神经机制。学习阶段, 被试需要记住屏幕上出现的两个字以及它们之间的配对关系并判断这两个字合起来能否成为一个汉字。联结再认测验阶段, 被试需要判断屏幕上出现的字对是与学习阶段一样的还是重新组合的。项目再认测验阶段, 被试需要判断屏幕上出现的单个汉字在学习阶段是否在学习阶段学过。实验结果对汉字整合与非整合条件下联结再认与项目再认时的行为表现与 ERP 特征进行了比较。行为结果表明, 相比于非整合条件, 汉字整合条件下的联结再认和项目再认的 Pr 值(击中率 - 虚报率)都显著更高。ERP 结果表明, 联结再认时汉字整合条件下有显著的 FN400 效应和 LPC 效应, 而项目再认时只有显著的 LPC 效应; 非整合条件下联结再认和项目再认时都表现出显著 LPC 效应而没有 FN400 效应。本研究与前人的研究结果一致, 发现整合操作后存在基于熟悉性的联结再认, 表明汉字整合过程中也存在整合效应。此外, 汉字整合还可以提高项目再认成绩, 但此时只有回想的参与。这可能与汉字整合使得项目间建立起了更强的联系, 形成了更有效且稳定的联结有关。

关键词 汉字整合, 联结再认, 项目再认, 熟悉性, 回想

Chinese character unitization increase associative recognition and item recognition

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Abstract: According to the dual-process models, the recognition of episodic memory can be supported by familiarity and recollection. Previous studies have revealed that both familiarity and recollection can support item recognition, but only recollection can support associative recognition. However, recently, some studies have found a type of special case that associative recognition can be supported by familiarity as long as the components in an association can be unitized (unitization effect). As a kind of pictograph, the process of uniting its parts into a compound character is different from the traditional unitization manipulation. Therefore, it is not clear whether the unitization effect still exists after Chinese character unitization. In addition, previous studies have consistently shown that unitization promotes associative recognition, but the impact on item recognition is still controversial. To clarify the two problems, our study used study-recognition paradigm and ERP technology with high time resolution to explore how Chinese character unitization affects associative recognition and item recognition, as well as the cognitive neural mechanism behind it. In the study phase, participants were instructed to remember both the single characters on the screen and their pairing relationship, and to discriminate whether the character pair could form a new compound character. In the associative recognition phase, participants were instructed to discriminate whether the word pairs on the screen are intact as those in the study phase or recombined. In the item recognition phase, participants were instructed to discriminate whether a single character was old or new compared with the study phase. As respect to data analysis, we compared the behavior performance and ERP components under the unitization conditions and non-unitization conditions during associative recognition and item recognition. The behavioral results showed that the Pr (hit - false alarm) of associative recognition and item recognition was higher under unitized condition than non-unitized condition. The ERP results showed that, (1) under the unitized condition, there were significant FN400 and LPC effects during associative recognition, while there was only significant LPC effect during item recognition, (2) under the non-unitized condition, there was only significant LPC effect during both associative recognition and item recognition, but there was no FN400 effect. This study indicates that the performance of associative recognition was significantly improved after Chinese character unitization. At the same time, there were not only recollection-based but also familiarity-based associative recognition. This is consistent with the previous researches, indicating that unitization effect also exists in the process of Chinese character unitization. In addition, the unitization of Chinese characters can also improve the performance of item recognition. At this time, only recollection was involved whether under unitized condition or non-unitized conditions. This may be related to the fact that Chinese character unitization makes stronger connections between items and forms a more effective and stable association.

Keywords: Chinese character unitization, associative recognition, item recognition, familiarity, recollection

任务转换和双语转换中情感代价的不对称性

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摘要 任务转换(task switching)是指在两项或多项不同任务间相互转换的过程。转换任务在反应时和正确率上的亏损被称为“转换代价(switch cost)”。转换代价受到任务难度的调节,即转向简单任务比转向困难任务消耗更多的认知资源,产生更大的转换代价。有研究发现,任务转换存在情感代价,即任务转换比任务重复诱发更消极的情感评估。情感代价的产生可能是由于认知资源的消耗导致,但是当前对于情感代价的认知机制尚不明确。因此本研究将采用任务/双语转换范式和情感诱导范式,探究任务难度的差异能否引发情感代价的不对称性。实验1采用任务转换范式和情感诱导范式,探讨任务转换中任务难度和转换类型是否在情感评估

上存在交互作用,表现出情感代价的不对称性。实验2以非熟练汉-英双语者为研究对象,采用双语转换范式和情感诱导范式,探讨双语转换过程是否存在情感不对称性。实验3在实验2基础上,以熟练汉-英双语者为研究对象,进一步探讨熟练程度是否会影响情感代价的不对称性。实验1的结果表明,与重复试次相比,困难任务的转换试次具有更消极的情感评估;而简单任务的转换试次情感评估无明显变化。说明困难任务的情感代价更大。实验2的结果表明,与重复试次相比,L2(英语)任务的转换试次情感评估更消极,而L1(汉语)任务的转换试次情感评估无明显变化。实验3的结果表明,高熟练双语者进行双语转换时不存在情感代价。综上所述,本研究证明任务转换和双语转换均存在情感代价的不对称性,表现为困难任务的情感代价更大,并且双语转换中的情感代价会随着双语者熟练度的提高而消失。说明情感代价是由于认知资源的消耗产生,情感代价随着认知资源消耗增加而增大,以揭示情感代价的认知机制。

关键词 任务转换, 转换代价, 双语转换, 情感代价

The asymmetry of affect cost in task switching and language switching

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Abstract: Task switching refers to the process of switching between two or more different tasks. The loss in response time and accuracy of switching tasks is called "switch cost". The switching cost is adjusted by the difficulty of the task, that is, switching to easier tasks consumes more cognitive resources than switching to more difficult tasks, resulting in greater switching costs. Studies have found that task switching has an affective cost, that is, task switching induces more negative affective evaluation than task repetition. The affective cost may be caused by the consumption of cognitive resources, but the current cognitive mechanism for the affective cost is still unclear. Therefore, this study will adopt the task/bilingual switching paradigm and the affective priming procedure to explore whether the difference in task difficulty can cause the asymmetry of affective costs. Experiment 1 adopts the task switching paradigm and the affective priming procedure to explore whether the task difficulty and the switching type have an interactive effect on affective evaluation in the task switching, which shows the asymmetry of the affective cost. Experiment 2 selected non-proficient Chinese-English bilinguals as the research object, adopts the bilingual switching paradigm and the affective priming procedure to explore whether there is affective asymmetry in the bilingual switching process. Experiment 3 is based on Experiment 2, selecting proficient Chinese-English bilinguals as the research object, and further explores whether proficiency will regulate the asymmetry of affective cost. The results of Experiment 1 show that compared with repeated trials, the switch trials of difficult task have a more negative affective evaluation; while the switch trials of easy task have no significant change in affective evaluation. It indicates a greater affective cost of difficult task. The results of Experiment 2 show that compared with repeated trials, the affective evaluation becomes more negative when switching to the L2 (English) task, while has no significant change when switching to the L1 (Chinese) task. The results of Experiment 3 show that there is no affective cost when highly skilled bilinguals perform bilingual switching. In summary, this study proves that both task switching and bilingual switching have asymmetry in affective cost. The affective cost of difficult task is greater, and the affective cost of bilingual switching will disappear as the proficiency of bilinguals increases. It shows that the affective cost is caused by the consumption of cognitive resources, and the affective cost increases with the consumption of cognitive resources, which reveals the cognitive mechanism of the affective cost.

Keywords: task switching, switching cost, language switching, affective cost

(2) “普通心理和实验心理专业委员会”口头报告分场 2

不同估计策略下注意负荷和时间结构对接触时间估计的影响

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摘要 估计接触时间(time-to-contact, TTC)指的是个体对运动物体到达特定位置时间的估计, 有助于个体对环境信息的处理。以往研究表明, 注意负荷、估计策略(速度策略和时间策略)、运动路径的时间结构(可见路径与被遮挡路径的比值)均会对估计 TTC 产生影响, 然而三者对 TTC 估计的共同作用效果尚未明确。因此, 本研究采用双任务范式, 通过两个实验探讨了不同估计策略下注意负荷对不同时间结构 TTC 估计的影响。实验 1 在可见-遮挡(visible-occluded, V-O)条件下进行, 即运动目标最初可见, 随后被遮挡, 该条件下个体偏好使用速度策略。采用 2(低负荷, 高负荷)× 3(时间结构为 0.5, 1, 1.5)的两因素被试内实验设计, 20 名在校大学生参与了该实验。因变量指标为 TTC 估计的均方根误差(Root-mean-squared error, RMSE)、相对偏差 BIAS 和变量误差(Variable error, VE)。实验 2 在遮挡-闪烁-遮挡(occluded-flashed-occlude, O-F-O)条件下进行, 即运动目标在最初出现和运动到路径中点时可见, 其他时间均不可见, 该条件下个体偏好使用时间策略。实验设计及因变量指标同实验 1, 20 名在校大学生参与了该实验。采用重复测量方差分析对数据进行分析。实验 1 结果表明, 对于 RMSE, 注意负荷主效应显著($p = 0.009$), 注意负荷与时间结构交互作用显著($p = 0.007$)。进一步简单效应分析发现, 时间结构为 0.5($p = 0.04$)和 1.5($p = 0.001$)时, 注意负荷对 TTC 估计影响差异显著, 时间结构为 1 时差异不显著($p = 0.29$)。对于 VE 和 BIAS 的分析发现, 被试估计 TTC 的准确性与其估计敏感性有关。实验 2 结果表明注意负荷、与时间结构的交互效应均不显著, $p > 0.38$ 。综合两个实验的数据分析发现, 估计策略、注意负荷和时间结构的交互作用显著($p = 0.012$)。高负荷下, 估计策略和时间结构的交互作用显著($p = 0.004$)。本研究表明当个体使用速度策略时, 注意负荷越高, TTC 估计越准确, 但同时会受到时间结构的影响; 当个体使用时间策略时, TTC 估计则主要受到任务的时间结构的影响。

关键词 TTC 估计, 注意负荷, 时间结构, 估计策略

The Influence of Attention Load and Temporal Structure on The Estimation of Time-to-Contact under Different Estimation Strategies

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Abstract: Estimated time-to-contact (TTC) refers to an individual's estimation of the time when a moving object arrives at a specific location, which is helpful for the individual to process environmental information. Previous studies have shown that attention load, estimation strategies (speed strategy and timing strategy), and the temporal structure of the motion path (the ratio of the visible path to the occluded path) will all have an impact on the estimated TTC, but the combined effect of the three on the TTC estimation Not yet clear. Therefore, this study adopts the dual-task paradigm and explores the influence of attention load on TTC estimation with different temporal structures through two experiments. Experiment 1 was carried out under the condition of visible-occluded (V-O), that is, the moving target is initially visible and then occluded. Under this condition, individuals prefer to use the speed strategy. A two-factor in-subject experimental design of 2 (low load, high load) × 3 (temporal structure 0.5, 1, 1.5) was adopted, and 20 college students participated in the experiment. The dependent variable indicators are the Root-mean-squared error (RMSE), relative deviation BIAS, and variable error (VE) estimated by TTC. Experiment 2 was carried out under the condition of occluded-flashed-occlude (OFO), that is, the moving target is visible when it initially appears and when it moves to the midpoint of the path, and it is not visible at other times. Under this

condition, the individual prefers to use the timing strategy. The experimental design and dependent variable indicators were the same as Experiment 1, and 20 college students participated in the experiment. Repeated measures analysis of variance was used to analyze the data. The results of Experiment 1 show that for RMSE, the main effect of attention load is significant ($p = 0.009$), and the interaction between attention load and temporal structure is significant ($p = 0.007$). Further simple effect analysis found that when the temporal structure is 0.5 ($p = 0.04$) and 1.5 ($p = 0.001$), the effect of attention load on TTC estimation is significantly different, and when the temporal structure is 1, the difference is not significant ($p = 0.29$). The analysis of VE and BIAS found that the accuracy of the participants' estimation of TTC is related to the sensitivity of their estimation. The results of experiment 2 show that the interaction effects of attention load and temporal structure are not significant, $p > 0.38$. Based on the data analysis of the two experiments, it is found that the interaction of estimation strategy, attention load, and temporal structure is significant ($p = 0.012$). Under high load, the interaction between estimation strategy and temporal structure is significant ($p = 0.004$). This study shows that when the individual uses the speed strategy, the higher the attention load, the more accurate the TTC estimation, but at the same time it will be affected by the temporal structure; when the individual uses the timing strategy, the TTC estimation is mainly affected by the task temporal structure.

Keywords: Time-to-contact estimation, Attention load, Temporal structure, Estimation strategies

化身虚拟老年人对主观年龄和认知功能的影响

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摘要 不同于实际年龄, 主观年龄是一个人主观感觉自己多少岁, 它对个体的认知功能和健康有着重要的作用。前人的研究发现主观年龄很容易被操控, 比如老年人在经历了五分钟的记忆实验后, 他们主观年龄增大了。本研究利用虚拟技术, 尝试改变被试的主观年龄。通过佩戴虚拟现实头盔, 大学生被试在虚拟环境中可以看到镜子中自己的影像, 如果该影像是老年人, 并且他的动作和被试的动作一致, 则被试会对该虚拟化身产生身体拥有感, 以为“镜中人的老年人就是我”。实验一操纵了被试与虚拟人物之间动作一致性, 测量被试的主观年龄, 对老年人的内隐刻板印象, 以及记忆任务表现。实验结果发现, 相比较不一致, 在动作一致时, 被试的主观年龄显著增大, 对老年人的内隐刻板印象变好, 在记忆任务中, 被试的表现也显著降低。实验二在操控被试与虚拟人物之间动作一致性之前, 启动了被试对年龄的不同的印象。实验记录了被试的主观年龄, 内隐刻板印象和记忆任务表现。结果发现, 在给予被试积极的年龄印象启动之后, 相比于消极的启动, 被试的主观年龄虽然变大, 内隐刻板印象变好, 但是记忆认知任务成绩也会上升。结果表明, 虚拟老年化身能够影响被试的主观年龄认知, 对老年人的内隐刻板印象, 和记忆任务的表现, 而这种表现的改变是受到不同的启动条件的调制。

关键词 虚拟现实, 虚拟化身, 主观年龄, 身体拥有感, 认知功能

The Effect of Virtually Being old people on Subjective Age and Cognitive Function

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Abstract: Different from chronological age, subjective age is individuals how old they feel or how old they view themselves. It plays an important role in an individual's cognitive function and health. Previous studies have found that subjective age can be rapid manipulated, such as when older people experience an increase in subjective age after a five-minute memory experiment. In this study, virtual technology was used to try to change the subjective age of the participants. By wearing a virtual reality helmet, college students can see their own body in the mirror in the virtual environment. If the virtual avatar is an old people and his or her actions are consistent with those of the participants,

the participants will have a sense of body ownership of the virtual avatar, thinking that "the old people in the mirror is me". Experiment 1 manipulated the action consistency between the participants and the virtual avatar, measured the participants' subjective age, implicit bias against old people, and memory task performance. The experimental results showed that, compared with inconsistency, when the actions were consistent, the subjective age of the participants increased significantly, the implicit bias against old people became better, and the performance of the participants in the memory task also decreased significantly. Experiment 2 activated participants' different impression of age before manipulating the consistency of movement between participants and virtual avatar. The participants' subjective age, implicit bias against old people and memory task performance were recorded. The results showed that, compared with the negative priming, the subjective age of the participants increased and the implicit stereotype improved after the positive priming, but the performance of the memory and cognitive tasks also increased. The results showed that the avatar of virtual old age could affect participants' subjective age cognition, implicit bias against old people, and performance of memory task, and the change of performance was modulated by different priming conditions.

Keywords: virtual reality, virtual avatar, subjective age, body ownership, cognitive function

目光注视对客体注意的影响及其时间进程

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摘要 目光注视在人类社交以及捕获和维持注意方面发挥重要作用。前人研究已经发现目光注视方向可以引导注意分配,然而睁眼或直视的面孔是一种包含社交信息的特殊客体。客体对注意分配的引导我们称之为客体注意,它是指个体对相同客体两个(或多个)特征的识别比对不同客体两个(或多个)特征的识别更快更准确。携带社交信息的眼光注视信号与客体是否以及如何交互引导注意仍需进一步研究。因此本研究采用双框线索范式,以具有不同注视方向(直视或回避)的客体作为刺激,通过操纵不同 SOA 来考察目光注视对客体注意的影响及其时间进程。实验一以面孔作为刺激,采用 2(线索位置: 直视 vs. 回避)×3(有效性: 有效 vs. 无效不同 vs. 无效相同)×3(SOA: 300 ms vs. 600 ms vs. 900 ms)被试内实验设计来探讨特殊的面孔客体如何与目光注视信息进行交互。结果表明 600 ms SOA 时,直视条件下的客体注意效应显著大于回避条件,进一步分析表明客体效应的差异来自于直视比回避条件下被试对无效相同客体位置上的目标反应更快,这说明与回避条件相比,直视更能捕获我们的注意,从而产生更大的客体注意效应。为了探究当面孔信息被削弱或消除时,目光注视效应是否能够扩展到其他客体中,实验二将面孔倒置,探讨当面孔信息被削弱时,目光注视对客体效应的影响是否还会发生;实验三和实验四分别使用不同注视方向的眼睛叠加矩形框或真实客体作为刺激,探讨当面孔信息被消除时,目光注视效应是否能够扩展到其他客体中。实验四的结果与实验一一致。实验二和实验三虽然也在 600 ms SOA 时发现了直视和回避目光客体效应的差异,但是差异来自于直视比回避在无效不同客体的目标反应更慢,表现出对直视目光的脱离困难,这说明直视更能维持我们的注意,从而产生更大的客体注意效应。上述结果说明了直视目光在 600 ms SOA 时更能捕获或维持我们的注意。

关键词 客体注意, 目光注视, 社会交互, SOA

Different temporal dynamics of object-based attention with faces between direct and averted gaze

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Abstract: Eye contact plays an important role in social interaction and can capture and hold attention. Previous studies have shown that eye contact can guide attentional allocation. However, face with direct or averted gaze is a special object containing social information. The object's guidance for attentional allocation is called object-based attention, in which items in the cued object are processed preferentially than items in the uncued object. It is still unclear whether and how eye contact interacts with objects in guiding attentional allocation. Therefore, the aim of our

study was to investigate the impact of gaze on object-based attention and its temporal dynamics by using two-rectangle paradigm and objects with different gaze directions (direct or averted). In Experiment 1, we used face as stimulus and a 2 (cue location: direct-gaze face, averted-gaze face) $\times$ 3 (cue validity: valid, invalid same-object, invalid different-object) $\times$ 3 (SOA: 300, 600, 900) within-subjects factorial design to investigate whether and how eye contact interacted with face to guide attentional allocation. The results revealed a larger object-based effect when the cue appeared on the direct-gaze face compared to the averted-gaze face under 600 ms SOA. Further analysis showed that the difference of object-based effect derived from that participants reacted more quickly to the target in direct gaze than averted gaze under the invalid same-object condition, which indicated that direct gaze could capture attention and caused a larger object-based effect. In order to explore whether the gaze effect can be extended to other objects when face information is weakened or eliminated. Inverted faces were used in Experiment 2 to explore whether the results in Experiment 1 could be found when face information was weakened. In Experiments 3 and 4, rectangles or real objects overlaid with eyes were used to explore whether the gaze effect existed when face information was eliminated. The results of Experiment 4 were consistent with Experiment 1. Although the results of Experiment 2 and Experiment 3 also suggested that the difference of object-based effect with eye contact in 600 ms SOA, the difference was due to the slower response to target in direct gaze than averted gaze under invalid different-object condition, which indicated that it was more difficult to disengage attention from direct gaze, which led to a larger object-based effect. This result provides the first evidence that direct gaze can capture and maintain attention at 600 ms SOA.

Keywords: Object-based attention, eye contact, social interaction, SOA

感知社会地位对选择性注意的影响

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摘要 感知社会地位在社交中起着重要作用。以往研究表明,个体通过社会经济地位(SES)和道德地位(MS)感知他人社会地位。个体会将注意优先投入到高 SES 目标者;印象形成中更关注目标者的负面道德信息。然而由于研究范式等的局限性,目前尚未有研究同时考察 SES 和 MS 对注意分配的影响,以及哪种地位占主导来引导注意选择仍不清楚。因此,本研究采用双框范式的变式,通过虚拟简历法操纵目标者的地位,探究上述问题。实验一采用 2 (线索位置:高 SES;低 SES) $\times$ 3 (线索有效性:有效;无效相同客体;无效不同客体) $\times$ 3 (SOA: 100 ms; 300 ms; 500 ms) 被试内实验设计,探究 SES 对选择性注意的影响及其时间进程。结果发现,高、低 SES 条件下的空间效应在不同 SOA 时均无显著差异;然而当 SOA 为 300 ms 时,高 SES 条件下的客体效应显著大于低 SES 条件。这表明 SES 不影响空间注意;但在 300 ms SOA 时影响客体注意且进一步分析表明高 SES 目标者既捕获注意又维持注意。实验二采用 2 (线索位置:高 MS;低 MS) $\times$ 3 (线索有效性:有效;无效相同客体;无效不同客体) $\times$ 3 (SOA: 100 ms; 300 ms; 500 ms) 被试内实验设计,探究 MS 对选择性注意的影响及其时间进程。结果发现,当 SOA 为 300 ms 时,高 MS 条件下的空间效应和客体效应均显著大于低 MS 条件。这表明 MS 在 300 ms SOA 时同时调节空间注意和客体注意,且高 MS 目标者既维持了个体的注意,又易化了其所在的空间位置。实验三在实验一、二的基础上操纵 SOA 为 300 ms,采用 4 (线索位置:高 SES;低 SES;高 MS;低 MS) $\times$ 3 (线索有效性:有效;无效相同客体;无效不同客体) 被试内实验设计,进一步探究 SES 和 MS 谁占主导地位。结果发现,空间效应在不同线索位置上差异不显著;但高 MS 条件下的客体效应显著大于高 SES、低 SES 和低 MS 条件,高 SES 条件下的客体效应显著大于低 SES 和低 MS 条件,低 SES 和低 MS 条件无显著差异。这表明个体在高 MS 的目标者上投注了更多的注意资源。上述实验揭示:SES 和 MS 对个体选择性注意的影响模式不同;MS 可能在社会地位对个体注意系统的影响中起主导作用。

关键词 感知社会地位, 选择性注意, 社会经济地位, 道德地位, SOA

The impact of perceived social status on selective attention

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Abstract: Perceived social status is ubiquitous in guiding social interactions in numerous environments. The literature on status has revealed that socioeconomic status (SES) and moral status (MS) are two important dimensions of social status relevant to human. Previous study has found that high SES faces received more attention than low SES faces, people preferentially assigned more attention to negative morality information when forming an impression of a person. However, as a result of the limitation of paradigm, it's still unclear how and when SES and MS simultaneously shape selective attention, and the relative importance of this two status to the perceiver's attentional processing is still an open question. To explore these problems, the current study used a variant of two-rectangle paradigm and manipulated the targets' status with fictive CVs. Experiment 1, employing a 2 (cue position: high SES, low SES) $\times$ 3 (cue validity: valid, invalid same-object, invalid different-object) $\times$ 3 (SOA: 100 ms, 300 ms, 500 ms) within-subjects factorial design, explored the influence and time course of SES on selective attention. The results revealed no significant differences in space-based effect between high SES and low SES faces under different SOA conditions, but a greater object-based effect can be observed within high SES faces than low SES faces for 300 ms SOA condition. These results suggested that SES did not modulate space-based attention, but SES plays an important role in object-based attention for 300 ms SOA condition, high SES faces capture and maintain perceivers' attention. In Experiment 2, a 2 (cue position: high MS, low MS) $\times$ 3 (cue validity: valid, invalid same-object, invalid different-object) $\times$ 3 (SOA: 100 ms, 300 ms, 500 ms) within-subjects factorial design was carried out to explore the influence and time course of MS on selective attention. Interestingly, the results showed that a greater space-based effect and a greater object-based effect can be observed within high MS faces than low MS faces for 300 ms SOA condition. The results indicate that MS affect space-based attention as well as object-based attention for 300 ms SOA condition, high MS face only maintain the perceivers' attention and there is a facilitation of its spatial location. To further explore the relative importance of SES and MS, we used a 4 (cue position: high SES, low SES, high MS, low MS) $\times$ 3 (cue validity: valid, invalid same-object, invalid different-object) within-subjects factorial design. The results showed that the difference of space-based effect for different cue position was not significant, but a greater object-based effect for high MS faces than high SES, low SES and low MS face. Additionally, a greater object-based effect was observed for high SES than low SES and low MS faces, the difference of object-based effect between low SES and high SES faces was not significant. These results indicated that participants assigned more attention to high MS faces. Taken together, there are different impact patterns of SES and MS on attentional allocation, and MS may be relatively more important than SES for individuals' attentional processing.

Keywords: perceived social status, selective attention, SES, moral status, SOA

危险知觉可训练性及其受情绪影响的研究

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摘要 驾驶员危险知觉能力是关系道路安全驾驶的重要因素, 面对日益复杂化的交通环境, 探寻提升驾驶员危险知觉能力的方法至关重要。大量研究表明, 驾驶员危险知觉能力与驾驶安全存在直接关联。目前, 英国、澳大利亚等国家已经出现基于电脑和触屏设备的标准化危险知觉测验 (HPT), 但我国尚未出现成熟范本。因此, 本研究采用测量和实验的方法, 考察现有危险知觉训练模式的效果、特点及其受主体情绪的影响。研究一参考 Wetton 等人 (2010) 编制 HPT 的过程和原则, 以实地拍摄行车视频为素材, 编制一套符合国内的《驾驶员危险知觉测验》, 为后续研究提供工具。测验包含 4 种场景 (道路危险源、车辆危险源、视觉盲区、特殊路况), 共 30 个项目, 反应方式为鼠标点按, 量化指标为命中率和时间偏移, 通过实证效度来评估

测验有效性。研究二采用 4（训练模式：专家评论训练、导航视角训练、预期训练、无训练） $\times$ 2（情绪启动：愤怒、平静）组间设计探究情绪对危险知觉可训练性的影响。因变量为被试命中率提升量（后测命中率-前测命中率）和时间偏移减少量（前测时间偏移-后测时间偏移）。结果表明：1）自编《危险知觉测验》具有一定有效性，能够将专家组和新手组区分开，可用于后续研究；2）适当训练干预可以提升驾驶员识别危险源的准确性和及时性；3）危险知觉训练效果会受到愤怒情绪的抑制；4）三种训练模式都能提升被试危险知觉能力，但训练效果会受到主体愤怒情绪影响。导航视角训练总体上效果最优，但容易受到主体愤怒情绪的抑制，而专家评论效果则具有较好的跨情绪一致性。研究为将来该领域的研究和实践提供较为可用的工具，并为将来驾驶员的培训和相关法律法规的制定提供理论依据和建议。

关键词 交通安全，危险知觉，危险知觉测验，训练干预，情绪

HPT test and the influence of emotion on the trainability of risk perception

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Abstract: Drivers' risk perception ability is an important factor related to road safety driving. Faced with increasingly complicated traffic environment, it is very important to explore ways to improve drivers' risk perception ability. A large number of studies have shown that there is a direct correlation between drivers' risk perception ability and driving safety. Currently, the United Kingdom, Australia and other countries have developed standardized risk perception tests (HPT) based on computers and touch screen devices, but China has not yet developed a mature model. Therefore, this study adopted the methods of measurement and experiment to investigate the effect and characteristics of the existing risk perception training model and the influence of emotion on the trainability of risk perception. In Study 1, referring to the process and principles of compiling HPT by wetton et al (2010), and taking field driving videos as materials, a set of domestic driver risk perception test was prepared to provide tools for follow-up research. The test includes 4 scenarios (road hazards, vehicle hazards, visual blind areas and special road conditions), a total of 30 items. The response method is mouse click, and the quantitative indicators are hit rate and time offset. The effectiveness of the test is evaluated through empirical validity. In study 2, 4 (training mode: expert review training, navigation perspective training, anticipation training, no training) $\times$ 2 (emotional activation: anger, calm) inter group design was used to explore the impact of emotion on the trainability of risk perception. The dependent variables are the increase of the subject's hit rate (post test hit rate - pretest hit rate) and the decrease in the time offset (pretest time offset - post test time offset). The results show that: 1) The self-compiled risk perception test has certain effectiveness, which can distinguish the expert group from the novice group, and can be used in the follow-up research; 2) Appropriate training intervention can improve the accuracy and timeliness of drivers' hazard identification; 3) The effect of risk perception training suppressed by anger; 4) All the three training modes can improve the risk perception ability of the subjects, but the training effect will be affected by the anger emotion of the subjects. Navigation view training had the best effect overall, but it was more easily suppressed by the anger of the subject, while expert review training had better cross-emotion consistency. The research will provide useful tools for future research and practice in this field, and provide theoretical basis and suggestions for driver training and relevant laws and regulations in the future.

Keywords: Traffic safety, risk perception, risk perception test, training intervention, emotion

发展性协调障碍儿童视空间信息前注意加工失匹配负波研究

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摘要 目的: 发展性协调障碍 (developmental coordination disorder, DCD) 是一种常见的神经发育障碍, 表现为智力发展正常, 但是精细和粗大运动技能发展受损。前注意加工是无需注意参与的, 对刺激的早期、自动化的加工, 失匹配负波 (mismatch negativity, MMN) 是研究前注意加工的客观指标。本研究旨在探究发展性协调障碍儿童和对照组儿童视空间信息的前注意加工功能特点。方法: 使用发展性协调障碍问卷家长版 (DCDQ) 和儿童运动协调能力成套评估工具 (M-ABC), 并结合教师评价, 筛选出 7-10 岁发展性协调障碍儿童 24 例, 同时选取对照组儿童 23 例。采用偏差刺激呈现频率为 20% 的非注意 oddball 范式, 应用美国 EGI 公司生产的 ERP 仪器, 采集并比较两组儿童的视觉失匹配负波。结果: 行为结果表明, 在注意主任务上, 两组儿童的反应时不存在差异; 然而, 障碍组儿童的准确率显著低于对照组 ($t = -2.431, p < 0.05$)。ERP 结果表明, 相比于障碍组儿童的视觉 MMN 波幅 $[(0.410 \pm 0.232)\mu V]$, 对照组儿童枕部 (O1、Oz、O2) 引起的波幅更负 $[(-0.306 \pm 0.237)\mu V, p = 0.036]$, 差异具有统计学意义 ($p < 0.05$)。结论: 发展性协调障碍儿童的视空间前注意加工能力较正常儿童差, 可能存在视觉感知障碍。意义: 通过 ERP 研究可以确定发展性协调障碍儿童是否在特定大脑区域存在功能异常, 是否存在注意加工问题, 深入探讨注意视空间信息加工脑机制, 为发展性协调障碍儿童的及时发现、矫正与治疗提供帮助, 提高其学习效率, 改善学业成绩。

关键词 发展性协调障碍, 前注意加工, 视觉失匹配负波

Study on pre-attentive change detection index by visual mismatch negativity in children with Developmental Coordination Disorder

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Abstract: Objective: Developmental Coordination disorder (DCD) is a common neurodevelopmental disorder, characterized by normal intellectual development but impaired fine and gross motor skill development. Pre-attentive processing does not need attention, the early, automatic processing of stimuli, and the mismatch negativity (MMN) is an objective indicator of pre-attentive processing. The aim of this study was to investigate the pre-attentive processing of visuospatial information in children with and without developmental coordination disorder. Method: Motor coordination was measured using the Developmental Coordination Disorder Questionnaire (DCDQ) and Movement Assessment Battery for Children test (M-ABC), combined with teacher evaluation, 24 children aged 7-10 years with developmental coordination disorder were selected, and 23 children in the control group were selected. The visual mismatch negativity waves of the two groups of children were collected and compared with the ERP instrument produced by EGI company in the United States by using the non-attentional Oddball paradigm with the deviant frequency of 20%. Results: The behavioral results showed that there was no difference in the response time of the two groups of children on the attention main task. However, children in the disorder group were significantly less accurate than those in the control group ($t = -2.431, p < 0.05$). The ERP results showed that compared with the visual MMN amplitude of children in the disorder group $[(0.410 \pm 0.232)\mu V]$, the occipital amplitude of children in the control group (O1, Oz, O2) was more negative $[(-0.306 \pm 0.237)\mu V, p = 0.036]$, and the difference was statistically significant ($P < 0.05$). Conclusion: Children with developmental coordination disorder have poorer visuospatial attention processing ability than normal children, and may have visual perception impairment. Significance: Can determine whether the developmental coordination disorder children through ERP research in a specific area of the brain dysfunction, whether there is attention to the problem of processing. To further explore the brain mechanism of attentional visual spatial information processing in order to provide help for the timely detection, correction and treatment of children with developmental coordination disorder, and improve their learning efficiency and academic performance.

Keywords: Developmental Coordination Disorder, Pre-attentional processing, Mismatch negativity

(3) “普通心理和实验心理专业委员会”口头报告分场 3

工作记忆中的信息移除机制

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摘要 信息繁杂的时代里, 我们的大脑每天都面对着大量需要处理的内容, 那么在这背后, 是什么样的工作记忆机制让我们避免陷入混乱局面, 保持高效工作的呢? 工作记忆是一个对信息进行暂时储存、加工的系统, 前人提出工作记忆中的无关信息会被主动地移除, 以便在容量有限地情况下, 更好地为目标服务。本研究旨在探究工作记忆任务中干扰项的加工方式, 并进一步验证工作记忆的信息移除是否存在。实验范式沿用 Ecker 等人 (2014) 使用的改良版工作记忆范式, 自变量为 CTI (线索和目标之间的时间间隔), 通过改变 3 方面实验设置 (记住替换词后是否按键、回忆时是否需要对应位置、是否加入特殊词), 对 93 名浙江大学学生开展 4 项实验, 并在此基础上增加意外回忆测试, 让被试在所有试次结束后, 自由回忆前面出现过的所有词语, 以探究干扰项的回忆效果。研究结果和移除假说不一致, 不论是否按键、是否按位置回忆, 被试并没有按照预想表现出在 CTI 长的条件下, 回忆出更少的干扰词, 且同样是干扰词, 被试对于特殊的动物词汇的记忆效果比其他的普通词汇更好, 并没有被一视同仁地主动从工作记忆中移除。这表明, 工作记忆中的信息移除机制可能并不存在, 但不可否认, 让工作记忆保持高效工作的机制一定存在, 未来研究可进一步探究不同范式下的机制差异。

关键词 工作记忆, 信息移除, 意外回忆, 干扰加工

The mechanism of removing information in working memory

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Abstract: In the face of so much information, our brains have to deal with a lot of things every day. So what mechanisms of working memory help us avoid chaos and stay productive? Working memory is a system that temporarily stores and processes information. Predecessors have proposed that irrelevant information in working memory will be actively removed in order to better serve the target in the case of limited capacity. The purpose of this study is to explore the processing mode of interference items in working memory tasks and further verify whether the information removal of working memory exists. The experimental paradigm follows the improved working memory paradigm used by Ecker et al. (2014), and the independent variable is CTI (cue-target interval). By changing the experimental settings in three aspects (whether to press the key after remembering the replacement word, whether to need the corresponding position when recalling, and whether to add special words), four experiments were carried out on 93 students of Zhejiang University. On this basis, an unexpected recall test was added to let the subjects freely recall all the words in front of them after all trials, so as to explore the recall effect of distracters. The research results are inconsistent with the removal hypothesis. No matter whether the key is pressed or not, the subjects do not recall fewer distracters as expected under the condition of long CTI, and they are also interfering words. The subjects have better memory effect for special animal words than other ordinary words, and have not been removed from working memory without discrimination. This shows that the information removal mechanism in working memory may not exist, but it is undeniable that the mechanism to keep working memory working efficiently must exist. Future research can further explore the mechanism differences under different paradigms.

Keywords: working memory, removal, irrelevant information, accidental recall

不同编码时间下的记忆神经表征：基于颅内电极的研究

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摘要 视觉工作记忆是一个短暂存储信息的记忆系统, 以往研究认为视觉工作记忆的容量是固定不变的。但最近有研究表明, 在记忆真实物体时, 随着编码时间的延长, 被试的记忆容量会增加 (Li et al., 2020)。也就是说, 视觉工作记忆的存储容量受到编码时间的影响。然而, 对于其依赖的神经机制并不清楚。因此, 本研究采用颅内电极记录技术 (StereoElectroEncephaloGraphy, SEEG) 来探究被试在不同编码时间下的神经活动。本研究采用 Li et al., 2020 中的实验范式, 让被试记忆六个真实物体, 呈现时间分别为 0.2s, 1s 和 2s, 随后相应地呈现空屏 2.8s, 2s 和 1s。之后, 会在其中一个物体的位置上呈现 0.5s 的追溯线索, 提示被试需要回忆哪个位置上的物体。测试阶段, 在之前提示位置呈现两个物体, 要求被试判断之前记忆过的物体出现在上面还是下面, 并给予反馈。本研究通过分析额叶、顶叶、枕叶、海马头和海马尾这几个区域的电极发现: 1) 在编码阶段, 额叶、顶叶、枕叶的 gamma 波段 (60-140 Hz) 存在持续性的激活, 并且激活时间与编码时间一致。2) 顶叶和枕叶的 gamma 波段强度在编码阶段对于正确试次要高于错误试次, 表明其与记忆有关。3) 利用表征相似分析 (Representational similarity analysis) 发现, 顶叶、枕叶、额叶的编码与回忆阶段的表征相似矩阵存在与编码时间的锁时效应, 且在正确和错误试次间表现不同。综上所述, 本研究认为不同编码时间下的记忆神经表征存在差异, 且这种差异主要存在于顶枕区域以及额叶区域, 且主要体现在 gamma 波段。

关键词 工作记忆, SEEG, Gamma 波段, 编码时间

The neural representation of memory for different encoding times: an SEEG study

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Abstract: Visual working memory (VWM) is the memory system that temporarily holds visual information. It is assumed that VWM has fixed memory capacity. Recent work with real-world objects, however, has challenged this view by providing evidence that the VWM capacity for real-world objects is not fixed but instead increases with prolonged encoding time (Li et al., 2020), indicating that VWM is influenced by the encoding time. However, little is known about its underlying neural mechanism. The current research was designed to investigate the brain activity for different encoding times by using the Stereo Electro Encephalo Graphy (SEEG). The present experimental paradigm was basically identical to Li et al., 2020, the participants were asked to remember six real-world objects that were presented for 0.2s, 1s and 2s, followed by a 2.8s, 2s, and 1s delay respectively. After the delay, a single item was cued and then was tested, following by a 2s feedback display. We analyzed the electrodes across the whole brain and found that 1) The gamma band (60-140 Hz) in the frontal, parietal, and occipital cortex was constitutively activated, and was locked to the encoding time. 2) The power in gamma band in the frontal and parietal cortex was larger for correct trials than incorrect trials, indicating that the activity in gamma band was related to memory. 3) Representational similarity analysis showed that the Representational similarity between the encoding and the retrieval period in the frontal, parietal, and occipital cortex was locked to the encoding time as well, and was larger for correct trials than incorrect trials. Overall, we argue that the neural representations of memory for different encoding times were different, and such difference mainly exist in the activity in gamma band from the frontal, parietal, and occipital brain regions.

Keywords: Working memory, SEEG, Gamma band, Encoding time

自我调节学习中类别间与类别内的信息加工

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摘要 类别学习下的自我调节学习是指个体在加工多个类别知识时自主选择学习策略的过程。当学习者在同个类别内进行连续加工时称为集中学习, 在不同类别间进行对比加工时称为交替学习。前人研究基于自然类别材料考察了类别间相似性对自我调节学习的影响, 结果发现: 类别间相似性低时, 学习者更多的选择集中学习; 类别间相似性高时, 则更多地选择交替学习, 并且取得更好的分类学习效果, 这表明类别相似性可预测自我调节学习下的学习行为。类别相似性不仅包括类别间相似性, 还包括类别内相似性, 学习者在寻找类别内的共性时也是有学习策略的。在以往研究中自我调节学习是已知呈现样例的数量, 该因素是否会影响个体的学习策略还有待探究。因此, 本研究共设计两个实验, 实验一探讨类别间相似性(高/低)与类别内相似性(高/低)对自我调节学习的影响, 实验二探讨影响类别转换的因素, 在实验一的基础上增加呈现样例数量的条件。本研究共 240 名大学生参加实验, 采用原型学习材料, 分为四个类别, 通过变异水平严格控制类别间与类别内相似性, 使用自我调节学习范式, 即学习阶段学习者可自由选择四类别中的一个类别进行学习, 学习结束后进入测试阶段。结果表明: 正确率方面, 实验一与实验二中类别间低相似条件的分类正确率显著高于类别间高相似条件, 类别内高相似条件的分类正确率显著高于类别内低相似条件。转换率作为衡量学习策略的指标, 是指学习阶段在不同类别间转换的比例。对转化率进行整体和阶段性方差分析, 发现当呈现样例数量时, 类别内高相似条件下的转换率显著高于类别内低相似条件, 且第一阶段的转化率显著高于其他三个阶段。本研究的结论: 类别间与类别内相似性共同预测自我调节学习的分类效果; 当告知学习者样例数量时, 学习者的学习策略会受到类别内信息而非类别间信息的影响, 同个类别内的样例越相似, 学习者更倾向于采用交替学习, 并且这种交替的倾向会随着学习进程而减弱, 进一步验证自我调节学习中的数据驱动效应。

关键词 类别学习, 自我调节学习, 类别间信息加工, 类别内信息加工, 样例数量

Information Processing between and within Categories in Self-regulated Learning

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Abstract: Self-regulated learning under category learning refers to the process in which individuals independently choose learning strategies when processing multi-category knowledge. When learners perform continuous processing in the same category, it is called concentrated learning, and when they perform contrast processing between different categories, it is called alternate learning. Previous studies investigated the impact of similarity between categories on self-regulated learning based on natural category materials. The results show that: when the similarity between categories is low, learners more choose concentrated learning; when the similarity between categories is high, more Choose alternate learning and achieve better classification learning results, which indicates that category similarity can predict learning behavior under self-regulated learning. Category similarity includes not only the similarity between categories, but also the similarity within categories. Learners also have learning strategies when looking for commonalities within categories. In previous studies, the number of examples presented in self-regulated learning is known, and whether this factor will affect individual learning strategies remains to be explored. Therefore, two experiments were designed in this study. Experiment 1 explores the impact of similarity between categories (high/low) and within-category similarity (high/low) on self-regulated learning. Experiment 2 explores the factors that affect category switching. On the basis of experiment 1, the conditions for presenting the number of samples were increased. In this study, a total of 240 college students participated in the experiments. We used prototype learning materials, divided into four categories, strictly controlled the similarity between and within categories through the level of variation, and used a self-regulated learning paradigm, namely learners in the learning phase can freely choose one of

the four categories for learning, and enter the testing phase after learning. The results showed that in Experiment 1 and Experiment 2, the classification accuracy of the low similarity condition between the categories is significantly higher than that of the high similarity condition between categories, and the classification accuracy of high similarity condition within the categories is significantly higher than that of low similarity condition within the categories. As an indicator of learning strategy, conversion rate refers to the ratio of conversion between different categories in the learning phase. The overall and staged variance analysis of the conversion rate found that when the number of samples is presented, the conversion rate under high similarity condition within the categories is significantly higher than that under low similarity condition within the categories, and the conversion rate in the first stage is significantly higher than the other three stages. The conclusions of this study are as follows: similarity between categories and within categories jointly predict the classification effect of self-regulated learning; When the learner is informed of the number of examples, the learner's learning strategy will be affected by the information within the categories rather than the information between the categories. The more similar the examples in the same category are, the learners are more inclined to adopt alternate learning, and this tendency to alternate will weaken with the learning process, further verifying the data-driven effect of self-regulated learning.

Keywords: Category learning, Self-regulated learning, Information processing between categories, Information processing within categories, example quantity

视觉工作记忆编码中的特征分离

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摘要 视觉工作记忆是一个短暂存储视觉信息的在线记忆系统。早期研究认为视觉工作记忆的基本存储单元为客体, 即是以整体的形式进行加工和存储的。然而, 近来有证据表明视觉工作记忆中对于不同客体特征的存储是分离的, 且每个特征都有其独立的存储空间和存储容量。那么, 究竟是什么造成了多特征物体不同特征的不同存储容量? 对此, 我们假设不同维度的特征具有不同神经机制, 即在编码阶段的加工时间和深度上存在差异。为了证明这一假设, 我们通过脑电 (EEG) 技术和多变量模式分析 (MVPA) 方法对组成物体的不同特征进行解码以比较特征之间的编码时间和加工深度。本研究分为两个实验。在实验一中, 在视野中央给被试呈现一个带有颜色和方向的光栅刺激, 被试按要求记忆颜色或方向, 或同时记忆其颜色和方向。在实验二中, 给被试呈现一个不仅具有颜色和方向特征, 而且具有位置特征的光栅刺激, 即光栅刺激可能出现在注视点的左侧或右侧。但是位置信息与记忆任务无关, 被试只要记忆光栅刺激的颜色和方向即可。与此同时, 我们记录了被试在完成实验任务时的脑电数据。实验一的研究结果显示, 在记忆颜色或方向条件下, 对于颜色的解码信息要比方向的更早达到峰值; 而方向的解码信息比颜色的要维持更久。在同时记忆颜色和方向条件下, 我们发现了类似的结果, 表明同一物体的不同特征存在不同的编码方式。通过对时频转换的数据进行 MVPA 分析, 发现这种不同特征的编码差异主要反映在 α 波段 (8-12Hz) 上。此外, 实验二的结果重复验证了实验一, 并且发现位置作为无关特征时依旧会进行编码, 且与颜色和方向存在不同的编码形式。因此, 我们认为视觉工作记忆对于物体的编码是存在特征分离的。

关键词 工作记忆, 客体, 特征, 编码, MVPA

The dissociated encoding of features in visual working memory

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Abstract: Visual working memory (VWM) is an online memory system that temporarily stores visual information. Early research suggested that the object is the basic storage unit of VWM. However, recent evidence shows that the storage of different features from multi-features objects in VWM is dissociated, and each feature has independent storage space and capacity. So, what causes the different storage capacities for different features? We assume that the

processing of different features have different neural mechanisms. To test this hypothesis, we decoded different features using multivariate pattern analysis (MVPA) from the data recorded through electroencephalogram (EEG), and then compared the start of the encoding time and the strength of the encoding between features. In Experiment 1, we presented a grating including color and orientation information in the center of the display. The participants were asked to memorize the color or orientation, or to memorize both the color and orientation. In Experiment 2, the same grating appeared on the left or right side of the central fixation. Here the participants only needed to memorize the color and orientation of the grating, but ignored the location. Meantime, we recorded the EEG during the task. Experiment 1 showed that, when memorizing color or orientation, the color decoding accuracy reached plateau earlier than the orientation; and the activity of the orientation lasted longer than that of the color. When memorizing both color and orientation, we found similar results, indicating that people adopted different strategies to encode different features of the same object. From the time-frequency analysis, the current results were mainly reflected in the alpha band (8-12Hz). Experiment 2 mimicked the results showed in Experiment 1, and it showed that the encoding of location was different from that of the color and orientation. Thus, we argue that the encoding of different features in VWM is separate.

Keywords: Working memory, object, feature, encoding, MVPA

工作记忆向长时记忆转化的时程效应及其神经机制

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摘要 工作记忆在日常生活中被频繁使用, 服务于我们当前的认知任务。以往研究表明工作记忆是一种短暂存储信息的记忆系统; 并且, 工作记忆中的信息通过反复复述可以存储到长时记忆之中, 形成更为持久的记忆表征 (Ranganath et al., 2005)。然而, 对于工作记忆转化为长时记忆的时程效应及其神经机制, 我们却知之甚少。大量研究表明海马对长时记忆的维持和提取十分重要, 并且海马在工作记忆维持新项目的过程中扮演着重要角色。那么, 海马是否在工作记忆向长时记忆转化过程中起到一定的作用? 为了探究这一记忆转化过程的时程效应及其神经机制, 本研究拟采用颅内电极记录技术 (StereoElectroEncephalography, SEEG), 采集癫痫病人的颅内电极数据。本研究试图回答两个问题: 1) 工作记忆转化为长时记忆的时程效应; 2) 海马在工作记忆转为长时记忆的过程中起到何种作用。实验过程中, 被试需要记忆并回忆光栅刺激的方向并通过鼠标做出反应。实验一共包含 6 个区组, 每个区组包含 30 个试次, 且每个试次呈现的光栅刺激都具有相同的方向信息。实验根据光栅数量分为两个条件, 即负荷 1 和 2。通过分析行为数据, 以及事件相关电位和时频转换后的数据, 我们发现工作记忆的绩效和海马的电信号都会随着练习的增加而变化。主要表现为, 记忆编码后的海马激活会随着不同区组变化, 且在第四个区组达到最低; 同样 Gamma 频段 (60-140Hz) 的强度也会随着不同区组变化, 在第四个区组最弱。这表明工作记忆可能在第四个区组, 即 90~120 次的重复时, 开始转化为长时记忆, 伴随着海马激活程度的降低。

关键词 工作记忆, 长时记忆, 海马, SEEG

The time course and its neural mechanism when transferring working memory into long-term memory

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Abstract: Working memory (WM) is frequently used in daily life to serve our current cognitive tasks. Previous studies have shown that WM is a memory system storing information temporarily. In addition, information stored in WM can be transferred into long-term memory (LTM) through repeated rehearsal, to form durable memory representations (Ranganath et al., 2005). However, little is known how the information from WM is transferred into

LTM, and how is its time course and its neural mechanism. Some studies have identified that the hippocampus plays a critical role in the maintenance and retrieval of LTM; moreover, the hippocampus significantly affects maintaining new items in WM. Therefore, does the hippocampus also provide support for the transferring from WM into LTM? In order to investigate the time course underlying such memory transfer and its neural mechanism, the present study adopted SEEG (StereoElectroEncephaloGraphy), and collected the data from epileptic patients. We attempted to answer two questions: 1) the time course for transferring information from WM into LTM; 2) what's the role of hippocampus during this transfer? During the experiment, the participants were required to remember and recall the orientation of the grating stimulus and then responded with the mouse. The experiment consisted of 6 blocks, each block containing 30 trials, and the stimuli presented in each trial had the same orientation. The experiment was divided into two conditions according to the number of gratings, namely load 1 and 2. We found that both the WM performance and the activity in the hippocampus changed after practice. Interestingly, the activity in hippocampus after the stimulus offset systematically changed between different blocks, and reached the lowest level in the fourth block. Similarly, the power of Gamma band (60-140Hz) also varied from block one to six, and was weakest in the fourth block as well. It suggests that the information from WM may already be transferred into LTM after 3 blocks, reflected by the decreased activity in hippocampus.

Keywords: working memory, long-term memory, hippocampus, SEEG

睡眠对知觉与动作序列内隐习得离线巩固效应的影响

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摘 要 学习不仅可以发生在线阶段, 也可以发生在离线阶段。在离线阶段发生的学习被称为离线巩固, 即在最初获得知识之后, 即使没有额外的练习, 其记忆痕迹也会保持稳定或提高。既往研究发现睡眠对外显学习的离线巩固具有促进作用, 但其对内隐学习离线巩固的影响尚缺乏一致性的结论。此外, 既往关于内隐学习离线巩固的研究主要采用了经典的序列学习范式, 未对动作序列和知觉序列进行区分。有鉴于此, 本研究采用改版的序列反应时任务, 在完全分离知觉序列和动作序列的情况下, 通过三个实验, 使用不同长度与复杂程度的序列规则, 系统考察了睡眠对知觉序列和动作序列内隐学习离线巩固效应的影响。在实验过程中, 被试需完成学习与测验两个阶段的序列反应时任务。在该任务中, 屏幕上会呈现 6 个 (或 4 个) 周围色块和一个中间色块, 要求被试判断目标色块与周围哪个色块颜色一致并又快又准地进行按键反应。对于知觉序列组, 目标色块的颜色遵循某一固定序列, 但周围色块的颜色是随机分配的, 因此, 对应的手指按键序列也是随机的; 对于动作组, 手指按键顺序遵循某一规律, 但目标色块的颜色是随机的。实验之前被试并不知晓序列规则的存在。学习与测验阶段间隔 12 个小时。对于睡眠组, 晚上 7 点-9 点完成学习阶段的序列反应时任务, 第二天早上 7 点-9 点完成测验阶段的任务; 白天组, 则相反。结果发现, 对于动作序列, 序列复杂程度较低时, 无论是否经过睡眠都会发生离线巩固效应, 而对于较为复杂的动作序列规则, 只有经历睡眠才会引起离线巩固效应的发生; 对于知觉序列, 无论何种难易程度, 均未发生任何离线巩固效应。上述结果表明内隐序列知识基于睡眠的离线巩固会受到序列类型及序列复杂程度的调节。

关键词 睡眠, 内隐学习, 离线巩固, 知觉序列, 动作序列

The effect of sleep on the consolidation of perceptual and motor sequences in implicit learning

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Abstract: Learning occurs not only during the learning phase (online periods), but also during the offline interval subsequent to the learning phase (offline periods). The process during the offline periods is referred to as consolidation, which means stabilization or enhancement of a memory trace even without additional practice after the initial acquisition. Previous studies have demonstrated that sleep improves offline memory consolidation related to explicit learning. However, consistent conclusion has not been reached on the impact of sleep on the consolidation of implicit learning. This discord may be explained by the fact that the majority of studies examined the offline consolidation effect of implicit learning used the classical version of the serial reaction time (SRT) task, in which the different modalities (perceptual and motor) of sequence learning are confounded. The present study investigated the effect of sleep on the consolidation of implicit perceptual and motor sequence learning by three experiments using a modified version of Serial Reaction Time task, which allows independent manipulation of perceptual and motor sequences. In the criterion tasks, six (or four) colored squares were presented around the center of the screen, where the target square appeared simultaneously and the participants were asked to press the button corresponding to the square which shared the same color with the target. The tasks in three experiments differed concerning the sequence length and structural complexity. In each experiment, we introduced a 12-h (including or not including sleep) delay between the learning and the retest phase with AM-PM and PM-AM. Results showed that, sleep does not promote the offline consolidation of perceptual sequences, regardless of the degree of difficulty. For motor sequences, the sequence learning effect significantly increased following sleep but not after waking when the sequence length was long and structural complexity was high. However, sleep-related offline improvements were absent when the structural complexity was low. These results indicated that the offline consolidation of implicit sequence knowledge based on sleep is modulated by sequence type and sequence complexity.

Keywords: sleep, implicit learning, offline consolidation, perceptual sequence, motor sequence

(4) “普通心理和实验心理专业委员会”口头报告分场 4

奖赏与惩罚在运动适应中的作用

印丛

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摘要 运动学习指人通过练习, 在运动行为表现上有所提高的过程, 是近年来认知心理学研究的热点领域之一。其中, 运动适应研究人的运动系统如何根据自身或环境变化进行快速调整; 由于其简单普遍, 因此被视作理解运动学习的基石所在。尽管关于奖赏和惩罚的研究是推动很多学科发展的前沿力量, 但在运动适应领域尚无系统研究。一些研究发现, 奖赏和惩罚在运动适应中的作用不同: 奖赏促进记忆保留, 惩罚提高学习速率。然而, 我们尚不清楚奖赏和惩罚对一种学习的影响是否会迁移到随后相同性质的学习中去。而且在以往研究中, 被试仅单纯地接受奖赏或惩罚一种强化方式, 尚不清楚奖赏与惩罚相结合的方式对运动适应的学习和记忆有何影响。因此, 本研究采用视觉运动旋转的实验范式, 试图探究奖赏、惩罚以及奖罚结合的强化方式对运动适应中学习、记忆以及迁移的影响。实验分为 7 个阶段: 基线、初始旋转学习、初始后效测量、初始冲洗、相反方向旋转学习、再冲洗、第二次旋转学习、第二次后效测量。四组被试在第 2 阶段, 即初始旋转学习阶段得到的反馈不同: 控制组仅接受视觉反馈, 奖赏组额外接受正分反馈, 惩罚组额外接受负分反

馈，奖罚结合组既可能得到正分又可能得到负分反馈。正分、负分分别对应被试费的增加或减少。实验结果发现，在初始旋转学习阶段，奖罚结合组比奖赏组学得更快，这种趋势甚至保留到了后续相反方向旋转学习阶段。然而，在第二次旋转学习中，各组学习情况却没有显著差异。将前后两次后效测量进行比较，我们发现受相反方向旋转学习的干扰，控制组、惩罚组与奖罚结合组的记忆保留有所降低；而奖赏组却没有显著变化。这样的结果表明，与单纯的奖励相比，采用奖罚结合的方式可以提高运动适应的学习速率；这种提高甚至可以迁移到相反参数的学习中去。单纯的奖赏可以促进记忆保留。这暗示了奖赏和惩罚在运动适应中作用的神经机制很有可能是不同的。

关键词 运动适应，视觉运动旋转，奖赏与惩罚，学习速率，记忆保留

The effect of reward and punishment in motor adaptation

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Abstract: Motor learning refers to improvement in the performance of motor behavior through practice, which is gaining increasing popularity in the field of cognitive psychology in recent years. As it is easily controlled in laboratory and universally experienced in our daily life, motor adaptation, investigating how human make quick adjustments in the face of altered conditions, has served as a cornerstone in understanding motor learning. Although reward and punishment-based learning has been at the forefront of advances in many disciplines, it has not been systematically studied in the field of motor adaptation. Some researchers have found that reward and punishment have dissociable effects on motor adaptation: reward increases retention of motor memory while punishment speeds up learning. However, it is not clear whether the effect of reward and punishment on one learning could transfer to the following learning. Besides, as participants receive only pure reward or punishment in previous research, it is not clear the effect of combination of reward and punishment on motor adaptation. Here, we used visuomotor rotation paradigm to explore different effects of reward, punishment and the combination of reward and punishment on learning, memory and transfer of motor adaptation. The experiment had 8 phases: baseline, initial rotation learning, initial aftereffect, initial washout, counter-rotation learning, second washout, second rotation learning, second aftereffect. We recruited four groups of participants and they differed in the feedback they received during the second phase, i.e. initial rotation learning. *Control* group received only visual feedback. Besides visual feedback, *Reward* group received positive score, *Punish* group received negative score while *RP combination* group could receive both positive and negative score according to their performance. Participants were informed that positive and negative score signify the increase and decrease of their participation fee. We found that during the initial rotation learning phase, *RP combination* group learned faster than *Reward* group. This tendency remained till following counter-rotation learning phase. However, no significant differences were detected during the second rotation learning phase. When comparing two aftereffect phases, we found the memory retention of *Control*, *Punish* and *RP combination* group decreased as the interference of the counter-rotation learning. However, the memory retention of *Reward* group remained the same. The results show that compared to pure reward, the combination of reward and punishment could enhance the learning rate of motor adaptation. Furthermore, the enhancement could be even transferred to the following learning with opposite parameter. However, only pure reward could promote memory retention. The results suggest that different neural circuit may underlie reward and punishment in motor adaptation.

Keywords: motor adaptation, visuomotor rotation, reward and punishment, learning rate, memory retention

真实且可控：基于虚拟现实的实验心理学平台

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摘要 对场景环境的控制是心理学实验的重要环节。通过计算机软件构建实验刺激并呈现在平面显示器上进行实验已经被普遍应用于实验心理学研究。然而在真实的世界中, 人们处于与三维复杂社会环境的交互中。传统的刺激呈现方式难以还原人类在三维世界中的真实反应, 我们需要一个能最大程度复刻真实环境, 并可以量化控制的呈现技术。随着影像处理和动画技术的发展, 虚拟现实因其沉浸式的体验展示出了其在社会场景研究中的巨大潜力。为了便于更多的研究者们使用这项技术, 我们在一个广泛使用的三维动画引擎 Unity3D 的基础上开发了一个实验工具包。在这个工具包中, 我们提供了 1) 包括城市街口、运动场馆在内的诸多常见社会场景, 和覆盖各年龄段、性别和体型的影视级别高精度人物模型库, 以使得研究者能够自由地搭建一个高度还原真实的虚拟实验空间; 2) 人物动画库, 包含常用的肢体动作和面部表情, 例如打招呼和惊讶, 使得复杂的社会行为能够得到良好地控制; 3) 与市面常用虚拟现实头盔和控制器的交互模块; 4) 以及一个简化实验设计和数据记录的类库, 并配备大量虚拟现实实验程序的样例, 以减少编写虚拟现实实验的时间成本。总结而言, 我们的工具包降低了研究者使用虚拟现实作为研究工具的技术门槛, 使得研究者能够轻松地创建一个真实且可控的实验环境。

关键词 虚拟现实 心理物理法 人物模型库 人物动画库

A virtual reality tool for psychophysics research

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Abstract: Stimulus manipulation and presentation is an essential part of psychological experiments. Using computer software to generate stimuli and present them on computer screens has been commonly used in experimental psychology research. However, in a real three-dimensional world, humans interact with the complex social world, which is difficult to be reproduced on a 2D computer screen. Therefore, it is necessary to build an experimental tool to reproduce the 3D environment in a psychological experiment. The development of virtual reality has demonstrated its great potential for generating close-to-real social scenes and providing an immersive experience. To facilitate the use of this technology, we have developed an experimental toolbox based on Unity3D, a widely used 3D animation engine. In this toolbox, we provide 1) a library of frequently used social scenes, including urban streets, gym, etc., and a film-level 3D human model database which is consist of models of different ages and genders, enabling researchers to easily build a highly realistic virtual experiment space; 2) a library of human animations containing body movements and facial expressions such as waving hand and being surprised, helping generate and present complex social behaviors in a virtual scene; 3) a user-friendly plugin to connect with most commonly used virtual reality head-mounted displays and controllers; 4) and a class library for factorial design as well as response recording with a number of demos and code examples. In summary, our toolbox lowers the technical barrier for researchers in the various research fields to use virtual reality as a research tool, simplifying the process of creating a realistic and controllable experimental environment.

Keywords: Virtual reality, Psychophysics, Human model database, Human animation database

面孔线索和身体线索对极端情绪识别的分离影响：来自眼动的证据

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摘要 极端情绪是指在生活中经历的极端高强度的情绪体验。以往研究主要关注中等强度情绪的表情识别, 较少关注身体姿势线索对情绪识别的影响。本研究采用行为学实验和眼动技术相结合, 采用 4 个实验, 以运动员不同强度输、赢的面部表情和身体姿势图片作为实验材料, 探究不同情绪强度 (极端 vs 中等) 下, 身体姿势对情绪识别的影响及其机制。实验 1 和实验 2 为行为学实验, 采用 2 (呈现部位: 面孔 vs 身体) × 2 (强度: 极端 vs 中等) × 2 (愉悦度: 输 vs 赢) 的被试内设计, 分别要求被试对单独呈现的面孔或身体的愉悦度 (实验 1) 和唤起度 (实验 2) 进行判断, 结果进一步验证了前人的研究, 即被试仅能通过身体姿势判断极端强度情绪的愉悦度 (输 vs 赢), 但极端强度情绪下, 面孔线索和身体姿势线索均可提供情绪唤起度的信息。实验 3 和实验 4 结合眼动技术, 实验 3 采用 2 (整体情绪强度: 极端 vs 中等) × 2 (面孔愉悦度: 输 vs 赢) × 2 (身体愉悦度: 输 vs 赢) 的被试内设计, 要求被试判断面孔与身体组合图片的愉悦度。发现被试通过身体姿势的愉悦度来判断整体情绪的愉悦度。眼动结果表明, 整体情绪强度为极端强度时, 对身体的平均注视时间更长, 该结果为通过身体线索来判断极端强度情绪的效价提供了生理学证据。而且当身体姿势为输时, 对眼睛的注视时间显著长于对嘴巴的注视时间, 为赢时则没有显著差异, 这一结果说明对身体姿势注视的增加, 改变了对于面部的注视模式。实验 4 采用 2 (整体情绪愉悦度: 输 vs 赢) × 2 (面孔强度: 极端 vs 中等) × 2 (身体强度: 极端 vs 中等) 的被试内设计, 要求被试判断面孔与身体组合图片的唤起度。结果表明, 极端强度面孔条件下的整体唤起度评分显著高于中等强度面孔条件。眼动结果表明, 在对唤起度判断的过程中, 不存在对极端强度情绪身体姿势的注视偏好。综上, 本研究结果从行为学和眼动模式两个层面进一步说明了对极端强度情绪的效价识别主要依靠身体线索。但是对极端强度情绪的唤起度识别还是主要依靠面孔线索。

关键词 极端情绪, 身体线索, 面部线索, 情绪识别, 眼动模式

The differential role of face cues and body gestures in peak emotion recognition: evidence from eye movement

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Abstract: Peak emotion refers to the apex of a highly intense emotional experience accompanied by the immediate peak expressions in response to real-life situations. Previous studies mainly focused on the recognition of normal facial expression, but less on the influence of body gestures on emotion recognition. In this study, across four experiments, we have explored the difference in emotion recognition from body and face cues between peak intensity emotion and moderate intensity emotion using behavioral measures and eye movement technique. Facial expression and body posture pictures of athletes with different intensity emotion (peak vs. moderate) were adopted as experimental materials. Experiment 1 and Experiment 2 were behavioral experiments, using a 2 (presentation part: face vs. body) × 2 (emotion intensity: peak intensity vs. moderate intensity) × 2 (valence: lose vs. win) within-subjects design. The participants were required to judge the valence (experiment 1) or arousal (experiment 2) of the face expression or body gesture presented separately. The results found that participants could judge the valence (loss vs. win) of peak emotion only from body gestures correctly, and face cues failure to provide the valence information for peak emotion recognition. However, participants could judge the arousal of peak emotion from face cues and body gestures. These results further confirmed the findings of the previous studies. Experiments 3 and 4 explored the difference of eye movement pattern in emotion recognition from face cues and body gestures between peak intensity and moderate intensity. Experiment 3 used a 2 (global intensity: peak intensity vs. moderate intensity) × 2 (facial valence: lose vs. win) × 2 (body valence: lose vs. win) within-subjects design, the participants were asked to judge the valence of the composite face-body pictures. The results showed that body gestures played a more

important role in providing valence information of peak emotion recognition than face cues. Moreover, according with behavioral results, eye movement data showed that the average percentages of fixation times for the body gestures were higher in peak intensity condition than in moderate intensity condition, providing physiological evidence for judging the valence information of peak emotion from body cues. For peak intensity emotion recognition, when the body valence was loss, the fixation times for eyes were significantly longer than the fixation times for mouth; however, when the body valence was win, there was no significant difference. These results showed that the increase of body posture fixation changed the fixation pattern of face. Experiment 4 used a 2 (global valence: lose vs win) $\times$ 2 (facial intensity: peak intensity vs medium intensity) $\times$ 2 (body intensity: peak intensity vs medium intensity) within-subjects design, the participants were asked to judge the arousal of composite face-body pictures. The results showed that face cues played the main role in providing arousal information regardless of peak intensity or moderate intensity. There was no significant difference of eye movement pattern between face cues and body gestures for arousal judgement of peak emotion. In summary, the present study combined behavioral measures with eye movement technique, providing both behavioral and physiological evidences for the important role of body gestures in peak emotion recognition. These results demonstrated that the valence judgement of peak emotions mainly depends on body cues, while the arousal judgement of peak emotions mainly depends on face cues.

Keywords: peak emotion, body gesture cues, face cues, emotion recognition, eye movement pattern

小容量集合面孔吸引力的平均表征

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摘要 以往研究发现集合的吸引力评分要显著高于集合成员的评分的平均值, 即集合吸引力高评现象。研究者提出整合集合成员合成平均面孔是集合吸引力高评的原因。但这种高评现象多出现于较大的集合中, 而在小容量集合中则不容易出现高评现象。这存在两种可能: 一是小集合面孔没有形成平均面孔, 二是小集合面孔中个体表征突显, 虽然形成了平均面孔但受到了个体表征的干扰。为了阐明其原因, 本研究采用吸引力评价任务并操纵集合加工时间, 通过两个实验来阐明小容量集合面孔的平均表征机制。在吸引力评价任务中, 要求被试对集合刺激的吸引力、集合合成的平均面孔以及集合中的每一张个体面孔进行评分。每个实验中都包含两种类型的集合: 一种是所有的集合成员都是原始面孔, 没有平均面孔; 另一种方法是将一张由集合中其他原始面孔合成而来的平均面孔也包含在集合中。研究结果发现, 小容量集合中也能够形成平均表征, 平均表征是通过形成平均刺激的表征来产生的, 且吸引力不出现高评现象是由于平均刺激受到了干扰。当认知资源不足时, 个体的精确表征不再凸显, 平均面孔受到干扰减小, 高评现象重新出现。

关键词 平均表征、面孔吸引力、平均面孔、小容量集合

Average representation of face attractiveness in small group size

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Abstract: Previous studies found that group attractiveness scores higher than average value of group members' characteristic values, that is group attractiveness effect. The researchers suggest that an average face morphed by integrating members is responsible for group attractiveness effect. However, the group attractiveness effect mostly appears in the large group but rarely in the small group. There are two possibilities: 1) the average face is not morphed in small group, 2) although an average face was morphed in small group, it is disturbed by salient individual face representations. The present study used the scoring paradigm and manipulated processing time to clarify the mechanism of average representation of face attractiveness in small group size through two experiments. In the scoring paradigm, participants were asked to rate the attractiveness of group stimuli, the average face created from the group, and each face of the group in isolated manner. There were two kinds of groups in each experiment: one is that all group members are original faces, without the average face; The other is an average face morphed from other

original faces was included in the group. The results show that small group can generate average representation by morphing an average face; Group attractiveness effect didn't appear in small group because the average face was disturbed; The lack of cognitive resources results in the weakened salient individual face representations in small group so that the average face is less likely to be disturbed and the group attractiveness effect could reappear.

Keywords: average representation, face attractiveness, average face, small group size

自身运动方向感知偏向于光流中静止的物体

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摘要 先前研究证明观察者可以使用光流对我们自身运动方向进行准确的感知，且光流中独立运动的物体会对自身运动方向感知产生影响。然而，光流中静止的物体是否对自身运动方向感知产生影响并不清楚。换言之，观察者把光流中静止的物体看作是光流的一部分，还是作为一个额外的信息并使用该信息对自身运动方向进行感知并不明确。为回答上述问题，我们设计了4个实验。在实验1中，光流刺激模拟观察者在由200个点组成的地面上平移。在2/3试次中，一个柱子放置在光流地面上，且在刺激一半呈现时间时，柱子在自身运动方向左侧或右侧4°或8°的位置。在每个试次中，光流刺激持续500ms，其自身运动方向从步长为4°的[-28°, 28°]区间中随机选择。0°为屏幕中心。被试通过移动鼠标控制的探针来报告他们感知的方向。结果表明，与光流刺激中无柱子时的感知方向相比，当光流刺激中的柱子位于自身运动方向右侧时，感知方向明显偏右；反之亦然。结果说明光流中的静止物体会影响自身运动方向感知。实验2通过保持柱子在屏幕上的高度不变让柱子的运动轨迹不符合光流规律。实验3在实验2的基础上，柱子由四条线和四个点组成。该方法明显降低了柱子的凸显性，同时让观察者无法将柱子视为点高密度的区域。结果与实验1相同，说明观察者没有将静止物体作为光流的一部分。实验4呈现三类刺激：纯光流（无柱子）、纯柱子以及同时包含柱子和光流的刺激。此外，光流中点的数量也从20、100和500中随机选择。结果表明，当光流中不含柱子时，方向误差-感知方向减真实方向之间-随着点数量的增加而减小；相比之下，当柱子添加到光流中时，点数量对误差的影响就消失了。该结果表明，当静止物体处于光流中时，光流只需含有少数几个点就可以让观察者准确地感知自身运动的方向。综上所述，本研究首次发现观察者并没有将光流中的静止物体作为光流的一部分，而是将静止物体作为单独的信息对自身运动方向进行判断。同时，静止物体可以减少航向感知对光流强度的依赖。

关键词 自身运动方向感知，光流，静止物体

Static object in optic flow biases the heading perception

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Abstract: Previous studies have demonstrated that observers can use optic flow to accurately perceive their instantaneous self-motion direction (i.e., heading), and the extra object or biological motion in the optic flow can affect the heading perception. However, there was no study to investigate whether the individual static object in the world affects the heading perception. Or in other words, when the display of optic flow contains an extra static object, observers take the object as a part of optic flow or as extra information that affects our heading perception. We, therefore, conducted four experiments to examine the effects of the static object in the optic flow on heading perception. In Experiment 1, the display (80°×80°) simulated observers translating (4 m/s) on a dot-ground consisting of 200 dots. Some displays contained an extra pole (height: 1 m) that was placed on the dot-ground and left or right to the heading direction by 4° or 8° at half of the display presentation time. On 500-ms each trial, heading direction was randomly chosen from -28° to 28° with respect to the display center (0°) in steps of 4°. 0° was not included. Participants reported their perceived heading by moving a mouse-controlled probe. The results showed that compared with the display without the pole, the perceived heading was more rightward biased as the pole was right to the actual heading; vice versa, suggesting that static object in optic flow affects heading perception. In Experiments 2, we kept the height of the pole on the screen constant to remove the deformation of the pole so that the motion trajectories of

the edge of the pole were not consistent with the rule of optic flow; in Experiment 3, we constructed a pole with four dots connected by four lines. The new pole reduced the luminance of the pole and prevented observers from taking the pole as an area with huge dots. The result patterns were the same as Experiment 1, suggesting that the observers do not take the static object as a part of optic flow. Experiment 4 showed participants pure optic flow (i.e., the pole was not presented), pure pole, and the display containing both pole and dots. Additionally, the dot number of optic flow was varied (e.g., 20, 100, and 500 dots). The results showed that the heading error – the difference between perceived heading and actual heading – decreased with the increase of dot number as the display did not contain a pole; by contrast, when a pole was added to the dot-ground, the effects of dot number disappeared. The results suggest that when a static object is in the optic flow, optic flow with few dots is enough to be used to perceive heading accurately. To sum up, the current study first revealed that observers do not take the static object as a part of optic flow and bias their heading perception towards the static object in the optic flow. The static object can reduce the reliance of heading perception on the intensity of optic flow.

Keywords: Heading perception, Optic flow, Static object

自身运动方向分布对基于光流的自身运动方向感知的影响

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摘要 在绝大多数基于光流的自身运动方向感知研究中, 呈现的自身运动方向是均匀分布的, 且刺激分布的中心与身体正前方重合。因而, 当自身运动方向分布不再是均匀分布时, 或刺激分布的中心与身体正前方分离时, 自身运动方向的感知是否发生改变并明确。为回答该问题, 我们设计了 5 个实验。实验 1 和 2 中, 光流刺激模拟被试在一个 3D 点阵空间中平移。每次试验, 光流刺激呈现 500ms, 其自身运动的方向从步长为 6°的[-33°, 33°]的区间中随机选择。0°为身体正前方。被试通过移动鼠标控制的探针来报告感知的方向。其中, 自身运动方向可能是均匀分布, 即不同方向呈现的试次数相同; 也可能是 U 形 (实验 1) 或 V 形 (实验 2) 分布, 即试次数随着方向值得增大而增加。结果发现, 与均匀分布相比, U 形和 V 形分布下的自身运动方向更加被低估。实验 3 中, 光流刺激可能是均匀分布, 也可能是右偏分布。在右偏分布中, 身体正前方右侧的自身运动方向试次数明显多于身体正前方左侧的自身运动方向试次数, 且分布的中心位于身体正前方的右侧。结果发现, 右侧自身运动方向在右偏分布中明显比在均匀分布中被低估; 但左侧自身运动方向在右偏分布中低估程度比均匀分布中小。甚至当 50% 的点被随机点取代时, 该结果也被重复出来 (实验 4)。实验 5 中, 两个分布均为均匀分布。但其中的一个分布中自身运动方向关于身体正前方对称; 在另一个分布中自身运动方向均在身体正前方的右侧, 因而分布中心位于身体正前方的右侧。结果发现, 两个分布中, 右侧自身运动方向的报告值差异不显著。综上所述, 本研究发现观察者可以习得自身运动方向的分布, 并用该分布来调整自身运动方向的感知。该研究表明视觉系统中可能存在着一个对自身运动方向的全局表征, 该表征与身体正前方和新习得的自身运动方向分布交互影响我们自身运动方向的判断。同时, 该研究也说明基于光流的自身运动方向感知与 anti-Bayesian 解释一致, 而非 Bayesian 解释。

关键词 自身运动方向感知, 光流, 中心偏向, 内部编码, 先前经验

Effects of heading distribution on heading perception from optic flow

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Abstract: Previous studies have revealed that the perception of self-motion direction (i.e., heading) from optic flow was biased toward the straight-ahead direction. However, in most of these studies, the headings were uniformly distributed; and the distribution center coincided with the straight-ahead direction, resulting in the effects of the heading distribution on heading perception remained unclear. Specifically, did the perceived heading change if the headings were not uniformly distributed or the distribution center was biased from straight ahead? We conducted four experiments to answer the question. In Experiments 1 and 2, the display (80°×80°) simulated observers translating in

a 3D dot-cloud consisting of 175 dots. On each 500-ms trial, the heading direction was randomly selected from -33° to 33° relative to the straight-ahead direction (0°) with steps of 6° . Participants moved a mouse-controlled probe to indicate their perceived heading on two heading distributions: (1) uniform distribution in which the trial numbers of all headings were the same; (2) U-shape (Experiment 1) or V-shape (Experiment 2) distribution in which the trial number increased with the increase of heading. The distribution centers coincided with the straight-ahead direction in these distributions. The results showed that compared with the uniform distribution, the headings were more underestimated in U-shape and V-shape distributions, suggesting that observers can learn the heading distribution and use it to modulate heading perception from optic flow. Experiment 3 contained a right-heavied distribution and a uniform distribution. In the right-heavied distribution, the trial numbers of headings right to the straight-ahead direction were more than that of headings left to the straight-ahead direction; and the distribution center was right to the straight-ahead direction. The results showed that the mean perceived heading was left to the straight-ahead direction and biased away from the distribution center in the right-heavied distribution. The heading underestimation was more increased for the right-side headings in the right-heavied distribution than the uniform distribution, but the underestimation of the left-side headings was decreased in the right-heavied distribution. The results were reproduced when 50% of the dots were replaced with random noise dots (Experiment 4). The results again suggest that observers can learn the heading distribution and use it to modulate the heading perception. In Experiment 5, two uniform distributions were presented. However, in one uniform distribution, the headings were symmetric about the straight-ahead direction (0°), so the distribution center coincided with the straight-ahead direction. In another uniform distribution, the headings were all right to the display center in one uniform distribution, so the distribution center was right to the straight-ahead. The results showed that the perceived headings of the right-side headings were not significantly different between the two uniform distributions, suggesting that heading perception from optic flow was not biased toward the distribution center. To summarize, the current study revealed that observers could learn the recent distribution of headings, and the heading distribution had effects on the heading perception. Specifically, the perceived heading was more biased towards the straight-ahead direction as the headings took more proportion in the heading distribution. However, the bias decreased as the heading took little proportion in the heading perception. The study implies that our visual system contains a global representation of headings that interacts with our recent experienced heading distribution and the straight-ahead direction to affect our heading perception. The study might suggest the heading perception is consistent with an anti-Bayesian account rather than a Bayesian account.

Keywords: Heading perception, Optic flow, Center bias, Internal encoding, Recent experience

(5) “普通心理和实验心理专业委员会”口头报告分场 5

数字距离和节奏信息对数字预测任务的影响

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摘要 很多研究探究了物理空间内的预测运动任务, 例如碰撞时间估计任务 (time to collisions tasks), 拦截任务 (interceptive tasks), 相对到达时间任务 (relative arrival time tasks) 等。从不同的维度探究该任务有利于研究者更加清楚的了解其心理加工机制。本研究使用数字预测任务范式探究数字距离和节奏对该任务的影响。数字预测范式是指被试判断一个数字按照恒定的变化速率何时能增加或减少到某一目标数字。本研究设计 3 个行为实验: 实验一探究在没有节奏信息情况下数字距离对数字预测运动的影响, 结果发现被试在数字距离大的条件下绩效显著高于数字距离小的条件。实验二探究在有节奏信息条件下数字距离对数字预测任务的影响, 结果发现当存在节奏信息时被试在数字距离大的条件下绩效也显著高于数字距离条件小的条件。另外, 本研究对比了实验一和实验二的结果, 发现存在节奏信息能显著提高被试的数字预测任务的结果。实

验三探究了在不规则节奏信息（即随机呈现起始数字和转换数字之间的数字）条件下数字距离对数字预测任务的影响，结果显示当随机呈现数字信息时被试在数字距离小的条件下任务绩效显著低于数字距离大的条件。此外，本研究对比了实验一和实验三的结果，发现在小数字距离条件下，被试在无节奏信息和不规则节奏信息条件下的差异不显著；在大数字距离条件下，被试在无节奏信息条件下的任务绩效显著高于在不规则节奏信息条件下的绩效。因此本研究得出，节奏信息可以提高数字估计的任务绩效；而不规则的节奏信息能够破坏个体利用数字距离线索进行时间估计，进而降低其任务绩效。

关键词 数字预测任务，数字距离，节奏

The Influence of Number Distance and Rhythms Cues on Number Prediction Motion

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Abstract: Lots of research focused on prediction motion (PM) in physical space, such as time to collision tasks, interceptive tasks or relative arrival time tasks. Exploring PM tasks from different dimensions is helpful for researchers to better understand its cognitive mechanism. This research explored the impact of number distance and rhythm on number PM task. Number PM task is that people judge when a number increase or reduce to a target number in a constant change rate. We designed three experiments: in Experiment 1, we explored the role of number distance in number PM task without rhythm cues. The results indicated that participants performed better in big number distance condition than in small number distance. We tested the impact of number distance and regular rhythm cue on number PM task in Experiment 2. The results showed that participants also performed better in big number distance condition than in small number distance. In addition, we compared the results of Experiment 1 and Experiment 2, which demonstrated that the performance was always better when there were regular rhythm cues. We tested the influence of number distance on number PM task in the irregular rhythm cues condition. The results showed that the performance was better in big number distance condition relative to small number condition. Furthermore, we compared the results of Experiment 1 and Experiment 3, which indicated that, in small number distance condition, the difference of performance was not significant between no rhythm cue and irregular cue. Participants performed better in no rhythm cue condition relative irregular rhythm cue condition when the number distance was big. Therefore, we conclude that the rhythm information can improve the performance of number distance. However, the irregular rhythm information can degrade the role of number distance, and further reduces the performance of number PM task.

Keywords: Number prediction, Number distance, Rhythm

长时训练减少声音诱发闪光错觉的反应

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摘要 声音诱发闪光错觉(sound-induced flash illusion, SiFI)是一种以听觉信息为主导加工的多感觉整合现象，表现为当视觉闪光伴随不相等数量的听觉声音在 100 ms 内相继或同时呈现时，个体会错觉性地知觉到视觉闪光的个数与听觉声音的数量相等（即产生裂变错觉或融合错觉）。虽然以往的研究表明，SiFI 效应产生的原因之一是个体知觉敏感性较低，但尚未有研究关注长时训练造成的知觉敏感性变化对 SiFI 的影响。本研究采用经典的 SiFI 范式与反馈训练相结合，考察 7 天的长时训练对 SiFI 的错觉量与反应时的影响。研究要求训练组被试完成为期 9 天的行为任务，其中第 1 天与第 9 天分别为前后测，中间 7 天为训练阶段，被试在训练阶段完成的 SiFI 任务给予正确与否的反馈。同时，研究要求控制组被试只需要在第 1 天与第 9 天分别进行一次前测与后测。实验结果发现：(1)与控制组相比，训练组的裂变错觉与融合错觉的错觉量显著减小，反应也

更快，且训练对于裂变错觉的影响要大于融合错觉；(2) SiFI 的错觉量在训练过程中存在“高原现象”，即当反馈训练进行到第 5 天时，被试的训练效果达到稳定。研究表明，基于长时程的训练可以显著提高个体的知觉敏感性，进而减小 SiFI 的错觉量。本研究补充了 SiFI 领域的知觉训练研究，并进一步提供证据表明 SiFI 可以作为一个测量工具去提高多感觉整合的效率。

关键词 声音诱发闪光错觉，知觉敏感性，长时训练，多感觉整合

Long-term Training Reduces the Responses to the Sound-induced Flash Illusion

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Abstract: Sound-induced flash illusion (SiFI) is an auditory-dominated multisensory integration phenomenon in which visual flashes presented with an unequal number of auditory beeps are illusorily perceived as equal in number to the auditory beeps. Although the SiFI has been documented to correlate with perceptual sensitivity, to date there is no consensus as to how it corresponds to sensitivity with long-term training. The present study adopted the classic SiFI paradigm with feedback training to investigate the effect of a week of long-term training on the SiFI effect. By asking the participants in the training group to complete a 9-day behavioral task, in which the first day and the ninth day were the pretest and posttest respectively, and the middle seven days were the feedback training stage. The participants were given feedback (e.g., correct or wrong) on the SiFI in the training stage. Both the training group and control group completed a pretest and a posttest before and after the perceptual training; however, only the training group was required to complete seven-day behavioral training. The results showed that: (1) long-term training could reduce the response of fission and fusion illusions by improving perceptual sensitivity, and the improvement of training effect on fission illusion was greater than fusion illusion; (2) there was a “plateau effect” that emerged during the training stage, which tended to stabilize by the fifth day. These findings demonstrated that the SiFI effect could be modified with long-term training by ameliorating perceptual sensitivity, especially in terms of the fission illusion. Therefore, the present study supplements perceptual training in SiFI domains and provides evidence that the SiFI could be used as an assessment intervention to improve the efficiency of multisensory integration.

Keywords: Sound-induced flash illusion, Perceptual sensitivity, Long-term training, Multisensory integration

额区 Theta 波对认知疲劳的调控作用

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摘要 认知疲劳是指随着执行任务时间的延长，个体的认知表现，如注意、记忆等持续下降的现象。前额 theta 波（4-8 Hz）是衡量认知疲劳最为稳定的脑电频段之一，但在认知疲劳的不同阶段中，theta 能量与行为表现之间的关系目前尚不明确。本研究拟通过 1 小时的精神运动警觉性任务（PVT）诱发认知疲劳，并将 1 小时的任务划分为三个相等的时间段（T1：0-20min，T2：20-40min，T3：40-60min）以探索认知疲劳随着执行任务时间延长的发展进程，以及在认知疲劳的不同阶段中，脑电功能与行为表现之间的关联是否存在差异。结果表明，随着任务时间的延长，个体在 PVT 任务中的表现持续下降，T3 阶段反应时显著长于 T2 阶段，T2 阶段反应时显著长于 T1 阶段。时频分析的结果表明，刺激呈现后 200-450ms 之间，额区（Fz，Fp1，Fp2）和双侧顶枕区（左侧：PO7，PO3，O1；右侧：PO8，PO4，O2）的 theta 波能量随着任务时间的延长下降。前额 theta 波活动反映了个体的认知努力的水平，theta 波能量下降，反映出个体的认知努力减少。然而，单试次回归分析的结果仅发现额区的 theta 波与行为表现之间的关系随着任务时间的延长发生改变，额区 theta 波对反应时的回归系数在任务初始阶段（T1：0-20min）显著高于任务后期阶段（T3：40-60min），即随着任务时间的延长，额区 theta 波能量对个体行为表现的影响下降，这可能表明随着认知疲劳程度的增加，个体认知努

力减少,对行为的调控能力下降。综合上述结果,本研究发现,认知疲劳的程度随着任务时间的延长而加剧,并且在认知疲劳程度加剧的过程中,额区的 theta 波能量降低,且与行为表现之间的关联程度下降,从而表明额区 theta 波能量在执行长时间的认知任务过程中,对认知行为表现具有重要的调控意义。

关键词 theta 波, 认知疲劳, 额区调控

The regulation role of frontal theta on cognitive fatigue

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Abstract: Cognitive fatigue can be defined as cognitive function decline induced by prolonged task performance. The frontal theta activity (4-8 Hz) is one of the most stable EEG frequency bands to measure cognitive fatigue. However, the relationship between theta activity and behavioral performance in different stages of cognitive fatigue remains unclear. We examined the developmental course of cognitive fatigue using a prolonged psychomotor vigilance task. In this study, we segmented the 1-hour task into three 20 min time block (T1:0-20min, T2:20-40min, T3:40-60min) to explore the correlation between theta activity and behavioral performance during different stages of cognitive fatigue. The results showed that with the prolong of the task, the performance in the PVT task continued to decline. The response time during phase T3 was significantly longer than that during T2, and the response time during T2 was significantly longer than that during T1. Time-frequency analysis found that after stimulus presentation, the frontal area (Fz, Fp1, Fp2) and bilateral occipital area (Left: PO7, PO3, O1; Right: PO8, PO4, O2), the theta activity decreases over time. The frontal theta activity reflects the level of cognitive effort, and the theta activity decline reflects the decrease of cognitive effort over time. However, the results of single-trial regression analysis found that only frontal theta change was related to the behavior change during the prolonged task. The regression coefficient of theta wave in the frontal region was significantly higher during the first time block(T1:0-20min) than the third time block (T3:0-20min). The influence of frontal theta activity behavioral performance decreased over the task time, which may indicate that with cognitive fatigue increasing, participants reduced the cognitive effort to regulate the behavior performance. To sum up, the present study found that cognitive fatigue increased over the task time, and the frontal theta activity decreased. Meanwhile, the correlation between frontal theta activity and behavioral performance decreased over time. The current findings indicated that frontal theta activity played an important role in regulated cognitive performance during the prolonged cognitive task.

Keywords: Theta activity, Cognitive fatigue, Frontal region regulation

分类决策过程中跨通道信息整合的动态过程

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摘要 为了优化行为表现,大脑会整合来自不同感官的信息。先前研究表明,多感官环境会促进或干扰分类表现,跨通道信息整合可能有重要影响但其机制尚不清楚。目前,知觉决策领域备受重视的两个理论是信息整合发生在早期信息编码阶段或晚期决策选择阶段,本研究借助脑电设备(EEG)、线性判别分析(LDA)及前馈模型探究跨通道信息整合的时间动态机制。39名被试佩戴128导脑电设备分别完成无干扰、视觉干扰、听觉干扰的视觉分类任务和听觉分类任务。行为表现显示:(1)视觉和听觉无关信息会对视觉分类有显著的促进作用;(2)视觉无关信息会促进,而听觉无关信息会干扰听觉分类表现。脑电数据显示:(1)视觉分类过程中,对听觉无关信息的整合发生在早期信息编码阶段,而视觉无关信息整合发生在晚期决策选择阶段,这可能与通道属性有关;(2)听觉分类时无关信息的通道效应没有体现在神经活动上。综合来看,这些结果证实了视觉和听觉无关信息会对视觉和听觉分类任务产生不同的影响,会分别体现在神经活动和行为表现层

面。这些结果也强调了跨通道信息整合可能发生在早期信息编码阶段，也可能发生在晚期决策选择阶段，揭示了分类决策过程中跨通道信息整合的动态过程。

关键词 分类决策，多感官整合，线性判别分析(Linear Discrimination Analysis, LDA)，信息积累

The Dynamic Process of Multisensory Integration in the Categorization Decision Making

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Abstract: To optimize behavioral performance, our brain combines information from different senses. Previous research showed that categorization behavioral responses could be either facilitated or interfered with by the multisensory context. However, how the brain integrates multisensory task-relevant or -irrelevant information during categorization is still unclear. A developing view is that the impact on either the early information encoding, or the post-sensory processing efficacy could be plausible. Here, a Task (Visual Categorization vs. Auditory Categorization) × Distractor Modality (visual vs. auditory) within-subject design was conducted with electroencephalogram (EEG), in which participants were required to finish both tasks under baseline, visual distractor, and auditory distractor context. With higher accuracy or faster response defined as facilitation effect and lower accuracy and slower response defined as interference effect, compared with baseline condition, the behavioral results showed that (1) distractors have a significant facilitation effect on visual categorization; (2) the effect of the distractor on auditory categorization is modulated by its modality, that is visual distractors could facilitate performance, while auditory distractors could interfere with it. To explain the effect on the behavior, the multivariate pattern analysis of EEG data showed that it is primarily the early-sensory, EEG component amplitudes of visual categorization representation are amplified by the auditory distractor, whereas it is the late-decision impacted by the visual distractor. Overall, these findings suggested that visual and auditory task-irrelevant information has different effects in both Visual and Auditory Categorization Task, reflecting on the neural and behavioral level respectively. Information integration could occur both during sensory encoding and decision formulation, revealing a dynamic interplay between multisensory integration and categorization decision making.

Keywords: categorization, multisensory integration, linear discrimination analysis (LDA), evidence accumulation

例外存在时呈现顺序对基于规则和信息整合类别学习的影响

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摘要 以往研究发现，交错呈现不同类别刺激（交错呈现）比连续呈现相同类别刺激（集中呈现）更有利于类别学习，因为交错呈现增强了不同类别刺激间的区别对比。Noh 等人（2016）在类别学习双系统框架下，采用四类别学习任务探索呈现顺序对基于规则和信息整合类别学习的影响，结果发现集中呈现有利于基于规则的类别学习，交错呈现有利于信息整合的类别学习。因为在交错呈现条件下，学习者需同时生成四个类别的检验规则，对工作记忆产生负担，不利于基于规则的类别学习。相反，交错呈现鼓励学习者放弃基于规则的次优策略，快速转换到信息整合的程序性系统，因此有利于信息整合的类别学习。现实生活中，人们并不能根据某个或多个特征组合完美地区分一些类别，总会存在一些例外。为了更贴合实际，本研究在 Noh 等人（2016）的实验基础上，修改了相应的类别结构，增加了一些例外刺激，使被试根据两个维度进行分类的最大正确率为 95%，并且增加基线条件（随机呈现），进一步考察在例外情境下呈现顺序对基于规则和信息整合类别学习的影响。对测试阶段的正确率进行 3（呈现方式：交错、集中、随机）× 2（类别结构：基于规则、

信息整合)的完全随机方差分析。结果发现:在基于规则条件下,集中呈现的分类正确率显著低于交错呈现和随机呈现的分类正确率,但交错呈现和随机呈现的分类正确率没有显著差异。在信息整合条件下,集中呈现、交错呈现和随机呈现的分类正确率没有显著差异。上述结果表明,在例外情境下,集中呈现不利于基于规则的类别学习,而呈现顺序不会影响信息整合的类别学习。本研究认为,在基于规则的任务中,例外的存在干扰学习者在集中呈现条件下为每个类别形成的相应规则,损害程度大于交错呈现条件下增加工作记忆负担造成的损害。在信息整合的任务中,虽然交错呈现条件鼓励学习者快速放弃基于规则的次优策略,但例外的存在干扰学习者形成刺激—反应联结,因此没有出现交错呈现优势。本研究也进一步验证了类别学习双系统理论。

关键词 类别学习,例外,交错呈现,集中呈现,类别学习双系统理论

The Effect of Presentation Order on Rule-based and Information Integration Category Learning in the Presence of Exceptions

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Abstract: Previous studies have found that interleaved presentation of different categories of stimuli is more conducive to category learning than blocked presentation of the same category of stimuli, this is because the interleaved presentation enhances the contrast between different categories. Noh et al. (2016) used a four-category learning task to explore the impact of presentation order on category learning based on rules and information integration under the framework of category learning dual systems, and found that blocked presentation is beneficial to rule-based category learning, and interleaved presentation is beneficial to information integrated category learning. Under the condition of interleaved presentation, learners need to generate test rules of four categories at the same time, which will burden working memory and is not conducive to rule-based category learning. On the contrary, interleaved presentation encourages learners to abandon rule-based strategies which are sub-optimal and quickly switch to a procedural system of information integration, thus facilitating category learning of information integration. In real life, people cannot perfectly distinguish certain categories based on one or more combination of characteristics, and there will always be some exceptions. In order to be more realistic, this study modified the corresponding category structure on the basis of the experiment of Noh et al. (2016), and added some exceptional stimuli, so that the maximum accuracy rate of the subjects' classification according to the two dimensions was 95%. We also added baseline condition (random presentation) to further examine the impact of presentation order on rule-based and information integration category learning in the presence of exceptions. Perform a completely random variance analysis of 3 (presentation mode: interleaved, blocked, random) x 2 (category structure: rule-based, information integration) for the correct rate of the test phase. The results found that: under rule-based condition, the classification accuracy rate of blocked presentation was significantly lower than that of interleaved presentation and random presentation, but there was no significant difference between the classification accuracy rates of interleaved presentation and random presentation. Under the condition of information integration, there was no significant difference in the classification accuracy of blocked presentation, interleaved presentation and random presentation. The above results show that in exceptional situation, blocked presentation is not conducive to rule-based category learning, and the presentation order does not affect category learning of information integration. This study believes that in rule-based task, the existence of exceptions interferes with the corresponding rules formed by learners for each category under the condition of blocked presentation, and the damage is greater than the damage caused by increasing the burden of working memory under the condition of interleaved presentation. In the task of information integration, although the interleaved presentation condition encourages learners to quickly abandon the rule-based sub-optimal strategy, exceptions interfere with the learner's formation of stimulus-response connections, so there is no advantage of interleaved presentation. This research also further validates the dual system theory of category learning.

Keywords: Category learning, Exception, Interleaved presentation, Blocked presentation, Dual system theory of category learning

4.5 工业心理学专业委员会

(1) “工业心理学专业委员会” 口头报告分场 1

教练型领导对团队效能的影响：跨水平中介效应模型

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摘 要 基于团队过程理论探讨了教练型领导对团队效能的影响，以及团队学习和自我效能感在其中的作用。选取 77 个软件开发团队共 419 名员工数据，跨层次结构方程(Multilevel SEM)分析结果如下：(1)教练型领导行为对团队绩效和成员满意度有显著的正向影响作用，对团队学习和成员自我效能感也有显著的正向影响作用；(2)团队学习对团队绩效和成员满意度具有显著的正向影响，并在教练型领导和团队绩效，以及成员满意度之间起中介作用；(3)成员自我效能感对成员满意度具有显著正向影响作用，并在教练型领导和成员满意度之间起中介作用。本研究结果有助于理解教练型领导对团队绩效的多水平组织理论模型，并能够有效指导变革和团队管理实践。

关键词 教练型领导，自我效能感，团队效能，多水平组织理论

The Coaching Leadership Effect on Team Effectiveness: Multi-level Mediating Effect Model

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Abstract: Based on the Input-Mediator-Output-Input (IMOI) theory, this study proposed a cross-level mediated model that discussed the influence of coaching leadership on team effectiveness. Through online anonymous surveys, this study collected data from more than 419 employees in 77 software development teams across the country, and constructed our MSEM with coaching leadership behaviors. Team learning, and team effectiveness at Level 1, and member satisfaction and self-efficacy at Level 2. The main results showed that: (1) Coaching leadership behavior had a significant positive impact on team performance ($r = 0.310, p < 0.05$) and member satisfaction ($r = 0.48, p < 0.001$); and it also had a positive influence on team learning ($r = 0.842, p < 0.001$) and member self-efficacy ($r = 0.299, p < 0.01$); (2) Team learning has a significant positive impact on team performance ($r = 0.401, p < 0.05$) and member satisfaction ($r = 0.48, p < 0.001$), and it plays a mediating role between coaching leadership and team performance ($r = 0.337, p < 0.05$, LLCI = 0.033, ULCI = 0.658), as well as member satisfaction ($r = 0.40, p < 0.001$, LLCI = 0.228, ULCI = 0.593); (3) Self-efficacy has significant positive effect on member satisfaction ($r = 0.41, p < 0.001$), and it plays a mediating role between coaching leadership and member satisfaction ($r = 0.12, p < 0.01$, LLCI = 0.053, ULCI = 0.198). The results of this study help to understand the multi-level organizational theoretical model of coaching leadership on team performance and can effectively guide change and team management practices.

Keywords: Coaching leadership; self-efficacy; team effectiveness; multi-level organizational theory

领导特质情感呈现对员工安全绩效的影响：工作投入的中介作用

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摘要 在全球范围内，工作场所的伤害和事故一直是严重的问题，安全生产不容乐观。面对安全生产的严峻形式，如何降低生产事故的发生、提高员工的安全绩效是理论界和实践界共同关注的焦点之一。而领导作为工作中的重要角色，对员工的工作态度与行为有着极为重要的影响。因此，本研究从领导的角度出发，探究领导特质情感呈现通过影响员工工作投入对员工安全绩效的作用机制。新近提出的领导特质情感呈现这个构念（即，领导与下属互动过程中引起员工相似情感感受的倾向，包括积极情感呈现与消极情感呈现两个维度），会从个体和团队两个过程影响下属的工作投入。其中，领导积极情感呈现一方面能够引发员工个体的积极情感，进而扩展个体的注意、认知和行动的范围，使员工产生更高水平的工作投入；另一方面，在团队中，领导积极情感呈现引发的相似的积极情感会自下而上地聚合形成情感氛围，在这种积极情感氛围下，下属会更加认同团队的工作目标并产生高水平的工作投入。然而，领导消极情感呈现所引发的员工消极情感与团队消极情感氛围则会对下属的工作投入产生阻碍作用。同时，工作投入作为一种积极的工作状态，当工作投入较高时，员工会迅速有效地进入工作状态，并在生产活动中更加关注自身的安全，因此更容易表现出安全遵守和安全参与行为。本研究采用问卷调查法，收集了来自核电企业的67个团队的467名一线员工与其直接领导（67名）的数据。其中，领导特质情感呈现和工作投入来自员工评价，安全遵守和安全参与来自领导评价。运用多层中介模型对数据进行统计分析，结果显示，工作投入中介了领导积极和消极特质情感呈现对员工安全遵守与安全参与的影响，支持了研究假设。本研究有如下两方面贡献：（1）本研究首次将领导特质情感呈现这一概念引入安全领域，同时为解释员工安全绩效的作用机制提供了全新的视角；（2）在管理实践中，企业在选用、考察和培训中关注领导情感呈现这一特质，也有助于提升员工的工作投入与安全绩效。

关键词 领导特质情感呈现，工作投入，安全遵守，安全参与

The influence of leader trait affective presence on employee safety performance: the mediating role of work engagement

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Abstract: Injuries and accidents in the workplace have always been a serious issue worldwide. Facing the severe form of occupational safety, how to reduce the occurrence of accidents and improve the safety performance has been one of the key issues in academia and business. In addition, leadership as an important role in work also has an extremely important influence on employees' attitudes and behaviors. This research explores the mechanism of leader trait affective presence on employees' safety performance through the mediating role of work engagement. Leader trait affective presence—the tendency of leaders to make their interaction employees feel similarly positive or negative, will influence followers' work engagement through both individual and group affective processes. Leader positive affective presence can elicit followers' positive affect during the interactions which helps employees develop themselves further, broaden thought-action repertoires and produce higher levels of work engagement on the one hand. On the other hand, employees tend to identify with team goals more strongly and better engage at work under the positive affective climate in groups which are engendered attributed to the elicitation of the similar positive feelings among team members. However, employees' negative affect and the group negative affective climate caused by leader negative affective presence will hinder work engagement. When the work engagement is high, employees will efficiently immerse in the tasks and pay more attention to their own safety behaviors in production activities. So, it is easier to show safety compliance and safety participation. In this study, we investigated 467 employees and their

direct supervisors (67) from 67 groups in a nuclear power company. Leader trait affective presence and work engagement were evaluated by employees. Safety compliance and safety participation were evaluated by their supervisors. Multilevel Mediation model was conducted to test the hypotheses. Results show that the effect of leader positive and negative affective presence on employees' safety performance is mediated by work engagement, which supports hypotheses of our study. There are mainly two contributions in this study: (1) The introduction of leader affective presence extends the existing theories in the field of occupational safety, which provides a new perspective to explain the effect of leaders' traits on employees' safety performance; (2) In practical term, companies could pay more attention to leader affective presence during selection or inspection, which also helps to improve employees' work engagement and safety performance.

Keywords: leader trait affective presence, work engagement, safety compliance, safety participation

德才兼备：领导正直与能力对员工不同沉默行为的影响

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摘要 尽管有学者开始关注领导正直对员工沉默行为的影响, 但领导正直与领导能力如何交互影响不同类型的员工沉默的问题, 尚未有研究予以解答。同时, “德才兼备”的领导类型, 虽然在实践中受到推崇, 但是其管理效果却缺乏学术支持。为解决这些问题, 基于信任研究模型(Burke et al., 2007), 本文探索了领导行为正直与领导能力感知对于默许型、防御型及亲社会型沉默的交互效应, 并揭示了领导信任的中介作用。基于之前的研究, 我们提出了一个被中介的调节模型, 认为领导的行为正直与能力感知将交互影响员工对领导的信任, 进而差异化地影响员工的沉默行为。具体来说, 我们预测对领导的信任将会积极影响员工的亲社会沉默, 而消极影响默许和防御型沉默。研究使用一个跨三时间点的研究设计, 收集了来自 87 个领导团队的 285 名员工的相关数据。分析结果表明, 在领导具有高能力的情况下, 领导正直与领导信任具有更正向的关系, 且领导正直能显著负向预测防御型沉默, 正向预测亲社会型沉默, 但无法显著预测默许型沉默; 数据支持了被中介的调节模型。本研究有助于我们理解领导正直积极效应的边界条件, 探索了领导正直与领导能力对于领导信任的影响, 以及对领导信任与不同类型员工沉默行为之间的关系。本研究的结果丰富了领导正直、信任与员工沉默的相关文献, 有力地支撑了“德才兼备”这一领导观念的学术价值, 具有较高的实践指导意义。

关键词 领导正直, 领导能力, 对领导的信任, 员工沉默

How Leader Integrity and Competence Interact to Influence Employee Trust and Different Silences

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Abstract: Although scholars began to focus on the influence of leader integrity on employee silence, how perceived leader integrity and competence interact to influence employees' different types of silences remained unanswered. Drawing from trust framework (Burke et al., 2007), this paper investigated the joint effects of leader behavioral integrity and competence on employee acquiescent, defensive and prosocial silence, as well as the mediating effect of trust in leader. A time-lagged data from 285 employees and 87 direct leaders was used to test our model. Results suggested that at higher level of leader competence, leader integrity was more positively related with trust in leader, which in turn related to defensive silence negatively, prosocial silence positively, and acquiescent silence non-significantly; The mediated-moderation models were also tested. This research enhances our understanding of how leader traits influencing trust in leader, as well as its nuanced relationships with employees' different silences.

Keywords: leader integrity, leader competence, trust in leader, employee silence

善意性别偏见的代际传递及其对女性领导力涌现的影响

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摘要 随着女权运动的兴起, 性别偏见议题受到了越来越多的关注。善意性别偏见指一类主观情感上爱护女性但是将她们限制在传统性别角色上的态度, 因持有者的主观好意而难以被识别为偏见。已有研究发现, 善意性别偏见暗中维护了男女不平等的现状, 对女性的身心健康和个体发展具有负面影响。本研究的目的是探究男女平权思想日益盛行的背景下, 善意性别偏见态度在亲子间的传播路径, 存在形式, 以及其对女性领导力涌现的影响。本研究分为三个子研究, 考察了女性父母的善意性别偏见态度、女性的善意性别偏见态度、善意性别偏见环境和女性的领导力涌现之间的关系。研究一采用问卷调查法, 调查了来自北京、上海、安徽、山西等省市的 165 名女性和她们的至少一方家长, 测量他们各自持有的善意性别偏见、女性的领导力涌现。结果发现, 家长对善意性别偏见态度的认可程度正向预测了其女儿对善意性别偏见的认可程度, 但无法预测女性的领导力涌现。研究二采用半结构化访谈法, 对 10 个有女儿的家庭和 4 名成年女性分别进行深度访谈, 访谈文稿采用 NVivo 进行编码, 形成编码表。发现家庭生活中对女儿的善意性别偏见主要存在于行事作为、生活照顾、婚恋态度、学业期望和工作生活期望这几个主题中。研究三结合前人研究并采用研究二收集到的访谈文本和编码结果制作善意性别偏见研究材料, 将来自全国各地 60 所高校的 166 名参与者随机分为实验组和控制组。实验组和控制组分别阅读包含或不包含善意性别偏见的描述材料, 之后共同组成团队完成任务。任务完成后, 请小组成员评价其他成员的领导力涌现。结果发现, 善意性别偏见环境对女性的领导力涌现具有显著的负面影响。整合研究结论认为, 在父母与女儿的相处过程中, 无意中表现出的善意性别偏见会阻碍女性的领导力涌现。本研究对女性领导力的培养和发展提供了有效建议, 对于改善社会性别偏见问题, 拓展女性人才的发展空间具有重要价值。

关键词 女性, 女性领导力, 领导力涌现, 善意性别偏见, 性别平等

How does benevolent sexism transit through generations and impact women's leadership emergence

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Abstract: With the rise of feminism, more and more attention has been paid to the issue of gender bias. Benevolent gender bias refers to an attitude that emotionally cherishes women but restricts them to traditional gender roles, and is difficult to identify as bias because of the goodwill of the holder. Studies have found that benevolent gender bias secretly maintains the status quo of gender inequality, and has a negative impact on women's physical and mental health and individual development. The purpose of this study is to explore the transmission path and existence form of benevolent gender bias attitudes between parents and children, as well as its influence on the emergence of female leadership in the context of the increasing prevalence of gender equality. This study is divided into three sub-studies to examine the relationship between benevolent gender bias attitudes of female parents, benevolent gender bias attitudes of women, benevolent gender bias environment and female leadership emergence. In Study 1, 165 female participants and their parents from Beijing, Shanghai, Anhui, Shanxi and other provinces and cities were investigated by questionnaire. Their benevolent sexism, women's leadership emergence were measured. The results showed that parents' recognition of the benevolent sexism positively predicted their daughters' benevolent sexism, but they could

not predict women's leadership emergence. In Study 2, 10 families and 4 women were interviewed in-depth by semi-structured interview method. The interview manuscripts were coded by NVivo to form a coding table. It is found that the benevolent sexism towards daughters at home mainly exists in the following themes: daughter's behavior, parenting, marriage attitude, academic expectation and life expectation. In Study 3, 166 participants from 60 universities across the country were randomly divided into experimental group and control group. The experimental group and control group was asked to read the description materials with and without benevolent sexism respectively. Then the experimental group and the control group formed a team solve a task. After the task is completed, ask the team members to evaluate the leadership emergence of other members. The results show that the benevolent sexism environment has a significant negative impact on the emergence of women's leadership. The conclusion of the study is that unintentional benevolent sexism will hinder the emergence of women's leadership. This study provides suggestions for the development of women's leadership, which is of great value to improve gender equality and the development of female talents.

Keywords: Female, Female Leadership, Leadership Emergence, Benevolent Sexism, Gender Equality

仁慈型领导与员工安全行为的关系：一个有调节的中介模型

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摘 要 全世界每年发生近 3.74 亿起非致命性工伤和疾病, 导致许多员工长期缺勤。根据中华人民共和国应急管理部最新发布的全国生产行业安全事故统计, 2020 年全国生产行业安全事故 3.8 万余起, 死亡人数为 2.74 万余人, 重特重大事故 16 起, 死亡人数 262 人。安全事故的发生给国家和企业都带来了巨大的损失, 也给相关家庭带来了巨大的痛苦, 安全生产形势复杂严峻。已有研究发现了安全行为与安全事故和伤害之间存在普遍的联系。因此, 本研究基于内隐追随理论, 使用仁慈型领导量表、下属默契量表、安全氛围量表和安全行为量表, 整群抽取国内某大型企业的 639 名员工作为被试来收集数据, 使用 SPSS21.0 及 Mplus8.0 对数据进行分析, 探讨仁慈型领导与员工安全行为的关系, 以及下属默契的中介作用和安全氛围在其中起到的有调节的中介作用。结果发现: (1)仁慈型领导能够正向影响员工的安全行为; (2)下属默契在仁慈型领导与员工安全行为间起中介作用; (3)安全氛围正向调节下属默契的中介作用, 高水平的安全氛围能够有效增强仁慈型领导通过下属默契对安全行为的影响。本研究深入探究了与员工安全行为相关的因素及它们间的关系, 明确了领导者对员工安全行为的重要影响、下属默契在仁慈型领导与安全行为间的积极作用以及培养良好的安全氛围的重要性, 为提升员工安全行为水平、降低安全事故发生率提供了科学依据, 为达到提升安全绩效的目的提供了科学路径。

关键词 仁慈型领导, 安全行为, 下属默契, 安全氛围

The Effect of Benevolent Leadership on Safety Behavior: A Moderated Mediation Model

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Abstract: Nearly 374 million non-fatal injuries and diseases occur every year in the world, resulting in the long-term absence of many employees. According to the latest statistics of safety accidents in the national production industry released by the Ministry of emergency management of the People's Republic of China, in 2020, there were more than 38,000 safety accidents in production industries nationwide, leading to more than 27,400 deaths, and 16 major accidents, with 262 deaths. The occurrence of safety accidents has brought great losses to the country and enterprises, and also brought great pain to the families concerned. The situation of safety production is complicated and severe.

Studies have found a general association between safety behaviors and accidents and injuries. Thus, based on the implicit followership theory, this study used the benevolent leadership scale, subordinates' moqi scale, safety climate scale and safety behavior scale to explore the relationship between benevolent leadership and employees' safety behavior, as well as the mediating role of subordinates' moqi and the moderating role of safety climate. There were 639 valid questionnaires, and the data were analyzed using SPSS 21.0 and M-plus 8.0. The results showed that : (1) High benevolent leadership is associated with high subordinates' moqi; (2) Subordinates' moqi mediated the relationship between benevolent leadership and employee safety behavior; (3) Safety climate positively moderates the mediating effect of subordinates' moqi, high level of safety climate can effectively enhance the influence of benevolent leadership on safety behavior through subordinates' moqi. This study explores the factors related to employee safety behavior and their relationship. The results demonstrate the important influence of leaders on employee safety behaviors, the positive role of subordinates' moqi between benevolent leadership and safety behaviors, and the importance of cultivating a good safety climate. This finding provides a scientific basis for improving the level of safety behavior of employees and reducing the incidence of safety accidents, and also provides a scientific path for improving safety performance.

Keywords: benevolent leadership, safety behavior, subordinates' moqi, safety climate

(2) “工业心理学专业委员会”口头报告分场 2

因为是我而接纳我：内在和外在肯定对员工解决职场人际冲突的影响

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摘 要 外界对于个人的肯定和接纳可分为内在肯定和外在外肯定两种形式，内在肯定是对一个人相对稳定的内在品质的肯定，而外在肯定是对个人外在行为表现或结果的肯定。研究发现，这两种肯定对于亲密关系的影响存在差异，来自伴侣的内在肯定（vs. 外在肯定）更能增进个体对亲密关系的信任和承诺，表现出更多的亲关系意愿和行为（Gordon & Chen, 2010）。这是由于内在肯定比外在肯定更能降低个体的自我防御性，进而促进亲人际关系行为。然而，以往研究仅局限于个体人际关系，忽略了组织情境。本研究聚焦于组织情境下，首次探究了两类肯定对员工解决职场人际冲突的影响。研究一考察内在和外在外肯定是否影响员工对假想职场人际冲突的宽恕意愿。238 名企业员工被随机分配到内在肯定和外在外肯定组：内在肯定组回忆一段组织对自己的内在肯定（如，因为自己人品好而受到接纳），外在肯定组回忆一段组织对自己的外在肯定（如，因工作业绩好而受到嘉奖）；接着让被试阅读八段职场人际冲突情境的描述，想象自己是情境中的受害者并指出对每段情境的宽恕意愿。研究二考察内在和外在外肯定是否影响员工对真实职场人际冲突的解决意愿。390 名被试首先回忆一段在近六个月中，自己与他人之间发生的工作冲突事件；随后完成内在肯定或外在肯定的启动（同研究一）；之后所有被试针对先前冲突事件的回忆，进行调解、宽容以及报复意愿的评分。研究一、研究二均表明，内在肯定比外在肯定能导致员工有更多的缓和职场人际冲突的意愿。研究三进一步考察外在肯定是否也能促进员工较为友善地解决职场人际冲突。463 名被试参与了这项研究，除在启动肯定类型（内在/外在肯定）时新增了控制组，其余研究过程与研究二基本相同。结果表明，与控制组相比，外在肯定也能增进员工缓和职场人际冲突的意愿，但其效果不如内在肯定。本研究首次在组织情境下考察内外在肯定的影响，丰富了这一主题的研究内容，拓展了自我肯定理论的解释范围，并为如何缓解职场人际冲突提供了实践参考。

关键词 自我肯定，内在肯定，外在肯定，亲关系行为，职场人际冲突

Accepting me for me: The effects of intrinsic vs. extrinsic affirmations on employees' responses to workplace offenses

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Abstract: Affirmation of one's self-worth can be divided into two types --- intrinsic affirmation and extrinsic affirmation. Intrinsic affirmation refers to an individual is unconditionally accepted and understood for his own intrinsic attributes. Extrinsic affirmation refers to an individual is accepted by his meeting external standard or achieving some goals. Past research has showed that intrinsic relative to extrinsic affirmation may have more relationship benefits. A study on romantic relationship demonstrated that intrinsic (vs. extrinsic) affirmation enhances relationship quality and promotes pro-relationship behaviors. This is because intrinsic affirmation lessens defensiveness more than extrinsic affirmation, which is thus helpful for building healthy relationships. However, the effects of intrinsic vs. extrinsic affirmations have not been examined in organizations. Three experiments of the present research were conducted to investigate the effects of intrinsic vs. extrinsic affirmations on responses to workplace interpersonal offenses. Experiment 1 examined the effects of intrinsic vs. extrinsic affirmations on willingness to forgive hypothetical workplace offenses. 238 employees were randomly assigned to intrinsic or extrinsic affirmation condition. They recalled and described a past event in which they were affirmed in the workplace for their inner qualities (intrinsic affirmation condition) or external performance (extrinsic affirmation condition). Then, eight hypothetical scenarios of workplace offenses were presented. Participants indicated their willingness to forgive the offenders of the scenarios. Experiment 2 examined the effects of intrinsic vs. extrinsic affirmations on multiple response intentions (willingness to forgive, reconcile, and revenge) toward real workplace offenses. 390 participants first recalled and described an unforgettable experience in which they were offended by a colleague over the last six months. Then, they completed the writing task of affirmation manipulation (the same as Experiment 1). Afterwards, their current response intentions toward the workplace offense that they had just recalled were measured. Experiments 1 and 2 showed that intrinsic relative to extrinsic affirmation from work promoted more positive response intentions (including increased willingness to forgive and reconcile and reduced inclinations toward revenge) toward colleagues who had offended them hypothetically or in real situations. Furthermore, to examine whether extrinsic affirmation can also promote pro-relationship responses to workplace offenses, Experiment 3 added a control condition (baseline level) and its remaining procedure was identical to that of Experiment 2. 463 participants took part in Experiment 3. The results showed that although extrinsic affirmation was less effective than intrinsic affirmation, it (vs. control condition) still triggered greater pro-relationship intentions. The present research was the first to examine the effects of intrinsic vs. extrinsic effect in organizations, which enriches the literature on affirmations of self-worth and extends the explanation scope of the self-affirmation theory. In addition, the current research has some practical implications. It provides a brief, impactful intervention that can ameliorate negative defenses (resentment and seeking revenge) and thus boost positive, cooperative reactions (forgiveness and reconciliation) to workplace offenses.

Keywords: self-affirmation, intrinsic affirmation, extrinsic affirmation, pro-relationship behavior, workplace interpersonal offense

敬业度在角色压力与反生产行为间的作用——感戴的调节

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摘要 角色压力 (role stress) 是工作场域下由于角色模糊、角色冲突和角色超载而造成的压力体验, 常常会导致一些负向的组织行为结果。其中, 角色压力与反生产行为 (counterproductive work behavior, CWB) 之

间的关系在前人的文献中已被广泛地探讨,也有文献研究了角色压力-反生产行为的中介变量,如负性情绪、组织支持感等,但鲜有将敬业度作为中介来考虑其作用机制的。敬业度(engagement)是员工在工作中表现出来的高度投入和积极主动的身心状态,但越来越多的管理实践揭示了员工敬业度有持续下降的趋势,因此对敬业度的考量具有现实意义。依据资源保存理论,首先构建了如下假设:角色压力会造成心理资源的耗竭,而这会引发敬业度的下降,并进一步导致反生产行为的增加。文章通过实证数据证实了该假设,发现角色压力与反生产行为具有显著的正向关系,敬业度与反生产行为具有显著的负向关系,敬业度在角色压力和反生产行为的关系中发挥了部分中介作用。其次,依据拓宽-建构理论,感戴(gratitude)作为一种积极情绪,可以补偿由于角色压力带来的资源损耗,建构个体损失的心理和社会资源,即感戴会负向调节敬业度与反生产行为之间的消极关系,具体而言,员工的感戴水平越高,即使敬业度由于角色压力而下降,他们也不会产生更多的反生产行为。由于工作场域下的感戴测量并未得到普遍的认可,所以在前人研究的基础上编制了员工感戴量表,经检验,符合心理测量学的标准,并谨慎地用于后续模型中对感戴这一变量的测量。文章在前人研究的基础上,首先,编制了员工感戴量表,经过访谈、专家研讨、题项形成与筛选、初测、再测、项目分析、信效度检验等,初步认定该量表可以作为工作场域下对员工感戴水平的一种测量方式。其次,借助自编量表和相关成熟量表,验证了本研究提出的有调节的中介模型,即员工感戴水平负向调节了员工敬业度在角色压力和反生产行为之间的中介作用。最后,探讨了理论贡献、实践意义、不足之处和未来展望。

关键词 角色压力,反生产行为,敬业度,感戴

The role of engagement between role stress and counterproductive work behavior——The moderating effect of gratitude

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Abstract: Role stress is a pressure experience caused by role ambiguity, role conflict and role overload in the workplace, which often results in negative organizational behaviors. Among them, the relationship between role stress and counterproductive work behavior (CWB) has been widely discussed in previous literatures, some studies further investigated the mediating variables in the role stress-counterproductive work behavior process, such as negative emotions, perceived organizational support, etc. However, when it comes to underlying mechanism, few have taken engagement as a potential mediator. Engagement refers to the highly engaged and active physical and mental state of employees in their work. Yet, an increasing number of management practices have revealed a tendency of continuous decline of employee engagement. Therefore, investigation of engagement has practical significance. Based on the conservation of resource theory, the following hypothesis are proposed firstly: role stress causes the exhaustion of psychological resources, which will lead to the decline of engagement, and further increases counterproductive work behavior. This paper confirms the hypothesis through empirical evidence and finds that role stress is positively related to counterproductive work behavior, while engagement is negatively related to counterproductive work behavior. Engagement plays a partial mediating role in the relationship between role stress and counterproductive work behavior. Secondly, according to the broaden-and-build theory, gratitude, as a positive emotion, can compensate for the resource exhaustion caused by role pressure and build the psychological and social resources simultaneously. Furthermore, gratitude negatively moderates the negative relationship between engagement and counterproductive work behavior. Specifically, the higher the employee's level of gratitude is, the weaker the negative relationship between engagement and counterproductive work behavior will be. Since the measurement of employee's gratitude in the workplace has not been universally recognized, we developed a scale to measure employee's gratitude. The scale has been tested to meet the standards of psychometrics, and has been carefully used to measure the level of gratitude in subsequent models. On the basis of previous studies, we first developed a scale of employee's gratitude. After interviews, expert discussion, item generation and reduction, initial test, retest, item

analysis, reliability and validity test, etc., it was preliminarily concluded that this scale could be used to measure employee's gratitude in the workplace. Secondly, the moderated mediation model proposed in this study that employee's gratitude negatively moderated the mediating effect of employee's engagement between role stress and counterproductive work behavior was confirmed by using self-developed scales and related maturity scales. Finally, the theoretical contributions, practical implications, limitations and direction for future research are discussed.

Keywords: role stress, counterproductive work behavior, engagement, gratitude

用幸福感染员工——以领导行为和解释风格为中介的研究

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摘要 积极组织心理学强调从积极的角度研究组织行为的运行规律。本研究聚焦于领导的幸福感是如何传递给员工的, 分析了幸福的领导在解释风格和领导行为上的特征, 及其对员工心理资本和幸福感的影 响过程。本研究包含 3 个子研究, 研究一以 360 名高校管理人员为调查对象, 测量了他们的幸福感、解释风格、领导行为, 结果显示: 领导的解释风格在领导幸福感与领导行为中起到了部分中介作用。研究二以 811 名高校员工为调查对象, 测量其感知到的领导行为、心理资本、幸福感, 结果显示: 员工心理资本在员工感知的领导行为与员工幸福感之间起到了部分中介作用。研究三分别调查了高校管理人员及其下属, 收集领导-员工配对数据 106 份。结果显示: 解释风格、领导行为、心理资本在领导幸福感与员工幸福感之间起到了链式中介作用。有两条路径得到了验证, 路径一: 领导幸福感—领导解释风格—领导行为—员工心理资本—员工幸福感; 路径二: 领导幸福感—领导行为—员工心理资本—员工幸福感。同时, 加入中介变量后, 领导幸福感对于员工幸福感的直接作用效应不显著。结果表明, 领导幸福感对员工幸福感有正向影响, 但并非直接传递给员工, 而是通过解释风格、领导行为、员工心理资本的间接作用来影响员工幸福感的。

关键词 领导幸福感, 员工幸福感, 解释风格, 领导行为, 心理资本

How to Transmit Well-being from Leader to Members: Mediation of Leader Behavior and Explanatory Style

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Abstract: Positive organizational psychology focuses on the organizational benefits of employee well-being. Following this perspective, the current study is designed to explore the influence of happy leaders on subordinates' social capital and subjective well-being by examining mediation process of leader behaviors and explanation styles. The whole research included 3 studies. In study 1, 360 managers who worked in university were investigated to measure their well-being, explanatory style and leader behavior. The results showed that the explanatory style of leaders played a partial mediating role in the well-being and leader behavior of leaders. In Study 2, 811 employees who worked in university were investigated to measure their perceived leader behavior, psychological capital and well-being. The results showed that psychological capital played a partial mediating role between employees' perceived leader behavior and employees' well-being. Study 3 investigated managers and their subordinates who worked in university, and collected 106 pairs of leader-employee matching data. The results showed that explanatory style, leader behavior and psychological capital played a chain mediating role between leaders' well-being and employees' well-being. Two paths have been verified: Leaders' well-being - Leaders' explanatory style - Leader Behavior - employees' psychological capital - employees' well-being (Path 1); Leaders' well-being - Leader Behavior - employees' psychological capital - employees' well-being (Path 2). At the same time, the direct effect of leaders' well-being on employees' well-being is not significant after adding mediating variables. In sum, this study showed that leadership well-being has a positive impact on employee well-being, but it is not directly transferred to employees, but through the indirect effect of explanatory style, leader behavior and employee psychological capital.

Keywords: Leadership well-being, Employee well-being, Explanatory style, Leader behavior, Psychological capital

生涯发展何以可持续？员工职业生涯的潜在转变分析

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摘要 随着组织和社会经济环境日趋复杂化，个体在职业发展过程中所面临的不确定性与挑战性不断增加。在不确定环境中，员工追求什么样的生涯成功模式能够让自己变得健康、快乐、且有生产力，实现可持续职业生涯？这对于员工个体层面和组织层面的职业生涯管理都十分重要。在职业生涯研究领域，可持续职业生涯（sustainable career）是一个兴起的热点议题，但相关的实证研究却凤毛麟角。本研究结合可持续职业生涯的理论框架和人-环境匹配理论，探索员工职业生涯可持续性（指标包括健康、主观职业成功和绩效）的潜在剖面类型，重点探讨人-职匹配程度与职业生涯可持续性的潜在剖面变化之间的关系。研究采用纵向研究设计，收集了间隔6个月的两轮次员工问卷调查的匹配数据（ $n = 529$ ）；数据分析采用潜在剖面分析（latent profile analysis）和潜在转变分析（latent transition analysis）的方法。研究结果发现：（1）员工职业生涯可持续性存在4种类型的潜在剖面：高可持续性、健康导向、绩效导向和低可持续性，这4种潜在剖面在两轮员工数据的分析中得到重复验证；（2）人-职匹配程度高的员工更有可能经历职业生涯可持续性的积极转变，与之相反，人-职匹配程度低的员工则更有可能经历职业生涯可持续性的消极转变。本研究丰富了可持续职业生涯的实证研究，并从人-职匹配视角深化了对职业生涯动态演变与可持续性转变的理解，具有理论方面的贡献性。同时，本研究为组织的人力资源管理与员工的职业生涯管理提供了有益的决策参考。

关键词 可持续职业生涯，人-职匹配，潜在转变分析，潜在剖面分析，职业生涯成功

Whose career is becoming more sustainable?

A latent transition analysis

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Abstract: Under the increasingly complex organizational and socio-economic environment, individuals are facing more and more uncertainty and challenges in their career development. In such a context, what kind of sustainable career mode should employees pursue to sustain their career with more health, happiness, and productivity? This is an important question no matter for the organizations' human resource management or employees' career management. In the field of vocational behavior, however, the extant research lacks empirical investigations on career sustainability. Integrating the theoretical framework of Sustainable Career and Person-environment Fit theory, the current study uses two-wave questionnaire data ($n = 529$) with an interval of 6 months to empirically identify the classes of employees' career sustainability through Latent Profile Analysis (LPA; using employees' self-reported data of health, subjective career success, and performance as the indicators), and further examine the predicting effect of person-job fit on the transitions (or stability) of employees' career sustainability classes, adopting Latent Transition Analysis (LTA). LPAs for each wave of data consistently resulted in four latent profile classes of employee career sustainability: *highly sustainable*, *health-oriented*, *performance-oriented*, and *unsustainable*. Moreover, an LTA model indicated that employees with higher person-job fit were more likely to go through positive transitions in career sustainability; on the contrary, employees with lower person-job fit were more likely to go through negative transitions in career sustainability. This study enriches the empirical research on employees' sustainable career and further deepens the understanding of career dynamics and sustainability transitions from the perspective of person-job fit. Also, this study provides practical implications for organizations' human resource management and employees' career management.

Keywords: sustainable career, person-job fit, latent transition analysis, latent profile analysis, career success

(3) “工业心理学专业委员会” 口头报告分场 3

紧缺人才的胜任特征智能评估研究

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摘要 为充分发掘我国紧缺人才优势, 改进现有人才选拔、评估和培训方法, 需要利用人工智能匹配的新技术, 为科技前沿领域聚集一批想创新、敢创新、能创新的高层次人才队伍。本研究为了解决紧缺型人才的瓶颈问题。首先, 基于大数据的人-职智能匹配, 通过基于 O*NET 的职业工作分析和基于心理测试的特征分析, 建立基于大数据聚合的智能匹配系统, 将大范围各地区紧缺专业的职业要求与求职人员的心理特征相匹配, 获得各类人群的基本归类后, 再进行结构化面试等新型甄选方法, 以提高人员选拔的速度和精度。此外, 基于地理位置的 LBS (Location Based Services) 为用户提供与位置相关的各类信息服务。其次, 从紧缺科技人员和关键管理岗位领导者入手, 通过关键行为事件访谈获得录音, 并对录音进行文本的转录, 通过计算机半自动化编码, 对非结构性数据进行索引、搜寻等数据挖掘, 形成核心胜任特征模型, 以此来作为对外招聘、培训和绩效评估的依据。目前, 科研团队已经在关键行为事件访谈、多模态信息的处理技术方面有所进展, 并开发出基于核心胜任特征的网络测试与培训系统, 包括共性胜任特征和科研、工程、管理领域下的特异性胜任特征, 并使用 SGP 成长评估模型对培训的效果进行衡量。在培训方式上, 也将采用认知技能培训、安全心智培训、团体沙盘游戏、合作型团队培训和情境模拟评价的新型培训获得验证, 通过可视化平台展示其动态过程, 供选人用人和绩效评估中使用。目前, 针对紧缺人才核心胜任特征的智能评估模式初步已初步取得了一定成效。

关键词 核心胜任特征, 人-职匹配, 关键行为事件访谈, 胜任特征培训, 大数据智能计算

Research on intelligence Evaluation of Competency of Talents in short supply

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Abstract: In order to fully explore the advantages of talents in short supply in China and improve the existing methods of talent selection, evaluation and training, it is necessary to gather a group of high-level talents who want to, are willing to and can innovate in the frontier fields of science and technology by using the new technology matched by artificial intelligence. This study aims to solve the bottleneck problem of talents in short supply. First of all, based on large data - intelligent matching, through the analysis of the vocational work based on the O * NET and based on the characteristics of the psychological test analysis, establish intelligent matching system based on the data aggregation, will be a shortage of a wide range of regional professional career requirements match with the psychological characteristics of people, for all kinds of people, after the basic classification of Then structured interview and other new selection methods, in order to improve the speed and accuracy of personnel selection. In addition, LBS (Location Based Services) provides users with various information Services related to Location. Secondly, from a shortage of technical personnel and key management job leader, through key behavioral event interview recordings, and the transcription of the recording for text, semi-automatic coding by computer, the unstructured data indexing, searching, such as data mining, the formation of the core competence characteristics model, in order to as the basis of external recruitment, training and performance evaluation. At present, the research team has been in key behavioral event interview, multimodal information processing technology, and developed the network testing and training system based on the core competence characteristics, including general competence characteristics and scientific research, engineering, management, under the specific competencies, and use the SGP

growth model to measure the effect of training. In terms of training methods, new types of training such as cognitive skills training, safe mind training, group sandtable game, cooperative team training and situational simulation evaluation will also be adopted to be verified, and the dynamic process will be displayed through a visual platform for use in selection and employment and performance evaluation. At present, the intelligent evaluation mode aiming at the core competency of talents in short supply has preliminarily achieved some results.

Keywords: Core competency, Person-job matching, Key behavioral event interview, Competency training, Big data intelligent computing

天生的和平使者？大五人格特质与人际冲突调解的关系

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摘要 本研究旨在探讨人格与人际冲突调解（Interpersonal peacemaking）之间的关系。冲突调解是团队成员中的一种自愿行为，它是指员工站在中立、公正的角度自愿帮助发生冲突的同事，以帮助同事找到友好的冲突解决方案。冲突调解在组织研究中被定义为一种组织公民行为。根据近期的研究，人际冲突调解可被分为五个成分来研究，它们分别是：冲突调解的总体行为（peacemaking in general）、问题解决导向的调解（settlement oriented peacemaking）、情感导向的调解（emotion oriented peacemaking）、幽默型调解（humorous peacemaking），以及调解的多重偏向性（multi-partiality of peacemaking）。本研究旨在探究大五人格特质与人际冲突调解的五个成分之间的关系。503 名来自世界各地的参与者填写了一项问卷调查，用于评估他们的人格特质和在工作场合中的冲突调解行为。我们采用 AMOS 22.0 进行了数据分析。与预期假设一致，开放性、外向性和宜人性格特质与冲突调解的大多数成分呈正相关，而尽责性和神经质仅与幽默型调解以及调解的多重偏向性呈负相关。冲突调解是团队中的一种重要行为，但尚未得到充分研究，促进冲突调解有助于提高团队效率。本文是探索人格特质与人际冲突调解行为之间关系的首批研究，对组织的人力资源管理具有一定的启示意义。

关键词 组织公民行为，人格，冲突调解，冲突管理，第三方行为

Natural-born Peacemakers?

Big Five Personality Traits and Interpersonal Peacemaking

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Abstract: This study aims to investigate the relation between personality and interpersonal peacemaking. Peacemaking is considered as voluntary behavior of team members to help conflicting colleagues in an impartial way, to find an amicable solution. Peacemaking in organizational studies is identified as an organizational citizenship behavior. According to recent research, peacemaking can be studied from the perspective of five different components: peacemaking in general, settlement oriented peacemaking, emotion oriented peacemaking, humorous peacemaking, and multi-partiality. We test the relation between the Big Five personality dimensions and five different components of interpersonal peacemaking. Five hundred and three participants from different backgrounds filled out a survey assessing their personality and peacemaking behavior at work. To test our hypotheses, we conducted Structural Equation Modeling in AMOS 22.0. In line with expectations, Openness, Extraversion, and Agreeableness related positively to most peacemaking components, while Conscientiousness and Neuroticism related negatively to the use of humor, and peacemakers' multi-partiality. Peacemaking is an important, however understudied, behavior in teams. The promotion of peacemaking contributes to team effectiveness. This is one of the first studies exploring the

relationship between personality (Big Five) and different aspects of interpersonal peacemaking. The implications for human resource management in organizations are discussed.

Keywords: Organizational citizenship behavior, Personality, Peacemaking, Conflict management, Third party behavior

员工依恋风格对工作场所求助行为的影响： 积极工作情感和消极工作情感的中介作用

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摘要 工作场所求助行为指员工向工作中的同事寻求情感性或工具性帮助, 以解决工作中或工作之外的一些问题。员工求助行为有利于个体和团队绩效、员工幸福感以及组织的可持续发展, 且工作场所中的人际互助行为大部分是由求助者寻求帮助引发的。但工作场所求助行为却很少被研究。依恋理论是理解人际关系的核心心理学理论, 从依恋的视角理解员工求助行为具有合理性。依恋理论已在发展心理学和社会心理学中被广泛应用, 但在组织行为学中却很少被关注。因此本研究基于依恋理论探讨员工依恋风格对其工作场所情感性求助和工具性求助行为的影响及作用机制。Chan (2013) 回顾了求助相关文献, 提出了求助模型, 他发现该模型只关注求助认知相关的前因变量, 而没有关注求助情感相关的前因变量, 并认为情感对求助行为的影响可能是未来有潜力的研究方向。依恋理论主要研究依恋的认知-情感过程, 认为依恋风格会影响个体的认知和情感。因此本研究基于依恋理论认为员工依恋风格会通过工作相关的积极情感和消极情感影响员工情感性求助和工具性求助行为。本研究采用人际关系经验量表(ERS)、工作相关情感量表和应对量表中的情感性求助和工具性求助行为两个维度对 278 名在职员工分三阶段进行问卷测试, 采用结构方程模型对数据进行多重中介效应分析。数据分析结果表明模型拟合良好, $\chi^2(217) = 462.868, RMSEA = 0.064, CFI = 0.934, TLI = 0.921, SRMR = 0.081$ 。员工对同事的依恋回避和依恋焦虑均会通过积极工作情感负向影响情感性求助和工具性求助行为。员工对同事的依恋焦虑会通过消极工作情感正向影响情感性求助行为。理论上, 本研究促进了依恋理论在职场中的应用, 丰富了员工依恋风格、求助行为的相关研究。实践上, 本研究对于从工作相关的情感出发对员工的求助行为进行干预具有一定的指导意义。

关键词 员工依恋风格, 情感性求助, 工具性求助, 积极工作情感, 消极工作情感

The Effects of Employee Attachment Style on Workplace Help-Seeking Behavior:

The Mediating Roles of Positive Job Affect and Negative Job Affect

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Abstract: Help-seeking behavior in the workplace refers to employees seeking emotional or instrumental help from colleagues to solve problems at work or outside of work. Employee help-seeking behavior is beneficial to individual

and team performance, employee happiness, and sustainable development of the organization. Besides, most of the helping based interactions are initiated by someone seeking help. However, help-seeking behavior in the workplace has rarely been studied. Attachment theory is a core psychological theory to understand interpersonal relationship. Therefore, it is reasonable to understand employees' help-seeking behavior from the perspective of attachment. Attachment theory has been widely used in developmental psychology and social psychology, but little attention has been paid to in research of organizational behavior. Therefore, based on attachment theory, this study explores the effects of employee attachment style on emotional help-seeking and instrumental help-seeking behaviors in the workplace and the underlying mechanism. Chan (2013) reviewed the literature related to help-seeking and proposed a help-seeking model. He found that this model only focused on the cognitive-related antecedent variables of help-seeking, but did not pay attention to the affect-related antecedent variables of help-seeking. He believed that the impact of affect on help-seeking behavior might be a potential research direction in the future. Attachment theory is centrally concerned with the cognitive-affective processes of attachment and suggests that attachment style can influence individuals' cognition and affect. Therefore, based on attachment theory, this study hypothesizes that employees' attachment style can affect employees' emotional and instrumental help-seeking behaviors through positive and negative job affect. In this study, Experience of Relationships Scale (ERS), Job Affect Scale, and the two dimensions of emotional help-seeking and instrumental help-seeking behaviors in Coping Scale were used to measure 278 employees in three waves. Structural equation model was used to analyze the multiple mediating effects. The results show that the model fits the data well, with $\chi^2(217) = 462.868$, $RMSEA = .064$, $CFI = 0.934$, $TLI = 0.921$, $SRMR = 0.081$. Both employees' attachment avoidance and attachment anxiety to colleagues can negatively influence their emotional and instrumental help-seeking behaviors through positive job affect and negative job affect. Employees' attachment anxiety to colleagues can positively affect their emotional seeking behavior through negative job affect. Theoretically, this study promotes the application of attachment theory in the workplace, and enriches the literature on employee attachment style and help-seeking behavior. Practically, this study has a certain guiding significance for the intervention of employees' help-seeking behavior from the perspective of job affect.

Keywords: Employee Attachment Style, Emotional Help-seeking, Instrumental Help-seeking, Positive Job Affect, Negative Job Affect

绩效压力情境下的员工安全生产行为：作用机制的探讨

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摘 要 生产效益和生产安全是影响加工制造型企业竞争力的两大重要因素。而在现实中，企业为追求高生产效益，往往会制定高的生产绩效目标，这势必导致一线生产员工体验到较大的绩效压力。工作场所的压力已被证实是影响员工安全生产的一个主要因素。但到目前为止，绩效压力的研究仅仅关注其对员工的绩效、不道德行为等方面的作用后果，却鲜有研究探讨其与员工安全生产行为之间关系。因此，本研究旨在探究绩效压力与安全生产行为(包括安全遵守行为和安全参与行为)之间的关系，重点探讨绩效压力对安全生产行为作用的内在作用机制和边界条件。本研究包括2个子研究。研究1在国内一家加工制造型企业中进行调研，共获得了279名一线生产员工两轮次的自我报告匹配数据。研究2在国内另一家加工制造型企业中进行调研，分别收集员工自我报告数据，以及上司对员工安全生产行为的评价数据，共获得了287名一线生产员工三轮次的员工-上司匹配数据。研究1的结果表明：绩效压力对员工安全生产行为的抑制作用是通过情绪耗竭产生的，即高的绩效压力会导致员工的情绪耗竭水平上升，进而会导致其安全生产行为的减少。研究2再次验证了研究1的研究结果，并发现了员工的工作自我效能感对上述中介作用的调节作用，即对于工作自我效能感较高的员工来说，情绪耗竭的中介作用不成立，而对于工作自我效能感较低的员工来说，绩效压力会通过加剧员工情绪耗竭，进而降低其在工作中的安全生产行为。本研究发现丰富了绩效压力以及安全生产行为的研究，同时也为企业的安全生产管理提供了一定的实践启示：企业管理者应结合实际，科学合理地制定绩效目

标, 并给予安全生产更多的重视, 同时, 企业应更多地关注员工的心理健康状况, 并可以考虑对员工进行一定的工作技能培训以提升员工的自我效能感水平。

关键词 绩效压力, 安全生产行为, 情绪耗竭, 工作自我效能感

How Performance Pressure Impacts Frontline Workers' Safety Behaviors in the Workplace? An Investigation of Underlying Mechanism

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Abstract: The production and safety in the workplace are two key factors which matter the competitiveness of manufacturing industry. Nevertheless, compared with safety issue, the production might be paid more attention and be more visible in practice. Employers usually set high performance benchmarks and scrutinize employees' performance in a high-stakes manner. Employees in the manufacturing industry are thus facing performance pressure at work. Performance pressures was found to significantly affect employees' job performance and unethical behaviors. Unfortunately, less is known regarding how performance pressure might influence workplace safety. Drawing upon the Job Demands-Resources model, the current research develops and examines an integrative model of frontline workers' safety behaviors (i.e., safety compliance and safety participation) under performance pressure. To examine our hypothesized conceptual model, we conducted two field studies. Study 1 collected two-wave data from 279 frontline workers in a Chinese manufacturing company and Study 2 collected three-wave multisource data from 287 frontline workers in another Chinese manufacturing company. Mediation analyses and moderated mediation analyses with a bootstrapping technique were then conducted to examine the hypothesized model. The results demonstrate that performance pressure increased emotional exhaustion, which in turn led to fewer safety behaviors (i.e., safety compliance and safety participation). However, these indirect effects differed among employees. The indirect effects of performance pressure on safety behaviors through emotional exhaustion was significant and negative among employees with low job self-efficacy, but not significant among employees with high job self-efficacy. To sum, this research demonstrates that performance pressure, a prominent job demand at work, could damage workplace safety behaviors through a health-impairment process, while employee's job self-efficacy, an important personal resource, could buffer these detrimental effects. Our findings might enrich the literature of performance pressure and safety to some extent. Meanwhile, these findings also suggest that employers should take cautions when they are setting performance benchmarks for employees. Interventions to protect frontline workers' psychological well-being and trainings on job skills to promote frontline workers' job self-efficacy are needed.

Keywords: performance pressure, safety behaviors, emotional exhaustion, job self-efficacy

(4) “工业心理学专业委员会” 口头报告分场 4

促销折扣不确定性对网购中跨期选择的影响

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摘要 当消费者面临一个即将开始的促销活动, 他们往往需要做出一个跨期选择, 即决定现在购买还是等待促销。近来在网络促销中还出现了前期隐藏折扣价格的方式, 这进一步增加了跨期选择的不确定性。本研究旨在探讨这种促销折扣不确定性对跨期选择的影响, 并基于期望效用和信息缺口理论探究感知功能价值和好奇心的中介作用。实验 1 模拟了网络促销情境, 测量了被试在确定和不确定折扣下的跨期选择以及感知功能价值和好奇心。结果表明: 相比于 2% 低折扣, 消费者在不确定折扣下的好奇心更强, 从而更有可能等待促

销；而相比于 35%高折扣，不确定性导致感知功能价值下降，因此对跨期选项的偏好降低。相比于 15%折扣，不确定折扣下的好奇心更强、感知功能价值更低，由于好奇心和感知功能价值起到相反的作用，导致两种条件间的跨期选择差异不显著。在实验 2 中，我们将产品属性（享乐/实用）作为调节因素，并记录了购买决策的反应时。结果表明，购买享乐产品时不确定折扣的积极效用更强；不确定折扣下的反应时显著长于确定折扣。这意味着，尽管不确定性在一定程度上能增加吸引力，但也需要考虑它可能会消耗更多的认知资源（更长的反应时）。总体而言，我们的研究发现不确定性促销是通过好奇心和感知功能价值的双重中介作用对跨期选择产生影响的。这项研究不仅扩充了有关不确定性促销的研究，也为未来的研究提供了一个新的视角。

关键词 跨期选择，促销折扣不确定性，感知功能价值，好奇心

The Influence of Uncertainty of Promotion Discount on Intertemporal Choice in Online Shopping

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Abstract: When consumers are faced with an upcoming promotion, they have to make an intertemporal choice, that is, decide whether to buy now or wait for the discount. Recently there has even been a way of giving an undisclosed discount prior to the promotion, which increased the uncertainty of intertemporal choice. This research aims to discuss the effect of the uncertainty of the promotion discounts on intertemporal choice, and explore the moderating effects of perceived functional value and curiosity. Study 1 simulated a context of online marketing, we measured the intertemporal choices of participants and their curiosity and perceived functional value under determined or uncertain discounts. The results showed that, compared to 2% discount, consumers were more likely to wait for the promotion under the uncertain discount, which was driven by their curiosity; compared to 35% discount, uncertain discount led to lower perceived functional value, thus lowering the preference for intertemporal options. The curiosity and perceived functional value played the opposite roles, therefore there was no significant decision difference between uncertain discount and 15% discount. In study2, we manipulated product attributes (hedonic / utility) as moderators and recorded the response time of the purchase decision. We found that the positive effect of uncertain discount was stronger when purchasing hedonic products, and the response time under uncertain discount was significantly longer than determined discounts. That is, although uncertainty can increase attraction to some extent, the longer response time it takes which means consuming more cognitive resources also need to be considered. In general, we discovered the dual psychological mechanism of the impact of uncertain promotion on intertemporal choice, which was mediated by perceived functional value and curiosity. This research not only enriches the literature about uncertain promotion, but also provides a new perspective for future research.

Keywords: intertemporal choice, uncertain promotion, perceived functional value, curiosity

未来时间洞察力对飞行驾驶安全行为的影响： 风险知觉与职业使命感的双重路径

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摘 要 飞行事故人为特征的日益凸显使得飞行人因失误与现代航线安全成为航空领域持续关注的议题。在探索威胁因素及其影响机制的同时，不应忽视积极个人特质对飞行驾驶安全的保护作用。未来时间洞察力（Future Time/Temporal Perspective, FTP）在未来的认知、体验与行为上体现的人格特质，通过个人对长远目标的一般倾向与从长计议对个体的重要价值加以表征，反映了时间管理、预期推理、理想追求等方面的个体差异。根据飞行情境中的风险不确定性与飞行任务的跨期决策特征，结合未来时间洞察力的状态监控、未来

规划等核心要素,已有研究证实未来时间洞察力是风险驾驶行为的晴雨表,能够良好预测驾驶员的安全绩效。为进一步探析未来时间洞察力对飞行安全的促进路径,研究基于调节聚焦理论,结合中国本土民航组织情境,对 237 名中国航线飞行员进行自陈量表数据取样,检验未来时间洞察力对安全飞行绩效的影响以及作用机制。结果显示:(1)未来时间洞察力对飞行员安全驾驶行为具有显著的正向影响,高未来时间洞察力个体的飞行安全水平显著高于低未来时间洞察力个体;(2)风险知觉(Risk Perception)与职业使命感(Calling)在未来时间洞察力对飞行员驾驶安全行为(Safety Operation Behaviors among Airline Pilots)的积极影响中发挥了部分中介作用:未来时间洞察力既可以通过提升飞行员的风险知觉水平这一自我预防(self-prevention)路径,也能够通过加深飞行员的职业使命感这一自我提升(self-enhancement)路径保障飞行任务的安全执行。研究结论不仅结合了传统人格研究取向和社会认知研究取向,揭示了未来时间洞察力对飞行驾驶安全行为的维护机制,丰富了既有飞行人因失误预防研究体系,同时也为航空安全文化建设、飞行员心理选拔、机组安全管理等实务内容提供了一定的启示与建议。

关键词 未来时间洞察力, 飞行驾驶安全行为, 风险知觉, 职业使命感, 调节聚焦理论

The Impact of Future Time Perspective on Safety Operation Behaviors among Pilots: Dual Path of Risk Perception and Calling

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Abstract: The increasingly prominent human characteristics of flight accidents have made pilot errors and modern airline safety cause continuous concern in the aviation field. While exploring the threat factors and their influencing mechanisms, the protective effect of positive personal characteristics on safety operation behaviors should not be ignored. The personality traits, reflected by future time perspective(FTP) in future cognition, experience and behavior, characterize the important value of individuals through their general tendency towards long-term goals and thinking, reflecting individual differences in time management, expected reasoning, and ideal pursuit. According to the risk uncertainty in the flight situation and the intertemporal decision-making characteristics of the flight mission, combined with the core elements such as state monitoring and future planning of FTP, studies have confirmed that FTP is a barometer of risk driving behavior, which can predict the safe performance of pilots. To further explore the path of FTP to flight safety, based on the regulatory focus theory and the situation of civil aviation organization, the study sampled self-reported scale data from 237 Chinese pilots to examine the impact and the mechanism of FTP on safe flight performance. The results showed that: (1) FTP has a direct and positive effect on safety operation behaviors, in which the safety operation behaviors of high-FTP pilots were higher than low-FTP counterparts. (2) Risk perception and calling partially mediated the relationship between the relationship between FTP and safety operation behaviors: FTP can promote the safe execution of flight missions by improving the pilots risk perception level and strengthening pilots calling. The research combines the traditional personality research orientation and the social cognition orientation, reveals the maintenance mechanism of FTP to the safety operation behavior among pilots, enriches the existing prevention research system of human errors. Also it provides certain enlightenment and suggestions for the construction of aviation safety, pilots psychological selection, and crew safety management.

Keywords: Future Time Perspective, Safety Operation Behaviors among Airline Pilots, Risk Perception, Calling, Regulatory Focus Theory

手机分心对行人行为的影响及其脑机制

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摘要 随着智能手机的普及, 行人步行时使用手机现象普遍, 因手机分心导致交通事故时有发生。研究探讨不同类型手机分心对步行的影响, 并进一步分析其影响的脑机制。研究包括三个实验, 首先采用行为实验, 选择大学生志愿者 30 人探讨手机通话、发信息、听音乐三种分心条件对行人行为的影响; 之后运用功能性近红外脑成像技术 (fNIRS), 分别考察不同认知负荷难度的分心任务 ($N=35$) 及不同通道类型分心任务 ($N=40$) 影响行人行为 (包括对交通信号灯和汽车鸣笛的反应) 的脑机制。数据结果发现: (1) 当步行时使用手机通话和发信息时, 被试对交通信号灯的反应均显著慢于无分心条件和听音乐时的反应 ($p<0.05$); 手机通话分心条件下, 被试对汽车鸣笛的反应显著慢于无分心和听音乐条件下的反应 ($p<0.05$); (2) 当步行时手机通话和发信息, 行人的步行速度显著慢于步行时听音乐和无分心的情况 ($p<0.001$); (3) 被试认为步行时手机通话和发信息要比无分心 ($p<0.001$) 和听音乐 ($p<0.01$) 付出更多的心理努力, 且认为步行时手机通话和发信息的任务难度更高 ($p<0.001$); (4) 高难度分心任务下, 被试对步行任务的反应时显著长于低难度分心任务 ($p<0.01$), 且在背外侧前额叶皮层、额极皮层、视觉联合皮层的脑区激活程度更高 ($p<0.05$), 表现出认知负荷对步行成绩的影响; 同时, (5) 视觉分心任务下, 被试对交通信号灯的反应时明显长于对汽车鸣笛的反应时 ($p<0.001$), 且在背外侧前额叶皮层、额极皮层、视觉联合皮层等脑区对交通信号灯反应的激活程度显著高于对汽车鸣笛反应的激活 ($p<0.05$); 听觉分心时, 被试对汽车鸣笛的反应时显著长于对交通信号灯的反应时 ($p<0.01$), 且在缘上回、颞上回等脑区对汽车鸣笛反应的激活程度显著高于对交通信号灯反应的激活 ($p<0.05$), 表现出同一通道资源竞争现象。由此我们得出结论, (1) 步行时手机通话与发信息均显著影响行人行为, 表现为行走速度变慢, 对外界信息反应延迟。(2) 手机影响步行安全既受到分心认知负荷大小的影响, 也与同一通道内资源竞争的限制。

关键词 手机分心, 行人安全, fNIRS, 认知负荷, 资源竞争

The Effect of Mobile Phone Distraction on Pedestrian Response and Its Brain Mechanism

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Abstract: With the popularity of smart phones, it is common for pedestrians to use mobile phones while walking, and traffic accidents often occur due to walking distraction. This study investigated the influence of different types of mobile phone distraction on pedestrian response and further analyzed the brain mechanism of the effect. The study consists of three experiments. First, 30 college students were selected to conduct a simulated pedestrian task to investigate the influence of three types of smart phone using, talking, texting and listening to music on pedestrian response. Then, using functional near-infrared spectroscopy (fNIRS) technique investigated the brain mechanisms of different cognitive load distraction task ($N=35$) and distractions of different sensory channels task ($N=40$) affecting pedestrian responses. The results showed that (1) Participants responded to the traffic lights much longer when they talking and texting in the mobile phone than listened to music or had no distraction while walking. Participants responded to the car horns much longer when they talking in the mobile phone than when they listened to music or had no distraction while walking. (2) Walking speed of participants who talked on mobile phones and sent messages while walking is significantly slower than those who listened to music and were not distracted. (3) Participants reported talking and texting in the mobile phone while walking needed more mental effort than without distraction

and listening to music, and talking and texting in the mobile phone while walking was rated as more difficult. (4) Under the condition of high cognitive load distraction task, participants responded to the pedestrian task much longer than that of distraction task with low cognitive load ($p < 0.01$), and the brain areas of dorsolateral prefrontal cortex, frontal cortex and visual association cortex were more activated under the high cognitive load condition, showing the influence of cognitive load on pedestrian response. (5) Participants tended to react to the traffic lights much slower than the car horns when they distracted by visual stimulus, and in the dorsolateral prefrontal cortex, frontal cortex and visual association cortex, the activation degree of the brain regions responding to traffic lights was significantly higher than that in car horns. When the auditory distraction occurs, the participants' response to the car horns was much slower than the traffic lights. The activation degree of superior marginal gyrus and superior temporal gyrus in response to car horns was significantly higher than that of traffic lights, which showed resource competition in the same sensory channel. Therefore, we draw the conclusions that (1) Mobile phone conversation and sending messages while walking significantly affect pedestrian behavior, which is manifested as slow walking speed and delayed response to external information. (2) Both cognitive load and resource competition between pedestrian task and smart phone using type in the same sensory channel would effect pedestrian safety.

Keywords: mobile phone distraction, pedestrian safety, fNIRS, cognitive load, resource competition

孤独对物质性消费偏好的作用：一个有调节的中介模型

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摘要 与表示客观上社会关系较少的孤立相区别，孤独指个体理想社交情况和现实社交情况之间的落差及其带来的负面情绪结果。孤独会对消费者的人际交往产生影响，促使消费者建立新的社会关系来满足自身的归属需要，这一倾向也体现在消费中，相比具有人际交往失败风险的体验性消费，高孤独水平的消费者更倾向于通过物质性消费来与物品建立联结，补偿未满足的归属需要。因此，归属需要在孤独对物质性消费偏好的影响中起中介作用。不同调节定向的个体对理想现实差距的需求理解不同，从而产生不同强度的归属需要，因此，调节定向可以调节孤独对归属需要的影响，进而调节归属需要的中介作用。我们开展了四个研究来验证这一模型：研究一通过问卷法收集了 154 份有效数据，用量表测量了被试的孤独、孤立及消费偏好，发现控制孤立的影响后，孤独能够显著正向预测物质性消费偏好；研究二共收集了 230 份有效问卷，将被试随机分为物质性消费和体验性消费两组，通过测量他们愿意为对应消费类型付出的购买努力来反映他们的消费偏好，发现孤独能够显著增强被试的物质性消费偏好；研究三采用单因素被试间设计，将 192 名被试随机分为孤独组和控制组，通过问题的频率程度影响被试的选择来对孤独进行操纵，并测量了被试的归属需要，逐步回归法的结果发现归属需要在孤独对物质性消费偏好的影响中起中介作用；研究四引入调节定向作为调节变量，共收集 267 份有效问卷，结果表明有调节的中介模型成立，调节定向作为调节变量作用于自变量孤独和中介变量归属需要之间。本研究基于补偿消费理论和调节定向理论，丰富了消费心理学领域中孤独的研究，拓展了调节定向对消费行为影响的研究，为企业应该如何针对孤独人群的偏好来开发相关产品提供了一定参考。

关键词 孤独，补偿性消费理论，归属需求，体验性和物质性消费

The Effect of Loneliness on Material Consumption Preference: A Moderated Mediation Model

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Abstract: In contrast to isolation, which indicates less objective social ties, loneliness refers to the gap between an individual's ideal social situation and his actual social situation and the negative emotional consequences it brings.

Loneliness will have an impact on the interpersonal communication of consumers, prompting consumers to establish a new social relationship to meet their own belonging need. This tendency is also reflected in the consumption. Compared with experiential consumption, which has the risk of interpersonal communication failure, consumers with high loneliness are more inclined to establish connection with goods through material consumption and compensate for unsatisfied belonging need. Therefore, belonging need plays a mediating role in the effect of loneliness on materialistic consumption preference. Individuals with different regulatory orientations have different understandings of the need produced from the gap between ideal and reality, thus producing different intensity of belonging need. Therefore, regulatory orientation can moderate the effect of loneliness on belonging need, and then moderate the mediating effect of belonging need. We conducted four studies to verify this model. In the first study, we collected 154 questionnaires and measured loneliness, isolation and consumption preferences. After controlling for the effect of isolation, loneliness significantly positively predicted material consumption preferences. In the second study, a total of 230 questionnaires were collected. The participants were randomly divided into two groups: material consumption group and experiential consumption group, and their consumption preferences were reflected by the amount of effort they were willing to pay for corresponding consumption types. It was found that loneliness significantly enhanced the material consumption preference of the participants. In the study3, we used single factor between-subjects design. 192 subjects were randomly divided into loneliness group and control group. We manipulated loneliness by changing the degree of frequency in the questions to affect the choice of subjects, and then measured belonging needs. The result of stepwise regression showed that belonging need played a mediating role in the effect of loneliness on material consumption preference. In study 4, a total of 267 valid questionnaires were collected with regulatory orientation as a moderating variable. The results showed that regulatory orientation acted on the relationship between independent variable loneliness and mediating variable belonging need. Based on the theory of compensatory consumption and the theory of regulatory orientation, this study enriches the research on loneliness in the field of consumer psychology, expands the research on the influence of regulatory orientation on consumer behavior, and provides some reference for enterprises to develop related products according to the preferences of lonely people.

Keywords: loneliness, compensatory consumption theory, belonging need, experiential and material consumption

4.6 医学心理学专业委员会

(1) “医学心理学专业委员会”口头报告分场 1

PPAR γ 介导小胶质细胞极化表型参与应激致 ob/ob 小鼠 抑郁障碍易感性

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摘要 背景: 肥胖导致机体呈慢性低度炎症状态, 这与肥胖个体的抑郁易感性有关, 但机制不清。有研究提示, 小胶质细胞过度激活是应激致抑郁症状和中枢炎症的主要原因。小胶质细胞激活通常分为经典激活 (M1) 和替代激活 (M2)。M1 型小胶质细胞可通过分泌促炎细胞因子, 如肿瘤坏死因子- α (TNF- α)、白介素 (IL)-1 β 和 IL-6, 引起中枢神经系统的功能障碍。M2 型, 即神经保护型, 可释放 IL-4、IL-10 和转化生长因子- β (TGF- β) 等抗炎细胞因子, 对抗炎症诱导的中枢神经系统损伤。过氧化物酶体增殖物激活受体 γ (PPAR γ) 是一种核转录因子, 可调节小胶质细胞极化表型和中枢炎症。本研究探讨 PPAR γ 在应激致肥胖小鼠抑郁障碍易感性中的作用。方法: 采用慢性不可预知性温和应激 (CUMS) 构建野生型 (wt) 小鼠和瘦素基因缺陷 (ob/ob) 小鼠抑郁模型, 采用糖水偏好实验、旷场实验、悬尾实验和 Morris 水迷宫实验检测小鼠抑郁样行为及学习记忆水平。同时检测前额叶皮质和海马区小胶质细胞激活状态、细胞因子、NF- κ B 表达和 PPAR γ 表达。结果: CUMS

导致 wt 和 ob/ob 小鼠抑郁样行为和空间记忆受损, 前额叶皮质和海马区促炎细胞因子升高、抗炎细胞因子降低, 小胶质细胞 M1/M2 比值增大, NF- κ B 过度表达以及 PPAR γ 表达下调。与 wt 小鼠比较, ob/ob 小鼠表现出更严重的行为障碍和更高水平的促炎细胞因子、M1/M2 比值、NF- κ B 激活以及更低水平的抗炎细胞因子和 PPAR γ 表达。PPAR γ 激动剂吡格列酮可减轻 wt 和 ob/ob 小鼠的抑郁样行为, 并逆转促炎和抗炎细胞因子的失衡。结论: 慢性应激导致肥胖小鼠更严重的抑郁样行为和神经炎症以及更低水平的 PPAR γ , 这表明 PPAR γ 介导小胶质细胞极化表型与应激致肥胖小鼠抑郁障碍易感性有关。

关键词 抑郁症, 肥胖, 炎症, 小胶质细胞, PPAR γ

PPAR γ -mediated Alteration of Microglial Activation Phenotypes is Involved in Susceptibility to Depressive Disorder Induced by Stress in ob/ob Mice

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Abstract Background: Obesity is a chronic low-grade inflammation state of the body which is associated with the susceptibility to depression in obesity, however, the underlying mechanisms have not yet been fully elucidated. Studies have suggested that excessive activation of microglia is proposed to be the main cause of stress-induced depressive symptoms and central inflammation. Microglial activation is usually categorized into classical (M1) and alternative (M2). M1 microglia could cause dysfunction of central nervous system (CNS) by secreting pro-inflammatory cytokines, such as tumor necrosis factor- α (TNF- α), interleukin (IL) -1 β and IL-6. M2 phenotype, the neuroprotective microglial phenotype, releases anti-inflammatory cytokines including IL-4, IL-10 and transforming growth factor- β (TGF- β) against inflammation-induced damage in the CNS. Further, peroxisome proliferator-activated receptor gamma (PPAR γ) is a nuclear transcription factor which regulates microglial polarization and inflammation. Our study aimed to investigate the role of PPAR γ in susceptibility to depressive disorder induced by stress in obese mice. Methods: Chronic unpredictable mild stress (CUMS) was performed to build wild-type (wt) mice and leptin-deficient (ob/ob) mice depression model. Depression-like behaviors and memory levels were evaluated by sucrose preference test, open field test, tail suspension test and Morris water maze test. Additionally, the activated microglial state, cytokines, NF- κ B expression, as well as PPAR γ expression in the prefrontal cortex and hippocampus were examined. Results: CUMS induced depression-like behaviors and spatial memory impairment, elevated pro-inflammatory cytokines, decreased anti-inflammatory cytokines, increased M1/M2 ratios of microglia, NF- κ B overexpression and down-regulation of PPAR γ expression in the prefrontal cortex and hippocampus in both wt and ob/ob mice. However, ob/ob mice exhibited severer behavioral disorders and higher levels of pro-inflammatory cytokines, M1/M2 ratios, NF- κ B activation, as well as lower levels of anti-inflammatory cytokine and PPAR γ expression compared to wt mice. Conclusions: Stressed obese mice displayed serious depression-like behaviors, higher levels of neuroinflammation and more downregulated expression of PPAR γ , which suggested that PPAR γ -mediated alteration of microglial activation phenotypes is related to the susceptibility to depressive disorder induced by stress in obese mice.

Keywords Depression, Obesity, Inflammation, Microglia, PPAR γ

胃肠道肿瘤患者失眠与心理困扰的关系： 应对方式与年龄的调节作用

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摘要 目的: 了解胃肠道肿瘤患者的心理困扰状况, 分析失眠与心理困扰的关系, 并探讨应对方式和年龄在二者关系中的调节作用。方法: 选取山东省某两所三级甲等医院胃肠外科的 352 名胃肠道肿瘤患者, 采用失眠质量指数 (ISI), 简易应对方式问卷 (SCSQ) 及 Kessler10 量表(K10)对患者进行评估; 运用 Pearson 相关分析及多元线性分层回归分析年龄、应对方式、失眠及心理困扰的关系, 并通过 Process 宏插件进行有调节的调节效应分析。结果: 胃肠道肿瘤患者的年龄范围为 26-87 岁, 平均为 58.32 (12.05) 岁, 心理困扰的平均得分为 21.29 (4.54) 分, 失眠与心理困扰正相关 ($r=0.510, P<0.001$), 与积极应对正相关 ($r=-0.225, P<0.001$), 与消极应对不相关 ($r=0.062, P>0.05$)。有调节的调节分析显示, 积极应对, 年龄和失眠的三元交互显著 ($\beta=0.104, P<0.05$); 消极应对, 年龄和失眠的三元交互显著 ($\beta=0.171, P<0.01$)。Johnson-Neyman 技术的结果显示积极应对只在 34 岁及以下患者的失眠与心理困扰的关系中起负向调节作用; 消极应对在 51 岁及以下患者的失眠与心理困扰的关系中起负向调节作用, 在 68 岁及以上患者中起正向调节作用。结论: 胃肠道肿瘤患者的心理健康状况较差, 失眠和心理困扰密切相关。年龄能够调节应对方式在失眠和心理困扰间的调节作用。具体来说, 在中青年人人群中, 积极应对或消极应对的水平越高, 失眠与心理困扰的关系越弱; 在老年人中, 消极应对水平越高, 失眠与心理困扰的关系更强, 而积极应对的水平不影响失眠与心理困扰的关系。

关键词 胃肠道肿瘤, 心理困扰, 失眠, 应对方式, 年龄

Relationship between insomnia and psychological distress among gastrointestinal cancer patients: The moderating effects of coping style and age

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Abstract: Objective: This study investigated the psychological distress of patients with gastrointestinal cancer, analyzed the relationship between insomnia and psychological distress, and explored the moderating effects of coping style and age in the relationship between insomnia and psychological distress. Methods: A total of 352 patients with gastrointestinal cancer were recruited to participate in this study from two tertiary hospitals of Shandong, China. They were assessed using the Insomnia Index (ISI), Simplified Coping Style Questionnaire (SCSQ) and Kessler10 scale (K10). Pearson correlation analysis and multiple linear regression were used to analyze the relationships between age, coping style, insomnia and psychological distress, and the Process macro was used to test the moderating effect. Results: The range of age among patients with gastrointestinal cancer was 26-87 years old, with a mean age of 58.32 (12.05) years old. The mean score of K10 was 21.29 (4.54). Insomnia was positively correlated with psychological distress ($r=0.510, P<0.001$), positively correlated with positive coping ($r=-0.225, P<0.001$), and not correlated with negative coping ($r=0.062, P>0.05$). The ternary interaction between positive coping, age and insomnia was significant ($\beta=0.104, P<0.05$), and the ternary interaction between negative coping, age and insomnia also was significant ($\beta=0.171, P<0.01$). The results of Johnson-Neyman technology showed that positive coping had a negative moderating effect on the relationship between insomnia and psychological distress in patients aged 34 and younger. Negative coping had a negative moderating effect in patients 51 years and younger and a positive moderating effect in patients 68 years and older. Conclusion: The psychological distress of gastrointestinal cancer patients is high and insomnia and psychological distress are closely related. Age can moderate the moderating effect of coping style on the relationship between insomnia and distress. Specifically, in middle-aged and the young patients, the higher positive coping or negative coping indicates a weaker relationship between insomnia and psychological

distress. In older people, the higher negative coping means a stronger association between insomnia and psychological distress.

Keywords: Gastrointestinal cancer, Psychological distress, Insomnia, Coping style, Age

不同人工智能模型在公立医院医生工作绩效预测中的应用

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摘要 背景 中国取得抗击新冠肺炎疫情胜利, 公立医院承担了最紧急、最危险、最艰苦的医疗救治工作, 发挥了主力军作用。提升医生个人工作绩效, 推动公立医院高质量发展, 为更好提供优质高效医疗卫生服务、防范化解重大疫情和突发公共卫生风险、建设健康中国提供有力支撑。目的 该研究旨在建立一种机器学习预测模型, 可用于医院管理者预测医生个人工作绩效, 针对性干预促进医院高质量发展。方法 2020年5月-10月对哈尔滨市八所公立三甲医院医生1600名进行问卷调查, 收集人口学特征和其他变量数据进行数据分析。在此基础上, 我们开发了一个医生工作绩效的预测模型。利用SMOTE方法增加小种群样本的数据, 每个数据根据大约9:1的比率随机分配到训练和测试集中。利用召回率、精度、F1分数、AUC下的面积确定了极端梯度提升树(XGBOOST)、支持向量机(SVC)和随机森林模型(RF)模型。结果 研究共纳入1509名被试, 其中240例(15.90%)为低工作绩效个体。重要度排序发现睡眠质量、婚姻状况、子女个数、开放性人格、感情承诺、成就动机、道德性人格、利他性人格、持续承诺等是医生工作绩效的重要预测特征。极端梯度提升树(XGBOOST)模型比其他模型具有更高的预测性能(AUC: 0.966, 精度: 0.983, 召回率: 0.952, 特异性: 0.923)。结论: 本研究建立的极端梯度提升树(XGBOOST)模型可准确识别低工作绩效的医生个体, 为医院管理者提供更个性化的干预建议, 有助于提升组织绩效, 推动医院高质量发展。

关键词 工作绩效, 公立医院, 医生, 机器学习

The Performance of Different Artificial Intelligence Models in Predicting job performance among physicians of public hospital

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Abstract: Background China had won the novel coronavirus pneumonia epidemic situation, and the public hospital had undertaken the most urgent, the most dangerous and the most difficult medical treatment work, and had played the main force role. We should pay attention to improving the personal performance of physicians, promote the high-quality development of public hospitals, and provide strong support for better providing high-quality and efficient medical and health services, preventing and resolving major epidemic and public health risks, and building a healthy China. Objective The purpose of this study was to establish a machine learning prediction model, which can be used for hospital managers to predict physicians' personal job performance and targeted intervention to promote the high-quality development of the hospital. Methods From May to October 2020, a questionnaire survey was conducted among physicians in eight public hospitals in Harbin. Demographic characteristics and other variable data were collected for data analysis. On this basis, we developed a prediction model of physicians' job performance. Synthetic Minority Oversampling Technology (SMOTE) was utilized to increase data for small population samples. Each datum was randomly assigned based on a ratio of about 9:1 into the training and test sets. XGBClassifier (XGB), Support Vector Machine(SVM) and Random Forest (RF) models were determined using recall, accuracy, F1 score and area under the receiver operating characteristic curve (AUC). Results: A total of 1509 subjects were included in the study, of which 240 cases were local performance individuals. In order of importance, we found that sleep quality, marital status, number of children, openness personality, emotional commitment, achievement motivation, conscientiousness personality, agreeableness personality, continuous commitment are important predictive

characteristics of physicians' job performance. The AUC of the XGB (0.971), SVC (0.901), and RF (0.955) models were found. The largest AUC among the three models was seen in the XGB model. XGB model has higher prediction performance than other models (AUC: 0.966; precision: 0.983; recall: 0.952; specificity: 0.923) Conclusion The XGB model established in this study can accurately identify individual doctors with low work performance, provide more personalized intervention suggestions for hospital managers, help to improve organizational performance and promote high-quality development of the hospital.

Keywords: Job performance, Public hospitals, Physician, Machine learning

利福昔明通过影响肠道菌群改善 CUMS 大鼠抑郁样行为

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摘要 目的: 探讨利福昔明对慢性不可预知温和应激 (CUMS) 抑郁模型大鼠的抗抑郁作用, 为治疗抑郁症提供理论依据。方法: 56 只 SPF 级雄性 Wistar 大鼠, 适应性喂养一周后, 随机分为对照组 (C)、慢性应激组 (U)、慢性应激+利福昔明组 (U+R) 和利福昔明组 (R)。采用 5 周慢性不可预知温和应激建立大鼠抑郁模型, 同时采用利福昔明灌胃作为干预手段。造模结束后, 采用蔗糖偏好实验, 旷场实验, 高架十字迷宫实验和 Morris 水迷宫实验检测抑郁样行为和学习记忆的改变。使用无菌 EP 管收集大鼠粪便样本, 提取分离肠道菌群 RNA, 然后采用 PCR 扩增 16SrRNA 的 V3-V4 区域后, 应用高通量测序分析大鼠肠道微生态组成, 考察各组大鼠肠道菌群丰度和多样性等的变化情况。以免疫组织化学、酶联免疫吸附实验、蛋白免疫印迹等方式检测前额叶皮质和海马中的 5-HT、色氨酸、IDO1、TPH2 和炎症细胞因子 (IL-6、TNF- α) 水平。结果: 慢性不可预知温和应激导致大鼠在行为学测试中表现出明显的抑郁、焦虑样行为和学习记忆功能损害。慢性应激降低前额叶皮质和海马中 5-HT 和 TPH 2 的水平, 增加促炎细胞因子、色氨酸和 IDO 1 的水平, 并导致肠道微生态发生紊乱。经利福昔明干预后, 可改善 CUMS 大鼠抑郁样行为, 且 5-HT、色氨酸、IDO1、TPH2 和炎症细胞因子的表达趋于正常, 肠道微生态趋于正常。结论: 利福昔明通过影响肠道菌群进而影响色氨酸代谢中 5-HT 的生成和降低神经炎症改善 CUMS 大鼠抑郁样行为。

关键词 利福昔明, 肠道菌群, 抑郁障碍, 5-HT, 神经炎症

Rifaximin improves depression-like behavior of CUMS rats by affecting the intestinal flora

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Abstract: Objective: To explore the antidepressant effects of rifaximin in depression animal model established with chronic unpredictable mild stress-induced (CUMS). Methods: fifty-six 21-day-old male Wistar rats after 7 days of acclimatization were randomly divided into four groups namely the control group (C), chronic unpredictable mild stress (CUMS) group (U), CUMS+Rifaximin group (U+R) and Rifaximin group (R). The rats in U and U+R group were received 5-week CUMS. Meanwhile, rifaximin was used as an intervention method. After molding, sucrose preference test, open field test, elevated plus maze test and Morris water maze test were used to detect alterations in depressive-like behaviours and memory impairment. Fecal samples were collected using the sterile EP tubes. The V3-V4 region of the 16SrRNA gene of the intestinal flora was amplified by PCR, after the RNA of intestinal flora were extracted and separated. High-throughput sequencing technic was applied to analyze composition of intestinal microflora and the changes of composition and diversity of intestinal flora in rats in each group. The expression levels of 5-HT, tryptophan, IDO1, TPH2 and inflammatory cytokines (IL-6, TNF- α) in the prefrontal cortex and hippocampus were measured by immunohistochemistry, enzyme-linked immunosorbent assay and western blotting.

Results: CUMS induced depressive and anxiety-like behaviors and memory impairment. CUMD induced increased levels of tryptophan and IDO 1 and proinflammatory cytokines in the prefrontal cortex and hippocampus, decreased levels of 5-HT and TPH 2, and disturbed the intestinal microecology. Rifaximin could relive depressive behaviors, the expressions of 5-HT, tryptophan, IDO1, TPH2 and inflammatory cytokines, and normalize the intestinal microecology. Conclusion: Rifaximin can affect the production of 5-HT in tryptophan metabolism and cytokines by affecting intestinal flora and then improve depressed behavior.

Keywords: Rifaximin, intestinal flora, depression, 5-HT, neuroinflammation

(2) “医学心理学专业委员会”口头报告分场 2

患者感知的医方共情对医患关系的影响：患者对医方信任的中介作用

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摘要 目的: 相互信任的医患关系对照护质量有重要影响。研究已经证实患者感知的医方共情和患者对医方信任对医患关系的影响。然而, 这些变量间的关系及潜在影响机制尚不明晰。因此, 本研究旨在探索患者感知的医方共情、患者对医方的信任及医患关系间的关系, 探究患者对医方信任可能的中介作用。方法: 研究采用中文版医方共情量表、维克森林医师信任量表和医患关系量表(患者版)对来自中国东部、中部和西部地区的 3289 名患者(有效回收率 68.6%)进行大样本调查。采用相关分析、Bootstrap 中介效应检验法等进行数据分析。结果: 患者感知的医方共情、患者对医方的总体信任、仁爱信任和技术信任、医患关系间均呈现正相关($r=0.49-0.75$, P 均 <0.01)。患者感知的医方共情、患者对医方的总体信任、仁爱信任和技术信任直接预测患者对医患关系的评价。患者感知的医方共情对患者对医方的总体信任、仁爱信任、技术信任有直接预测作用。中介效应分析显示, 患者对医方的总体信任在患者感知的医方共情和医患关系中起中介作用($b=0.18$, 95% CI=[0.15, 0.21])。具体而言, 患者对医方仁爱信任在患者感知的共情和医患关系间的中介作用显著($b=0.24$, 95% CI=[0.20, 0.28]), 患者对医方技术信任的中介作用不显著($b=0.01$, 95% CI=[-0.02, 0.02])。结论: 患者感知的医方共情可以直接影响或者通过患者对医方的仁爱信任间接影响医患关系, 说明患者对医方仁爱的关注以及医方共情在医患信任重建中的重要作用。

关键词 共情, 信任, 仁爱信任, 技术信任, 医患关系

The relationship between physician's empathy and physician-patient relationship: the mediation role of patient trust in physician

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Abstract: objective: a trustful physician-patient relationship is an essential component of high-quality care. the influence of physician's empathy and patient trust on physician-patient relationship has gained empirical support. however, relationship among these variables and underlying influencing mechanism remain unclear. this study aims to explore the relationship among physician's empathy, patient trust and physician-patient relationship, and mediation role of patient trust. methods: a cross-sectional survey was conducted. a total of 3289 patients (response rate 68.6%) recruited from eastern, central and western china completed questionnaire. physician's empathy, patient trust and physician-patient relationship were measured by chinese version of consultation and relational empathy scale, wake forest physician trust scale and patient-doctor relationship questionnaire, respectively. bootstrapped mediation

analysis was performed. results: all correlations were significantly positive across physician's empathy, patient all trust, patient trust in physician's benevolence and competence, and physician-patient relationship ($r=0.49-0.75$, all with $p<0.01$). patients' evaluation of physician-patient relationship was directly predicted by their perception of physician's empathy, patient overall trust, patient trust in physician's benevolence ($b=0.67$, $p<0.001$) and competence ($b=0.05$, $p=0.026$). patients' perception of physician's empathy could directly predict patient overall trust, and patient trust in physician's benevolence and competence. mediation analysis showed that the indirect effect of physician's empathy on physician-patient relationship through patient overall trust was significant ($b=0.18$, 95% $ci=[0.15, 0.21]$). specifically, the mediation effect of patient trust in physician's benevolence was significant ($b=0.24$, 95% $ci=[0.20, 0.28]$) and the mediation effect of patient trust in physician's competence was not significant($b=0.01$, 95% $ci=[-0.02, 0.02]$). conclusions: patients' perception of physician's empathy influences their evaluation of physician-patient relationship directly and indirectly via patient trust in physician's benevolence. the findings underline patients' attention to physician's benevolence and the significance of physician's empathy in rebuilding trust and harmonious relationship between physician and patient.

Keywords: physicians' empathy, patient trust in physician, patient trust in physician's benevolence, patient trust in physician's competency, physician-patient relationship

疫情爆发期间民众医患信任的恢复：一项潜转化分析

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摘要 目的: 近年来, 中国的医患矛盾已经侵蚀了公众对医生的信任, 中国的医患信任随着杀医伤医案件的爆发跌至谷底。但是, 自 2020 年 1 月以来, 与 COVID-19 大流行的斗争可能改变了公众对医护人员的看法。我们的研究探究了公众信任在疫情爆发后是否发生变化, 如果发生了是如何变化的, 以及封城、隔离的政策和社会支持如何促进公众对医生的恢复。方法: 采用具有全国代表性的纵向样本, 于 2020 年 2 月至 3 月在中国大陆 29 个省进行了基于人口的纵向研究。基线样本 ($N=3233$) 是在中国 COVID-19 传播最快的期间获得的 (2020 年 2 月 1 日至 9 日)。研究随访 ($N=1380$) 在疫情恢复期进行 (2020 年 3 月 17 日至 24 日)。排除 30 名地理位置发生改变的个体, 共得到 1350 名参与者在这两个时间点匹配的数据。使用 M-plus 7.0 的极大似然估计法估计了两个时间点民众对医生信任的潜剖面模型, 和一个潜在转化模型探究社会支持、风险感知对医患信任变化的影响。结果: 民众对医生的信任在疫情爆发期间有显著的改善。通过两个时间点的潜剖面模型发现, 两个 class 的潜剖面模型拟合最好, 参与者被分为中度信任组 (T1 时潜剖面类别概率为 21%, T2 时有 45% 转变为高信任组) 或高信任组 (T2 有 88% 保持在高信任组)。在有隔离经历的人群中 [$B = 0.52$, $p = 0.041$, 95% $CI (0.02-1.03)$, $OR = 1.68$], 以及在社会支持较高的人群中 [$B = 0.60$, $p = 0.001$, 95% $CI = (0.29-1.02)$, $OR = 1.83$] 观察到了从中度信任组到高信任组的转化。社会支持调节了向高信任潜剖面的转变。结论: 我国 COVID-19 疫情爆发和隔离经历与患者对医生信任度的提高有关。在突发公共卫生事件中, 公众对医疗服务提供者的信任可以恢复, 应利用社会支持和风险管理策略进一步促进维持医患信任。

关键词 潜转化模型, 突发公共卫生事件, 医患信任, 风险感知, 社会支持

The effects of the COVID-19 epidemic outbreak on public trust in physicians in China: A latent transition analysis

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Abstract: Background For over a decade, conflicts between physicians and patients in China have eroded public trust in physicians (PTP). The recent battle with the COVID-19 epidemic ongoing since January 2020 may have changed public perceptions. Our study investigated whether and how PTP changed since the outbreak and how lockdown experience and social support contributed to restoration of PTP. Methods A Population based, longitudinal study were

conducted in 29 provinces in mainland China with nationally representative longitudinal data from February to March, 2020. The baseline sample ($N = 3,233$) was obtained during the most rapid progression of COVID-19 in China (February 1 to 9). Study follow-up ($N=1,380$) took place during the recovery period (March 17 to 24). A total of 1,350 participants were matched between the two time points (30 participants were removed due to change of location). Two latent profile models and a latent transition model were estimated using robust maximum likelihood estimation (MLR) by M-plus 7.0. Results PTP significantly improved during the outbreak. Participants were classified into either a moderate trust (21% at T1; 45% transition into high group at T2) or a high trust (88% maintained at T2) in physicians' latent profile. A latent transition from the moderate trust to the high trust group was observed between baseline and follow-up in locked-down regions [$B = 0.52, p = 0.041, 95\% CI (0.02-1.03), OR = 1.68$] and among those with higher social support [$B = 0.60, p = 0.001, 95\% CI = (0.29-1.02), OR = 1.83$]. Social support moderated the transition to the high trust latent profile. Conclusion The COVID-19 epidemic outbreak and lockdown experience in China was associated with increased patient physician trust. The public trust can be restored in health care providers during a public health emergency and social support and risk management strategies should be utilized to further promote to maintain PTP.

Keywords: latent transition model, public health emergency, physician-patient trust, risk perception, social support

无法忍受不确定性成分与广泛性焦虑症状间关系的网络分析

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摘要 无法忍受不确定性（Intolerance of uncertainty, IU）被认为是广泛性焦虑（Generalized anxiety disorder, GAD）发展和维持的重要危险因素。目前研究大多使用自我报告量表总分来探究 IU 与 GAD（或担忧）之间的关系。然而，IU 是由不同的认知、情感和行为成分所组成的构念；GAD 是由认知、情感和躯体症状的组成的异质性综合症。本研究旨在探索 IU 不同成分与 GAD 不同症状之间的关系模式以及 IU 的哪些成分是 GAD 的核心危险因素，从而为相关预防和干预提供一定的参考。以陕西省某大学 624 名大学生为研究对象。采用无法忍受不确定性量表（IUS-12）测量 IU 各成分；采用广泛性焦虑量表（GAD-7）测量 GAD 各症状。使用软件 R 进行正则化偏相关网络的统计分析和可视化，特别关注网络中各个变量的预期影响（Expected influence）和桥预期影响（bridge expected influence）。结果表明，IU 社团内存在 4 条最强关联的边，如“无法预料的事情让我烦躁不安”和“我会因为无法得到所有需要的信息而感到沮丧”（正则化偏相关系数为 0.39）。GAD 社团内存在 2 条最强关联的边，如“由于不安而无法静坐”和“感到似乎将有可怕的事情发生而害怕”（正则化偏相关系数为 0.30）。在网络中，GAD 症状“对各种各样的事情担忧过多”和 IU 成分“我会因为无法得到所有需要的信息而感到沮丧”具有最高的预期影响。在 IU 社团中，“我会因为无法得到所有需要的信息而感到沮丧”具有最高的桥预期影响。在 GAD 社团中，“对各种各样的事情担忧过多”和“不能够停止或控制担忧”症状的桥预期影响最高。节点预期影响和桥预期影响的相关稳定性系数分别为 0.75 和 0.44。本研究揭示了 IU 不同成分与 GAD 不同症状之间的潜在关联路径以及 IU 的哪些成分是 GAD 的核心危险因素。这些结果为相关的预防和干预提供了潜在的靶点，如针对“它使我无法获得我需要的所有信息”可能比针对 IU 其他成分能更有效地减少 GAD 症状的严重程度。

关键词 无法忍受不确定性，广泛性焦虑，网络分析

The relations between different components of intolerance of uncertainty and symptoms of generalized anxiety disorder: a network analysis

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Abstract: Intolerance of uncertainty (IU) is considered as an important risk factor in the development and maintenance of generalized anxiety disorder (GAD). Yet, researches have investigated the relations between IU and GAD (or worry) using total scores on self-report measures. However, IU is a complex construct, consisting of beliefs, emotions, and behaviors. GAD is a heterogeneous syndrome characterized by different cognitive, affective, and physical symptoms. The purpose of this study is to explore the relations between different components of IU and symptoms of GAD, and which components of IU are the core risk factors of GAD, so as to provide some reference for related prevention and intervention. We recruited 624 college students from one university in Shaanxi Province. Components of IU were measured by 12-item Intolerance of Uncertainty Scale (IUS-12) and symptoms of GAD were measured by Generalized Anxiety Disorder 7-Item Questionnaire (GAD-7). Software R is used for statistical analysis and visualization of regularized partial correlation network. Specifically, we focused on the expected influence and bridge expected influence of each variable. The results showed that four strongest edges were between components of IU, like “Unforeseen events upset me greatly” and “It frustrates me not having all the information I need” (regularized partial correlation = 0.39). Two strongest edges were between symptoms of GAD, like “Being so restless that it is hard to sit still” and “Feeling afraid as if something awful might happen” (regularized partial correlation = 0.30). Symptom “Worrying too much about different things” and component “It frustrates me not having all the information I need” had the highest expected influences in the present network. In the community of IU, component “It frustrates me not having all the information I need” had the highest bridge expected influence. And in the community of GAD, symptoms “Worrying too much about different things” and “Not being able to stop or control worrying” had the highest bridge expected influence. The correlation stability coefficients of node expected influence and node bridge expected influence are 0.75 and 0.44, respectively. This study reveals potential pathways between different components of IU and various symptoms of GAD and which components of IU are the core risk factors of GAD. These results may provide some references for related prevention and intervention, such as targeting component “It frustrates me not having all the information I need” may be more effective at reducing symptoms of GAD than targeting other components of IU.

Keywords: Intolerance of uncertainty, Generalized anxiety disorder, Network analysis

4.7 生理心理学专业委员会

(1) “生理心理学专业委员会”口头报告分场 1

基于多元模式分类的大脑血氧信号复杂性分析 在多动性抽动症儿童诊断中的应用

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摘要 多动性抽动症是一种多发于儿童或青少年时期的神经障碍性疾病, 由于缺乏可靠的量化生理诊断指标, 当前多动性抽动症的诊断仍大多依赖对于症状的定性描述, 因此, 一种能够准确辨别多动性抽动症的生物标志物对于病患的及时诊断与干预有着重要的意义。大脑血氧信号复杂性作为一种反映环境适应能力的生理指标, 可用于区分包括注意缺陷多动障碍(ADHD)和强迫性神经官能症(OCD)这两种常见的抽动症并发症在内的多种神经性障碍。本研究的首要目的便是在此基础上探究血氧信号复杂性能否应用于多动性抽动症儿童的诊断中。此外, 考虑到当前的复杂性分析主要大多为单变量分析方法的局限性, 本研究的第二个目的是探究基于多元模式的复杂性分析方法的优点。本研究使用静息态功能磁共振成像(fMRI)技术采集了 25 名男性抽动症患儿和 25 名年龄、性别以及教育程度匹配的健康儿童对照的大脑静息态血氧水平依赖(BOLD)信号, 采用多尺度熵计算其大脑血氧信号复杂性。分别采用传统的单变量模式分析方法(独立样本 t 检验)和包含非线性支持向量机(SVM)分类算法的多元模式分析方法对组间复杂性差异进行分析。在此基础上, 采用相关分析探究不同分析方法获得的复杂性指标与患儿的症状严重程度(耶鲁综合抽动严重程度量表得分)的关系。结果显示: 1) 在左侧小脑、额上回、额内侧回, 患儿的血氧信号复杂性显著低于健康对照; 2) 在左侧壳核、右侧尾核、丘脑、双侧小脑以及多处皮质处, 多元模式分析能够以最高 94% 的准确性显著区分患儿和健康儿童的复杂性模式; 3) 由多元模式分析推导出的非线性复杂性指标在左侧小脑与右侧运动辅助区与患儿的症状严重程度呈现显著正相关。研究支持了抽动症的基底核-小脑-丘脑-皮质环路的病理学模型, 证明了多元模式分析方法在症状区分以及描述复杂性症状严重程度之间关系的优点, 说明了当结合多元模式分析方法后, 大脑血氧信号复杂性能够作为一种有效的抽动症诊断潜在生物标志物。

关键词 多动性抽动症, 复杂性, 血氧信号, 多元模式分析, 生物标志物

Multivariate Searchlight Classification of Brain Blood-Oxygen Signal Complexity Analysis for the Diagnosis of Children with Tourette syndrome

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Abstract: Tourette syndrome (TS) is a kind mental disorder which often occurs in childhood or adolescence. Due to the lack of reliable diagnostic biomarkers and it's the varied presentations or the interferences of other comorbidities of TS, TS diagnosis is still mainly dependent on the qualitative descriptions, therefore a proper biomarker is crucial for the early diagnosis and intervention of this syndrome. The complexity of brain blood-oxygen signal is a fundamental feature of dynamic biological systems reflecting the ability to adapt and function in an ever-changing environment. Results from a number of researches have shown that the complexity of brain blood-oxygen signal can

successfully identify the abnormal brain regions related to the pathophysiology of certain neuropsychiatric disorders, including attention deficit hyperactivity disorder (ADHD) and obsessive compulsive disorder (OCD), which are two common comorbid disorders of TS. Hence the first goal of our study is to further explore whether it can be used for the TS discrimination. Besides, considering the limitation of the widely used univariate analysis in the complexity analysis, the second goal of our study is to explore the potential advantages of applying multivariate analysis in the complexity analysis. The resting state brain blood-oxygen-level-dependent (BOLD) signals of 25 male children with TS and 25 age-gender-education degree matched healthy controls (HCs) were obtained using the resting state functional magnetic resonance imaging (fMRI) technique. Multiscale entropy was selected as the complexity measure of BOLD signals. Both traditional univariate analysis (independent sample *t* test) and multivariate searchlight analysis with non-linear SVM classification method were used to explore the group differences in the complexity of resting state BOLD signals between 25 TS boys and 25 HCs. Correlation analysis between TS severity in TS patients (YGTSS scores) and different complexity indices derived from different analysis method was further conducted. The results showed: 1) significant complexity reduction exhibited in TS patients in the left cerebellum, left superior frontal gyrus and left medial frontal gyrus; 2) significant classification accuracies for the complexity pattern were found in the left putamen, right caudate, right thalamus, bilateral cerebellum and several regions of the cortex; 3) significant correlations between YGTSS scores were only found with the non-linear complexity index derived from the multivariate searchlight analysis with non-linear classification methods in the left cerebellum and right supplementary motor area. Our study supports the model of basal ganglia-cerebellar-thalamo-cortical for the pathophysiology of tics and demonstrates the advantages of multivariate analysis in the TS discrimination and the description of the associations between TS severity and complexity. Taken together, these results suggested that combined with multivariate searchlight classification, complexity is of potential clinical utility as a biomarker for TS diagnosis.

Keywords: Tourette syndrome, complexity, blood-oxygen signal, multivariate analysis, biomarker

知觉负载对注意增强前脉冲抑制的影响

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摘要 突发地, 强听觉刺激(脉冲刺激)能够引发个体的惊吓反射, 当事先一段时间内出现一个弱刺激(前脉冲刺激), 个体的惊吓反射会被显著的抑制。这一现象被称为前脉冲抑制(prepulse inhibition, PPI)。以往研究发现 PPI 受个体注意水平的调节, 即注意前脉冲刺激时 PPI 会大于非注意条件下的 PPI。然而, 现有研究多对前脉冲刺激的特征或空间位置来操控注意水平高低, 缺少通过知觉负载操控注意水平来检测 PPI 变化。本研究采用视觉知觉负载任务, 屏幕上呈现 4 种颜色和 4 种形状的随机组合色块, 低负载任务要求被试判断是否出现特定颜色或形状的色块, 高负载任务要求被试判断特定颜色和形状组合的色块是否存在。在视觉任务中同步出现前脉冲刺激和脉冲刺激, 为了控制被试对前脉冲刺激的注意水平, 在每段任务中会持续播放宽带背景噪声, 并采用双耳时间差操控前脉冲刺激和背景噪声的相对知觉空间位置。当背景噪声与前脉冲刺激的知觉空间位置相同时, 称之为知觉空间重合(perceptual spatial co-location, PSC), 听者对前脉冲刺激的觉察较难。当背景噪声与前脉冲刺激的知觉空间位置不同时, 称之为知觉空间分离(perceptual spatial separation, PSS), 听者对前脉冲刺激的觉察较易。实验测量高低负载水平下被试在不同知觉空间条件下的听觉 PPI 水平。结果发现高负载条件下被试对目标刺激判别的反应时会显著高于低负载条件下的反应时, 但正确率没有显著差异, 这说明知觉负载任务的操控是有效的。对 PPI 进行两因素(2 负载水平 * 2 知觉空间位置)重复测量方差分析, 结果发现知觉负载主效应显著, 即低负载水平下的 PPI 显著高于高负载水平下 PPI, 而知觉控制位置主效应不显著。两因素的交互作用显著, 简单效应分析表明仅当低负载水平下知觉空间分离的 PPI 大于知觉空间重合下的 PPI, 高负载条件下二者没有显著差异。上述结果说明 PPI 的注意调节受跨通道知觉负载的影响, 高负载视觉任务会占用被试的注意资源进而降低对前脉冲刺激的加工, 表现出更低水平的 PPI。此研究通过知觉负载操控进一步验证 PPI 能够被个体注意水平所调节。

关键词 前脉冲抑制, 知觉负载, 注意调节, 知觉空间位置

The effect of perceptual load on attentional enhancement of prepulse inhibition

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Abstract: A sudden and intense aural stimulus (pulse) can trigger the individual's startling response, which is significantly inhibited when a weak stimulus (prepulse) is presented before a period of time. This phenomenon is known as prepulse inhibition (PPI). Previous studies have found that PPI is modulated by the attention of prepulse. In other words, PPI in the attended condition is larger than PPI in the unattended condition. However, most of the studies control the level of attention to detect PPI changes by the feature or spatial location of the prepulse, not by manipulating perceptual load. In this study, a visual perception load task was used, in which 4 colors and 4 shapes were combined and presented randomly on the screen. The low-load task required the subjects to judge whether a certain color or shape appeared, while the high-load task required the subjects to judge whether a certain color or shape combination existed. To controlling attention on prepulse, the background noise was continued to play in each trial, and the interaural time difference was used to control the relative perceptual spatial position of the prepulse and the background noise. When the perceptual spatial position of background noise and the prepulse are the same, which is called perceptual spatial co-location (PSC), the listener is difficult to detect the prepulse. When the perceptual spatial position of the background noise is different from that of the prepulse, it is called perceptual spatial separation (PSS). The listener can detect the prepulse more easily. PPI was measured under different perceptual spatial positions under high/low load conditions. The results showed that the PPI under high load condition was significantly higher than that under low load condition, but there was no significant difference in the accuracy, which indicated that the control of perceptual load task was effective. Two ways repeated measurement ANOVA (2 load level * 2 perceived spatial position) was performed on PPI. The results showed that the main effect of perceptual load was significant, that is, the PPI under low load level was significantly higher than that under high load level, while the main effect of perceived control position was not significant. The interaction between the two factors was significant. Simple effect analysis showed that PPI of PSS was larger than PPI of PSC only under low load condition, but there was no significant difference under high load condition. These results suggested that the attentional modulation of PPI was affected by cross-model perceptual load, and the high-load visual task would occupy the attention resources and reducing the processing of prepulse, showing a lower level of PPI. This study further verified that PPI could be modulated by attention through perceptual load task.

Keywords: prepulse inhibition, perceptual load, attentional modulation, perceptual spatial position

人类听皮层中的空间关系表征——颅内电生理证据

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摘要 声源空间位置是声信号的基本属性, 也是人类听觉系统的加工目标之一。当环境中同时存在多个声信号时, 声源之间的空间关系便成为理解整个复杂听觉场景的重要线索。但是, 听皮层如何表征空间关系目前尚不明确。本研究通过高时空分辨率的颅内电生理记录技术, 在 22 例癫痫患者中初步探讨了听觉脑区对声源空间关系的表征机制。我们使用头相关传递函数分别处理男声与女声的音节/da/, 构建出不同空间关系的听觉刺激, 并由此筛出 295 个具有显著听觉反应的电极触点, 主要分布在颞横回 (n = 39)、颞上回 (n = 127)

与后岛叶皮层 ($n = 80$)。针对每一个电极触点,我们提取颅内脑电信号中与本地神经元活动密切相关的高频伽马 (high gamma, 60 – 150 Hz) 成分,并计算不同空间关系条件之间的神经表征差异矩阵 (representational difference matrix, RDM),观察可见几种反复出现的 RDM 模式。进一步对所有电极的 RDM 进行无监督聚类分析,得出了 5 种典型模式,分别反映 3 类不同的空间表征偏好,包括 (1) 单侧空间偏好,即当两个声音均位于左侧或右侧空间时电极反应最特殊; (2) 特定声源身份-空间组合偏好,即神经反应选择性地偏好“同侧男声对侧女声”或“同侧女声对侧男声”; (3) 相对空间关系偏好,即电极对声源空间重合和空间分离的反应存在差异。三种空间表征偏好在皮层中的分布也存在差异,其中对单侧空间具有选择性的电极最多 (48%),符合前人研究描述的听皮层特点;表征声源身份-空间组合 (38%) 与相对空间关系 (14%) 的电极相对较少,后者相对于前者多集中在颞叶靠后的位置,提示后侧颞叶对空间关系加工的特殊贡献。有趣的是,统计各个脑区中各类空间偏好的占比后发现,有 18% 的初级听皮层电极表现出了对相对空间关系的表征,该占比与前人动物电生理研究中发现的表征相对空间关系的神经元占比接近。该结果表明,人类听皮层中存在复杂多样的听觉空间表征机制,这可能是支撑人类优秀空间听觉能力的神经基础。

关键词 听觉空间, 听皮层, 颅内脑电

Neural Representation of Relative Spatial Location in Human Auditory Cortex – Evidence from Intracranial Recordings

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Abstract: The location of the sound source is a fundamental feature of auditory signals and one of the primary computational goals of the human auditory system. When multiple sound streams exist, the relative spatial location of sound sources provides essential information for us to understand the complex auditory scene. However, how the auditory cortex encodes this spatial relationship remains an open question. Using intracranial electroencephalogram (iEEG) with high spatial and temporal resolutions, we probed the neural representation of auditory space in auditory cortices from 22 subjects with epilepsy. For sound stimuli, we used the head-related transfer function to construct auditory scenes that contained different spatial relationships between a male and a female-speaking syllable /da/. We collected 295 electrode contacts with significant auditory responses. These electrodes covered auditory areas, including Heschl's gyrus ($n = 39$), superior temporal gyrus ($n = 127$), and posterior insula ($n = 80$). We extracted the high gamma (60 – 150 Hz) component of the iEEG signals closely related to local neural processing and calculated the representational difference matrix (RDM) for each contact. We observed repeated patterns of RDM across contacts and further extracted these patterns using unsupervised clustering analysis. The clustering algorithm revealed five RDM patterns that likely represented three different spatial preferences. The first one showed a preference towards hemifields, with contacts exhibited special responses to conditions where both sounds localized in the left or right hemifield. The second one showed a preference toward specific identity-localization combinations, with contacts exhibited special responses to “left male/right female” or “left female/right male” conditions. The third showed a preference toward relative spatial relationships, with contacts exhibited differential responses to spatial co-localization and separation. The three types of representation had different anatomical distributions. Most contacts (48%) showed a preference towards hemifields, consistent with previous findings that most cortical neurons have broad spatial tuning to contralateral space. Meanwhile, relatively fewer contacts showed a preference towards identity-location combinations (38%) and relative spatial relationships (14%), with the latter had a more posterior distribution, suggesting a special role for posterior temporal areas in the processing of relative sound location. Interestingly, by examining the ratios within each auditory area, we found that 18% of contacts in the primary auditory

cortex displayed representation of relative sound location, which was close to the proportion revealed by previous single-unit recordings in animals. These results revealed a functional heterogeneity of spatial processing in the human auditory cortex, which could serve as the neural substrate of our outstanding performance in spatial hearing.

Keywords: auditory space, auditory cortex, intracranial electroencephalogram

阳虚质个体对应激情境的情绪和 HRV 反应

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摘要 中医理论认为, 体质是个体在先天禀赋和后天获得的基础上形成的形态结构、生理功能和心理状态方面相对稳定的特质。当体质平衡遭到破坏, 个体就会对某些致病因素具有易感性。阳虚体质个体容易罹患抑郁、焦虑等心理问题。本研究采用《中医体质量表》、《抑郁自评量表》、《焦虑自评量表》筛选没有抑郁、焦虑症状的 26 名阳虚质和 31 名平和质大学生为被试, 运用特里尔社会应激任务(Trier Social Stress Test, TSST)创设应激情境, 以主观情绪体验、心率变异性等指标考察阳虚质个体的应激反应模式, 为分析阳虚质个体对心理问题的易感性提供依据。整个实验包括 5 个阶段: 静息期、应激任务期(准备期、演讲期、心算期)和恢复期。对正性情绪、负性情绪、应激感知得分进行 2(组别:阳虚质、平和质)×5(实验阶段:静息期、准备期、演讲期、心算期、恢复期)的重复测量方差分析。结果表明, 组别×实验阶段交互作用显著, 阳虚质比平和质个体在应激任务中感受到更多的负性情绪($F=11.45, P=0.001$)和压力体验($F=7.37, P=0.001$)。对 HRV 指标进行 2(组别:阳虚质、平和质)×5(实验阶段:静息期、准备期、演讲期、心算期、恢复期)的重复测量方差分析。结果表明, LF/HF 指标的组别×实验阶段交互作用显著($F=5.54, P=0.01$), 阳虚质个体在演讲期、心算期的 LF/HF 比值显著高于对照组。本研究结果表明, 阳虚质个体从应激情境中体验到更多负性情绪, 且交感神经系统功能亢进, 是导致其对心理问题易感性的重要原因。

关键词 中医体质, 阳虚质, 应激, 心理问题

Emotional and HRV Responses of Yang-deficiency Individuals to Acute Stress

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Abstract: According to the theory of traditional Chinese medicine, constitution is the relatively stable trait in terms of morphological structure, physiological function and psychological state formed on the basis of innate endowment and acquired. When the physical balance was destroyed, individuals would be susceptible to some pathogenic factors. Individuals with Yang deficiency constitution were prone to depression, anxiety and other psychological problems. In this study, 26 Yang-deficiency and 31 balanced constitution college students without depression and anxiety symptoms were selected by Constitution of Chinese Medicine Questionnaire, Self-Rating Depression Scale and Self-Rating Anxiety Scale. Trier Social Stress Test was used to create stress environment, heart rate variability (HRV) and other indicators were used to investigate the stress response of Yang-deficiency individuals. The whole experiment includes five stages: resting period, stress task period (preparation period, speech period, mental arithmetic period) and recovery period. The 2(groups: Yang-deficiency, balanced constitution) × 5(experimental stages: resting period, preparation period, speech period, mental arithmetic period, recovery period) repeated measurement ANOVA was used to analyze the scores of positive emotion, negative emotion, stress perception and HRV. The results showed that the interaction effects were significant for negative emotions and stress experience. Yang-deficiency individuals felt more negative emotions ($F = 11.45, P = 0.001$) and stress experience ($F = 7.37, P = 0.001$) during the stress task. The interaction effect was also significant for LF / HF ratio ($F = 5.54, P = 0.01$), values of Yang-deficiency individuals were significantly higher in the speech stage and mental arithmetic stage.

Yang-deficiency individuals experienced more negative emotions to stress, and their sympathetic nervous system were overactivated, which lead the susceptibility to psychological problems.

Keywords: TCM Constitution, Yang-deficiency, stress, psychological problems

右侧额顶区联合 theta 交流电刺激对空间能力的影响

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摘要 右侧额顶区 theta 脑波的功能连接，是空间工作记忆（Visual-spatial working memory, vsWM）的重要电生理基础。近来研究将经颅交流电刺激（Transcranial alternating current stimulation, tACS）应用于 vsWM 的电生理研究中，一方面该技术有助于建立 vsWM 与该功能连接的因果关系，另一方面该技术为增强个体 vsWM 提供了新思路。已有研究报告右侧额顶区 theta 的 tACS 刺激对 vsWM 的影响，但存在以下未知。1，vsWM 与诸多空间能力相关（如心理旋转，mental rotation，MR），尚且未知观察到的效应是 vsWM 特异性的改变还是空间能力广泛性的改变。2，现有研究未使用高空间精度的交流电刺激，右侧额顶区的刺激同时也会对其他脑区造成影响，因此无法得知实验结果是否完全由右侧额顶区的变化引起。3，从刺激方案的频率属性来讲，理论上有两种方案，即减慢 theta 方案（Slow）和强化个体固有 theta 方案（Tune），尚未有研究比较这两种方案。基于此，本研究招募 20 名成人被试，采用被试内实验设计，每人完成 3 种在线 tACS 条件，即 Slow 条件、Tune 条件、及 Sham 条件。tACS 由 2 组 2×1 电极阵诱发，放置于右侧的额叶及顶叶。在 Slow 中，刺激频率被设定为 4 赫兹且额顶同相位。不同于 Slow，Tune 中使用的频率取决于个体在前测 vsWM 中，theta 频段的额顶功能连接特征。而 Sham，仅在实验开始前后 90 秒内出现 6 赫兹刺激。在每种条件下，被试需要先后完成三个任务：vsWM、MR、数学运算，记录正确率及反应时。在刺激前后，记录每名被试的静息脑电，预处理后使用 phase-locking value 的方法计算额顶区功能连接。相比 Sham，Tune 显著提升了 vsWM ($F(1, 19) = 5.103, p < 0.05, \eta_p^2 = 0.212$) 及 MR ($F(1, 19) = 5.332, p < 0.05, \eta_p^2 = 0.219$) 的成绩，而没有显著改变数学能力。相比之下，Slow 并未显著改变三类任务表现。静息脑电的结果类似，Tune 显著提升了右侧 ($F(1, 19) = 8.045, p < 0.05, \eta_p^2 = 0.297$) 和中侧 ($F(1, 19) = 8.725, p < 0.001, \eta_p^2 = 0.315$) 额顶区的功能连接，而 Slow 没有诱发出显著差异。综上，本研究支持了右侧额顶交流电刺激对 vsWM 的影响。而这种提升可能是基于空间能力的广泛提升，从而支持了 vsWM 与 MR 的共同通路假说。但这种效果仅在刺激频率为个体特有 theta 频率时才可诱发。在此基础上，本研究也为优化 Slow 方案提供了方向。

关键词 经颅交流电刺激，theta，空间工作记忆，心理旋转，空间能力

The effect of right fronto-parietal theta tACS on spatial abilities

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Abstract: The right fronto-parietal theta connectivity is an important electrophysiological underlying of visual-spatial working memory(vsWM). Recent studies highlight the use of transcranial alternating current stimulation(tACS) in vsWM research given its potentials in offering casual explanations and a new approach to enhancing vsWM performance. Indeed, research already showed the effects of theta tACS on vsWM; however, existing evidence has the following limitations. Firstly, vsWM is broadly correlated with various spatial abilities (e.g. mental rotation, MR). It is unknown if the observed effect is specific on vsWM or the common spatial ability. Secondly, given that the observed effect was not derived from high-definition tACS, the alleged “right fronto-parietal tACS” in previous studies may also stimulate other brain regions. Thus, it is not clear if the observed effect is entirely attributed to the change of the right fronto-parietal connectivity”. Thirdly, concerning the temporal setting of tACS, there are two approaches to intervening vsWM – slowing down theta oscillations (Slow) and strengthening the individual-specific theta oscillation (Tune). However, the two protocols have not been compared. Hence, the current study recruited 20

adults and adopted a within-subject design. Each participant completed 3 online tACS conditions – Slow, Tune, and Sham. tACS protocols were deployed with 2 sets of 2 by 1 electrodes on right fronto-parietal regions. In Slow, the frequency of tACS was set to 4 Hz, and the fronto-parietal stimulation was in phase. Tune was similar to Slow but the setting that the frequency of Tune depended on the theta connectivity feature demonstrated in a vsWM task before tACS. In contrast, Sham involved the stimulation of 6 Hz only in the first and last 90 seconds. In each condition, participants were guided to complete 3 tasks: vsWM, MR, and arithmetics. Accuracy and response time were recorded. Besides, resting-state electroencephalography (rs-EEG) was recorded immediately before and after each stimulation. After preprocessing, the phase-locking value was calculated to measure fronto-parietal connectivity. Compared to Sham, Tune significantly improved vsWM ($F(1, 19) = 5.103, p < 0.05, \eta_p^2 = 0.212$) and MR ($F(1, 19) = 5.332, p < 0.05, \eta_p^2 = 0.219$) but not arithmetics. Slow did not show any improvements. Similarly, Tune significantly improved right ($F(1, 19) = 8.045, p < 0.05, \eta_p^2 = 0.297$) and middle ($F(1, 19) = 8.725, p < 0.001, \eta_p^2 = 0.315$) fronto-parietal connectivity and Slow did not show such effects. In sum, this study supports the effect of right fronto-parietal tACS on vsWM. However, the effect is not vsWM specific – it may derive from the change on the common spatial ability, which further supports the common mechanism of vsWM and MR. It should be noted that the effect was only elicited by individual-specific frequency, which provides directions for optimizing the Slow protocol.

Keywords: Transcranial alternating current stimulation, Theta, Visual-spatial working memory, Mental rotation, Spatial ability

4.8 体育运动心理专业委员会

(1) “体育运动心理专业委员会”口头报告分场 1

注意焦点可以预防运动领域的自我损耗吗？

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摘要 运动员大赛最佳竞技表现的核心是良好的自我控制(张力为, 2013)。自我控制的力量模型提出，自控资源是一种有限的共用资源，一旦使用就会损耗，出现自控能力暂时下降的现象，即产生“自我损耗”(Baumeister et al., 1998; Englert & Bertrams, 2013)。在竞技领域的激烈比赛中，由于运动员必须时刻做到高度自控，因此，如何预防运动员的自我损耗是当前面临的严峻挑战(张力为, 张连成, 2013)。注意焦点干预为预防自我损耗提供了研究思路，该领域研究表明，相比于内部焦点(即个体对自己身体动作的关注，如高尔夫挥杆时的手臂摆动)，外部焦点(即个体对动作产生效果的关注，如高尔夫挥杆时的球杆摆动)可以促进动作执行的自动化，进而可以减少资源消耗，并提升运动表现(Wulf, 2013)。基于上述观点，研究拟采用“双任务”范式考查注意焦点能否预防自我损耗，即在个体完成自我损耗的诱发任务时，实施注意焦点干预，以期减少个体在这一任务上的资源消耗，使其在后续自我损耗的探测任务上具有更充足的资源，从而具有更好的自控表现。实验招募了 34 名运动等级为二级及以上的大学生运动员，采用单因素 3 水平组间实验设计。首先，完成 Operation 手眼协调动作自控任务(Alquist et al., 2020)，在完成该任务时随机接受不同的注意焦点干预：控制组(12 名)为“请又快又好地完成任务”；内部焦点组(10 名)为“务必关注你的手，请又快又好地完成任务”；外部焦点组(12 名)为“务必关注小镊子，请又快又好地完成任务”。然后，完成神经激活逆反应运动自控任务(李丹阳, 张力为, 2020)。结果表明，相比于控制组和内部焦点，外部焦点干预减少了个体在 Operation 任务上的资源消耗，使其在完成神经激活逆反应任务时具有更充足的资源，自我控制表现更好，具体为在该任务的反应时和正确率上表现更佳。研究提示，在运动领域的自我控制任务中，注意焦点可以作为一种经济、有效的干预

手段, 通过促进个体动作执行的自动化, 进而减少自控资源消耗, 从而预防个体在上一任务上的自我损耗, 最终改善其在后续任务上的自我控制表现。

关键词 注意焦点, 动作自动化, 自我损耗, 自我控制

Can Attentional Focus Help to Prevent Ego Depletion in Sports?

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Abstract: The core of athletes' best competitive performance is good self-control (Zhang, 2013). How to improve athletes' self-control ability is an urgent concern of the practitioners of competitive sports. The strength model of self-control proposes that all acts of self-control are dependent on a global energy resource. The capacity of this resource is considered to be limited and can temporarily become depleted after an exertion of self-control (a state referred to as *ego depletion*), meaning that there is less capacity available for subsequent acts of self-control for a certain amount of time afterward, which leads to poorer self-control in secondary tasks in the meantime (Baumeister et al., 1998; Englert & Bertrams, 2013). As athletes must achieve a high degree of self-control at all times in fierce competitive sports, thus how to prevent athletes' ego depletion is a severe challenge currently facing (Zhang & Zhang, 2013). Among the different procedures, the attentional focus is a promising one. Empirical evidence has amassed for the benefits of adopting an external focus on the intended movement effect (e.g., focus on the pendulum-like motion of the golf club) relative to an internal focus on body movements (e.g., focus on the swing of your arms). These findings indicate that an external focus promotes automaticity in movement control, with the consequence that reduced information processing demands and enhanced the effectiveness and efficiency of motor performance (Wulf, 2013). Following the line of arguments, the present study aimed to examine whether the intervention of attentional focus might prevent the effects of ego depletion by applying the dual-task paradigm: attentional focus circumvents the need for self-control in the first task used to induce ego depletion, which makes the individual reserve more sufficient resources to cope the subsequent self-control tasks. Given that, the individual will have better self-control performance in the secondary task. Thirty-four collegiate athletes were randomly assigned to one of the following three groups, which differed only in the way that the Operation task, an attentionally demanding perceptual-motor task requiring hand-eye coordination (Alquist et al., 2020). Participants completed the Operation task in different attentional focuses: control (i.e., please complete the task fast and well; $n = 12$), internal focus (i.e., focus on your hand, please complete the task fast and well; $n = 10$), and external focus (i.e., focus on the tweezer-like device, please complete the task fast and well; $n = 12$). Immediately after completion of the first task, participants were asked to complete the second task, the "nerve activation inverse reaction" task, which requires the individual to inhibit the habitual response in a sport task (Li & Zhang, 2020). Results showed that external focus removed the drain on the self-control resource usually imposed by the Operation task and made individuals possess sufficient resources to perform more quickly and accurately on the subsequent "nerve activation inverse reaction" self-control task, compared with control and internal focus. The present study demonstrates that a brief intervention of attentional focus promotes the automatization of movement execution, reduces the resource demand, so that prevents the effects of ego depletion, and improves self-control performance.

Keywords: attentional focus, movement automatization, ego depletion, self-control

压力对运动任务中定向注意的影响

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摘要 注意控制理论认为注意对压力下的运动表现起着非常重要的作用, 但缺少直接证据支持注意是压力与运动表现间的中介变量。定向注意包括早期和晚期两个阶段, 运动领域常见的时间压力和奖惩压力主要影响早期的注意定向阶段还是晚期的注意脱离阶段尚需考查。研究一通过两个实验分别检验时间压力和奖惩压

力对飞镖任务中定向注意的影响,参与者为非飞镖或射击项目运动员。实验1共64名参与者,采用两因素混合设计探讨时间压力对定向注意的影响,结果显示:无论时间压力高低,相对于任务目标,干扰目标引发的注意定向更多,未支持注意控制理论;实验2共40名参与者,采用单因素组内设计,探讨奖惩压力对定向注意的影响,结果显示:无论在何种奖惩压力下,相对于任务目标,干扰目标引发的注意定向更少;只有在奖赏压力下,干扰目标引发的注意脱离更加困难,部分支持了注意控制理论。研究二包含实验3和实验4,分别邀请112和66名非飞镖或射击项目运动员,使用虚拟现实下的射击任务,对研究一的结果进行重复性检验。结果显示:20项因变量指标中,在差异检验的方向上有14项指标的结果得到重复,重复率为70%。对两个研究的结果进行迷你元分析,结果发现:时间压力和奖惩压力对定向注意的影响都体现在注意脱离阶段。具体来说,相较于低时间压力,高时间压力导致对干扰目标的注意脱离更加困难,效果量处于中等水平;对任务目标的注意脱离更快,效果量较大。相较于惩罚压力,奖赏压力能够导致干扰目标引发的注意脱离更慢;奖赏在与惩罚的竞争中占据优势,且效果量较大。综上所述,本研究得出以下结论:高时间压力抑制目标导向的注意系统,激活刺激驱动的注意系统,主要表现在晚期注意脱离阶段,使对任务目标的注意脱离更快,对干扰目标的注意脱离更慢。奖惩压力激活刺激驱动的注意系统,主要表现在晚期注意脱离阶段,使干扰目标引发的注意脱离更加困难,且奖赏目标在与惩罚目标的竞争中占有优势。

关键词 时间压力;奖惩压力;定向注意;迷你元分析

Effect of Stress on Orientation of Attention in Sports

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Abstract: Attention often concerned with pressure and performance as a third variable. The causal relationship between these variables, however, is not entirely clear. Whether the negative pressure effect occurs at the early stage of attentional engagement or at the late stage of attentional disengagement needs further explore. We sought to examine the completion cycle between reward and punishment, and how they were moderated the flow from top-down to bottom-up. For study 1, two experiments were organized via a dart-throw task to investigate the effects of time pressure and reward-punishment pressure upon orientation of attention. In experiment 1, a between-within subject design was used to investigate the impact of time pressure on orientation of attention. The findings revealed that the distractors displayed an advantage of attention disengagement over the task target independent of the time constraint. In experiment 2, a two-factor within-subject design was selected to examine the effect of reward-punishment pressure on orientation attention. The findings exposed that the distractors cause more attentional engagement and the length of the distractors under the reward condition was longer. Study 2 was performed using virtual reality to repeat the results of study 1. The outcomes discovered that 14 of the 20 outcomes were replicated in the same direction. The probability of replicated test results was 70%. A mini meta-analysis was done on the results of the two studies. Results showed that the effects of time pressure and reward-punishment pressure on orientation of attention were reflected in the attention disengagement stage. In detail, compared with low time pressure, high time pressure led to more difficult attention disengagement from distractors, the effect size was at a medium level. Compared with punishment pressure, reward pressure can cause attention disengagement from distractors more slowly. Reward has the advantage in the competition with punishment, and the effect size was large. In summary: Time pressure inhibited top-down attention system and activated the bottom-up attention system mainly in the attentional disengagement stage. In detail, the attentional disengagement from targets went faster and the attentional disengagement from distractors went slower. Reward-punishment pressure activated the bottom-up attention system mainly in the attentional disengagement stage. In detail, the attention disengagement from distractors went more difficult and reward targets had an advantage in the competition between punishment targets.

Keywords: Time Pressure, Reward-Punishment Pressure, Orientation of Attention, Mini Meta-analysis

网球运动员运动记忆的表征更新机制

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摘要 目的：众所周知，运动专家具有超强的运动记忆能力，探讨运动员超强运动记忆背后的表征更新机制，可以丰富运动记忆相关的理论与实践内容。方法：采用专家——新手范式，选取 24 名体育学院网球运动员（依据运动水平将其分为专家组和新手组）为实验对象，采用 N-back 实验范式，结合网球比赛图片设置运动实验情境，运用美国 Neuroscan 脑电记录系统对不同水平网球运动员在不同记忆负荷下的运动记忆表征更新的行为和脑神经活动特点进行比较。结果：行为结果显示：在高记忆负荷下，不同水平网球运动员准确率的组别主效应显著（ $F_{(1, 22)}=15.857$ ， $P<0.05$ ， $\eta^2=0.419$ ），专家组的准确率高于新手组；在同等记忆负荷下，不同水平网球运动员反应时的组别主效应显著（ $F_{(1, 22)}=5.303$ ， $P<0.05$ ， $\eta^2=0.194$ ），专家组的反应时短于新手组；ERPs 结果显示：在高记忆负荷下，不同水平网球运动员在特定脑区所诱发的 P3 和 PSW 峰波幅组别主效应显著，专家组波幅明显高于新手组。在同等记忆负荷下，不同水平网球运动员诱发的 P3 和 PSW 峰潜伏期组别主效应显著，新手组潜伏期明显晚于专家组。结论：高水平网球运动员在将新刺激与长时记忆中的动作技能套路相组化过程中，提取长时记忆中已有的相应动作模式较迅速，其可能的神经机制为大脑皮层特定脑区诱发产生的 P3 和 PSW 潜伏期较早；随着任务难度的增加，高水平网球运动员的运动记忆表征更新程度明显增加，用于运动记忆表征更新的心理运算资源更多，其可能的神经机制为大脑皮层特定脑区诱发产生 P3 的脑神经活动水平较高。

关键词 网球运动员，运动记忆，记忆负荷，事件相关电位

Study on the Mechanism of Representation Updating of Tennis Athletes' Motor Memory

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Abstract: Objective: As we know, the athletes possess great motor memory. In this study, we explored the representation updating mechanism of tennis players' great motor memory, in order to enrich the theories and practice of motor memory. Methods: Using the expert novice paradigm, 24 tennis players (divided into expert group and novice group according to their sports level) were selected as the experimental objects. The n-back experimental paradigm was used to set the exercise experimental situation combined with the pictures of tennis matches. The representation of motor memory of tennis players of different levels under different memory loads was updated by using the neuroscan EEG recording system. Behavior and brain nerve activity were compared. Results: The results show that: under the high memory load, the main effect of different levels of tennis players' accuracy rate is significant ($F_{(1, 22)} = 15.857$, $P < 0.05$, $\eta^2 = 0.419$), and the accuracy rate of expert group is higher than that of novice group; under the same memory load, the main effect of different levels of tennis players' response is significant, ($F_{(1, 22)} = 5.303$, $P < 0.05$, $\eta^2 = 0.194$), and that of expert group is significant. The results of ERPs showed that: under high memory load, the main effect of P3 and PSW peak amplitude induced by different levels of tennis players in specific brain regions was significant, and the amplitude of expert group was significantly higher than that of novice group. Under the same memory load, the main effect of P3 and PSW peak latencies induced by different levels of tennis players is significant, and the latency of novice group is significantly later than that of expert group. Conclusion: In the process of organizing the new stimulus with the action skill routine in long-term memory, the high-level tennis players can extract the corresponding action patterns from the long-term memory more quickly. The possible neural mechanism is that the latency of P3 and PSW induced by specific brain regions of cerebral cortex is earlier; With the increase of task difficulty, high-level tennis players' motor memory representation updating degree increased significantly, and more psychological computing resources were used for motor memory representation updating. The possible neural mechanism was that the brain nerve activity of P3 induced by specific brain regions of cerebral cortex was higher.

Key words: tennis player, motor memory, memory load, event-related potential

专项注意训练对羽毛球初学者知觉预测影响及神经机制研究

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摘要 目的: 专项注意训练是通过对注意训练研究范式加以改良, 契合某种运动专项的注意特点, 从而提高从事该运动专项运动员认知能力的训练方式。注意偏向是注意过程中的一种成分, 表现为对特定目标认知加工能力的提升及抑制无关刺激, 研究表明个体的注意偏向特征可以通过训练加以强化和改变。知觉预测是个体利用部分信息或先行信息预测未知事件的一种高级的认知加工过程, 是运动过程中影响运动行为进行及完成的一项重要能力。本研究对羽毛球初学者进行以注意偏向为基础的专项注意训练干预, 验证专项注意训练对羽毛球初学者知觉预测影响, 探索专项注意训练影响知觉预测的神经机制。方法: 以沈阳体育学院羽毛球选修课学生作为实验被试, 共 30 名, 男 18 名, 女 12 名, 分为实验组和对照组。进行实验前测, 通过羽毛球视频及图片材料使其预判赛场信息, 测试其知觉预测反应时与准确率, 同时采取测试过程中的 ERP 数据。对实验组进行为期 4 周的专项注意训练, 训练范式为采取改良的点探测任务范式, 对照组不进行任何干预。训练周期结束后, 对两组被试进行实验后测, 再次测试其知觉预测的行为及神经机制特征。通过对比实验前后测的数据, 判断专项注意训练对个体知觉预测的影响及神经机制。结果: 行为方面: 前测两组被试知觉预测任务反应时及正确率无显著性差异, 后测实验组知觉预测任务反应时及正确率显著优于对照组; 实验组后测知觉预测任务反应时及正确率均显著优于前测, 对照组前后测无显著性差异。] ERP 方面: 前测两组被试 ERP 数据无显著性差异, 后测实验组 P1、N2 及 P3 波幅及潜伏期显著小于对照组; 实验组后测 N2 及 P3 波幅与潜伏期显著小于前测, 对照组前后测 ERP 数据无显著性差异。结论: 1) 专项注意训练可以提高个体对专项刺激物的认知加工程度, 从而使其知觉预测过程判断时间更短, 正确率更高。2) 知觉预测过程受到前额叶及顶叶的多重调控; 专项注意训练提高个体相关脑区活动水平, 表现为消耗更少的资源, 在预测目标时更容易。

关键词 专项注意训练, 知觉预测, 注意偏向, 羽毛球

Research on the Influence of Special Attention Training on Perception Prediction of Badminton Beginners and Its Neural Mechanism

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Abstract: Purpose: Special attention training is improving the research paradigm of attention training to fit the attentional characteristics of a sport, finally improve the cognitive ability of athletes engaged in this sport. Attentional bias is a component in the attention process, performed by the improvement of cognitive processing ability for specific targets and suppression of irrelevant stimuli. Research shows that the characteristics of human attention bias can be strengthened and changed through training. Perceptual prediction is an advanced cognitive processing process in which people use partial information to predict unknown events. It is an important ability for people to complete sports training. In this study, the badminton beginners were trained with attentional bias, verify the influence of special attention training on the perception prediction of badminton beginners, explore the neural mechanism of special attention training affecting perception prediction. Method: Take 30 badminton beginners as experimental subjects, 18 males and 12 females, divided into experimental group and control group. Pre-test using the perceptual prediction task to test the response time and correct rate of the two groups, at the same time take the ERP data during the test. Conduct special attention training for the experimental group for 4 weeks, the training paradigm is to adopt an improved point detection task paradigm, no intervention in the control group. After the training period is over, post-test the two groups. Test the behavior and neural mechanism characteristics of its perceptual prediction. By comparing the data measured before and after the experiment, judge the influence of special attention training on individual perception prediction and the neural mechanism. Result: In terms of behavior, there is no significant

difference in the response time and accuracy of the two groups of perception prediction tasks in the pre-test, in the post-test experimental group's perceptual prediction task response time and accuracy rate were significantly better than those of the control group. The post-test perception of the experimental group predicts the task response time and accuracy rate significantly better than the pre-test, no significant difference measured in the control group. In terms of ERP, there is no significant difference in the ERP data of the two groups in the previous test, the amplitude and latency of P1, N2, and P3 of the experimental group after the test were significantly smaller than those of the control group. The amplitude and latency of the post-test N2 and P3 of the experimental group were significantly smaller than those of the pre-test, no change in the control group. Conclusion: 1) Special attention training can improve the individual's cognitive processing degree of the special target stimulus, so that the judgment time of the perceptual prediction process is shorter and the accuracy rate is higher. 2) The process of perception prediction is regulated by multiple frontal and parietal lobes; Special attention training improves the activity level of the individual's relevant brain regions, which is manifested as consuming less resources and making it easier to predict goals.

Keywords: Special attention training, Perceptual prediction, Attentional Bias, Badminton

足球裁判知觉认知专长研究综述

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摘要 目的: 知觉认知专长是指个体定位、识别和处理环境信息的能力, 以便将其与现有知识和当前能力相结合从而选择和执行适当的活动。足球裁判需快速进行大量比赛决策, 知觉认知要求很高。现有研究和综述缺乏对于裁判知觉认知专长的梳理和总结, 因此本文对足球裁判知觉认知过程的影响因素、知觉认知技能及其训练的相关研究进行了系统综述。方法: 采用系统综述的方法, 以“soccer/football referee”+“perceptual cognition/ perception/perceptual cognitive”等为关键词, 检索了“EBSCO”、“Web of Science”、“ScienceDirect”、“中国知网”四个数据库以及相关参考文献, 在 594 篇文献中进一步筛选, 最后纳入分析 40 篇。结果: (1) 影响知觉认知过程的因素可分为内部和外部因素。内部因素研究表明裁判的年限、每周训练时间等会对知觉认知过程造成影响。外部因素研究表明: 裁判与球员的距离和角度会改变其深度知觉和视知觉、裁判在场上的跑动速度会造成影响、比赛视频慢速回放会提升裁判对犯规的敏感性。(2) 知觉认知技能主要包含识别和回忆、预判及决策。专业知识的增加以及训练可以提高识别和回忆水平; 因果知觉影响裁判的预判技能; 闪光滞后效应是造成越位决策失误的主要原因, 专业知识和知觉认知训练可以应对其不良后果。(3) 目前针对知觉认知的训练手段主要有视频模拟训练和电脑动画训练两种, 提升了裁判识别和决策的正确率。近年也有采用模糊环境和虚拟现实作为训练手段以提高足球裁判的知觉认知水平。展望: (1) 学者们多选择助理裁判这一对象进行研究, 而聚焦于主裁的研究较少, 后续可以增加对主裁的研究。(2) 知觉认知技能缺乏其特有的研究范式, 现有的研究多采用测量通用技能的方法, 未来可开发具有领域特色的研究范式。(3) 知觉认知技能领域仍存在争议, 如因果知觉对预判的影响机制等, 后续还需扩大研究群体和采用不同的研究范式予以进一步探究。(4) 新兴的知觉认知训练手段还处于起步阶段, 后续研究可以在训练方法及训练影响的神经机制进行更深层次的探讨。

关键词 足球裁判, 知觉认知专长, 训练

A Review of Research on Perceptual Cognitive Expertise in Soccer Referee

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Abstract : Objects: Perceptual cognitive expertise refers to the ability of performers to identify and process (environmental) information for integration with existing knowledge to facilitate the selection of appropriate responses under time pressure. Soccer referees are required to make a large number of decisions quickly and there is a great demand for perceptual cognitive expertise in soccer referees. Existing studies and reviews lack an overview of the perceptual cognitive expertise of referees, so this paper provides a systematic review of the factors influencing the perceptual cognitive processes, perceptual cognitive skills and training of soccer referees. Method: Using the systematic review method, the four databases "EBSCO", "Web of Science", "ScienceDirect", "China National Knowledge Infrastructure" and related references were searched for the keywords "soccer/football referee" + "perceptual cognition/ perception/perceptual cognitive", 594 articles were further screened and 40 pieces of literature were included in the analysis. Results: (1) Factors affecting perceptual cognitive processes can be divided into internal and external factors. The results of internal factors suggest that the number of years of refereeing and the number of hours of training per week can have an impact on perceptual cognitive processes. Researches on external factors have shown that: the distance and angle of the referee from the player alter his depth perception and visual perception; referees' on-field running speed can have an impact; and slow-motion replay of match video will improve the referee's sensitivity to fouls. (2) Perceptual cognitive skills consist mainly of recognition and recall capacity, anticipation and decision-making. Increased expertise and training can improve recognition and recall capacity; causal perception affects the referee's anticipation; the flash lag effect is a major cause of offside decision errors, and expertise and perceptual cognitive training can counter its adverse consequences. (3) At present, video simulation training and computer animation training are the two main training methods for perceptual cognition, which improve the correct rate of referee recognition and decision making. In recent years, blurred environments and virtual reality have also been used as training methods to improve the perceptual cognition of soccer referees. Prospects: (1) Researchers have focused more on the subject of assistant referees and less on head referees, and subsequent research on head referees could be added. (2) Perceptual cognitive skills lack its own domain-specific research paradigm, and existing researches have mostly used generic measuring methods. In the future, research paradigms with domain characteristics can be developed. (3) The field of perceptual cognitive skills is still controversial, such as the mechanism of causal perception on anticipation, and needs to be further investigated with a larger scale of participants and different research paradigms. (4) Perceptual cognitive training tools are still in their infancy, and subsequent research can provide a deeper exploration of training methods and the neural mechanisms affected by training.

Keywords: soccer referee, perceptual cognitive expertise, training

羽毛球大学生运动员运动决策优势特征及神经机制研究

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摘 要 羽毛球是一项动作精细、技战术灵活多变、开放性的竞技项目, 具有球速快、出手动作一致性高等特点。羽毛球运动员要在极短的时间内对来球作出迅速、准确的反应和决策, 必须具备高效率的运动决策能力。Singer (1980) 将运动决策分为预期过程和动作选择过程。因此, 本研究以运动认知加工过程为主线, 对

不同羽毛球水平大学生在运动决策的动作选择反应阶段的行为、眼动和脑神经活动特点进行研究, 比较不同水平羽毛球大学生运动员之间存在的加工差异的基础上, 揭示较高水平的羽毛球大学生运动员的动作选择反应优势的行为、认知特征及其可能的神经机制, 为今后羽毛球教学和训练的科学化提供理论依据。本研究采用专家—新手的研究范式, 运用眼动记录法和事件相关电位(ERP)记录法相结合技术, 对不同羽毛球水平大学生判断回击球类型的行为、眼动和脑神经活动进行同步记录。实验对象为24名体育院校羽毛球运动员, 根据运动水平的不同, 将其分为专家组和经验组。专家组为羽毛球院队队员12名, 平均年龄 24.8 ± 2.3 岁, 平均训练年限 6.8 ± 1.7 年, 运动等级为二级; 经验组为羽毛球专修大学生12名, 平均年龄 20.2 ± 1.1 岁, 平均训练年限 1 ± 0.3 年, 无运动等级但具备一定的羽毛球基础。研究采用 2 (运动水平) $\times 2$ (信息量)的混合实验设计。自变量运动水平为组间变量, 包括专家组和经验组两个水平; 自变量信息量为组内变量, 包括两个不同时间点的信息量, 分别为对方球员击球后四帧(160ms)--低信息量, 对方球员击球后七帧(280ms)--高信息量。因变量为行为指标(反应时, 准确率), 眼动指标(注视点呈现时间、注视数目、眼跳距离)和脑电指标(ERPs的峰潜伏期、峰波幅和平均波幅)。结论: 1、羽毛球大学生运动员在判断后场回击球类型的动作选择反应阶段, 具有准确性高的行为优势, 羽毛球专修大学生呈现的快速反应则是以“牺牲”准确率为代价的。2、羽毛球大学生运动员在判断回击球类型的动作选择反应阶段, 相同时间遮蔽条件下, 羽毛球大学生运动员具有准确率高, 搜索信息速度快的优势; 其可能的神经机制为大脑皮层相应脑区N1激活程度高、时间晚, P2脑神经活动水平低, P3激活程度低; 诱发产生的PSW兴奋性水平高; 说明专家组运动员的动用的心理资源少, 注意集中程度高。

关键词 羽毛球大学生运动员, 运动决策, 优势特征, 眼动, 神经机制

Study on the Characteristics and Neural Mechanism of Sports Decision-making Advantage of Badminton College Athletes

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Abstract: Badminton is a competitive event with fine movements, flexible techniques and tactics and openness. It has the characteristics of fast ball speed and high consistency of hand movements. Badminton players must have high-efficiency sports decision-making ability if they want to make rapid and accurate response and decision-making to the incoming ball in a very short time. Singer (1980) divided motion decision-making into expectation process and action selection process. Therefore, taking the process of sports cognitive processing as the main line, this study studies the characteristics of behavior, eye movement and brain nerve activity of college students with different levels of badminton in the action selection response stage of sports decision-making, and compares the processing differences between College Badminton Athletes with different levels. This paper reveals the behavioral, cognitive characteristics and possible neural mechanism of action choice response advantage of high-level badminton college athletes, so as to provide a theoretical basis for the scientific badminton teaching and training in the future. Using the expert novice research paradigm and the combination of eye movement recording method and event-related potential (ERP) recording method, this study synchronously recorded the behavior, eye movement and brain nerve activities of college students with different badminton levels in judging the type of return stroke. The subjects were 24 badminton players in physical education colleges. According to their sports level, they were divided into expert group and experience group. The expert group consists of 12 badminton team members, with an average age of 24.8 ± 2.3 years, an average training period of 6.8 ± 1.7 years and a sports grade of grade II; The experience group consists of 12 badminton majors, with an average age of 20.2 ± 1.1 years, an average training period of 1 ± 0.3 years, no sports level, but with a certain badminton foundation. The study adopts a mixed experimental design of 2 (exercise level) $\times 2$ (amount of information). The independent variable movement level is an inter group variable, including expert group and experience group; The independent variable information quantity is an intra group variable, including the information quantity at two different time points, which are four frames (160ms) - low information quantity after the

opponent's player hits the ball, and seven frames (280ms) - high information quantity after the opponent's player hits the ball. The dependent variables were behavioral indicators (reaction time, accuracy), eye movement indicators (fixation time, fixation number, saccade distance) and EEG indicators (peak latency, peak amplitude and average amplitude of ERPs). Conclusion: 1. Badminton college athletes have the advantage of high accuracy in the action selection reaction stage of judging the type of backcourt return stroke. The rapid response of badminton college students is at the expense of "sacrificing" accuracy. 2. Badminton college athletes have the advantages of high accuracy and fast search information under the same time shielding condition; The possible neural mechanism is that the activation degree of N1 in the corresponding brain area of cerebral cortex is high and the time is late, the activity level of P2 brain nerve is low and the activation degree of P3 is low; Induced PSW had a high level of excitability; It shows that the athletes of the expert group use less psychological resources and pay high attention to concentration.

Keywords: badminton college athletes, sports decision-making, dominant characteristics, eye movement, neural mechanism

(2) “体育运动心理学专业委员会”口头报告分场 2

累积生态风险对大学生运动拖延的影响： 锻炼自我效能感的中介效应和主观锻炼体验的调节效应

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摘要 目的：研究累积生态风险对大学生运动拖延的影响，探究锻炼自我效能感的中介作用和主观锻炼体验的调节效应。方法：课题组以分层整群抽样的方式从江西共青大学城五所高校选取 903 名大学生为被试对象，通过问卷调查法获取累积生态风险、锻炼自我效能感、主观锻炼体验和运动拖延的相关数据。结果：大学生累积生态风险、锻炼自我效能感、主观锻炼体验与运动拖延得分在性别上存在显著差异。其中，男生锻炼自我效能感和主观锻炼体验得分显著高于女生，而女生累积生态风险与运动拖延得分相对较高。相关分析结果显示，大学生累积生态风险与锻炼自我效能感、主观锻炼体验之间存在显著负相关；累积生态风险与运动拖延之间存在显著正相关。本文在控制大学生性别、年级的情况下，将累积生态风险、锻炼自我效能感、主观锻炼体验、运动拖延进行中心化处理。中介效应表明，大学生累积生态风险、锻炼效能感和运动拖延构建的结构方程模型适配度很高且各路径系数显著，在“累积生态风险→锻炼自我效能感→运动拖延”路径中，间接效应 Bootstrap95%置信区间为[-0.154,-0.048]；直接效应置信区间是[-0.335,-0.118]，两种效应都不包括 0，表明锻炼自我效能感在累积生态风险影响运动拖延的路径中有中介效应。调节效应显示，累积生态风险与主观锻炼体验的交互作用对锻炼自我效能感和运动拖延影响的 R²变化量显著。结论：锻炼自我效能感在累积生态风险影响运动拖延的路径中存在中介效应。主观锻炼体验调节了累积生态风险到大学生运动拖延的路径和中介效应的前半段路径。

关键词 体育心理，累积生态风险，锻炼效能感，运动拖延，中介效应

The Influence of Cumulative Ecological Risk on University Students' Exercise Delay: The Mediating Effect of Exercise Self-Efficacy and the Moderating Effect of Subjective Exercise Experience

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Abstract: Objective: To study the effect of cumulative ecological risk on college students' exercise delay, and to explore the mediating effect of exercise self-efficacy and the moderating effect of subjective exercise experience. Method: The research group selected 903 college students from five universities in Jiangxi Gongqing University Town in a stratified cluster sampling method to obtain cumulative ecological risks, exercise self-efficacy, subjective exercise experience, and exercise procrastination through questionnaire surveys. related data. Results: There are significant differences in the gender of college students' accumulated ecological risk, exercise self-efficacy, subjective exercise experience and sports procrastination scores. Among them, boys' exercise self-efficacy, and subjective exercise experience scores were significantly higher than girls' scores, while girls' cumulative ecological risk, exercise procrastination was relatively high. Correlation analysis results show that there is a significant negative correlation between accumulated ecological risk and exercise self-efficacy and subjective exercise experience among college students; there is a significant positive correlation between accumulated ecological risk and exercise procrastination. Under the condition of controlling the gender and grade of college students, this paper will centralize the treatment of accumulated ecological risk, exercise self-efficacy, subjective exercise experience, and exercise delay. The mediating effect shows that the structural equation model constructed by college students' cumulative ecological risk, exercise efficacy, and exercise procrastination has a high degree of adaptability and significant path coefficients. In the path of "cumulative ecological risk→exercise, self-efficacy→exercise procrastination", there is an indirect effect Bootstrap 95% confidence interval is [-0.154, -0.048]; the direct effect confidence interval is [-0.335, -0.118], both effects do not include 0, indicating that exercise self-efficacy is in the path of cumulative ecological risk affecting sports procrastination Mediation effect. The moderating effect shows that the interaction of cumulative ecological risk and subjective exercise experience has a significant change in R^2 that affects exercise self-efficacy and exercise procrastination. Conclusion: Exercise self-efficacy has a mediating effect in the path of cumulative ecological risk affecting exercise procrastination. Subjective exercise experience regulates the path from accumulated ecological risk to the delay of college students' exercise and the first half of the path of mediation effect.

Keywords: sports psychology, cumulative ecological risk, exercise efficacy, exercise procrastination, mediation effect

累积生态风险对大学生运动拖延的影响： 自我控制的中介效应和锻炼氛围的调节效应

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摘要 目的：大学生运动拖延与个体所处的生态背景密切相关，受家庭、学校、同伴和个体风险等累积因素的影响。本文旨在研究累积生态风险对大学生运动拖延的影响，验证自我控制的中介作用与锻炼氛围的调节效应，以期为高校体育课程改革，助力大学生形成健康生活方式提供理论参考。方法：本文采用文献资料法、逻辑分析法和数理统计法研究以分层整群随机抽样的方式从江西共青大学城五所高校选取 903 名大学生为被试对象，采用累积生态风险量表、自我控制量表、锻炼氛围量表和运动拖延量表收集相关数据。结果：大学生累积生态风险、自我控制、锻炼氛围与运动拖延得分在性别上存在显著差异。其中，男生自我控制和

锻炼氛围得分显著高于女生，而女生累积生态风险和运动拖延得分相对较高。大学生累积生态风险对运动拖延有正向预测作用 ($R^2=0.379$, $F=183.120$, $\beta=0.612$, $P=0.000$)；也可以显著负向预测自我控制水平 ($R^2=0.117$, $F=39.807$, $\beta=-0.342$, $P=0.000$)；当大学生累积生态风险和自我控制同时进入回归方程后预测运动拖延，路径系数具有统计学意义 ($R^2=0.456$, $F=136.616$, $\beta=-0.066$, $P=0.026$)，自我控制介入回归模型之后，大学生累积生态风险对运动拖延的解释力明显提高，而路径系数明显降低 ($\beta=0.598$)，说明自我控制在大学生累积生态风险和运动拖延之间起部分中介效应。调节效应显示，累积生态风险与锻炼氛围的交互作用对大学生自我控制影响的 R^2 变化量显著 ($P=0.014$)，说明锻炼氛围调节了累积生态风险与大学生自我控制的路径。结论：自我控制是累积生态风险因素影响运动拖延的一个中介变量，锻炼氛围调节了累积生态风险因素到大学生自我控制的路径。

关键词 体育心理，累积生态风险，自我控制，锻炼氛围，运动拖延

The influence of accumulated ecological risk on the procrastination of college students: the mediating effect of self-control and the moderating effect of exercise atmosphere

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Abstract: Purpose: University student movement procrastination is closely related to the individual's ecological background, and is affected by cumulative factors such as family, school, peers and individual risks. This article aims to study the impact of cumulative ecological risks on college students' sports delays, verify the mediating effect of self-control and the regulating effect of exercise atmosphere, in order to provide theoretical references for the reform of college physical education curriculum and help college students to form a healthy lifestyle. Method: This article uses the method of literature data, logical analysis and mathematical statistics to select 903 college students from five universities in the Gongqing University Town of Jiangxi Province in a stratified cluster random sampling method, and adopts the cumulative ecological risk scale, self The control scale, exercise atmosphere scale and exercise procrastination scale collect relevant data. Results: There are significant differences in the gender of college students' accumulated ecological risk, self-control, exercise atmosphere and sports procrastination scores. Among them, boys' self-control and exercise atmosphere scores were significantly higher than girls' scores, while girls' cumulative ecological risk, sports procrastination was relatively high. The cumulative ecological risk of college students has a positive predictive effect on sports procrastination ($R^2=0.379$, $F=183.120$, $\beta=0.612$, $P=0.000$); it can also significantly negatively predict the level of self-control ($R^2=0.117$, $F=39.807$, $\beta=-0.342$, $P=0.000$); when college students' cumulative ecological risk and self-control enter the regression equation at the same time, they predict movement delay, and the path coefficient is statistically significant ($R^2=0.456$, $F=136.616$, $\beta=-0.066$, $P=0.026$) After self-control is involved in the regression model, the explanatory power of college students' cumulative ecological risk to exercise procrastination is significantly improved, while the path coefficient is significantly increased ($\beta=0.598$), indicating that self-control has a partial mediating effect between college students' cumulative ecological risk and exercise procrastination. The moderating effect shows that the interaction between cumulative ecological risk and exercise atmosphere has a significant change in R^2 ($P=0.014$), which indicates that the exercise atmosphere regulates the path of cumulative ecological risk and college students' self-control. Conclusion: Self-control is an intermediary variable of cumulative ecological risk factors affecting sports procrastination, and the exercise atmosphere regulates the path from cumulative ecological risk factors to college students' self-control.

Keywords: sports psychology, cumulative ecological risk, self-control, exercise atmosphere, exercise procrastination

预期到现实的转变：安慰剂效应提升锻炼的情感反应

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摘要 研究背景：锻炼的情感反应在个体变异性上受预期强度和方向的调节，如个体相信锻炼能/不能带来情感效益。鉴于此，研究者会尽量排除预期对锻炼实际效果带来的混淆效应，即安慰剂效应。但从促进锻炼效益最大化的角度考量，合理利用安慰剂提升情感效益确是另一种明智选择。如利用心理因素，采用言语指导的预期操纵范式向个体传达“锻炼非常有效”的信息，以此种效能信息作为安慰剂。然而关于安慰剂的干预内容，以往研究一般采用结果预期(锻炼会增加活力感)，自我效能感预期(你有出色的运动能力)或物品效能预期(佩戴磁手环能增加运动效益)的干预内容。但目前研究中未同时对比这三种预期内容何者更优。研究目的：探讨不同安慰剂干预类型对运动中(主观报告)以及心率变异性(客观指标)的影响，旨在探讨何种安慰剂干预类型效果最佳。研究方法：在一次急性 30min 有氧跑步前，三组安慰剂干预组分别观看相应的预期启动材料，控制组观看中性材料。在运动前，运动期间每隔 5min，运动后对情感反应进行测量。研究结果：在运动后情感反应上，结果预期组和自我效能感预期组比控制组感受到更多愉悦感；结果预期组比自我效能感预期组和控制组感受到更高的活力感；结果预期组紧张感低于控制组。对比编码分析(contrast-coded analysis)，将安慰剂组(结果预期组、自我效能感预期组、物品效能组)和控制组分别编码为(-1, -1, -1, +3)，结果表明 3 组安慰剂干预组在运动后愉悦感和活力感上高于控制组。然而在运动中愉悦感和运动后心率变异性上，安慰剂干预组和控制组无差异。研究结论：安慰剂效应因预期干预的具体内容而异，结果预期组对运动后情感反应的提升作用较稳健。这可能是因为结果预期的本质更能增加因果透明性，进而帮助个体建立锻炼与结果收益间的连接，进而增加个人控制感，带来放大的安慰剂效应。此外，相比客观指标，安慰剂效应对主观报告指标更为敏感。

关键词 预期；安慰剂效应；锻炼的情感反应

Expectation to Reality:

The add-on Placebo Effect Augment Affective Response to Exercise

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Abstract: Background: Numerous studies have extensively investigated the positive effects of acute and long-term exercise on affective response. The specific direction and magnitude of these responses can vary from individual to individual, depending on the expectation of the exercise. For example, individuals believe that exercise can/cannot bring emotional benefits. So, researchers try to rule out the confounding effect on the actual effect of exercise, known as the placebo effect. However, it is a wise choice for researchers to correctly use the placebo effect to produce additional exercise benefits. Research on the “add-on placebo effect” has focused on experimentally manipulating expectations and on adopting a paradigm of verbal instructions to convey a positive message (e.g., the exercise you will perform often results in a good mood). However, as for the specific placebo intervention, previous studies generally used outcome expectation (exercise will increase the sense of vitality), self-efficacy expectation (you have excellent athletic ability) or product utility expectation (wearing a magnetic bracelet can increase the exercise benefit). However, most studies did not simultaneously compare the three expected content which is better. The current study has investigated the effects of different types of placebo intervention on affective responses (subjective reports) and heart rate variability (objective indicators) during and after exercise, and to determine which type of placebo intervention has the best effect. Method: Before an acute 30-minute running, the three placebo groups were shown the corresponding expectation priming material, while the control group was shown the neutral material. Affective responses were measured before exercise, every 5 minutes during exercise, and after exercise. Results: Outcome expectation group and the self-efficacy expectation group felt more enjoyment than the control group. Outcome expectation group felt higher vigor than the self-efficacy expectation group and the control group. The outcome

expectation group had less tension than the control group. In contrast coding analysis, the three-placebo group and control group were coded as -1, -1, -1, +3, respectively. The results showed that the placebo intervention group had higher enjoyment and vigor after exercise than the control group. However, there was no difference in enjoyment during exercise and heart rate variability after exercise. Conclusions: The placebo effect varied with the specific content of the placebo intervention, and the outcome expected group on the improvement of affective response after exercise was more robust. This may be because the nature of outcome expectation increases causal transparency, which in turn helps individuals establish a connection between exercise and outcome benefits, and increases the individual's sense of control and amplifying the placebo effect. In addition, compared to objective indicators. The placebo effect was more sensitive to subjective reporting measures.

Keywords: placebo effect; expectation: affective response to exercise

不同信息表征方式对慢性病风险感知及锻炼意向的影响

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摘要 身体活动不足导致慢性病高发, 适度锻炼可有效降低慢性病发病率, 但我国居民身体活动水平偏低, 因此有必要采取措施提升人们的身体活动水平。研究表明风险感知可提升锻炼意向, 而信息表征会影响风险感知, 信息表征是信息在现实中的呈现方式, 如图片、文字、表格、语音等不同表征方式。表征方式不同, 风险感知亦存在差异。以往研究表明, 图形和表格呈现的信息能引发人们更强烈的风险感知和行为改变意向。通过改变信息呈现方式影响人们的风险感知及行为已经在多个领域取得成果, 如疫苗接种、戒烟、戒酒等, 然而还未发现关于信息表征对慢性病风险感知及锻炼意向的研究。本研究以 180 名大学生为被试, 采用单因素被试间实验设计, 向被试分发内容完全相同、表征方式不同(图形、文字、表格)的实验材料(实验材料改编自 2017 年国家体育总局颁布的《全民健身指南》), 旨在探讨不同信息表征方式(图形、文字、表格)对慢性病风险感知及锻炼意向的影响。结果发现, (1) 不同信息表征方式对慢性病风险感知的影响存在显著差异($F=5.12, p<0.01, \eta_p^2=0.06$), 相比于图形表征, 表格和文字表征的健康信息能引发人们更强烈的慢性病风险感知, 但表格和文字之间的差异不显著; (2) 不同信息表征方式对锻炼意向的影响没有显著差异; (3) 风险感知对锻炼意向有预测作用($R^2=0.03, p<0.05$)。本研究首次在锻炼行为领域进行了信息表征的研究, 发现不同信息表征会影响人们对慢性病的风险感知, 表格和文字表征的效果更好, 这不仅拓展了信息表征的研究领域, 还为政府机构进行宣传教育提供依据。

关键词 信息表征, 风险感知, 锻炼行为

Effect of different information representation methods on chronic disease risk perception and exercise intention

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Abstract: Lack of physical activity leads to high incidence of chronic diseases. Moderate exercise can effectively reduce the incidence rate of chronic diseases, but the living level of our residents is low. Therefore, it is necessary to take measures to improve people's physical activity level. Research shows that risk perception can improve exercise intention, and information representation can affect risk perception. Information representation is the format of information, such as pictures, words, tables, voice and other different representation methods. There are differences in risk perception with different representations. Previous studies have shown that information presented by graphs and tables can trigger people's stronger risk perception and behavior change intention. The effect of information representation on people's risk perception and behavior has been achieved in many fields, such as vaccination,

smoking cessation, alcohol abstinence and so on. However, there is no research on the effect of information representation on risk perception and exercise behavior. In this study, 180 college students were selected as subjects, and a single factor inter subject experiment design was adopted. The experimental material with the same content and different representation methods (graphics, text, tables) were distributed to the subjects. The purpose of this study was to explore the effect of different information representation methods (graphics, text, tables) on the risk perception of chronic diseases and exercise intention. The results showed that: (1) there were significant differences in the effects of different information representation methods on the risk perception of chronic diseases ($F = 5.12$, $p < 0.01$, $\eta_p^2 = 0.06$), Compared with graphic representation, the health information represented by table and text can induce people's stronger perception of chronic disease risk, but the difference between table and text is not significant. (2) There was no significant difference in the effect of different information representation on exercise intention. (3) Risk perception had a predictive effect on exercise intention ($R^2 = 0.03$, $p < 0.05$). This study is the first time to study the information representation in the field of exercise behavior. It is found that different information representations will affect people's risk perception of chronic diseases, and the effect of form and text representation is better. This not only expands the research field of information representation, but also provides the basis for government agencies to carry out publicity.

Keywords: information representation, risk perception, exercise behavior

基于自我决定理论的成年人锻炼动机潜剖面分析

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摘要 本研究基于自我决定理论，探索成年人锻炼的动机剖面，以及动机剖面与锻炼阶段及锻炼行为的关系。方法：采用横断调查设计，共 618 名参与者完成了线上调查(男 250 人，女 366 人，缺失 2 人)，平均年龄为 49.38 ± 7.16 岁。通过《锻炼行为调节问卷—BREQ3》和《锻炼变化阶段量表》测量了参与者的锻炼动机(无动机、外部调节、内摄调节、认同调节、整合调节及内部动机)和锻炼阶段(前意向、意向、准备、行动及保持阶段)，采用《戈丁休闲时间身体活动问卷(LTPA)》测量了行动及保持阶段参与者的中到大强度身体活动量。数据处理采用潜剖面图分析(latent profile analysis, LPA)探索成年人锻炼的动机剖面；采用卡方独立性检验探索动机剖面与锻炼阶段的关系，采用贝叶斯单因素方差分析检验在行动和保持阶段，不同动机剖面人群中到大强度身体活动量的差异。结果：1) 识别出由不同动机组合形成的 4 个成年人锻炼动机剖面，分别为：低控制高自主，中等控制及自主，无动机，及高控制高自主动机剖面；2) 动机剖面与锻炼阶段相关显著($\chi^2(12) = 145.40$, $sig. < .001$)，在低控制高自主和高控制高自主人群中，锻炼保持阶段的比例最高(分别为 65.82%和 65.43%)；在中等控制及自主人群中，50.9%的个体处于行动或保持阶段；而 35.5%的无动机人群处于前意向阶段。3) 在行动和保持阶段，不同动机剖面人群的中到大强度身体活动量存在差异($BF_{10} = 1722.24$)，低控制高自主和高控制高自主动机剖面的中到大强度身体活动量高于中等控制及自主和无动机剖面。结论：1) 不同类型的动机构成了 4 种成年人锻炼的动机模式；2) 自主动机有利于锻炼坚持及更多的锻炼行为；3) 在自主动机高时，控制动机未对锻炼坚持和锻炼行为产生负面影响。

关键词 锻炼动机剖面，自主动机，控制动机，锻炼阶段，锻炼行为

Latent Profile Analysis of Adults' Exercise Motivation Based on Self-Determination Theory

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Abstract: Objectives: This research aimed to identify motivational profiles for exercise, using Self-Determination Theory as theoretical framework among a sample of adults of China; and to explore the relationships between motivational profiles and exercise stage and moderate to vigorous PA behavior. Method: A cross sectional survey was

used. 618 Chinese adults (age = 49.38 ± 7.16 years, ages 39–70; $n_{\text{male}} = 250$, $n_{\text{female}} = 366$, 2 missed) completed the online multidimensional measure of motivation for exercise by the *Behavioural Regulation in Exercise Questionnaire* (BREQ3). The stage of exercise was measured by one item scale named *Stages of Change Questionnaire*. *Godin Leisure Time Physical Activity Questionnaire* was filled by participants in action and maintenance stages to measure their moderate to vigorous physical activity behavior. Latent profile analysis was conducted by R Language to identify motivational profiles for exercise. Chi-square test of independence and Bayesian ANOVA were used to test relationships between motivational profiles and stages of exercise and MVPA respectively. Results: 1) A solution with four motivational profiles was favored by results. Profile 1 combined strong autonomous motivations and weak controlled motivations and amotivation; profile 2 combined all motivations on average; profile 3 was characterized by both low autonomous and controlled motivations except average amotivation; and the last profile combined both high controlled and autonomous motivations. 2) There was significant relationship between motivational profiles and stages of exercise ($\chi^2(12) = 145.40$, $\text{sig.} < .001$). Among profile 1 and 4 groups, the proportion of the maintenance stage were the highest (65.82% and 65.43%, respectively); among adults in profile 2, 50.9% of individuals were in the action or maintenance stages; and 35.5% amotivated adults were in the precontemplation stage. 3) The Bayesian Factor was 1722.24 supporting the credible differences of MVPA across different motivational profiles. Adults in profiles 1 and 4 had more MVPA than adults in profiles 2 and 3. Conclusions: 1) Adults' motivations for exercise can be described in 4 profiles which are made up of multiple and simultaneous types of motivation. 2) More autonomous motivation profiles may be central to long term exercise engagement. 3) Controlled motivation may not have negative influence on exercise engagement when people have high autonomous motivations.

Keywords: exercise motivational profiles, autonomous motivation, controlled motivation, exercise stage, exercise behavior

大学生身体活动意向与行为的关系：有调节的中介模型

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摘要 目的：以计划行为理论（TPB）为基础框架，构建一个有调节的中介模型，重点考察行动计划的中介和调节作用及习惯强度的调节作用。方法：以 634 名在校大学生为被试，采用问卷调查法完成对《TPB 量表》、《身体活动等级量表 PARS-3》、《行动计划量表》和《自我报告习惯指数 SRHI》的测量，运用结构方程模型（SEM）进行假设模型检验。结果：（1）行动计划和习惯强度的纳入，将 TPB 模型对身体活动的解释力从 31.2%提升至 49.3%。（2）多群组分析显示，预测模型具有跨性别和跨低、中、高身体活动水平的测量不变性。（3）主观规范、感知行为控制与习惯强度对行为意向的直接正向预测作用具有统计学意义（ $P < 0.01$ ），其中感知行为控制的预测效应值最大；行动计划与习惯强度对身体活动的直接预测作用具有统计学意义（ $P < 0.01$ ），其中习惯强度的预测效应值最大。（4）行为意向对身体活动的直接预测作用受行动计划、习惯强度的调节；行动计划在行为意向与身体活动间起部分中介作用，且中介过程的后半路径受习惯强度的调节。结论：将行动计划、习惯强度作为弥合身体活动意向与行为间鸿沟的“第三变量”，有助于解释和预测意向-行为转化的复杂作用机制，可作为大学生身体活动行为干预的理论依据。建议：学校和社会通过完善体育场地设施，开放更多的公共体育资源，来削弱大学生进行身体活动所面临的阻碍；学校体育教师和社会体育从业者主动引导大学生制定符合自身情况的身体活动计划，推动他们从“有意向”到“有行动”的落实；家庭和学校应继续加强终身体育观念的灌输，培养大学生形成定期参与身体活动的生活习惯。

关键词 计划行为理论，身体活动，意向-行为鸿沟，行动计划，习惯强度

The relationship between physical activity intention and behavior of college students: a moderated mediation model

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Abstract: Objective: Based on the theory of planned behavior (TPB), a moderated mediation model is constructed, focusing on the mediation and moderation effect of action planning and the moderation effect of habit strength. Methods: Taking 634 college students as Participants, using questionnaire survey method to complete the measurement of "TPB Scale", "Physical Activity Rating Scale, PARS-3", "Action Planning Scale" and "the Self-Report Habit Index, SRHI", Hypothesis model testing is carried out by structural equation modeling (SEM). Results: (1) The inclusion of action planning and habit strength increased the explanatory power of the TPB model for physical activity from 31.2% to 49.3%. (2) Multi-group analysis shows that the prediction model is invariant to the measurement of transgender and across low, medium, and high levels of physical activity. (3) The direct positive predictive effect of subjective norms, perceived behavior control and habit strength on behavior intention is statistically significant ($P < 0.01$), among which the predictive effect of perceived behavior control is the largest; action planning and habit strength have direct effects on physical activity The predictive effect is statistically significant ($P < 0.01$), and the predictive effect of habit strength is the largest. (4) The direct predictive effect of behavioral intention on physical activity is moderated by action planning and habit strength; action planning plays a part of mediating role between behavioral intention and physical activity, and the latter half of the mediation process is moderated by habit strength. Conclusion: Taking action planning and habit strength as the "third variable" to bridge the gap between physical activity intention and behavior can help explain and predict the complex mechanism of intention-behavior transformation, and can be used as a theoretical basis for college students' physical activity behavior intervention. Suggestion: Schools and society improve sports facilities and open more public sports resources to weaken the obstacles faced by college students in physical activity; school physical education teachers and social sports practitioners actively guide college students to develop physical activity plans that suit their own conditions and promote them From "intentional" to "action" implementation; families and schools should continue to strengthen the instillation of the concept of lifelong sports, and cultivate college students to form a lifestyle habit of regularly participating in physical activities.

Keywords: theory of planned behavior, physical activity, intention-behavior gap, action planning, habit strength

(3) “体育运动心理学专业委员会”口头报告分场 3

腹式呼吸对压力下注意控制的影响

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摘要 注意控制是指关注目标本身, 忽略无关信息干扰的能力。竞技比赛中, 如何在压力下做好注意控制, 对每个项目的运动员都很重要。注意控制理论 (attentional control theory) 认为, 压力损害注意控制, 但并没有指出如何降低其不利影响。通过自主放松发展而来的腹式呼吸 (diaphragmatic breathing) 为解决该问题提供了思路。本研究借助具有沉浸感、交互性效果的虚拟现实 (Virtual Reality, VR) 技术构建结合运动情境的通用性压力情境, 通过腹式呼吸方法, 探索改善注意控制的手段, 以提高运动员在紧张焦灼、复杂多变竞技比赛中的适应能力。为探究短期、长期腹式呼吸对压力下注意控制的改善作用, 实验 1 邀请 168 名大学生参加一项 2 × 2 的组间设计实验, 自变量为通过 VR 技术诱发的压力情境 (低、高) 和呼吸练习 (腹式呼吸、正常呼

吸), 因变量为 Stroop 干扰效应以及心率变异性的变化。结果发现, 短期腹式呼吸练习可改善注意控制 ($F(4, 121) = 2.58, p = .040, \eta_p^2 = .08$); 但没有发现高压情境下呼吸练习具有更为明显的改善效果 ($F(4, 121) = .26, p = .906$)。实验 2 邀请 70 名大学生参加一项 2×3 的混合设计实验, 组间自变量为呼吸训练 (腹式呼吸、控制), 组内自变量为测量时间 (前测、中测、后测), 因变量为 Stroop 干扰效应以及心率变异性的变化。研究参与者随机分入腹式呼吸组和控制组, 前者共进行 8 周、每周 2 次、每次 20 分钟的腹式呼吸训练, 后者则不进行任何干预训练。结果发现, 与实验 1 相比, 长期呼吸训练改善注意控制的效果更大 ($F(4, 55) = 27.90, p < .001, \eta_p^2 = .67$); 腹式呼吸组的中测和后测表现均优于前测 ($F(8, 51) = 4.31, p = .001, \eta_p^2 = .40$), 这说明长期腹式呼吸训练提高注意控制的效果更为明显与稳定。本研究提示, 一次性腹式呼吸练习即可改善注意控制表现, 且这种促进作用在低压、高压情境下均适用; 长期腹式呼吸训练的干预效果优于短期腹式呼吸练习, 腹式呼吸对注意控制的改善作用具有一定的可重复性。因此, 腹式呼吸可作为调整运动员训练与比赛身心状态、放松恢复的备选手段。

关键词 腹式呼吸, 注意控制, 压力, 虚拟现实

The effect of diaphragmatic breathing on attentional control under pressure

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Abstract: Attentional control refers to the ability to overcome current difficulties through efforts, focus on relevant information all the time, and avoid distracting interference of irrelevant information. In competitive competition, it is very important for events and athletes to control attention under pressure. Attentional control theory (ACT) proposes that pressure may damage attentional control performance, however, it doesn't point out how to reduce the effects. The diaphragmatic breathing provides a way to improve the performance of attentional control under pressure. This study uses virtual reality (VR) technology, which characterized by immersion and interaction effects, to construct a general pressure situation combined with sports scenes. Meanwhile, the way of diaphragmatic breathing can find a simple and easy way to improve the performance under pressure, and improve the adaptability of athletes in complex and changeable competitions. Experiment 1 aimed to examine the effect of short-term diaphragmatic breathing practice on attentional control under pressure. We invited 168 participants to join in a 2×2 between-group experiment design. Independent variable consisted of pressure situation (low, high) and breathing practice (diaphragmatic breathing, normal breathing). Dependent variable consisted of Stroop interference effect and the changes of HRV physiological indexes. The experiment used VR to induce pressure situation and completed Stroop task at the same time. The results showed that breathing practice could improve attentional control performance ($F(4, 121) = 2.58, p = .040, \eta_p^2 = .08$). However, no significant improvement was found in the high pressure situation ($F(4, 121) = .26, p = .906$). Experiment 2 aimed to examine the effect of long-term diaphragmatic breathing training on attentional control under high pressure. We invited 70 participants to join in a 2×3 mixed-group experiment design. Independent variable consisted of breathing training (diaphragmatic breathing, control) and measure time (pre-test, middle-test, post-test). Dependent variable consisted of Stroop interference effect and the changes of HRV physiological indexes. Participants were randomly assigned to diaphragmatic breathing group and control group. The diaphragmatic breathing group received breathing training for 8 weeks, twice a week and 20 minutes each time, while the control group did not receive any intervention. The results showed that compared with the breathing practice in experiment 1, the effect size of breathing training on attentional control was greater ($F(4, 55) = 27.90, p < .001, \eta_p^2 = .67$). This result suggested that the effect of improving attentional control by long-term diaphragmatic breathing training was more obvious and stable. All in all, diaphragmatic breathing can improve the performance of attentional control whether in low pressure situation or high pressure situation. The intervention effect of long-term diaphragmatic

breathing training is better than short-term diaphragmatic breathing practice with repeatability. Maybe diaphragmatic breathing can be used as an alternative way to adjust athletes' daily physical and mental states.

Keywords: diaphragmatic breathing, attentional control, pressure, virtual reality

疫情下精英运动员备战奥运的心理训练个案分析

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摘要 疫情下, 训练环境受限、后期比赛不确定等挑战影响运动员的身心健康 (Schinke, et al., 2020), 为做好抗疫情、保备战工作, 心理团队以中国运动员心理建设系统理论为依据, 制订了三重目标: 1) 减少疫情下的心理应激; 2) 提高自我控制能力; 3) 提升文化素养和精神境界。研究采用多重基线水平的 ABA 单被试实验设计, 对 16 名备战奥运精英运动员进行为期 5 个月“术道兼修”心理干预, “术”是指通过心理技能学习与训练能够在短期内收到效果, 例如: 讲座、心理咨询、团体辅导等; “道”的提升则需要依靠个人人格的不断完善与心理素养的持续积淀来实现, 是一个通过学习与体悟获得心理能力不断发展的长期过程, 例如: 演讲比赛、感谢信和读书会。使用心境状态问卷、心理疲劳、状态自信心和选拔赛射箭成绩, 对被试的心理水平和运动表现水平进行测量。采用视觉化检验 (visual analysis) 和效果量 NAP (Nonoverlap of All Pairs) 对实验数据进行分析。干预结束后 1 个月请 4 位教练员和 16 名运动员回答《实践评估问卷》以进行社会效度评价。随着干预进行, 16 名运动员的运动表现水平均有所提高, 社会效度评价支持了干预效果。结果显示, 术道兼修的心理训练具有良好的心理干预效果, 可帮助射箭运动员提高运动表现水平。

关键词 术道兼修; 心理训练; 精英运动员; 单被试实验设计

Sport psychology services to high performance athletes during COVID-19

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Abstract: During COVID-19, challenges such as restricted training environment and uncertainty games affect athletes' physical and mental health (Schinke, et al., 2020). In order to Olympic Games, the psychological team uses Chinese athletes' psychological system theory, three goals have been formulated: 1) reduce psychological stress during COVID-19; 2) improve self-control; 3) improve cultural literacy and spiritual realm. The study adopted a single-participant ABA experimental design with multiple baseline levels. 16 athletes preparing for the Olympics were subjected to a 4-month the combination of skill orientation and spirit orientation psychological intervention. "Shu" refers to the ability to learn and train psychological skills in a short time, such as: lectures, psychological counseling, group counseling, etc; "Dao" needs to improve personal personality and the psychological literacy, such as: speech contest, thank you letter and book reading. Use the state of mind questionnaire, mental fatigue questionnaire, state confidence questionnaire and archery rings to measure the mental level and athletic performance. Visual analysis and NAP (Nonoverlap of All Pairs) were used to analyze the experimental data. One month after the intervention, 4 coaches and 16 athletes were asked to answer the "Practice Evaluation Questionnaire" for social validity evaluation. As the intervention progressed, the sports performance of the 16 athletes improved, and the evaluation of social validity supported the intervention effect. The results show that psychological training has a good psychological intervention effect and can help archery athletes to improve their athletic performance.

Keywords the combination of skill orientation and spirit orientation; psychological training; high performance athletes; single-subject experimental design

自我谈话对飞镖投掷表现的影响机制：基于脑电与运动学特征的分析

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摘要 对于精细运动技能而言, 运动员动作执行前几秒钟的认知状态, 能够对运动员的行为表现产生重要影响。因此, 如何调整该段时间个体的认知状态是运动心理学家关注的热点。体育运动领域研究发现, 有效的认知干预策略能调整运动员在该段时间的状态。自我谈话就是其中常见的方式之一。尽管以往研究发现, 自我谈话能对运动员的行为表现产生积极影响, 但这些研究大多是从结果表现的角度出发, 鲜有研究探究自我谈话的作用过程。为此, 本研究从行为学、运动学和脑电活动变化三个角度探讨自我谈话的内在作用机制, 从而为丰富体育运动领域自我谈话相关研究。本研究采用有偿招募方式, 选取 15 名男性大学生飞镖新手和 15 名男性大学生飞镖专家为实验被试。实验设计为 2×2 两因素混合设计, 旨在探讨指导型自我谈话和激励型自我谈话对不同运动专长的个体的飞镖投掷表现的作用机制。其中, 组间变量为被试类型(飞镖专家与新手), 组内变量为自我谈话类型(指导型与激励型自我谈话)。为减少实验误差, 组内变量使用平衡设计, 即每组被试分为均等的两部分, 一部分先使用指导型, 再使用激励型, 另一部分先使用激励型, 再使用指导型。研究结果发现, 在行为学表现上, 对于飞镖新手来说, 指导型自我谈话效果更好; 而对于飞镖专家来说, 激励型自我谈话效果更佳。在运动学表现上, 无论是飞镖新手还是飞镖专家, 指导型自我谈话都降低了个体的运动协调表现。此外, 从整体表现来看, 两种自我谈话方式都能影响飞镖专家的运动协调能力。在脑电活动变化上, 使用自我谈话对飞镖专家的运动控制能力更为有效, 而对飞镖新手的视空间协调能力效果更佳, 但对两者的言语认知思维的影响并没有太大差异。此外, 研究还发现, 激励型自我谈话能有效提高飞镖新手的脑功能连接性, 而指导型自我谈话能有效促进飞镖专家的脑功能连接性。

关键词 自我谈话, 飞镖, 脑电, 运动学

A study on the mechanism of self talk effect on throwing performance of different dart players: based on the analysis of EEG and kinematic characteristics

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Abstract: For fine sports, the cognitive state of athletes in the first few seconds before the execution of their actions can have an important impact on their behavior. Therefore, how to adjust the cognitive state of individuals in this period of time is the focus of sports psychologists. Research in the field of sports found that effective cognitive intervention strategies can adjust the state of athletes in this period of time. Self talk is one of the common ways. Although previous studies have found that self-talk can have a positive impact on the performance of athletes, most of these studies are from the perspective of result performance, and few studies explore the process of self-talk. Therefore, this study explores the internal mechanism of self talk from three perspectives of behavior, kinematics and EEG activity changes, so as to enrich the research on self talk in the field of sports. In this study, 15 novice male college students and 15 male college students' dart experts were selected as the research objects, and a 2x2 mixed experimental design was used to explore the mechanism of guided self-talk and incentive self-talk on dart throwing performance of individuals with different sports expertise. The results show that, in terms of behavioral performance, the guided self-talk is better for novice darts, and the incentive self-talk is better for dart experts. In terms of kinematic performance, both novice darts and expert darts, guided self-talk reduces the individual's motor coordination performance. In addition, from the overall performance point of view, the two self talk ways can affect

the movement coordination ability of dart experts. In the change of EEG activity, the use of self talk is more effective for dart experts' motor control ability, and better for dart novices' visual spatial coordination ability, but there is not much difference in the impact on their speech cognitive thinking. In addition, the study also found that motivational self talk can effectively improve the brain function connectivity of dart novices, while instructional self talk can effectively promote the brain function connectivity of dart experts.

Keywords: Self-talk, darts, EEG, kinematics

正念减压训练对钢架雪车运动员正念、抑郁、焦虑、睡眠质量和注意集中的干预效果

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摘要 目的：考察正念减压对中国钢架雪车队运动员正念、抑郁、焦虑、睡眠质量和注意集中的干预效果。方法：对国家钢架雪车集训队 21 名运动员进行正念减压干预。采用正念五因素问卷（FFMQ）、抑郁自评量表（SDS）、状态特质焦虑量表（TSAI）、匹兹堡睡眠质量指数（PSQI）于干预开始前、干预 4 周后、干预 8 周/干预结束后以及干预结束 4 周后进行施测，评估 MBSR 对运动员正念水平、抑郁、焦虑和睡眠质量的影响。采用数字划消实验于干预开始前和干预结束后施测，评估 MBSR 对运动员注意集中水平的影响。结果：（1）正念减压可以提高钢架雪车运动员的正念水平，但是干预效果具有滞后效应，干预结束四周后才能观察到。短期的干预效果主要表现在有觉察行动子量表上，干预开始四周之后就有效果，干预结束四周之后依然具有长期后效。（2）正念减压训练显著降低了钢架雪车运动员的抑郁水平，干预开始四周之后就有效果，干预结束四周之后依然具有长期后效。（3）正念减压训练显著降低了钢架雪车运动员的特质焦虑水平，显著降低了钢架雪车运动员的状态焦虑水平，干预结束四周之后依然具有长期后效。（4）正念减压训练显著提高了钢架雪车运动员的睡眠质量，干预开始四周之后就有效果，干预结束之后效果明显，干预结束四周之后依然具有长期后效。（5）正念减压训练显著提高了钢架雪车运动员的注意集中水平。结论：正念减压训练可以有效提高钢架雪车运动员的正念水平，降低其抑郁和焦虑程度，提升其睡眠质量，提高其注意集中水平；作为一种有效的心理干预手段，在后续心理服务过程中可以继续使用正念减压训练。

关键词 正念减压，钢架雪车，抑郁，焦虑，睡眠质量，注意集中

Intervention Effects of MBSR on Mindfulness, Depression, Anxiety, Sleep Quality, and Concentration of Skeleton Athletes

Abstract: Objective: To investigate the intervention effects of Mindfulness Based Stress Reduction (MBSR) on mindfulness level, depression, anxiety, sleep quality, and attention concentration level of Chinese skeleton athletes. Methods: Total 21 athletes from Chinese skeleton team were trained once a week for 8 weeks. Five Facet Mindfulness Questionnaire (FFMQ), Self-Rating Depression Scale (SDS), State-Trait Anxiety Inventory (TSAI), and Pittsburgh Sleep Quality Index (PSQI) were measured four times at baseline (pre-test, T1), 4 weeks after the intervention start (middle test, T2), 8 weeks after the intervention start (post-test, T3), and 4 weeks after the end of the intervention (tracing test, T4), to evaluate the intervention effects of MBSR on mindfulness level, depression, anxiety, and sleep quality of skeleton athletes respectively. The Cancellation tasks was tested at baseline (pre-test, T1) and 8 weeks after the intervention (post-test, T3) to assess the effect of the MBSR on attention concentration level of skeleton athletes. Results: 1) MBSR can promote the mindfulness level of skeleton athletes, but this kind of hysteresis effect could be found after the end of intervention. 2) MBSR can significantly reduce the depression of skeleton athletes, and this kind of intervention effect could also be found after four weeks of the intervention. 3) MBSR can significantly decrease the anxiety of skeleton athletes, including trait anxiety and state anxiety, and this kind of

intervention effect could also be found after four weeks of the intervention. 4) MBSR can improve the sleep quality of skeleton athletes, and the intervention effect could be found four weeks after the start, and there is a long term effect four weeks after the end of training. 5) MBSR has a significant intervention effect on concentration of skeleton athletes. Conclusion: MBSR training could improve the mindfulness level, decrease the depression & anxiety level, increase the sleep quality, enhance the attentional concentration of skeleton athletes. As an effective psychological skills training, MBSR can continued to be used in the future on skeleton athletes.

Key Words: Mindfulness-Based Stress Reduction; skeleton; Depression & Anxiety; Sleep Quality; Concentration

正念干预对高校运动员心理健康及睡眠质量的影响

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摘 要 目的: 运动员群体的心理疾病患病率较高, 尤其在团体项目中(如篮球、排球等)。大学生的心理健康状况如今也令人堪忧, 而高校运动员作为大学生的一个特殊群体, 学业压力还会与紧张的比赛和训练周期联系在一起, 同时要扮演好这双重的角色, 必然使得背负在他们身上的担子更加沉重。此外, 他们往往会额外牺牲睡眠时间来完成各方面的任务, 从而面临较大的睡眠障碍风险。因此, 本研究将正念干预应用于高校运动员中, 旨在探讨其对心理健康以及睡眠质量的改善效果。方法: 北京体育大学校队男子排球运动员 14 人(4 名健将, 10 名一级)和女子篮球运动员 6 名(均二级), 实验组和对照组各 10 名。每晚 9 点集中进行共 20 分钟的正念冥想和正念呼吸练习, 课程为两位冥想大师 Jack Kornfield 和 Tara Brach 开发的《每日正念》中文版, 为期 4 周。采用症状自评量表(SCL-90)、匹兹堡睡眠质量(PSQI)问卷、五因素正念量表(FFMQ)和正性-负性情绪量表(PANAS)以及 sleeptek 空气垫式睡眠监测仪进行测量。结果: (1) 本研究中 SCL-90 中敌对、焦虑因子以及 PANAS 中负性情绪得分与 PSQI 得分均存在极显著正相关($r=0.74$ 、 0.75 和 0.74 , $P<0.01$), 抑郁、偏执因子与 PSQI 得分均存在显著正相关($r=0.61$ 和 0.68 , $P<0.05$)。 (2) 实验组干预前后, 睡眠效率显著提高、入睡时间显著缩短($t=-4.20$ 和 2.66 , $P<0.05$), 睡眠时长增加, 大多数能达到建议的 8 个小时(7.95 ± 1.10 小时), 深睡占比增加, 但均无显著差异($P>0.05$); SCL-90 中各因子分及总分在干预后均有所下降, 其中抑郁、偏执因子分显著下降($t=2.81$ 和 3.15 , $P<0.05$); FFMQ 得分在干预后有显著增加($t=-5.09$, $P<0.05$); 对照组干预前后各问卷、量表和生理指标均无显著差异($P>0.05$)。 (3) 实验组较对照组干预后测睡眠效率和睡眠时长显著增加、R 期显著减少($t=2.36$ 、 $t=2.78$ 和 $t=2.70$, $P<0.05$); 后测量表和问卷结果两组之间均无显著差异($P>0.05$)。结论: (1) 4 周的干预可以显著提高高校运动员的正念水平; (2) 心理因素是影响睡眠质量的关键, 正念干预可以促进高校运动员的心理健康, 改善睡眠质量。
关键词 正念, 高校运动员, 心理健康, 睡眠质量

Effects of Mindfulness Intervention on Mental Health and Sleep Quality of College Athletes

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Abstract: Objective: The prevalence of mental illness among athletes is high, especially in team sports (such as basketball, volleyball, etc.). Nowadays, the mental health of college students is also worrying, and college athletes, as a special group of college students, the academic pressure will be associated with the intense competition and training cycle, at the same time to play this double role, will inevitably make the burden on them more heavy. In addition, they tend to sacrifice extra sleep to complete various tasks, which puts them at greater risk for sleep disorders. Therefore, this study applied mindfulness intervention to college athletes to explore its effect on improving mental health and sleep quality. Methods: There were 14 men's volleyball players and 6 women's basketball players in the school team of Beijing Sport University. There were 10 in the experimental group and 10 in the control group. A

four-week, 20-minute concentration of mindfulness meditation and mindful breathing exercises at 9pm every night. The Chinese version of Daily Mindfulness, developed by two meditation gurus, Jack Kornfield and Tara Brach. The symptom Self-rating Scale (SCL-90), The Pittsburgh Sleep Quality (PSQI) Questionnaire, the Five-factor Mindfulness Scale (FFMQ), the Positive-negative Emotion Scale (PANAS) and the Sleeptek Air cushion sleep monitor were used for measurement. Results: (1) In this study, hostility and anxiety factors in SCL-90 and negative emotion scores in PANAS were significantly positively correlated with PSQI score ($R = 0.74, 0.75$ and $0.74, P < 0.01$), and depression and paranoia factors were significantly positively correlated with PSQI score ($R = 0.61$ and $0.68, P < 0.05$). (2) In the experimental group before and after intervention, the sleep efficiency was significantly improved, the time to fall asleep was significantly shortened ($t = -4.20$ and $2.66, P < 0.05$), the sleep duration was increased, most of them could reach the recommended 8 hours (7.95 ± 1.10 hours), and the proportion of deep sleep was increased, but there were no significant differences ($P > 0.05$); The scores of all factors and total scores in SCL-90 were decreased after intervention, and the scores of depression and paranoia were significantly decreased ($t = 2.81$ and $3.15, P < 0.05$). FFMQ score was significantly increased after intervention ($t = -5.09, P < 0.05$); There were no significant differences in the questionnaire, scale and physiological indexes before and after intervention in the control group ($P > 0.05$). (3) Compared with the control group, the sleep efficiency and sleep duration of the experimental group were significantly increased after intervention, while the R period was significantly decreased ($t = 2.36, T = 2.78$ and $T = 2.70, P < 0.05$). There were no significant differences between the two groups ($P > 0.05$). Conclusions: (1) 4-week intervention can significantly improve the level of mindfulness of college athletes; (2) Psychological factors are the key factors affecting sleep quality, and mindfulness intervention can promote mental health and improve sleep quality of college athletes.

Keywords: Mindfulness, college athletes, mental health, sleep quality

精英运动员急性严重损伤后该如何应对？

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摘要 本研究将精英运动员操作性地界定为曾在全国大型比赛获得前3名、亚洲比赛前6名、奥运会和世界级比赛前8名的运动员(刘洁洁, 2019)。研究的目的是通过访谈发生急性严重损伤后仍能重返赛场，取得优异成绩的精英运动员，探讨运动员伤后合理应对的心理策略。采用半结构式访谈的质化研究方法，基于解释性现象学分析(Interpretative Phenomenological Analysis, IPA)对研究对象高同质性和对访谈文本深入分析的要求以及资料饱和原则，以面对面或者腾讯会议的形式访谈了11名有急性严重损伤史且有备战奥运会经历的国家队运动员，其中10名运动员皆在伤后重返赛场并取得了优异成绩。采用Colaizzi (1978)的现象学分析方法进行资料分析。深度访谈发现，运动员在发生急性损伤后会绝望，沮丧，沉浸在受伤中，但部分精英运动员仍能重返赛场并取得优异成绩，得益于以下3点。**第一，用合理化心态看待受伤。**“竞技体育谁不受伤呢？”这种想法可以减轻运动员伤后的心理痛苦。**第二，设定明确的目标。**来自教练或领导的肯定可以帮助运动员消除内心的不确定性，如“你只管好好养伤，伤好后一定让你比奥运会”。这会帮助运动员明确自己的目标，“康复就是为了参加奥运会。”“你要知道你自己想要什么，然后尽可能得去争取。”正是这样的目标感给了运动员坚持康复的动力。**第三，关注并做好康复过程中的每个当下。**运动员要经历难以忍受的疼痛，日复一日做同样的动作，甚至每天的训练都达不到自己的期望。但很多运动员认为，“别想太多，做好当下该做的，做好自己该做的。要坚持，可能有一段时间，每一天都看不到自己有哪些进步，但是过几个月之后，再回头看确实是不一样的。”

关键词 精英运动员，急性损伤，严重损伤，应对，心理策略

How should elite athletes deal with acute severe injuries?

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Abstract : In this study, elite athletes are operationally defined as those who have won the top 3 in national competitions, the top 6 in Asian competitions, the top 8 in the Olympic Games and world-class competitions (Liu Jiejie, 2019). The purpose of this study is to interview elite athletes who can return to the field after acute serious injury and achieve excellent results, and to explore the psychological strategies of athletes to deal with them reasonably after injury. Using qualitative research methods and semi-structured interviews, the high homogeneity of the subjects and in-depth analysis of interview texts required by Interpretive Phenomenological Analysis are the basic principles of the study. Eleven national team athletes with a history of acute serious injuries and preparation for the Olympic Games were interviewed in the form of face-to-face or Tencent meetings, and 10 of them returned to the field after injury and achieved excellent results. The phenomenological analysis method of Colaizzi (1978) was used to analyze the data. In-depth interviews found that athletes will be desperate, depressed and immersed in injuries after acute injuries, but some elite athletes can still return to the field and achieve excellent results, thanks to the following three points. First, treat injuries with a rational mindset. "Who is not injured in competitive sports?" This kind of thinking can alleviate the psychological pain of athletes after injury. Second, set clear goals. Affirmation from coaches or leaders can help athletes eliminate their inner uncertainty, such as "you just take good care of the injury, and you will certainly participate in the Olympic Games after the injury is healed." This will help athletes define their goals: "recovery is to participate in the Olympic Games. you need to know what you want, and then you have to go for it as much as you can." It is this sense of goal that gives athletes the motivation to continue to recover. Third, pay attention to and do well every moment in the process of rehabilitation. Athletes have to experience unbearable pain, do the same movements day after day, and even their daily training falls short of their expectations. But many athletes think, "Don't think too much, do what you have to do right now, do what you have to do. To persevere, there may be a time when you can't see any progress every day, but after a few months, it's really different to look back."

Keywords: Elite athletes, acute injury, severe injury, coping, psychological strategy

(4) “体育运动心理学专业委员会”口头报告分场 4

排球专项大学生运动竞赛情绪感染与竞赛状态焦虑的关系 及其链式中介效应研究

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摘 要 在排球运动竞赛中, 情绪感染现象非常普遍。所谓情绪感染, 它是人与人之间感官情绪信息自动化、无意识地传递的过程, 情绪信息接受者与情绪信息发出者产生趋于一致的情绪现象。本研究着重探讨排球专项大学生运动竞赛情绪感染的基本特征及其与竞赛状态焦虑之间的关系, 揭示正念、运动竞赛情绪调节自我效能感在其中的作用机制, 以期为促进排球专项大学生赛场表现、降低消极情绪感染影响、提高对竞赛状态焦虑的预测与解释以及相关干预工作提供实证依据。研究主要采用访谈法、问卷法, 在编制《排球专项大学生运动竞赛情绪感染问卷》的基础上, 采用整群抽样, 对北京体育大学、沈阳体育学院、吉林体育学院、哈尔滨体育学院 511 名排球专项大学生进行调查。结果表明, 编制的《排球专项大学生运动竞赛情绪感染问卷》由 23 个项目组成, 包括 5 个维度, 即: 积极、悲伤、焦虑、挫折、愤怒。问卷信效度良好, 达到心理测量学标准; 排球专项大学生总体情绪感染程度较高, 在运动竞赛中更多受积极、焦虑、挫折情绪感染的影响, 在性别上无显著差异。二级及以上运动等级和训练年限为 1-6 年的排球专项大学生感受到的焦虑情绪感染更多,

其中 1-3 年最大；积极情绪感染通过正念、情绪调节自我效能感对竞赛状态焦虑和状态自信心影响的链式中介模型成立。消极情绪感染通过正念、情绪调节自我效能感对竞赛状态焦虑影响的链式中介模型成立，而对状态自信心的链式中介模型不成立。消极情绪感染对状态焦虑的直接影响更大，积极情绪感染对状态自信心的直接影响更大。因此，排球专项大学生情绪感染程度较高，要重视对排球专项大学生情绪感染的调节和辅导。在干预研究中应注重对排球专项大学生的情绪感染、正念、情绪调节自我效能感的干预，积极探索正念、情绪调节自我效能感的干预训练方法，提高正念和情绪调节自我效能感水平，消除消极情绪感染，促进运动表现。

关键词 排球专项大学生，情绪感染，运动竞赛，竞赛状态焦虑，链式中介效应

Research on the Relationship between Competition Emotional Contagion and Competition State Anxiety of College Volleyball Students and its Chain Mediating Effect

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Abstract: In volleyball competitions, emotional contagion is very common. Emotional contagion is a process of automatic, unconscious transfer of sensory-emotional information between people, where the receiver of the emotional information and the sender of the emotional information produce a convergent emotional phenomenon. This study focuses on the basic characteristics of volleyball college students' sports competition emotional contagion and its relationship with competition state anxiety, reveals mindfulness, sports competition emotion regulation self-efficacy in the mechanism, to promote volleyball college students playground performance, reduce the influence of negative emotional contagion, improve the prediction and interpretation of competition state anxiety and related intervention work to provide empirical basis. Research mainly adopts interview method, questionnaire method, On the basis of compiling the questionnaire of College Students' Emotional contagion in Volleyball Competition, 511 volleyball special college students from Beijing Sports University, Shenyang Institute of physical education, Jilin Institute of physical education and Harbin Institute of physical education were investigated by cluster sampling. Research result: The questionnaire of College Students' Emotional contagion in Volleyball Competition consists of 23 items, including 5 dimensions, namely: positivity, sadness, anxiety, frustration, and anger. The questionnaire has good reliability and validity and meets the psychometric standards. Volleyball college students' overall emotional contagion is high, in the sports competition is more affected by positive, anxiety, frustration emotional contagion, no significant difference in gender. In terms of anxiety contagion, Level 2 and above and training for 1-6 years of volleyball students feel more, of which 1-3 years is the largest. Positive emotional contagion was established through the chain mediating model of mindfulness and emotion regulation self-efficacy on competition state anxiety and state confidence. The chain mediating model of negative emotion contagion on competition state anxiety through mindfulness and emotion regulation self-efficacy is established, but the chain mediating model of state self-confidence is not established. Negative emotional contagion has a greater direct effect on state anxiety and positive emotional contagion has a greater direct effect on state self-confidence. Therefore, volleyball college students have a high degree of emotional contagion, we should pay attention to the regulation and counseling of volleyball college students' emotional contagion. The intervention study should focus on the intervention of emotion contagion, mindfulness, and emotion regulation self-efficacy of volleyball college students, and the intervention training methods of mindfulness and emotion regulation self-efficacy should be actively explored, to improve the level of mindfulness and emotion regulation self-efficacy, eliminate negative emotional contagion and promote sports performance.

Keywords: volleyball college students, emotional contagion, sports competition, competition state anxiety, chain mediating effect

情绪对大学生网球初学者击球稳定性的影响： 自我谈话的调节作用

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摘 要 情绪和自我谈话是影响动作表现的重要因素，本研究基于合理情绪疗法理论，在深度挖掘大学生网球初学者自我谈话特征的基础上，通过 3 个递进式研究揭示大学生网球初学者情绪、自我谈话、击球稳定性三者之间的关系，以期体育教师、网球初学者提供情绪调节的建议，为促进网球教学质量和运动表现提供实证依据和指导。研究结果表明：（1）运用观察法和访谈法对 20 名大学生网球初学者自我谈话内容进行描述研究，发现大学生网球初学者较多使用消极自我谈话。其原因是练习者击球效果达不到理想时多进行负面思维。（2）采用单因素被试内实验设计，探究不同情绪状态（正性、中性、负性）对大学生网球初学者动作表现的影响，20 名大学生网球初学者参与研究。发现不同情绪状态下（正性、中性、负性）大学生网球初学者正反手击球稳定性不同，较正性情绪和中性情绪状态，负性情绪状态下大学生网球初学者正反手击球稳定性较差，且差异性显著。正性情绪与中性情绪状态下个体动作表现差异性不显著。（3）令参与者处于负性情绪状态下，采用单因素被试间实验设计，探究即时自我谈话（指导型、动机型）对负性情绪的调节作用，45 名大学生网球初学者参与研究。发现即时指导型自我谈话能调节负性情绪对大学生网球初学者正反手击球稳定性的消极影响。即时动机型自我谈话与对照组差异性不显著。（4）采用单因素被试间实验设计，探究长期指导型自我谈话和长期动机型自我谈话对大学生网球初学者正反手击球稳定性的影响。对 117 名大学生网球初学者干预九周，发现自我谈话（指导型、动机型）可以促进大学生网球初学者正反手击球的稳定性，且指导型自我谈话的效果优于动机型自我谈话，长期动机型自我谈话对负性情绪具有调节作用。

关键词 自我谈话，情绪，击球稳定性，调节作用，大学生网球初学者

The Influence of Emotion on the Hitting Stability of College Tennis Beginner: The Moderating Effect of Self-talk

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Abstract: Emotion and self talk are important factors that affect action performance. Based on the theory of rational emotional therapy, this study explored the characteristics of self talk of college tennis beginners, and revealed the relationship among emotion, self talk and hitting stability of college tennis beginners through three progressive studies. In order to provide suggestions for physical education teachers and tennis beginners to regulate their emotions, to promote the quality of tennis teaching and sports performance to provide empirical basis and guidance. The results show that: (1) Using observation and interview methods to describe the content of self talk of 20 college tennis beginners, it is found that college tennis beginners use more negative self talk. The reason is that practitioners often think negatively when their batting effect is not ideal. (2) In this study, a single factor experiment was designed to explore the influence of different emotional states (positive, neutral, negative) on the action performance of college tennis beginners. It is found that the stability of forehand and backhand of college tennis beginners under different emotional states (positive, neutral, negative) is different, compared with positive emotion and neutral emotional state, the stability of forehand and backhand stroke of college tennis beginners in negative emotional state is poor, and the difference is significant. There was no significant difference between positive emotion and neutral emotion. (3) Put the participants in a negative mood., a single factor experimental design was used to explore the moderating effect of instant self talk (guided self-talk and motivational self-talk) on negative emotions., 45 college tennis beginners participated in the study. It is found that immediate guided self talk can regulate the negative influence of negative emotions on the stability of forehand and backhand stroke of college tennis beginners. There was no significant difference between instant motivational self-talk and control group. (4) Using the single factor experimental design,

this paper explores the influence of long-term guided self-talk and long-term motivational self-talk on the stability of forehand and backhand stroke of college tennis beginners. After nine weeks of intervention on 117 college tennis beginners, it was found that self talk (guided self talk, motivational self talk) can promote the stability of forehand and backhand stroke of college tennis beginners, and the effect of guided self talk is better than that of motivational self talk. Long term motivational self talk can regulate negative emotions.

Keywords: Self-talk, Emotions, Hitting stability, Moderating Effect, College tennis beginners

运动员情绪调节与竞技表现的关系

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摘要 情绪调节指个体运用策略来发起、维持、调整或表达情绪的能力。情绪调节能力对运动员在竞技大赛中取得最佳运动成绩至关重要。因此，本文的目的是从情绪调节的理论、测量评估方法、以及对运动员情绪调节能力的干预三个角度来探讨情绪调节与运动成绩之间的关系。本文采用系统综述的方法，从中国知网，万方，Web of Science 和 EBSCO 等数据库进行文献检索。从 145 篇文献中确定了符合纳入标准的 30 篇文献，包括 2 篇综述，20 篇实证研究和 8 篇干预研究。介绍了解释情绪调节与竞技表现关系的 5 个理论的核心要点和实证研究，包括情绪调节过程模型、认知动机关系理论、情绪调节工具模型、多行动计划模型和团队运动员情绪调节的多级模型，并探讨 5 大理论的异同及运动员情绪调节在研究中的重要性。还介绍了通过量表、行为检测法和生理检测法对情绪调节的外显调节和内隐调节进行评估的方法；最后归纳了通过心理训练提高情绪调节能力的三类方法。结论：情绪调节与运动成绩的高低存在密切联系，这种关系受情绪、认知方式和环境等多种因素的影响，且在团体运动中，运动员的情绪调节还会受到队友的影响。情绪调节策略及其有效性的自信程度，在情绪调节与运动成绩的关系中起重要作用。内隐情绪调节是一种有价值的情绪调节方式，能有效抑制运动员的负面情绪和行为，但该方面的研究在运动领域相对匮乏。可有效提高运动员情绪调节能力的训练方法可概括为传统心理训练方法、生物反馈训练和正念训练三类，与传统方法相比，生物反馈训练和正念训练更能帮助运动员更好地感知和调节情绪，进行对运动表现产生更多积极影响。因此，生物反馈训练和正念训练可作为运动员日常的心理监测和心理训练手段。未来还需要进一步探究情绪调节与运动成绩的关系，以及加强对体育运动中内隐情绪及调节方式的探究，为后续从外显和内隐两个层面进行个人化的情绪调节干预提供依据和方法。

关键词 运动员，情绪调节，评估，干预，心理训练

The Relationship between Emotional Regulation and Athletic Performance of Athletes

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Abstract: Emotional regulation is the ability of individuals to use strategies to initiate, maintain, adjust or express emotion. Emotional regulation is very important for athletes to get the best performance in competition. Therefore, the purpose of this systematic review is to explore the relationship between emotional regulation and sport performance from three perspectives that the theory of emotional regulation, measurement and intervention. The paper uses the method of systematic review. The following databases were searched from CNKI, Wanfang data, Web of Science and EBSCO. Results: 30 articles meeting our inclusionary criteria were identified from 145 articles, including 2 reviews, 20 empirical studies and 8 intervention studies. This review introduced the core points and empirical studies of five significant theories to explain the relationship between emotion regulation and competitive performance, which includes Emotional regulation process model, cognitive motivational relational theory(CMRT), instrumental model of emotion regulation, the multiaction plan model(MAP) and Multilevel Model of Emotion Regulation of Athletes in Teams(MERAT), and discussed similarities and differences of the five theories and the

importance of emotional regulation of athletes. Then introduced a method to evaluate explicit regulation and implicit regulation of emotion regulation by scale, behavioral test and physiological test. Conclusion: emotional regulation is closely related to sport performance, which is affected by emotion, cognitive style, environment and other factors, in team sports, athletes' emotional regulation is also influenced by their teammates. Emotional regulation strategies and confidence in their effectiveness play an important role in the relationship between emotional regulation and performance. Implicit emotion regulation is a valuable way of emotion regulation, which can effectively inhibit the negative emotion and behavior of athletes, but the research on this aspect is relatively scarce in the field of sports. The intervention method that can effectively improve athletes' emotional regulation ability can be summarized into three categories: traditional psychological training method, biofeedback training and mindfulness training. Compared with traditional methods, biofeedback training and mindfulness training can help athletes better perceive and regulate emotions and have more positive effects on sports performance. Therefore, biofeedback training and mindfulness training can be used as daily psychological monitoring and psychological training means for athletes. In the future, it is necessary to further explore the relationship between emotional regulation and sports performance, and strengthen the exploration of implicit emotions and regulation methods in sports, so as to provide basis and methods for subsequent individualized emotional regulation intervention from both explicit and implicit levels.

Keywords: athletes, emotion regulation, measurement, intervention, mental training

龙舟运动员情绪调节策略对运动决策影响

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摘要 本研究为探讨情绪调节策略在不同比赛情境和比赛阶段中对龙舟运动员决策正确率和速度的影响，采用实验法，以某大学龙舟队 32 名男运动员为研究对象，年龄在 18 岁到 22 岁，采用 2（情绪调节策略：认知重评策略，表达抑制策略）×3（比赛情境：船头领先，船头持平，船头落后）×3（比赛阶段：启航，途中，冲刺）的混合实验设计，自变量是情绪调节策略、比赛情境、比赛阶段，因变量是运动员的运动决策。研究结果发现：1.运动员运动决策的正确率在领先的时候高于落后和持平的时候。2.运动员运动决策的正确率在冲刺阶段高于启航与途中阶段；运动员运动决策的速度在途中和冲刺阶段快于启航阶段。3.采取认知重评策略的运动员运动决策速度快于采取表达抑制策略的运动员运动决策速度。4.采取表达抑制策略的运动员运动决策速度在途中阶段快于冲刺和启航阶段；在途中阶段，运动员运动决策的正确率在领先的时候高于落后和持平的时候；在冲刺阶段，运动员运动决策的速度在领先的时候快于持平和落后的时候。结论：龙舟运动员的运动决策正确率在冲刺阶段领先的时候最高；龙舟运动员的运动决策速度在途中阶段最快；无论是何种比赛情境和比赛阶段，采取认知重评策略的龙舟运动员运动决策速度均快于采取表达抑制策略的龙舟运动员运动决策速度。

关键词 龙舟运动员，情绪调节策略，运动决策

Influence of emotion regulation strategies on sports decisions of dragon boat athletes

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Abstract: In order to explore the influence of emotion regulation strategy on the correct rate and speed of decision-making of dragon boat athletes in different competition situations and stages, the experimental method was used to study 32 male athletes of a university dragon boat team, aged 18 to 22, using 2(emotion regulation strategy: cognitive reappraisal strategy, expression inhibition strategy)×3(competition situation: bow leading, bow flat, backward)×3(race stage: sailing, on the way, sprint)×3(race stage: mood regulation strategy, race situation, race stage, race stage) The dependent variable is the athlete's motion decision. The results show that :1. The accuracy of athletes'

sports decision-making is higher than that of backward and flat. 2. the correct rate of athletes' sports decision is higher in the sprint stage than in the sailing stage and the speed of athletes' sports decision is faster in the en route and sprint stage than in the sailing stage. Athletes who 3. adopt cognitive re-evaluation strategy are faster than athletes who adopt expression inhibition strategy. Athletes who 4. adopt the expression suppression strategy are faster in the en route stage than in the sprint and sailing stage; in the en route stage, the correct rate of the athlete's sports decision is higher than that of the backward and flat when leading; in the sprint stage, the speed of the athlete's sports decision is faster than the flat and backward when leading. Conclusion: The correct rate of motion decision of dragon boat athletes is the highest when the sprint stage is leading, the speed of motion decision of dragon boat athletes is the fastest on the way stage, and the speed of motion decision of dragon boat athletes adopting cognitive re-evaluation strategy is faster than that of dragon boat athletes adopting expression suppression strategy.

Keywords: Dragon boat athlete, Emotion regulation strategy, Movement Decision

情绪、情绪调节策略与目标定向对运动员行为抑制的影响

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摘要 情绪对行为抑制的影响是运动心理学研究的重要内容。行为抑制是个体能够快速抑制先前形成的优势反应, 重新调整判断做出新的正确反应的能力。运动员在比赛场上时常需要行为抑制帮助转化因误判而产生的错误应对动作。赛场上不同情绪会影响运动员的注意、决策以及行为, 因此探讨不同情绪调节策略对于不同情绪的调节效果, 有利于运动员在运动场上迅速调整状态, 发挥应有竞技水平。目标定向理论假定人在定义成就和判断感知能力方面采用不同的方式, 个体在处理成就任务的时候, 依据自己对自身能力的评价, 其目标类型性质也会发生变化。探讨三者对于运动员行为抑制的影响有利于丰富心理学领域相关研究同时丰富运动训练学相关理论, 对提高运动员的运动表现和运动成绩有重要意义。本研究采用问卷法与实验法, 以同场对抗类项目运动员 105 名为研究对象, 采用 2 (情绪: 积极、消极) × 2 (情绪调节策略: 认知重评、表达抑制) × 2 (目标定向: 任务定向、自我定向) 三因素被试间设计, 结果: (1) 情绪主效应显著, 消极情绪状态下运动员行为抑制正确率更高; 情绪调节策略主效应边缘显著, 使用表达抑制策略运动员行为抑制稍好于认知重评策略; 目标定向主效应显著, 任务定向运动员的行为抑制好于自我定向运动员。(2) 情绪、情绪调节策略与目标定向间两两交互效应均不显著。(3) 情绪、情绪调节策略与目标定向共同影响运动员行为抑制, 消极情绪状态下使用认知重评策略的自我定向运动员在行为抑制任务中成绩最好。结论: 运动员行为抑制受到情绪、情绪调节策略与目标定向的共同影响。消极情绪状态下, 任务定向运动员采取表达抑制策略能够有效调节情绪对于行为抑制的影响; 自我定向运动员采取认知重评策略能够有效调节情绪对行为抑制的影响。

关键词 运动员, 情绪, 情绪调节策略, 目标定向, 行为抑制

The Impact of Emotion, Emotional Regulation Strategies and Goal Orientation on Behavioral Inhibition of Athletes

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Abstract: The influence of emotion on behavior inhibition is an important content of sports psychology research. Behavioral inhibition is the ability of an individual to quickly suppress previously formed dominant responses and to readjust judgments and make new correct responses. Athletes often need behavior suppression to help transform the wrong response actions caused by misjudgment. Different emotions on the field will affect athletes' attention, decision-making and behavior. Therefore, exploring the effects of different emotional regulation strategies on

different emotions is conducive to athletes' rapid adjustment of status on the field and their due competitive level. The theory of goal orientation assumes that people adopt different ways in defining achievement and judging perception ability. When an individual handles achievement tasks, according to his own evaluation of his own ability, the type and nature of his goals will also change. To explore the influence of the three factors on athletes' behavior inhibition is beneficial to enrich the relevant researches in the field of psychology and enrich the relevant theories of sports training, which is of great significance to improve athletes' athletic performance and performance. This research adopts the questionnaire method and experimental method, with 105 athletes competing against class project named the research object, using 2 (emotions: positive and negative) $\times$ 2 (emotion regulation strategies: cognitive reappraisal and expression suppression) $\times$ 2 (goal orientation, task orientation and ego orientation) three factors between subjects design. Results: (1) the main effect significant, negative mood state of athletes behavior inhibition of higher accuracy; The edge of main effect of emotion regulation strategy was significant, and the behavioral inhibition of athletes using expression inhibition strategy was slightly better than that of cognitive reappraisal strategy. The main effect of target orientation is significant and task-oriented athletes' behavior inhibition is better than that of self-oriented athletes. (2) The pairwise interaction effect between emotion, emotion regulation strategy and target orientation is not significant. (3) Emotion, emotion regulation strategy and target orientation influence athletes' behavioral inhibition together. Self-oriented athletes who use cognitive reevaluation strategy in negative emotional state have the best performance in the behavioral inhibition task. Conclusion: The inhibition of athletes' behavior is influenced by emotion, emotion regulation strategy and target orientation. Under negative emotional state, task-oriented athletes can effectively regulate the influence of emotion on behavior inhibition by adopting expression inhibition strategy; Self-directed athletes adopting cognitive reappraisal strategy can effectively regulate the influence of emotion on behavioral inhibition.

Keywords: athletes, emotion, emotional regulation strategy, goal orientation, behavioral inhibition

情绪对不同威胁敏感性运动员注意控制的影响

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摘要 目的：探究威胁敏感性高低的运动员在不同情绪状态下注意控制功能中注意转换和注意集中的差异。方法：使用《威胁敏感性量表》选取威胁敏感性高和低的运动员，采用项目鉴别指数法把被试根据量表总分的高低次序排列，前 27% 为高威胁敏感性运动员，后 27% 为低威胁敏感性运动员。采用视频诱发情绪，经 5 点评分快乐情绪视频 3.9 分，愤怒情绪视频 3.5 分，均满足要求，视频时长各 4 分钟。任务转换范式要求在不断变化的环境中个体根据特定需要稳定保持或灵活转换目标，根据重复任务反应时可以判断注意集中功能，转换任务反应时可以衡量注意转换的水平高低。筛除情绪诱发效果差的被试 9 名后，有效参与者共 79 名。研究参与者包含高威胁敏感性运动员 40 人，低威胁敏感性运动员 39 人，女生 36 人，男生 43 人，平均年龄 20.73 ± 2.17 岁，所有参与者视力或矫正视力正常。实验采用 2（威胁敏感性：高、低） $\times$ 2（情绪状态：快乐、愤怒）被试间设计，因变量是重复任务和转换任务的反应时。结果：以威胁敏感性和情绪作为组间自变量，以重复任务和转换任务反应时为因变量进行两因素方差分析可知，不同威胁敏感性运动员在重复任务中差异显著， $F(1,78) = 4.36$ ， $p < .05$ ，高威胁敏感性运动员的重复任务反应时（ 851.36 ± 272.24 ）长于低威胁敏感性（ 831.68 ± 295.84 ）。情绪在转换任务上主效应显著， $F(1,78) = 7.40$ ， $p < .01$ ，快乐情绪状态下运动员的转换任务反应时（ 896.39 ± 287.24 ）长于愤怒情绪状态下的情况（ 870.45 ± 287.50 ）。威胁敏感性和情绪的交互作用不显著，但描述统计结果显示，高威胁敏感性运动员在快乐时重复任务反应时（ 858.18 ± 265.63 ）长于愤怒时（ 844.86 ± 278.38 ），而低威胁敏感性运动员在快乐情绪中重复任务反应时（ 828.60 ± 295.66 ）比愤怒状态下（ 834.99 ± 296.18 ）短。结论：低威胁敏感性运动员更能保持注意集中，愤怒情绪状态下运动员非常警觉，在注意转换功能上表现较好，情绪对不同威胁敏感性运动员注意控制的影响有待深入讨论，进一步研究其作用机制。

关键词 运动员，情绪，威胁敏感性，注意控制

The Impact of Emotion on Attention Control of Athletes with Threat Sensitivity

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Abstract: Purpose: To explore the difference of attention conversion and attention concentration in attention control functions of athletes with high or low threat sensitivity under different emotional states. Method: Use the "Threat Sensitivity Scale" to select athletes with high and low threat sensitivity, and use the item discrimination index method to rank the subjects according to the total score of the scale. The top 27% are high threat sensitive athletes, and the last 27% are athletes with low threat sensitivity. Video is used to induce emotions. After 5-point scoring, the happy emotion video is 3.9 points, and the angry emotion video is 3.5 points, both of which meet the requirements, and the video duration is 4 minutes each. The task switching paradigm requires individuals to stably maintain or flexibly switch goals according to specific needs in a constantly changing environment. According to the response of repeated tasks, the attention concentration function can be judged, and the level of attention conversion can be measured when the response of switching tasks is changed. After screening out 9 subjects with poor emotional inducing effects, there were 79 effective participants. The study participants included 40 high-threat-sensitive athletes, and 39 low-threat-sensitive athletes, 36 girls, and 43 boys, with an average age of 20.73 ± 2.17 years old. All participants had normal or corrected vision. The experiment adopts a design of 2 (threat sensitivity: high, low) $\times$ 2 (emotional state: happy, angry) between subjects, and the dependent variable is the response time of repetitive tasks and switching tasks. Results: Taking threat sensitivity and emotion as the inter-group independent variables, and using the repetitive task and switching task response time as the dependent variable, a two-factor analysis of variance showed that athletes with different threat sensitivity have significant differences in repetitive tasks, $F(1,78) = 4.36, p < .05$, the repetitive task response time (851.36 ± 272.24) of high threat sensitivity athletes is longer than that of low threat sensitivity (831.68 ± 295.84). Emotion has a significant main effect on the switching task, $F(1,78) = 7.40, p < .01$, the response time of the athlete in the happy emotional state (896.39 ± 287.24) is longer than the situation in the angry emotional state (870.45 ± 287.50). The interaction between threat sensitivity and emotion is not significant, but the descriptive statistics show that the high-threat-sensitive athletes have longer repetitive tasks when they are happy (858.18 ± 265.63) than when they are angry (844.86 ± 278.38), while low-threat-sensitive athletes' response time of repeated tasks in the happy mood (828.60 ± 295.66) is shorter than that in the anger state (834.99 ± 296.18). Conclusion: Athletes with low threat sensitivity are more able to maintain attention concentration. Athletes are very alert in the state of anger and perform better in the attention conversion function. The influence of emotions on the attention control of athletes with different threat sensitivity needs to be discussed in depth, and its mechanism of action should be further studied.

Keywords: athletes, emotion, threat sensitivity, attention control

(5) “体育运动心理学专业委员会”口头报告分场 5

运动对抑郁干预的元分析

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摘要 目的: 本文通过分析运动对抑郁症干预的相关文献, 为临床运动处方治疗抑郁提供理论支持, 力求通过科学规律的身体锻炼来改善人们抑郁水平。方法: 以“体育参与”、“运动”、“体育锻炼”、“抑郁”为中文关键词, 以“physical participation” OR “exercise” OR “sports” AND “depression”为英文检索词, 在中国知网、万方数据库、PubMed 数据库、SCI 科学引文索引 WOS 数据库精确检索相关文献, 时间跨度为建库以来到 2020

年 12 月底。采用 Review Manager5.3 软件进行发表偏倚检验、异质性检验、绘制森林图，并对数据进行亚组分析和敏感性分析。结果：（1）本文纳入 14 篇文献共 1312 名调查对象，其中实验组 716 名，对照组 596 名，运用 Cochrane 工具对所纳入的文献进行质量学评价，纳入文章质量处于中等水平以上。（2）亚组分析结果：运动能很好地缓解大学生（ $P<0.00001$ ）和中学生（ $P<0.00001$ ）的抑郁水平。运动跑台、太极拳、健美操、健身气功、普拉提、网球对抑郁均有显著的干预效果。中等强度运动（ $P<0.00001$ ）对抑郁症的缓解有显著的效应。结论：中等及以上强度的运动均能改善学生的抑郁水平，中等强度的有氧运动对抑郁症干预效果最佳。运动可以刺激神经递质、去甲肾上腺素、多巴胺和内啡肽的分泌，从而有效降低抑郁水平。针对抑郁症群体的具体情况，合理调整运动参数，形成个性化的健身运动处方，通过体育锻炼转移抑郁人群的注意力，拓展人际渠道，合理调控情绪，实现抑郁症的精准干预。

关键词 运动，抑郁，干预，元分析

Meta-analysis of the intervention of sports on depression

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Abstract: Objective: This article analyzes the relevant literature on the intervention of exercise on depression, provides theoretical support for clinical exercise prescription to treat depression, and strives to improve people's depression level through scientific and regular physical exercise. Method: Use "sports participation", "sports", "exercise", "depression" as Chinese keywords, and "physical participation" OR "exercise" OR "sports" AND "depression" as English search terms, which are known in China Net, Wanfang database, PubMed database, SCI scientific citation index WOS database accurately retrieve relevant documents, the time span is from the establishment of the database to the end of December 2020. The Review Manager5.3 software was used for publication bias test, heterogeneity test, forest map drawing, and subgroup analysis and sensitivity analysis of the data. Results: (1) A total of 1312 survey subjects were included in 14 articles, of which 716 were in the experimental group and 516 were in the control group. Cochrane tools conducted a qualitative evaluation of the included articles, and the quality was above the medium level. (2) Subgroup analysis results: exercise can well alleviate the depression levels of college students ($P<0.00001$) and middle school students ($P<0.00001$). Sports treadmills, Tai Chi, aerobics, Health Qigong, Pilates, and tennis all have significant intervention effects on depression. Moderate-intensity exercise ($P<0.00001$) has a significant effect on the relief of depression. Conclusion: Moderate-intensity aerobic exercise has a significant effect on depression intervention. Exercise stimulates the secretion of neurotransmitters, norepinephrine, dopamine and endorphins, thereby effectively reducing the level of depression. According to the specific situation of the depression group, reasonably adjust the exercise parameters, form a personalized fitness exercise prescription, divert the attention of the depressed group through physical exercise, expand interpersonal channels, Reasonable control of emotions, and achieve precise intervention for depression.

Keywords: exercise, depression, intervention, meta-analysis

体育锻炼对大学生心理健康水平的影响：心理弹性的中介作用

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摘要 为明确体育锻炼对心理健康的作用机制，本研究构建了一个中介模型，重点考察了心理弹性在二者关系中的中介作用。以 500 名大学生为调查对象，使用抑郁自评问卷（SDS）测量的抑郁情绪作为心理健康水平的消极情绪指标，以 PANAS 中积极情绪指作为心理健康水平的积极维度评价指标，体育活动等级量表考察体育锻炼强度，Conner-Davidson 心理弹性量表（中文版）测量心理弹性。结果显示：（1）锻炼水平与心理弹性（ $r=.250, p<.0.01$ ）、积极情绪（ $r=.198, p<.0.01$ ）显著正相关，与抑郁（ $r=-.198, p<.0.01$ ）显著负相关；心理弹性与积极情绪（ $r=.337, p<.0.01$ ）、显著正相关，与抑郁（ $r=-.576, p<.0.01$ ）显著负相关。

(2) 中介效应检验发现: 在控制了性别、年级和学科类型之后, 体育锻炼对积极情绪有显著的正向预测作用, 心理弹性在体育锻炼与积极情绪的关系中起部分中介作用, 该直接效应为.115, 心理弹性的中介效应为.097, 分别占总效应 (.212) 的 54.25%和 45.75%。在控制了性别、年级和学科类型之后, 体育锻炼对抑郁有显著的负向预测作用, 心理弹性在体育锻炼和抑郁的关系中起完全中介作用, 该直接效应为-.055, 心理弹性的中介效应为-.098, 分别占总效应 (-.153) 的 35.95%和 64.05%。研究结果不仅有利于全面理解体育锻炼对心理健康积极和消极两个维度的影响, 而且可以引导大学生积极参加体育活动, 使其成为改善大学生心理健康水平的有效方法。

关键词 体育锻炼, 心理健康, 心理弹性

Effects of Physical Exercise On Mental Health of College Students: Mediating Effect of Resilience

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Abstract: In order to give an interpretation for the relationship and complex mechanisms between physical exercise and mental health, the present study conducted a model of mediation, focusing on the mediation role of resilience in the relationship between the two. In this study, 500 college students were participated by using Self-rating Depression Scale (SDS) as a negative emotional indicator of mental health, The Positive and Negative Affect Scale (PANAS) was used to evaluate the level of positive emotion, physical activity rating scale was used to evaluate the intensity of physical exercise, Conner-Davidson Resilience Scale (Chinese version) was used to measure resilience. The results showed that: (1) physical exercise was positively correlated with resilience ($r=.250, p<.0.01$) and positive emotion ($r=.198, p<.0.01$), negatively correlated with depression ($r=-.198, p<.0.01$); resilience was positively correlated with positive emotion ($r=.337, p<.0.01$), and negatively correlated with depression ($r=-.576, p<.0.01$). (2) After controlling for gender, grade and subject type, physical activity has a positive direct effect on positive emotion; resilience plays a part of mediating role in the relationship between physical exercise and positive emotion. The direct effect is .115, the mediating effect of resilience is .097, accounting for 54.25% and 45.75% of the total effect (.212) respectively. After controlling for gender, grade and subject type, physical activity has a negative effect on depression; resilience plays a completely of mediating role in the relationship between physical exercise and depression. The direct effect is -.055, the mediating effect of resilience is-.098, accounting for 35.95% and 64.05% of the total effect (-.153) respectively. The research results are not only helpful to understand the influence of physical exercise on the positive and negative dimensions of mental health, but also can guide college students to take an active part in physical activities, it is an effective method to improve the mental health level of college students.

Keywords: physical activity, mental health, resilience

短时有氧运动影响执行功能的安慰剂效应

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摘要 目的: 实验一探讨了习惯性预期的安慰剂效应(placebo effect)及反安慰剂效应(nocebo effect); 实验二首先探讨了诱发预期的安慰剂效应及反安慰剂效应, 然后探讨了习惯性预期在诱发预期产生安慰剂效应及反安慰剂效应关系间的调节作用。方法: 本研究在 30min 中等强度有氧运动干预前后测量执行功能。实验一: 选用大学生 171 人($M_{age} = 19.61 \pm 2.138$ 岁), 其中男生 75 人, 女生 96 人。采用 3 (习惯性预期: 积极、中性、消极) $\times$ 2 (时间: 前测、后测) 的混合实验设计, 因变量为 Go/No Go 任务的 d 值和 Go 反应时(抑制功能), 2-back 任务的正确率和反应时(刷新功能), More odd shifting 任务(转换功能)的混合正确率和转换成本。实验二: 来自研究一中的参与者 150 人($M_{age} = 19.53 \pm 1.903$ 岁), 其中男生 69 人, 女生 81 人。采用 3 (诱发预期: 积极、中性、消极) $\times$ 3 (习惯性预期: 积极、中性、消极) $\times$ 2 (时间: 前测、后测) 的混合实验设计, 因变量同实验一。

结果：重复测量方差分析结果显示：实验一：习惯性预期与时间对 d 值的交互作用显著 $[F(2, 148) = 5.058, p = .008, \eta_p^2 = .064]$ ，简单效应分析发现，积极组后测 d 值显著大于前测 $[p = .003, 95\%CI = 0.099-0.490]$ ，表明积极的习惯性预期对运动改善抑制功能产生安慰剂效应。转换成本的习惯性预期与时间的交互作用显著 $[F(2, 141) = 4.214, p = .017, \eta_p^2 = .056]$ ，简单效应分析发现，消极组后测转换成本显著大于前测 $[p = .014, 95\%CI = 9.968-85.341]$ ，表明消极的习惯性预期对运动改善转换功能产生反安慰剂效应。实验二：d 值的诱发预期与时间的交互作用显著 $[F(2, 126) = 5.769, p = .004, \eta_p^2 = .084]$ ，简单效应分析发现，积极组后测 d 值显著大于前测 $[p = .040, 95\%CI = 0.013-0.541]$ ，消极组后测 d 值显著小于前测 $[p = .008, 95\%CI = -0.595-0.092]$ ，表明积极的诱发预期对运动改善抑制功能产生安慰剂效应，消极的诱发预期对运动改善抑制功能产生反安慰剂效应。结论：运动对抑制功能和转换功能的效益受习惯性预期影响，运动对抑制功能的效益受诱发预期影响，积极预期增强认知效益，消极预期削减认知效益。

关键词 习惯性预期，诱发预期，安慰剂效应，反安慰剂效应

Placebo Effect of Short-term Aerobic Exercise on Executive Function

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Abstract: Objective: In Experiment 1, we investigated the placebo effect and the nocebo effect of habitual expectation. In Experiment 2, we first investigated the placebo effect and nocebo effect of induced expectation, and then investigated the moderating effect of habitual expectations on the relationship between placebo effect and nocebo effect of induced expectation. Methods: In this study, executive function was measured before and after a 30 min moderate-intensity aerobic exercise intervention. Experiment 1: 171 college students ($M_{age} = 19.61 \pm 2.138$ years) were selected, including 75 males and 96 females. A mixed experimental design of 3 (habitual expectation: positive, neutral, negative) $\times$ 2 (time: pre-test, post-test) was adopted, and the dependent variables were the d value and Go response of Go/No Go task, the accuracy of 2-back task and the response time, and the mixed accuracy and switching cost of More odd shifting task. Experiment 2: 150 participants from study 1 ($M_{age} = 19.53 \pm 1.903$ years), including 69 males and 81 females. A mixed experimental design of 3 (induced expectation: positive, neutral, negative) $\times$ 3 (habitual expectation: positive, neutral, negative) $\times$ 2 (time: pre-test and post-test) was adopted, and the dependent variable was the same as Experiment 1. Results: Experiment 1: d value: The interaction between the habitual expectation and time was significant $[F(2, 148) = 5.058, p = .008, \eta_p^2 = .064]$. Simple effect analysis showed that the post-test' s d value of the active group was significantly higher than that of the pre-test' s d value $[p = .003, 95\%CI = 0.099-0.490]$. The results showed that positive habitual expectations had a placebo effect on the inhibitory function of exercise improvement. Switching cost: The interaction between the habitual expectation and time was significant $[F(2, 141) = 4.214, p = .017, \eta_p^2 = .056]$. Simple effect analysis showed that the post-test' s switching cost in the negative group was significantly higher than that in the pre-test' s switching cost $[p = .014, 95\%CI = 9.968-85.341]$. These results suggest that negative habitual expectations have a nocebo effect on the conversion function of exercise improvement. Experiment 2: d value: The interaction between induced expectation and time was significant $[F(2, 126) = 5.769, p = .004, \eta_p^2 = .084]$. Simple effect analysis showed that the post-test' s d value of the active group was significantly higher than that of the pre-test' s d value $[p = .040, 95\%CI = 0.013-0.541]$. The post-test' s d value of the negative group was significantly lower than that of the pre-test' s d value $[p = .008, 95\%CI = -0.595-0.092]$, indicating that the positive inductive expectation had a placebo effect on the inhibitory function of exercise improvement, while the negative inductive expectation had a nocebo effect on the inhibitory function of exercise improvement. This study did not find a moderating effect of habitual expectations. Conclusion: The benefits of exercise on inhibitory function and conversion function are affected by habitual expectation, and the benefits of exercise on inhibitory function are affected by induced expectation. Positive expectation enhances cognitive benefit, while negative expectation decreases cognitive benefit. Placebo expectation may be an important psychological factor

affecting the executive function of exercise improvement, which should be paid more attention to in subsequent studies.

Keywords: habitual expectation, induced expectation, placebo effect, nocebo effect

单次 HIIE 运动时长与注意策略对久坐少动大学生情感反应的影响

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摘要 目的: 本研究旨在探究不同运动时长的高强度间歇运动与不同注意策略对久坐少动大学生运动情感反应的影响, 以尝试找到能够改善久坐少动者情感反应的最佳运动方法。方法: 研究选取低身体活动水平大学生 100 名, 锻炼强度偏好低且容忍度低, 锻炼阶段处于准备期或意向期。采用二因素组间实验设计, 自变量 1 为 1:1HIIE 的运动时长 (30s、45s、60s), 自变量 2 为注意策略 (分离型、联结型), 因变量为情感效价和运动后愉悦感, 其中情感效价在运动过程中的 20%、40%、60%、80%、100% 进行重复测量, 探究不同运动时长及注意策略对 HIIE 情感反应的影响。结果: (1) 对于运动期情感效价, 注意策略与测量时间点交互作用显著, 在分离型注意策略中, 运动期 20% 时的情感效价显著高于其他四个测量时间点。而联结型注意策略所产生的情感效价在各时间点上没有显著差异; 运动时长和注意策略交互作用显著, 在 60sHIIE 中, 分离型注意策略得分显著高于联结型注意策略。(2) 对运动期恢复期情感效价的差值, FS 测量时间点主效应显著, 20% 的 FS 差值显著低于其他四个时间点, 运动结束时的 FS 显著高于其他四个时间点。即随着 HIIE 的进行, 运动期与恢复期所产生的 FS 差值逐渐增大, 在运动结束时达到最大。(3) 对运动后愉悦感而言, 运动时长与注意策略的交互作用显著, 在 30sHIIE 中, 联结型注意策略所产生的运动后愉悦感显著高于分离型注意策略。在 60sHIIE 中, 分离型注意策略所产生的运动后愉悦感显著高于联结型注意策略。结合描述统计结果可以发现, 30s-联结型和 60s-分离型这两组被试的 PACES 得分也最高。结论: (1) 在运动休息比为 1:1 的 HIIE 运动中, 恢复期能够使得运动期下降的情感效价得到恢复, 从而始终保持在较为积极的状态。(2) 在不同运动时长的 HIIE 中选择适当的注意策略可以提高运动情感反应。在 30sHIIE 中使用联结型注意策略会产生更高的运动后愉悦感, 在 60sHIIE 中使用分离型注意策略会产生更好的运动中情感效价及运动后愉悦感。

关键词 高强度间歇运动, 运动时长, 注意策略, 情感反应, 久坐少动

Effects of single HIIE duration and attention strategies on emotional responses and subsequent exercise of sedentary people

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Abstract: Objective: The purpose of this study was to explore the influence of different duration of high-intensity interval exercise and different attention strategies on the emotional response of sedentary and sedentary college students to exercise, so as to try to find the best exercise method to improve the emotional response of sedentary college students. Methods: The study selected 100 college students with low physical activity level, with low exercise intensity preference and low tolerance, and the exercise stage was in the preparation period or intention period. Two-factor group experiment design was adopted. One of the independent variables was 1:1HIIE exercise duration (30s, 45s, 60s), another was attention strategy (separated type, linked type), and dependent variable was affective valence and post-exercise pleasure to explore the effects of different exercise duration and attention strategies on HIIE's emotional response. The affective valence was repeatedly measured in 20%, 40%, 60%, 80%, and 100% of the exercise process. Results : (1) For the affective valence of exercise period, the interaction between attention strategy and measurement time point was significant. In the separate attention strategy, the affective valence of 20% of exercise period was significantly higher than that of the other four measurement time points. The affective valence of

associative attention strategy had no significant difference at each time point. The interaction between exercise duration and attention strategy was significant. In the 60sHIIE, the score of detached attention strategy was significantly higher than that of connected attention strategy. (2) For the difference of affective valence in the recovery period of exercise, the main effect of FS at the measured time point was significant, the difference of FS at 20% was significantly lower than the other four time points, and the difference of FS at the end of exercise was significantly higher than the other four time points. That is, with the progress of HIIE, the FS difference between the exercise period and the recovery period gradually increases and reaches the maximum at the end of the exercise. (3) For the post-exercise pleasure, the interaction between exercise duration and attention strategy is significant. In 30sHIIE, the post-exercise pleasure generated by the associative attention strategy is significantly higher than that generated by the separate attention strategy. In the 60sHIIE group, the dissociative attention strategy produced significantly higher post-exercise pleasure than the associative attention strategy. Combined with the descriptive statistical results, it can be found that 30s-connected and 60s-separated groups also had the highest scores of PACES. Conclusion : (1) In HIIE exercise with exercise rest ratio of 1:1, the recovery period can restore the affective valence decreased during the exercise period, so as to maintain a more active state. (2) Choosing appropriate attention strategies in HIIE with different exercise duration can improve the emotional response to exercise. In the group of 30sHIIE, the associative attentional strategy produced higher post-exercise pleasure, while in the group of 60sHIIE, the separate attentional strategy produced better affective valence and post-exercise pleasure.

Keywords: high-intensity interval exercise, exercise duration, attention strategy, emotional response, sedentary

单次高强度间歇运动训练与认知训练相结合 对普通大学生多目标追踪表现的影响

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摘要 目的: 目前增强多目标追踪表现的研究多为单独的认知训练或者单独的运动锻炼对多目标追踪表现的影响, 为此本研究旨在探讨高强度间歇运动训练与认知训练相结合对普通大学生多目标追踪表现的影响。

方法: 高强度间歇运动(High-Intensity Interval Training, HIIT)以 TABATA 运动形式进行, 共两组, 每组八个动作, 每个动作运动形式为先 20s 运动, 后 10s 休息。一组 4min, 中间休息 1min, 约 9min。运动过程中被试的心率为最大心率的 85%。认知训练的形式为自适应多目标追踪(Multiple Object Tracking, MOT)训练, 即当被试在某次追踪时的反应正确, 下一次追踪任务中客体的运动速度将上调 30%; 而当被试反应错误时, 客体的运动速度会下调 20%, 小球的初始速度为 68cm/s, 共 30 个 trail。实验采用 2(测试时间: 前测、后测)×4(组别: MOT 组、HIIT 组、MOT+HIIT 组、对照组)的混合设计, 组间变量为组别, 其中 MOT 组 22 人、HIIT 组 22 人、MOT+HIIT 组 21 人、对照组 21 人, 组内变量为测试时间, 因变量为被试在自适应 MOT 任务中追踪目标客体时能够达到的客体运动速度值, 分别为极值(被试所有正确追踪任务中客体运动速度的最大值, 代表被试的最大追踪能力), 平均阈值(被试所有正确追踪和错误追踪转折点处所对应的客体运动速度值的中点, 代表被试的平均追踪能力), 最后四次阈值(被试追踪过程中最后四次转折点处的客体运动速度的平均值, 代表被试的稳定追踪能力)。结果: 以组别和时间自变量, 前后测成绩为因变量做重复测量方差分析, 结果显示: (1) 最后四次阈值的测试时间主效应显著($F(1,82)=17.629, p=0.000, \eta_p^2=0.177$), 组别主效应不显著, 组别和时间交互作用显著($F(3,82)=3.977, p=0.011, \eta_p^2=0.127$), 进一步的简单效应分析表明, MOT 组、MOT+HIIT 组的后测成绩均好于前测($p=0.003, p=0.000$)。 (2) 极值和平均阈值的测试时间主效应显著($F(1,82)=13.843, p=0.000, \eta_p^2=0.144$) ($F(1,82)=31.919, p=0.000, \eta_p^2=0.280$), 组别主效应以及组别与时间的交互作用不显著。结论: (1) 单次急性认知训练和高强度间歇运动训练与认知训练相结合这两种训练方法均提高了被试的稳定追踪能力。 (2) 单次高强度间歇运动没有改善被试的多目标追踪表现。

关键词 高强度间歇运动训练, 认知训练, 多目标追踪

The Effect of the Combination of Acute High-Intensity Interval Training and Cognitive Training on the Performance of Multiple Object Tracking of College Students

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Abstract: Purpose: At present, most of the researches to enhance the performance of multiple object tracking are about the effects of separate cognitive training or separate exercise on the performance of multiple object tracking. Therefore, this study aimed to explore the effect of the combination of acute high-intensity interval training and cognitive training on the performance of multiple object tracking of college students. Methods: High-Intensity Interval Training (HIIT) was performed in the form of TABATA. There were two sets of eight movements in each group. Each movement consisted of 20s exercise followed by 10s rest. One set was 4min, and the rest was 1min, the whole process lasted 9 minutes. The heart rate of the subjects during the exercise was 85% of their maximum heart rate. The form of cognitive training was adaptive Multiple Object Tracking (MOT), and there were 30 trails in total. Adaptive training adopted the adaptive program to control the movement speed of the object. The initial speed of the ball was 68cm/s. When the participant reacted correctly, the movement speed of the object in the next trial would be increased by 30%. When the response was wrong, the object's speed of motion would be reduced by 20%. A mixed design of 2(time: pre-test, post-test) $\times$ 4(group: MOT, HIIT, MOT+HIIT, control group) was adopted. The inter-group variables were group (MOT=22, HIIT=22, MOT+HIIT=21, control group=21), the intra-group variable was time, and the dependent variable was the object velocity value that the subject can achieve when tracking the target object in the adaptive MOT task, which were respectively the extreme value (the maximum movement speed of the object in all correct tracking tasks represented the maximum tracking ability of the subject), the average threshold value (the midpoint of the object velocity values corresponding to all correct tracking and false tracking turning points of the subject represented the average tracking ability of the subject), The last four threshold (the average of the object's speed at the last four turning points in the course of tracking represented the stable tracking ability of the subject). Results: Using group and time as independent variables and pre - and post-test scores as dependent variables, the results of repeated measures ANOVA showed that (1) the main effect of time was significant in the last four thresholds($F(1,82)=17.629, p=0.000, \eta_p^2=0.177$), while the main effect of group was not significant. The interaction between group and time was significant($F(3,82)=3.977, p=0.011, \eta_p^2=0.127$). Further simple effect analysis showed that the scores of MOT group and MOT+HIIT group were better than those of pretest ($p=0.003, p=0.000$). (2) The main effect of test time for extreme value and average threshold was significant($F(1,82)=13.843, p=0.000, \eta_p^2=0.144$) ($F(1,82)=31.919, p=0.000, \eta_p^2=0.280$). The main effect of group and the interaction between group and time were not significant. Conclusions: (1) Both acute cognitive training and the combination of high-intensity interval exercise training and cognitive training improved the subjects' stable tracking ability. (2) Acute high-intensity interval exercise did not improve participants' performance in multiple object tracking.

Keywords: High-Intensity Interval Training, cognitive training, multiple object tracking

新冠疫情下居民体育活动和焦虑的特点与关系：有调节的中介模型

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摘要 2020年伊始，突如其来的新冠疫情席卷全球，对人类各个领域造成了强烈冲击，居民出现群体焦虑，如何制定有效措施促进居民身心健康、社会和谐稳定成为重要问题，探究新冠疫情期间居民体育活动现状、焦虑程度，以及体育活动、积极心理资本、焦虑之间的关系具有重要理论意义和实践价值。目的：考察新冠疫情下居民体育活动、焦虑的特点与关系，分析居民焦虑的缓解效应及作用机制。方法：采用体育活动等级

量表(PARS-3), 积极心理资本问卷(PPQ), 焦虑自评量表(SAS)在全国各地进行网络在线调查, 最终收集 425 份有效数据。结果: 新冠疫情下, 居民体育活动量明显偏少, 居民焦虑程度显著高于普通情境下的常模($t = 15.40$, $p < .001$), 且相对于高体育活动量, 低体育活动量居民的焦虑程度显著更高($t = 2.64$, $p < .01$), 积极心理资本显著更低($t = -3.87$, $p < .001$); 男性在焦虑上的得分显著高于女性($t = 2.81$, $p < .01$), 但在积极心理资本上无性别差异; 体育活动正向预测积极心理资本 ($\beta = .20$, $p < .001$), 积极心理资本负向预测焦虑 ($\beta = -.32$, $p < .001$), 积极心理资本中介了体育活动和焦虑的关系, 亲友互动 (家人互动、朋友互动) 调节了体育活动和积极心理资本之间的关系。结论: 此结果表明居民可以通过体育活动增加积极心理资本缓解焦虑情绪, 且在亲友互动等社会支持不足的情况下居民则更需要通过体育活动等方式来增加积极心理资本, 以缓解焦虑。

关键词 体育活动, 积极心理资本, 焦虑, 亲友互动, 新冠疫情

Characteristics and Relationship between Residents' Physical Activity and Anxiety under the COVID-19 Epidemic in China: A Moderated Mediation Model

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Abstract: At the beginning of 2020, the sudden outbreak of the COVID-19 swept the world, causing a strong impact on all fields of human beings. The residents have group anxiety. How to formulate effective measures to promote residents' physical and mental health and social harmony and stability has become an important issue. Current status of residents' sports activities, the degree of anxiety, as well as the relationship between physical activity, positive psychological capital, and anxiety have important theoretical significance and practical value. *Objective:* To investigate the characteristics and relationships of residents' physical activity and anxiety under the COVID-19, and analyze the alleviating effect and mechanism of residents' anxiety. *Methods:* Using the Physical Activity Rating Scale (PARS-3), the Positive Psychological Capital Questionnaire (PPQ), and the Self-rating Anxiety Scale (SAS) to conduct online surveys across the country, and finally collect 425 valid data. *Results:* Under the COVID-19, the residents' physical activity was significantly less, and the residents' anxiety was significantly higher than the norm in ordinary situations ($t = 15.40$, $p < .001$), and compared with the high physical activity, The degree of the low physical activity residents' anxiety is significantly higher ($t = 2.64$, $p < .01$), and the positive psychological capital is significantly lower ($t = -3.87$, $p < .001$); males score significantly higher on anxiety than females ($t = 2.81$, $p < .01$), but there is no gender difference in positive psychological capital; physical activity positively predicts positive psychological capital ($\beta = .20$, $p < .001$), and positive psychological capital negatively predicts anxiety ($\beta = -.32$, $p < .001$), positive psychological capital mediates the relationship between physical activity and anxiety, and family-friend interaction (family interaction, friend interaction) mediates the relationship between physical activity and positive psychological capital. *Conclusion:* This result shows that residents can increase their positive psychological capital through physical activities to relieve anxiety, and in the case of insufficient social support such as the interaction of relatives and friends, residents need to increase their positive psychological capital through physical activities to relieve anxiety.

Keywords: Physical Activity, Positive Psychological Capital, Anxiety, Interact with Friends and Family, COVID-19

4.9 法律心理学专业委员会

(1) “法律心理学专业委员会”口头报告分场 1

修复不公正的意义：角色、权威修复行为影响法学生司法体系认同感

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摘要 不公正时常发生，且难以避免，如何修复不公正、如何评估和提高修复效果是法律心理学需要关注的社会情景。目前相关的国内实证研究几乎为零，国外的研究也大多集中于组织不公正领域，司法不公正鲜有涉猎。不公正事件发生后的权威机构行为在一定程度上能够使修复不公正事件，使不公正恢复至公正状态，提高受害者或旁观者对权威机构的信任，进而提高公民的司法体系认同感。本研究设计了一个2（角色：受害者、旁观者）*3（权威行为：惩罚行为、赔偿行为、无作为行为）的被试间实验，用以研究权威行为对法学生司法体系认同感的影响。通过对207名中国政法大学的法学生进行实验，结果发现角色、权威行为均会影响法学生的司法体系认同感，具体表现为角色的主效应显著， $F(2, 116)=5.52$ ， $p=0.005$ ， $\eta_p^2=0.09$ ；权威行为的主效应边缘显著， $F(4, 350)=2.25$ ， $p=0.063$ ， $\eta_p^2=0.03$ ；但两者的交互作用不显著；同时组织信任在这一路径中起到了一定中介作用，具体表现为行为满意度能够直接显著正向预测认同感中的成员归属， $B=0.16$ ， $SE=0.06$ ， $\beta=0.21$ ， $t=2.76$ ， $p=0.006$ ；也能够通过组织信任的完全中介作用显著正向预测认同感中的身份认同，组织信任的中介作用为 $B=0.43$ ， $SE=0.13$ ， $\beta=0.27$ ， $t=3.38$ ， $p=0.001$ 。本研究虽存在着实验变量定义困难等问题，但对于修复行为在不公正事件发生后的作用机制起到了一定探索作用，同时为法律心理学的其他研究提供了新思路。

关键词 权威修复行为，不公正，司法体系认同感，组织信任

The Influence of Authority Behavior on Group Identity in Unfair Situation: The Mediating Role of Organizational Trust

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Abstract: Authoritative behavior after injustice scenarios can restore injustice to a just state to some extent, increasing the trust of victims or bystanders in authoritative institutions, and then improving their group identity. This research designed a 2 (role: victim, bystander) * 3 (authoritative behavior: punishment behavior, compensation behavior, inaction behavior) between subjects to study the influence of authority behavior on the group identity of law students. Through experiments on 207 law students, it was found that roles and authoritative behaviors affect group identity through different ways; at the same time, organizational trust plays a mediate role. Although this study has problems such as poor experimental manipulation of compensation behavior, it still explores the way to study authoritative behavior in the field of bystanders.

Keywords: actions, group recognition, law student, trust

面部表情欺骗数据库的构建与分析

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摘要 检测欺骗对于个人生活、社会稳定及国家安全至关重要。检测欺骗的关键在于检测欺骗的线索。基于测谎仪、EEG、fMRI、热成像、认知线索及行为线索等方法无法有效地检测欺骗。通过机器学习检测欺骗的言语线索和非言语线索有较高的准确率(高于 54%)。而基于机器学习检测欺骗需要大量的欺骗样本进行建模。因此，构建具有心理学特征的欺骗数据库对于欺骗检测研究有着极为重要的意义。面部表情隐含着较为丰富的潜在欺骗线索（如瞳孔、微表情），且通过表情检测欺骗有较好应用前景。产生欺骗模型的条件有两种：一是自然条件、二是实验室条件。由于欺骗无法被实验人员控制产生。因此，如何在自然条件下或实验室条件下诱发产生高生态效度的欺骗数据模型成为了研究者们热切关注的难题。因此，本研究在两种条件下分别构建了面部表情欺骗数据库，并进行了分析研究。实验一在实验室条件下采用了 38 个情绪诱发视频，基于情绪泄露理论，通过“诱发—抑制”范式采集了 25 名大学生被试（Mean age=19.6, SD=2.25）在自然情绪表达（诚实）和抑制情绪表达（欺骗）下的面部表情线索，并通过一台高清摄像机捕捉记录。得到了 920 个视频，其中诚实 462 个，欺骗 458 个。使用了机器学习软件 OpenFace2.0 对视频进行处理并输出面部表情的 AU (Action Unit)强度及相关距离指标。并通过 Python 对这些指标进行计算整合，使用 SPSS 对诚实和欺骗的数据进行配对样本 t 检验。实验二在自然条件下以“狼人杀”欺骗游戏的范式，通过两台摄像机分别采集了 59 名大学生和 29 名戒毒人员（Mean age=28.24, SD=9.45）的面部表情线索。通过视频剪辑软件剪辑出 750 个视频，其中诚实 474 个，欺骗 276 个，处理分析同实验一。结果显示，在实验室条件下，诚实和欺骗的一些指标存在着显著差异，而自然条件下的指标均无显著性差异。由于本研究仅采用了配对样本 T 检验进行分析，后续研究可用机器学习的方式进行分析处理或许能有更好的结果说明。

关键词 面部表情，欺骗线索，欺骗检测，数据库、机器学习

Construction and Analysis of Facial Expression Deception Database

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Abstract: Detecting deception proves crucial for individual lives, social stability, and national security. And the critical of detecting deception seems to detect deception cues. Researchers explored numerous deception cues, such as Polygraph, EEG, fMRI, thermal imaging techniques, cognitive cues, behavioral cues. In general, those detection method looks invalidated. Thus, researchers derived high accuracy rates (higher than 54%) by machine learning, which can detect verbal and nonverbal cues which seems difficulty to be perceived by naked eye. However, this method requires a sea of deception samples for building the model. Therefore, constructing a deception database with psychological features proves crucial for machine learning to detect deception. Since facial expressions contain plentiful potential deception cues, which might exist a good application prospect. Consequently, we constructed a facial expression deception database under laboratory and natural conditions. A comparative study of deception databases in both conditions was conducted. In the 1st experiment, 38 emotion-evoking videos were used to eliciting facial expression cues under laboratory conditions. We recruited 25 graduates (Mean age= 19.6, SD = 2.25) and employed 19 videos to elicit natural emotion (truthful) and utilized the other videos to elicit fake emotion (deceptive). 920 videos were edited by software Adobe Premiere, including 462 truthful and 458 deceptive. The machine learning software OpenFace 2.0 was employed to process the videos and output facial expression metrics. Python was utilized to compute the metrics and Paired-Samples T test was employed to analysis metrics. In 2nd experiment, the facial expressions of 59 college students and 29 drug addicts (Mean age=28.24, SD = 9.45) were captured by two high-speed cameras under natural conditions, which named "werewolf" deception game. We edited 750 videos by video editing software Adobe Premiere, including 474 honest and 276 deceptive. The analysis appeared the same as 1st experiment. The results showed that there were significant differences between some indicators of honesty and deception in laboratory conditions, while there were no significant differences in natural conditions. Since this study

only used the paired sample T-test for testing, machine learning may be employed for computing and processing in subsequent studies to obtain better results.

Keywords: Facial expression, deception cues, deception detection, database, machine learning

Risk-Need-Responsivity 理论模型对戒毒人员适用性的评价

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摘要 加拿大学者 Andrews 等 1990 年提出 Risk-Need-Responsivity (简称 RNR) 理论, RNR 理论包括危险原则、需求原则、反应原则。Andrews 和 Bonta(2010) 把八个中心危险和需求因素分成“大四”危险因素和“中四”危险因素。该理论在罪犯矫治领域影响很大, 但该理论的应用量表在戒毒领域效度结论不一。研究发现: RNR 理论对吸毒犯矫治效果预测总体适用性不高。作 RNR 理论的应用, 第三代风险评估 LSI-R 量表对成年吸毒犯具有较高的预测效度; YLS/CMI 量表测量青少年吸毒犯, 物质滥用子量表对再犯预测效度较低, 同伴关系和态度子量表对再犯预测效度较高。第四代风险评估 LS/CMI 量表是 LSI-R 量表的发展, 以该量表为因变量的研究发现吸毒犯和其他罪犯在总分、犯罪历史子量表、酒精/毒品问题子量表三项指标上有显著的差异。依据 RNR 理论, 犯因性需要因素对农村地区农民毒品使用和犯罪之间联系的预测效度较高, 反社会人格模式和亲犯罪态度量表对后续严重吸毒行为预测效度较高。综合 RNR 理论在戒毒领域应用效度的研究, 可以认为 RNR 理论在戒毒领域并不完全像罪犯以罪犯为研究对象一样完全适用, 在戒毒矫治领域以 RNR 理论为指导, 在以吸毒犯作为研究对象时, RNR 理论及毒品子量表条目需要进行修订, 尤其是增加毒品子量表的条目, 并需要以戒毒人员为对象进行验证。

关键词 RNR 理论, 戒毒人员, 适用性, 评价

Evaluation of the applicability of risk-needy-responsivity theory model to drug addicts

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Abstract: Canadian scholar Andrews et al proposed Risk-Need-Responsivity (hereinafter referred to as RNR) theory in 1990. RNR theory includes danger principle, demand principle and response principle. Andrews and Bonta(2010) divide the eight central risk and need factors into "senior" risk factors and "middle fourth" risk factors. The theory has great influence in the field of correction of criminals, but the validity of the application scales of the theory in the field of drug rehabilitation is different. It is found that the overall applicability of RNR theory to predicting the correction effect of drug offenders is not high. With the application of RNR theory, the third generation risk assessment scale LSI-R has a high predictive validity for adult drug offenders. YLS/CMI scale was used to measure juvenile drug offenders. Substance abuse subscale had a lower predictive validity for recidivism, while peer relationship and attitude subscale had a higher predictive validity for recidivism. The LS/CMI scale of the fourth generation of risk assessment is the development of the LSI-R scale. Using this scale as the dependent variable, it is found that there are significant differences between drug offenders and other offenders in the three indicators of total score, criminal history sub-scale and alcohol/drug problem sub-scale. According to the RNR theory, the factors of criminal need have a high predictive validity for the relationship between drug use and crime among rural farmers, and the antisocial personality model and pro-criminal attitude scale have a high predictive validity for the subsequent serious drug use. Comprehensive RNR theory applied in the field of drug research, the reliability and validity of can think RNR theory in the field of drug is not like a criminal to criminals as completely as the research object, in the field of drug treatments in RNR theory as the instruction, in the drug addicts as the research object, the theory of RNR and drug inventory items need to be revised, especially to increase drug inventory items, And it needs to be verified with drug addicts as the object.

Keywords: RNR theory, drug addicts, applicability, evaluation

4.10 学校心理学专业委员会

(1) “学校心理学专业委员会”口头报告分场 1

遭遇同伴侵害的大学生更沉迷于社交媒体： 错失恐惧的中介与学校归属感的调节效应

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摘要 同伴侵害是造成大学生问题性社交媒体使用的重要风险因素, 但同伴侵害如何及何时会影响大学生问题性社交媒体使用仍缺乏足够的证据。基于补偿性网络使用理论、自我决定理论、生态系统理论和压力-缓冲模型等综合理论的观点, 错失恐惧可能会中介同伴侵害对问题性社交媒体使用的影响, 而学校归属感会缓冲这一效应。为检验这一假设, 本研究采用纵向追踪设计(共 3 个时间点, 间隔 3 个月)对广州市 569 名大学生(男生 242 名)的同伴侵害(T1)、错失恐惧(T2)、学校归属感(T1)和问题性社交媒体使用(T1/T2/T3)进行测量, 并运用结构方程模型进行检验。结果发现: (1) 在控制人口学变量后, 同伴侵害可显著正向预测大学生问题性社交媒体使用($B=0.268$, $95\%CI=[0.116, 0.438]$); (2) 同伴侵害还会通过错失新颖信息($B=0.237$, $95\%CI=[0.124, 0.343]$)和错失社交机会($B=0.219$, $95\%CI=[0.109, 0.328]$)这两条路径间接影响大学生问题性社交媒体使用; (3) 学校归属感显著调节错失社交机会在同伴侵害与大学生问题性社交媒体使用间的中介效应, 即相比于高学校归属感($B=-0.128$, $95\%CI=[-0.324, 0.046]$), 同伴侵害通过错失社交机会间接增强大学生问题性社交媒体使用在低学校归属感条件下更显著($B=-0.184$, $95\%CI=[-0.355, -0.005]$)。由此推测, 错失社交机会的恐惧是同伴侵害加剧大学生问题性社交媒体使用的重要机制, 且低学校归属感在其中发挥“推波助澜”的作用。该结果有助于扩展大学生问题性社交媒体使用的多系统环境风险因素的研究, 为开展大学生社交网络成瘾的干预和预防工作提供了科学参考。

关键词 同伴侵害, 大学生问题性社交媒体使用, 错失恐惧, 学校归属感

The association between peer victimization and problematic social media use among Chinese adolescent: Testing A moderated mediation model

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Abstract: Peer victimization is an important risk factor for problematic social media use among college students, but there is still insufficient evidence on how and when peer victimization affects problematic social media use. Based on compensatory internet use theory, self-determination theory, ecological system theory and the stress-buffering model, fear of missing out may mediate the effect of peer victimization on problematic social media use, while psychological sense of school membership may buffer this mediating effect. In order to examine the effects, 569 college students (242 boys) in Guangzhou were investigated for T1 peer victimization, T2 fear of missing out, T3 psychological sense of school membership, and T1/T2/T3 problematic social media use, using three-wave longitudinal data with time interval of three months. After controlling a range of demographic variables, the structural equation model showed that: (1) peer victimization can significantly and positively predict problematic social media use among college students($B=0.268$, $95\%CI=[0.116, 0.438]$); (2) peer victimization also indirectly affects problematic social media use in college students through fear of missing new information ($B=0.237$, $95\%CI=[0.124, 0.343]$) and fear of

missing social opportunity($B=0.219$, $95\%CI = [0.109, 0.328]$); (3) psychological sense of school membership significantly moderates the mediating effect of fear of missing social opportunity between peer victimization and problematic social media use among college students. Compared with higher psychological sense of school membership ($B=-0.128$, $95\%CI = [-0.324, 0.046]$), the indirect effect of peer victimization enhances problematic social media use among college students through fear of missing social opportunity is more significant under lower psychological sense of school membership($B=-0.184$, $95\%CI = [-0.355, -0.005]$). Therefore, it is speculated that the fear of missing social opportunity is an important mechanism of peer victimization exacerbating problematic social media use among college students, and the lower psychological sense of school membership plays a moderating role in this process. The results are helpful to expand the research on multi-system environmental risk factors of problematic social media use among college students, and provide a scientific reference for the intervention and prevention of social network addiction among college students.

Keywords: peer victimization, problematic social media use among college students, fear of missing out, psychological sense of school membership

大学生生涯同一性的理论与测量工具： 基于学职融合的自我同一性发展视角

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摘要 埃里克森的心理社会发展理论中,“自我同一性”的形成与发展作为青少年阶段自我发展过程中最核心的任务,玛西亚在此基础上做出了同一性的操作化,将同一性形成的方式划分成探索和承诺。然而,对于大学阶段的学生在生涯发展过程中所凸显的动力意向、学职过渡的独特性,本研究从互依我和独立我两个视角出发,结合大学生生涯自我同一性中关心的具体问题,构建了大学生生涯自我同一性探索、承诺、意向三维测量模型并编制了相关测量工具。研究借助层面理论进行概念性定义,通过方便取样前后进行了预测、修订和正式施测,最后产生了52题、6点记分的《大学生生涯自我同一性量表》,测量了生涯自我同一性的六个维度,包含四种同一性形成路径和两种动力结构。研究通过SPSS、Lisrel、Mplus统计软件对量表的信效度和结构模型进行检验,结果显示:六个维度的Cronbach's α 系数在0.868~0.932之间,间隔两周的重测信度达到0.683~0.754,组合信度、聚敛效度和区分效度均达到可接受水平。量表的模型结构良好($\chi^2/df=3.141$, CFI=0.98, NFI=0.97, NNFI=0.98, RMSEA=0.053),且该模型结构在中国汉族和蒙古族被试中具有文化等值性。此外,研究还进行了概化理论分析,发现各维度条目数在3~7题时,已可以达到较好的信度标准,这为日后进一步发展简化版量表和编制复本问卷奠定了基础。综上,本研究所研制的《大学生生涯自我同一性量表》,涵盖了大学生自我同一性发展在生涯领域中的四种路径和两大动力结构,条目数适中,具有良好的心理测量学指标。

关键词 大学生 生涯同一性 学职融合视角 独立自我 互依自我 形成路径 动力结构 概化理论

Theory and Measurement tools of College Students' Career Identity: Based on the Academic-Vocational Integration Perspective by Development of Ego-Identity

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Abstract: In Erickson's theory of psychosocial development, the formation and development of "ego-identity" is the most core task in the process of self-development in the adolescent stage. Basis on it, Marcia made the operation of identity and divided the way of identity formation process into exploration and commitment. However, for college

students in the process of career development highlights the dynamic interest, the uniqueness of transition from school to work transition, from two perspectives of interdependent and independent I, combined with the specific concern of self-identity of college students career, constructs the university students to explore career self-identity, commitment, and intention three-dimensional measurement model and relevant measurement tools are developed. Theory research with the aid of level to the conceptual definition, through convenience sampling is forecasted, revision and formal measured before and after, generated 52item, 6 points score of the college students' Career-Professional Identity Scale, measuring the six dimensions of career ego-identity, contains four kinds of identity formation path and two kinds of dynamic structure. The reliability and validity of the scale and its structural model were tested by SPSS, Lisrel and Mplus statistical software. The results showed that Cronbach's coefficient of the six dimensions was between 0.868 and 0.932, and the reliability of the re-test after two weeks reached 0.683 to 0.754. The combined reliability, convergent validity and discriminant validity all reached acceptable levels. The model structure of the scale is good ($\chi^2/df=3.141$, CFI=0.98, NFI=0.97, NNFI=0.98, RMSEA=0.053), and the model structure has cultural equivalence between Chinese Han and Mongolian subjects. In addition, the theoretical analysis of generalization is also carried out, and it is found that the reliability standard can be better when the number of items in each dimension is 3~7, which lays a foundation for the further development of the simplified scale and the preparation of the duplicate questionnaire in the future. In sum, the College students' Career-Professional Identity Scale developed in this study covers four paths and two major dynamic structures of the development of college students' self-identity in the career field, with a moderate number of items and qualified psychometrics indicators.

Keywords: undergraduate, career-professional identity, academic-vocational integration perspective, independent self, interdependent self, path of formation, dynamic structure, generalizability theory

基于 MBTI 人格类型的职业指导策略——来自技工院校的调查研究

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摘要 本研究基于 MBTI 人格类型理论, 旨在揭示与分析技工类院校学生的人格类型特征, 提出符合技工类院校学生人格类型特征的职业指导策略, 以期提高技工类院校学生就业的人职匹配度, 和学生的就业满意度。研究方法采用调查法, 使用 MBTI-M 人格类型量表, 随机选取 1734 名技工院校学生进行施测。结果显示: 1) 教导型人格 (ENFJ) 为技工院校学生数量最多的人格类型; 2) 与普通高中生样本相比, 技工院校学生的人格特征在决策方式维度上, 和生活方式维度上, 具有显著差异。技工院校学生在决策方式上更倾向情感而非思考, 而在生活方式上更倾向判断而非感知; 3) 技工院校中的不同专业, 具有不同的“优势”职业性格类型, 即该类型学生在某专业的学业表现较好。本研究从以下方面提出职业指导建议: 1) 技工院校学生中数量最多的教导型人格, 在谆谆善诱引导他人方面具有特长, 提示应多注重发掘学生这方面的优势; 2) 与普通高中不同, 技工院校教育具有明确的专业性, 建议在选择专业之前, 进行人格类型测试, 依照各专业“优势”职业性格类型, 在学生选择专业时给出建议; 3) 技工院校的职业指导应贯穿学习始终, 立足专业特点与性别差异, 以及同专业内学生不同的人格类型, 合理引导学生利用自身的优势空间, 开展差异化职业指导。结论: 技工院校学生的职业指导策略, 需同时考虑学生的人格类型和专业特点, 因“材”择业, 实现最佳的人职匹配。

关键词 MBTI 人格类型量表, 职业性格类型, 优势空间, 人职匹配, 职业指导策略

Career guidance Strategies based on MBTI Personality Type -- A Survey From A Technician Institute

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Abstract: Based on MBTI personality type theory, this study aims to reveal and analyze the personality types of students from technician institutes and propose career guidance strategies in line with the characteristics on personality types, expecting to obtain a person-vocation fit and improve students' job satisfaction. Research methods: 1734 technical college students were randomly selected to carry out the survey by completing MBTI-M personality Type scale. The results show that: 1) Persuasive personality (ENFJ) is the personality type with the largest number of students in technician institutes; 2) Compared with the sample of high school students, the personality characteristics of technician institute students are significantly different in dimensions on decision-making mode and life style. Technician institute students tend to be emotional rather than ruminative while making decisions, also, judgmental rather than perceptive on lifestyle. 3) There are "advantageous" occupational personality for technician institutes students who are in different majors have which means students with some characters tend to have better academic performance in a certain major. Here are some career guidance suggestions: 1) Persuasive personality, which is the personality type with the largest number of students in technician institutes, informs us that more attention should be paid to exploring the advantages of students from this aspect. 2) Different from high schools, technician institute education is more focused on vocational education. It is suggested to conduct this personality type test before choosing a major. In this way, students can get advice according to the "advantage" occupational personality type of each major. 3) Career guidance in technician institutes should be in focus throughout the study. Students deserve to be encouraged to make full use of their advantages and be carried out differentiated vocational guidance based on professional characteristics, gender differences, as well as different personality types of students within the same major. Conclusion: Personality types and characters of different subjects should be considered to get a full understanding of vocational guidance strategy for technician institutes students, finally, to obtain a person-vocation fit.

Keywords: MBTI personality type scale, occupational personality type, advantage space, person-vocation fit, career guidance strategy

大学生的资质过高感及其对适应的作用机制

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摘要 高考升学作为影响个体生涯发展的关键事件之一, 受到考生、家长和教师的广泛重视。特别是在集体主义文化背景下, 高考的成败被赋予了更加广泛的社会意义。在给予成功者巨大荣誉、光环与关注度的同时, 我们对那些失意者的心理状态, 以及他们升入大学后的生涯发展却所知甚少。尽管高考被认为是最公平的考试之一, 但仍不可避免地受到一些随机因素和结构性因素的影响, 导致并不是每一个考生都能进入与自认为与自己能力相匹配的大学。人力资源领域内的相关研究表明, 若个体认为自身具备的资质超出所处环境的要求, 即体验到资质过高感, 将对个体的心理健康和工作态度产生负面影响, 并可能影响个体的工作绩效。因此本文在结合以往理论与研究的基础上, 将资质过高感这一概念引入到大学生群体中, 开发了大学生资质过高感的测量工具, 并使用纵向研究设计对大学生的资质过高感与入学适应水平之间的关系和作用机制进行了实证研究, 为高校相关工作者提供了一些帮助感到资质过大大学生的建议。在山东三所普通高校前后招募了近 1800 名大学生参与访谈和问卷调查, 前后共进行了 4 轮施测, 并使用 SPSS26.0, Mplus7.0 和 Process3.5 插件对问卷数据进行分析后, 得出了以下结论: (1) 本研究中编制的大学生资质过高感问卷具有较好的信度;

验证性因素分析的结果表明问卷具有较好的结构效度,该问卷适合作为后续研究工具使用。(2)大学生的资质过高感正向预测其入学一个月后的学习动机,心理资本在二者间起调节作用。(3)大学生的资质过高感负向预测其入学一个月后的生活满意度。(4)大学生的资质过高感与入学适应间存在遮掩效应,具体表现为资质过高感通过学习动机路径间接正向预测入学两个月后的适应水平,同时通过生活满意度路径负向预测入学两个月后的适应水平。(5)心理资本调节资质过高感通过学习动机路径对入学适应的影响,该路径的积极作用对心理资本较高的个体较强,对心理资本较低的个体较弱。

关键词 大学生, 资质过高感, 适应, 相对剥夺, 认知失调

College Students' Perceived Overqualification and its Effect Mechanism on Adaptation

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Abstract: College entrance examination, as one of the key events affecting individuals' career development, draws widely attention from students, parents and teachers. What's more important, in the context of Chinese collectivism culture, the success or failure of the examination has been given a broader social significance. While we bestow great kudos, glory and attentions on those who succeed, we know little about those who failed. Although the college entrance examination is considered to be one of the fairest exams, it is inevitably influenced by some random and structural factors, resulting in not every examinee being able to enter a university that matches his or her abilities. Studies in the field of human resources have shown that if an individual believes that his or her qualifications exceed the requirements of the environment, that is, if he or she experiences a feeling of overqualification, it will have a negative impact on the individual's mental health and work attitude, and may affect the individual's work performance. As a result, on the basis of previous theory and research, this paper introduced the concept of perceived overqualification into the group of college students, developed a college student perceived overqualification measurement tools, and conducted a longitudinal study to reveal the relationship and mechanism between college students' perceived overqualification and adaptation after enrollment. Our work provided some practical suggestions for helping college students with perceived overqualification. We recruited nearly 1800 college students from three ordinal universities in Shandong province for the purpose of interview and questionnaire survey. As a result, 4 rounds of measurements were conducted and data was analyzed with SPSS26.0, Mplus7.0 and Process3.5. Conclusions were drawn as follows: (1) The college student perceived overqualification questionnaire developed in this study has good reliability; results of confirmative factor analysis indicated this questionnaire has good validity, which proved this questionnaire to be an effective measurement tools in future study. (2) College students' perceived overqualification can positively predict their learning motivation one month after enrollment, and psychological capital plays a moderating role in the relationship between them. (3) College students' perceived overqualification can negatively predict their life satisfaction one month after enrollment. (4) There is a masked effect between the perceived overqualification and the adaptation of college students, which is shown as the perceived overqualification indirectly positively predicts adaptation two months after enrollment through the mediation of learning motivation, and negatively predicts adaptation two months after enrollment through the mediation of life satisfaction. (5) The influence of overqualification on adaptation through learning motivation path is stronger for individuals with higher psychological capital, but weaker for individuals with lower psychological capital.

Keywords: college students, perceived overqualification, adaptation, relative deprivation, cognitive dissonance

大学生主动性人格、领悟社会支持与建言意愿的关系研究

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摘要 新课程改革强调以人为本，健全学生人格，注重学生的健康发展。确立学生主体地位，与新课程改革密切相关。大学生的主体地位应不仅仅体现在课堂中积极参与，还应该体现在对班级建设或教师授课方式提出建议，这样更能体现大学生的主人翁意识。大学生与教师的关系既区别于基础教育阶段的师生关系，又区别于工作状态下的员工与领导的关系，在课堂的教学中，如果出现有损学习效率的事情，大学生如果有建言意愿，能够促进大学课堂的教学，在有限的时间得到更多的知识，能够与教师共同成长。本研究旨在研究大学生群体中的建言意愿，并探讨个体内部的主动性人格和外部的领悟社会支持两方面与大学生建言意愿的关系。采用主动性人格量表、领悟社会支持量表和建言意愿量表对 407 名大学生进行问卷调查。结果显示，主动性人格、社会支持对建言意愿有显著预测作用。在分维度中，朋友支持在变革性与抑制性建言间起部分中介作用；家庭支持在变革性与促进性建言间起部分中介作用；其他支持在变革性与促进性建言间起部分中介作用。而且，发现一些人口学变量（性别、是否为学生干部、学业水平）也在影响着建言意愿。此外，编制了半结构访谈提纲，对 15 名大学生进行访谈，使用 Nvivo 软件进行质化分析，结果显示，绝大多数被试均与访谈人员就建言相关内容进行阐述，描述了自己的相关经历，表明了自己对于人格、社会支持与建言意愿之间关系的看法，对问卷的结果进行了补充，更加深入地了解到了不同性别、不同年级、不同性格的大学生选择建言的原因以及建言之前考虑的因素。本研究一方面可以扩充建言的研究领域，有助于促进大学生的建言意愿，产生更多的建言行为，为高校教学管理的质量提升提供实证参考。另一方面，还可以推进有关建言意愿心理机制的理论研究，丰富相关的管理心理学理论。

关键词 大学生，主动性人格，领悟社会支持，建言意愿

Research on the Relationship between Proactive Personality, Perceived social support and Willingness of Voice of College Students

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Abstract: The new curriculum reform emphasizes people - oriented, improve the students' personality, pay attention to the healthy development of students. It is closely related to the new curriculum reform to establish the student's subject status. The subject status of college students should not only be reflected in the active participation in the classroom, but also should be reflected in the class construction or teachers teaching methods of suggestions, which can better reflect the sense of ownership of college students. The relationship between college students and teachers is different from the teacher-student relationship in the basic education stage, and different from the relationship between staff and leaders in the working state. In classroom teaching, if there is something harmful to learning efficiency, college students with willingness of voice will be able to promote classroom teaching, get more knowledge in the limited time, and grow up together with teachers. The purpose of this study is to study the willingness of voice among college students and to explore its relationship with proactive personality(individual internal) and perceived social support(individual external). The proactive personality questionnaire, PSSS and willingness of voice scale were used to survey 407 college students. The results show that proactive personality and social support play a significant role in predicting the willingness of voice. In the sub-dimension, friends support plays a part of mediation role between transformative and prohibitive voice; Family support plays a part intermediary role between transformative and promotive voice advice; Other support plays a mediation role between transformative and promotive voice. In addition, it is found that some demographic variables (gender, student leader or not, academic level) also affect voice behavior willingness. In addition, a semi-structured interview outline was compiled and 15 college students were interviewed, used Nvivo software for qualitative analysis, the result shows

that the vast majority of participants were linked to related contents in the interviewers will advice, describes their relevant experience, shows his for the personality, the relationship between social support and advice intention, the results of the questionnaire are supplemented to further understand the reasons why college students of different genders, grades and personalities choose voice behavior and the factors considered before voice behavior. On the one hand, this study can expand the research field of voice behavior, help promote the voice behavior intention of college students, produce more voice behavior, and provide empirical reference for the improvement of teaching management quality in colleges and universities. On the other hand, it can also promote the theoretical research on the psychological mechanism of voice behavior intention and enrich the relevant theories of management psychology.

Keywords: College Students, Proactive Personality, Perceived Social Support, Willingness of Voice

(2) “学校心理学专业委员会”口头报告分场 2

父母教养投入对初中生未来取向的影响： 个人成长主动性、职业决策自我效能感的链式中介作用

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摘要 目的: 未来取向指个体在思想和行为上对未来的偏好与规划。青少年期是个体思考人生发展方向、确定职业发展目标的关键期, 合理的未来规划有助于青少年顺利实现从儿童期向成人期的过渡与转变。生态系统理论提出, 家庭环境对个体发展具有深远影响。然而, 已有研究多立足于从家庭环境因素解释个体已有心理, 较少探讨其对未来指向行为的功能及其机制。因此, 从家庭环境因素理解青少年未来取向的发展具有重要意义。与此同时, 未来取向意指个体主动思考和应对发展任务与挑战, 而自我效能感是个人成长主动性的重要预测变量。高自我效能感个体能积极应对困难与挫折, 并迅速汲取经验以获得个人成长。由此, 本研究旨在探讨父母教养投入对青少年未来取向的影响, 以及职业决策自我效能感、个人成长主动性在其中的作用机制。方法: 通过方便取样的方法, 采用父母教养投入问卷、未来取向问卷、个人成长主动性量表、职业决策自我效能感量表对 358 名初中生进行问卷调查。结果: (1) 父母教养投入、个人成长主动性、职业决策自我效能感与未来取向呈显著正相关; (2) 父母教养投入、个人成长主动性、职业决策自我效能感均显著正向预测未来取向; (3) 个人成长主动性、职业决策自我效能感在父母教养投入对未来取向的影响中存在多重中介与链式中介作用。结论: (1) 充分的父母教养投入能使青少年体会到来自家庭的有力支持, 有助于增强其积极思考未来的职业决策效能体验与主动迎接成长的信心, 从而表现出更高水平的未来取向特征; (2) 在青少年生涯规划教育过程中, 不仅应发挥家庭的重要功能, 也要从学校角度进一步挖掘青少年未来职业规划教育的有效途径, 提升其主动成长的信心与能力。

关键词 青少年, 父母教养投入, 未来取向, 个人成长主动性, 职业决策自我效能

The Impact of Parental Involvement on Future Orientation: The Chain Mediating Role of Personal Growth Initiative and Career Decision-making Self-efficacy

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Abstract: Purpose: Future orientation refers to the individual's preference and planning for the future in thought and behavior. Adolescence is a critical period for individuals to think about the direction of their life and determine their career development goals. Reasonable future plans help young people to smoothly realize the transition and transformation from childhood to adulthood. Ecosystem theory proposes that the family environment has a profound impact on individual development. However, the existing studies are mostly based on explaining the individual's

existing psychology from family environment factors, and seldom discuss its function and mechanism for future-oriented behavior. Therefore, it is of great significance to understand the development of adolescents' future orientation from family environment factors. At the same time, future orientation means that individuals actively think about and respond to development tasks and challenges, and self-efficacy is an important predictor of personal growth initiative. Individuals with high self-efficacy can actively deal with difficulties and setbacks, and learn from experience quickly to gain personal growth. Therefore, this study aims to explore the influence of parental upbringing investment on adolescents' future orientation, as well as the mechanism of self-efficacy in career decision-making and personal growth initiative. Method: Through convenient sampling methods, a questionnaire survey was conducted among 358 junior high school students by using parental involvement questionnaire, future orientation questionnaire, personal growth initiative questionnaire, and career decision self-efficacy scale. Results:(1)Parental involvement, personal growth initiative, career decision-making self-efficacy and future orientation are significantly positively correlated;(2)Parental involvement, personal growth initiative, and career decision-making self-efficacy all significantly positively predict future orientation;(3)Personal growth initiative and career decision-making self-efficacy have multiple intermediary and chain intermediary roles in the influence of parental upbringing investment on future orientation. Conclusions:(1)Sufficient parental upbringing investment can enable young people to experience strong support from their families, help them to actively think about the future of career decision-making efficiency experience and proactively welcome growth confidence, thus showing a higher level of future orientation characteristics;(2)In the process of youth career planning education, not only should the important function of the family be brought into play, but also effective ways of future career planning education for young people should be further explored from the school point of view, so as to enhance their confidence and ability to actively grow.

Keywords: adolescent, parental involvement future orientation, personal growth initiative, career decision-making self-efficacy

儿童青少年消极同伴关系与执行功能的联系：冗思的中介作用

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摘 要 执行功能包含一系列高级认知能力, 在儿童青少年期持续发展, 与个体良好的适应结果相联系。根据 Baumeister 的自我调节模型, 消极同伴关系会损害个体的归属需要, 对痛苦经历的抑制和调节过程会消耗心理资源, 从而限制执行功能的发展。已有研究揭示了消极同伴关系与执行功能的关系, 但鲜有研究考察消极同伴关系和执行功能二者关系的具体机制。消极的社会经历会产生反射性的痛苦反应, 考虑到情绪及思维方式对儿童青少年发展的重要作用, 我们将冗思纳入同伴侵害与执行功能的关系中, 考察冗思的中介作用。即消极同伴关系可能会导致冗思, 损耗个体心理资源, 进而限制执行功能的发展。本研究以童年中期、童年晚期和青少年早期 3 个年龄阶段 (分别为 3、5、7 年级) 的 549 名儿童青少年为被试, 进行时隔半年的追踪, 使用同伴提名法测量同伴拒绝, 使用自我报告法测量同伴侵害、抑郁冗思和愤怒冗思, 使用父母报告法测量执行功能。结果发现: (1) 潜变量交叉滞后模型分析结果显示同伴拒绝、同伴侵害负向预测执行功能, 执行功能负向预测同伴拒绝, 但不能预测同伴侵害, 表明同伴拒绝与执行功能间存在双向预测关系。(2) 中介效应分析结果显示, 愤怒冗思在同伴侵害对执行功能的影响中发挥中介作用, 抑郁冗思在同伴侵害对执行功能的影响中未发挥中介作用。两类冗思在同伴拒绝对执行功能影响中的中介作用不显著。(3) 多组比较结果显示, 消极同伴关系与执行功能的联系以及冗思在其中的作用均不存在显著的性别差异和发展阶段差异。结果表明, 同伴拒绝、同伴侵害经历会限制执行功能的发展, 较差的执行功能会进一步增加同伴拒绝的可能性。同伴侵害会导致儿童青少年产生更多的愤怒冗思, 进而影响执行功能。本研究的发现有助于了解消极同伴关系对调控机能的影响及其内在机制, 加强对消极同伴关系经历的关注有助于儿童青少年的认知调控能力的健康发展。

关键词 同伴拒绝, 同伴侵害, 执行功能, 愤怒冗思, 抑郁冗思

Associations between Negative Peer Relations and Executive Function in Childhood and Adolescence: The Mediating Role of Rumination

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Abstract: Executive functions (EFs) refer to a family of advanced cognitive functions, which develop throughout childhood and adolescence, are associated with better developmental outcomes. According to Baumeister's self-regulation model, negative peer relations impair need to belong, and the process of inhibiting and regulating painful experiences will consume psychological resources, thus limiting the development of executive function. Previous studies revealed the association between negative peer relationship and EFs, however, few studies have investigated the mechanism of this relationship. Considering the important role of emotion and mindset on the development of children and adolescents, we take rumination into account, investigate the mediating role of rumination between peer victimization and EFs. That is, negative peer relations influence rumination, then consume psychological resources, which impair the development of EFs. In this study, 549 children and adolescents from 3 grades (grade 3, grade 5, grade 7) were tracked for 6 months. Peer rejection were measured by peer nomination. Peer victimization, depressive rumination and anger rumination were measured by self-report. Executive function was measured by parent-report. The results showed that: (1) Cross-lagged analysis showed that peer rejection and victimization negatively predicted executive function. There was a bidirectional associations of peer rejection and executive function. Executive function couldn't predict peer victimization. (2) Mediation effect analysis showed that anger rumination played a mediating role in the effect of peer victimization on executive function, but depressive rumination not. Neither depressive rumination nor anger rumination play a mediating role in the effect of peer rejection on executive function. (3) Multi-group models indicated no sex differences and no development stage differences was found in the relationships between negative peer relations, rumination and executive function. This study revealed peer rejection and victimization will limit the development of executive function, and poor executive function will further increase the possibility of peer rejection. Peer victimization will lead to more anger rumination among children and adolescents, and then influence the executive function. The results highlighted that it's essential to pay more attention to the negative peer relations, so as to prompt their development of cognitive regulation.

Keywords: Peer rejection, Peer victimization, Executive function, Anger rumination, Depressive rumination

小学生学校幸福感的发展轨迹：预测因素及与问题行为的关系

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摘要 学校幸福感作为积极心理学在学校领域的重要研究内容, 是反映学生学校适应的重要指标。学生的学校幸福感不仅对其当前的整体幸福感与身心健康起着重要影响, 还关系到学生未来的身心健康及其个体生涯发展。尽管学校幸福感对小学生的影响是长远且深厚的, 但是小学生学校幸福感的发展模式及其与预测因素、后果的关系尚不清楚。因此, 本研究的目的是探究小学生学校幸福感的三个组成成分(学校满意度、在校积极情感、在校消极情感)的协同发展轨迹及其与预测因素、后果的关系。本研究采用问卷调查法, 选取2756名4-5年级的小学生($M_{\text{age}} = 9.91 \text{ years}$, $SD = 0.72$, 47%是女生)为被试进行了四波段的追踪调查, 每次

测量间隔 6 个月。采用平行过程潜类别增长模型分析识别出小学生学校幸福感的三种成分的四种协同发展轨迹类型：（1）繁荣组（48.6%），（2）共同中稳定组（29.2%），（3）共同高稳定组（13.3%），（4）问题组（8.9%）。多元回归分析结果显示：同伴侵害、教师虐待是小学生学校幸福感不良发展的风险因素；成绩是小学生学校幸福感积极发展的保护因素。问题组和繁荣组的学生分别报告了最多的内外化问题和最少的内外化问题。研究结果强调了亚组差异对了解学校幸福感发展的重要性，以及普遍筛查、动态监测和针对特定亚组的独特特征的干预的必要性。

关键词 学校幸福感，发展轨迹，预测因素，后果，小学生

Trajectories of Subjective Well-Being in School Among Elementary School Students: Predictors and Relations to problem behavior

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Abstract: As an important research content of positive psychology in school field, subjective well-being in school is an important index reflecting students' school adaptation. Students' subjective well-being in school not only plays an important role in their current global well-being, physical and mental health, but also relates to their subsequent physical and mental health and individual career development. Although the impact of subjective well-being in school among elementary school students is long-term and profound, its developmental patterns and predictors and outcomes during this period are unclear. Thus, this study aimed to identify multiple co-developmental trajectories of the three components (i.e., school satisfaction, positive affect in school and negative affect in school) of subjective well-being (SWB) in school and their relations to predictors and outcomes among Chinese elementary school students. A total of 2756 students (Mage = 9.91 years, SD = 0.72; 47% girls) completed a packet of measures on four occasions at 6-month intervals. Parallel process latent class growth analyses identified four co-developmental groups (i.e., flourishing, congruently moderate-stable, congruently high-stable, and troubled). Multivariate logistic regression analyses revealed that peer victimization, maltreatment by teachers served as risk factors for the adverse co-development groups; whereas academic achievement served as protective factor for the favorable co-development groups. Students in the troubled group and flourishing group reported the most and fewest internalizing and externalizing problems, respectively. The findings highlighted the importance of subgroup differences in understanding the progression of SWB in school and the need for universal screening, dynamic monitoring, and interventions tailored to the unique characteristics of the subgroups.

Keywords: Subjective well-being in school, Developmental trajectory, Predictors, Outcomes, Elementary school students

童年创伤对青少年网络成瘾的影响：自我隐瞒的中介机制

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摘要 青少年网络成瘾一直受到研究者的高度关注。研究表明，童年创伤与青少年网络成瘾的关系密切。但是，童年创伤与青少年网络成瘾的研究较少。因此，预防青少年网络成瘾促进其心理健康发展，积极探索童年创伤与青少年网络成瘾的内在机制尤为重要。Schimmenti 发现童年创伤可能导致个体有更低地自我暴露，促使其产生自我隐瞒的动机。为了逃避这些负性情绪或者隐瞒带来的压力从而选择不合理的行为方式，使用网络来逃避。本研究以青少年为被试，探讨自我隐瞒在童年创伤与青少年网络成瘾的中介作用，以期找到改善网络成瘾的有效方法。因此本研究假设自我隐瞒在童年创伤与青少年网络成瘾间起中介作用。为了探讨自

我隐瞒在童年创伤与青少年网络成瘾间的中介作用。采用儿童期虐待问卷(childhood trauma questionnaire,CTQ)、自我隐瞒量表(self-concealment scale,SCS)、青少年病理性互联网使用量表(adolescent pathological internet use scale,APIUS)对 565 名中学学生进行调查,获得有效问卷 532 份。研究表明:(1)童年创伤与青少年网络成瘾呈显著正相关,自我隐瞒与童年创伤和青少年网络成瘾呈显著正相关;(2)自我隐瞒的中介作用的模型拟合良好, $(\chi^2=203.703, df=49, \chi^2/df=4.157, GFI=0.938, AGFI=0.902, NFI=0.939, IFI=0.953, TLI=0.936, CFI=0.952, RMSEA=0.077, SRMR=0.048)$,童年创伤能够正向预测自我隐瞒水平($\beta=0.27, p<0.001$),童年创伤能正向预测青少年网络成瘾($\beta=0.36, p<0.001$),童年创伤通过自我隐瞒对青少年网络成瘾的中介作用为 0.116,童年虐待对调整抑郁的总效应为 0.428,效果量 27.10%。由此说明,童年创伤不仅直接影响青少年网络成瘾水平,还会通过自我隐瞒对青少年网络成瘾产生影响。这启示我们,家长、学校和社会要对青少年进行适当关怀和支持,使青少年敞开心扉,降低自我隐瞒的可能性,有效减少其孤独感和消极情绪,减少青少年病理性互联网的使用。

关键词 青少年,童年创伤,网络成瘾,自我隐瞒,中介作用

The Influence of Childhood Trauma on Adolescents' Internet Addiction Disorder: Mediating Mechanism of Self-concealment

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Abstract: Teenagers' Internet addiction has been paid great attention by researchers. Studies have shown that childhood trauma is closely related to adolescents' Internet addiction. However, there are few studies on childhood trauma and adolescent Internet addiction. Therefore, it is essential to prevent teenagers' Internet addiction, promote their mental health development, and actively explore the internal mechanism of childhood trauma and teenagers' Internet addiction. Schimmenti found that childhood trauma may lead to lower self-exposure, which leads to the motivation of self-concealment. To escape these negative emotions or hide the pressure and choose unreasonable behavior, use the network to escape. Taking adolescents as subjects, this study explores the mediating role of self-concealment in childhood trauma and adolescents' Internet addiction to find an effective way to improve Internet addiction. Therefore, this study assumes that self-concealment plays an intermediary role between childhood trauma and adolescent Internet addiction. To explore the mediating role of self-concealment between childhood trauma and adolescent Internet addiction. A total of 565 middle school students were investigated with the Child Abuse Questionnaire (CTQ), Self-Concealment Scale (SCS), and Adolescent Pathological Internet Use Scale (APIUS), and 532 valid questionnaires were obtained. The results show that: (1) there is a significant positive correlation between childhood trauma and adolescent internet addiction, and there is a significant positive correlation between self-concealment and childhood trauma and adolescent internet addiction; (2) The model of the mediating effect of self-concealment fits well ($\chi^2=203.703, df=49, \chi^2/df=4.157, GFI=0.938, AGFI=0.902, NFI=0.939, IFI=0.953, TLI=0.936, CFI=0.952, RMSEA=0.077, SRMR=0.048$) Childhood trauma can positively predict the level of self-concealment ($\beta=0.27, p<0.001$), and positively predict adolescents' Internet addiction ($\beta=0.36, p<0.001$). Furthermore, the mediating effect of childhood trauma on adolescents' Internet addiction through self-concealment is 0.116. The total effect of childhood abuse on adjusting depression is 0.428, with an adequate amount of 27.10%. Therefore, childhood trauma directly affects teenagers' Internet addiction and influences teenagers' Internet addiction through self-concealment. This enlightens us that parents, schools, and society should give proper care and support to teenagers to open their hearts, reduce the possibility of self-concealment, effectively reduce their loneliness and negative emotions, and reduce the use of pathological Internet by teenagers.

Keywords: teenagers, childhood trauma, internet addiction, self-concealment, mediation

初中生课外活动参与对认知能力的影响 ——基于全国 10083 名初中生的分析

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摘要 认知能力发展是青少年心理发展的重要内容, 课外活动参与在提升青少年认知能力上发挥了重要作用, 但国内鲜见基于全国样本数据的相关实证研究。本研究选取 2014—2015 学年“中国教育追踪调查”(CEPS) 10083 名初中生的数据, 采用多水平模型的分析方法, 探讨不同类型课外活动参与对初中生认知能力的影响, 并进一步分析影响程度的性别差异和家庭经济地位差异。结果发现: 第一, 课外写老师布置的作业时间、课外体育锻炼时间对初中生认知能力具有显著的正向影响。而平时参加课外补习时间、上兴趣班时间、看电视时间、上网玩游戏时间对学生的认知能力具有显著的负向影响。第二, 性别和家庭经济地位调节课外活动参与对认知能力的影响。具体表现为, 课外写老师布置作业的时间对男生认知能力的正向影响大于女生, 而平时参加校外辅导班时间对女生认知能力的负向影响大于男生; 平时上兴趣班时间对富裕家庭学生认知能力的负向影响更大, 看电视和体育锻炼分别对困难家庭学生认知能力的负向影响和正向影响更大。研究发现对青少年课外时间的合理安排, 家庭培养策略的参考以及学校、社会相关教育管理实践具有一定的指导意义。

关键词 课外活动, 认知能力, 性别, 家庭经济地位

Effects of Extracurricular Activity Participation on Cognitive Ability among Junior Middle School Students

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Abstract: Cognitive ability development is a crucial part of adolescents' psychological development, and participation in extracurricular activities plays an important role in improving adolescents' cognitive ability. However, there is little in-depth empirical research based on national samples. Based on the data of 10083 junior high school students in China Education Panel Survey (CEPS) from 2014 to 2015, this study used the multi-level model analysis method to explore the impact of different types of extracurricular activities on the cognitive ability of junior high school students, and further analyzed the moderating role of gender and family economic status. The results showed that: (1) The extracurricular time spent on homework assigned by the teacher and physical exercise had significant positive impacts on the cognitive ability of junior high school students. The time spent on extracurricular tutoring, interest classes, watching TV, and playing games online had significant negative impacts on students' cognitive ability; (2) Gender and family economic status moderated the association between extracurricular activities and cognitive ability among junior high school students. Specifically, the homework time assigned by the teacher had a greater positive impact on boys' cognitive ability, while the time spent on extracurricular tutoring on weekdays had a greater negative impact on girls' cognitive ability. Besides, the time spent on interest classes on weekdays had a greater negative impact on the cognitive abilities of students from wealthy families, and the time spent on watching TV and physical exercise had greater negative and positive impacts on the cognitive abilities of students from difficult families. These findings have certain guiding significance for the reasonable arrangement of adolescents' extracurricular time, the reference of family training strategies and the educational management practices of schools and society.

Keywords: extracurricular activities, cognitive ability, gender, family economic status

青少年疫情期间的的生活状态对复学后群体适应的影响

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摘要 新冠肺炎疫情背景下, 居家隔离使青少年的人际交往模式发生骤变, 其线下主要交往对象从同伴转为父母等主要照料者。复学后, 青少年表现出的亲社会行为能够帮助个体快速建立同龄人社交, 完成群体适

应,进而适应紧张的学习生活和校园生活,有效预防心理危机事件的发生。本研究探究了青少年疫情期间的生活状态对其复学后群体适应的影响。本研究对上海的一所私立中学的490名初中生进行了问卷调查,平均年龄13.78岁($SD = 1.26$),男女性各半;使用亲子关系量表(NRI),生活质量量表(QOL),正负性情绪量表(PANAS),短版中学生亲社会行为量表进行测量,探讨了以母子关系、父子关系分别为自变量,以生活质量为调节变量,以正负情绪为中介变量,以亲社会行为为因变量的2个有调节的中介模型。结果表明:(1)疫情居家期间,优质的亲子关系能正向预测中学生的正性情绪(母子关系: $B = 0.338, t = 7.424, p < .01$;父子关系: $B = 0.324, t = 7.201, p < .01$)、负向预测中学生的负性情绪(母子关系: $B = -0.345, t = -9.716, p < .01$;父子关系: $B = -0.309, t = -8.705, p < .01$),进而促进中学生复学后的亲社会行为表现,正负情绪存在显著中介作用;(2)生活质量显著调节了亲子关系对正负情绪的影响,感知到的生活质量越高,优质的母子关系对中学生正性情绪的正向预测越强($B = 0.009, t = 2.165, p < .05$)、对中学生负性情绪的负向预测作用越弱($B = 0.010, t = 3.453, p < .01$),优质的父子关系对中学生负性情绪的负向预测作用越弱($B = 0.007, t = 2.425, p < .05$);(3)母子关系与父子关系对中学生复学后亲社会行为表现的影响模式存在差异:仅父子关系对亲社会行为的直接预测作用显著(母子关系: $B = 1.055, t = 1.783, p > .05$;父子关系: $B = 1.548, t = 2.728, p < .01$);生活质量仅对父子关系对正性情绪的预测作用没有调节($B = 0.005, t = 1.203, p > .05$)。本研究进一步提出了一个更为完整的亲子关系对青少年亲社会行为的作用机制模型,补充了前人研究中的不足,这一成果对于培养、促进青少年的同伴适应,社会适应能力的发展有一定的贡献。

关键词 母子关系,父子关系,生活质量,正负情绪,亲社会行为

Impact of adolescents' living conditions during the epidemic on group adaptation after school resumption

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Abstract: In the context of COVID-19, home isolation caused an abrupt change in the interpersonal interaction pattern of adolescents, and their main offline interaction objects shifted from peers to parents and other primary caregivers. After returning to school, pro-social behaviors that adolescents exhibit can help them quickly establish peer socialization, complete group adaptation, and then adapt to stressful academic and campus life, effectively preventing psychological crisis events. This study explored the impact of adolescents' living conditions during the epidemic on their group adaptation after returning to school. Questionnaires were administered to 490 middle school students, with a mean age of 13.78 years ($SD = 1.26$), in a private middle school in Shanghai, and the gender ratio was 1:1. The Network of Relationships Inventories (NRI), Quality of Life Scales (QOL), Positive and Negative Affect Scales (PANAS), and short version of Scale of Middle School Students' Prosocial Behaviors were used to explore the effects of mother-child relationship and father-child relationship as independent variables, respectively, quality of life as moderating variable, positive and negative emotions as mediating variables, and pro-social behavior as dependent variable in 2 moderated mediation models. The results showed that: (1) During the epidemic staying at home, high-quality parent-child relationship could positively predict the positive emotions of middle school students (mother-child relationship: $B = 0.338, t = 7.424, p < .01$; father-child relationship: $B = 0.324, t = 7.201, p < .01$) and negatively predict the negative emotions of middle school students (mother-child relationship: $B = -0.345, t = -9.716, p < .01$; father-child relationship: $B = -0.309, t = -8.705, p < .01$), thereby promoting the performance of pro-social behaviors of middle school students after returning to school, with a significant mediating effect of positive and negative emotions; (2) Quality of life significantly moderated the effect of parent-child relationship on positive and negative emotions. The higher the perceived quality of life, the stronger the positive prediction of high-quality mother-child relationships on middle school students' positive emotions ($B = 0.009, t = 2.165, p < .05$), the weaker the negative predictive effect on middle school students' negative emotions ($B = 0.010, t = 3.453, p < .01$), and the weaker the negative predictive effect of high-quality father-child relationships on middle school students' negative

emotions ($B = 0.007, t = 2.425, p < .05$); (3) There were differences in the patterns of influence of mother-child relationship and father-child relationship on middle school students' performance of pro-social behaviors after returning to school: only the direct predictive effect of father-child relationship on pro-social behavior was significant (mother-child relationship: $B = 1.055, t = 1.783, p > .05$; father-child relationship: $B = 1.548, t = 2.728, p < .01$); quality of life only did not moderate the predictive effect of father-child relationship on positive emotions ($B = 0.005, t = 1.203, p > .05$). This study further proposed a more complete model of the mechanism of the role of parent-child relationship on adolescents' pro-social behavior, which complements the deficiencies in previous studies, and these results have contributed to the cultivation and promotion of peer adaptation of young people and the development of social adaptability.

Keywords: mother-child relationship, father-child relationship, quality of life, positive and negative affects, pro-social behavior

(3) “学校心理学专业委员会”口头报告分场3

专家和新手教师在师生联合搭建任务中的差异：一项超扫描研究

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摘要 师生互动不仅是保证教学目的达成的重要形式,也是促进学生社会性、行为和认知发展的重要途径。以往的互动研究多从学生视角切入展开探讨,对教师因素产生的影响与效用的关注不足。同时,已有研究表明专家教师在教学知识的结构性、教学计划的关联性和教学监控的有效性等教学行为上显著优于新手教师。那么,专家教师在与学生合作互动中的行为表现(如合作效率)上是否同样显著优于新手教师?此外,互动脑假说指出个体的大脑神经结构受到人际互动过程中获得的经验与技能的影响。那么,脑际神经同步能否识别专家/新手教师在师生合作互动中的差异?基于上述两个研究问题,本研究采用近红外超扫描技术,通过2(教师类型:专家 vs. 新手)×2(任务类型:合作 vs. 独立)的混合设计,考察了专家-新手教师与学生互动的行为差异与脑际神经机制。行为结果显示:合作条件下,专家教师-学生组的完成率显著高于新手教师-学生组。视频编码结果显示,专家教师-学生组的合作性显著高于新手教师-学生组;专家教师的任务主导性显著高于新手教师。fNIRS结果显示:在合作搭建条件下,专家教师-学生组在右侧背外侧前额叶脑区出现了显著的脑际神经同步,并且观测到的脑际神经同步比新手教师-学生组更强。同时,在合作搭建下,格兰杰因果分析同样未发现两类教师与学生之间存在脑际神经活动方向的主导角色。此外,专家教师-学生组在合作过程中的脑际神经同步与师生合作搭建的完成率、合作性存在边缘显著的正相关;与专家教师的心理理论能力、观点采择能力存在显著正相关。上述结果表明,专家教师-学生组的合作互动的行为表现显著优于新手教师-学生组,脑际神经同步能够识别更优的师生合作互动。本研究从行为与脑际神经机制的视角揭示了专家和新手教师与学生合作互动的行为和脑际神经活动的差异以及教师的心智化能力对师生合作互动的潜在影响。

关键词 专家教师, 新手教师, 合作互动, 脑际神经同步, 近红外超扫描技术

The differences between experts and novice teachers when collaborate with students: a fNIRS hyperscanning study

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Abstract: Teacher-student interaction is not only an important way to ensure the achievement of teaching purposes, but also an important way to promote students' social, behavioral and cognitive development. In the previous studies, interactive research mostly started from the perspective of students and started to explore, and the focus on the impact and effectiveness of teacher factors was insufficient. At the same time, existing research has shown that expert

teachers are significantly better than novice teachers in teaching behavior, such as the structure of teaching knowledge, the relevance of teaching plans and the effectiveness of teaching monitoring. Then, are expert teachers also significantly better than novice teachers in the performance of cooperation with students (such as cooperation efficiency)? In addition, the interactive brain hypothesis indicates that the individual's brain neural structure is affected by the experience and skills gained during interpersonal interaction. Then, can inter-brain neural synchronization recognize the differences between expert/novice teachers in teacher-student cooperation? Based on these two research questions, this study combined near-infrared super-scan technology and a mixed design of 2 (teacher type: expert vs. novice) x 2 (task type: cooperation vs. independent), the expert-novice teacher and student were investigated Interactive behavioral differences and interbrain neural mechanisms. The behavior results showed that under the cooperation conditions, the completion rate of the expert teacher-student group is significantly higher than that of the novice teacher-student group. The video coding results showed that the cooperation of the expert teacher-student group was significantly higher than that of the novice teacher-student group; the task dominance of the expert teacher was significantly higher than that of the novice teacher. The fNIRS results showed that under the conditions of cooperative construction, the expert teacher-student group showed significant inter-brain neural synchronization in the right dorsolateral prefrontal brain area, and the observed inter-brain neural synchronization was stronger than the novice teacher-student group. At the same time, under the cooperation condition, Granger Causal Analysis not found dominant role in the direction of brain activity between the two types of teachers and students. In addition, the brain-synchronization of the expert teacher-student group in the cooperation process was marginally positively correlated with the completion rate and cooperation of the teacher-student team; there was a positive correlation with the expert teacher's theory of mind ability and perspective taking ability. The results indicate that the expert teacher-student group's cooperative interaction performance is better than the novice teacher-student group, and the inter-brain neural synchronization can identify better teacher-student cooperation interaction. This study reveals the differences in the behaviors and inter-brain neural activities of experts and novice teachers and students in the cooperative interaction and the potential impact of teachers' mental ability on the cooperative interaction between teachers and students from the perspective of behavior and inter-brain neural mechanisms.

Keywords: expert teacher, novice teacher, cooperative interaction, interpersonal neural synchronization, fNIRS-based hyperscanning

情绪共情与教师情绪衰竭的关系：有调节的中介模型

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摘 要 教学是一种情感上的努力，调查研究显示中小学教师群体普遍存在情绪衰竭现象。共情与情绪衰竭之间的关系已经得到了研究者的关注，但是并未得到一致性的结果。有研究指出共情作为一种积极心理特质，通常会对个体身心健康产生积极影响；截然相反的结果显示共情具有负面效应，对他人共情会消耗情绪及情绪调节资源，进而加剧自身情绪衰竭。这可能与共情的两种成分——认知共情和情绪共情所发挥的作用不同有关，情绪共情是共情负面效应的主要来源。因此，十分有必要进一步厘清情绪共情与教师情绪衰竭之间的关系。然而，目前缺乏足够的实证研究对二者之间的内部作用机制进行探讨。情绪劳动等同情绪调控模型(emotional labor as emotion regulation model, ELERM)和最近的实证研究均指出，情绪共情能够通过情绪劳动策略对教师的情绪衰竭产生影响，且情绪共情与环境工作因素（挑战性-阻碍性压力源）的相互作用会促使教师选择不同的情绪劳动策略，从而影响情绪衰竭。鉴于此，本研究尝试从教师自身视角出发，着重考察情绪共情对教师情绪衰竭产生的负面效应，并进一步探讨表层扮演（通过隐藏或伪装真实情感以表现出组织要求的情绪情感）、深层扮演（通过改变认知诱因以激发组织要求的情绪情感）和自然感受情绪的表达这三种情绪劳动策略在二者关系中的中介作用以及挑战性-阻碍性压力源的调节作用。以 932 名中小学教师作为研究对象进行问卷调查。结果发现：(1) 情绪共情与中小学教师情绪衰竭呈正相关，证实了情绪共情的负面效应；(2) 表层扮演和自然感受情绪的表达的中介作用显著，情绪共情既能够通过增加表层扮演策略的使用频率进而

加剧教师的情绪衰竭,也能通过增加自然感受情绪的表达策略的使用频率进而缓解教师的情绪衰竭;(3) 表层扮演的中介作用受到挑战性压力源和阻碍性压力源的调节。具体而言,在低挑战性压力源或高阻碍性压力源下,表层扮演的中介作用增强。本研究为教师共情的负面效应提供了证据,并且对教师专业化实践及心理健康教育培训具有重要启示。

关键词 情绪共情, 情绪劳动策略, 情绪衰竭, 挑战性-阻碍性压力源, 中小学教师

Associations Between Affective Empathy and Teachers' Emotional Exhaustion: A Moderated Mediation Model

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Abstract: Teaching is a kind of emotional efforts, and some surveys have shown that emotional exhaustion is common among primary and secondary school teachers. The relationship between empathy and teachers' emotional exhaustion has attracted the attention of many researchers, but no consistent results have been obtained. Some studies have pointed that empathy as a positive impact on individuals' physical and mental health; the opposite results showed that empathy has a negative effect. To be specific, empathy with others may consume one's own emotions and emotional regulation resources, thereby exacerbating their own emotional exhaustion. We speculated this may be related to the different roles played by the two components of empathy—cognitive empathy and affective empathy, and affective empathy is the main source of the negative effects of empathy. Both emotional labor as emotion regulation model(ELERM) and the recently empirical studies have found that the interaction between affective empathy and work factors in the environment (i.e. challenge and hindrance stressors) may prompt teachers choose different emotional labor strategies, and thus have an impact on teachers' emotional exhaustion. Therefore, it is necessary to further clarify the relationship between affective empathy and teachers' emotional exhaustion. However, there is currently a lack of sufficient empirical research to explore the internal mechanism of action between them. Given this, from the perspective of teachers themselves, the current study focused on the negative effect of affective empathy on teachers' emotional exhaustion, and further to explore the mediating and moderating roles of surface acting (by hiding or faking true emotions to display appropriate emotions at work), deep acting (by changing the cognitive inducement to stimulate the appropriate emotions at work), authentic emotional display and challenge and hindrance stressors. A total of 932 primary and secondary school teachers completed measures of emotional exhaustion, empathy, emotional labor strategies and challenge and hindrance stressors. The results were as follows: (1) Affective empathy was positively related to teachers' emotional exhaustion; (2) Both surface acting and authentic emotional display partially mediated the relationship between affective empathy and emotional exhaustion, that is affective empathy can aggravate emotional exhaustion by increasing surface acting, and can also alleviate the emotional exhaustion by enhancing authentic emotional display; (3) The mediating role of surface acting between affective empathy and emotional exhaustion was moderated by challenge and hindrance stressors. Especially, the mediating effect is stronger at high hindrance stressors or at low challenge stressors. This study provides an evidence for the negative effect of affective empathy and provides important enlightenment for teachers' professional practice and mental health education and training.

Keywords: affective empathy, emotional labor strategies, emotional exhaustion, challenge and hindrance stressors, primary and secondary school teachers

陈述性记忆预期错误在不同强度恐惧记忆提取消退中的应用及其性别差异

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摘要 现有的条件性恐惧记忆提取消退范式这一非侵入性干预操作中, 预期错误被证明是诱发记忆去稳定的必要条件, 但是现有的预期错误的产生方式缺乏主观差异及可视化的考量, 有研究发现陈述性记忆和非陈述性记忆拥有相同的脑区激活, 两种类型记忆并非独立, 从而基于陈述性学习和非陈述性学习相互作用的观点, 陈述性记忆的预期错误的诱发方式可以自动化地引发恐惧记忆的进入再巩固, 而陈述性记忆量化的研究已经趋于成熟, 因此本研究使用陈述性记忆的预期错误的操作方式引发恐惧记忆的预期错误, 探索其在恐惧记忆的再巩固过程中的有效性, 主要从不同强度恐惧记忆以及性别差异两方面进行分析。结果发现: (1) 对比较弱恐惧记忆的预期错误组和无预期错误组发现, 预期错误的效果在消退阶段便已经有所展现, 无预期错误组未完全消退, 而预期错误组完成消退并且未出现自发恢复及重建现象; (2) 对于较强恐惧记忆有预期错误组的数据结果显示, 其消退效果显著, 未出现自发恢复, 但存在重建现象; (3) 对于有预期错误操作的两组性别分析发现, 强恐有 PE 性别差异不显著, 均未出现自发恢复, 但是弱恐有 PE 女生组在习得和消退阶段表现出一定的易习得难消退效果, 这一研究结果与前人研究结果一致。结果表明可以通过陈述性记忆的预期错误的产生方式开启恐惧记忆再巩固过程, 有效抑制恐惧记忆的自发恢复和重建, 并且可以进一步通过人为可视化操作预期错误的大小来消除恐惧记忆, 并且该操作方式对于男女组均有效果, 也为后续恐惧记忆预期错误量化的研究提供思路的参考, 在较强恐惧记忆的重建方面的应用还需要进行进一步探究。

关键词 条件性恐惧记忆, 提取消退, 陈述性记忆预期错误, 记忆强度

The application and sex difference of declarative memory prediction error on the retrieval-extinction of different intensity of fear memory

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Abstract: Prediction Error (PE) has been demonstrated as a necessary condition to induce destabilization on conditioned fear extinction in retrieval-extinction paradigm which is a non-invasive intervention operation. But the existing way of prediction error produced lacks subjectivity and visualization on fear memory. Brain structures typically associated with nondeclarative learning are increasingly implicated in declarative memory, they have an interaction. Thus, the way of declarative memory prediction error induced triggers the fear memory undergo reconsolidation, and declarative memory quantitative research has been mature. Therefore, this study using declarative memory prediction error operation cause fear memory errors, to explore its effectiveness in the process of reconsolidation of fear memory, mainly analyze from two aspects of different intensity of fear memory and gender difference. The results showed that : (1) for the prediction error group and the no prediction error group (no PE group) in weak fear memory groups, the effect of prediction error play a great role in extinction stage. No PE group don't extinction, while the PE group extinction successfully without spontaneous recovery and reinstatement. (2) In the enhanced memory condition, PE can improve the extinction and spontaneous recovery, but participants will be feared when they faced US again. (3) The gender difference analysis of the two groups with PE operation found that the gender difference of the strong fear PE was not significant, and there was no spontaneous recovery, but the weak fear PE female group showed a certain effect of easy to learn in the stages of acquisition and difficult to fade in the stages of extinction, which was consistent with the results of previous studies. The results showed that the reconsolidation process of fear memory could be initiated by the prediction error in declarative memory, and the spontaneous recovery and reinstatement of fear memory could be effectively suppressed. In the future, fear memory can be further eliminated by manually visualizing the size of prediction errors, and this operation method is effective for both male

and female groups. It provides a reference for subsequent research on quantification of prediction errors of fear memory. Further exploration is needed for its application in the reconstruction of strong fear memory.

Keywords: conditioned fear memory, retrieval-extinction, declarative memory prediction error, memory intensity

家庭中的好表现可预测工作中的高投入吗？

——基于中小学教师工作-家庭关系视角的探索

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摘 要 目的：从工作-家庭关系的视角，考察中小学教师的家庭角色绩效与工作投入的关系。方法：采用整群抽样法，调查 700 名已婚中小学教师，其中有小学教师 289 名（41.3%），中学教师 411 名（58.7%）；男教师 234 名（33.4%），女教师 466 名（66.6%）。采用纵向问卷调查法，第一时间段采用《家庭角色绩效量表》和《工作-家庭支持问卷》调查被试的家庭角色绩效和家庭支持状况，在时隔一年后的第二时间段，采用《工作-家庭增益量表》、《工作-家庭冲突量表》和《U-trecht 工作投入量表》调查被试的家庭对工作的增益、家庭对工作的冲突和工作投入状况。运用 AMOS 对研究工具进行验证性因素分析，运用 SPSS 进行主要变量的描述性统计和相关分析，采用 Bootstrap 法，考察中小学教师的家庭角色绩效与工作投入的关系，并探讨家庭支持、家庭对工作的增益和家庭对工作冲突在其中的中介作用。结果：（1）家庭角色绩效、家庭支持、家庭对工作的增益和工作投入之间呈显著正相关，家庭对工作的冲突与各变量均呈显著负相关；（2）家庭角色绩效可显著预测工作投入，总效应量为 0.23。（3）家庭支持、家庭对工作的增益和家庭对工作的冲突在家庭角色绩效影响工作投入的过程中起中介作用，其中介效应量分别为 0.06、0.02 和 0.11；（4）“家庭支持→家庭对工作的增益”在家庭角色绩效影响工作投入的过程中起链式中介作用，效应量为 0.04。结论：中小学教师的家庭角色绩效不仅能直接影响工作投入，还通过家庭支持、家庭对工作的增益和家庭对工作的冲突间接作用于工作投入。

关键词 家庭角色绩效，工作投入，家庭支持，家庭对工作的增益，家庭对工作的冲突

Does Good Performance at Home Predict High Engagement at Work? ——An Exploration Based on The Perspective of Work-family Relationship of Primary and Secondary School Teachers

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Abstract: Objective: From the perspective of work-family relationship, this paper examines the relationship between family role performance and work involvement of primary and secondary school teachers. Methods: Using cluster sampling method, seven hundreds married primary and secondary school teachers were investigated, including 289 (41.3%) primary school teachers and 411 (58.7%) secondary school teachers. There were 234 male teachers (33.4%) and 466 female teachers (66.6%). Family role performance and family support were measured at time point 1, and family-to-work enrichment, family-to-work conflict, work involvement were measured at time point 2. AMOS was used for confirmatory factor analysis, SPSS was used for descriptive statistics and correlation analysis of major variables. Bootstrap method was used to investigate the relationship between family role performance and work involvement, and to explore the mediating roles of family support, family-to-work enrichment and family-to-work conflict. Results: 1) Family role performance, family support, family-to-work enrichment and work involvement were significantly positively correlated, and family-to-work conflict was significantly negatively correlated with all the other variables; 2) Family role performance can significantly predict work engagement, with a total effect size of 0.23. 3) Family support, family-to-work enrichment and family-to-work conflict played a mediating role in the process of family role performance affecting work engagement, with mediating effect sizes of 0.06, 0.02 and 0.11, respectively; 4) “family support → family-to-work enrichment” played a chain mediating role in the process of family role

performance affecting work engagement, the effect size was 0.04. Conclusion: The family role performance of primary and secondary school teachers not only directly affects work engagement, but also indirectly affects work engagement through family support, family-to-work enrichment and family-to-work conflict.

Keywords: family role performance, work engagement, family support, family-to-work enrichment, family-to-work conflict

4.11 心理测量专业委员会

(1) “心理测量专业委员会”口头报告分场 1

高中生职业生涯规划能力问卷的编制与初步应用

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摘 要 目的 科学构建高中生职业生涯规划能力结构, 编制高中生职业生涯规划能力测评问卷, 调查高中生职业生涯规划能力水平现状, 为学校的职业生涯规划教育的开展提供支持。方法 设计包含三部分。首先在对已有研究进行总结的基础上, 邀请 101 名专家, 通过半结构式访谈及专家建议, 初步构建高中生职业生涯规划能力结构维度。拟定问卷项目后, 邀请高中生、心理学专业研究生共计 27 人对问卷项目进行修订, 形成初始问卷。对 592 名高中生施测后, 对问卷进行项目分析及多次探索性因素分析, 形成正式问卷。对 1782 名高中生施测, 使用验证性因素分析检验问卷信效度。最后使用正式问卷调查 1921 名高中生职业生涯规划能力水平。结果 (1) 高中生职业生涯规划能力是一个多维度结构, 包含生涯准备能力、自我认识能力、获取信息能力、生涯决策能力、生涯管理能力。(2) 《高中生职业生涯规划能力问卷》包含 5 个维度, 40 个题项, 采用李克特 5 点计分, 总问卷内部一致性系数为 0.95, 5 个维度内部一致性系数均大于 0.8, 信度极佳。(3) 验证性因素分析得出 $\chi^2/df=2.254$, RMSEA=0.035, GFI=0.930; NFI=0.929, IFI=0.959; PGFI=0.629, PNFI=0.725。拟合指数较为理想, 量表内部结构良好, 符合心理测量学标准, 能够用于测量高中生职业生涯规划能力。(4) 高中生职业生涯规划能力处于中等水平 (3.346 ± 0.588), 有待提高。(5) 高中生职业生涯规划能力在性别 ($t=2.484, p<0.05$)、年级 ($F=15.984, p<0.001$)、家庭所在地 ($t=5.955, p<0.001$) 均存在显著性差异。男生的职业生涯规划能力好于女生; 高一年级职业生涯规划能力较高, 高三年级职业生涯规划能力较低; 来自于城镇的学生, 其职业生涯规划能力高于非城镇学生。

关键词 高中生, 能力结构, 职业生涯规划能力, 问卷编制

Development and Primary Application of Career Planning Skills Questionnaire for High School Students

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Abstract: Objective: Construct a high school student's career planning ability structure through scientific methods, compile a high school student's career planning ability assessment questionnaire, investigate the status of high school students' career planning ability level, and provide support for the development of the school's career planning education. Methods: The design consists of three parts. First of all, based on the summary of the existing research, 101 experts are invited. Through semi-structured interviews and expert suggestions, a preliminary dimension of high school students' career planning ability structure is initially constructed. After preparing the questionnaire items, a

total of 27 high school students and graduate students in psychology were invited to revise the questionnaire items to form the initial questionnaire. Then, after testing 592 high school students, the questionnaire was subjected to project analysis and multiple exploratory factor analysis to form a formal questionnaire. The test was conducted on 1782 high school students, and the reliability and validity of the questionnaire were tested using confirmatory factor analysis. Finally, a formal questionnaire was used to survey the career planning ability of 1921 high school students. Results: (1) High school students' career planning ability is a multi-dimensional structure, including career preparation ability, self-awareness ability, information acquisition ability, career decision-making ability, career management ability. (2) The "High School Students Career Ability Questionnaire" contains 5 dimensions, 40 items, using Likert's 5-point scoring, the internal consistency coefficient of the total questionnaire is 0.95, the internal consistency coefficients of all 5 dimensions are greater than 0.8, and the reliability is extremely high. good. (3) Confirmatory factor analysis shows that $\chi^2/df=2.254$, $RMSEA=0.035$, $GFI=0.930$; $NFI=0.929$, $IFI=0.959$; $PGFI=0.629$, $PNFI=0.725$. The fit index is ideal, the internal structure of the scale is good, it meets the psychometric standards, and can be used to measure the career planning ability of high school students. (4) High school students' career planning ability is at a medium level (3.346 ± 0.588) and needs improvement. (5) High school students' career planning abilities differ significantly in gender($t=2.484$, $p < 0.05$), grade($F=15.984$, $p < 0.001$), and family location($t=5.955$, $p < 0.001$). The career planning ability of boys is better than that of girls; the career planning ability of the first grade is higher, and the career planning ability of the third grade is lower; students from urban areas have higher career planning skills than non-urban students.

Keywords: senior high school students, capacity structure, career planning skills, questionnaire development

“游戏化体验”量表的开发与验证

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摘要 近年来, 游戏化被广泛地应用在健康服务、教育培训、物流、市场营销等活动, 以及社交网络等应用程序中, 但以往研究主要聚焦于游戏化元素的自身特点, 忽略了用户对这些元素的感知与体验。为填补这一空白, 本研究旨在通过 4 个研究开发与验证游戏化体验量表。研究一通过开放式问卷收集用户对游戏化元素的体验与感知, 以探索游戏化体验的内在结构。研究二编制了初始项目并通过主成分分析探索其因子结构。研究三通过验证性因子分析对量表的信度和效度进行了评估。研究四对量表进行了简化并验证了量表的测量不变性。研究表明, 游戏化体验量表(Gamification Experience Scale, GXS)由 33 个项目组成, 共有 6 个可重复验证的因子, 包含社交互动、乐趣、沉浸感、社会比较、成就感与特权, 累计方差贡献率为 80.952%。Cronbach's α 的范围在 0.884 至 0.977, McDonald's ω 在 0.934 至 0.974, 表明信度良好。所有项目载荷均大于 0.7, 6 个维度的 AVE 值均大于 0.6, CR 值均大于 0.9, 表明聚合效度良好。Fornell-Larcker 标准与 HTMT 被用来检验区分效度, 6 个维度的 AVE 平方根均大于它们与其他维度的相关系数且 HTMT 值均小于 0.85, 表明区分效度良好。6 个维度与契合度、持续使用意愿、口碑以及 App 评分均呈现不同程度的显著正相关, 验证了量表的校标关联效度。本研究的发现强调了以用户为中心的游戏化体验的重要性, 为未来有关游戏化体验的研究提供了重要的理论基础和评估游戏化体验的可靠测量工具。此外, 本研究为在线服务的管理者与设计师在理解游戏化体验方面提供了新的见解与测量手段。

关键词 游戏化, 游戏化体验, 用户体验, 量表开发, 量表验证

Development and Validation of the Gamification Experience Scale (GXS)

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Abstract: In recent years, gamification has widely been applied to health services, education, training, logistics, and marketing, as well as in applications such as social networks. However, previous studies mainly focus on gamification elements, ignoring users' perception and experience of these elements. In order to fill this gap, this research aims to develop and validate the Gamification Experience Scale (GXS) through four studies. Study 1 collected user experiences and perceptions of using gamification elements through an open-ended questionnaire to explore the psychological structure of gameful experiences. Study 2 developed the initial item pool and explored the factor structure through principal component analysis. Study 3 evaluated the reliability and validity of the scale through confirmatory factor analysis. Study 4 optimized the length of the scale and validated its measurement invariance. The results show that the GXS consists of 33 items with six replicable factors, including social interaction, enjoyment, immersion, social comparison, accomplishment, and privilege. The six extracted factors explained 80.952% of the total variance. Cronbach's α ranged between 0.884 to 0.977, and McDonald's ω ranged between 0.934 to 0.974, demonstrating confident reliability. All of the indicator loadings were greater than 0.7, the AVE values of the six dimensions were greater than 0.6, and the CR values were greater than 0.9, supporting convergent validity. The Fornell-Larcker criterion and HTMT were used to test discriminant validity. The square roots of AVE of the six dimensions were all greater than their correlation coefficients with other dimensions, and the HTMT values were all less than 0.85, reflecting discriminant validity. The six dimensions were positively correlated with engagement, continued use intention, word-of-mouth, and application rating to varying degrees, which validated the criterion-related validity. Our findings highlight the importance of user-centered gameful experience and provide an important theoretical foundation for future research on gameful experience and a reliable measurement tool for evaluating gameful experience. Additionally, this research provides new insights for online service stakeholders in understanding gameful experience.

Keywords: Gamification, Gameful experience, User experience, Scale development, Scale validation

新时代民众社会心态测评系统·社会风险感知量表的编制

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摘要 社会风险感知是指全社会范围内, 人们对各种客观风险的主观感受和认识。社会风险感知不仅会影响个体的身心健康, 而且会影响社会心态, 不利于社会健康稳定发展。新时代民众面临新风险, 同时民众关心的社会风险也有所变化。现有研究对凸显当前时代特点的网络安全风险和民生领域具体风险的重点关注有待加强。为探究适合我国新时代背景下民众社会风险感知的结构维度, 通过访谈、专家评定并对相关研究进行文献分析, 确定了网络安全、房价压力、养老问题、社会人际、区域差距、政务公开、教育培养、医疗卫生、生态环境和就业保障共 10 个维度, 编写了与之对应的 49 个项目。对 200 名来自全国不同地区、不同年龄段、不同行业的民众进行初测, 进行探索性因素分析, 形成 46 个项目组成的正式量表。并采用该量表对 456 名民众进行调查, 回收数据并分析其信效度。经过数据分析和处理, 最终量表包含 10 个维度 30 道题目, 量表的内部一致性信度为 0.91, 各维度 Cronbach's α 在 0.74-0.85 之间, 累计方差解释率为 69.92%。验证性因素分析表明模型拟合良好, RMSEA=0.04, GFI=0.92, IFI=0.96, TLI=0.96, CFI=0.96。各维度之间的相关系数为 0.18-0.50 之间, 且各维度与量表总分的相关均显著。综上, 社会风险感知量表具有良好的信度和效度, 符合心理测量学标准要求, 适用于对中国民众社会风险感知的评估。

关键词 社会风险感知, 量表编制, 社会心态

New era public social mentality evaluation system •The development of public social risk perception scale

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Abstract: Social risk perception refers to people's subjective feelings and understanding of various objective risks in the whole society. Social risk perception will not only affect the physical and mental health of individuals, but also affect the social mentality, which is not conducive to the healthy and stable development of society. In the new era, people are faced with new risks, and the social risks that people care about have also changed. The focus of existing studies on cyber security risks and specific risks in the field of people's livelihood that highlight the characteristics of the current era needs to be strengthened. To explore suitable for China's new era under the background of public social structure dimension of risk perception, through interviews, expert assessment and the related research literature analysis, determines the network security, housing stress, pension problems, social interpersonal, regional disparity, open government, education, culture, health, ecological environment and job security, a total of 10 dimensions, Forty-nine corresponding projects have been written. An exploratory factor analysis was conducted on 200 people from different regions, different ages and different industries to form a formal scale consisting of 46 items. The scale was used to investigate 456 people, and the data were collected and its reliability and validity were analyzed. After data analysis and processing, the final scale contains 30 items in 10 dimensions. The internal consistency reliability of the scale is 0.91, Cronbach's α in each dimension is between 0.74 and 0.85, and the cumulative variance interpretation rate is 69.92%. Confirmatory factor analysis showed that the model fit well, RMSEA=0.04, GFI=0.92, IFI=0.96, TLI=0.96, CFI=0.96. The correlation coefficients of each dimension ranged from 0.18 to 0.50, and the correlation between each dimension and the total score of the scale was significant. In conclusion, the social risk perception scale has good reliability and validity, meets the requirements of psychometrics standards, and is suitable for the assessment of Chinese people's social risk perception.

Keywords: Social risk perception, Scale formulation, Social mentality

中学生问题解决能力量表的编制

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摘要 随着现代素质教育的不断推进和深入, 教育者逐渐强调学生问题解决能力这一高阶思维的重要性。问题解决能力不仅是贯穿学生的学习生涯, 也是我国学生发展核心素养的十八重点之一, 更是 21 世纪学生的必备能力之一。但是回顾以往有关问题解决能力的研究, 不难发现问题解决能力的理论虽然丰富但却缺少有效的测量工具。中学阶段是学生抽象逻辑思维发展的关键时期, 因此对中学生问题解决能力的有效测量不仅对他们的学业起着引导作用, 更有利于他们的发展。所以本研究立足于我国中学生的学习与发展现状, 综合已有研究, 编制了中学生问题解决能力量表, 为更好的测评中学生问题解决能力提供有效的帮助。本研究首先通过对已有研究文献的梳理和总结, 在理论层面上将中学生问题解决能力构念为问题探究、框架构建、计划制定、计划实施、结果反馈这五个维度, 共编制了 36 道题目。首先研究一对名中学生进行施测, 回收数据进行项目分析和探索性因素分析, 最终形成了包含 5 个维度, 共 20 道题目的正式量表, 累计解释变异量为 76.41%; 研究二采用正式量表对 356 名中学生进行施测, 回收数据用于验证性因素分析, 结果表明: 总量表的 Cronbach's α 为 0.82, $\chi^2/df=2.12$, RMSEA = 0.048, IFI=0.978, TLI=0.974, CFI=0.978。数据分析的结果表明

本量表具有良好的信效度,符合心理测量学的标准和要求,可应用于对中学生问题解决能力的调查研究中,在实践层面丰富了问题解决能力的研究。

关键词 中学生,思维,问题解决能力,量表编制

Compilation of Problem-Solving Ability Scale for Middle School Students

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Abstract: With the continuous advancement and deepening of modern quality education, educators gradually emphasize the importance of high-level thinking of students' problem-solving ability. The problem-solving ability not only runs through the students' study career, but also one of the eighteen key points of the core literacy development of our students, and it is also one of the necessary abilities of the 21st century students. But looking back on the previous researches on problem-solving ability, it is not difficult to find that the theory of problem-solving ability is rich but lack of effective measuring tools. The middle school stage is a critical period for the development of abstract logical thinking ability. The effective measurement of the problem-solving ability of middle school students not only guides their academic work, but also benefits their development. Therefore, based on the current situation of middle school students' learning and development in China, this study compiled the scale of middle school students' problem-solving ability to provide effective help for better assessment of middle school students' problem-solving ability. This research first through to the existing literature combing and the summary, in the theoretical level constructs the middle school student problem-solving ability the question inquiry, the frame construction, the plan formulation, the plan implementation, the result feedback these five dimensions, a total of 36 questions were prepared. Firstly, a pair of middle school students were tested, and the data were collected for item analysis and exploratory factor analysis. Finally, a formal scale containing 5 dimensions and a total of 20 items was formed, with a cumulative interpretation variance of 76.41%. In the second study, 356 middle school students were measured using a formal scale, and the data were recovered for confirmatory factor analysis. Cronbach's $\alpha=0.82$, $\chi^2/df=2.12$, RMSEA =0.048, IFI=0.978, TLI=0.974, CFI=0.978. The results of data analysis show that this scale has good reliability and validity and conforms to the standards and requirements of psychometrics. It can be applied to the investigation and research on the problem solving ability of middle school students, which enriches the research on problem solving ability at the practical level.

Keywords: Middle school students, thinking, problem-solving ability, scale compilation

审美的测量：美术能力倾向测验的回顾与展望

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摘要 目的: 美术能力倾向测验对美术人才的识别和选拔具有重要意义,我国社会发展对美术能力倾向测验提出了现实需求,需要我们关注美术能力倾向测验的开发与应用。因此,本研究对美术能力测验开发的历史进行回顾,对已有美术能力倾向测验进行分类并予以介绍,分析测验的不足,并提出研究的发展方向,以期对进一步开发适用于我国国情的美术能力倾向测验提供一定的启示。**资料来源:** 本文采用文献检索法,回顾了1913年以来主要以国外研究为主的,国、内外对美术能力方面的测量研究。**资料选择:** 由两名研究员独立审查资料,从中国知网、谷歌学术、Cog Prints 等多个专业论文搜索网站对如“审美知觉”、“美术测验”、“美术能力”、“美术能力测量”等关键词进行检索。**资料提取:** 两名研究员对主要的30个美术能力倾向测验进行资料整理、归纳分类。**结论:** 现有测验可分为从审美能力测量和艺术创作能力测量两种角度开发的测

验,其中审美能力测量的测验又可以分为审美判断测验和判断后选择判断理由的测验。但以往研究存在缺乏对审美知觉能力维度的实证研究、没有区分“主观美”和“客观美”,以及缺乏对各类型美术能力倾向测验效度的比较研究的问题。未来可进一步加深对审美知觉能力维度的实证研究,开发多类型美术能力判断测验并比较其效度,开发适用于小学甚至学龄前儿童的美术能力倾向测验,以及开发适合我国国情的美术能力倾向测验。

关键词 审美知觉,美术能力倾向测验,人才选拔,测验开发

Aesthetic Measurement: Review and Prospect of Art Aptitude Test

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Abstract: Purpose: Art aptitude test is of great significance to the identification and selection of artistic talents, the social development of our country has put forward the realistic demand for the art aptitude test, which requires to pay attention to the development and application of the art aptitude test. Hence, in order provide some enlightenment for the further development of art aptitude test applicable to China's national conditions, this study reviews the history of art aptitude test development, classifies and introduces the existing art aptitude test, analyzes the deficiencies of the test, and puts forward the development direction of the study. **Data identification:** Using the method of literature review, this paper reviews the domestic and foreign research on the measurement of art ability since 1913, which mainly focuses on foreign research. **Study selection:** Two observers independent searched keywords such as "aesthetic perception", "art test", "art ability" and "measurement on art ability" from CNKI, Google Scholar, Cog Prints, and other professional paper retrieval websites. **Data extraction:** Two observers collated and classified the data of 30 mainly art aptitude tests. **Conclusion:** The existing tests can be sorted out into two aspects: the measurement of aesthetic ability and artistic creation ability. However, there are some problems in previous studies, such as lack of empirical research on the dimensions of aesthetic perception ability, the distinction between "subjective beauty" and "objective beauty", and comparative study on the validity of various art aptitude test. Future empirical research on the dimension of aesthetic perception ability can be more further, developing multiple types of art ability judgment tests and comparing their validity, developing art aptitude tests suitable for primary school or even preschool children, for China's national conditions as well.

Keywords: aesthetic perception, art aptitude test, personnel selection, test development

多维度儿童智力诊断量表全国参考性常模制定研究

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摘要 1978年以来,本土化智力测验的研发取得了积极成果,但亦存在几个待突破的情况:针对学龄前和小学儿童的智力测验少;多数智力测验在区别轻、中、重度智力落后程度上的功力不足;不少测验未制定全国常模。为此,金瑜等在深入考察中外多个经典智力测验的基础上,2006年编制了多维度儿童智力诊断量表(简称 MIDSC)。该测验作为个别智力测验,旨在诊断 4-11 岁儿童的智力状况,为智力落后儿童的鉴定和区分提供客观信息。MIDSC 是基于心理测量学取向的智力测验,同时汲取当代认知心理取向和多维取向的智力理论,采用层级模型理论架构,最高层为 G 因素,第二层为言语因子、操作因子和工作记忆,最底层为 11 种狭窄能力,由此衍生出全量表、三个分量表和 11 个分测验(含 1 个补充充分测验)。此后 MIDSC 历经 10 余年的使用、检验和修订,臻于成熟。本研究主要目的是制定全国参考性常模,再次检验测验的心理测量学特征。首先标准化取样。根据国家行政区划划分,采用兼顾东西南北和大中小城市原则,确定了六个取样地区、组建协作组、进行主试培训。依据人口普查结果、按照人口统计学变量分配各地区、各年龄组被试人数,抽样和施测,最终常模样本组包含 800 名被试。从中随机选取了 61 名被试进行重测,141 名被试接受《中小学

生团体儿童智力筛选测验》，30名4至6岁半的儿童接受了《韦氏学龄前儿童智力测验（WPPSI）》测试；抽取了51名智力落后儿童接受MIDSC测试。其次建立常模。采用连续常模法拟合技术，4-10岁各年龄组内细分为三个小组，制定各年龄组常模，分测验采用均数为13、标准差为4的标准分，分量表和全量表采用100为均数、15为标准差的离差智商；经检验，智商分数符合正态分布。最后检验心理测量学特征。结果发现：三个分量表和全量表分半信度达0.96-0.99；10个正式分测验中，6个分半信度高于0.90，仅1个略低于0.8；全量表重测信度为0.82。验证性因素分析发现层次结构模型拟合性优良（ $CMIN/DF=4.426$ ； $CFI=0.99$ ； $RMSEA=0.065$ ）；校标效度研究得到效度系数分别为0.73,0.62,0.73和0.58；差异检验发现智力落后组在所有分测验和量表得分上均显著低于正常组，效应量达1.72-3.68。结论：MIDSC的心理测量学特征符合要求，能够诊断4-11岁儿童智力、鉴别和区分智力落后儿童，可以推广使用。

关键词 多维度儿童智力诊断量表，常模，信度，效度

A study on the Establishment of National Reference Norm of Multi-dimensional Intelligence Diagnostic Scale for Children

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Abstract: Since 1978, the research and development of native intelligence test has achieved positive results, but there are still some problems to be broken through: the intelligence test for preschool and primary school children is less; Most intelligence tests have insufficient ability in distinguishing between the degree of light, medium and severe mental retardation; Many tests have not developed national norm. So, Jin Yu and others have compiled a Multi-dimensional Intelligence Diagnosis Scale for Children(MIDSC) in 2006 based on the in-depth investigation of many classic intelligence tests at home and abroad. As a personal intelligence test, the test aims to diagnose the intelligence status of 4-11 year olds and provide objective information for the identification and differentiation of children with intellectual disabilities. MIDSC is an intelligence test based on psychometrics orientation, and draws on the intelligence theory of contemporary cognitive psychological orientation and multi-dimensional orientation. It adopts the hierarchical model theory structure, with the highest level being g factor, the second layer is speech factor, operation factor and working memory, and the lowest level is 11 narrow abilities, thus the full scale is derived three subscales and 11 subtests (including 1 supplementary test). After more than 10 years of use, inspection and revision, MIDSC has been mature. The main purpose of this study is to develop national reference norm and to test the psychometric characteristics of the test again. First, standardize the sampling. According to the division of national administrative regions, six sampling areas, cooperative groups and main trial training were determined by taking into account the location and the size of cities. According to the census results, the number of subjects in different regions and age groups was distributed according to demographic variables. The sample and test were conducted. The final normal shape group consisted of 800 subjects. 61 subjects were randomly selected for retest, 141 subjects were tested with the Screening Test for Group Children of Primary and Secondary Students", and 30 children aged 4 to 6 and a half were tested with the Wechsler Preschool and Primary Scale of Intelligence (WPPSI); 51 children with mental retardation were selected for MIDSC test. Secondly, the norm is established. The continuous norm fitting technique was used, and each 4-10-year-old group was divided into three groups, and the norm of each age group was established. The standard scores of mean number 13 and standard deviation 4 were used in the subtest. The deviation IQ of 100 mean and 15 was used as the standard deviation in the subscale and the total scale; The IQ scores were tested to be in accordance with the normal distribution. Finally, the characteristics of psychometrics were tested. The results showed that the half-split reliability of the three subscales and the total scale was 0.96-0.99; 6 of the 10 formal subtest had a half-split reliability higher than 0.90, only one was slightly lower than 0.8; The retest reliability coefficient of the total scale was 0.82. The results of confirmatory factor analysis showed that the model fit of hierarchical structure was good ($CMIN/df=4.426$); $CFI=0.99$; $RMSEA=0.065$); The coefficients of criterion-related

validity were 0.73,0.62,0.73 and 0.58, respectively; The difference test showed that all the scores of mental retardation group were significantly lower than those in the normal group, and the effects were 1.72-3.68. Conclusion: the psychometric characteristics of MIDSC are in line with the requirements, and can be used widely in the diagnosis of intelligence, distinguishing and distinguishing children with mental retardation between 4-11 years old.

Keywords: MIDSC, norm, reliability, validity

(2) “心理测量专业委员会”口头报告分场 2

MUPP-2PL 在迫选式性格测验中的应用研究

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摘 要 迫选式问卷能很好地避免传统李克特问卷所带来的各种反应偏差问题(如作答趋中性、社会赞许效应、装好作假等), 因此它被很多人才测评开发者所青睐。但迫选式问卷基于传统计分形式产生的数据为自模式数据, 这种数据形态违背了一些测验质量分析(如信度分析、因子分析等)的前提假设, 从而导致迫选式测评的测验科学性无法得到相关测量学指标的支持。近年来, 为了从迫选题目中获得非自模式的数据和更准确地估计潜在特质值, 研究者提出了多种适用于迫选题目的 IRT 模型: Brown (2010) 基于瑟斯顿比较判断法提出的瑟斯顿 IRT 模型, Stark (2005) 基于配对迫选题型开发的 MUPP 框架, 基于此框架, 当题目符合展开反应模式并使用 GGUM 为概率函数时, 则为 MUPP-GGUM 模型 (Stark et al. 2005), 当题目符合优势反应模式并使用 2PL 为概率函数时, 则为 MUPP-2PL 模型 (Morillo et al. 2016)。本研究将基于 MUPP-2PL 模型, 采用极大似然参数估计方法对维度分数 (theta) 进行估计, 旨在探讨在多种模拟条件下维度分真值、估计值和自模分数之间的关系, 以及在何种情境下, 可以最大化发挥 IRT 计分的优势, 获得更精确的维度分估计值。研究中数据模拟所使用的题目信息来自 MAP 职业性格测验, 它是智鼎在线公司基于人格特质理论开发的测验产品, 共测量了 24 个性格维度, 由数个迫选题块组成, 每个题块由来自不同性格维度的三个描述条目(即题目)组成。研究考虑了每个维度所测量的题目数, 各维度内题目的难度参数、区分度参数的变异性, 单维 block 的占比和真值分布等条件。研究评价标准包括维度分数估计偏差 (bias) 及绝对偏差 (absbias), 维度分数估计值与真值的相关 (corr)。结果发现: (1) 每个维度所测量的题目数是影响 theta 估计稳定性的重要因素; (2) 维度内题目的难度参数标准差高于 0.3 时对 theta 的估计更为准确; (3) 对极端 theta 的估计误差较大。本研究立足于成熟的人格测验产品 MAP, 在研究过程中借鉴了其多年来积累的开发经验, 研究结果对高维人格类迫选测验的开发和 MUPP-2PL 模型在其中的应用具有一定的指导价值。

关键词 MUPP-2PL, 优势反应模型, 迫选测验, 人格测评, MAP 职业性格测验

A Research on the Application of the MUPP-2PL in the Forced-Choice Personality Test

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Abstract: Forced-choice questionnaires (FCQs) are preferred by many talent assessment developers because they avoid the response biases associated with traditional Likert-type questionnaires (e.g., response neutrality, social desirability, faking, etc.). However, the ipsative data generated by FCQs are based on traditional scoring methods, and violate some assumptions of test quality analysis (e.g., reliability analysis, factor analysis, etc.), and thus the scientific validity of FCQs cannot be supported by relevant measurement indicators. In recent years, in order to overcome the problems of ipsative data and to estimate potential trait values more accurately, researchers have proposed several IRT models applicable to FCQs: the Thurston IRT model proposed by Brown (2010) based on Thurston's comparative judgment rule, and the MUPP framework developed by Stark (2005) based on multidimensional pairwise preference

items. Based on the MUPP framework, when the item conforms to the unfolding response pattern and uses generalized graded unfolding model (GGUM) as the probability function, it is the MUPP-GGUM model, and when the item conforms to the dominant response pattern and uses two-parameter logistic model (2PL) as a probability function, it is the MUPP-2PL model (Morillo et al. 2016). In this study, the dimensional score (θ) will be estimated using a maximum likelihood parameter estimation method based on the MUPP-2PL model, in order to explore the relationship between the true value of the dimensional score, the estimated value and the ipsative score under a variety of simulation conditions, as well as the context in which the advantages of IRT scoring can be maximized to obtain a more accurate estimate of the dimensional score. The data simulations are based on the item information of the MAP Occupational Personality test, a personality test developed by Insight Online Company based on Personality Trait Theory, which measures 24 personality dimensions and consists of several forced-choice question blocks, with each block consisting of three description items from different personality dimensions. The study considered the number of items measured for each dimension, the variability of the discrimination parameter and the difficulty parameter of the items within each dimension, the proportion of unidimensional blocks, and the distribution of truth values. The study evaluation criteria included bias and absolute bias of the dimensional score estimates, and correlation of the dimensional score estimates with the truth value. It was found that (1) the number of items measured per dimension was an important factor affecting the stability of θ estimates; (2) θ was estimated more accurately when the standard deviation of the difficulty parameter of the items within the dimension was higher than 0.3; and (3) The estimation error of more extreme (very low or high) scores are higher on average than those of medium scores. This study is based on MAP, a well-established personality test, and draws on its many years of development experience. The results of this study are valuable for the development of high-dimensional personality tests and the application of the MUPP-2PL model to these tests.

Keywords: MUPP-2PL, dominance model, forced-choice questionnaires, personality assessment, MAP occupational personality test

高科技作弊甄别算法

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摘要 高科技作弊作为团体作弊的一种形式, 具有大规模、有组织、答案可以跨考场传播等特点。本研究借鉴高维变量筛选的思想, 提出一种结合传统作弊甄别指标优势与高科技作弊特点的算法。首先计算两两考生间的答案抄袭指标 ω 或 g_2 , 按此从大到小将考生排序, 从嫌疑度最大的考生开始寻找可能的嫌疑作弊团体, 依次判别考生是否属于此团体, 最后通过作弊团体的判别标准, 选出真正的作弊团体。在算法中有 3 个比较重要的超参数: Tr 通过对切割点的判断来判断筛选出的组是否是作弊组, Ta 通过对组内答案抄袭指标的判断来判断筛选出的组是否是作弊组, M 用于决定何时结束对考生中作弊组的筛选, 停止算法。分别进行两个模拟研究, 均进行了 100 次模拟研究。研究一用于研究算法中的超参数 (Tr 、 Ta 、 M) 对不同场景的作弊甄别结果的影响, 模拟 5000 名考生的作答, 设置 50 名作弊考生, 3 种抄袭比例 (40%, 60% 和 80%) 和 3 种抄袭源能力 (能力百分等级为 70%, 80% 和 90%)。研究二研究使用 ω 和 g_2 两种指标的传统算法与新算法的结果。模拟 25000 名考生的作答, 设置单组作弊与多组作弊的情境, 设置 3 种作弊考生人数 (50、100、200 名), 3 种抄袭比例 (40%, 60% 和 80%) 和 3 种抄袭源能力 (能力百分等级为 70%, 80% 和 90%), 同时为传统算法设置了严格与宽松的 α 水平。研究一的结果表明在甄别难度最大即抄袭率为 40% 时, Tr 的取值影响较大, 当标准宽松时, 检出率高的同时误判率较高, 对 Ta 取值严格, M 取值大一些可以在控制误判率的同时保证良好的检出率。研究二中, 单组作弊情境下, 使用两种指标的新算法的检出率保持在 90% 以上, 误判率接近为 0, 当 α 水平宽松时, 传统算法可以得到与新算法接近的误判率但检出率远低于新算法, 当 α 水平严格时, 传统算法可以得到与新算法接近的检出率但误判率远高于新算法。多组作弊情境下, 新算法的

检出率保持在 97%以上，最大的误判率为 4.21‰，传统算法无法在保证高检出率的同时实现低误判率。新算法的结果明显优于传统算法。

关键词 高科技作弊，团体作弊，作弊甄别

An Algorithm to Detect High-tech Cheating

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Abstract: The complex nature of high-tech cheating has brought new challenges to cheating screening. In this paper, we propose a new algorithm that is conceived of as a combination of the advantages of traditional cheating indexes and the related information of cheating groups for high-tech cheating. We calculate the aberrant similarity index ω and g_2 between two test takers and then find all possible suspect groups starting from the largest aberrant similarity, establish criteria for candidates to join the group and determine if they are members of that cheating group, finally determine whether it is a "real" cheating group by setting the discriminating criterion for the establishment of the groups. There are 3 important hyperparameters in the algorithm. Tr is a threshold to standardize whether a cut point is significant to cut out a group. Ta is a threshold to view the indicators within a group whether big enough to be doubted. M gives the condition of convergence, when cheat group is not found during forward screening M times in a row, we stop the iteration. Two simulation studies are conducted to evaluate the performance of the new approach under different conditions and each simulation is repeated 100 times. Study 1 is aimed to investigate the effect of the hyperparameters (Tr , Ta , M) in the algorithm on the screening results. The total sample size is 5000 and the number of cheaters in Study 1 was set to 50. Three levels of gunner's ability (70%, 80%, and 90%,) and three levels of plagiarism ratio (40%, 60%, and 80%) are considered in Study 1. Based on Study 1, the purpose of Study 2 is to compare the results of the traditional algorithm and our new algorithm using the two indexes of ω and g_2 under the determination of better performing hyperparameter values. The total sample size is 25000 and single-group cheating and multiple-group cheating conditions are set. Three levels of cheaters (50, 100, and 200), three levels of gunner's ability (70%, 80%, and 90%,) and three levels of plagiarism ratio (40%, 60%, and 80%) are considered in Study 2. Also, we set strict and loose alpha levels for the traditional method. The results of Study 1 show that when the plagiarism rate is 40%, the value of Tr has a greater impact. When the value of Tr is large, that is, when the standard is loose, the detection rate is high and the Type I error rate is high. A larger value for Ta and a larger value for M can control the Type I error rate and ensure a good detection rate. In Study 2, the detection rates of the new algorithm using both indexes in the single-group cheating conditions remain above 90% and the Type I error rates are close to zero. When the alpha level is loose, the traditional algorithm could obtain the Type I error rates close to that of the new algorithm but the detection rates are much lower, and when the alpha level is strict, the traditional algorithm could obtain the detection rates close to that of the new algorithm but the Type I error rates are much higher. Under multiple cheating conditions, the detection rates of the new algorithm remain above 97%, and the max Type I error rate is 4.21‰. The traditional algorithm cannot achieve a low Type I error rate while ensuring a high detection rate. The result of the new algorithm is significantly better than those of the traditional algorithm. Simulation results show that the new algorithm yields a high detection rate, as well as low Type I error, under different simulated conditions.

Keywords: high-tech cheating, test collusion, cheating detection

游戏形式的创造力测验的开发

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摘要 创造力测量是创造力研究的基础。一直以来, 以发散思维测验和顿悟类测验为主流的传统创造力测验存在诸多弊端。首先, 传统测验过于强调创造力标准化定义中的“新颖性”, 忽略“适宜性”, 导致许多新奇而怪异的作答被误判为高创造性; 第二, 将发散性思维等同于创造性思维, 缺乏对聚合性思维的考察; 第三, 评价指标单一, 人工评分费力费时; 第四, 传统测验任务较为简单抽象, 脱离真实问题情境, 生态效度低下。针对以上问题, 本研究旨在开发游戏形式的创造力测验任务, 收集被试在交互中的过程性数据, 实现对多种创造思维能力的评估。创造力游戏测验以“证据中心的设计”为指导框架, 围绕“史前人类生活”构建问题情境, 引导被试展开想象, 通过组合卡片故事的方式“合成”创造性解决方案。游戏分为三个关卡, 共设计超 600 种动画反馈, 被试每一步的卡片组合都会触发预设反馈, 以此保证被试有较大的问题探索空间, 同时限制其交互行动范围, 减小测量误差。本研究共招募 515 名大一学生被试, 同时完成发散性图形与文字测验、中文远距离联想测验、顿悟性问题测验、威廉斯创造倾向量表等效标测验。研究一提取了过程性行为指标, 并系统检验了测验的难度、区分度、信效度。结果表明, 测验具有良好的心理测量学属性。其中, “创造性方案总数”指标与顿悟测验分数的相关最高 ($r = 0.30, p < .001$); “卡片组合方案总数”指标与发散图形测验中“灵活性”分数的相关最高 ($r = 0.29, p < .001$)。研究二以操作步骤和顿悟测验分数为节点构建贝叶斯网络, 进一步探讨个体的顿悟水平对游戏关键作答的影响, 为结构效度提供证据。创造力游戏测验的作答体验得到被试非常高的评价, 体现游戏测验的优势和前景。

关键词 创造力, 游戏测评, 发散性思维, 顿悟, 贝叶斯网络

Development of a Game-Based Assessment to Measure Creativity

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Abstract: Creativity measurements are the foundation of creativity research. Divergent thinking tests and insight problems as major instruments for measuring people's creativity have been long questioned by scholars in the field. Firstly, the standardized definition of creativity indicates two predominant attributes of creative products, novelty and appropriateness. However, the novelty was overemphasized which resulted in some novel, but odd, bizarre answers were considered as creative. Secondly, some researchers considered the creative thinking process as only involving divergent thinking, ignoring the function of convergent thinking. Thirdly, behavioral indicators of the test were scarce, at the same time, subjective scoring methods were strenuous and time-consuming. The purpose of the current study aims to develop a game-based assessment to measure multiple creativity thinking skills, with the guidance of evidence-centered design, a foundational assessment design framework. The game was designed to guide participants to imagine under the problem situation of “prehistoric human life”, and to explore creative solutions by combining different story cards. There're three levels in the game, with more than 600 kinds of pre-designed animation as the feedbacks after each trial, which ensures a large problem-solving space for the participants, while limiting the number of game interactions and reducing measurement errors. To validate the assessment, we collected data from 515 first-year university students who played the game and completed several external creativity measures (i.e., Figural and verbal creative thinking tests, insight problems, Chinese remote association test, Williams creativity assessment packets). The results of study 1 showed that the game has sound psychometrical properties. The creativity estimates (i.e., “the number of solutions”, “the number of card combinations”) derived from the game significantly correlated with the external measures, with the correlation coefficient were 0.30 and 0.29, respectively. In study 2, a Bayesian network was conducted including each step and insight scores as nodes, which further examined the relationship

between the insight skills and participants' in-game actions. Finally, the game received very high evaluation from participants, showing the attractions of game-based assessment.

Keywords: creativity, game-based assessment, divergent thinking, insight, Bayesian network

毒品成瘾的心理风险因素探索：基于机器学习模型

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摘要 毒品成瘾问题对社会治安和国家稳定是一个不小的威胁因素。因此, 加深对吸毒者心理因素的特点和加工方式的了解, 针对吸毒群体开展有效的心理治疗, 对提高吸毒者心理特质及今后的戒毒工作具有重要意义。前人研究中常使用回归分析探索变量间的关系, 同时使用此方法对结果变量进行预测和筛选。在采用回归模型分析数据的心理学研究中, 最小二乘法是最常用的模型系数估计方法, 但这种传统方法存在以下两点不足: 其一是多重共线性, 即在回归模型中多个预测变量之间存在相关关系, 这使得估计得到的回归系数易于受到样本数据的影响, 从而导致估计结果的稳定性较差; 其二是过度拟合, 这使得所得模型只适用于当前样本, 缺乏概化能力。而机器学习方法可以弥补传统方法的这些不足之处。机器学习方法中的 Ridge 回归、Lasso 回归和弹性网络算法, 对高度相关变量的回归系数施加惩罚, 从而解决了传统统计的限制性共线性假设。Ridge 回归将不重要的预测变量系数缩小为零。Lasso 回归和弹性网络回归算法可以将系数精确地缩小到零, 从而对更简单的模型进行子集选择。目前很少有研究使用该方法, 故本研究在前人研究的基础上使用机器学习中这三种方法, 以期识别出影响毒品成瘾的关键心理风险因素, 为戒毒与禁毒相关研究与实践提供更多理论和工具上的参考。本研究使用自编量表对正常人群和从天津市某戒毒所抽取的吸毒者进行施测, 共 677 名被试, 其中吸毒者 317 名, 正常人 360 名。之后使用 Ridge 回归、Lasso 回归和弹性网络算法随机抽取 70% (n=474) 的有效数据集作为训练样本集, 剩余 30% (n=203) 作为测试样本集。结果发现, 所使用的不同机器学习统计算法的结果非常相似。在所建立的模型中, 相对于其他变量, 责任心表现出了最大的相对重要性, 其 Ridge 回归、lasso 回归和弹性网络算法的重要性系数分别为 0.036、0.040、0.040, 其次是易分心和社会偏见, 其 Ridge 回归、lasso 回归和弹性网络算法的重要性系数分别为 0.026、0.023、0.026 和 0.025、0.022、0.024。

关键词 毒品成瘾, 机器学习, 心理风险因素

Exploring the psychological risk factors of drug addiction: based on a machine learning model

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Abstract: Drug addiction is a serious threat to public order and national stability. Therefore, it is of great significance to deepen the understanding of the characteristics and processing mode of drug addicts' psychological factors and carry out effective psychological treatment for drug addicts. Regression analysis is often used in previous studies to explore the relationship between variables, at the same time using this method to predict and screen the outcome variables. The least square method is the most commonly used method to estimate model coefficients in psychological research using regression models to analyze data. However, this traditional method has the following two shortcomings: One is multiple collinearity, that is, there exists correlation among multiple predictors in the regression model, which makes the estimated regression coefficients easily influenced by the sample data, thus

making the estimated result less stable. The second is overfitting, which makes the model fit only for the current sample and lack generalization ability. Machine learning methods can make up for these shortcomings of traditional methods. Ridge regression, Lasso regression and elastic network algorithms in machine learning methods solve the restrictive collinear assumption of traditional statistics by imposing penalties on the regression coefficients of highly correlated variables. Ridge regression reduces the coefficient of an unimportant predictor variable to zero. Lasso regression and elastic network regression algorithms can reduce coefficients to zero precisely for subset selection of simpler models. At present, few studies have used this method, so this study uses these three methods in machine learning on the basis of previous studies. In order to identify the key psychological risk factors affecting drug addiction, and provide more theoretical and instrumental reference for the related research and practice of drug rehabilitation and drug control. A total of 677 subjects, including 317 drug addicts and 360 normal subjects, were tested with self-made scale. Then 70% ($n = 474$) of the valid datasets were randomly selected as training sample sets using Ridge regression, Lasso regression and elastic network algorithms, Remaining 30% ($n = 203$) as a test sample set. It is found that the results of different machine learning statistical algorithms used are very similar. Accountability showed the greatest relative importance relative to other variables in the established model, The importance coefficients of the Ridge regression, lasso regression and elastic network algorithms are 0.036, 0.040, and 0.040 respectively, followed by distraction and social bias, The importance coefficients of Ridge regression, lasso regression and elastic network algorithm are 0.026, 0.023, 0.026 and 0.025, 0.022 and 0.024 respectively.

Keywords: Drug addiction, Machine learning, Psychological risk factors

新冠疫情对中国在校研究生学习活动的研究：基于潜在类别分析

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摘要 自2019年底新冠疫情爆发以来,人们的生活、学习、工作等方面都受到了巨大的影响。对于学生而言,长时间的隔离、授课方式的转变、师生交流方式的变化等问题为学生的学习活动带来了诸多不便。已有研究针对中小学生对大学生群体受疫情影响的情况开展调查,但少有针对研究生群体的研究。因此,本研究针对研究生群体,旨在探究疫情期间研究生学习活动所受到的影响。本研究采用自编研究生学习活动受疫情影响问卷、焦虑自评量表、自评抑郁量表和社会回避及苦恼量表进行调查,向全国各省市高校的研究生发放问卷,共回收有效问卷2818份。采用潜在类别分析方法对疫情期间研究生学习活动所受影响进行分类,并进行了有关的后续分析,探讨人口学变量对分类的影响,及各潜在类别研究生心理健康状况的差异。分析结果发现,研究生学习活动受疫情影响的类型可以分为4个类别,即总体受影响较小组(34.83%)、总体受影响较大组(31.97%)、课程活动受影响较大组(19.40%)和社交活动受影响较大组(13.79%)。进一步采用多分类logistic回归分析探讨人口学变量对分类的影响。结果表明,年级是影响分类的重要预测因子。与总体受影响较小组相比,总体受影响较大组和社交活动受影响较大组中硕士二年级和硕士三年级的研究生所占比例均较大;在课程活动受影响较大组中,硕士二年级研究生所占比例大于硕士一年级和硕士三年级的研究生。采用方差分析探究各潜在类别研究生心理健康状况的差异,结果显示,总体受影响较大组在焦虑、抑郁和社交焦虑上的得分均显著高于其他三组,其次是课程活动受影响较大组和社交活动受影响较大组,总体受影响较小组在这三个量表上的得分均最低。本研究结果表明,疫情使各年级研究生的学习活动均受到了不同程度的影响,当前疫情常态化背景下应关注研究生的心理健康问题。

关键词 新冠疫情, 研究生, 学习活动, 潜在类别分析

Effects of COVID-19 Pandemic on Chinese Graduate Students' Learning Activities: A Latent Class Analysis

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Abstract: Ever since the outbreak of COVID-19 at the end of 2019, people's lives, studies, work, and other aspects have been tremendously affected. For students, long-term home isolation, the transformation in teaching methods, and changes in teacher-student communicative modes have caused a lot of inconvenience to their learning activities. Studies concerning the impact of the COVID-19 pandemic on primary, secondary, and college school students have been conducted by researchers, but few studies have targeted graduate students. Therefore, the current study is aimed at graduate students, intending to explore the extent to which their learning activities have been affected due to the pandemic. A self-compiled questionnaire with relation to the impact of the pandemic on graduate students' learning activities, self-rated anxiety scales (SAS), self-rated depression scales (SDS), and social avoidance and distress scales (SAD) were used to conduct investigations in the present study. Questionnaires were distributed to graduate students in universities across the country, and a total of 2818 valid questionnaires were collected. Latent class analysis was performed to classify the effects of the pandemic on graduate students' learning activities. Related follow-up analysis was carried out to explore the effects of demographic variables on classification and the differences in the mental health status of graduate students in various latent classes. The results showed that four latent classes were identified, namely the overall less affected group (34.83%), the overall more affected group (31.97%), course activities are more affected group (19.40%) and social activities are more affected group (13.79%). Multinomial logistic regression analysis was further conducted to explore the influence of demographic variables on the classification. The results indicated that grade is a significant predictor of the latent classes. Compared with the overall less affected group, the proportions of postgraduates in the second and third year of master's degree in the overall more affected group as well as social activities are more affected group are both larger. In course activities are more affected group, second-year grad students accounted for higher proportion in comparison to first-year and third-year grad students. The analysis of variance was used to explore the differences in the mental health of postgraduates in each latent class. Results showed that the scores of anxiety, depression, and social anxiety of the more affected group were significantly higher than those of the other three groups, followed by the course activities are more affected group and social activities are more affected group, and the overall less affected group had the lowest scores on these three scales. The results of this study suggest that the learning activities of graduate students in all grades are affected to varying degrees owing to the current crisis. Under the current backdrop of the new normal, attention should be paid to the mental health of graduate students.

Keywords: COVID-19 pandemic, graduate student, learning activity, latent class analysis

疫情期间研究生的心理健康现状及其影响因素 ——基于 2829 名中国研究生的调查数据

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摘要 自 2019 年 12 月以来, 新冠肺炎疫情开始在中国以及世界蔓延, 不但对群众的生命安全产生威胁, 也在带来了心理层面的巨大压力。校园教学人员聚集度高, 涉及人数众多。出于疫情防控的目的, 各校均采取了封校隔离、远程授课等一系列举措。已有研究对学生群体在疫情期间的心理健康状况开展了调查, 但目前缺少针对研究生群体的疫情期间心理健康状况的研究。本研究通过线上问卷的形式, 采用焦虑自评量表和抑郁自评量表对来自中国不同地区的 2829 名硕士研究生样本进行调查, 通过方差分析探讨研究生人口学特征与焦虑及抑郁症状之间的关系, 结果显示: 受访者中重度抑郁占 1.3%, 中度抑郁占 14.4%, 轻度抑郁占 21.8%; 重度焦虑占 1.4%, 中度焦虑占 4.34%, 轻度焦虑占 14.4%。单因素方差分析发现, 不同性别、年级、学校毕业要求、与导师交流方式及与同学的交流方式的受访者在焦虑和抑郁水平上存在显著差异。两因素方差分析发现, 与导师的交流方式和与同学的交流方式之间存在显著的交互作用。简单效应检验发现, 与导师间接交流的情况下, 与同学间接交流和与同学直接交流的研究生的焦虑与抑郁得分不存在显著差异; 与导师直接交流的情况下, 与同学间接交流的研究生焦虑与抑郁水平显著高于与同学直接交流的研究生。研究结果启示,

应对疫情期间研究生心理健康状况进行监测，尤其在研究生无法与导师或同学进行直接交流的情况下，重点关注其焦虑与抑郁状况。

关键词 新冠疫情, 研究生, 焦虑, 抑郁, 交流方式

The status and influencing factors of mental health among graduate students during the COVID-19 epidemic:

Based on the analysis of survey of 2829 graduate students in China

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Abstract: A covid-19 epidemic has been spreading in China and other parts of the world since December 2019. The epidemic has not only threaten the people's lives, but also brought psychological pressure. There are highly crowded massive people in teaching activities. For the prevention and control of the epidemic, schools adopted isolation, online education and other measures. Previous scholarship had assessed student's mental health issues during epidemics. However, there is no research to explore the influencing factor to mental health of graduate students during epidemics. In this study, 2829 graduate students from different regions of China were recruited to complete the network questionnaires, the contents of the questionnaire included demographic data, Self-Rating Anxiety Scale (SAS) and Self-Rating Depression Scale (SDS). Results indicated that 1.3% of the respondents were experiencing severe depression, 14.4% moderate depression, and 21.8% mild depression; that 1.4% of the respondents were experiencing severe anxiety, 4.34% moderate anxiety, and 14.5% mild anxiety. One-way ANOVA analyses found that gender, grade, graduation requirements, communication means with advisors and communication means with peers influenced the anxiety and depression of respondents. Two-way ANOVA analyses found communication means with advisor and communication means with peers have significant interactive effects on respondents' anxiety and depression. Simple effect analyses found if communication means with advisors is indirect means, there was no difference in anxiety and depression between respondents who communicated with peers directly and who communicated with peers indirectly; if communication means with advisors is direct means, there are higher anxiety and depression in respondents who communicated with peers indirectly than who communicated with peers directly. The results of this study suggest that the mental health of graduate students should be monitored during epidemics. Their anxiety and depression should be paid more attention, especially when students could not communicate with advisor and peers directly.

Keywords: COVID-19, graduate students, anxiety, depression, communication mean

(3) “心理测量专业委员会”口头报告分场 3

信息假设的贝叶斯因子评估

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摘要 目前, 零假设显著性检验(null hypothesis significant testing, NHST)是心理学研究者主要的统计推断工具。然而在过去十多年中 NHST 的局限性被广泛讨论。比如, 零假设很少能代表研究者的理论期望; p 值无法衡量数据支持假设的程度; 基于 p 值小于 0.05 的推断可能导致不可信的研究结论和发表偏差。本研究呈现 NHST 的替代方法, 即使用贝叶斯因子(Bayes factor, BF)进行假设评估。贝叶斯因子反映数据支持假设的相对程度, 例如, $BF_{12}=10$ 表示数据支持假设 1 的证据是假设 2 的 10 倍。此外, 贝叶斯因子可转化为后验模型概率, 用于同时比较多个研究假设。除了检验传统零假设与备择假设外, 贝叶斯因子还可用于评估代表研究者理论期望的信息假设。信息假设的一个简单例子是 $m_1 > m_2 > m_3$, 其中 m 表示各组均值。贝叶斯检验的关键

是先验分布的选取与贝叶斯因子的计算。在先验信息缺失或研究者不愿引入先验信息以得到完全客观的统计推断结论时,本研究提出适用于一般统计模型的客观先验选取方法,利用部分样本数据信息设定合理先验。随后,基于该先验设定方法推导贝叶斯因子的表达式。零假设与备择假设的贝叶斯因子可简化为后验密度与先验密度在零假设处的比值,而信息假设的贝叶斯因子则可表示为后验概率与先验概率在信息假设限制下的比值。此后,利用MCMC算法估计先验与后验密度或概率,进而计算贝叶斯因子。为了便于心理学研究者使用该方法,本研究在CRAN平台上开发R软件包**bain**,同时在可视化统计数据分析软件JASP中嵌入**bain**模块。目前已可用于贝叶斯t检验、回归系数检验、方差分析、协方差分析、逻辑回归、重复测量、以及简单结构方程模型的参数检验等。

关键词 贝叶斯因子, 先验分布, 信息假设, bain

Evaluating informative hypotheses using the Bayes factor

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Abstract: Psychological researchers are well-acquainted with null hypothesis significance testing (NHST). It is, arguably, their main inferential tool. In the last decade the limitations of NHST have extensively been discussed. To name three: the null-hypothesis only rarely represents the expectations that researchers have; the p-value cannot measure the support from the data for the hypotheses; and, evaluation of the p-value versus the benchmark “.05” leads to undesirable phenomena like questionable research practices and publication bias. This study will first introduce an alternative for NHST, that is, hypothesis evaluation using the Bayes factor. The Bayes factor reflects the degree to which the data support the hypotheses. For example, if $BF_{12}=10$ this implies that the evidence from the data to support hypothesis 1 is 10 times larger than to support hypothesis 2. In addition, Bayes factors can be translated into posterior model probabilities, which can be used to compare multiple hypotheses simultaneously. Besides testing the traditional null hypothesis against the alternative hypothesis, the Bayes factor can also be used to evaluate the informative hypothesis that represents researchers’ theoretical expectations. A simple example of an informative hypothesis is $m_1 > m_2 > m_3$, where m denotes the mean of each group. The key procedure of Bayesian tests includes the prior specification and the Bayes factor computation. When the prior information is not available or researchers are unwilling to involve the prior information to obtain completely objective statistical inference, this study proposes an objective prior specification approach that can be applied to general statistical models. This approach uses a part of sample data to set a proper prior. Based on such prior setting, the Bayes factor is derived. The Bayes factor of the null hypothesis and the alternative hypothesis can be simplified as the ratio of posterior and prior densities at null hypothesis, while the Bayes factor of the information hypothesis can be expressed as the ratio of posterior and prior probabilities under the constraints of the information hypothesis. Thereafter, the MCMC algorithm is used to estimate the prior and posterior densities or probabilities, and then to compute the Bayes factor. In order to facilitate the use of the proposed method for psychological researchers, An R software package Bain has been developed on CRAN, and been exported to the visual statistical data analysis software JASP. At present, the proposed approach accompanied by the software can be used for Bayesian t tests, regression coefficient tests, analysis of variance, analysis of covariance, logistic regression, repeated measurement, and parameter tests in simple structural equation models.

Keywords: Bayes factor, prior distribution, informative hypotheses, bain

潜在回归线性 Logistic 测验模型的测验等值研究

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摘要 测验等值在国外已广泛应用于大型考试、题库建设、计算机化自适应等方面, 相较之下, 由于我国对测验等值的研究开展较晚, 因此在这方面的研究则显得较少。现如今, 我国许多重要的考试均尚未实现等

值,例如高考、英语四六级考试等。尽快实现测验等值是国内许多大型考试所共同面临的重要任务。然而,随着互联网的广泛应用,即使是集优点于一身的非等组锚测验设计都常面临锚题曝光的问题。因此,有必要通过理论和实证研究探索如何在无锚人、无锚题的情况下,寻找可实现测验分数等值的新方法。

本研究在解释性项目反应模型的框架下,通过一个模拟研究和一个实证研究对潜在回归线性 Logistic 测验模型在测验等值的应用方面进行深入研究,研究结果发现:(1)潜在回归线性 Logistic 测验模型在测验等值过程中能有效估计考生能力参数和题目区分度参数。其中,对考生能力参数的估计几乎接近真值。但是,在估计题目难度参数时出现明显的偏差。(2)潜在回归线性 Logistic 测验模型的测验等值精确度受到考生样本量、题目数量和参数预测变量个数不同程度的影响。在题目数量方面,当题目数量在 20 道或者 40 道时,潜在回归线性 Logistic 测验模型的参数估计表现较为稳定。在考生样本量方面,潜在回归线性 Logistic 测验模型在考生能力参数和题目区分度参数的估计误差随着样本量的增大而减小。在预测变量个数方面,当题目参数预测变量个数越多,潜在回归线性 Logistic 测验模型在估计题目难度参数时表现越差。(3)和传统等值设计下的测验等值结果相比,潜在回归线性 Logistic 测验模型在测试实践中能够很好地估计考生能力参数和题目区分度参数。但是,在题目难度参数的估计出现了明显的偏差。同时,因为样本量较少和预测变量选择有限的问题,潜在回归线性 Logistic 测验模型在实证研究中出现了无法收敛的情况。

关键词 测验等值,解释性项目反应模型,潜在回归线性 Logistic 测验模型

Research on the Test Equating of Latent Regression Linear Logistic Test Model

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Abstract: Test equating has been widely used in large-scale examinations, item bank construction, computerized adaptive test, etc. abroad. Compared with foreign countries, domestic research in this area is progressing slowly. Nowadays, many important examinations in our country have not conducted the test equating, such as the college entrance examination and the CET-4 or CET 6. It is an important task for many large-scale examinations in China to conduct the test equating as soon as possible. However, with the rapid development of the Internet, the design of the non-equivalent groups with anchor test often faces the problem of the exposure to anchors. Therefore, it is necessary to use theoretical and empirical research to explore how to find new methods that can achieve the test equating without common person and anchor items. This study conducted a simulation study and an empirical study to investigate the application of the the latent regression linear Logistic test model under the framework of Explanatory item response models. The results showed that: (1) The latent regression linear Logistic test model can effectively estimate the person ability parameter and the item discrimination parameter in the process of test equating. Besides, the estimation of the person ability parameter is really accurate. However, the model showed significant deviations when estimating the item difficulty parameter. (2) The accuracy of the test equating of the latent regression linear Logistic test model was affected by the sample size, length test and the numbers of predictors. When the length of test was at 20 and 40, the latent regression linear Logistic test model had a stable performance of the parameter estimation. Besides, the estimation error of the latent regression linear Logistic test model in the person ability parameter and the item discrimination parameter decreased as the sample size increased. Furthermore, the latent regression linear Logistic test model had the worst performance on estimating the item difficulty parameter as the numbers of the predictors increased. (3) Compared with results of the traditional design of test equating, the latent regression linear Logistic test model can well estimate the person ability parameter and the item discrimination parameter in the practice of test equating. However, there is a significant deviation in the estimation of the item difficulty parameter of the latent regression linear Logistic test model. At the same time, the latent regression linear Logistic test model has the problem of convergence in the empirical research because of the small sample size and limited choice of predictors.

Keywords: Test equating, Explanatory item response models, Latent regression linear Logistic test model

同时兼顾能力与属性掌握模式的 Higher-order CD-CAT 选题策略研究

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摘要 在心理与教育测量领域, 一个能同时提供终结性评价和形成性评价的测验是非常有实际应用价值的, 其中终结性评价(由能力表示)便于了解被试的潜在特质在群体中的相对位置, 而形成性评价(由属性掌握模式或知识状态表示)不但有助于心理症状的诊断与干预, 也有助于学习或教学策略的改进。为了同时高效地获取被试的终结性评价和形成性评价, 研究者们开发出了兼顾能力和属性掌握模式的双目标 CD-CAT, 其中基于高阶认知诊断模型的 higher-order CD-CAT, 因其理论解释更合理, 题库建设成本更低而逐渐受到关注。然而, 当前 Higher-order CD-CAT 的选题只能采用单目标 CD-CAT 中的传统选题策略, 即只对属性掌握模式自适应, 这可能导致能力的估计精度不高。鉴于此, 本文试图开发一种适用于 Higher-order CD-CAT 的新选题策略, 思路如下: 在高阶认知诊断模型框架下, 被试的项目作答由其属性掌握模式决定, 而属性掌握模式归属于更高阶的能力, 由此可认为被试的项目作答是由能力和属性掌握模式联合决定的。本文基于 PWKL 方法的选题思路, 结合了能力和属性掌握模式的联合后验概率, 从而开发出适用于 Higher-order CD-CAT 的、兼顾能力和属性掌握模式的 HO-PWKL 选题策略。Monte Carlo 实验表明: 在不同条件下, HO-PWKL 的测量精度和题库安全性均高于传统策略。同时, 在短测验、以及多属性的测验中, HO-PWKL 在测量精度上的优势更为明显, 这些优势并不受认知诊断模型的影响, 说明新策略比较稳定可靠。另一方面, 虽然 HO-PWKL 的选题用时比 KL、HKL 和 PWKL 更多, 但即使在测量属性比较多的测验中, 新策略选择每个项目的平均用时依旧非常少, 这符合 CAT 的速度要求。综合而言, 本研究开发的 HO-PWKL 选题策略基本可行, 可以满足在 higher-order CD-CAT 中同时兼顾能力和属性掌握模式信息的选题要求, 弥补了传统的选题策略仅对属性掌握模式自适应的不足。

关键词 双目标 CD-CAT, 高阶认知诊断模型, higher-order CD-CAT, 选题策略

Item selection method considering both the ability and cognitive profile in higher-order CD-CAT

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Abstract: A test that can provide the summative information to ranking examinees in order and provide formative information for remediation may be very valuable in psychology and education setting. Although the existing dual-objective CD-CAT can meet this purpose, this CAT system just a compromise because each item is calibrated by two models which underlying constructs are dramatically different. Therefore, the higher-order CD-CAT which employs higher-order CDMs was proposed. Moreover, the development of the item bank of this CAT system would be easier than that in the traditional dual-objective CD-CAT. However, current item selection methods used in the higher-order CD-CAT select items adaptively according to only the attribute profile, which might lead to low precision with respect to ability. In light of this, a new item selection method that simultaneously considers both the ability and attribute profile information was proposed for the higher-order CD-CAT in this study. Under the frameworks of the higher order CDMs, ability governs the attribute profiles, and the item responses are modeled by the attribute profiles; hence, it is reasonable to hold that the item responses are affected by a combination of the ability and attribute profile of the examinees. This study incorporated the combination into the PWKL method and finally proposed the HO-PWKL method, which can simultaneously consider the information of both the ability and attribute profile. The results from the simulation study indicated that the proposed method always outperformed the traditional methods in terms of the measurement accuracy and item usage rate, and these advantages would be more evident in the short test or more attributes were measured. Furthermore, the above advantages did not be affected by

the model used, which demonstrated that the newly proposed method is precise and stable. With respect to the implementation time of each method, the new method slower than the KL, HKL and PWKL method in that it is more complicated, especially when more attributes were measured. However, the average item administration time of the HO-PWKL method is less than 125 milliseconds even though 8 attributes were measured, which meets the calculation speed requirement of CAT. To summarize, under the higher-order CD-CAT, the new method proposed in this study always outperformed the existing methods in terms of measurement accuracy and item pool usage, which would promote further study and practical application of the higher-order CD-CAT.

Keywords: dual-objective CD-CAT, higher-order CDMs, higher-order CD-CAT, item selection method

一种高效的 CD-CAT 在线标定新方法：基于熵的信息增益与 EM 视角

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摘要 认知诊断计算机自适应测验(Cognitive Diagnostic Computerized Adaptive Testing, CD-CAT)是认知诊断(Cognitive Diagnostic, CD)与计算机自适应测验(Computerized Adaptive Testing, CAT)相结合的产物, 在为被试提供详细诊断信息的同时可提高测验的准确性及效率, 是目前的研究热点。CD-CAT 使用的前提是已构建好的题库, 但题库的建设和维护却是一个极具挑战性的任务。在线标定是题库维护的有效方式之一, 截至目前 CD-CAT 中仅有较少方法能同时标定新题的 Q 矩阵和项目参数。此外, 已有在线标定方法的新题标定效率均较低, 有待于进一步提高。因此, 在 CD-CAT 情境下开发提升新题标定精度和标定效率的方法是极为必要的。受 Chen 等人(2015)提出的 SIE (Single-Item Estimation)方法和特征选择方法中信息增益(Information Gain, IG)准则的启发, 本研究提出了基于熵的信息增益的在线标定方法(Information Gain of Entropy-based Online Calibration Method, IGEOCM)。IGEOCM 以序列方式来标定新题的 Q 矩阵和项目参数, 具体如下: 首先, 基于被试属性掌握模式和被试在新题上的作答, 构建熵的信息增益指标并最大化该指标来标定新题 q 向量; 其次, 基于被试属性掌握模式后验分布, 被试在新题上的作答及上一步所估计的新题 q 向量, 使用 EM 算法标定新题项目参数。对于所有新题重复以上两步以获得所有待标定新题的 Q 矩阵和项目参数。随后, 为验证 IGEOCM 在不同标定样本、属性掌握模式、新题作答个数以及选题策略下的性能, 展开了两项 Monte Carlo 实验研究, 并将其与已有 SIE、SIE-R-BIC 和 RMSEA-N 方法比较。结果表明: (1) IGEOCM 方法在所有条件下均具有较好的标定精度和标定效率, 且略优于 SIE, SIE-R-BIC 和 RMSEA-N 方法。(2) 各方法的项目标定精度随样本量的增加而提升。(3) 相对高阶分布和多元正态分布, IGEOCM, SIE, SIE-R-BIC 和 RMSEA-N 方法在均匀分布下性能更佳。(4) 被试新题作答个数对各在线标定方法标定精度和标定效率的影响较小。(5) CD-CAT 选题策略影响 SIE 和 IGEOCM 方法的项目标定精度。在高阶分布和多元正态分布下, SIE 方法和 IGEOCM 在选题策略为 MPWKL 和 GDI 时具有更高的 Q 矩阵标定精度。总体而言, 尽管所提 IGEOCM 方法在标定精度和标定效率方面均颇具竞争力且略优于传统方法, 但对 CD-CAT 中在线标定方法的研究仍需进一步深化和拓展。

关键词 认知诊断计算机自适应测验, 项目增补, 在线标定, Q 矩阵, 熵的信息增益

A High-efficiency and New Online Calibration Method in CD-CAT Based on Information Gain of Entropy and EM algorithm

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Abstract: Cognitive diagnostic computerized testing (CD-CAT) includes the advantages of both cognitive diagnosis (CD) and computerized adaptive testing (CAT), which can offer detailed diagnosis feedback for each examinee by applying less test items and time. It has been a promising field. Item bank is a prerequisite for the implementation of CD-CAT, however, its maintenance is a very challenging task. One of the effective ways to maintain the item bank is online calibration. Till now, there are only a few online calibration methods in the CD-CAT context that can calibrate

Q-matrix and item parameters simultaneously. Moreover, the computational efficiency of these methods needs to be further improved. Therefore, it is crucial to find more online calibration methods that jointly calibrate the Q-matrix and item parameters. Inspired by SIE (Single-Item Estimation) method proposed by Chen et al. (2015) and information gain feature selection criteria in feature selection, an information gain of entropy-based online calibration method (IGEOCM) was proposed in this study. The proposed method can jointly calibrate Q-matrix and item parameter in a sequentially manner. The detailed process of the new items was described as follows: First, for the new item j , the q-vector can be calibrated by maximizing the information gain of entropy-based on the attribute patterns of examinees and the examinees' responses to item j . Second, the item parameters of the new item j are estimated by the EM algorithm based on the posterior distribution of examinees' attribute pattern, the examinees' responses to item j and the q-vector estimated in the first step. Repeating the first step and second step for all other new items to obtain their estimated Q-matrix and estimated item parameters one-by-one. Two simulation studies were conducted to examine whether the IGEOCM could accurately and efficiently calibrate the Q-matrix and item parameters of the new items under different calibration sample size (40, 80, 120, 160 and 200), different attribute pattern distribution (uniform distribution, higher order distribution and multivariate normal distribution) and different number of new items answered by examinee (4, 6 and 8), and different item selection algorithm (posterior-weighted Kullback-Leibler, PWKL; the modified PWKL, MPWKL; the generalized deterministic inputs, noisy "and" gate model discrimination index, GDI; shannon entropy, SHE). Furthermore, the performance of the proposed methods was compared with the SIE, SIE-R-BIC and RMSEA-N methods. The results indicated that (1) the IGEOCM worked well in terms of the calibration accuracy and estimation efficiency under all conditions, and outperformed the SIE, SIE-R-BIC and RMSEA-N methods overall. (2) The accuracy of the item calibration increases as the sample size increases for all calibration methods under all conditions. (3) the SIE, SIE-R-BIC, RMSEA-N and IGEOCM performed better under the uniform distribution and higher order distribution than under the multivariate normal distribution. (4) The number of new items answered by the examinee had a negligible impact on the calibration accuracy and computation efficiency of the SIE, SIE-R-BIC, RMSEA-N and IGEOCM. (5) The item selection algorithm in CD-CAT affects the Q-matrix calibration accuracy of the SIE and IGEOCM methods. Under the higher order distribution and multivariate normal distribution, the SIE method and IGEOCM have higher Q-matrix calibration accuracy when the item selection algorithms are MPWKL and GDI. On the whole, although the proposed IGEOCM is competitive and outperform the conventional method irrespective of in the calibration precision or computational efficiency, the studies on the online calibration method in CD-CAT still need to be further deepened and expanded.

Keywords: Cognitive diagnostic computerized adaptive testing, Item replenishing, Online calibration, Q-matrix, Information gain of entropy

非参数诊断方法在纵向认知诊断测评中的应用

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摘要 纵向测评的发展有利于教育者更好把握学生的学习和发展轨迹。相对于构建参数模型的方法, 采用非参数诊断方法因其计算简便, 受限条件少等优势已被用于横断认知诊断测评中。为了探究非参数方法在纵向认知诊断测评中的应用, 研究(1)在汉明距离方法应用的基础上, 加入了约束条件, 提出了约束汉明距离的非参数诊断方法。同时尝试将“参数+非参数”的方法应用于纵向的认知诊断测评中。(2)采用 Zhan, Jiao, Liao 和 Li(2019)提出的纵向高阶认知诊断模型为数据生成模型, 基于模拟研究对比了汉明距离, 约束汉明距离, “参数+非参数”三种方法和纵向参数模型的诊断方法在不同条件下(学生数量 $N=100, 300$; 属性个数 $K=3, 5$; 题目数量=30, 50; 纵向测评的时间点 $T=2, 3, 5$)的学生属性模式判准率(Pattern correct classification rate, PCCR)和纵向的属性模式判准率(Longitudinal pattern correct classification rate, LPCCR)。模拟研究结果表明: 与参数模型结果相比, 汉明距离、约束下的汉明距离和“参数+非参数”三种方法均具有较好的 PCCR 与 LPCCR。测评时间点的增加, 题目数量的增多都能提高以上三种含有非参数诊断方法的 PCCR, 但随着属性数量的增

加, PCCR 呈下降趋势。LPCCR 随着时间点的增加、属性数量的增多呈现下降的趋势, 但含有非参数的诊断方法所属性数量变化带来的影响较大。在属性个数为 5 时, 非参数诊断方法的表现略差于参数模型下的 LPCCR。上述三种包含非参数的诊断方法, 在不同样本下表现一致, 即不受样本容量的影响。非参数诊断方法可在要求不低于一定判准率的基础上应用于纵向认知诊断测评中, 为现有纵向认知诊断方法提供一个参考。

关键词 非参数, 纵向高阶认知诊断, 汉明距离

Application of Non-parametric Diagnostic Methods in Longitudinal Cognitive Diagnostic Assessment

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Abstract: The development of longitudinal evaluation is beneficial to educators to better grasp the learning and development track of students. Compared with the method of constructing parametric model, the non-parametric cognitive diagnostic method has the advantages of simple calculation, less time consuming and less limited conditions to complete the classification of students and it has been used in cognitive diagnosis. To explore the application of non-parametric methods in longitudinal cognitive diagnostic assessment, we did the following study.

In the first part, we put forward a new constrained Hamming distance based on the previous study of Hamming distance, and tried to combine the parametric and non-parametric methods as a half-parametric method to apply to the longitudinal cognitive diagnosis. In part two, we compared the performance of different methods (parametric, half-parametric, Hamming distance, constrained Hamming distance) under different conditions in a simulation study. The simulation study focused on four factors which include (a) the sample sizes at two levels of 100 and 300; (b) the number of attributes at two levels of 3 and 5; (c) the number of items at two levels of 30 and 50; (d) the number of occasions at three levels of two, three and five. Based on the data generated by a longitudinal higher-order diagnostic classification model proposed by Zhan, Jiao et al., (2019). The results show that the half-parametric, Hamming distance and constrained Hamming distance all have good pattern correct classification rate (PCCR) and longitudinal PCCR. The PCCR of them can be increased with the increase of the occasions and the number of items, but with the increase of the number of attributes, PCCR shows a downward trend. Longitudinal PCCR showed a decreasing trend with the increase of occasions and the number of attributes, but the non-parametric methods (Hamming distance, constrained Hamming distance) and half-parametric methods were greatly affected by the change of the number of attributes. When the number of attributes is 5, the longitudinal PCCR of them is slightly worse than that in parametric model. These methods are consistent in different samples except parametric method, that is, they are not affected by sample size.

Keywords: cognitive diagnosis, non-parametric methods, Hamming distance

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基于层级诊断分类模型的学习进阶验证方法开发：以分数运算为例

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摘要 学习进阶是指学生对某个主题日益复杂的思考或理解方式的描述 (NRC, 2007)。值得注意的是, 学习进阶不仅可以从认知的角度描述学生的学习过程, 而且可以架构学习研究和课堂教学实践的桥梁 (Salinas, 2009)。它的建立是一个从建立假设性学习进阶到验证假设的迭代过程。目前, 已有一些关于学习进阶的验

证方法,其中具有代表性的有 Rasch 模型和规则空间模型(RSM)的方法。由于前者主要用于测量学生能力,因此不能为学生提供细粒度的属性分析。虽然后者可以在认知诊断框架下测量细粒度的属性,但 RSM 有时无法获得正确的属性层级关系。针对上述两种方法的不足,本研究提出了一种新的基于认知诊断的学习进阶验证方法,即能够基于数据验证属性层级关系的层级诊断分类模型(HDCM)的方法。然后,以分数的加减运算为例,深入探讨了新方法在数学学习进阶中的应用。首先,基于专家评定法析取分数运算属性及其层级关系;随后,参考 Klein 等人(1981)的水平划分建构假设性的小学生分数运算学习进阶,用以描述分数运算发展过程;最后,收集 817 名五年级学生在 56 题的分数运算测验上的数据,采用层级诊断分类模型(HDCM)对数据进行分析并修正学习进阶假设。本研究的主要发现如下:(1)小学生分数运算包括 5 个属性:基本运算(A1)、约分(A2)、通分(A3)、带分数拆分(A4)和借位(A5);(2)确立的分数运算学习进阶包括 4 个水平:处于进阶水平 1 的学生只能掌握简单的同分母分数加减运算,水平 2 的学生能进行需要约分的同分母分数加减运算,水平 3 的学生能进行异分母分数加减运算及简单的带分数加减运算,水平 4 的学生能进行复杂的带分数加减运算。综合来看,本研究建构的小学生分数运算学习进阶确立了完整的小学生分数运算结构、刻画了分数运算发展的进程,不仅突破已有基于 Rasch 模型或 RSM 等学习进阶验证方法的局限,而且探索了基于带属性层级的参数化认知诊断模型的学习进阶的教学实践价值,对数学教育研究者、心理测量研究者以及一线教师具有借鉴意义。

关键词 学习进阶,验证方法,认知诊断模型,HDCM,分数运算

Development of a New Learning Progression Verification Method Based On the Hierarchical Diagnostic Classification Model: taking Fractional Operations as an Example

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Abstract: Learning progressions referred to descriptions of increasingly sophisticated ways of thinking about or understanding a topic (NRC, 2007). It is worth pointing out that learning progression can not only describe the learning process of a student from a cognitive perspective but also bridge learning research and classroom teaching practice (Salinas, 2009). Its establishment is an iterative process from the establishment of hypothetical learning progression to the verification of hypotheses. Up to now, some validating methods about learning progressions have been proposed and the representative ones include the method of Rasch model (Rasch, 1960, 1966a, 1966b) and the method of rule space model (RSM; Tatsuoaka, 1983, 1995, 1996). Because the former method is mainly used to measure students' abilities, it cannot provide fine-grained attribute analysis for students. Although the latter method can measure fine-grained attributes via the cognitive diagnosis framework, RSM sometimes fails to obtain the correct attribute hierarchical relationship. To overcome the shortcomings of the above two methods, this paper puts forward a new cognitive diagnosis-based verification method, i.e., the method of hierarchical diagnostic classification model (HDCM) which can verify the hierarchical relationship of attributes based on data. Then, the application of the new method in learning progressions of mathematics is thoroughly explored by taking the addition and subtraction of fractions as an example. First, the attributes of fractional operations and their hierarchical relationships were extracted using an expert assessment method. Following the level division of Klein et al. (1981), a hypothesized learning progression was constructed to describe the development of fractional operations. Next, the HDCM was used to analyze the test data on a 56-item fractional operation test collected from 817 fifth-grade students, followed by the revision of the learning progression hypothesis. Results showed that (1) the fractional operations involved five attributes: basic operation (A1), reduction of a fraction (A2), changing fractions to a common denominator (A3), split with mix number (A4), and borrowing (A5); (2) the constructed learning progression featured four levels: students at

level 1 were only able to master simple addition and subtraction of fractions with the same denominator, students at level 2 could perform the addition and subtraction of fractions with the same denominator requiring reduction, students at level 3 were capable of performing addition and subtraction operations with different denominator fractions, as well as simple addition and subtraction operations with mixed numbers, and students at level 4 could perform complex addition and subtraction operations with mixed numbers. In conclusion, the constructed learning progression of fractional operations establishes a complete structure of fractional operations and characterizes the development of fractional operations. It not only breaks through the limitations of the existing methods of learning progression based on Rasch Model and rule space model, etc., but also explores the teaching practice value of learning progression based on the parameterized cognitive diagnosis model with attribute hierarchies, which can be a useful reference for mathematics education researchers, psychometric researchers and front-line teachers.

Keywords: Learning progression, Validating methods, Cognitive diagnostic models, HDCM, Fractional operations

问题解决测验过程数据的序列反应模型的建构及应用

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摘要 基于计算机的交互式问题解决测验可以在仿真任务情境下实时记录学生的反应过程, 并保存为过程数据。过程数据蕴含了关于学生认知与思维活动的丰富信息, 对这些信息进行挖掘与分析有利于对学生潜在能力进行更加准确的估计。然而, 过程数据形式新颖、结构复杂, 如何充分合理地利用过程数据评估学生的潜在能力是一个兼具理论和实践意义的新议题。本研究围绕这一议题, 提出了一种可以全面利用学生在问题解决测验中的反应过程信息, 估计其潜在能力和题目状态转移参数的序列反应模型。本研究首先提出了将学生的整个反应过程表征为问题状态序列的信息提取方法, 然后结合随机过程思想, 提出了可以对整个问题状态序列进行分析的序列反应模型 (SRM) 及其参数估计方法。然后使用一个 Monte Carlo 模拟研究探讨了样本量、序列长度和先验信息对于 SRM 参数估计返真性的影响, 并使用该模型分析了国际学生评估项目 (PISA) 2012 年计算化问题解决测验 Tickets 任务的过程数据。模拟研究结果表明, 新方法具有良好的心理测量学性能, 先验信息的有无对于 SRM 参数估计返真性的影响较小; 样本量越大, 状态转移参数估计的返真性越好; 序列长度越长, 潜在能力估计的返真性越好。实证研究结果表明, 用 SRM 分析实际数据获得的能力估计值与专家评分标准相一致, 可以正向预测学生在问题解决测验上的整体能力; 并且由于 SRM 利用了学生完整的反应序列, 因此对于能力水平的区分相较于结果变量更加合理与细致, 还可以获得任务中每种行为特征 (状态转移) 的相对难易程度。本研究提出的序列反应模型在充分利用过程性信息的同时兼具可解释性, 为更合理、准确地估计学生能力提供了方法支持。同时, SRM 的分析结果可为基于计算机的交互式问题解决测验的编制, 以及如何提高测验的信度提供有用的参考, 为实证研究提供了理论基础和方法学指导。总之, 本研究推动了过程数据建模方法的发展, 为基于动态过程的心理与教育测评提供了更深入和细化的分析方法。

关键词 序列反应模型, 计算机化问题解决测验, 过程数据, 作答序列, 心理测量模型

Sequential Response Model and Its Application for Analyzing Process Data of Problem-Solving Test

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Abstract: The computer-based interactive problem-solving test can record students' response processes in real time under virtual reality scenario, and save them as process data. Process data contains rich information about students' cognitive and thinking activities. Making full use of these information can lead to more accurate estimation of students' latent abilities. However, the form of process data is novel and its structure is complex. How to rationally

and fully utilize process data to evaluate students' latent abilities more accurately and comprehensively is a new issue with both theoretical and practical significance. Aiming at this problem, this study proposed a sequential response model (SRM), which can make full use of students' complete response sequences in problem-solving test to estimate their latent abilities and state transition parameters. In this study, we first proposed an information extraction method which characterized the whole reprocess process as a sequence of problem states. To analyze the whole problem state sequence, combined with the idea of stochastic process, SRM and its parameter estimation method were proposed. Then, a Monte Carlo simulation study was used to explore the influence of sample size, sequence length and prior information on the accuracy of parameter recovery in SRM. And the proposed model was further used to analyze the process data of the Ticket task in the Programme for International Student Assessment (PISA) 2012 problem solving test. Simulation results showed that the new methods had good psychometric performance. The setting of prior information has little influence on the accuracy of parameter estimation; and the increase of sample size and response sequence can improve the parameter estimation accuracy. The empirical data analysis results showed that the ability estimates obtained from SRM were consistent with the scoring rules made by experts, and can significantly predicted students' overall performance in the problem-solving test. In addition, compared with the result variable, SRM was more reasonable and detailed in distinguishing students' capabilities, and can also obtain the relative difficulty of each state transition in the task, for it utilizing the complete response sequences. The proposed SRM can make full use of the process information and be interpretable at the same time, which provides method support for estimating students' abilities in a more rational and accurate way. In the meantime, the fruitful results of SRM can provide useful reference for the development of computer-based interactive problem-solving test and the improvement of test reliability, which provides methodological guidance for empirical research. In summary, this study promotes the development of process data modeling method, and provides a more in-depth and detailed analysis method for psychological and educational assessment based on dynamic process.

Keywords: Sequential Response Model, Computer-based Problem-solving Test, Process Data, Response Sequence, Psychometric Model

无监督在线能力测验结果影响因素探究及控制

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摘 要 随着互联网的发展, 无监督在线测验凭借其测验效率高、测验成本低等优势, 成为当下较为常见的测验实施方式之一。但对于无监督在线测验过程中产生的潜在误差, 现有的理论体系还无法给出清晰完整的解释。因此, 有关的心理测量学问题亟需研究。研究使用自行开发的手机无监督在线测验平台, 探究了无监督在线测验的无监督性与测验设备的跨屏显示对测验结果的影响因素。研究一以北京师范大学 218 名在校生为研究对象, 比较了有人监督与无人监督两种情境下的作答情况, 同时邀请受测者填写尽责性问卷以及报告他们对测验的重视程度。研究二重点讨论了题目跨屏显示对受测者作答的影响, 以 477 名 18 至 35 周岁的互联网用户为研究对象。受测者被随机分配到题目跨屏幕组或非跨屏幕显示组, 两组题目内容一致, 只在显示界面上有所差异。测试完成后, 邀请受测者报告他们在测验时感到的焦虑与愤怒两种负面情绪。研究发现, 监考角色的缺失将引发大量的非严肃性作答行为。而受测者是否决定认真作答与他们对于测验的重视程度有关。使用作答时间比率、标准化分数以及电话回访结果等信息, 可以更加科学地确定非严肃性作答筛选标准范围。对于跨屏显示的题目和没有跨屏显示的题目, 两种测试界面不存在测试等价性。跨屏显示组的受测者报告了更高的愤怒与焦虑水平。研究结合实际, 重点探究了实际测验使用中可能遇到的问题以及对于测验结果产生的影响, 丰富了无监督在线测验设备理论的实证研究基础。研究进一步丰富了基于时间作答比率来筛选非严肃性作答受测者的方法。结论认为, 未受控制的低利害性无监督在线测验会出现大量非严肃作答行为, 题目跨屏显示不利于考生进行作答。该结论可用于测试实施方在无监督在线测试开发、实施、结果分析中提供参考与借鉴, 具有一定的应用价值。

关键词 无监督在线测验 非严肃性作答 心理测量分析

Research and Control of Influencing factors of Unproctored Internet-based Ability Test Results

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Abstract: Relying on the development of Internet, unproctored Internet-based test, with the advantages of high efficiency and low cost, has become one of the most common ways of test implementation. However, it still lacks comprehensive theoretical system to identify the potential errors in the process of unproctored Internet-based test. The psychological measurement problems related needs to be improved. This study, applying self-developed unproctored Internet-based test platform on mobile phone, explores the influence on test results of two factors including proctored and unproctored situation and display interface. Study 1: Concerning supervision situation, 218 students in Beijing Normal University are divided into two groups to carry out the research, one of which is under the supervision of experimenters and another without the supervision of experimenters. Meanwhile, volunteers are required to fill in conscientiousness questionnaires and report their attention degree of the test. The study further enriches the method of selecting non-serious responses respondents, based on time response ratio. Study 2: As for the display interface factor, 477 Internet users aged between 18 and 35 are selected as study objects and randomly assigned to cross or non-cross screen display groups with unified question. Two groups have the same research question but different display interfaces. Then volunteers are invited to report their anxiety and anger degree in the process of test. The study found that the lack of supervision will lead to a large number of non-serious responses. Whether the volunteers decide to answer seriously or not depends on the importance they attach to the test. Relying on the information of response time ratio, standardized score and telephone follow-up results, the scope of screening criteria for non-serious responses can be determined more scientifically. As for display interface, the two test interfaces show no measurement invariance. Compared with the group without cross screen display, subjects in the cross-screen display group show higher level of anger and anxiety. Combined with practice, the study focuses on the exploration of possible problems in practical test implementation and the influence on test results, providing empirical research data for unproctored Internet-based test devices and theory. It shows that uncontrolled unproctored Internet-based test will appear non-serious answer behavior, the items which across the screen display will not be conducive to the candidates to answer. The conclusion, of great application value, can offer reference for the development, implementation and result analysis of unproctored Internet-based test.

Keywords: Unproctored Internet-based test, Non-serious responses, Psychological measurement analysis

谁掌握着计算机化分类测验的最终话语权？ ——三大类终止规则

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摘要 作为一种特殊的计算机化自适应测验，计算机化分类测验（Computerized Classification Testing, CCT）能够自适应地将被试划分到两个或多个不同的类别，已被广泛应用于合格性测验及临床心理学或医学诊断中。作为 CCT 的重要组成部分，终止规则决定测验何时停止以及将被试最终划分到何种类别，因此直接影响测验效率及分类准确率。根据终止规则所基于的理论基础，已有终止规则可以划分为三大类：似然比规则、贝叶斯决策理论规则及置信区间规则。具体地说，它们的核心思路分别是：（1）通过事先设定不同类别被试的能力的上下界，构造假设检验以及似然比统计量；（2）通过作答反应获得被试能力的后验分布，并由此计算损失函数值；（3）通过判断被试能力估计值的置信区间是否高于/低于分界分数，从而完成对被试的分类。同

时,在构造具体的终止规则时,还要考虑不同测验情境(主要包括划分的类别数以及测验的维度数)的特点。总体而言,似然比规则基于似然比检验,具有较好的理论性质,相关研究也较多。但是,该方法在多维、多分类等复杂测验情境下的拓展难度较大。贝叶斯决策理论规则通过后验概率与损失函数,完成对被试的分类判断。损失函数的多样性使得该方法的形式非常灵活,也使得该方法很容易就可以被应用于不同的测验情境中。但是,形式的灵活会不可避免地导致使用者在损失函数的选择上产生疑问,也可能会在实际应用中产生由于损失函数选取不恰当而导致的误差。置信区间方法直接将分界分数与能力估计值的置信区间进行比较,是三种方法中最简单直接的一类方法。但是,这种方法的稳健性较差,测验效率也相对较低。未来研究可以继续开发贝叶斯规则、考虑多维多类别情境或者结合反应时和机器学习算法。针对 CCT 测验的不同应用场景的实际需求,三类终止规则在合格性测验上均有应用潜力,而贝叶斯规则在临床医学问卷中更为适用。

关键词 计算机化分类测验,终止规则,似然比,贝叶斯决策理论

Who Has the Final Say in Computerized Classification Test: Three Types of Termination Rules

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Abstract: As a subset of computerized adaptive testing, computerized classification testing (CCT) aims to classify participants into two or more different categories adaptively and has been widely used in eligibility testing and clinical psychology or medical diagnosis. As a crucial part of CCT, the termination rule determines when the test is to be stopped and what category the participants are ultimately classified into, which directly affects the efficiency and accuracy of the test. According to the theory on which the termination rules are based, the existing termination rules can be divided into three types: likelihood ratio rules, Bayesian decision theory rules, and ability confidence intervals rules (ACI). Specifically, their core ideas are: (1) by pre-setting the upper and lower bound of different categories, constructing hypothesis tests and calculating likelihood ratio statistics; (2) obtaining the posterior distribution of the participant's ability by responses, and calculating the loss function value; (3) determining if the confidence interval of the participant's ability estimate includes, above, or below the cut-point, the classification of the participant is decided. At the same time, in different test situations (mainly including the number of categories and the number of items' dimensions), CCT termination rules have various specific forms. In general, the likelihood ratio rule is based on the likelihood ratio test, which has good theoretical properties, and there are many related studies. However, this method is more difficult to be extended to complex test situations such as multi-dimension and multi-category. The Bayesian decision theory rules complete the classification decision by calculating posterior probability and loss function. The diversity of the loss function makes the method very flexible and makes it easy to be applied to different test situations. However, the flexibility of the form may inevitably cause users to have questions about the choice of the loss function and may also cause an extra error due to improper loss function in practice. The ACI method directly compares the cut-off score with the ability confidence interval, so it is the simplest and most direct rule among the three methods. However, this method has poor robustness and relatively low efficiency. Future research can continue to develop Bayesian rules, consider multi-dimensional and multi-category situations, or combine response time and machine learning algorithms to construct new termination rules. In view of the actual needs of different practical situations of the CCT test, all of the three rules have application potential in the eligibility test, and the Bayesian rule is more applicable in clinical medical questionnaires.

Keywords: computerized classification testing, termination rule, likelihood ratio, Bayesian decision theory

阶段适应与融入反应时的计算机化分类测验选题策略

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摘要 计算机化分类测验（Computerized Classification Testing, CCT）的目的在于将考生划分到不同类别。如何选择题目以构建满足各方面需求的试卷一直是 CCT 的研究热点。题目曝光控制是首要面临的问题，现有基于分界分数的选题策略固定选择在分界分数处具有高信息量的题目，导致题库中大量题目浪费而高信息量题目曝光率极高。测验时间控制是亟待解决的第二个问题，目前不同考生完成测验的时间往往差异较大，且部分考生可能超时。因此本研究：（1）提出阶段适应的 CCT 选题策略（SAI），即根据当前决策需求匹配相应信息量的题目；（2）优化融入反应时的 CCT 选题策略（M-GMFCT），并结合阶段适应思想提出 timed-SAI 策略。研究一采用模拟方法考察 SAI 能否“按需分配”题目，并比较它与传统方法在题目均衡使用和分类准确性方面的表现。因此，从区间 $[-3.5, 3.5]$ 以 0.25 为步长生成 29 个考生能力点，并考虑两种测验长度（10 和 20 题）。题库大小为 500 题，分界分数取 0，权重参数取 1。每种条件重复 100 次，评价指标为：选择优先指数、题目曝光率与正确分类百分比（PCC）。结果表明：（1）能力距分界分数越近，SAI 越倾向于选择高信息量题目，反之则推荐低信息量题目；（2）传统方法中高信息量题目的曝光率接近 1，而 SAI 中大部分题目的曝光率低于 0.2；（3）在大多数情况下，SAI 的 PCC 都高于传统方法。研究二考察 M-GMFCT 与 timed-SAI 能否减小测验时长的均值与方差。为贴合实际，从 $N(0, 1)$ 中随机抽取 1000 名考生的能力。采用层次模型对作答和反应时联合建模，并设置考生能力与速度的相关 $\rho_{\theta\tau} = 0.59$ 、题目难度与时间强度的相关 $\rho_{b\beta} = 0.65$ 。敏感参数取 0.5，其余条件同研究一。每种条件重复 100 次，评价指标为：测验长度为 10 时每名考生的测验时间和 PCC 以及测验长度为 10、15 和 20 题时的题目曝光 χ^2 统计量。结果表明：（1）timed-SAI 的测验时长均值与方差最小，M-GMFCT 次之，传统方法最大；（2）M-GMFCT 与传统方法的 PCC 无显著差异；（3）timed-SAI 的 χ^2 在所有题目水平下均最低。未来研究可拓广至多维多分类测验情景、考虑条件依赖的反应时模型、分析不同类型反应时对决策判断的帮助。

关键词 计算机化分类测验，选题策略，反应时，曝光控制

Stage Adaptive and Timed Item Selection Methods for Computerized Classification Test

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Abstract: Computerized classification test is designed to divide examinees into different proficiency categories. A corollary problem is how to select items for the test to satisfy all stakeholders. One of the challenges faced by test developers is item exposure control. As CCT trends to select items with high information at the cut scores to make decisions reliable, the top informative items are under high exposure rate while the less informative ones with little chance to be used. Another issue that is pertinent for CCT is time control. It is crucial to reduce the differences between examinees' test-taking time and the number of examinees who exceed the time limitation. The objects of this study are to (1) propose the stage adaptive item selection method (SAI) for CCT, i.e., matching the current need for decision making with the rank of item information; (2) optimize the GMFIT method to CCT (M-GMFCT) and combine with the idea of stage adaptive method to introduce the timed-SAI method. Study 1 investigated the nature of the SAI and the performance in item usage as well as classification accuracy compared with the traditional method. Specifically, 29 levels of examinees' ability (from -3.5 to 3.5 by 0.25) and two levels of test length (10 and 20 items) were simulated. The item bank contained 500 items and the cut score was set at 0. The weighting parameter was set at 1. Each condition was repeated 100 times and the selected priority index, item exposure rate, and percentage of correct classifications (PCC) were computed. Results show that: (1) the new method picks the informative items when the current ability estimate are close to the cut score and recommends the less informative items otherwise; (2) the item

exposure rates of high-quality items under the traditional method are close to 1 while most of the items have lower exposure rate with the SAI method; (3) the PCCs of the SAI method, for the most part, are higher than the traditional method. Study 2 determined whether the M-GMFCT and the timed-SAI can shrink the mean and variance of the test-taking time. 1000 examinees were generated from $N(0, 1)$. The hierarchical model was used to model the response and response time. And the correlation between ability and speed was 0.59. The correlation between item difficulty and time density was 0.65. The sensitivity parameter was 0.5. The remaining conditions were the same as in study 1. Each condition was repeated 100 times and the test time and PCC were computed under length 10 when the χ^2 statistic was calculated under three levels of length (10, 15, and 20 items). Results show that: (1) the timed-SAI method holds the smallest mean and variance of test time and the M-GMFCT takes second place while the traditional one has the longest and most fluctuant test time; (2) the PCCs of the M-GMFCT and the traditional method are similar; (3) the χ^2 statistics of the timed-SAI method are at the lowest level among the others under all test lengths. Future directions may seek to further progress in extending the stage adaptive and timed item selection methods in the multidimensional and polytomous scenario and using the conditional dependent model to be more in line with the practical need and make full use of the information provided by response time.

Keywords: computerized classification test, item selection method, response time, exposure control

一种基于句向量的中文短文本主观题自动评分方法

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摘要 主观题自动评分技术在语言学习与语言测试领域诊断及信度方面具有重要的应用前景。英文主观题自动评分技术以统计分析技术为主, 而中文由于其语言的复杂性难以使用统计分析技术进行主观题的自动评分。随着自然语言处理技术的飞速发展, 中文主观题的自动评分技术正在蓬勃发展。文本较短的主观题称为短文本类的主观题, 例如概述题、简答题等, 短文本类的主观题有标准答案, 自动评分应先处理考生文字答案, 然后比较处理后文本与标准答案的相似度, 以此进行评分。在文本主题挖掘方法中, 主题模型是一种广泛应用于短文本的挖掘方法。主题模型将文本根据不同主题分类成若干集合, 使得被分类在同一集合内的所有文本共享同一主题。由于短文本主观题文本数据较少, 可能存在数据稀疏问题, 且如果不能联系上下文进行判断各种语境下的多义词, 中文的语义会造成不同程度的缺失, 影响文本语义挖掘的效果。因此本文提出 Doc-BTM 模型, 使用句向量模型解决上下文语义缺失问题。同时通过句向量模型引入主题模型, 将文本通过句向量模型进行训练后, 在句向量模型的基础上结合使用词对主题模型(biterm topic model, BTM), 通过词对主题模型缓解短文本数据稀疏的问题。本文使用复旦中文语料库进行主题建模, 将本文提出的 Doc-BTM 模型与词向量模型、词对主题模型进行聚类效果的比较。选取 K-Means 聚类算法验证模型的有效性。选用 F-measure 对处理后的短文本聚类效果进行性能评价, 将准确率、召回率、F1 作为评价指标。实验结果表明 Doc-BTM 模型的准确率、召回率、F1 相比传统基础模型有了进一步的提升。

关键词 主题模型, 句向量模型, 短文本主观题, 自动评分

An Automatic Scoring Method Based on Sentence Vectors for Subjective Questions of Chinese Short Texts

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Abstract: The automatic scoring technology of subjective questions has important application prospects in the field of language learning and language testing in terms of diagnostic information and reliability. The automatic scoring technology for English subjective questions is mainly based on statistical analysis technology, while it is difficult for Chinese to use statistical analysis technology for automatic scoring of subjective questions due to its language

complexity. With the rapid development of natural language processing technology, the automatic scoring technology of Chinese subjective questions is developing rapidly. Subjective questions with short text are called short text subjective questions, such as summary questions, short answer questions, etc. Short text subjective questions have standard answers. Automatic scoring technology should first process the students' text answers, and then compare the similarity between the processed text and the standard answers for scoring. Among text topic mining methods, topic model is a widely used short text mining method. The topic model classifies texts into several collections according to different topics, so that all texts classified in the same collection share the same topic. Since there is less text data for short text subjective questions, data sparseness may exist. And if it is not possible to judge polysemous words in various contexts in relation to the context, the semantics of Chinese will cause varying degrees of deficiency, which will affect the effect of text semantic mining. Therefore, we propose the Doc-BTM model and use the sentence vector model to solve the problem of contextual semantic lack. Then the topic model is introduced through the sentence vector model, after the text is trained through the sentence vector model, the biterm topic model (BTM) is combined with the sentence vector model to alleviate the problem of sparse short text data through the BTM. We use the Fudan Chinese Corpus for topic modeling, and compare the clustering effect of the Doc-BTM model proposed in this paper with the word vector model and the BTM. We choose K-Means clustering algorithm to verify the effectiveness of the model. F-measure is used to evaluate the performance of the short text clustering effect after processing, and the accuracy rate, recall rate, and F1 are used as evaluation indicators. The experimental results show that the accuracy, recall, and F1 of the Doc-BTM model have been further improved compared with the traditional basic model.

Keywords: topic model, sentence vector model, short text subjective questions, automatic scoring technology

4.12 社会心理专业委员会

(1) “社会心理学专业委员会”口头报告分场 1

决策者及互动同伴的社会价值取向对合作行为的影响及其机制

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摘要 合作行为普遍存在于人类社会, 对人类社会的发展尤为重要。一般而言, 它受决策者的社会价值取向的影响, 亲社会决策者比亲自我决策者有着更高的合作水平。与此同时, 合作行为的产生也会受到互动同伴社会价值取向的影响, 相较于与亲自我者互动时, 决策者与亲社会者互动时会表现出更多的合作行为。那么, 决策者社会价值取向对合作行为的影响是否会因互动同伴社会价值取向的不同而不同? 可能的中介机制为何? 目前鲜有研究进行探讨。为此, 本研究设计了 2 个实验, 采用“三重对策矩阵”筛选亲社会决策者与亲自我决策者, 考察两种社会价值取向的决策者在与亲社会、亲自我及社会价值取向未知的同伴进行公共物品游戏时的合作行为 (实验 1) 及其作用机制 (实验 2)。实验 1 结果显示, 互动同伴的社会价值取向调节了决策者社会价值取向与合作行为之间的关系: 互动同伴为亲社会者及未知社会价值取向者时, 亲社会被试的合作行为显著多于亲自我被试的合作行为; 互动同伴为亲自我者时, 亲社会与亲自我被试的合作行为不存在显著差异。实验 2 重复了实验 1 的结果, 并进一步发现: 当互动同伴为亲社会者及未知社会价值取向者时, 决策者的社会价值取向完全通过对互动同伴的合作预期影响其合作行为; 当互动同伴为亲自我者时, 合作预期在决策者社会价值取向与合作行为关系间的中介作用不复存在。这些结果弥补了现有研究的不足, 有利于更好地理解社会价值取向与合作行为的关系。

关键词 合作行为, 社会价值取向, 决策者, 互动同伴, 合作预期

Effects of Social Value Orientation of The Decision-maker and The Confederate on Cooperative Behavior and The Potential Mechanism

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Abstract: Cooperative behavior generally exists in human society, and it plays a vital role in the development of society. Generally, cooperative behavior is affected by the decision-maker's social value orientation, and Pro-Social decision-makers cooperate more than Pro-Self decision-makers. At the same time, cooperative behavior is affected by the confederate's social value orientation, and decision-makers cooperate more with Pro-Socials but not with Pro-Selfs during social interaction. So far, whether the effect of the decision-maker's social value orientation on cooperative behavior would be moderated by the confederate's social value orientation and its potential mechanism remains unknown. To address this issue, we designed two experiments. In Experiment 1, we selected Pro-Social and Pro-Self participants using "triple matrix game" firstly, and then measured these participants' cooperative behavior when they played Public Goods Game with a Pro-Social confederate, a Pro-Self confederate, and a confederate whose social value orientation was unknown. In Experiment 2, we further investigated the cognitive mechanism in the relationship between social value orientation and cooperative behavior. Results of Experiment 1 showed that the confederate's social value orientation moderated the association between decision-maker's social value orientation and cooperative behavior. Specifically, Pro-Social participants cooperated more than Pro-Self participants when they interacted with a Pro-Social confederate or a confederate with unknown social value orientation but not a Pro-Self confederate. The results of Experiment 2 replicated the result of Experiment 1, and further found that cooperative expectation for the confederate plays a mediating role in the relationships between participants' social value orientation and cooperative behavior when they interacted with a Pro-Social confederate or a confederate with unknown social value orientation but not a Pro-Self confederate. These results make up the deficiency of the existing research and shed light on better understanding the relationship between social value orientation and cooperative behavior.

Keywords: cooperative behavior, social value orientation, decision-makers, confederates, cooperative expectation

社会决策中的信息回避：利己还是利他？

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摘要 目的 （1）探究大学生在不同模糊情境（模糊自己收益或模糊对方收益）中，不同的信息取向（信息回避或信息获取）对其进行利己或利他选择的影响。（2）探究大学生社会选择倾向及信息回避的心理机制。（3）探究影响信息回避和社会决策选择的背景因素。方法 本实验分为两个部分。在实验一中，通过有偿招募的方式得到非心理学、经济学类专业大学生被试 200 名，其中男性 62 名，女性 138 名。采用改编的独裁者博弈范式，首先向被试呈现模糊对方收益的分配方案，并询问被试是否愿意知晓对方名下的具体数值。被试作出信息取向选择后，无论选择信息回避与否，都将被试随机分配到利己分配方案（自己 10、对方 5）或利他分配方案（自己 10、对方 15），每种方案下 100 人，被试在对应的分配方案作出决策。最后，完成道德认同量表和无法忍受不确定性量表。在实验二中，通过有偿招募的方式得到非心理学、经济学类专业大学生被试 200 名，其中男性 78 名，女性 122 名。同样采用改编的独裁者博弈范式，向被试呈现模糊自己收益的分配方案后，其余程序与实验一相同。结论 （1）人们在决策中，会选择信息回避行为，信息回避影响被试在社会决策中的选择。（2）在不同情境下，被试选择信息回避的目的可能是为了个人利益而“更好地利己”，也可能是为了抵抗利己的诱惑而“更好地利他”，具有情景的差异性。（3）在本研究中，被试是否选择信息回避，

和被试的不确定性容忍度没有任何关系。道德认同是影响社会决策（实验1）和信息回避行为（实验2）的一个可能的背景因素。

关键词 社会决策，独裁者游戏，信息回避，道德认同，不确定容忍度

Information Avoidance in Social Decision-making: Selfish or Altruism?

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Abstract: Objective (1) to explore the influence of different information orientation (information avoidance & Information Acquisition) on self-interest or altruistic choice of college students in different fuzzy situations. (2) To explore the psychological mechanism of College Students' social choice tendency and information avoidance. (3) Explore the background factors that influence information avoidance and social decision-making. Methods the experiment was divided into two parts. In Experiment 1, 200 non psychology and economics college students were recruited, including 62 males and 138 females. Using the changed dictator game paradigm, the participants were first presented with a fuzzy distribution scheme of each other's income and asked whether they would like to know the specific value of each other's name. After the subjects made the choice of information orientation, whether they chose information avoidance or not, they were randomly assigned to egoistic allocation scheme (self 10, opposite party 5) or altruistic allocation scheme (self 10, opposite party 15). Under each scheme, 100 participants made decisions in the corresponding allocation scheme. Finally, the scale of moral identity and the scale of intolerable uncertainty were completed. In the second experiment, 200 non psychology and economics majors were recruited, including 78 males and 122 females. In the same way, the adapted dictator game paradigm was used to present the participants with a fuzzy distribution scheme of their own benefits, and the rest procedures were the same as those in Experiment 1. Conclusion (1) people will choose information avoidance behavior in decision-making, and information avoidance affects subjects' choice in social decision-making. (2) In different situations, the purpose of information avoidance may be "better self-interest" for the sake of personal interests, or "better altruism" to resist the temptation of self-interest. (3) In this study, whether the subjects choose information avoidance or not has no relationship with the uncertainty tolerance of the subjects. Moral identity is a possible background factor affecting social decision-making (Experiment 1) and information avoidance behavior (Experiment 2).

Keywords: social decision-making, dictators game, information avoidance, moral identity, tolerance of uncertain

鱼和熊掌不可兼得：3~5 岁幼儿道德决策与自我利益的抉择

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摘要 本研究考察 3~5 岁幼儿道德决策的发展特点及自我利益在其中的作用，探究 3~5 岁幼儿在正义与利益之间的抉择，幼儿是否会牺牲个人利益来拒绝坏人，以及这种行为发展的年龄特点。本研究采用现场行为情境实验对幼儿进行测试，设置对照组和实验组，实验组先观看角色扮演视频，再观看物品选择视频，幼儿需要在好人给出的较少资源和坏人给出的较多资源间做出选择，同时设置了资源的不同比例；对照组仅观看物品选择视频，幼儿只需要在不同比例下做出资源数量的选择即可。结果显示：在对照组，幼儿确实会选择更多的物品，120 人中有 105 人，二项式检验结果显示，两种选择的差异是显著的($p < 0.001$)，各年龄组分别进行二项式检验，各年龄组均存在显著差异($p < 0.001$)。各年龄组幼儿在不同比例下的选择结果，不存在显著的年龄差异和比例上的差异 (Fisher's exact, $p = 0.892$)。在实验组，幼儿在两种选择结果上，120 人中有 69 人选择了坏人给的更多资源，二项式检验结果显示，两种选择的差异是不显著的 $p = 0.120$ ，各年龄组分别进行二项

式检验,除了3岁组中差异显著,其他年龄组差异均不显著,分析各年龄组幼儿在不同比例下的选择结果,随着年龄的发展幼儿选择更多资源的频数在两种比例下都在逐渐下降,但年龄差异不显著(Fisher's exact, $p=0.670$)。研究结论:3~5岁幼儿在不同情境下的行为决策存在显著差异,对坏人的拒绝行为存在显著的年龄差异,自我利益的比例不同,幼儿对坏人的拒绝行为存在显著的影响。当两种选择对自身利益差异不大的情况下,幼儿会做出更多的拒绝行为,即牺牲自我利益来拒绝反社会行为者,但当选择比例增大时,出于自我自利的作用,幼儿会更多的接受反社会行为者给出的资源。即幼儿已经具有对反社会行为者的厌恶,但在实际决策中,自我利益是其决策影响的一个重要因素。

关键词 幼儿,道德决策,自我利益

Not both Fish and Bear's Paw: the Choice of Moral Decision and Self-interest of 3-5-year-old Children

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Abstract: This study examines the developmental characteristics of 3-5-year-old children's moral decision-making and the role of self-interest in it. To explore the choice between justice and interest of 3-5-year-old children, whether they will sacrifice their personal interests to reject bad people, and the age characteristics of this behavior development. In this study, children were tested by scene behavior situation experiment. The control group and the experimental group were set up. The experimental group watched the role-playing video first, and then watched the item selection video. The children need to choose between the less resources given by the good people and the more resources given by the bad people. At the same time, the different proportion of resources was set. The control group only watched the item selection video, and the children only needed to make the choice of the number of resources under different proportions. The results showed that: in the control group, children did choose more items, 105 out of 120 children. The results of binomial test showed that the difference between the two choices was significant ($P < 0.001$), and there were significant differences in each age group ($P < 0.001$). There is no significant difference in age and proportion among different age groups (Fisher's exact, $p=0.892$). In the experimental group, 69 out of 120 children chose more resources given by bad people. The binomial test results showed that the difference between the two choices was not significant, $P=0.120$. The binomial test was conducted for each age group. Except for the 3-year-old group, the difference was not significant in other age groups. The results of the selection of children in different age groups were analyzed with the development of age, the frequency of children choosing more resources is gradually decreasing in both proportions, but there is no significant difference in age (Fisher's exact, $p=0.670$). Conclusion: there are significant differences in behavior decision-making of 3-5-year-old children in different situations, there are significant age differences in the refusal behavior of bad people, the proportion of self-interest is different, and children's refusal behavior to bad people has a significant impact. When there is little difference between the two choices for their own interests, children will make more refusal behaviors, that is, they will refuse antisocial actors at the expense of self-interest. However, when the proportion of choices increases, children will accept more resources given by antisocial actors for the role of self-interest. That is to say, children already have aversion to antisocial actors, but in actual decision-making, self-interest is an important factor affecting their decision-making.

Keywords: Children, Moral Decision, Self-interest

社交目标取向对消费决策风格的影响：中国与印尼的跨文化探究

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摘要 人们可能对那些激发他们在社交环境中行为的社交能力有不同的目标取向, 研究发现不同的社交目标取向预示着不同的行为反应。消费者社会化模型认为一些前因变量会通过社会化角色(如父母、同伴、媒

体等)影响社会化的过程,进而影响消费者社会化的结果。消费决策风格是消费者在作出决策时所表现出的稳定购物决策态度、习惯、倾向等心理特征。从消费者社会化的角度看,社交目标取向可作为社会化过程中形成的一种行动意图来影响消费决策风格,然而目前对社交目标取向和消费决策风格之间关系的研究还较少。此外,研究发现不同宗教信仰会影响个体的消费决策风格和目标取向,而中国与印尼在宗教信仰的人数比例上有较大差异。因此,为了探索社交目标取向与消费决策风格的关系,以及在中国、印尼两种文化间的差异,本研究使用社交目标取向量表(SAGOS)及消费者决策风格量表(CSI)测量两国共237名大学生(中国:132,印尼:105)的社交目标取向与消费决策风格,通过路径分析探究两变量之间的关系。结果表明所使用的量表在两个文化环境中的信度良好。中国被试中仅2.3%有宗教信仰;印尼被试均有宗教信仰。在两国文化中,实用主义消费风格仅受发展目标取向影响显著,社交取向消费风格受到发展目标取向和趋近目标取向的共同影响,不可取的消费风格仅受回避目标取向的影响。对比两国数据,在消费风格上,中国不可取的消费风格维度得分显著大于印尼。在社交目标取向中,中国发展目标取向维度和趋近目标取向维度得分显著大于印尼。对比两个变量的关系,中国文化中,社交取向的消费风格受趋近目标取向的影响(效应量为0.347)大于印尼文化中这一影响(效应量为0.185)。结果表明:不同的社交目标取向可以预测不同的消费决策风格,同时该效果具有跨文化的一致性,但在影响程度上存在一定差异。中国大学生较印尼大学生在消费风格上更容易冲动和困扰,同时更重视提高社交技巧和关系质量,更倾向于获得积极的社交评价和声望。

关键词 社交目标取向,消费决策风格,跨文化,宗教

The Influence of Social Goal-Orientation on Consumer Decision-Making Style: A Cross-Cultural Exploration of China and Indonesia

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Abstract: People may have different goal orientations toward social competence that motivate their behavior in social settings. Research has found that different social goal orientations indicate different behavioral responses. The consumer socialization model postulated that some antecedent variables affected socialization processes via socialization agents (such as parents, peers, media, etc.). Then these socialization processes, in turn, affected consumer socialization outcomes. Consumer decision-making styles referred to the psychological characteristics of stable shopping decision-making attitudes, habits, and tendencies shown by consumers when making decisions. From the perspective of consumer socialization, social goal orientation could be used as an action intention formed in the socialization processes to influence consumer decision-making styles. However, there are few researches on the relationship between social goal orientation and consumer decision-making styles. In addition, some research found that different religious beliefs affected the individual's consumer decision-making styles and goal orientation, and the proportion of religious beliefs in China and Indonesia was quite different. Therefore, in order to explore the relationship between social goal orientation and consumer decision-making styles, as well as the differences between the two cultures of China and Indonesia, this study used the Social Goal Orientation Survey (SAGOS) and Consumer Style Inventory (CSI) to measure the social goal orientation and consumer decision-making styles of 237 students (China: 132, Indonesia: 105). We explored the relationship between the two variables through path analysis. The results showed that the scales we used had good reliability in the two culture. Only 2.3% of Chinese participants had religious beliefs; while Indonesian participants all had religious beliefs. In both cultures, utilitarian consumer styles were only significantly influenced by social developing goals, social/conspicuous consumer styles were influenced by social developing goals and social demonstration-approach goals, and the undesirable consumer styles were only affected by social demonstration-avoidance goals. Comparing the data of the two countries, in terms of consumer decision-making styles, Chinese undesirable consumer styles dimension score was significantly higher than that of Indonesia. In the social goal-orientation, the scores of Chinese social developing goal orientation dimension and social demonstration-approach goal dimension were significantly higher than those of Indonesia. Comparing the

relationship between the two variables, in Chinese culture, the influence of social demonstration-approach goal on social/conspicuous consumer decision-making styles was greater (with the effect size of 0.347) than in Indonesian culture (with the effect size of 0.185). The results indicate that different social goal-orientations could predict different consumer decision-making styles, and the effect has cross-cultural consistency, with only a certain difference in the degree of this predictive effect. Chinese students are more likely to be impulsive and confused in their consumer decision-making styles than Indonesian students, and they pay more attention to improve social skills and relationship quality and are more inclined to gain positive social evaluation and prestige.

Keywords: social goal orientation, consumer decision-making styles, cross-culture, religion

社会比较和自我肯定策略对正性负性情绪的影响

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摘要 个体天然的具有社会属性, 不可避免的会进行社会比较, 从而获得自我概念的完整性。心理资源理论认为, 一定时间内个体的心理资源是有限的, 如前项任务消耗了资源, 那么可用于后项任务的资源便会减少。积极正性的情绪作为一种重要的心理资源, 是个体从事各类活动的关键影响因素。因此探究社会比较对正性负性情绪的影响意义重大。个体进行社会比较的结果, 受到个体如何看待社会比较信息, 以及个体如何认知自己与比较对象的关系。其中, 向上社会比较就是个体和一个比自己更好的对象进行比较, 向下社会比较就是个体和一个比自己更差的对象进行比较; 个体认为自己与比较对象的关系是相似还是相反。自我肯定理论认为, 当个体面临潜在威胁时, 通过肯定个体与威胁领域无关的重要价值, 达到自我整体性, 进而拥有更多的心理资源。自我肯定策略可以帮助个体缓解在社会比较中产生的威胁效应。但特质肯定和价值肯定策略的有效性, 还没有稳定的结果, 有待进一步探索。实验采用双因素被试间设计, 探究社会比较方向(向上比较组、向下比较组、控制组)和自我肯定策略(特质肯定、价值肯定、控制组)的使用, 对正性负性情绪的影响。被试被随机要求与模拟智力测验成绩排名前10%或者与排名最后10%的人相比, 然后测量其正性负性情绪。结果发现, 自我肯定策略对正性、负性情绪的影响, 表现出显著性差异; 社会比较方向和自我肯定策略, 在正性情绪上表现出交互作用显著。社会比较方向和自我肯定策略的使用对正性负性情绪的影响, 表现出显著的性别差异。结果表明自我肯定策略的使用, 可以有效地应对社会比较后产生的负性情绪, 帮助个体平复情绪波动。在日常生活中应该重视自我肯定策略的使用和推广。

关键词 社会比较, 自我肯定, 正性负性情绪

The influence of social comparison and self-affirmation strategies on positive and negative emotions

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Abstract: Individuals with natural social attributes inevitably carry out social comparison, so as to obtain the integrity of self-concept. According to the theory of psychological resources, the individual's psychological resources are limited in a certain period of time. If the former task consumes resources, the resources available for the latter task will be reduced. Positive emotion, as an important psychological resource, is the key factor for individuals to engage in various activities. Therefore, it is of great significance to explore the impact of social comparison on positive and negative emotions. The result of social comparison depends on how the individual views the information of social comparison, for example, he tends to compare with better objects or worse objects than himself; And whether the individual's cognition of the social comparison object is similar or opposite. The theory of self-affirmation holds that when an individual is faced with potential threats, he can achieve the integrity of self-concept and have more

psychological resources by affirming his important value which has nothing to do with the threat field. Self-affirmation strategies can help individuals alleviate the threat effect in social comparison. However, the effectiveness of the two strategies is not stable. Therefore, further study is needed. The experiment is a between-groups design, which have two factors. This study explored the influence of social comparison direction (upward comparison group, downward comparison group, control group) and self-affirmation strategy (trait affirmation, value affirmation, control group) on positive and negative emotions. The subjects were randomly asked to compare with the top 10% or the bottom 10% of the simulated intelligence test scores, and then measured their positive and negative emotions. The results showed that there were significant differences in the effects of self-affirmation strategies on positive and negative emotions; Social comparison direction and self-affirmation strategy showed significant interaction in positive emotion. There are significant gender differences in the effects of social comparison direction and self-affirmation strategy on positive and negative emotions. The results show that the use of self-affirmation strategy can effectively deal with the negative emotions generated by social comparison, and help individuals to calm the emotional fluctuations. In daily life, we should pay attention to the use and promotion of self-affirmation strategy.

Keywords: Social comparison, self-affirmation, positive and negative emotions

(2) “社会心理学专业委员会”口头报告分场 2

结伴购物与冲动消费的关系：同伴类型与自我控制的作用

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摘 要 在当前消费环境下, 结伴购物已成为线下购物的主要形式, 而同伴在购物过程中并非是某人出现在购物场景中, 而是通过影响消费者情绪、提供意见、情感支持、减少风险感知等方式, 改变消费者的消费行为。冲动消费是个体在无准备无计划的情况下, 受到外界促发而产生的消费行为。冲动消费受到营销刺激、个体因素以及情境因素共同影响, 因而关注结伴购物、明确同伴的参与下对购物者冲动消费意愿的影响是十分重要的。本研究选取 150 名大学生作为研究对象, 通过 3 个实验探究了购物情境、自我控制能力、同伴类型及购物者性别对冲动消费意愿的影响。结果表明: (1) 个体冲动消费意愿在不同购物情境中存在显著差异。与独自购物相比, 结伴购物情境下, 被试的冲动消费意愿显著更高。(2) 冲动消费意愿在不同自我控制能力个体间存在显著差异; 在购物情境与冲动消费意愿间调节作用显著, 自我控制能力调节了购物情境和冲动消费意愿的关系。结伴购物情境下, 低控组个体的冲动消费意愿显著高于高控组。(3) 结伴购物情境下, 个体冲动消费意愿在同伴类型的不同水平上存在显著差异, 同伴类型中的辈分关系及同伴性别交互作用显著。当陪同者为朋辈时, 购物者冲动消费意愿更高; 陪同者为男性, 购物者冲动消费意愿更高; 相对于男性长辈, 男性朋辈陪同下, 个体冲动消费意愿更高; 女性陪同者的辈分关系在个体冲动消费意愿上没有显著差异。(4) 被试性别在同伴类型与个体冲动消费意愿的关系上存在显著的调节作用, 与男性长辈相比, 个体性别在男性同辈水平上调节作用显著, 在女性朋辈及女性长辈水平上不显著。

关键词 冲动消费, 结伴购物, 自我控制, 性别差异

The Relationship Between Group Shopping and Impulsive Consumption: The Role of Peer-type and Self-control

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Abstract: In the current consumption environment, shopping in partnership has become the main form of offline shopping. However, in the process of shopping, peers do not appear in the shopping scene but change consumers' consumption behavior by influencing consumers' emotions, providing opinions, emotional support, and reducing risk perception. Impulse consumption is a kind of consumption behavior that is promoted by the outside world without preparation and plan. Impulsive consumption is influenced by marketing stimulation, individual factors, and situational factors. Therefore, it is very important to pay attention to the influence of partner shopping and peer participation on consumers' impulse consumption intention. In this study, 150 college students were selected as the research object, and three experiments were conducted to explore the influence of shopping situation, self-control ability, peer type and shopper's gender on impulse consumption intention. The results show that: (1) there are significant differences in individual impulse consumption intention in different shopping situations. Compared with shopping alone, the impulsive consumption intention of the participants in group shopping was significantly higher. (2) There are significant differences between individuals with different self-control ability in impulse consumption intention; there is a significant moderating effect between shopping situation and impulse consumption intention, and self-control ability regulates the relationship between shopping situation and impulse consumption intention. In the context of group shopping, the impulse consumption intention of low control group was significantly higher than that of high control group. (3) In the context of group shopping, there are significant differences in individual impulse consumption intention at different levels of peer types, and there is significant interaction between generation relationship and peer gender in peer type. When the accompanying person is a peer, the shopper's impulse consumption intention is higher; when the accompanying person is a male, the shopper's impulse consumption intention is higher; compared with the male elder, the individual impulse consumption intention is higher when accompanied by male peer; there is no significant difference in the generation relationship of female escort on individual impulse consumption intention. (4) Compared with male elders, individual gender has a significant moderating effect on the relationship between peer type and individual impulse consumption intention. Compared with male elders, individual gender has a significant moderating effect on a male peer level, but not on female peer and female elder level.

Keywords: Impulsive consumption, Shopping together, Self-control, Gender differences

理性的社会惰性

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摘要 社会惰性（social loafing）是指个体在群体中工作不如单独一个人工作时努力的倾向。社会惰性广泛存在，并被大多数社会心理学家认为是一种“社会疾病”。但果真如此吗？在群体任务中适当降低个人付出是否是种理性行为？本研究利用信号检测论作为分析工具，对群体任务中的个人表现进行建模，通过计算机模拟研究个体在同时进行群体任务与个人任务时的注意分配策略，定义在个人任务上注意分配过高的策略为社会惰性策略（简称惰性策略），反之为非惰性策略，称选择惰性策略的人有惰性倾向。与前人的研究结果不同，模拟结果表明，群体越大，个人的惰性策略需视其他任务参数而定，两者之间不存在一个简单的线性关系（即群体越大，社会惰性越强）。最佳的注意分配策略由个人能力、群体大小、其他人的惰性策略，以及任务回报等多方面因素决定。具体表现为：（1）群体中只有一名成员有惰性倾向时，无论其他成员能力比该成员强还是弱，选择惰性策略皆可使该成员个人收益达到最高；（2）群体中除一名成员外的其他成员有惰性

倾向时, 该成员应选择惰性策略使个人收益达到最高; (3) 群体中所有成员有同样的惰性倾向时, 当群体中各成员能力较弱时, 所有成员都选择非惰性策略可使个人收益达到最高, 其他情况下所有成员都选择惰性策略可使个人收益达到最高。本研究针对群体大小 (3 和 9 人) 及群体内其他成员的惰性策略 (其他人没有惰性倾向和所有成员具有同样的惰性倾向) 进行了试验研究。结果表明, 被试的惰性策略会随他人所采用的策略而变化; 而且, 随着群体变大, 被试会调整自身的惰性策略, 并不是一味的增强惰性倾向。这些变化的趋势与模拟结果一致, 是追求利益最大化的个体应该表现出的趋势。本研究的结果表明: 社会惰性是人们对所处复杂任务环境的适应性反应, 适度的惰性可以是理性的。

关键词 社会惰性 信号检测论 注意分配 生态理性

The Rationality of Social Loafing

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Abstract: Social loafing is a phenomenon in which a person exerts less effort when the person works in groups than when working alone. Social loafing exists widely and is considered by most social psychologists as a "social disease". But is this really the case? Can some degree of loafing be a rational act? To find out, we used signal detection theory to model individual behavior in a dual-task context, in which a person is asked to engage in two decision-making tasks simultaneously, one individual and the other group. Social loafing is defined as allocating too much attention (usually more than 50%) to the individual task. Different from previous findings, our simulation results show that group size and loafing tendency are not always linearly related (i.e. the larger the group, the more the loafing). The optimal amount of loafing depends on group members' abilities, members' loafing tendencies, group size, and task payoffs. Specifically, 1) when only one member can loaf, the person should loaf to maximize total payoff; 2) when other members of the group are loafing, the remaining person should also loaf; and 3) when all members of the group loaf to the same extent, if their abilities are relatively low, the rational choice is not to loaf; otherwise, loaf. After the simulations, we conducted an experiment to examine participants' loafing tendencies in tasks distinguished by two factors: group size (3 or 9) and the loafing tendencies of other, computer-simulated members (not loafing or loafing to the same extent as the participant). The results showed that participants loafed to different extents in response to the loafing tendencies of others, and with the increase of group size, participants adjusted their loafing strategies flexibly and did not always increase their loafing tendencies. The observed pattern of loafing behaviors is consistent with our simulation results, suggesting that participants could adjust their loafing strategies in the same directions as a payoff-maximizing, rational person would do. In sum, our study shows that social loafing is our mind's adaptive response to complex task environments and that some degree of loafing is a rational strategy in many task environments.

Keywords: social loafing, signal detection theory, attention allocation, ecological rationality

贫富差距下的躁动

——社会阶层和经济不平等如何影响人们的财富和地位追求

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摘要 社会阶层影响了人们的感知、目标和价值观, 而经济不平等影响了人们的态度和行为。基于社会身份认同理论, 本文开展的一系列前期研究显示, 当一个人的社会阶层越高, 其对于财富和地位的追求渴望也越大。基于新物质主义理论和地位焦虑理论, 本文进一步探索了经济不平等是如何影响人们的财富和地位追求。研究 1 和 2 采用了“虚拟社会”实验范式, 直接操纵被试感知到的经济不平等水平, 并测量了被试对于财富和地位的追求渴望。结果显示, 相比处在“经济平等”组的被试, 处在“经济不平等”组的被试报告了更高财

富和地位渴望。研究 3 使用跨文化样本, 通过多层线性回归模型分析, 发现社会层面的经济不平等水平(通过“基尼系数”测量)与个体层面的财富和地位追求渴望(通过人们对于“追求更多财富和地位”这一价值观的认同程度测量)呈现显著正相关。此外, 本文还发现社会阶层对于“经济不平等—财富和地位追求”的关联具有调节作用。具体而言, 较低社会阶层人士, 其追求更多财富和地位的渴望, 受到经济不平等程度的影响更大。总体而言, 这些研究结果揭示了经济不平等在追求动机层面的社会心理影响。本文进而探讨了这种影响的后果, 如贫富差距与物质主义和拜金主义的关系、贫富差距加剧了社会躁动不安、影响社会和谐稳定等, 并为如何缓解这些社会躁动、鼓励良性社会竞争提供了思路和建议。

关键词 社会阶层, 经济不平等, 财富追求, 地位追求

Restless in an unequal world: How social class and economic inequality affect people's desire for wealth and status

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Abstract: Social class influences people's goals, values, and perceptions, while economic inequality affects people's attitudes and behaviors. Building on the social identity theorizing, the present research has found in a set of preliminary studies that higher social class is associated with a greater desire for wealth and status. Building on the neo-material and the status anxiety perspectives, the present research has further investigated whether and how economic inequality might influence people's attitude towards wealth and status. Using experimental designs, Studies 1 and 2 has shown that people in the high inequality condition reported a greater desire to have more wealth and status than those in the low inequality condition. In a large-scale cross-cultural sample, Study 3 has shown that economic inequality at the societal level is associated with a greater desire for both wealth and status as well. Moreover, further analyses have shown that the effect of inequality on desire varies as a function of social class. Particularly, the “greater inequality—heightened desire” relationship was stronger among lower- than upper-class individuals. In summary, these findings reveal the socio-psychological consequences of economic inequality. The present research further discusses the impacts of the relationship on materialism, social restlessness, and social stability, and offers insights into alleviating social restlessness and encouraging healthy social competition.

Keywords: Social class, Economic inequality, Desire for wealth, Desire for status

面孔吸引力对赠礼行为意愿及其礼物价格估计的影响机制

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摘要 面孔吸引力对个体的社会活动有着深远的影响。目前已有研究发现面孔吸引力对于社会经济和人际交往等方面有着明显的美貌溢价效应。作为一种常见的社会活动, 赠送行为反映着人际关系的互动过程, 然而, 面孔吸引力如何对赠送行为及其选择产生影响仍缺乏相关实证研究。本研究通过 2 个实验分别从收礼者和送礼者的角度, 基于情景模拟实验向被试呈现高低吸引力和不同性别的面孔, 以研究面孔吸引力和面孔性别如何影响赠送行为。实验 1 探讨被试作为赠送行为的收礼者时送礼者的面孔吸引力和性别对礼物估价的影响, 结果发现, 当送礼者为高面孔吸引力时, 作为收礼者的被试对礼物估价明显更高。同时, 被试在面对高吸引力面孔时更偏好女性面孔并对其赠送的礼物有更高的估价; 但这种效应在低面孔吸引力送礼者上消失。实验 2 在首次礼物赠予情境下, 探讨被试作为送礼者时, 收礼者的面孔吸引力和性别对赠送不同价位礼物意愿的影响。结果发现, 当被试作为送礼者时, 同样表现出收礼者的面孔吸引力和性别的交互效应, 即对高吸引力女性面孔赠送高/中/低价格礼物的意愿都明显高于低吸引力面孔。进一步对不同性别和吸引力的面孔的社会距离进行评定, 结果发现收礼者的面孔吸引力能够通过社会距离间接影响送礼者赠送高/中/低价格礼物的意

愿。收礼者面孔吸引力越高,则送礼者感知到与其的社会距离越小,赠送礼物的意愿就越高。本研究从送礼者和收礼者的主体角度初步探讨影响赠送行为的相关因素,进一步证实了送礼行为中的美貌溢价效应。

关键词 面孔吸引力, 性别, 赠礼行为意愿, 社会距离, 礼物估价

The psychological mechanism of facial attractiveness on willingness of gift behavior and gift price estimation

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Abstract: Facial attractiveness has a profound effect on individual social activities. At present, previous studies have found that facial attraction has an obvious beauty premium effect on social economy and interpersonal communication. As a common social activity, gift-giving behavior reflects the interactive process of interpersonal relationship. However, there is still a lack of relevant empirical research on how facial attraction affects gift-giving behavior and its choice. The present study adopted two scenario simulation experiments which from the perspective of the recipient and the giver, respectively, and further discuss how facial attractiveness and face gender affect the gift-giving behavior. Experiment 1 explored the influence of the facial attractiveness and facial gender of the giver on the gift evaluation when the participants were the recipients. The results showed that when the giver had high facial attractiveness, the participants had significantly higher gift evaluation. At the same time, when facing high attractive faces, participants prefer female faces and have a higher evaluation of their gifts. But this effect was absent in gift givers with low facial attractiveness. In Experiment 2, under the first gift giving situation, the effects of the recipient's facial attractiveness and facial gender on the willingness to give gifts at different prices were discussed. The results show that the participants' willingness of giving high, medium, and low price gifts to high attractive female faces was significantly higher than that of low attractive faces. Furthermore, we also found the facial attractiveness of the recipient can indirectly affect the willingness of the giver to give high, medium and low price gifts, which showed a significant mediation effect of "facial attractiveness" → "perceived social distance" → "the willingness of gift-giving". That is, the more attractive the recipient's face was, the less social distance the giver perceived, and the more willing the giver was to give gifts at high, medium and low prices. Our present study preliminarily discusses the relevant factors affecting gift giving behavior from the perspective of the giver and recipient, and provided further evidence to the beauty premium effect in gift giving behavior.

Keywords: Facial attractiveness, Gender, Gift-giving willingness, Social distance, Gift price estimation

(3) “社会心理学专业委员会”口头报告分场3

道德阈限模型具有跨文化一致性:来自中国集体主义文化的证据

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摘要 研究背景: 人们选择行动, 使他们能够保持自己的道德自我关注。但是, 道德行为到底是如何转化为道德自我关注的呢? 西方学者基于已有研究提出了道德阈限模型(Moral Threshold Model)用于解释道德行为到底是如何转化为道德自我关注并基于 WEIRD 样本(西方-受教育-工业化-富裕-个人主义文化的样本)验证了该模型的解释效力(Zlatev, Kupor, Laurin & Miller, 2020)。然而, 道德阈值模型是否具有跨文化适用于的普遍性尚不得而知? 方法和材料: 基于上述问题, 本研究开展了两个单因素被试间实验, 共计招募了 1804 名中国被试来检验道德阈限模型的两个核心假设。实验采用风险情境背景下的金钱投资任务对两个核心假设进行跨文化的检验。研究结果: (1) 当受益人是需要帮助的人而不是自己时, 人们对小的有保证的积极结果

表现出更强的偏好，而不是大的不确定的结果；（2）人们在为慈善机构做决策时，相对于只为自己做决策时，对最大潜在利益的大小不那么敏感。研究结论：本研究为中国集体主义文化中的道德阈限模型提供了支持证据。研究结果表明道德阈限模型具有跨文化一致性，能够用于解释道德行为到底是如何转化为道德自我关注的内在心理机制。

关键词 道德自我，道德阈限模型，集体主义文化

Moral Threshold Model is Universal: The evidence from China's collectivist culture

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Abstract: Background: People select actions that allow them to maintain their moral self-regard. The moral threshold model was put forward to explain how moral actions translate into moral self-regard by scholars with the WEIRD sample (Zlatev, Kuper, Laurin, & Miller, 2020). However, whether the moral threshold model applies as a human universal is still unknown? Materials and methods: In two studies, a total of 1804 participants under China's collectivist culture were recruited to test the two main hypotheses of the moral threshold model. The test context was set as a hypothetical monetary investment task. Results: The results showed a stronger preference for smaller guaranteed positive outcomes over larger uncertain ones when the beneficiary was a prosocial cause than when it was. Moreover, people's decisions were less sensitive to the maximum potential benefit when making decisions for a charity than when making decisions exclusively for themselves. Conclusion: The current study provided evidence for the moral threshold model among China's collectivist culture, which indicated that the moral threshold model could be applying as a human universal.

Keywords: moral self-regard, moral threshold model, morality, collectivist culture

道德者何以幸福？——关于实现论身份中介作用机制的探讨

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摘要 幸福一直是积极心理学研究的热点，大众观点常认为道德者更幸福。关于幸福的研究有两种主要的理论观点：享乐论和实现论。道德身份虽然在概念和实证上均与实现论幸福密切联系，但也存在关于道德身份和享乐论幸福（主观幸福感）联系的证据。现有研究的局限在于对道德身份与两种幸福感的联系关注不够，并缺少对道德身份促进幸福机制的探讨。本研究提出，在成人初期，实现论的幸福感反映了实现论身份的功能完善，道德身份可能通过实现者身份的功能的完善促进主观幸福感。道德身份的内化（有）和符号化维度（做）均可通过该机制促进主观幸福感。研究收集了成人初期416名在校大学生的调查数据，被调查者完成了道德身份中心性问卷，主观幸福感和实现论幸福感的测量。结果证实了研究的假设：实现论幸福在道德身份和主观幸福感之间起着完全中介的作用。道德身份的“有”和“做”两方面均通过实现论身份的中介促进主观幸福感。研究讨论了道德身份与两种幸福观点的关系，虽然幸福的研究认为享乐论幸福和实现论幸福是两种并行的观点，但在身份发展的特定时期，道德身份的对幸福感促进的作用主要体现在实现身份的功能完善上，某种程度上主观幸福感是实现论身份所带来的间接收益。道德身份作为实现论身份的一个重要方面，对于幸福的发展和促进起重要作用。

关键词 道德身份，主观幸福感，实现幸福感，成人初期，中介作用

How is “Having” and “Doing” of Moral Identity Linked to Subjective Well-being? The Mediating Role of Eudaimonia Identity in Emerging Adults

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Abstract: Moral identity can be useful in improving human well-being, but researches payed little attention to the relationship between moral identity and two different well-being perspective: hedonia and eudaimonia. Current study proposed that eudaimonia identity can be a critical mechanism that function as mediation between moral identity and subjective well-being in emerging adults. Two subdimensions of moral identity: internalization and symbolization, usually be thought as the “having” and “doing” side of the moral self, both can promote subjective well-being from the proposed mediation mechanism. We examined 416 emerging adult participants, who completed the Self-importance of Moral Identity, the Satisfaction with Life Scale, Scale of Positive and Negative Experience, and the Questionnaire for Eudaimonic Well-being. The result from the investigate data confirmed our hypothesis. The eudaimonia identity played as complete mediation between moral identity and subjective well-being. Two subdimensions of moral identity, internalization and symbolization, both promoted subjective well-being from the mediation mechanism of eudaimonia identity function. We discussed this finding’s implication with moral identity, eudaimonia and hedonia research.

Keywords: Moral identity, Subjective well-being, Eudaimonia well-being, emerging adults, mediation effect

同情增加第三方惩罚：对以往研究的两个补充

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摘要 第三方惩罚(Third-Party Punishment, TPP)一般是指个体作为旁观者观察到违反社会规范的行为，愿意牺牲自我利益来惩罚违规者。以往大量研究表明，在不公平的情境且无法直接帮助受害者的情况下，个体的同情会增加第三方惩罚。本研究主要对情境中不公平的程度进行分类，在不同程度的不公平情境中研究同情对第三方惩罚的影响。此外，有研究者提出随着不公平程度的增加，惩罚成本也将随之增加。因此，我们认为在特定的不公平情境下，惩罚成本可能会影响同情与第三方惩罚之间的关系。研究1采用2（同情：高同情、低同情）*3（不公平程度：低不公平、中等不公平、高度不公平）的被试间实验设计。发现只有在中等程度不公平的情境下，高同情组的第三方惩罚显著高于低同情组。此外，道德愤怒在同情增加第三方惩罚的过程中起到了调节作用。研究2基于高度不公平情境，采用2（同情：高同情、低同情）*3（惩罚成本：低惩罚成本、中等惩罚成本、高惩罚成本）的被试间实验设计。数据分析发现，在低、中程度的惩罚成本中，同情通过道德愤怒增加第三方惩罚。结果表明，同情只能在中等程度不公平的情境下，增加第三方惩罚；与此同时随着不公平情境的增加，个体的第三方惩罚行为不会随之增加的一个重要因素是惩罚成本。

关键词 同情，第三方惩罚，不公平情境，惩罚成本，道德愤怒

Compassion magnifies third-party punishment: Two additions to previous research

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Abstract: Third-party punishment (TPP) generally refers to the behavior that individuals punish violators at the expense of self-interest when the violation of social norms has nothing to do with their own interests. Previous studies

have provided overwhelming evidence that compassion magnifies third-party punishment in an unjust situation where the individual cannot directly help the victim. With the present contribution, we predominantly focus on classifying the levels of unjust situations to further examine how compassion influences third-party punishment at different levels of unjust situations. Besides, as the degree of injustice increases, the punishment cost will also increase. We consider the punishment cost may influence the relationship between compassion and third-party punishment in a specific unjust situation. The study 1 adopted an inter-subject design of 2 (compassion: high compassion vs. low compassion)*3 (degree of unjust: low unjust vs. medium unjust vs. high unjust), and found that the degree of third-party punishment in the high compassion group was significantly higher than in the low compassion group which only occurred in the medium level of unjust situations. And moral rage plays a mediating role during the magnificent of third-party punishment by compassion. The study 2 adopted an inter-subject design of 2 (compassion: high compassion vs. low compassion)*3 (penalty cost: low penalty cost vs. medium penalty cost vs. high penalty cost) in a highly unfair situation, and observed that compassion increased third-party punishment through moral rage only in the condition of low and medium punishment cost. Our results showed that compassion increased third-party punishment through moral rage only in the medium unjust situation; And in the high unjust situation, punishment cost is an important factor which resulted in that compassion does not increase third party punishment.

Keywords: compassion, third-party punishment, unjust situation, punishment cost, moral rage

洗尽铅华归本真——身体清洁对道德行为及意图的影响

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摘要 清洁与道德之间存在着紧密的隐喻联系，研究者们认为，身体清洁会使个体将自身视为更加纯洁的存在，由此影响个体的道德行为及判断，但研究结论并不统一。本研究假设，身体清洁的具身体验激活了清洁与道德间的隐喻联结，进而易化了个体对道德事件的加工，并且这种易化的方向是促进道德行为与意图的更真实表达。具体而言，实验 1a 首先将道德表现区分为意图与行为两个维度，通过问卷测量被试的作弊行为及未来道德意图。结果发现：相较于控制组，身体清洁（洗澡）显著影响了被试的道德行为及意图之间的关系，即那些拥有更多作弊行为的被试报告了更高的不道德意图，表现出道德一致性效应。实验 1b 采用相同的测量方式，调换了行为与意图的测量顺序，先测量意图后测量行为，结果与实验 1a 相一致，即相较于控制组，身体清洁显著影响了被试的道德行为与意图之间的关系，但是，方向相反：即那些报告了更低的不道德意图的被试进行了更多的作弊行为，表现出道德许可效应。这些效应在控制组均不存在。上述结果提示，身体清洁易化了个体对自身道德行为与意图之间联系的加工。实验 2 人为操纵被试的道德表现，强制要求被试将自己描述为一个道德或不道德的人，探究清洁操纵是否会影响不同道德自我启动对不道德意图的作用，结果发现：控制组中，不道德启动相较于道德启动表达了更不道德的意图，而身体清洁组中则不存在这种差异，表明，身体清洁组被试的道德意图更不容易受到实验者外部强加的道德启动的影响。基于以上结果，我们认为，身体清洁可以易化个体对道德事件信息的加工，使个体能够更好地利用自身真实经验做出判断，并排除外在因素的影响。

关键词 具身认知 物理清洁 道德 概念隐喻理论

Wash away the dirt to see the real thing: The effect of physical cleansing on moral behavior and intention

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Abstract: There is a strong metaphorical link between cleanliness and morality. Researchers have suggested that physical cleansing causes individuals to perceive themselves as purer beings, which in turn influences their moral

behavior and judgments, but their findings are inconsistent. In this study, we hypothesized that the embodied experience of physical cleanliness activates the metaphorical connection between cleanliness and morality, thus facilitating individuals' processing of moral events in the direction of promoting more authentic expressions of moral actions and intentions. To be specific, in experiment 1A, moral performance was divided into two dimensions: intention and action, and participants' cheating behavior and future moral intention were measured through a questionnaire. Results: Compared to the control group, physical cleansing (bathing) significantly affected the relationship between moral behavior and intention, i.e., participants who cheated more reported higher unethical intentions, showing the moral consistency effect. In experiment 1B, the same measurement method was used and we change the measurement order of behavior and intention. The intention was measured first and then the behavior was measured. The results were consistent with experiment 1A, that is, compared with the control group, physical cleanliness significantly affected the relationship between the moral behavior and intention of the subjects, but in the opposite direction: Those who reported lower unethical intentions engaged in more cheating, showing the moral licensing effect. None of these effects existed in the control group. These results suggest that physical cleanliness facilitates individuals' processing of the relationship between moral behavior and intention. In experiment 2, participants were forced to describe themselves as moral or immoral to manipulate their moral performance. In the control group, the unethical priming expressed more unethical intentions than the moral priming, but this difference was not found in the clean group, suggesting that the moral intentions of the clean group were less susceptible to the externally imposed moral priming of the experimenter. Based on the above results, we believe that physical cleanliness can facilitate individuals' processing of moral event information, enabling individuals to make better use of their own real experience to make judgments and eliminating the influence of external factors.

Keywords: embodied cognition, physical cleansing, moral, conceptual metaphor theory

低权力感增加道德规范敏感性：来自 fNIRS 的证据

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摘要 传统的道德困境判断使得人们不得不在“功利论和道义论”之间做选择，这忽视了个体的第三种选择“不行动偏好”（偏好论）。而 CNI 参数可以区分出个体的道德困境判断是由功利论倾向(C 参数)、道义论倾向(N 参数)还是不行动偏好(I 参数)所引起的。Gawronski 和 Brannon(2020)等人的研究发现相较于提高权力感，降低个体的权力感仅促使被试产生更高的道德规范敏感性(N 参数)。但这一研究未能厘清不同权力感水平对个体道德规范敏感性的影响是由于高权力感降低了道德规范敏感性，还是低权力感增加了道德规范敏感性。为进一步探究高低权力感道德规范敏感性的差异来源，这一研究首先增设控制组探究高低权力感对道德困境判断的影响。其次，权力感对道德困境判断的影响缺乏认知神经层面的研究。因此，这一研究采用近红外(fNIRS)设备测量不同权力感状态下的个体在进行道德困境判断时的大脑血氧变化情况以提供相应神经指标。最后，本研究认为控制感和秩序需求在权力感与规范敏感性之间起到链式中介作用，支持补偿控制理论。这一研究通过三个实验表明：与高权力感个体相比，低权力感增强了个体的道德规范敏感性(N 参数)且伴随腹内侧前额叶(vmPFC)的显著激活。低权力感通过降低控制感，进而增加秩序需求，最终增加道德规范敏感性(N 参数)，为补偿性控制理论提供了实证依据。

关键词 权力感，道德困境判断，CNI，功能性近红外光谱成像技术

Low Sense of Power Increases the Sensitivity to Moral Norms: Evidence from fNIRS

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Abstract: The traditional view is that individuals' judgments of moral dilemmas are "either utilitarian or deontological". However, CNI parameters can further distinguish whether moral dilemma judgement is caused by utilitarian tendencies (C parameter), deontological tendency (N parameter), or inaction preference (I parameter). Gawronski and Brannon (2020) investigated the influence of sense of power on moral dilemma judgment based on CNI and found that reducing individual sense of power can promote subjects to have higher sensitivity to moral norms (N parameter) than increasing sense of power. But this finding does not say whether a high sense of power reduces sensitivity to moral norms or whether low sense of power increases it. In order to further clarify the sources of differences in sensitivity to moral norms of high and low sense of power, a control group was first added to explore the influence of high and low sense of power on moral dilemma judgment. Secondly, a large number of researchers have devoted themselves to exploring the neural mechanism of moral dilemma judgment, but the study of moral dilemma judgment by sense of power still remains at the behavioral level. Therefore, this study used near-infrared (fNIRS) equipment to measure the changes of cerebral blood oxygen in individuals with different sense of power when making moral dilemma judgment, so as to provide neural indicators for the influence of sense of power on moral dilemma judgment. Based on the compensation control theory, this study finally explored the internal psychological mechanism of the influence of the sense of power on the moral dilemma judgment. In this study, we concluded that: Low sense of power enhanced individuals' sensitivity to moral norms (N parameter), accompanied by significant activation of vmPFC. And low sense of power increases the need for structure by reducing the sense of control, and ultimately increases the sensitivity to moral norms (N parameter), providing an empirical basis for compensatory control theory.

Keywords: sense of power, moral dilemma judgement, CNI, functional near-infrared spectroscopy (fNIRS)

(4) “社会心理学专业委员会”口头报告分场 4

第三方惩罚的情绪动机：群体偏差和情绪调节的作用

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摘要 作为旁观者去付出代价惩罚不公平的第三方惩罚行为，是维护社会规范的重要的利他行为，然而很多研究都发现第三方惩罚中存在群体偏差，且其内在机制并不明晰。本研究采用三个实验，探讨了第三方惩罚及其群体偏差的情绪动机以及个体情绪调节发挥的作用。在报名时首先测量被试的情绪调节策略（偏向表达抑制还是认知重评），然后让被试参与线上互动游戏。被试作为第三方旁观者，看到分配者和接受者之间的分配结果（公平或者不公平）后，报告当下的多种情绪，然后自主决定付出一定代价去惩罚分配者（付出1个单位可以惩罚分配者3个单位）。实验1（ $n=43$ ）中不提示任何群体信息以提供基线，结果发现看到不公平分配引起的更多惩罚是由愤怒情绪中介的；而越倾向于采用表达抑制策略的个体（下称表达抑制者），这种中介效应越小。实验2（ $n=44$ ）进一步增加了群体信息，在游戏之初，分配者、接受者、被试选择加入不同的群体，然后进行与实验1相同的任务；结果发现，只有在分配者为内群，接受者为外群这种组合时，高表达抑制者这种不公-愤怒-惩罚的效应才更小。在实验2的基础上，实验3操控了被试的视角，分别强调“分配者做出这样的分配”（ $n=39$ ）和“接受者收到这样的分配”（ $n=40$ ）。结果发现，在强调“分配者做出这样的分配”时，高表达抑制者对内群做出不公分配的愤怒和惩罚（相对外群做出不公）更少，对外群接受不公分

配的愤怒和惩罚（相对内群接受不公）更少。当强调“接受者接受这样的分配”时，不管情绪调节策略如何，人们都只在接受者为内群（而不是外群）时，对不公产生更高愤怒和惩罚。此外，特质测量结果还发现表达抑制和“共享他人积极情绪”的积极共情能力负相关。从实验1到实验3的结果说明，第三方惩罚及其群体偏差的情绪动机主要是愤怒；此外，情绪调节会影响这一过程，相对于认知重评，表达抑制策略使用者不公平厌恶更小；特别是内群分配者对外群接受者做出分配时，高表达抑制者能够容忍不公。当强调“接受者”时，不管何种情绪调节策略都产生了区别对待；在强调“分配者”时，只有高表达抑制者存在这种区别对待。结合与共情的相关，表达抑制者的“区别对待”可能与表达抑制与对外群接受者更差的共情有关。总之，本研究深入探讨了第三方惩罚及其群体偏差的情绪机制，有利于理解人类维护公平规范和群体秩序的本质。

关键词 第三方惩罚，情绪，情绪调节，公平，群体偏差

The emotional motivation underlying group bias in Third-Party Punishment and the role of emotion regulation

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Abstract: Third-party Punishment (TPP) that dispenses costly punishment for unfairness as bystanders is a type of altruistic behavior to maintain the social norm. However, while a growing number of studies revealed group bias in TPP, its underlying mechanisms remain unclear. In the current study, we conducted three experiments to examine the role of emotion as well as emotional regulation strategies in explaining TPP, in particular group bias in punishment. We assessed participants' emotional regulation strategies (habitually using suppressive expression or cognitive reappraisal) during recruitment, and then participants engaged in an online interactive game. As a third-party bystander, after witnessing the distribution (fair or unfair) between the allocator and the recipient, participants were asked to report their emotion and decided the amount of money to deduct as punishing the allocator (i.e., each unit they spent led to three-unit reduction in gains of the allocator). In Experiment 1 ($n = 43$), we provided no group information (as a baseline) and found that witnessing unfair distribution resulted in more punishment, which was mediated by heightened feelings of anger. Notably, this mediating effect was smaller among suppressors – individuals who were more likely to habitually adopt suppressive expression (vs. cognitive reappraisal) strategies. In Experiment 2 ($n = 44$), we provided group information. At the beginning of the game, the allocator, the recipient, and the participant (bystander) chose to join different groups and then performed the same task as in Experiment 1. Our results demonstrated that only under the “ingroup allocator and outgroup recipient” condition, there existed a weaker mediational path from unfairness to punishment via feelings of anger among suppressors. In an effort to build upon Experiment 2, Experiment 3 manipulated the angle from participants. Specifically, we presented participants with two conditions: “the allocator makes such a distribution” ($n = 39$) and “the recipient receives such a distribution” ($n = 40$). The findings were intriguing. On the one hand, when the *allocator* was emphasized, suppressors displayed less feelings of anger and less punishment when the ingroup (vs. outgroup) allocator distributed unequally and when the outgroup (vs. ingroup) recipient received unfair distributions. On the other hand, when the *recipient* was emphasized, regardless of the use of emotional regulation strategies, participants only reported more feelings of anger and more punishment towards injustice when the recipient was an ingroup (rather than outgroup) member. In addition, we also found an inverse association between suppressive expression and positive empathy (i.e., the ability to “share others' positive feelings and events”). These above results indicated that feelings of anger served as an emotional motivation for TPP and its group bias. Interestingly, emotional regulation moderated this process. Compared with cognitive reappraisal users, suppressive expression users had less inequity aversion, especially when there was a combination of the ingroup allocator and the outgroup recipient. When the *recipient* was emphasized, no matter which emotion regulation strategies were used, participants discriminately dealt with injustice towards ingroup and outgroup victims.

When the *allocator* was emphasized, only suppressors showed discrimination. Specifically, such "injustice discrimination" of suppressors may be related to their poorer empathy towards outgroup recipients. In conclusion, this study explored in depth the emotional mechanism of third-party punishment and its group bias, which contributed to understanding the nature of maintaining fair norms and group order.

Keywords: Third-Party-Punishment, Emotion, Emotion regulation, Fairness, Group Bias

警示如何更有效？来自自我相关性的中-英差异的证据

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摘 要 警示语, 如“NO smoking”、“请勿喧哗”, 广泛出现在日常生活中, 指的是提醒和警告他人注意安全、遵循规则的告示或建议。本研究考察语言和自我相关性对警示语有效性的影响。在有效性的衡量上, 根据警示语的多阶段认知加工模型, 选取警觉度、愉悦度和遵从度作为指标。实验 1 招募了 30 名大学生被试, 以文字模态的警示语为实验材料, 采用 2(语言: 中文/英文)×2(自我相关性: 高/低)的两因素被试内实验设计, 以被试对警示语愉悦度、警觉度和遵从度的评分为因变量。在实验过程中, 首先屏幕中央呈现注视点“+”500ms, 随后随机呈现中、英文警示语 2000ms, 被试依次完成对警示语警觉度、愉悦度和遵从度的 7 点评分。运用拉丁方设计将 30 名被试分为三组, 以平衡三项评分之间的呈现顺序。结果发现, 对高自我相关性的警示语来说, 双语者对中文或英文表达的警示语的有效性加工没有差异, 而对低自我相关性的警示语来说, 中文表达警示语的有效性加工加工优于英文表达。实验 2 招募了 30 名大学生被试, 以图文模态的警示语为实验材料, 采用 2(语言: 中文/英文)×2(自我相关性: 高/低)的两因素被试内实验设计, 因变量为被试对警示语警觉度、愉悦度和遵从度的评分。实验程序同实验 1。结果显示, 无论自我相关性的高低, 中、英表达警示语的有效性加工没有明显区别。以上结果表明: (1)自我相关性影响语言对文字模态警示语有效性的认知加工; (2)图文模态警示语的有效性加工优于文字模态警示语。

关键词 警示语, 双语, 自我相关性, 模态

How can warnings be more effective?

Evidence from Chinese-English differences in self-relevance

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Abstract: Warnings, such as “No smoking” and “Don’t make noise”, are widely used in daily life. They refer to notice or suggestion that remind and warn others to pay attention to safety and follow the rules. This study examines the impact of language and self-relevance on the effectiveness of warnings. For the measurement of effectiveness, alertness, pleasure and compliance were selected as indicators based on a multi-stage cognitive processing model of warnings. In Experiment 1, 30 college students were recruited, and text modal warnings were used as stimuli in a 2×2 within-subjects design, with language (Chinese, English) and self-relevance (high, low) as the independent variables, and participants’ scores of alertness, pleasure and compliance with warnings as the dependent variables. During the experiment, a gaze point “+” was first displayed in the centre of the screen for 500 ms, followed by a random presentation of the warnings in English or Chinese for 2000 ms. Participants completed a 7-point scale on the alertness, pleasure and compliance of the warnings in turn. A Latin square design was used to divide the 30

participants into three groups to balance the order of presentation between three ratings. It was found that for warnings with high self-relevance, there was no difference in the effectiveness of warnings in Chinese or English, while for warnings with low self-relevance, the effectiveness of warnings in Chinese were better than those in English. Experiment 2 recruited 30 college students. Image-text modal warnings were used as stimuli in a 2 (language: Chinese, English) × 2 (self-relevance: high, low) within-subjects design, and participants' scores of alertness, pleasure, and compliance with warnings as the dependent variables. The experimental procedure was the same as Experiment 1. The results indicated that regardless of the level of self-relevance, there was no significant difference in the effectiveness of warnings in Chinese or English. The results of the above two experiments indicated that self-relevance influences the cognitive processing of language on the effectiveness of text modal warnings, and the effectiveness of image-text modal warnings is better than that of text modal warnings.

Keywords: Warnings, Bilingual, Self-relevance, Modal

同性竞争情景下面孔吸引力组合对择偶复制的影响

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摘要 择偶复制 (mate choice copying) 是指在择偶过程中, 个体受到其它同性别个体对目标对象评价、判断影响, 做出相同或相似择偶决策的行为。择偶复制可以减少择偶过程中的不确定性, 节约成本, 提高辨别异性的能力, 从而辅助个体做出更加准确的配偶选择。本研究通过两个实验探讨在同性竞争情景下面孔吸引力组合对择偶复制现象的影响。实验一采用 4 (榜样人物和靶目标的吸引力组合: 高高组/低低组/高低组/低高组) × 2 (榜样人物对靶目标的态度: 感兴趣/不感兴趣) 被试内实验设计, 采用择偶复制研究的经典范式, 考察被试在榜样人物的不同态度下对靶目标的交往意愿变化。实验二采用 2 (同性竞争情景: 同性竞争情景/非同性竞争情景) × 4 (榜样人物和靶目标的吸引力组合: 高高组/低低组/高低组/低高组) × 2 (性别: 男性/女性) 混合实验设计, 在实验一的基础上探讨同性竞争情景对择偶复制的影响。结果表明: (1) 无论何种吸引力组合情况下, 榜样人物对靶目标为感兴趣态度时, 被试对靶目标的交往意愿均增加, 即证明择偶复制现象。(2) 无论榜样人物对靶目标是否感兴趣, 只有当二者同为高吸引力水平时, 对于靶目标两次评价分数变化的性别差异显著, 男性对于靶目标的交往意愿下降更多。(3) 当靶目标和榜样人物均为高吸引力水平 (即高高组) 及榜样人物为高吸引力、靶目标为低吸引力 (即高低组) 时, 被试在感兴趣态度下的评分变化显著大于不感兴趣态度下, 即在榜样人物为感兴趣态度下被试与靶目标的交往意愿显著增加。(4) 增加同性竞争情景后, 无论何种吸引力组合, 男女对靶目标的交往意愿评价均下降, 即同性竞争情景降低了择偶复制现象的出现。尤其在榜样人物和靶目标同为高吸引力水平时, 女性交往意愿下降最为显著。(5) 同性竞争情景下, 对榜样人物的认知评价也发生了变化。无论何种吸引力组合, 被试对榜样人物的评价都更加消极, 且吸引力越高, 对其评价就越负面。研究结果对理解择偶复制这一复杂的人类行为提供了实验性证据。

关键词 择偶复制, 同性竞争, 面孔吸引力组合, 性别差异

The Influence of Attractiveness Combination on Mate Choice Copying under the Intrasexual Competition

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Abstract: Mate choice copying refers to the behavior in which individuals will be affected by the evaluation and judgment of other same-sex individuals on the target object and make the same or similar mate choice decisions

during the mate selection process. Mate choice copying can reduce the uncertainty in the process of mate selection, save costs, and improve the ability to distinguish between the opposite sex, so as to help individuals make more accurate mate selection. In this study, two experiments were conducted to explore the effect of attractiveness combination on mate choice copying under the intrasexual competition. In Experiment 1, a 4(the attractiveness combination of the model and the target: high-high group/low-low group/high-low group/low-high group) $\times$ 2(the attitude of the model to the target: interested/not interested) within-subjects design and the classic paradigm of mate choice copying was used to investigate the change of the participants' dating intention to the target under the different attitudes of the model. Based on Experiment 1, experiment 2 explored the effect of intrasexual competition on mate selection by conducting a 2(intrasexual competition situation: intrasexual competition situation/non-intrasexual competition situation) $\times$ 4(the attractiveness combination of the model and the target: high-high group/low-low group/high-low group/low-high group) $\times$ 2(gender: male/female) mixed design. The results showed that: (1) No matter what kind of attractiveness combination, when the model was interested in the target, the participants' willingness to date with the target increases, which proved the phenomenon of mate choice copying. (2) No matter whether the model was interested in the target or not, only when both of them are at high attraction level, the gender difference of the two evaluation scores for dating with the target was significant, and men's willingness to date with the target decreased more. (3) When the target and model were both of high attractiveness level (high-high group), and the model was of high attractiveness, while the target was of low attractiveness (high-low group), the score change of the participants under the attitude of interest was significantly greater than that under the attitude of not interest, that is, the willingness of the participants to date with the target was significantly increased under the attitude of model being of interest. (4) After adding the variable of intrasexual competition situation, no matter what kind of attractiveness combination, both men and women's willingness to date with the target decreased, that is, the intrasexual competition situation reduced the occurrence of mate choice copying phenomenon. Especially under the condition of high attractiveness of the model and the target, the decline of women's willingness to date was more significant. (5) In the context of intrasexual competition, the cognitive evaluation of the models also changed. No matter what kind of attraction combination, the participants' evaluation of model characters was more negative, and the higher the attraction of model, the more negative the evaluation. The results provided experimental evidence for understanding the complex human behavior of mate choice copying.

Keywords: mate choice copying, intrasexual competition, attractiveness combination, gender differences

面孔情绪的性别刻板印象：性别图式的作用

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摘 要 面孔情绪在人们的生活与社交中起着重要的作用，而情绪性别刻板印象会影响个体的面孔情绪信息加工。情绪性别刻板印象是指人们对男性和女性这两类特定社会群体在体验和表现具体情绪程度上所持有的固有观念或者既定的认知模式，这种与情绪有关的性别刻板印象已经被很多研究所证实。另有研究表明性别图式类型与性别刻板印象有密切关联，主要表现为性别图式类型对性别刻板印象起调节作用。相比于非性别图式化，性别图式化个体更易受到性别刻板印象的影响。但以往研究多通过外显指标探讨面孔情绪，而面孔情绪的性别刻板印象研究则很少。本研究采用情感错误归因程序（AMP）的变式，从内隐层面考察性别图式对面孔情绪性别刻板印象的影响。实验选取湖北省某大学在读本科生 287 名，发放《大学生性别角色问卷》（CSRI-50），回收有效问卷 214 份。通过男性分量表和女性分量表得分分别计算出中位数，并对被试进行性别图式分类，最终符合条件的 80 名同学参加正式实验。其中性别图式化个体 30 人，非性别图式化个体 50 人；男生 31 人，女生 49 人；平均年龄 20.35 ± 1.19 岁。实验采用 2(面孔性别：男、女) $\times$ 2(面孔情绪：高兴、生气) $\times$ 2(性别图式类型：性别图式化、非性别图式化)的混合实验设计。结果表明面孔情绪主效应显著，面孔情绪与面孔性别的交互效应显著。本研究表明中国大学生存有明显的面孔情绪性别刻板印象，面孔性别会影响个体的面孔情绪知觉。相较于女性高兴面孔，个体对男性高兴面孔的评价更积极。相较于女性生气面孔，对男性生

气面孔的评价更消极。此外,在面孔性别对个体面孔情绪识别的影响中,性别图式并不起作用。性别图式化个体与非性别图式化个体在对面孔情绪的知觉上没有差异。

关键词 面孔情绪, 性别刻板印象, 性别图式

Gender stereotype of facial emotion: the effect of gender schema

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Abstract: Facial emotion plays an important role in people's life and social interaction, and gender emotional stereotypes can affect individuals' information processing of facial expression. Gender stereotypes of emotion refer to people's inherent concepts or established cognitive models on the experience and performance of specific emotions in two specific social groups, male and female. The existence of this emotion-related gender stereotypes has been confirmed by many studies. And studies have shown that gender schema types are closely related to gender stereotypes, which is mainly manifested in the moderating effect of gender schema types on gender stereotype-related behaviors, gender schematic individuals are more likely to be affected by gender stereotypes than non-gender-schematic individuals. However, previous studies mostly explored facial emotions through explicit indicators, while there were few studies on gender stereotypes of facial emotions. This study investigated whether gender facial emotional stereotypes of college students are influenced by gender schema types at the implicit level, using a variant of Affect Misattribution Procedure. A total of 287 undergraduate students in a comprehensive university in Hubei Province were selected. The CSRI-50 was issued and 214 valid questionnaires were collected. The medians were calculated by the scores of male subscale and female subscale respectively, and the subjects were classified by gender schema. Finally, 80 students participated in the formal experiment. There were 30 gender-schematized individuals and 50 non-gender-schematized individuals, and there were 31 boys and 49 girls with an average age of 20.35 ± 1.19 years. The experiment used 2 (facial gender: male, female) $\times 2$ (facial emotion: happy, angry) $\times 2$ (gender schema: gender-schematic, non-gender-schematic) mixed experimental design. The results show that the main effect of facial emotion is significant, and the interaction between facial emotion and facial gender is significant. This study shows that Chinese college students have obvious gender stereotypes of facial emotion, and facial gender affects individuals' perception of facial emotion. Happy faces were rated more positively on men than on women. And anger faces were rated more negatively on men than on women. In addition, gender schema does not play a moderated role in the influence of face gender on individuals' face emotion recognition. There is no difference between gender-schematic and non-gender-schematic individuals in the perception of facial emotion.

Keywords: facial emotion, gender stereotype, gender schema

努力因素对内群体偏好的影响

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摘要 近年来,自我归类理论(一个探讨群体过程与偏好的认知性理论)强调群体的形成常具有情境依赖性。结合实际,为加入群体付出越多努力的人往往对内群成员偏好更高,提示努力相关因素可能成为影响群际偏好的情境因素;但其影响机制还有待研究。为此,本研究基于自我归类理论对参照框架的强调,通过4个实验探索了有/无参照框架时努力因素对群际偏好的影响。实验1a、1b操纵被试加入群体所需的努力程度,分别通过公共物品范式(以合作任务中向公共账户投入的代币数占个人总数的比例代表其合作偏好)与归因范式(以被试对模糊故事情境中内群体的辩护程度代表其归因偏袒程度)衡量内群偏好,结果均发现无参照框架时努力程度越高内群体偏好越强。该结果可由努力的合理化模型解释,即高认知需求任务使个体认知失调,个体通过美化结果(增加对内群体偏好)合理化自身努力。实验2和3引入参照框架,通过虚拟指导语操纵努力相关变量,结合公共物品范式测量内群体偏好。实验2在操纵个体及其决策对象的努力程度后发现,努力程度相似的被试合作偏好显著更高;该结果可用社会比较理论解释,即个体在社会比较中为维护自身的正

确性会更重视与他人的相似,因此会对努力相似的个体产生偏好。实验3操纵被试及其决策对象的努力经历性质、努力结果后发现,结果优势时,被试多与经历性质相似者合作,结果劣势则多与结果相似者合作;即任务结果影响群际偏好形成时的关注焦点;该结果可结合社会比较理论与认知失调理论进行解释,即总体上个体通过与他人的相似性确认内群概念,但努力结果劣势可能导致认知失调,进而影响个体在群体形成过程中关注过程或结果的相似性。综上,努力投入程度影响内群体偏好的形成,且有/无参照框架下影响机制不同。本研究结果首次系统探索了努力对群体形成与群际偏好的影响,为心理内群体的促成提供了实践指导。

关键词 努力程度,努力经历,努力结果,内群体偏好

Effort Input Affects the Ingroup Bias

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Abstract: Ingroup bias is not often formed by actual ingroup or outgroup concepts. The self-classification theory, namely a cognitive theory which explores the process of group formation and preferences, emphasizes the situational dependence of group concepts, which provides a new perspective for understanding the formation of ingroup in the psychological sense. Combined with reality, the more efforts the individual puts in to join a group, the more sense of identity and higher preference of ingroup members are showed, which suggests the possible impact of efforts and related factors for the ingroup bias. However, which specific factors are included and how they affect ingroup bias have not yet been studied. Therefore, based on the theory of self-classification, and combining the theory of cognitive dissonance and the theory of social comparison, we explored the influence of efforts and the relevant factors through four behavioral experiments. Study 1a and 1b manipulated the degree of participants' efforts prior to entering a group, and measured ingroup bias by public goods paradigm (in this paradigm, the level of favoritism shown in collaboration is represented by the ratio of how many tokens the participant gives to the public account to the number of tokens he/she takes into the personal account) and attribution paradigm (in this paradigm, the favoritism is represented by the level of defense for one side in an ambiguous story) respectively. The results show that when there's no reference frame, the more efforts the participants make, the higher ingroup bias they show, which can be interpreted by rationalization model of effort in cognitive dissonance theory. That is to say, cognitively demanding tasks disturb one's cognition and so the individual justifies his/her efforts by embellishing results (by the means of increasing favoritism towards ingroups). To further explore the influence of social comparison frame, study 2 manipulated the degree of participants' efforts prior to entering a group, as well as the degree of efforts of both ingroup members and outgroup members, and measured ingroup bias by public goods paradigm. The results show that when there is a reference frame, if the effort level between the participant and his/her partner is similar, the ingroup bias shown will become higher. Social comparison theory can provide a potential explanation for it, that in order to maintain self-righteousness, an individual will pay more attention to the similarity with others in social comparison, resulting in the favoritism towards whoever has alike experience of efforts. Moreover, study 3 manipulated the result of participants', ingroup members', and outgroup members' efforts, as well as the experience of making efforts, on the condition that the levels of participants' efforts were alike. Afterwards, ingroup bias was measured by public goods paradigm. The results show that when there is a reference frame, the outcome of efforts can moderate the effect of efforts. Specifically, when the individual is at disadvantage with a bad result of efforts, he/she will show stronger ingroup bias in favor of partners with similar results of efforts, and when the individual was at disadvantage with a bad result of efforts, stronger ingroup bias is shown by partners with similar experience of efforts. It can be explained by combining social comparison theory and cognitive dissonance theory, which says an individual confirms the concept of ingroup by the similarity with others, but the disadvantage of outcomes of his/her efforts may lead to cognitive dissonance, having an impact on individuals' focus of processes and results when

forming groups. In conclusion, this research is the first to systematically point out the influence of efforts on forming groups and intergroup bias, which provides practical guidance on how to accelerate the formation of ingroup.

Keywords: degree of effort, experience of effort, result of effort, ingroup bias

互动方式和群体身份对幸灾乐祸的影响

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摘要 幸灾乐祸是指个体对他人遭遇的不幸事件而产生愉快情绪反应的现象。当个体对他人产生幸灾乐祸时，就有可能主动置他人于不幸中，对有竞争关系的他人或群体更有可能采取攻击行为。以往研究发现，群体间竞争关系增加了个体对外群体的幸灾乐祸，然而群体间的合作关系对幸灾乐祸的影响并未进一步探讨。并且以往研究大多基于现实生活中的群体身份探讨幸灾乐祸，个体对群体固有的刻板印象等因素未能加以控制。因此，本研究将被试随机分配到新的群体，创建平等中立的群体身份。本研究通过2个实验来探讨不同互动方式和群体身份对幸灾乐祸的影响以及背后的心理过程。研究1采用3（互动方式：竞争 vs. 合作 vs. 控制组）×2（群体身份：外群体成员 vs. 内群体成员）两因素混合实验设计。结果表明，群体身份的主效应显著，个体对外群体成员的幸灾乐祸程度显著高于内群体成员；互动方式和群体身份的交互作用显著。简单效应分析表明，在群体竞争互动中，个体对外群体成员的幸灾乐祸程度显著高于内群体成员群体。研究1的结果尚不能说明个体对内外群体成员幸灾乐祸程度的差异是由于个体增加了对外群体的幸灾乐祸所致还是由于减少了对内群体的幸灾乐祸所致。并且厌恶是探讨人际幸灾乐祸最普遍的预测因素，不同的群体身份容易使个体产生群体间偏见，包括厌恶等情绪，因此本研究引入了厌恶这一心理变量。研究2采用单因素被试内实验设计，自变量为群体身份（外群体成员 vs. 内群体成员 vs. 控制组）。结果表明，在群体竞争互动中，个体对不同群体身份成员的幸灾乐祸存在显著性差异。个体对外群体成员的幸灾乐祸程度显著高于控制组，个体对内群体成员和控制组的幸灾乐祸程度无显著差异。采用Bootstrap法进行中介分析发现，厌恶在群体关系与幸灾乐祸之间起部分中介作用。综上，研究表明（1）竞争的互动方式会增加个体对外群体的幸灾乐祸程度。（2）群体竞争互动中，引发了个体对外群体的厌恶，从而增加了个体对外群体成员的幸灾乐祸程度。

关键词 幸灾乐祸，群体互动，社会认同，厌恶

The influence of different interaction and group memberships on schadenfreude

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Abstract: Schadenfreude is a common psychological phenomenon, which refers to the phenomenon that individuals have a happy emotional response to the unfortunate events encountered by others. When individuals feel happy about others' unfortunate, they may take the initiative to put others in their unfortunates, while others or groups with competitive relationships may take aggressive actions. The cultural differences and historical background among groups will affect the individual's schadenfreude over the group. Most previous studies discussed the group's schadenfreude over the actual group. Therefore, in this study, subjects were randomly assigned to new groups to create equal and neutral group identities. With the present contribution, we conducted two experiments to explore the effect of internal and external group identity on schadenfreude under the relationship of cooperation, competition and independence. The study 1 is to adopt a two-factor mixed experimental design of 3 (interaction mode: competition vs. cooperation vs. control group) ×2 (group identification: external group members vs. internal group members). The results of Study 1 showed that the main effect of internal and external groups is significant, the main effect of interaction mode is not significant. The interaction between interaction mode and group identification is significant, Simple effect analysis shows that there is a significant difference in the degree of individual gloating over the members of internal and external groups under the condition of competition among groups. The results of Study 1

could not explain whether the difference in the degree of schadenfreude towards the internal and external group members was caused by the increase of schadenfreude towards the external group or the decrease of schadenfreude towards the internal group. In addition, aversion is the most common predictor of interpersonal schadenfreude, and different group identities are easy to cause individuals to have inter-group bias, including aversion and other emotions, so this study introduced aversion as a psychological variable. In study 2, a single-factor in-subject experimental design was adopted, and the independent variable was group identification (out-group members vs. in-group members vs. control group). The results showed that there were significant differences in the schadenfreude of different group identification members. Under the condition of group competition, the degree of individual's schadenfreude with foreign group members was significantly higher than that of control group. There is no significant difference in the schadenfreude between the internal group members and the control group. Using Bootstrap method, we found that aversion partially mediated the relationship between group relationship and schadenfreude. Based on the above research results, this study draws the following conclusions: (1) Competitive interaction will increase the degree of schadenfreude of the individual outside the group. (2) In the group competition situation, it causes the individual's aversion to the outside group, thus increasing the degree of Schadenfreude of the outside group members.

Keywords: Schadenfreude, Group interaction, Social identity, Aversion

(5) “社会心理学专业委员会”口头报告分场 5

政治参与和地方政府信任的关系：一个有调节的中介模型

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摘 要 “民惟邦本，本固邦宁”，公众对政府的认同、信任与支持在政府维系政治稳定、开展高效社会治理等方面具有重要意义。由此，提高公众政府信任成为政府工作的重要任务之一。以往研究发现，我国公众对政府信任存在“差序格局”，即公众对中央政府的信任高于对地方政府的信任。而差序格局的存在或弱化地方治理、阻碍国家整体治理效益提升。地方政府作为与公众直接接触、交往与沟通的政府机构，探讨地方政府信任提升机制具有重要的现实意义。协同治理理论指出，政府、社会组织、公众等多方主体应通过协同合作共同治理社会公共事务，实现公共利益最大化。公众作为主体之一，在地方政府的社会治理过程逐渐发挥出重要作用。政治参与作为公众向政府表达自身需求的渠道之一，在此过程中，公众获得政府相关信息和知识，增加对政府的认识，更好理解政府等，从而提升了公众对政府的信任水平。众多研究指出，公众积极的政治参与能够提升公众对政府的信任水平。政府宣传教育是一种政府管理手段，旨在运用思想政治工作或激励方式，以提高公众政治认识、实现组织目标等。本研究拟在考察公众政治参与和地方政府信任关系的基础上，重点探索政府宣传教育在提升公众地方政府信任以及在公众政治参与和地方政府信任关系间的作用。结合实际政府宣传教育活动，本研究提取了政府宣传教育活动的频率和宣传教育有用性评价作为两个主要的考察变量。对 2071 名被试进行问卷调查并分析。结果发现：（1）政治参与显著正向预测地方政府信任；（2）活动有用性评价在政治参与和地方政府信任间起部分中介作用；（3）宣传教育频率负向调节政治参与和有用性的关系以及有用性的中介效应，表现出边际递减效应。上述结果表明，多渠道提升公众政治参与意识，合理把握政府宣传教育频率是促进地方政府信任提高的可选策略。

关键词 政治参与 地方政府信任 政府宣传教育 有调节的中介 边际递减效应

The Relationship between Political Participation and Local Government Trust: A Moderated Mediation Model

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Abstract: “The people are the foundation of the state, and the state is solid.” The public’s recognition, trust, and support for the government is of great significance in maintaining political stability and carrying out efficient social governance. Therefore, improving public government trust has become one of the important tasks of government work. Previous studies have found that the public trust in the government in China has a “differential pattern”, that is, the public trust in the central government is higher than the trust in the local government. However, the existence of a differential pattern may weaken local governance and hinder the improvement of the overall governance efficiency of the country. As a government agency that directly contacts, communicates with the public, local governments have important practical significance to explore the mechanisms for enhancing trust in local governments. The collaborative governance theory points out that the government, social organizations, the public, and other multi-parties should jointly govern social public affairs through collaborative cooperation, to maximize public interests. Political participation is the peak for the public to express their needs to the government. In this process, the public obtains government-related information and knowledge, increases their understanding of the government, and the government, thereby enhancing the public’s level of trust in the government. Studies showed that the public actively participates in raising the level of trust in the government. Government publicity and education is a government management method that aims to use ideological and political work or incentive methods to improve public political awareness and achieve organizational goals. Based on examining the relationship between public political participation and local government trust, this study focuses on exploring the role of government publicity and education in enhancing public local government trust and the relationship between public political participation and local government trust. Combined with the actual government publicity and education activities, this study extracted the frequency of government publicity and education activities and the public’s evaluation of the usefulness of publicity and education as two main variables. A total of 2071 participants were investigated and analyzed in the present study. The results indicated that: (1) political participation significantly and positively predicted local government trust. (2) The relationship between political participation and local government trust was mediated by activity usefulness. (3) The frequency of publicity and education negatively moderated the relationship between political participation and activity usefulness and the mediating effect of activity usefulness, showing a diminishing marginal effect. These findings indicated that multi-methods to enhance the awareness of political participation and reasonably grasping the frequency of government publicity and education were optional strategies for promoting trust in local governments.

Keywords: political participation, local government trust, government publicity and education, a moderated mediation model, diminishing marginal effect

公正世界信念与组织中的亲社会行为：心理资本的作用

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摘要 公正世界信念理论认为人们有一种基本需要，即相信自身所处世界是公正的，在公正世界里，人们得其所应得，所得即应得。这种信念可为个体提供控制感与安全感，带来一系列诸如维持个体心理健康、促进长期目标投入等适应性、亲社会结果，但其中的作用机制及这类适应性、亲社会结果的情境特异性仍有待探究。在作用机制方面，本研究认为，公正世界信念所提供的控制感与安全感是个体重要的心理力量来源，可促进个体更为广泛的心理资源的构建，使其拥有更高水平的心理资本，从而鼓励个体对于各类事件的积极应对。在情境特异性方面，以往研究一般关注公正世界信念对个体的适应性影响及个人与一般公正世界信念

的二维构念与亲社会行为之间的关系，少有研究将公正世界信念引入组织管理领域，在组织情境中探讨其对员工亲社会行为的影响。本研究基于公正世界信念的二维建构与积极心理资本理论，采用问卷调查与情境短文评价方法，探讨在组织情境中，个人公正世界信念与一般公正世界信念对员工亲社会行为的影响及心理资本在其中的作用，以拓展对公正世界信念在组织情境中作用的认识。结果显示，在特定的组织不公情境中，员工的个人公正世界信念与一般公正世界信念均对其亲社会行为存在正向影响，但作用机制有所不同：个人公正世界信念主要通过员工的心理资本促进其亲社会行为；一般公正世界信念在心理资本这一作用路径之外，也存在情绪路径，通过愤怒、同情等消极道德情绪驱动员工做出亲社会行为。在更为广泛的组织情境中，个人公正世界信念与一般公正世界信念则均可通过心理资本对组织中的亲社会行为产生积极作用。研究结果表明，公正世界信念的适应性、亲社会功能不仅局限于个人公正世界信念，一般公正世界信念，至少在组织情境中，也可促进亲社会行为。而心理资本则是公正世界信念发挥其积极功能、产生适应性、亲社会结果的重要机制。

关键词 公正世界信念，心理资本，组织中的亲社会行为

Belief in a Just World and Prosocial Behaviors in Organization: The Role of Psychological Capital

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Abstract: Theory of belief in a just world(BJW) holds that people have a basic need to believe that the world they live in is just, where people get what they deserve. Such belief can provide individuals with a sense of control and security, leading to a range of adaptive and prosocial outcomes such as maintaining one's psychological well-being and promoting one's commitment for long-term goal, while the explanatory mechanisms and the contextual specificity of these adaptive and prosocial outcomes remain to be explored. In terms of explanatory mechanisms, this study proposes that the sense of control and security provided by BJW are important sources of psychological power for individuals, contributing to the construction of a wider range of psychological resources and a higher level of psychological capital (PsyCap), which encourages individuals to respond positively to various events. In terms of contextual specificity, previous researches have generally focused on the adaptive functions of BJW for individuals and the relationship between two-dimensional construct of BJW and prosocial behaviors, few studies have introduced BJW to organizational management and explored its effects on employees' prosocial behaviors in organization. Based on the two-dimensional construct of BJW and positive psychological capital theory, this study used questionnaires and situation vignettes to explore the effects of personal belief in a just world (PBJW) and general belief in a just world(GBJW) on employees' prosocial behaviors in organization and the role of PsyCap, aiming at expanding the understanding of the effects of BJW in organizational contexts. The results showed that in specific organizational injustice contexts, employees' PBJW and GBJW both positively affected their prosocial behaviors, though with different mediators: PsyCap mediated the effects of PBJW as well as GBJW on prosocial behaviors, while GBJW also drove employees' prosocial behaviors via negative moral emotions such as anger and sympathy. In broader organizational contexts, both PBJW and GBJW had positive effects on prosocial behaviors with PsyCap as the mediator. The findings suggest that the adaptive and prosocial functions of BJW are not exclusive to PBJW. GBJW, also serves much important functions to promote prosocial behaviors, at least in organizational contexts. And PsyCap is an important explanatory mechanism through which BJW serves its positive functions and produce adaptive, prosocial outcomes.

Keywords: belief in a just world, psychological capital, prosocial behaviors in organization

中国南北方信任差异及其心理机制：社会距离的影响

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摘要 生态文化对信任这一复杂的社会心理过程有着重要影响, 近年来愈发受到研究者的重视。以往研究大多从国家间跨文化比较的视角探究生态文化对信任的影响, 近年来逐渐有研究者尝试从国家内的地域差异对信任问题进行探索。然而目前还少有研究对中国内部南北方不同生态文化下的信任差异进行探讨, 其内在心理机制也尚未明确。研究采用信任博弈范式, 在国家间研究基础上探讨了中国内部南北地域生态文化差异对人类信任行为的影响及其内在心理机制。实验1采用2×2的混合设计, 考察了在地区来源和社会距离的共同影响下南北方个体的信任差异。结果显示: (1) 北方人具有更强的内群体偏好, 对内群体成员具有更高的信任水平; (2) 中国内部信任存在地区效应, 信任双方的地区来源对信任产生影响。北方人更加信任同地区人, 南方人不存在地区信任偏好; (3) 社会距离能够缓和信任的地区效应; (4) 互惠预期是信任地区效应的内在心理机制。实验2引入互惠预期变量, 采用2×2×2的混合设计, 用于检验中国内部信任地区效应是否受到互惠预期的影响。结果显示: (1) 互惠预期是信任地区效应的内在心理机制, 验证了实验1的结果; (2) 互惠预期仅在近社会距离条件下产生影响, 在远社会距离条件下不起作用。研究发现了中国内部信任存在地区效应, 并验证了互惠预期是其内在心理机制, 为中国南北方信任的相关研究提供了更加全面、辩证的研究视角, 同时也拓展了社会距离和互惠预期的相关研究。

关键词 信任, 社会距离, 中国南北方, 信任博弈, 互惠预期

Trust Differences between North and South China and Its Psychological Mechanism: The Influence of Social Distance

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Abstract: Ecological culture has an important impact on trust which is a complex psychosocial process, and scholars pay more and more attention to it in recent years. Previous studies have mostly used the way of cross-cultural comparison among countries to explore the influence of ecological culture on trust. In recent years, some researchers have gradually tried to explore the problem from regional differences within the county. However, researches on the difference of trust between the north and the south of China under different ecological cultures are almost blank, and its underlying mechanism is also unclear. Based on the inter-country research, this study used the paradigm of Trust Game to explore the influence of ecological and cultural differences between the north and the south of China on trust behavior and its underlying mechanism. In Experiment 1, the mixed design of 2×2 was adopted to investigate the differences of trust between individuals from the north and the south of China under the influence of regional sources and social distance. The results of Experiment 1 show that: (1) Northerners have stronger internal group preferences and higher level of trust in in-group members; (2) China's internal trust has regional effect, and the regional sources of both sides of trust have influence on trust. Northerners trust people from the same region more, southerners do not have regional trust preference; (3) Social distance is able to mitigate trust region effect; (4) Reciprocity expectation is the underlying mechanism of trust region effect. Introducing the variable of reciprocity expectation, Experiment 2 adopted the mixed design of 2×2×2 to examine whether the region effect of China's internal trust is affected by reciprocity expectation. The results of Experiment 2 show that: (1) Reciprocity expectation is the underlying mechanism of trust region effect, which verifies the results of Experiment 1; (2) Reciprocity expectation has an effect

only in acquaintances, but not in strangers. This study finds the trust regional effect existing between the north and the south of China and verifies its underlying mechanism, which provides a more comprehensive and dialectical perspective for the research on China's internal trust, and meanwhile expands the research on social distance and reciprocity expectation.

Keywords: Trust, Social distance, South and North China, Trust game, Reciprocal expectation

社交网络捐赠利他者更利他的边界机制：基于信任视角

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摘要 信任问题已逐渐成为互联网公益事业发展的桎梏。本研究在信任整合模型和精细加工可能性模型的指导下，通过拟生态化实验考察个体特质因素（个人公正世界信念）、状态因素（自我损耗）对社交网络捐赠决策的影响，并重点关注转发者特性的信源信任（网络人际信任）以及受助者特性的内容信任（责任归因）在其中的调节作用。研究采用问卷调查法和实验法相结合的方式进行。研究1结果显示，在个人公正世界信念和自我损耗影响个体捐赠决策的过程中，网络人际信任的调节作用显著。面对熟人参照时（高网络人际信任条件下），低个人公正世界信念者处于高自我损耗状态时，社交网络捐赠意愿显著提高。研究2结果显示，在个人公正世界信念和自我损耗影响个体捐赠决策的过程中，责任归因的调节作用显著。在责任外归因条件下，高个人公正世界信念者处于低自我损耗状态时，社交网络捐赠意愿显著提高；在责任内归因条件下，低个人公正世界信念者处于高自我损耗状态时，社交网络捐赠意愿显著降低。研究结果表明，在社交网络捐赠情境中，网络人际信任和责任归因是影响个体捐赠决策的边界条件，在特定的情况下发挥作用。由此可见，公益组织在募捐时应关注这些外部因素，取其所长，避其所短，更好地利用社交网络的优势推动公益事业的发展。

关键词 个人公正世界信念，自我损耗，网络人际信任，责任归因，社交网络捐赠

How to make the altruist more altruistic in Social Network fundraising? Perspective of trust

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Abstract: The problem of trust has gradually become the shackle of the development of Internet public welfare. In order to cultivate citizen's charitable consciousness and promote the development of Internet public welfare, under the guidance of Integrative Model of Trust and Elaboration Likelihood Model, this study focused on the influence of individual attributes (idiosyncratic factor and state factor: personal belief in a just world and ego-depletion) on their fundraising decision-making process, and revealed the moderating effect of source trust from sender (online interpersonal trust) and content trust from recipient (attribution of responsibility). The study was conducted by the method of questionnaire survey and experiment. Study 1 explored the moderating role of online interpersonal trust in the process of individual attributes influencing fundraising decision-making. The results showed that online interpersonal trust plays a significant role in the process of personal just world belief and self-depletion affecting individual fundraising decision-making. Under the condition of High self-depletion, the low-individual just-world believers' willingness to donate increased significantly after strengthening interpersonal trust. Study 2 explored the moderating role of attribution of responsibility in the process of individual attributes influencing fundraising decision-making. The results showed that responsibility attribution plays a significant role in the process of personal just world belief and self-depletion influencing individual fundraising decision. Under the condition of out-of-duty attribution, the high individual just world believers under the condition of low ego-depletion increased significantly their willingness to donate; Under the condition of in-of-duty attribution, the low individual just world believers under the condition of high ego-depletion significantly reduced their willingness to donate. According to the above

research results, in the social network fundraising situation, interpersonal trust and responsibility attribution are the boundary conditions that affect individual fundraising decision-making, and play a role in specific circumstances. Therefore, the public welfare organizations should pay attention to these external factors, take advantage of their strengths, avoid their weaknesses, and better use the advantages of social networks to promote the development of public welfare undertakings.

Keywords: Personal Belief in a Just World, Ego-Depletion, Online Interpersonal Trust, Attribution of Responsibility, Social Network fundraising

人们对智能机器亲社会谎言的接受度及其作用机制

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摘 要 谎言通常被认为是不道德的，但亲社会谎言是一种特殊的谎言类型，其善意的目的会改变人们对这种“不道德行为”的评价。人们认可他人的亲社会谎言，但人们是否接受智能机器在两难情境中的亲社会谎言决策？本研究基于道德基础理论，通过四项研究探讨了人们对智能机器亲社会谎言决策的接受度及其作用机制。按照道德基础理论，谎言违背了公平这一道德基础，由此将亲社会谎言具体化为公平—关怀基础冲突、公平—自由基础冲突、公平—洁净基础冲突、公平—忠诚基础冲突和公平—权威基础冲突的两难情境。通过探索人们对智能机器在这五种冲突情境中对亲社会谎言决策的接受度在道德基础间和道德基础内的差异，以全面地揭示人们是否接受智能机器的亲社会谎言决策。研究一探讨了智能机器亲社会谎言决策接受度的道德基础间差异，具体探讨了人们对智能机器亲社会谎言决策的接受程度、道德评价、信任程度和购买意愿。研究发现，人们接受智能机器在公平—关怀基础冲突、公平—自由基础冲突、公平—洁净基础冲突的两难情境中的亲社会谎言决策，且相比于诚实决策人们倾向于接受智能机器的亲社会谎言决策；人们不接受智能机器在公平—忠诚基础冲突和公平—权威基础冲突的两难情境中的亲社会谎言决策，且相比于亲社会谎言决策人们倾向于接受智能机器的诚实决策。研究二探讨了智能机器亲社会谎言决策接受度的道德基础内差异。聚焦于关怀/伤害基础，探讨了三种伤害类型的关怀—公平基础冲突情境中人们对智能机器亲社会谎言的接受度。研究发现，在涉及三种伤害类型的关怀—公平基础冲突两难情境中人们接受智能机器的亲社会谎言决策，且相比于诚实决策人们倾向于接受智能机器的亲社会谎言决策。研究三聚焦于关怀基础，探讨人们对智能机器亲社会谎言决策的接受度的心理机制。研究发现，对智能机器的心智感知、感知仁慈、拟人化影响着人们对智能机器亲社会谎言决策的接受度，并且在智能机器亲社会谎言决策和对智能机器的接受度中发挥着链式中介作用。

关键词 智能机器，亲社会谎言，道德基础理论，接受度

People's Acceptance of Prosocial Lies of Autonomous Machines and the Underlying Mechanism

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Abstract: In daily life, people tell prosocial lies for the benefit of others to avoid interpersonal conflicts and maintain positive relations with them. Lying is normally considered immoral, but prosocial lying is a special type of lying, whose benign purpose changes people's evaluation of such "immoral behavior". Research has found that people have higher moral evaluation and trust for those who make prosocial lies. Autonomous machines will inevitably face moral dilemmas when they function, thus, it is meaningful to know do people allow autonomous machines to tell prosocial lies? Based on moral foundation theory, the current paper explores people's acceptance of prosocial lying decision-making of autonomous machines through four studies. According to moral foundation theory, lying violates the moral foundation-fairness, so we specify prosocial lying in the fairness-care conflict dilemma, fairness-liberty conflict dilemma, fairness-purity conflict dilemma, fairness-loyalty conflict dilemma, and fairness-authority conflict

dilemma. By revealing inter-and intra-moral foundation differences in people's acceptance of prosocial lies of autonomous machines, the current paper reveals a comprehensive and systematic picture of whether people accept autonomous machines to tell prosocial lies. Study 1 explore the inter-moral-foundation acceptance differences of prosocial lying decision-making of autonomous machines. Study1 discusses acceptability, moral evaluation, trust level, and purchase intention. The results of study 1 indicate that in dilemmas when fairness conflicts with care, liberty, sanctity, people permit autonomous machines to tell prosocial lies, and prosocial lying decision-making is preferred than honest decision-making; in dilemmas when fairness conflicts with loyalty, authority, people don't allow autonomous machines to make prosocial lies, and honest decision-making is preferred than prosocial lying decision-making. Study 2 explores the intra-moral-foundation acceptance differences of prosocial lying decision-making of autonomous machines. Focusing on the care/harm foundation, we design three types of fairness-care conflict dilemmas based on the previous harm classification: emotional harm to people, physical harm to people, and harm to animals. Study 2 finds that in all the fairness-care dilemmas, people permit autonomous machines to tell prosocial lies, and prosocial lying decision-making is preferred over honest decision-making. Study 3 focuses on the care/harm foundation to investigate the underlying mechanisms between prosocial lying decision-making of autonomous machines and people's acceptance. The results show that mind perception, perceived benevolence, and anthropomorphization of autonomous machines affect people's acceptance and three factors play a chained mediating role between prosocial lying decision-making of autonomous machines and people's acceptance. In summary, the current paper indicates that in dilemmas when fairness conflicts with care, liberty, sanctity, people allow autonomous machines to tell prosocial lies; in dilemmas when fairness conflicts with loyalty, authority, people don't allow autonomous machines to tell prosocial lies and people's acceptance of prosocial lying decision-making of autonomous machines are statistically unchanged regardless type of harm in fairness-care conflict dilemmas. It suggests that people's acceptance of prosocial lying decision-making of autonomous machines vary among moral foundations and are consistent within a moral foundation. Besides, mind perception, perceived benevolence, and anthropomorphization of autonomous machines jointly is the mechanism of people's acceptance of prosocial lying decision-making of autonomous machines.

Keywords: Autonomous machines, Prosocial lying, Moral foundation, Acceptance

线上接触对群际关系的影响：基于加工流畅性的视角

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摘要 群际关系是社会心理学研究的重要领域，良好的群际关系对促进社会和谐具有重要意义。群际接触是现实生活中改善群际关系的有效策略。随着互联网的发展与普及，阅读网络媒介中发布的新闻评论这种新的线上接触方式也逐渐受到学者的关注。此外，阅读网络评论时的加工流畅性会影响网络用户对外群体成员的态度和评价，对网络情景中群际关系具有重要作用。因此，本文从加工流畅性的视角出发，通过模拟虚拟的外群体，以大学生为被试，采用投资博弈范式及自行编写网络媒介的新闻报道及评论，探讨网络情景中阅读网络评论这种线上接触方式对群际关系（包括群际信任、接触意愿和社会距离）的影响。实验1采用3（线上接触：直接、扩展、控制组）×2（知觉流畅性：高、低）的被试间设计，考察线上接触和知觉流畅性对群际关系的影响及接触意愿和社会距离的中介作用。实验2同样采用3（线上接触：直接、扩展、控制组）×2（语义流畅性：高、低）的被试间设计，考察线上接触和语义流畅性对群际关系影响及接触意愿和社会距离的中介作用。结果表明：（1）线上接触可以改善网络情景中的群际关系。线上接触条件下的个体表现出了更强的接触意愿，更小的社会距离以及更高的群际信任；（2）加工流畅性是改善网络情景中群际关系的可行性路径。无论是知觉流畅性还是语义流畅性，高流畅条件下的被试表现出了更强的接触意愿，更小的社会距离以及更高的群际信任；（3）与现实情景的研究结果一致，接触意愿和社会距离在线上接触与群际信任之间起中介作用。

关键词 线上接触，加工流畅性，群际关系

The impact of online contact on intergroup relations: a processing fluency-based perspective

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Abstract: Intergroup relations are an important area of research in social psychology, and good intergroup relations are important in promoting social harmony. Intergroup contact is an effective strategy for improving intergroup relations in real life. With the development and popularity of the Internet, the new online contact method that reading news commentaries published in the online media has also gradually received the attention of scholars. Moreover, the processing fluency when reading online comments affects the attitudes and evaluations of outgroup members by online users, and plays an important role in intergroup relations in online scenarios. Therefore, from the perspective of processing fluency, this paper explores the impact of online contact that reading reviews in an online situations on intergroup relations (including intergroup trust, willingness to engage and social distance) by simulating virtual out-groups, using an investment game paradigm and self-written news reports and reviews from the online medium, with university students as subjects. Experiment 1 used a 3 (online contact: direct, extended, control group) $\times$ 2 (perceptual fluency: high vs. low) between-subjects design to examine the effect of online contact and perceptual fluency on intergroup relations and the mediating effects of willingness to engage and social distance. Experiment 2 also used a 3 (online contact: direct, extended, control group) $\times$ 2 (semantic fluency: high vs. low) between-subjects design to examine the role of online contact and semantic fluency in the effect of online contact on intergroup relations and the mediating effects of willingness to engage and social distance. Results indicated that : (1) online contact improves intergroup relations in online situations. Individuals in the online contact condition showed greater willingness to engage, less social distance and higher intergroup trust; (2) processing fluency is a viable route to improving intergroup relations in online situations. In both perceptual and semantic fluency, subjects in the high fluency condition showed greater willingness to engage, less social distance and higher intergroup trust; (3) consistent with the findings in the real-life scenario, willingness to engage and social distance mediated the relationship between online contact and intergroup trust.

Keywords: online contact, processing fluency, intergroup relations

(6) “社会心理学专业委员会”口头报告分场 6

工作伦理调节心理契约破裂感知对组织公民行为的影响

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摘 要 员工组织关系是当前组织行为和管理心理的重要课题, 它不仅包括雇佣合同中议定的员工和组织双方的角色, 也包括存在于心目中双方责任、义务的期望——前者是文本形式的契约, 后者则是心理契约。员工会对组织是否遵循心理契约内容进行评价, 当察觉组织未能实现契约规定时, 会产生一定的心理契约破坏感。这种心理契约破裂知觉 (Perceived Psychological Contract Breach) 会带来员工在工作动机与态度方面的改变, 影响工作行为与绩效, 最终影响组织绩效和组织战略目标的实现。工作伦理 (Work Ethics) 描述了员工对于受雇企业和具体工作的态度, 是一种员工对自身行为的内在约束机制。本研究认为员工的工作伦理可能在心理契约破裂感知影响组织公民行为之间产生“防火墙”效果。根据 Forsyth 的伦理思想理论, 我们将工作伦理分为主观主义 (Subjectivists)、绝对主义 (Absolutists)、例外主义 (Exceptionists) 和情境主义 (Situationists) 四类。本研究将心理契约破裂五项全局量表 (Robin 和 Morrison, 2000)、心理契约量表 (Rousseau, 2001)、工作伦理多项量表 (Miller 等, 2002) 和组织公民行为量表 (Katz, 1964) 整合, 在互联网企业进行调查, 收集有效问卷 412 份。结果分析发现员工的心理契约破裂感知和组织公民行为呈显著负相关。其中持交易型

(Transactional) 心理契约的员工对心理契约破裂更敏感, 组织公民行为更容易受心理契约破裂的负性影响。而关系型心理契约的员工对心理契约破裂的容忍度较高, 组织公民行为受心理契约破裂的影响也较小。结合四种工作伦理发现, 当员工感知心理契约破裂, 某些类型的工作伦理对组织公民行为的下降有“防火墙”效应。其中绝对主义和例外主义工作伦理持有者在感知心理契约破裂时组织公民行为呈现显著负相关 ($\beta_{\text{Absolutists}} = -0.224, p_{\text{Absolutists}} = 0.044$; $\beta_{\text{Exceptionists}} = -0.269, p_{\text{Exceptionists}} = 0.01$), 其余两种类型无显著效应。由于绝对主义和例外主义都是低相对主义的工作伦理类型, 可见相对主义工作伦理是在心理契约破裂时影响组织公民行为的关键。本研究结合了工作伦理理论, 探讨心理契约、心理契约破裂对组织公民行为的影响, 为解决企业发展中人力资源和管理方面遇到的困难提供了新的工具。

关键词 心理契约, 心理契约破裂, 工作伦理, 组织公民行为

The Effects of Work Ethics on Organizational Citizenship Behavior Under Perceived Psychological Contract Breach

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Abstract: The relationship between employees and organizations is one of the primary focuses in areas such as Organizational Behavioral Sciences and Managerial Psychology. Not only does it include duties and roles specified on text-based agreements, but it also involves expectations of bilateral obligations and responsibilities. The former refers to written contracts, while the later describes psychological contracts. Employees tend to evaluate whether organizations have met these psychological commitments; when not fully achieved, senses of psychological contract breach will arise. Perceived psychological contract breach can bring changes in employees' attitudes and motivations, affecting work-related behaviors and performances. Such consequences, accumulated, will impact organizational performances and strategic objectives. Work ethics describes employees' attitudes toward their employer organizations and specific tasks assigned in their working routines. It is considered an inherent mechanism of employees' self-discipline. In this study we believe that work ethics serves as a buffer between perceived psychological contract breach and organizational citizenship behavior. According to Forsyth's ethical ideologies (1984), we hereby categorize work ethics holders into Subjectivists, Absolutists, Exceptionists and Situationists. We combined Five-item Global Scale to Measure Perceptions of Contract Breach (Robin & Morrison, 200), Psychological Contract Inventory (Rousseau, 2001), The Multidimensional Work Ethic Profile (Miller, Woehr, & Hudspeth, 2002) as well as Organizational Citizenship Behavior Items (Katz, 1964). A total of 412 effective questionnaires were collected from an internet company. Analysis revealed that perceived psychological contract breach was negatively related to organizational citizenship behavior. Employees with transactional psychological contracts were more sensitive to perceived psychological contract breaches, that their organizational citizenship behaviors were more susceptible to the negative effects of breached psychological contracts; relational psychological contract holders, on the other hand, were steadier on their organizational citizenship behavior levels. Results also revealed the buffering effects of work ethics. Absolutists and Exceptionists experienced significant negative impacts on their organizational citizenship behaviors when facing perceived psychological contract breaches ($\beta_{\text{Absolutists}} = -0.224, p_{\text{Absolutists}} = 0.044$; $\beta_{\text{Exceptionists}} = -0.269, p_{\text{Exceptionists}} = 0.01$). Subjectivists and Situationists, on the other hand, showed no significant effects. Since both Absolutists and Exceptionists share the characteristics of low relativism in work ethics, we can conclude that relativism serves a major role in the relationship between perceived psychological contract breach and organizational citizenship behavior. With theories of work ethics, this study examined the effects of psychological contract, perceived psychological contract breach on organizational citizenship behavior, bringing potential novel insights into problem-solving in human resource and management.

Keywords: Psychological Contract, Perceived Psychological Contract Breach, Work Ethics, Organizational Citizenship Behavior

利他性惩罚有利于惩罚者获取权力：一个演化的视角

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摘要 利他惩罚是维持基因无关个体之间广泛合作的重要机制，但它也提出了一个长期存在的进化之谜：既然利他惩罚降低了惩罚者的适应度，那么利他惩罚者是如何在进化中得到选择的？一种解释是利他的惩罚为惩罚者带来了积极的声誉。本研究通过引入声誉的二维结构，从权力的角度进一步探讨利他惩罚如何通过正面声誉提高惩罚者的适应度。三个实验表明：利他性惩罚有利于惩罚者获取权力。实验1是120名本科生参与的被试内设计。被试随机分成30组，每组4人，进行5轮公共物品博弈。在每一轮之后，被试可以惩罚选择保留代币的成员。然后，实验者向被试展示三名成员的惩罚次数。被试用7点李克特量表评估他们的热情和能力，并在他们之间分配权力点。实验2是240名本科生参与的2（温暖：低/高） $\times$ 2（能力：低/高）被试间设计。旨在用实验室操作声誉的两个维度来进一步检验其与权力之间的因果关系。实验3是3（惩罚：无/低/高） $\times$ 2（组间竞争：无/有）混合设计，考察了组间竞争对惩罚与权力关系的影响。实验1的结果表明，利他惩罚有利于惩罚者权力的获得，能力评价在上述关系中起中介作用，而温暖评价的中介作用不显著。实验2对实验1中的中介变量（热情和胜任力）进行操作，验证了上述变量与因变量权力获得之间的因果关系。实验3表明，组间竞争进一步增强了参与者将权力分配给利他惩罚者的倾向。总之，本研究通过考察影响惩罚与权力获得关系的调节变量和中介机制，在一定程度上解释了利他惩罚影响惩罚者权力获得的机制：利他惩罚提高了人们对惩罚者声誉的评价，这种积极的评价最终转化为惩罚者的权力获得；而群体间的竞争加剧了上述现象的发生趋势。上述结果为理解利他性惩罚的演化机制提供了一种权力视角，并为理解人类社会中群体领袖的最初涌现这一问题提供了新的理论思路。

关键词 利他性惩罚，权力，声誉，群体间竞争

Altruistic Punishment Favors the Power Attainment for Punishers: An Evolutionary Perspective

Abstract: The existing literature suggests that altruistic punishment is an important mechanism maintaining extensive cooperation among genetically unrelated individuals, but it also raises a long-standing evolutionary riddle: since altruistic punishment reduces the fitness of punishers, how are altruistic punishers selected in evolution? One explanation is that altruistic punishment brings a positive reputation for punishers. By introducing the two-dimensional structure of reputation, this study further explores how altruistic punishment can improve punishers' fitness through positive reputation from a power perspective. Experiment 1 was a within-participants design involving 120 undergraduates. Participants randomly formed 30 groups of 4 to play 5 rounds of public goods games. After each round, participants could punish defectors who chose to keep the tokens. Then, the experimenter presented to participants the number of punishments made by the three members. Participants evaluated their warmth and competence on a 7-point Likert scale, and allocated the power points among them. Experiment 2 was a 2 (warmth: low/high) $\times$ 2 (competence: low/high) between-participants design involving 240 undergraduates. Participants read a piece of material describing performance of a particular individual in terms of warmth and competence, and then participants chose an integer from 0 to 10 to represent the number of power points that they were willing to allocate to that individual. Experiment 3 was a 3 (punishment: no/low/high) $\times$ 2 (between-group competition: without/with) mixed design, where punishment was within-participants variable and between-group competition was between-participants variable. Participants played 5 rounds of public goods games in group of 4, and allocated power points among the members according to the number of punishments. The results of Experiment 1 showed that altruistic punishment was conducive to punishers' power attainment, and the competence evaluation mediated the above relationship, while the mediating effect of warmth evaluation was not significant. Experiment 2 manipulated the mediating variables (warmth and competence) in Experiment 1 and confirmed the causal relationship between the

above variables and the dependent variable, power attainment. Experiment 3 showed that between-group competition further strengthened the participants' tendency to allocate power to altruistic punishers. In conclusion, by examining the moderating variables and mediating mechanisms that affect the relationship between punishment and power attainment, this study explains to a certain extent the mechanism by which altruistic punishment affects punishers' power attainment: altruistic punishment improves people's evaluation of punishers in terms of competence; this kind of positive evaluation finally translates into punishers' power attainment; and the between-group competition strengthens the tendency of the occurrence of the above phenomenon. These findings shed some light on the understanding of the evolutionary mechanism of altruistic punishment.

Keywords: words altruistic punishment, power, reputation, between-group competition

社会比较对攻击性的影响：一个有调节的中介模型

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摘要 社会比较是一种普遍存在的社会现象，人们在日常生活中习惯于通过与他人进行比较来了解和判断自己的在群体中的地位与能力，从而对自己做出评价和定位。然而，过度或者不良的社会比较不仅会导致个体产生诸多问题行为，还会使个体表现出更高的攻击性。因此，研究社会比较对攻击性的影响具有重要的现实意义。此外，已有研究发现，相对剥夺感、愤怒和隐性自恋人格是影响攻击性的重要因素，但是目前尚未有研究将他们与社会比较纳入同一框架之中进行考察。因此，本研究旨在探讨相对剥夺感和愤怒在社会比较对攻击性影响中的中介机制以及隐性自恋人格可能的调节作用。采用社会比较倾向量表、相对剥夺感量表、愤怒量表、攻击问卷以及隐性自恋人格问卷，对山东省某高校 726 名大学生（平均年龄 18.23 岁，标准差为 0.71）进行调查。结果表明：（1）社会比较能够显著正向预测攻击性。（2）相对剥夺感和愤怒在社会比较与攻击性之间起中介作用，具体而言，社会比较通过三条路径影响攻击性：一是相对剥夺感的单独中介作用；二是愤怒的单独中介作用；三是相对剥夺感和愤怒的链式中介作用。（3）隐性自恋人格调节了社会比较与攻击性之间的关系，具体作用于“社会比较→相对剥夺感→攻击性”这条中介路径上，即高隐性自恋人格可以增强社会比较与相对剥夺感以及相对剥夺感与攻击性之间的关系。本研究不仅揭示了社会比较对攻击性的影响及其作用机制，也为干预和减少个体的攻击性提供了一定的依据和启示。

关键词 社会比较，攻击性，相对剥夺感，愤怒，隐性自恋人格

The Effect of Social Comparison on Aggression: A Moderated Mediation Model

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Abstract: Social comparison is a universal social phenomenon. In daily life, people are used to understanding and judging their status and ability in the group by comparing with others, so as to evaluate and position themselves. However, excessive or bad social comparison will not only lead to many problem behaviors, but also lead to higher aggression. Therefore, it is of great practical significance to study the effect of social comparison on aggression. In addition, existing studies have found that relative deprivation, anger and covert narcissistic personality are important factors affecting aggression, but there is no study to integrate them and social comparison into the same framework to consider the mechanism. Therefore, the present study aimed to investigate the mediating mechanisms of relative deprivation and anger on the effect of social comparison on aggression and the possible moderating effect of covert narcissistic personality. A total of 726 college students ($M_{age} = 18.23$ years, $SD = 0.71$) from a university in Shandong Province participated in the current study and completed multiple questionnaires, namely, the Social Comparison Orientation Scale, Relative Deprivation Scale, Anger Scale, Aggression Questionnaire and Covert Narcissistic Personality Questionnaire. The results showed that: (1) Social comparison can significantly positively predict

aggression. (2) Relative deprivation and anger played a mediating role between social comparison and aggression. In particular, social comparison influenced aggression indirectly through three paths: one was the mediating role of relative deprivation; the second was the mediating role of anger; the third was the chain mediating role of both relative deprivation and anger. (3) The relationship between social comparison and aggression can be moderated by covert narcissistic personality, and specifically acted on the mediating path of “social comparison→relative deprivation→aggression”. That is, high covert narcissistic personality can enhance the relationship between social comparison and relative deprivation and between relative deprivation and aggression. This study not only contributes to reveal the effect of social comparison on aggression and its mechanism, but also provides some basis and enlightenment for intervention and reduction of individual aggression.

Keywords: social comparison, aggression, relative deprivation, anger, covert narcissistic personality

偏好重塑：积极人际互动促进直觉亲社会行为

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摘要 亲社会属性是人类生活的一个重要特征，但对于人们是否能够形成亲社会行为的一般直觉向，仍存在争论。亲社会性反思模型(the reflective model of prosociality)认为，人类生来就是具有非道德和纯粹利己主义倾向的生物，从事亲社会行为需要对这种利己主义本能进行反思控制。而亲社会性直觉模型(the intuitive model of prosociality)却提出了相反的假设，认为在许多情况下，亲社会行为不需要主动控制自私冲动，它本身就可以以直觉的(或冲动的)方式出现。亲社会性自动化的行为特征，奖赏寻求相关的神经特征，以及儿童亲社会性的早期发展都为亲社会性直觉模型提供了支持性证据。为了协调这两种不同的理论观点和证据，社会启发式假设(social heuristic hypothesis, SHH)对影响直觉亲社会行为的因素进行了预测。行为决策是由那些在过去经历过的情况下取得成功的行为经验所塑造的(Chudek & Henrich, 2011; Kiyonari, Tanida, & Yamagishi, 2000)。个体的直觉反应容易受过去经验的影响，将在日常互动中有利的行为内化为一种启发式，在一些情境中成为引导个体行为的关键。在日常生活中，人们总是参与公共或私人互动。在互动过程中既存在积极互利的情况，也存在着糟糕失望的情况。我们对他人的行为受以往他人行为和我们自身互动经验的影响。在这些理论和研究的基础上，我们通过3项实验来探究互动经历对直觉亲社会选择的影响。我们分别通过在线互动、回忆和助人报道的方式直接或间接地诱发参与者的互动经验。总体而言，研究发现：(1)互动经历会影响个体后续的帮助选择：积极互动经历增加了个体的帮助选择。(2)这一效应是存在于依赖启发式的直觉加工条件下，在深思熟虑加工中几乎消失。(3)帮助行为的改变在一定程度上可以由人性感知来解释。这在一定程度上说明，亲社会行为偏好能够通过互动经验在相对较短的时间尺度内被重塑。

关键词 直觉亲社会性，社会启发式，亲社会行为，偏好塑造

A remodeling of preferences:

Positive interactions promote intuitive pro-social behavior

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Abstract: Prosocial behavior is a central feature of human life and there is an ongoing debate whether individuals have, therefore, developed a general intuitive tendency to act prosocially or not. The reflective model of prosociality holds that humans are born as creatures with non-moral and purely egoistic tendencies, and prosocial behavior requires exerting reflective control over this egoistic instinct. However, in contrast to the reflective model, Zaki and Mitchell (2013) have proposed an intuitive model of prosociality, which suggests that prosocial behavior often arises from intuitive, hot, or system 1 preferences, representing an impulse of its own. The intuitive model of prosociality is

supported by at least three markers: behavioral signs of automaticity, neural signatures of reward seeking, and early development. The idea that prosociality can be intuitive in no way implies that it always is and there are some conflicting evidences. The social heuristics hypothesis (SHH) has therefore been proposed as a theoretical framework to addressing conflicting evidences. The SHH posits that associations between processing mode and prosocial behavior are complex and multifaceted, prone to shifting according to individual variability and the contexts in which it occurs. In the current study, we explored the impact of helping experience on intuitive prosocial behavior and the potential mediating factors from a perspective of preferences remodeling. In three experiments, we induced participants' helping experiences directly or indirectly through online interaction, recall, and news reports about helping. Consistent with our predictions, positive helping interactions could promote helping choice. This effect existed in the intuitive processing that relies on heuristics and virtually disappear in deliberative processing. Moreover, we also present evidence that our treatment effects could be explained by the change in views of humanity. Taken together, our findings suggest that the power of previous experience for shaping our behavior in a virtual help settings.

Keywords: intuitive prosociality, social heuristics hypothesis, prosocial behavior, remodeling of preferences

女性周期性的激素变化与亲社会行为

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摘要 利他和亲社会是社会心理学和行为科学的研究热点。亲社会行为在人类合作、竞争和社会共同进化中发挥着至关重要的作用。近期研究表明，施加外源性激素所导致的激素水平的变化能影响人们的亲社会倾向。此外有研究表明，即使是自然范围内的激素的波动也可能影响亲社会行为。以往研究探究了月经周期的激素变化对亲社会性的影响，但研究结果不一致。Anderl 等人（2015 年）使用被试间设计，并通过被试的口头报告的生理周期信息估计女性的生理周期阶段，发现处于卵泡期的女性比处于黄体期的女性具有更高的亲社会倾向；但 Sternstrom 等人(2018)使用类似的方法，却发现卵泡期的女性比黄体期的女性更不亲社会。以往研究结果的不一致很可能是由于研究方法的局限性所致。基于此，本研究直接测量女性被试的唾液类固醇激素水平，并采用被试内的实验设计，探究了女性周期性变化的激素水平（雌二醇、孕酮和睾酮）与其亲社会性之间的关系。亲社会水平通过三个行为任务（慈善捐赠任务、社会价值取向任务和社会折扣任务）和一份自陈报告的问卷（亲社会倾向测量）来测量。被试连续五周、每周来实验室一次参与实验。每次测试，被试都提供唾液样本以供测量其激素水平。此外，被试还完成亲社会测量任务。实验程序和分析方法都在实验实施之前在 OSF 平台进行了预注册。多层线性回归的结果表明，女性亲社会性水平不受雌二醇、孕酮、睾酮、和雌二醇和孕酮之比水平的调节。这一结果说明，女性的亲社会水平不受到生理周期的激素变化而改变。这一结果也强调了探究激素水平和社会行为关系的研究中，使用被试内设计的重要性。

关键词 生理周期，亲社会，雌二醇，孕酮，睾酮

Do Women's Natural Hormonal Fluctuations Modulate Prosociality?

A Within-subject Analysis

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Abstract: The study of altruistic and prosocial behavior is at the core of modern social and behavioral sciences. It plays a vital role in human cooperation, competition, coordination and societal coevolution. Recent advances show

that exogenously administered hormone levels moderate prosocial propensities. It's been argued that even the natural hormonal fluctuations may affect prosocial propensities although debates remain. Previous studies have attempted to examine the effects of menstrual cycle on prosociality, but have obtained ambiguous results. Using between-subject designs and self-reported menstrual histories, Anderl and colleagues (2015) found that women in the follicular phase were more prosocially orientated than those in the luteal phase but Sternstrom et al. (2018) found that women in the follicular phase were less prosocial than those in the luteal phase. This somewhat conflicting evidence regarding the menstrual cycle effects on prosociality may be due to methodological limitations. Our study directly tests this conjecture using a within-subject design in which women's hormone levels and prosocial tendencies were repeatedly measured across the menstrual cycle. In this study, we investigated the relationships between women's natural salivary steroid hormone levels (estradiol, progesterone, and testosterone) and their prosociality in a variety of contexts, as measured by three behavioral tasks (Charitable Donation, Social Value Orientation, and Social Discounting tasks) and one self-reported questionnaire (the Prosocial Tendencies Measure). Participants completed five weekly laboratory tests to obtain within-subject hormonal fluctuation data and prosociality measurements. In a preregistered analysis, we found little evidence supporting the hypotheses that women's prosociality tracked natural changes in salivary estradiol, progesterone, estradiol-to-progesterone ratio, or testosterone. Our results demonstrate the importance of performing within-subject analyses when examining the relationships between hormonal levels and social behavior.

Keywords: menstrual cycle, prosociality, estradiol, progesterone, testosterone

从“生存”到“发展”：助人分配中的效率-公平权衡

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摘要 当同时面对多个潜在受助对象时, 助人者通常需要考虑如何在多个受助者之间分配有限的资源。该决策过程往往涉及对于公平和效率的权衡。本研究关注潜在受助者的处境如何影响助人决策中的分配偏好。对比受助者的处境(在接受帮助的领域所拥有的资源多寡)与该领域所需资源的基准线, 可以区分“生存”和“发展”两种情境。在“生存”情境中, 受助者的处境尚未达到该领域的基准线; 而在“发展”情境中, 受助者的处境达到了基准线但仍不充分。本研究提出, 相比于“发展”情境, 在“生存”情境下, 助人者更偏好能使所有潜在受助者获得等量资源的“公平”方案, 而非使得资源总量最大化的“效率”方案。此外, 本研究还探讨了目标完成度、叙述框架两个调节变量的作用。本研究通过4个实验检验假设。实验1采用“爱心家教为学生补习功课”情境, 发现在“生存”情境中, 助人者更偏好公平方案; 而在“发展”情境中, 助人者更偏好效率方案。实验2探究帮助目标完成度的调节作用, 通过2(受助者处境: 生存/发展)×2(目标完成度: 全部/部分完成)混合设计, 采用“为贫困山区儿童运食物”情境, 发现当效率方案可以一次性满足全部帮助目标时, 无论在何种条件下, 帮助者都更偏好效率方案。实验3探究叙述框架的调节作用, 采用2(受助者处境: 生存/发展)×2(叙述框架: 获益/损失)的被试间设计, 采用情境同实验2, 发现当使用损失框架叙述问题时, 两种条件下人们都更偏好公平方案。实验4采用“新冠疫情期间为果农运出水果”的新情境, 再次检验了主效应。同时, 实验3、4都尝试对可能的中介因素进行探究。本研究揭示, 潜在受助者的处境会影响助人决策中的分配偏好: 相比于在帮助现状在基线以上的人们进一步改善生活、实现“发展”时, 助人者在帮助现状处于基线以下的受助者跨越基线、保证“生存”时, 更偏好公平方案而非效率方案。这一发现对现有的助人决策、分配决策相关研究进行补充, 同时有助于促进对效率和公平的深入理解。

关键词 帮助行为, 效率, 公平, 分配偏好

From surviving to thriving: How helping allocation preferences shift

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Abstract: When having multiple recipients who need help at the same time, helpers often need to consider ways to allocate limited resources among multiple recipients. Such decision-making processes often involve a trade-off between equity and efficiency. The current study focuses on how the situation of potential recipients affects helping allocation preferences. By comparing the recipient's situation (the amount of resources available in the area needing help) to a bottom line of resources needed in that area, a distinction can be identified between people in "surviving" and "thriving" situations. For people who are "surviving", their situation has not yet reached the bottom line of the area, while people the "thriving" scenario are ones who have reached the bottom line but is still insufficient. The current study suggests that helpers prefer "equity" in "surviving" scenarios, where all potential recipients receive an equal amount of resources. When facing "thriving" situations, helpers prefer "efficiency", where the total amount of resources is maximized. In addition, we explored the role of two moderating variables, goal completion and narrative framing. Four experiments were conducted to test the hypotheses. Experiment 1 used a "student tutoring" scenario and found that compared to the "thriving" scenario, the helpers preferred the equity option rather than the efficiency option in the "surviving" scenario. Experiment 2 explored the moderating effect of goal completion using a scenario where food needed to be transported for poor children in the mountain. A mixed design of 2 (recipient's situation: surviving/ thriving) $\times$ 2 (goal completion: all/partial completion) was used. The helper preferred the efficiency solution regardless of the condition. With the same scenario, Experiment 3 explored the moderating effect of narrative frame using a 2 (recipient's situation: surviving/ thriving) $\times$ 2 (frame: gain/loss) between-subjects design. Results have found greater preferred towards the equity option for both conditions when the problem was described with a loss frame. The main effect was tested again in Experiment 4 with a scenario of "helping farmers to transport fruits during a COVID19 epidemic". Meanwhile, both Experiments 3 and 4 attempted to explore possible mediating factors. The current study reveals that the situation of potential recipients affects distributional preferences when making helping decisions: compared to facing multiple recipients who are in "thriving" situations, the helpers preferred the equity option rather than the efficiency option when facing multiple recipients who are "surviving" below the bottom line. Our finding has implications for existing helping decisions. At the same time, it serves as complements for existing research on helping decisions and distributional decisions and contributes to a deeper understanding of efficiency and equity.

Keywords: Helping allocation, Efficiency, Equity, Helping behavior

(7) “社会心理学专业委员会”口头报告分场 7

抽象/具体的死亡提醒以及年龄如何影响死亡认知及态度： 基于死亡提醒操作回答的文本分析

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摘要 根据恐惧管理理论，死亡提醒操作会触发人们对于自己必死命运的本能恐惧（存在论恐惧），从而引发其对于自身文化世界观或是内群体的防御反应。但最近存在很多对于死亡提醒操作效果再现性的质疑。本研究首次尝试通过进行文本分析来验证传统的死亡提醒操作——即对抽象死亡进行想象——的合理性。其次，本研究也探讨了年龄对于死亡认知及态度的影响。本研究在日本收集了 204 名年轻人（年龄 19.16 ± 1.54 岁），以及 180 名老年人（年龄 72.29 ± 4.79 岁）在死亡提醒操作（抽象/具体）中的回答并加以分析。抽象死亡提醒操作要求被试认真想象并写下自己死亡时的想法和心情。而具体死亡提醒操作则要求被试认真想象并写

下自己死于事故时的想法和心情。分析结果显示,人们被唤起死亡意识后的思考主要包括以下五个方面的内容:存在论恐惧(死亡的不可避免性及预测不能性)、情感表出、生命反思、临终状态,以及身后事。抽象/具体的死亡提醒操作使被试的死亡思考产生不同侧重。对抽象死亡进行思考的被试——无论是年轻或是老年人——对于存在论恐惧,即死亡的客观性质有更多言及。除此之外,相比老年人,年轻人会更多言及对于生命的思考,表述出今后的人生目标。而对具体死亡进行思考的被试则有更多情感表出,会更为详细的表述自己面对死亡时的心情。面对死亡,年轻人表达最多的是悲伤、恐惧等负性情绪。而老年人则更多的表达出一种“不喜不悲”的中性情绪。同时,相较抽象死亡条件,被试对于自己身后事(遗产分配等)的言及也有显著增加。根据以上结果可以得出:1)抽象的死亡提醒操作最能唤起被试的存在论恐惧,而具体的死亡提醒操作则会使被试聚焦于死亡的其他侧面。这一发现证实了传统死亡提醒操作的合理性;2)虽然客观上老年人距离死亡更近,但他们与年轻人一样能够对抽象死亡进行思考。这说明老年人依然能够与死亡保持心理上的距离。同时,他们对于死亡也抱有更为豁达、不消极的态度。这一发现也为“如何实现健康老化”提供启示。

关键词 恐惧管理理论,死亡提醒,年龄差,死亡意识

How Abstract / Specific Mortality Manipulation and Age May Affect Concern and Attitudes Toward Death: A Content Analysis of the Answer from Mortality Salience Manipulation

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Abstract: According to terror management theory, mortality salience (MS) manipulation triggers people's instinctive fear of death (existential terror), thereby eliciting defensive reactions to others who have a different cultural worldview or that belong to out-groups. However, there have been many doubts about the reproducibility of the effect of mortality salience recently. The present study is the first attempt to verify the rationality of traditional MS manipulation—individuals' exposure to an abstract mortality manipulation without providing any specific information of death—through context analysis. Furthermore, we also explored the effect of age on death concerns and attitudes. The present study was conducted in Japan. We collected and analyzed the text data from two-hundred and four young people ($M_{age} = 19.16$, $SD = 1.54$) and one-hundred and eighty older people ($M_{age} = 72.29$, $SD = 4.79$), who accepted either abstract or specific MS manipulation. In the abstract MS manipulation, participants were asked to imagine their own death and write down their emotions and feelings towards it. Whereas in the specific MS manipulation, participants were asked to imagine their own death caused by an accident. According to the results, the text contents can be categorized into the following five aspects: Existential Terror (the inevitability and unpredictability of death), Emotion Expression, Life Reflection, Dying State, and After Death. We found that participants tend to focus on different aspects of death after different MS manipulation. Participants who were exposed to an abstract MS manipulation—whether young or old—mentioned Existential Terror, namely, the objective nature of death more often. Compared to older participants, young participants showed greater concern for Life Reflection, emphasizing how they would like to live their life. On the other hand, in specific MS manipulation, participants focused more on Emotion Expression—how they feel in the face of death. For young participants, the most frequently used words were “*terrify*” or “*sad*”, which revealed a negative attitude towards death. In comparison, older participants were more capable of feeling neutral about death (e.g. “*I don't feel anything special towards death.*”). Additionally, there were a significant number of participants that spoke more about After Death—for example, how to deal with the inheritance. We can draw the conclusion from the present study that existential fear was more frequently aroused by abstract MS manipulation, while specific MS manipulation would draw participants' attention to other aspects of death. These findings provide evidence for the rationality of traditional MS manipulation. Furthermore, although older people are objectively closer to death, their reaction towards abstract MS manipulation was similar to young peoples' reactions, indicating that older people are still able to maintain psychological distance from death. Meanwhile, they are more

open-minded and maintain non-negative attitudes towards death. These findings may also provide a better understanding of the process of healthy aging.

Keywords: terror management theory, mortality salience, age differences, awareness of death

社会信息对他人疼痛评估的影响

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摘要 准确知觉他人的疼痛至关重要,尤其在医疗保健情境下,这可能关乎疼痛治疗或管理的程度和策略。然而,评估他人的主观感受天然地存在障碍,且这一过程极易受到其他因素的影响。本研究通过两个实验考察对他人疼痛的评估(实验一:实验室数据, $N = 50$; 实验二:网络数据, $N = 207$)和疼痛管理推荐(实验二)是否受到社会信息的影响。实验一中被试观看受伤的手或脚的图片并评估受伤者的疼痛程度。这些图片分为高、中、低三种疼痛水平且平衡匹配了较低($Social_{Low}$)或较高($Social_{High}$)的社会评价信息(10位虚构被试的疼痛评分)。实验二中被试观看慢性肩痛病人转动患肢时的疼痛面部表情视频剪辑并评估病人的疼痛程度和给与疼痛管理推荐(止痛药或心理治疗)。与实验一相同,视频刺激材料也平衡匹配了较低($Social_{Low}$)或较高($Social_{High}$)的社会评价信息。研究结果显示:(1)实验一中被试的疼痛评分显著受到刺激图片疼痛水平的驱动,即刺激图片的疼痛水平越高被试所给出的疼痛评分越高, $t(49) = 16.27, p < 0.001$ 。更重要的是, $Social_{High}$ 实验条件下的疼痛评估显著高于 $Social_{Low}$ 下的疼痛评估, $t(49) = 8.83, p < 0.001$ 。(2)实验二验证了实验一中揭示的社会信息效应, $t(206) = 7.54, p < 0.001$ 。然而,与实验预期不同的是,我们未能发现社会信息对疼痛管理推荐的影响,即 $Social_{High}$ 和 $Social_{Low}$ 实验条件下被试推荐给病人的止痛药剂量, $t(206) = 0.35, p = 0.73$ 和心理治疗疗程, $t(206) = 1.41, p = 0.16$, 均无显著差异;此外,对止痛药或心理治疗的推荐偏好也无显著差异,对于止痛药偏好 $t(206) = -1.59, p = 0.11$, 对于心理治疗偏好 $t(206) = 1.59, p = 0.11$ 。相关分析发现被试的特质性移情水平越高所表现出的社会信息效应越强, $r(207) = 0.25, p = 0.04$ (实验一), $r(207) = 0.11, p = 0.056$ (实验二)。本研究显示人们对他人的疼痛评估总体来说是客观理性的,但是极易受到社会信息的影响。

关键词 社会信息, 疼痛评估, 疼痛管理推荐, 移情

Social information influences estimation of vicarious pain

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Abstract: Accurately perceiving pain in others is important, especially in medical and healthcare settings, in which different levels of perceived pain might lead to different treatments or pain management strategies. However, judging the pain of others is inherently difficult and may be influenced by various social and cultural factors. Here, we examined whether vicarious pain estimation (experiment 1, lab data, $N=50$, and experiment 2, online data, $N=207$) and pain management recommendations (experiment 2) are influenced by the opinion of others (social information). In experiment 1, perceivers viewed pictures depicting injured hands or feet in high, medium and low intensities, preceded by nonpredictive social information (pain ratings from 10 fictitious perceivers), indicating low ($Social_{Low}$) or high ($Social_{High}$) vicarious pain estimation of others. In experiment 2, perceivers viewed facial video clips of real patients suffering from chronic shoulder pain and estimated patients' pain intensity and gave their pain management recommendations regarding pain medicine and psychotherapy. We found that (1) in experiment 1, perceivers' pain estimation was highly driven by normative vicarious pain intensity levels, $t(49) = 16.27, p < 0.001$. More importantly, pain estimation during $Social_{High}$ trials was statistically higher than that during $Social_{Low}$ trials, $t(49) = 8.83, p <$

0.001; and (2) experiment 2 replicated the social influence effect in pain estimation observed in Experiment 1, $t(206) = 7.54$, $p < 0.001$. However, we failed to reveal such effect in pain management recommendations, for dose of pain medicine, $t(206) = 0.35$, $p = 0.73$; for session of psychotherapy, $t(206) = 1.41$, $p = 0.16$; paired t-test of Social_{HIGH} and Social_{LOW} trials revealed no preference for psychotherapy: $t(206) = 1.59$, $p = 0.11$ or pain medicine $t(206) = -1.59$, $p = 0.11$. Correlation analysis revealed that perceivers with more empathy showed larger social influence, $r(207) = 0.25$, $p = 0.04$ for experiment 1 and $r(207) = 0.11$, $p = 0.056$ for experiment 2. Our findings revealed that people's pain estimation was basically reasonable, but could be biased by such little social influence.

Keywords: social information, pain estimation, pain management recommendation, empathy

广场舞对于老年人孤独感及心理健康的影响：一项范围综述

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摘要 背景：孤独感是老年人普遍存在的心理问题，也是其他心理问题，如抑郁，焦虑，自杀等的重要原因。广场舞是一项在中国广泛开展的以老年人为主的健身运动，有效地增加了老年人的社会参与，是改善老年人孤独感的潜在干预措施。这篇综述旨在研究广场舞与孤独感以及其他心理健康因素之间的关系。

方法：本文采用范围综述的方法，系统检索了 Scopus 英文数据库和 CNKI 中文数据库，研究广场舞与孤独或社会联系，身心健康或认知功能之间的关系同行评审的期刊文章和博硕士论文被纳入研究。结果：检索获得文献 763 篇，其中 117 篇符合纳入标准。仅 6 篇文献评估了孤独或社交关联，且均为横断研究。广场舞与较少的孤独感，更好的社交关系和更多的社交参与有关。65 篇文献评估了心理健康状况，其中 23 篇为随机对照实验，研究结果包括减轻心理症状，增加积极情绪和幸福感。9 篇文献探究了认知功能，其中 6 篇为随机对照实验，研究发现参与广场舞可以改善老年人认知功能。85 篇文献关注躯体健康，其中 37 篇为随机对照实验，研究结果包括改善身体形态，身体机能和身体素质等，降低血压血脂，改善心肺和肾功能等。结论：广场舞是减少中国老年人孤独感的一种可行的干预措施。目前已发表的研究广场舞和孤独感或社交关联的研究均发表与近几年，且均为横断研究，未来关于广场舞如何减少老年人孤独感仍有较多研究空间。目前关于广场舞研究的文献仍大多集中于躯体健康，心理方面研究的因素较少，基本关注于精神病症状、积极情绪和幸福感，广场舞带来的积极影响和作用机制有待进一步探讨。

关键词 老年人，孤独感，广场舞，心理健康

Does Square Dance Improve Loneliness and Mental Health of Older Adults? A Scoping Review

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Abstracts: Backgrounds: Loneliness is a common psychological problem among the elderly, and it is also an important cause of other psychological problems, such as depression, anxiety, and suicide. Square dance, a widespread exercise among the elderly in China, successfully increase social engagement of the elderly, and could be an effective intervention to reduce loneliness among older Chinese adults. This review aims to examine the relationship between square dance and loneliness, and related health outcomes. Methods: The databases Scopus and CNKI were systematically searched with the instruction of scoping review. Peer-reviewed journal articles and thesis publications examining the relationships between square dance in China and loneliness or social connection, physical health, mental health, or cognition were included. Results: 763 publications were retrieved, 117 of which met the inclusion criteria. Only 6 articles evaluated loneliness or social connection, and they were all cross-sectional studies.

Square dance was associated with less loneliness, better social relationships, and more social engagement. 65 publications evaluated mental health, 23 of which were randomized controlled trial. The findings included alleviating psychological symptoms, increasing positive emotions and well-being. Nine articles explored cognitive function, and six of them were randomized controlled trial. The study found that participation in square dance can improve the cognitive function of the elderly. 85 articles focused on physical health, 37 of which were randomized controlled trial. The research results included improving body size indexes, physiological function tests, and physical strength and agility indicators, lowering blood pressure and blood lipids, and improving heart, lung and kidney functions. Conclusion: Square dance is a feasible intervention to reduce the loneliness of Chinese elderly. The published studies on square dance and loneliness or social connections have been published in recent years, and they are all cross-sectional studies. There is still more directions for research on how square dance can reduce the loneliness of the elderly in the future. At present, the literature on square dance research is still mostly focused on physical health, and there are few psychological factors. The main focus is on psychotic symptoms, positive emotions and well-being. The positive influence and mechanism of square dance need to be further explored.

Keywords: older adults, loneliness, square dance, mental health

自我损耗效应存在的新证据

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摘要 自我损耗效应指的是, 相对于完成一项不需要耗费努力的中性任务, 完成一项需要耗费努力的自控任务之后, 人们在随后的自控任务上会表现得更差。该效应从 1998 年提出以后获得了极大的关注, 有成百上千项研究曾探讨过这一效应, 参与的研究者多达数千人。但是, 最近几年, 这一效应的可重复性遭到了极大的挑战。Carter 等人(2015)在其元分析中指出, 自我损耗效应存在严重的发表偏差, 使用统计方法纠正发表偏差以后, 自我损耗效应基本等于零。随后 Hagger 等人 (2016) 发起了多实验室重复研究, 结果真的没有发现显著自我损耗效应。随后, Dang 等人(2021)又组织了另外一项多实验室重复, 结果发现了显著自我损耗效应, 但是效应很弱, 只有 $d=0.10$ 。从前人的这些研究中, 我们发现, 效应比较小的原因主要是实验操纵太弱, 也即在大多数自我损耗研究中, 第一个损耗任务都只有 5 到 10 分钟, 起不到损耗的作用。因此, 本研究中, 我们首先设计了一个范式, 也即使用反向眼跳作为第一个损耗任务, 持续半小时左右, 第二个任务使用了 Go/Nogo 任务。我们首先在中国的学生群体中进行了检测, 发现了很强的自我损耗效应。随后, 我们使用多实验室重复法, 在 11 个实验室中进行重复, 结果也发现了较强的自我损耗效应 ($d=0.30$)。随后, 我们又通过网络平台上招募被试重复这一范式, 同样也发现了相应大小的效应。本研究证明, 只要实验操纵足够强, 就可以产生稳定的自我损耗效应, 从而为解决这一重复危机提供了重要证据。

关键词 自我控制, 自我损耗效应, 可重复性危机

New Evidence for the Existence of Ego Depletion

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Abstract: The ego depletion effect refers to the phenomenon that compared with completing a neutral task that does not require effort exertion, completing a self-control task demanding effort exertion impairs subsequent self-control performance. This effect has attracted so much attention that hundreds of studies involving thousands of researchers have tested this effect. However, the replicability of ego depletion has been challenged recently. In a meta-analysis, Carter et al. (2015) found substantial publication bias in ego depletion literature. The effect size of ego depletion turned to be zero after correcting for publication bias. Hagger et al. (2016) organized a multi-lab replication that also found a null effect. Although another multi-lab replication found a significant effect (Dang et al., 2021), the effect size was small ($d=0.10$). We argue that the small effect size is due to the weak manipulation used in previous studies. In the current research, we designed a new paradigm, with an antisaccade task lasting 30 minutes as the depleting task

and a Go/No go task as the outcome measure. We tested it in a sample of Chinese students, which found a strong effect. Then we organized a multi-lab replication consisting of 11 labs and found a small to medium effect size ($d = 0.30$). Finally, we tested the paradigm with an online sample and also found a comparable effect size. Therefore, our results demonstrate that the ego depletion effect does exist as long as the manipulation is strong effect, which provides important evidence for the replicability crisis of ego depletion.

Keywords: Self-Control, Ego Depletion, Replicability Crisis

身体负重感对绿色自然景观审美偏好的影响及其机制

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摘要 进化美学认为审美具有一定的进化意义, 那些具有显著进化含义的事物更容易被体验为美。同时, 审美体验还建立在身体感觉的基础上, 特定的、相匹配的身体感觉与动作能提高人们的审美体验。因此, 对于人们心理机能能有好处且隐含着进化效价的自然景观环境而言, 人们对其的审美偏好是否会随着不同程度的身体感觉而发生变化仍是一个值得探究的问题。本研究通过 4 个实验, 基于外显和内隐判断任务来研究不同类型自然景观环境(绿色与非绿色自然景观)的外显审美偏好和内隐审美注意偏向是否会随着不同程度的身体负重感觉(身体负重与无身体负重)而发生变化以及其中的心理机制。结果发现, 相比非绿色自然景观, 处于身体负重状态下的被试在外显审美评级任务(实验 1)中对绿色自然景观有着更高的审美评价; 同时也表现出了对绿色自然景观的明显审美注意偏向(实验 2 和实验 3), 但这种基于外显审美和内隐注意偏向的效应在无身体负重条件下则没有出现。此外, 实验 4 通过内隐联想测试(IAT)也发现, 当被试处于身体负重状态时, 相较于非绿色自然景观, 他们更容易将高轻松感词汇与绿色自然景观联系起来。上述结果表明, 身体负重感可以影响人们对绿色自然景观的审美偏好, 这可能是因为绿色自然景观在身体负重条件下与轻松感有更强的隐性关联, 有助于减轻人们的身体负重感, 从而提高他们对绿色自然景观的偏好。

关键词 进化美学, 身体负重, 绿色自然景观, 放松感

The influence of physical burden on the aesthetic preference for green natural environment

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Abstract: The perception of beauty is known to be associated with the bodily sensations and evolutionary implications. However, whether the aesthetic preference for natural landscape environments with different evolutionary benefits changes on the basis of different degrees of bodily sensations is still an open issue. The present study used four experiments to investigate whether the sensation of a physical burden is capable of changing the explicit aesthetic appraisal and implicit aesthetic attentional bias for natural landscape. In addition, we further investigated whether green natural landscapes are implicitly associated with a sense of relaxation, and provide a preliminary explanation of this preference for green natural landscapes. The results showed that participants wearing a heavy backpack gave green natural landscapes higher aesthetic scores in the explicit aesthetic rating task (Experiment 1). Similarly, a clear aesthetic attentional bias toward the green natural landscape was found in the physical backpack condition, but not in the no-backpack condition (Experiment 2 and Experiment 3). Furthermore, the implicit association test (IAT) in Experiment 4 revealed that a green natural landscape was more readily associated with a high level of relaxation when the participants wore a backpack. The results indicated that the bodily sensation of a physical burden modulates the aesthetic preference for natural environments when they consist of green plants, which are associated with a high level of relaxation and have significant evolutionary implications.

Keywords: evolutionary aesthetics, physical burden, green natural landscape, sense of relaxation

一笑而过还是感同身受：幽默与共情的相互抑制关系

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摘要 良性进犯理论认为幽默来源于被评价为良性的进犯, 由于对他人所受进犯的共情可能使该进犯难以被评价为良性, 因此提出假设 1: 面对他人所受进犯时, 共情对于幽默感知存在抑制作用。共情反应常伴随着共情代价, 但由于它具有社会赞许性因而避免共情的动机难以被公然表达, 而相信人们应该以非严肃的幽默态度来应对进犯这一信念可以使避免共情的动机得到表达, 因此提出假设 2: 幽默应对信念对共情存在抑制作用。通过四个研究考察了幽默子成分与共情之间相互抑制的关系。研究 1 采用相关法: 研究 1a 通过问卷测量了 135 名中国大学生的幽默感和特质共情, 结果表明应对型幽默和特质共情存在显著负相关; 研究 1b 通过 prolific 平台对 194 名英美被试采用更为全面的幽默感和特质共情量表施策, 同时开发“幽默应对信念量表”并检验信效度, 结果再次支持了幽默感中应对相关成分与共情的显著负相关, 幽默应对信念量表信效度良好且得分与特质共情表现出效应量最大的负相关。研究 2 通过实验法检验幽默成分与共情的相互抑制关系: 研究 2a ($N = 140$) 在操纵情境共情后测量被试对视频材料的幽默评分, 结果发现情境共情启动会显著地降低被试的幽默感知; 研究 2b ($N = 176$) 在操纵幽默应对信念后要求被试报告对一段视频中角色的共情反应强度, 结果表明幽默应对信念的启动会显著地降低被试的共情反应。综上, 研究结果表明无论是作为稳定特质还是情境反应, 幽默与共情都存在相互抑制的关系, 其中起到关键作用的子成分为幽默应对信念。本研究基于良性进犯理论和有关共情代价的相关研究, 开拓性地提出了幽默与共情之间的相互抑制, 关注到两种优势特质之间的辩证制衡, 同时也启发高特质共情的个体可以在社交时选择更加灵活的策略, 通过使用自己舒适的幽默类型以获得更加融洽的社交体验。

关键词 幽默, 共情, 幽默应对信念

Laugh it off or put yourself in others' shoes:

The mutual inhibition between humor and empathy

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Abstract: Benign Violation Theory holds that humor arises from violations that are evaluated as benign, and because empathy towards the violation makes it more difficult to evaluate it as benign, H1 was proposed: empathy has an inhibitory effect on humor perception in the face of violation on others. On the other hand, empathic response is often accompanied by personal costs while it is socially desirable, making the motivation to avoid empathy inappropriate to express overtly. H2 suggests the belief that responding to violations with a non-serious humorous attitude is right and helpful allows the motivation to avoid empathy to be expressed, thus such belief, named as Coping Humor Belief, would have a suppressive effect on empathy. The mutual inhibition between humor and empathy was examined through four studies. Study 1 took the correlational approach: Study 1a measured the sense of humor and trait empathy in 135 Chinese university students through established scales, the results showed a significant negative correlation between coping humor and trait empathy; Study 1b administered more comprehensive scales to 194 British and American subjects, developing and validating the Coping Humor Scale at the same time. The results again supported the negative correlation between the coping-related component of humor and empathy, and the good reliability and validity of the Humor Coping Beliefs Scale, which showed the largest negative effect size correlation with trait empathy. Study 2 experimentally examined the mutual inhibitory relationship between humor components and empathy: Study 2a ($N = 140$) measured subjects' humor ratings on a video material after manipulating situational empathy and found that situational empathy priming significantly reduced subjects' perceptions of humor; Study 2b ($N = 176$) asked subjects to report their empathic responses to a character in a video after manipulating their coping humor belief, the results showed that the initiation of coping humor belief significantly reduced subjects' empathic responses. Taken together, the findings suggest that humor and empathy are mutually inhibitory, both as stable traits

and as situational responses, with humor coping beliefs as a key subcomponent. Based on the Benign Violation Theory and literatures about empathy cost, this study pioneered the idea of mutual inhibition between humor and empathy, focusing on the dialectical checks and balances between the two virtues. Practically speaking, the results inspires individuals with high trait empathy to use humor more flexibly when socializing to get a more congenial social experience, as humor is considerably appreciated in social settings.

Keywords: humor, empathy, coping humor belief

4.13 临床与咨询心理学专业委员会

(1) “临床与咨询心理学专业委员会”口头报告分场 1

正念影响强迫症的心理机制探究

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摘要 引言: 正念被认为是干预强迫症的一种可能方法, 但是已有的研究发现正念对于强迫症患者的干预效果并不是完全一致的, 例如有研究发现正念中的不反应、不判断和有觉知地行动与强迫症水平成负相关, 而观察与描述成正相关或者无显著关系(Carpenter, Conroy, Gomez, Curren, & Hofmann, 2019), 也有研究发现只有不行动能够预测干预效果(Hawley et al., 2017)。因此本研究将探究正念影响强迫症的心理机制, 考察正念各维度对强迫症状水平的影响, 并探究不恰如其分的体验在正念与强迫症水平之间的中介作用。方法: 在大学以及精神专科医院中调查了 559 名被试 (男性 184 名), 平均年龄为 22.17 岁 ($SD=3.74$ 岁)。采用强迫症状分类量表修订版 (OCI-R)、正念五因素量表 (FFMQ) 以及不恰如其分的体验问卷中文版 (NJRE-C) 进行评估, 并收集人口学信息。采用相关分析、单因素方差分析以及结构方程模型进行统计推断。结果: 相关分析结果表明正念五因素中, 观察 ($r=.308, p<.001$) 与不行动 ($r=.122, p=.004$) 和强迫症水平成正相关, 描述 ($r=-.198, p<.001$)、不判断 ($r=-.465, p<.001$) 与有觉知地行动 ($r=-.461, p<.001$) 与之成负相关。将正念五个维度、NJRE、以及强迫症水平纳入模型进行路径分析, 模型拟合良好 ($\chi^2=10.458, df=4, RMSEA=0.054, CFI=0.991, TLI=0.960, SRMR=0.011$)。结果表明 NJRE 完全中介觉察、描述、不判断与强迫水平, 部分中介 (35%) 有觉知地行动与强迫水平。讨论: 本研究发现正念的五个因素对强迫症水平的影响方向是不同的。路径分析结果发现观察、描述与不判断均完全通过改变 NJRE 水平影响强迫症水平, 而有觉知地行动对于强迫症水平有直接作用, 且不行动的主效应不成立。研究结果进一步探究了正念、NJRE 与强迫症水平的作用机制, 并且表明正念干预对于强迫症的影响不是完全有益的, 应当谨慎采用正念干预强迫症。

关键词 强迫症, 正念, 不恰如其分的体验, 心理机制, 路径分析

The Psychological Mechanism of Mindfulness in Obsessive-Compulsive Disorder

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Abstract: Introduction: Mindfulness is considered as a possible intervention for obsessive compulsive disorder (OCD). However, previous studies found that the effects of mindfulness-based interventions were not completely

beneficial for patients. For example, one study found the facets of mindfulness like non-reactivity, non-judging and acting with awareness were negatively correlated with the severity of obsessive-compulsive disorder, while observing and describing were positively or not significantly correlated (Carpenter, Conroy, Gomez, Curren, & Hofmann, 2019). Another study found that the effect of intervention was only predicted by the level of nonreactivity (Hawley et al., 2017). Therefore, this study wanted to explore the psychological mechanism of mindfulness in OCD, to examine the relationships of five dimensions of mindfulness on the severity of OCD symptoms, and to explore the mediating effect of not just right experience (NJRE) on mindfulness and OCD. Methods: 559 subjects from universities or psychiatric hospitals (184 males) were surveyed. The average age was 22.17 years ($SD=3.74$ years). Four scales including the revised version of Obsessive-Compulsive Inventory scale (OCI-R), the Five-Factor Mindfulness Questionnaire (FFMQ), the Chinese version of Not Just Right Experience (NJRE-C), and geographic information scale were used. Correlation analyses, ANOVA, and structural equation modeling (SEM) were undertaken. Results: The results of correlation analysis showed that among mindfulness facets, Observing ($r=0.308$, $p < .001$) and Nonreactivity ($r = .122$, $p = .004$) demonstrated positive correlations, while Describing ($r = -.198$, $p < .001$), Non-judging ($r = -.465$, $p < .001$), and Acting with awareness ($r = -.461$, $p < .001$) showed negative correlations. The model of SEM consisted of five facets of mindfulness, NJRE and the severity of OCD fitted well ($\chi^2 = 10.458$, $df = 4$, $RMSEA = 0.054$, $CFI = 0.991$, $TLI = 0.960$, $SRMR = 0.011$). Results indicated that NJRE completely mediated Awareness, Describing, Non-judging and OCD, and partly mediated (35%) Acting with awareness and OCD. Discussion: The study found different effects of mindfulness facets on OCD. The results of SEM showed NJRE completely mediated Observing, Describing, Non-judging and OCD, partly mediated Acting with awareness and OCD. These findings showed the relationships of mindfulness, NJRE and OCD and indicates that it should be cautious on the application of mindfulness intervention for OCD patients considering different effects of five facets on OCD.

Keywords: compulsive-obsessive disorder, mindfulness, not just right experience, psychological mechanism, path analysis

第二代正念干预的本土化与价值澄清：基于正念积极心理的实证研究

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摘 要 第二代正念干预是近年正念干预发展的最新趋势。相比于第一代正念干预，第二代正念干预的特点之一是强调外显的伦理培养。然而，第二代正念干预所传递的某些伦理与价值观念，包括第一代正念干预即有内隐传递的价值观念，比如正念冥想和慈悲冥想所隐含的效果论、享乐主义的价值观念等，并不必然正确或具有文化普适性。因此，在推广和应用正念干预时，有必要进行价值澄清，以保证干预的世俗性和适用性，并尊重参与者的价值观和选择权。本研究评估了名为“正念积极心理”的本土第二代正念干预。该六周干预的练习包括正念冥想和慈悲冥想，并整合了积极心理学、中国哲学等内容；其设置符合第二代正念干预的一般特点，并在干预的后期，通过对照不同哲学思想等方式，尽力澄清之前练习所承载的价值观念。基于 138 名被试的随机控制干预研究表明，该干预有效改善了幸福感、人际态度等心理变量，且参与者普遍认可了干预对潜在价值判断的价值澄清工作。正念积极心理不仅提供了适合中国应用的第二代正念干预，也突显了正念干预中普遍存在、尚需解决的价值澄清问题，推动正念干预作为世俗心理干预的进一步发展。本次实证研究也探讨了正念干预中价值澄清的标准（何种程度上的澄清是必要的）及其评估（参与者的评估是否是有效指标）等问题。

关键词 第二代正念干预；慈悲冥想；积极心理学；伦理；哲学

The localization and value clarification of the Second-Generation Mindfulness-Based Interventions: Empirical study on Mindfulness-Based Positive Psychology

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Abstract: Second-Generation Mindfulness-Based Interventions (SG-MBI) is the new development of Mindfulness-Based Interventions (MBI). Compared to the First-Generation Mindfulness-Based Interventions (FG-MBI), one characteristic of SG-MBI is to cultivate ethics explicitly. However, some ethics and values delivered in SG-MBI, including values implicitly delivered in FG-MBI, such as consequentialism and hedonism delivered underlying mindfulness meditation and four immeasurables meditations, were not necessarily right or universally accepted across cultures. Therefore, it is necessary to make value clarification when spread and apply MBI, in order to secure the secularity and feasibility, and respect the values and right of choices. The current research evaluated an indigenous SG-MBI called “Mindfulness-Based Positive Psychology” (MBPP). This six-week training practice mindfulness meditation and four immeasurables meditations, and integrate positive psychology, Chinese philosophy. Its setting met the general characteristics of SG-MBI, and in its later sessions, tried to clarify the values underlying earlier practices by contrasting different schools of philosophy and such. A randomized controlled trial with 138 participants showed that, this training not only improved psychological variables like well-being and interpersonal relationship, and participants endorsed the work of value clarification. MBPP not only provided the SG-MBI that is suitable for application in China, and also highlighted the issue of value clarification that is widely-existed and to be solved in MBI, thus facilitate the further development of MBI as secular interventions. This empirical study also discussed the issues like standard of value clarification in MBI (the extent of necessary value clarification) and its assessment (whether participants’ evaluation is valid index).

Keywords: Second-Generation Mindfulness-Based Interventions, Four Immeasurables Meditations, Positive Psychology, Ethics, Philosophy

逆境的力量：负性生活事件经历的应激接种作用以及积极重评在其中的调节作用

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摘要 目的：以往的应激心理学研究多聚焦于应激的负面效应，将压力事件和逆境经历视为心理健康的危险预测因子之一。然而，最近的研究认为适度的压力经历有助于个体之后的压力应对并提升心理健康，这种效应被称为应激接种。本研究旨在探究生活事件暴露史与心理健康之间的关系，以及负性生活经历是否存在应激接种作用。方法：在间隔两个月的两个时间点收集了纵向数据。在时间点1收集了生活事件暴露史以及积极重评分数；在时间点2收集了压力感知分数，共匹配得到448份有效数据。其中，生活事件暴露史的数据收集需要被试对67个常见生活事件逐一填写，内容包括：发生时间、持续时间、影响程度。对于被试经历过的生活事件，用“影响程度*持续时间”作为该事件的分数。根据被试对事件正负性质的评价，将所有事件的得分划分为负性事件总分和正性事件总分。结果：负性事件总分与压力感知分数呈U型曲线关系，即中等程度的负性事件暴露史能够预测最低的当前压力感知水平——负性事件总分*负性事件总分（二次项）对压力感知的回归显著， $\beta=0.510$, $p=0.004$ ；负性事件总分（一次项）对压力感知的效应为 $\beta=-0.141$, $p=0.418$ 。而正性事件分数与压力感知呈线性关系， $\beta=-0.34$, $p<0.001$ 。本研究进一步探索了积极重评在上述二次曲线关系中的调节作用：负性事件总分*负性事件总分（二次项）和积极重评的交互作用显著， $\beta=0.129$, $p=0.023$ ；负性事件总分（一次项）和积极重评的交互作用不显著， $\beta=0.004$, $p=0.931$ 。进一步地将积极重评以 $M\pm SD$ 划分为高中低三组后进行分组回归，发现只有在积极重评高分组中，才呈现出负性事件总分与压力感知的二次关系，二次项的效应为 $\beta=1.456$, $p=0.001$ ，一次项的效应为 $\beta=-1.089$, $p=0.009$ ，而在中分组和低分组中均

未能验证二次曲线关系。结论：负性生活事件与当前压力感知水平存在 U 型曲线关系，具有中等程度负性生活事件暴露史的个体在当前感知到的压力水平最低，而积极重评在其中起到了调节作用。

关键词 应激接种 生活事件暴露史 负性生活事件 二次曲线模型 积极重评

The strength of adversity: the stress inoculation effect of negative life event experience and the moderating effect of positive reappraisal

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Abstract: Previous studies on stress psychology focused on the negative effects of stress, and regarded stress events and adversity experiences as one of the risk predictors of mental health. However, recent studies have begun to pay attention to the positive effects of stress. It is believed that stress experience helps individuals cope with stress and improve their mental health. This effect is called stress inoculation. The present study aims to explore the relationship between life event exposure and mental health, and whether negative life experiences have the stress inoculation effect. Method: longitudinal data were collected at two time points which are two months apart. At time point 1, life event exposure and positive reappraisal were collected; at time point 2, perceived stress scores were collected, and a total of 448 valid data were matched. The data collection of life event exposure requires subjects to fill in 67 common life events one by one, including: time of occurrence, duration, and degree of impact. For the life events experienced by the subjects, we use "degree of influence * duration" as the score of the event, and according to the subjects' evaluation of the positive and negative nature of the event, divide the scores of all events into negative life event scores and positive life event scores. Results: Negative life event scores and perceived stress scores showed a U-shaped curve relationship, that is, the lowest current stress perception level can be predicted by the moderate negative events exposure—Negative life event scores * Negative life event scores (quadratic term) has a significant effect on stress perception, $\beta=0.510$, $p=0.004$; the effect of negative life events (linear term) on stress perception is $\beta=-0.141$, $p=0.418$. Positive life event scores have a linear relationship with stress perception, $\beta=-0.34$, $p<0.001$. This study further explored the moderating effect of positive reappraisal in the above-mentioned curve relationship: negative life events * negative life events (quadratic terms) and positive reappraisal have significant interaction effects, $\beta=0.129$, $p=0.023$; The interaction between negative life events and positive reappraisal was not significant, $\beta=0.004$, $p=0.931$. Furthermore, the positive reappraisal was divided into three groups of high, middle and low according to M and SD, and then the regressions of each group are carried out. It is found that only in the high group, the quadratic relationship between negative life event exposure and stress perception is presented, and the effect of the quadratic term is $\beta=1.456$, $p=0.001$, the effect of the linear term is $\beta=-1.089$, $p=0.009$. The quadratic relationship cannot be verified in the middle and low groups. Conclusion: There is a U-shaped relationship between negative life events exposure and current stress perception. Individuals who had experienced moderate negative life events have the lowest perceived stress level, and positive reappraisal plays a moderating role in it.

Keywords: stress inoculation, life event exposure, negative life event, quadratic curve model, positive reappraisal

正念减压课程的作用及起效机制：正念、自我悲悯和自我冷漠

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摘要 背景：以往许多研究发现正念减压课程（Mindfulness-based Stress Reduction; MBSR）能提升正念和自我悲悯，降低觉知压力，且正念和自我悲悯都是重要的起效机制。然而，大多数研究仅使用 Neff 开发的自我悲悯量表总分，忽略了该量表拟合更好的两因子结构（自我悲悯和自我冷漠），且探究机制时仅考虑中介变量（即正念和自我悲悯）的前后测差值，未考察中介变量与结果变量的时间先后顺序。本研究将考虑自我悲悯量表的两个子维度，加入中测，以检验 MBSR 能否通过干预中的正念和自我悲悯/冷漠预测干预后的觉知

压力。方法：本研究为随机对照研究，招募 68 名高压人群（觉知压力量表得分 ≥ 26 分），随机分到 MBSR 组或等待控制组。MBSR 组被试获得持续八周（每周 2.5 小时）的正念课程，加一日正念日（6 小时），等待控制组在等待期间不接受任何干预，在后测结束后获得 2 日正念课程（共 12 小时）。两组被试在干预前（T0）、中（第四周结束后，T1）、后（T2）测量五因素正念量表、觉知压力量表和自我怜悯量表。结果：2（组别） $\times$ 3（测量时间）重复测量方差分析发现对于正念、觉知压力和自我冷漠，时间 $\times$ 组别交互作用显著；对于自我怜悯，时间 $\times$ 组别交互作用不显著。事后比较结果表明，相比于等待控制组，MBSR 组的正念水平在 T1 和 T2 显著提高，觉知压力和自我冷漠水平在 T2 显著降低。中介效应分析结果表明，仅 T1 正念水平在干预对 T2 觉知压力和 T2 自我冷漠的作用中起到部分中介作用。讨论：本研究重复验证了 MBSR 能通过提升高压人群的正念水平降低其觉知压力。此外，本研究将自我怜悯量表的两个子维度进行区分后，发现在 MBSR 能显著降低干预后的自我冷漠，且是部分通过提升干预前期的正念水平实现的，但并未发现 MBSR 对于自我怜悯的效果，也未发现其是正念起效的机制。这提示我们能将 MBSR 用于降低高压人群的压力水平和自我冷漠，而未来若需要提升个体的自我怜悯水平，可能还需要在干预中增加相应练习（如慈心禅）的剂量。

关键词 正念减压课程，觉知压力，自我冷漠，自我怜悯，特质正念

The Effects and mechanisms of Mindfulness-based Stress Reduction Program: Mindfulness, Self-Compassion and Self-coldness

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Abstract: Background: Previous studies have found that mindfulness-based Stress Reduction program (MBSR) helps improve mindfulness and self-compassion, while reduce stress. Besides, mindfulness and self-compassion are potential mechanisms of change in MBSR. However, most studies only used the total score of the Self-Compassion Scale (SCS) developed by Neff, ignoring the validated two-factor structure (self-compassion and self-coldness) of the scale, and only used pre-post change score of self-compassion and mindfulness as the mediating variables, without examining the temporal sequence of mediators and outcome variables. In the current study, two dimensions of the SCS were analyzed separately, and mid-tests were added to test whether MBSR could predict post-intervention perceived stress through mindfulness and self-compassion/coldness. Methods: Sixty-eight high-stress (Perceived Stress Scale score ≥ 26) participants were recruited and randomly assigned to MBSR group or waiting-list control (WL) group. MBSR group received 8-week sessions (2.5-h per week) and a one-day (6-h) retreat, while the WL group received no intervention during the waiting period and received a 2-day (6-h per day) of mindfulness training after post-test. The Five-factor Mindfulness Scale, Perceived Stress Scale and Self-compassion Scale were measured before (T0), during (at the end of week 4, T1) and after (T2) the intervention. Results: Results of 2 (group) $\times$ 3 (measurement time) repeated-measure ANOVA found that the time $\times$ group interaction was significant for mindfulness, perceived stress and self-coldness, while the time $\times$ group interaction was not significant for self-compassion. The results of post-hoc comparison showed that compared with the WL group, mindfulness in the MBSR group were significantly increased at T1 and T2, and perceived stress and self-coldness were significantly decreased at T2. The mediating effect analysis showed that only mindfulness at T1 partially mediated the effects of the intervention on T2 perceived stress and T2 self-coldness. Discussion: The current study has repeatedly verified that MBSR can reduce perceived stress by improving mindfulness skills. In addition, after distinguishing the two dimensions of the SCS, the current study found that MBSR could significantly reduce self-coldness after intervention, which was partly achieved by improving mindfulness at the early stage of intervention. However, no effect of MBSR on self-compassion was found, nor was it found to be the mechanism of the effect of MBSR. These findings suggest that MBSR can be used to reduce the stress and self-coldness in people with high stress. However, to improve self-compassion, it may be necessary to increase the dose of corresponding exercises (such as Loving-kindness meditation) in the MBSR program.

Keywords: mindfulness-based stress reduction, perceived stress, self-coldness, self-compassion, mindfulness

针对情绪困扰的 49 天在线自助正念干预的有效性

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摘要 背景: 线上正念近几年被广泛关注, 不少研究已证明线上正念干预对改善心理健康的效果, 然而, 研究中的线上正念大多缺乏系统结构化的干预框架, 且目前仍未有直接针对情绪困扰或者障碍的正念干预。本研究将主要探讨结合正念减压课程 (Mindfulness-based Stress Reduction; MBSR) 与针对情绪障碍的跨诊断治疗统一方案 (Unified Protocol for Transdiagnostic Treatment of Emotional Disorders, UP) 的缓解情绪困扰的正念干预 (Mindfulness Intervention for Emotional Distress, MIED) 对于改善心理健康的效果。**方法:** 本研究为单组研究, 通过公益渠道分 9 批次招募 4312 名情绪困扰人群 (K10>21 分) 和 1361 名心理工作者, 被试在完成报名问卷和前测问卷将获得持续 49 天的线上自助正念课程, 课程内容包括每日的练习音频、阅读材料和作业。所有被试在干预前 (T0)、干预期间每周 (T1-6) 和干预后 (T7) 测量五因素正念量表简版、觉知压力量表、Kessler 情绪困扰量表、阿森斯失眠量表、总体焦虑水平及其干扰程度量表和总体抑郁水平及其干扰程度量表, 从第 2 批次开始新增平静心境问卷。**结果:** 混合线性模型结果发现随着课程时间增加, 被试的压力、情绪困扰、焦虑显著降低 (大效应量); 正念及其维度和平静心境显著增加 (中效应量), 抑郁和失眠显著改善 (中效应量)。亚组分析结果发现, 和没有完成 50% 课程的学员相比, 完成至少 50% 课程的学员的在正念水平上有更大的效应量, 在其他的变量上没有相似发现。**讨论:** 本研究初步证明了缓解情绪困扰的正念干预对于改善情绪困扰以及其他心理健康问题的有效性, 但症状的缓解源于课程时间还是课程干预内容, 仍需进行随机对照实验, 进一步确认干预带来的效果。

关键词 情绪困扰, 线上正念干预, 抑郁, 焦虑

Effectiveness of a 49-day self-help online mindfulness Intervention for emotional distress

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Abstract: Background: Online mindfulness has attracted widespread attention in recent years and many studies proved its effect on mental health. However, most of the online mindfulness studies lacked a systematic and structured intervention framework and there is no mindfulness intervention for emotional distress so far. In the current study, we focused on the effect of Mindfulness Intervention for Emotional Distress (MIED) on improving mental health, which combined Mindfulness-based Stress Reduction(MBSR) and the Unified Protocol for Transdiagnostic Treatment of Emotional Disorders. **Method:** Our study was a single-group study. 4,312 people with emotional distress (K10>21) and 1,361 psychological workers were recruited online. After completing the registration questionnaire and the pre-test questionnaire, the participants received an online self-help mindfulness course lasting 49 days, including daily practice audio, reading materials and assignments. *Five-Facet Mindfulness Questionnaire—Short Form, Chinese Perceived Stress Scale, Kessler Psychological Distress Scale, the Overall Anxiety Severity and Impairment Scale, the Overall Depression Severity and Impairment Scale, Athens Insomnia Scale and Inner Peace State Scale* were measured before the intervention (T0), every week (T1-6) during intervention and after the intervention (T7). **Results:** Results of mixed linear model showed that with the increase of course time, stress, emotional distress and anxiety of participants decreased significantly with large effect size. Mindfulness and peace of mind increased significantly with medium effect size. Depression and insomnia also improved significantly with medium effect size. Subgroup analysis found that participants who completed at least 50% of the intervention had a larger effect size on levels of mindfulness than participants who did not complete 50% of the intervention. Similar findings were not found for other variables. **Discussion:** This study preliminarily proved the effectiveness of MIED to alleviate emotional distress and other mental health problems. However, to find out whether the relief of symptoms is due to practice time or the intervention content, a randomized controlled trial is needed.

Keywords: emotional distress, online mindfulness intervention, depression, anxiety

(2) “临床与咨询心理学专业委员会”口头报告分场 2

新冠肺炎疫情下创伤后应激症状独特的纵向关系： 一项交叉滞后网络分析

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摘要 背景: 新型冠状病毒肺炎疫情被认为是一种新型集体创伤, 为了解在这一特定背景下创伤后应激症状的产生和维持, 并为维护心理健康提供建议。本研究对创伤后应激症状, 以及症状和焦虑、抑郁、自杀意念, 生活质量, 社会支持之间的时间关系进行探索。方法: 通过 DSM-5 的创伤后应激障碍检查表对被试的创伤后应激症状进行两次测量, 时间间隔为六个月。基于两次测量都提供了完整数据的 81 名被试, 使用最新开发的交叉滞后网络模型构建症状, 以及包含焦虑、抑郁、自杀意念、生活质量、社会支持五个协变量的网络, 并评估症状的预测能力和被预测程度。结果: 结果表明对未来创伤后应激症状预测作用最大的是不计后果或自我毁灭行为, 其次是难以集中注意力和睡眠障碍; 被预测程度最大的症状是责备自己或他人, 其次是负性信念、闯入性的创伤记忆、与创伤相关的噩梦和创伤事件线索引起的生理反应。协变量对创伤后应激症状的发展影响较小。结论: 在新冠肺炎这一新型创伤的背景下, 不计后果或自我毁灭行为是创伤后应激症状的核心。将不计后果或自我毁灭行为作为核心的干预目标可能最为有效, 对该行为的干预可能会限制其他症状未来的发展, 从而加速康复。另外, 交叉滞后网络结果所呈现的症状之间预测和被预测的关系为理解症状发展的因果机制提供了启示。

关键词 新冠肺炎疫情, 创伤后应激症状, 网络分析, 交叉滞后

Unique longitudinal relationships between of post-traumatic stress symptoms under COVID-19: A cross-lagged panel network analysis

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Abstract: Background: The Coronavirus disease 2019 (COVID-19) outbreak has been suggested as a collective trauma, which presents a continuing crisis. The current study was aimed to know the arise and maintenance of posttraumatic stress symptoms and give specified suggestions to people under the shadow of COVID-19. This study explored the temporal relationship between PTSD symptoms, , anxiety, depression, suicidal ideation, quality of life, and social support. Method: Posttraumatic stress symptoms were measured twice, six months apart, using the DSM-5 Posttraumatic Stress Disorder Checklist. Based on 81 healthy participants who provided complete data from both measurements, the newly developed cross-lagged panel network model was used to construct symptoms and networks with covariates (i.e., anxiety, depression, suicidal ideation, quality of life and social support), and the predictive power and degree of symptoms were evaluated. Results: The cross-lagged network analysis revealed self-destructive/reckless behavior was the most significant predictor of future posttraumatic stress symptoms, followed by difficulty concentrating and sleep disturbance. The most predicted symptom was blame of self or others,

followed by negative belief, intrusive thoughts, nightmares, and physiological cue reactivity. Covariates had little effect on the development of posttraumatic stress symptoms. Conclusion: Self-destructive/reckless behavior was the most central symptom in the network of posttraumatic stress symptoms related to the COVID-19 pandemic, which as an important target of interfere may have great benefits. In addition, the results of the cross-lagged panel network provide insights for understanding the causal mechanism of symptom development.

Key words: COVID-19, posttraumatic stress symptoms, network analysis, cross-lagged

生命意义提升人生幸福： 来自新冠肺炎疫情急性期一线医护人员的证据编辑

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摘要 幸福感分为享乐主义取向的主观幸福感和实现论的心理幸福感。而生命意义包括意义感和意义寻求两个维度。研究发现生命意义能够预测幸福感。本研究试图探讨在新冠疫情期间，抗疫医护人员和普通民众在生命意义和主观幸福感以及心理幸福感的关系方面的差异。本研究在新冠肺炎疫情爆发期间（2020年3月至4月）施测，被试为山西赴武汉的一线抗疫医护人员（405名），简称医护组，和非武汉地区的普通民众（343名），简称民众组两组。使用生命意义量表(MLQ-search)、生活满意度量表(Satisfaction with Life Scale)、正性负性情绪量表问卷(PANAS)和心理幸福感量表(Psychological Well-being Scale)调查发现，医护组在生命意义、主观幸福感和心理幸福感的得分都显著高于民众组。两组的生命意义感与生活满意度和积极情感呈显著正相关，与消极情感呈显著负相关。且相关系数其医护组显著高于民众组。生命意义的意义寻求维度与生活满意度和积极情感呈显著正相关，与消极情感呈负相关但不显著。且相关系数医护组显著高于民众组。生命意义的意义感维度和心理幸福感，意义寻求维度和心理幸福感均成显著正相关，相关系数也是医护组显著大于民众组。综上，山西赴武汉的抗疫医护人员生命意义和幸福感得分显著高于非武汉地区的普通民众，而其生命意义与幸福感的相关系数等也显著高于后者，结果提示可能是较高的生命意义帮助医护人员应对灾难性应激事件，并提升幸福感。

关键词 生命意义，主观幸福感，心理幸福感，新冠肺炎，医护人员

新冠肺炎（COVID-19）疫情期间积极心理自助练习对医学生心理健康状况及学习投入的影响

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摘要 目的 探讨积极心理自助练习对医学生焦虑抑郁、主观幸福感及学习投入情况的影响，为改善医学生心理健康状况、促进学习投入提供有效指导。方法 选取某医科院校162名医学生作为研究对象，进行为期4周的积极心理自助练习，分别在自助练习前（T1）、练习1个月后（T2）、练习3个月后（T3）采用焦虑量表（GAD-7）、抑郁量表（PHQ-9）、总体主观幸福量表（GWB）及学习投入量表（UWES）测量其焦虑、抑郁、主观幸福感及学习投入情况。结果 重复测量结果显示：学生在经过1个月积极心理自助练习后，焦虑、抑郁、主观幸福感及学习投入情况在时间主效应上存在显著性差异（ $P < 0.05$ ），且呈现一定的变化趋势。其中在不同时间段焦虑情绪平均值分别为（ $T1=3.70 \pm 3.05$ ； $T2=2.49 \pm 2.71$ ； $T3=3.49 \pm 3.66$ ， $T1 > T3 > T2$ ，其中 $T1$ 与 $T3$ 不存在显著性差异，其他均有显著性差异），抑郁情绪平均得分为（ $T1=5.79 \pm 3.46$ ； $T2=4.03 \pm 3.10$ ； $T3=5.14 \pm 3.80$ ， $T1 > T3 > T2$ ，各时段均存在显著性差异），结果显示，在干预后第一个月焦虑抑郁情绪得分显著下降，3个月之后又开始升高，但仍低于练习之前。主观幸福感总分平均得分为（ $T1=78.48 \pm 10.19$ ； $T2=86.15 \pm 9.90$ ； $T3=82.01 \pm 10.74$ ， $T2 > T3 > T1$ ，且各时段之间均存在显著性差异），学习投入总分平均得分为（ $T1=72.87 \pm 13.96$ ； $T2=80.59 \pm 16.27$ ； $T3=76.42 \pm 15.13$ ， $T2 > T3 > T1$ ，且各时段之间均存在显著性差异），说明自助练习后第一个月主观幸福感、学习投入得分显著提高，练习后3个月较练习一个月后有所下降，但仍高于自

助练习之前得分。结论 积极心理自助练习能够有效降低医学生焦虑抑郁情绪水平,改善学习投入情况,提高主观幸福感,促进身心健康。

关键词 疫情,自助练习,医学生,心理健康,学习投入

The impact of positive psychological self-help exercises on the mental health status and learning engagement of medical students during COVID-19 epidemic

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Abstract: Objective To evaluate the effects of positive psychological self-help exercise on anxiety, depression, subjective well-being and learning engagement for medical students, so as to provide effective guidance for improving mental health status and promoting learning engagement. Method 162 students from a medical college received positive psychological self-help exercise for 4 weeks, and were measured by Generalized Anxiety Disorder-7 scale (GAD-7), Patient Health Questionnaire-9 scale (PHQ-9), General Well-Being scale (GWB) and Utrecht Work Engagement Scale (UWES). The anxiety, depression, and subjective well-being and learning engagement were measured before intervention (T1), 1 month after intervention (T2) and 3 months after intervention (T3), respectively. Result The repeated measurement results showed that after 1 month of positive psychological self-help exercise ($P < 0.05$), there were significant differences in the main effect of time on anxiety, depression, subjective well-being and learning engagement with a certain trend. The average score of anxiety in different time periods was ($T1=3.70\pm3.05$; $T2 = 2.49 \pm 2.71$ mm; $T3=3.49\pm3.66$, $T1>T3>T2$, among which $T1$ and $T3$ had no significant difference, while the others had significant difference), and the average score of depression was ($T1=5.79\pm3.46$; $T2 = 4.03 \pm 3.10$ mm; $T3=5.14\pm3.80$, $T1>T3>T2$, all with significant differences). The results showed that anxiety and depression scores decreased significantly in the first month after the intervention, and began to increase again after 3 months, but still lower than before the exercise. The average score of the total subjective well-being score was ($T1=78.48\pm10.19$; $T2 = 86.15 \pm 9.90$ mm; $T3=82.01\pm10.74$, $T2>T3>T1$, and there were significant differences among different periods). The average score of total learning input was ($T1=72.87\pm13.96$; $T2 = 80.59 \pm 16.27$ mm; $T3=76.42\pm15.13$, $T2>T3>T1$, and there were significant differences among all time periods), indicating that subjective well-being and learning input scores were significantly improved in the first month after self-help exercise, and decreased at the third month after exercise compared with the first month, but still higher than the scores before self-help exercise. Conclusion Positive psychological self-help exercise can effectively lower the anxiety and depression level for medical students, improve learning engagement、 subjective well-being, and promote physical and mental health.

Keywords: COVID-19 epidemic, self-help exercises, medical students, mental health, learning engagement

新冠肺炎疫情爆发期家长焦虑、抑郁,与儿童皮质醇水平、创伤性应激症状的潜在剖面分析

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摘 要 目的: 新冠肺炎疫情爆发对人们的心理健康造成了一定影响。在居家隔离期间, 家长与儿童有更长的相处时间。家长的精神健康可能会影响儿童的 HPA 轴功能。方法: 本研究在 2020 对 119 位儿童及其家长进行了施测, 家长的抑郁和焦虑在 2020 年 5 月施测, 儿童的唾液皮质醇于 9 月份收集, 而儿童的创伤后应

激症状在 11 月份收集。结果：通过潜在剖面分析，本研究发现五种潜在模式，即：未受影响组、皮质醇调节失效组、受其他压力源影响组、皮质醇调节有效组、以及未受父母影响组。在未受影响组中，父母低焦虑抑郁，儿童低皮质醇，低 PTSS；在皮质醇调节失效组中，父母焦虑抑郁高，儿童皮质醇水平低，PTSS 高；在被其他压力源影响组中，父母焦虑抑郁低，而儿童的皮质醇水平和 PTSS 都高；在皮质醇调节有效组中，父母焦虑抑郁低，儿童皮质醇水平高，同时 PTSS 低；在未受父母影响组中，父母焦虑抑郁水平高，儿童皮质醇水平中等，儿童 PTSS 水平低。在疫情期间，未受影响组比其他组有显著更少的行为问题，学习问题，思想障碍，以及强迫性活动。在疫情后（2020 年 11 月），皮质醇调节失效组和被其他压力源影响组比其他三组有更多的学习问题。讨论：本研究发现，在疫情期间，父母的心理健康情况和儿童应对压力的反应存在不同的潜在类型。父母的心理健康和儿童的心理健康息息相关。

关键词 新冠肺炎疫情 焦虑 抑郁 儿童 皮质醇 潜在剖面分析

The stress response profile of parents and children during and after the outbreak of COVID-19: a latent profile analysis of parents' depression, anxiety and children's cortisol level and posttraumatic stress symptoms

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Abstract: This study utilized a latent profile analysis approach to examine the relationship between parent-child stress response profile with salivary cortisol levels and children's conduct problems in 119 primary school students in Hubei province during and after the outbreak of COVID-19 in China. Parent's mental health may have an important influence on children's hypothalamic-pituitary-adrenal (HPA) functioning. Parents' depression and anxiety score were measured during the outbreak of COVID-19 in Hubei in May 2020, saliva cortisol samples were collected in September 2020, and child PTSS were measure in November 2020. A latent profile analysis was conducted to identify profiles of parents' anxiety, depression, children's salivary cortisol level, and children's posttraumatic stress symptoms (PTSS) among a group of 119 primary school students at Hubei province and their parents. The result revealed five family stress response profiles: unaffected, cortisol adjustment not functioning, influenced by other stress, cortisol adjustment functioning, unaffected by parents. During the pandemic, in May, children in the unaffected group had least significantly less conduct problems, learning problems, mind obstacles, and impulsive activities than students in other groups. After the pandemic, in November, children in the cortisol adjustment not functioning group and the influenced by other stress group had significantly more leaning problems than other groups. This study revealed that parents' mental health may have significant influence on children's mental health and behavior. Interventions targeting at parents' mental health may have benefits for children as well.

Keywords: COVID-19, anxiety, depression, children, cortisol, latent profile analysis

疫情期间儿童创伤后应激症状和抑郁的发展轨迹：基于比较的视角

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摘要 背景：2020 年初疫情期间，居家隔离所带来的创伤后应激症状（Posttraumatic stress disorder symptoms, PTSS）和抑郁情绪可能对儿童的身心发展带来负面影响。家庭抗逆力（Family resilience）从家庭整体应对危机的能力出发，可以帮助儿童缓解这两种危机下常见的心理反应。本研究基于比较的视角考察了疫情流行初期儿童 PTSS 和抑郁轨迹，以探讨疫情期间两类负性情绪动态发展的规律性和差异性，并探究儿童感知到的家庭抗逆力对该群体 PTSS 和抑郁发展亚类型的预测作用。方法：选取江苏省四所中小学的 883 名学生（男生

452 人, 女生 431 人, 平均年龄 11.41 ± 2.27 岁), 使用自编人口学量表、创伤后应激障碍检查量表 (PCL-5)、流调中心儿童抑郁量表 (CES-DC) 和儿童家庭抗逆力量表 (FRAS-CR) 于 2020 年 2 月底、3 月中、3 月底进行三个时间点的追踪测评, 并采用潜变量混合增长模型和多元逻辑回归模型进行数据分析。结果: 疫情爆发初期 (2020 年 2 月至 3 月), 儿童 PTSS 的发展轨迹存在 2 个亚类型, 分别是持续稳定组 (71.1%) 和先高后低组 (28.9%); 抑郁的发展轨迹也存在持续稳定组 (83.0%) 和先高后低组 (17.0%) 2 个亚类型。此外, 虽然家庭抗逆力总分并不能预测儿童的 PTSS 和抑郁轨迹, 但其分维度 (保持积极态度) 得分更低的儿童更有可能属于 PTSS 的先高后低组, 且预测效应显著 ($p < 0.05$)。结论: (1) 儿童 PTSS 和抑郁情绪的发展轨迹皆具有群体异质性, 并且存在相似的发展亚类型, 均可以分为持续稳定组和先高后低组两种; (2) 儿童在疫情爆发初期出现 PTSS 的概率高于抑郁情绪; (3) 家庭抗逆力对儿童 PTSS 的发展轨迹存在显著预测效应。本研究对探讨 PTSS 和抑郁的相关关系具有一定的理论价值, 并对分类识别和支持危机中儿童缓解创伤后应激症状和抑郁情绪有着一定的临床价值。

关键词 创伤后应激症状, 抑郁情绪, 家庭抗逆力, 潜变量混合增长模型, 新冠疫情

Developmental Trajectories of posttraumatic stress disorder symptoms and depression among children during COVID-19:

A comparative view

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Abstract: Background: During the early 2020 pandemic, posttraumatic stress disorder symptoms (PTSS) and depression among children caused by home quarantine were likely to negatively impact their physical and mental development. Family resilience, based on the ability of family to cope with crises as a whole, can help children alleviate these two prevalent psychological reactions under crises. Based on a comparative perspective, this study examines the trajectories of PTSS and depression in children at the early days of pandemic, in order to explore the regularity and differences of the dynamic development of two categories of negative emotions. and explores the predictive effect of children's perceived family resilience on PTSS or depression sub-types of development. Methods: A total of 883 students (452 boys, 431 girls, average age 11.41 ± 2.27 years) were selected in four primary and secondary schools in Nanjing. They were assessed with a self-designed demographic scales, the PTSD Checklist for DSM-5 (PCL-5), the Center for Epidemiologic Studies Depression Scale for Children (CES-DC) and the shortened Chinese version of the Family Resilience Assessment Scale (FRAS-CR) in late February, mid-March, and late March, 2020, respectively. Latent mixture growth model (LGMM) and a multi-logistic regression model were used for data analysis. Results: There were two PTSS trajectories in children, namely, the continuous stable group (71.1%) and the moderate decreasing group (28.9%). There were also two depression trajectories in children: the continuous stable group (83.0%) and the moderate decreasing group (17.0%). The total family resilience score did not predict children's PTSS and depression trajectories, but children with lower scores in the sub-dimension (maintaining a positive outlook) were more likely to be in the moderate decreasing PTSS group, and the predictive effect was significant ($p < 0.05$). Conclusion: (1) Displaying group heterogeneity, the developmental trajectories of PTSS and depression had similar sub-types: the continuous stable group and the moderate decreasing group. (2) Children had a higher probability of developing PTSS than depression early in the pandemic. (3) Family resilience can significantly predict the trajectories of children's PTSS. This study had a certain theoretical value for exploring the correlation between PTSS and depression, and the current findings also had a number of clinical implications for identifying and supporting the alleviation of PTSS and depression among children in crises.

Keywords: Posttraumatic stress disorder symptoms, Depression, Family resilience, Latent growth mixture model, COVID-19

(3) “临床与咨询心理学专业委员会”口头报告分场 3

失独父母创伤后应激障碍的症状网络结构

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摘要 对于独生子女的父母来说, 他们唯一的孩子去世是一种伤害性极强的创伤事件, 这种白发人送黑发人的悲痛通常会导致创伤后应激障碍 (posttraumatic stress disorder, PTSD)。以往的研究常关注失去独生子女的父母 (中国的研究中通常称作失独父母) PTSD 总分, 少有研究从症状视角关注失独父母的 PTSD。本研究旨在探究失独父母创伤后应激障碍的症状网络结构从而了解失独父母 PTSD 发生机制。本研究采用横断面的问卷调查方式, 从 2016 年 11 月至 2017 年 7 月共调查了中国 10 个城市的 385 名失独父母。被试的纳入标准是至少在 1 年前失去了独生子女, 且目前没有养育其他小孩, 女性参与者必须年满 49 岁, 这意味着她们已经过了生育年龄。采用 DSM-5 创伤后应激障碍量表 (PTSD checklist for DSM-5, PCL-5) 测量 PTSD 症状。采用 R 语言 qgraph 和 bootnet 代码包对数据进行网络分析。症状网络分析结果显示: (1) 兴趣减退 (diminished interest)、过度惊吓 (exaggerated startle)、易怒/愤怒 (irritability/anger) 和噩梦 (nightmares) 是失独父母 PTSD 症状网络的高中心性症状。(2) 以下 3 对症状之间的连接最强, 分别是: 反复出现的想法 (recurrent thoughts and nightmares) 和噩梦 (nightmares)、易怒/愤怒 (irritability/anger) 和鲁莽/自我毁灭行为 (reckless/self-destructive behavior) 之间, 以及过度紧张 (hypervigilance) 和过度惊吓 (exaggerated startle)。本研究在一定程度上表示了失独父母 PTSD 的高中心性症状和症状之间的关系, 并且具有高中心性和强度连接性的症状可以成为失独父母心理辅导中的干预靶点。总之, 本研究拓宽了学界对失独父母 PTSD 症状的认识, 并为失独父母的心理辅导工作提供一定的启示。

关键词 创伤后应激障碍, 失独父母, 症状网络

Symptom structure of posttraumatic stress disorder after parental bereavement – a network analysis of Chinese parents who have lost their only child

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Abstract: Background: The death of a child is a highly traumatic event and often leads to mental health problems, including posttraumatic stress disorder (PTSD). Previous studies focused on overall PTSD after the loss of an only child; however, little attention has been paid to PTSD at the symptom level. This study aims to identify the network structure of PTSD symptoms in bereaved parents who have lost their only child, known as Shidu parents in Chinese society. Methods: A cross-sectional study enrolled 385 bereaved individuals who had lost an only child across 10 cities in China from November 2016 to July 2017. PTSD symptoms were measured by the PTSD Checklist for DSM-5 (PCL-5). Network analysis was implemented by using the R packages qgraph and bootnet. Results: The PTSD network revealed that diminished interest, exaggerated startle, irritability/anger, and nightmares were the most central symptoms. The strongest connections emerged between the symptoms of recurrent thoughts and nightmares, irritability/anger and reckless/self-destructive behavior, and hypervigilance and exaggerated startle. Conclusions: The current study provides further clarity regarding how PTSD symptoms relate to each other in bereaved parents who have lost an only child. Symptoms with high centrality and connectedness may be viable targets for intervention in bereaved parents.

Keywords: Posttraumatic stress disorder (PTSD), Parental bereavement, Bereaved parents who have lost an only child (Shidu parents), Network structure

中国中老年夫妻抑郁症状的纵向网络分析：个体与二元网络

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摘要 抑郁症状在老年群体中普遍发生, 具有性别差异, 且在夫妻间存在较强的互依性。本研究试图通过纵向网络分析探讨中老年群体的抑郁症状间交互模式的性别差异以及个体症状如何在夫妻间相互影响。本研究的样本来源于中国健康与养老追踪调查(CHARLS)在 2011 和 2013 的两个中老年人队列追踪数据, 最终纳入分析的有效样本为 2578 对夫妻(平均年龄 55.55 岁, SD = 8.55)。该调查使用《流行病学研究中心抑郁量表-10》测量抑郁症状, 包括 10 个症状条目。本研究使用交叉滞后面板网络模型(cross-lagged panel network models)分别对丈夫个体、妻子个体以及夫妻二元的抑郁症状网络进行估计。个体网络分析结果显示, 丈夫和妻子的个体抑郁症状网络形态存在差异。在丈夫个体网络中, 作为反向症状的“愉快”相比其他症状具有更强的点出影响力(out-expected-influence), 即对网络中的其他抑郁症状有更强预测作用; 而“做事费劲”及反向症状“希望”和“愉快”则具有更高的点入影响力(in-expected-influence), 即更容易受到网络中其他抑郁症状的影响。在妻子个体网络中, “害怕”及反向症状“希望”和“愉快”具有较强的点出影响力, 且“希望”和“愉快”的点入影响力也比其他抑郁症状更强。二元网络分析结果可视化地展示了同时纳入丈夫和妻子进行分析, 抑郁症状在夫妻二元系统中呈现的整体网络特征。其中, 妻子的“害怕”症状有较高的桥接影响力(bridge expected-influence)以及桥接强度(bridge strength), 表示其在整体样本中对丈夫抑郁症状的预测作用以及双向联系程度都较强。但其后的 bootstrap 分析显示样本中夫妻二元症状网络的桥接影响力指标并不稳定, 提示二元抑郁症状网络中可能存在较多夫妻间的双向预测作用, 且预测强度和方向可能在样本中具有较大的差异性。本研究在具有全国代表性的中老年夫妻样本中估计了抑郁症状的个体与夫妻二元网络, 揭示了抑郁症状网络的性别差异以及症状在夫妻之间的交互模式。本研究结果强调了无论在个体还是夫妻层面, 抑郁症状之间都存在较强的相互预测关系, 并提示未来研究需要关注症状相互关系的异质性。

关键词 纵向网络分析, 二元视角, 中老年夫妻, 抑郁症状

A Longitudinal Network Analysis of Depressive Symptoms in Chinese Late Middle-Aged and Older Couples: Individual and Dyadic Networks

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Abstract: Depression, a serious mental health problem with high prevalence in the Chinese elderly population, has gender differences and strong interdependence within couples. Applying longitudinal network analysis in a large sample of Chinese late middle-aged and older couples, this study aimed to investigate the intra-individual interaction pattern of depressive symptoms and its gender differences, as well as the inter-individual interaction pattern of symptoms within the couple. Data were obtained from the 2011 and 2013 cohorts of China Health and Retirement Longitudinal Study (CHARLS), a longitudinal survey of late middle-aged and older adults. The final sample included in the analysis was 2578 couples (mean age = 55.55, SD = 8.55). The survey used "Epidemiology Research Center Depression Scale-10" to measure the depressive symptoms. We computed two individual networks separately in husbands and wives and a dyadic network using cross-lagged panel network models. Noticeably, husbands' and wives'

depressive symptoms showed different network structures. Specifically, in husbands' symptoms network, *Happiness* was highest in out-expected-influence (out-EI), indicating its relatively higher predictiveness to other symptoms within the network. *Hope*, *Happiness*, and *Felt everything was an effort* were higher in in-EI, which suggested that they were more susceptible to other depressive symptoms. Whereas, in wives' symptoms network, symptoms of *Fear*, *Hope*, and *Happiness* exhibited higher out-EI. Meanwhile, *Hope* and *Happiness* also were higher in in-EI. The dyadic network visualized how the partners' symptoms cohered and interacted within the couple. Specifically, wives' symptoms of *Fear* had higher bridge EI and bridge strength. It indicated that wives' *Fear* has a strong predictive effect on and strong mutual connections with husbands' depressive symptoms. However, the bridge EI estimates were unstable under bootstrapping conditions, suggesting that there might be more bi-directional predictive effects within couples in the dyadic depressive symptom network and that the intensity and direction of the effects might have great heterogeneity among the samples. This study demonstrates the networks of depressive symptoms at both individual and dyadic level in a nationally representative sample of Chinese late middle-aged and older couples. The results of this study highlight a strong mutual predictive relationship between depressive symptoms at both individual and couple levels and suggest that future research should focus on the heterogeneity of the relationship between symptoms.

Keywords: Longitudinal network analysis, Dyadic perspective, Chinese late middle-aged and older couples, Depressive symptoms

干预中自我怜悯与心理症状动态变化过程的网路分析

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摘要 许多证据表明自我怜悯干预对心理症状具有明显改善作用,但其具体的起效机制仍未得到充分探讨。本研究试图从网络视角切入、分析干预过程中自我怜悯各成分和心理症状之间相互影响的动态过程,在网络层面揭示自我怜悯干预的起效机制。本研究基于自我怜悯压力管理在线个体干预(SCSM-OI) 2021 年度上半年参与者的干预期每日追踪数据进行分析,数据包括参与者每日报告一次的自我怜悯六成分(自我友善、自我批判、普遍人性、孤独感、正念和过度沉溺)以及抑郁、焦虑和应激症状。共有 57 名被试在 28 天的干预期间完成了不少于 21 次的每日测量,被纳入为有效样本。研究使用多层向量自回归模型(mlVAR)估计干预过程中自我怜悯成分与心理症状之间的同时网络(个体在同一时间点内的网络关系)和时序网络(交叉滞后的预测性网络关系)。结果显示,自我怜悯成分与不同心理症状的动态变化过程存在差异。例如,在自我怜悯-抑郁的时序网络中,只有普遍人性能显著预测后一天的“忧郁”症状,而自我怜悯与焦虑及应激的时序网络则较之更为密集,且存在自我怜悯成分与症状之间的双向预测关系。在自我怜悯-焦虑的时序网络中,自我批判具有较高的桥接影响力(bridge EI),即在自我怜悯的各成分中自我批判对焦虑症状的预测力更强;在自我怜悯-应激的时序网络中则是自我友善的桥接影响力更高。自我怜悯成分与心理症状的同时网络与时序网络也存在差异。例如,过度沉溺在同时网络中与抑郁症状的桥接联系较强,但在时序网络中则不然。而自我批判虽然在时序网络中对焦虑症状的桥接影响力较高,在同时网络中与焦虑症状的联系却较弱。自我友善与应激症状中的“失控感”在时序网络中具有正向的双向预测关系,但在同时网络中却呈现显著的负相关。本研究结果表明干预过程中自我怜悯成分对抑郁、焦虑与应激症状分别具有独特的动态影响过程。其中时序与同时网络的差异性也提示着未来研究应使用更密集的报告周期澄清自我怜悯各成分与心理症状变化的具体因果机制。

关键词 自我怜悯, 心理症状, 心理干预机制, 心理网络

The Network Dynamics of Self-Compassion and Psychological Symptoms during Intervention

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Abstract: Self-compassion (SC) interventions showed promising effects on psychological symptoms, but the mechanisms of SC interventions have not been adequately explored. Adopting a network perspective, this study aimed to investigate the dynamics of SC components and psychological symptoms during an intervention. We used the daily report data of participants of the Self-Compassion Based Stress Management-Online Individual (SCSM-OI) on the first half of 2021, which consisted of six components of SC (self-kindness, self-judgement, common humanity, isolation, mindfulness, and over-identification) as well as symptoms of depression, anxiety, and stress. The valid sample included 57 participants who completed at least 21 times of daily reports during the 28-day intervention. This study used multilevel vector autoregressive model (mlVAR) to estimate the contemporaneous and the temporal networks of SC components and psychological symptoms during SCSM-OI. Results showed that the network dynamics differed across categories of symptoms. For example, in the SC-depression temporal network, only common humanity significantly predicted the symptom of Felt depressed on the next day, but the SC-anxiety and the SC-stress temporal networks were denser, demonstrating mutual predictive effects between SC components and symptoms. Self-judgement was high in bridge expected influence (bridge EI) in the SC-anxiety temporal network while Self-kindness had a higher bridge EI in the SC-stress temporal network. The contemporaneous and the temporal networks of SC and symptoms also differed. For example, Over-identification showed strongest a bridge connection with depressive symptoms in the contemporaneous network but not in the temporal network. Self-judgement had a strong bridge EI with anxiety symptoms in the temporal network but not in the contemporaneous network. Self-kindness showed positive and mutual predictive effects with Loss of control in the temporal network, but a significant negative association in the contemporaneous network. Our findings reveal the unique dynamics of SC and different kinds of psychological symptoms. The differences between the temporal and contemporaneous networks encourage future studies using more intensive measurement intervals to clarify the causal dynamics of SC components and psychological symptoms.

Keywords: self-compassion, psychological symptoms, intervention mechanism, psychological network

自杀三阶段理论视角下自杀风险的研究： 基于中国大学生的潜在剖面分析

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摘要 自杀三阶段理论是自杀意念-行为框架下的一个新生理论, 强调心理痛苦、绝望、联结感、自杀能力以及自杀意念在自杀行为形成中的作用。但目前直接验证自杀三阶段理论的实证研究多采用以变量为中心的方法, 其研究结论主要基于样本的平均水平得出, 忽视了个体间的差异, 无法准确地揭示自杀意念及行为产生的机制。因此, 本研究在“以人中心”的研究视角下, 采用问卷法对太原、济南、聊城、重庆的 1947 名中国大学生 (M 年龄 = 20.06, SD = 1.37; n 男性 = 960) 进行调查, 再进一步检验自杀三阶段理论的合理性。具体而言, 本研究以心理痛苦、绝望、联结感、自杀能力和自杀意念作为指标, 利用潜在剖面分析 LPA 来识别大学生自杀风险的不同亚群体。研究结果表明, 大学生自杀风险亚类别可以分为: 无自杀意念组 (73.45%), 低自杀意念组 (16.01%), 高自杀意念组 (7.70%) 和自杀行为风险组 (2.80%) 四类, 各亚类别间的异质性主要体现在自杀尝试水平上。无自杀意念组中的个体感受到的心理痛苦和绝望水平最低; 低自杀意念组中的个体虽然感受到了心理痛苦和绝望, 但两者的水平并未超过联结感; 高自杀意念组中的个体感受到的心理痛苦和绝望水平超过了联结感, 但自杀能力水平相对较低; 自杀行为风险组中的个体不仅心理痛苦和绝望水平超过了联结感, 而且自杀意念和自杀能力水平最高。此外, 自杀行为风险组的个体自杀尝试水平显著高于

其他三类亚群体。研究结果不仅支持了自杀三阶段理论的合理性，而且提示我们针对不同自杀风险人群构建多重预防机制和干预方案。

关键词 自杀三阶段理论，潜在剖面，自杀风险

Examining Suicide Risk Through the Lens of the Three-Step Theory: A Latent Profile Analysis in Chinese University Students

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Abstract: The Three-Step Theory (3ST) of suicide is a new theory rooted in the ideation-to-action framework, which emphasizes the role of pain, hopelessness, connectedness, suicide capacity and suicide ideations in the formation of suicide behaviors. However, previous empirical studies that directly verify the 3ST all used variable-centered approaches, which conclusions are mainly based on the average level of the sample, ignoring the differences between individuals, and could not accurately reveal the mechanism of suicide ideations and behaviors. Therefore, under the research perspective of "person-centered", the current study used questionnaire method to investigate 1947 Chinese university students in Taiyuan, Jinan, Liaocheng and Chongqing (Mage = 20.06 years, SD = 1.37; n male = 960) to further examine the rationality of the 3ST. Specifically, this study used psychache, hopelessness, connectedness, suicide ideation and suicide capacity as indicators, and used potential profile analysis (LPA) to identify distinct suicide risk profiles. The results showed four different suicide risk profiles: non-suicide ideation subgroup (73.45%), low suicide ideation subgroup (16.01%), high suicide ideation subgroup (7.70%) and suicide behavior risk subgroup (2.80%). The heterogeneity between subgroups is mainly reflected in the level of suicide attempts. The individuals in the non-suicide ideation subgroup felt the lowest level of psychache and hopelessness. The participants in the low suicide ideation subgroup felt psychache and hopelessness that did not exceed the connectedness. Only psychache and hopelessness felt by the individuals in the high suicide ideation subgroup exceed the level of connectedness, but suicide capacity was relatively low. Participants' psychache and hopelessness in the suicide behavior risk subgroup exceed connectedness and have the highest level of suicide ideations and suicide capacity. In addition, participants in the suicide behavior risk subgroup had significantly higher levels of suicide attempts than the other three subgroups. The results support the rationality of the 3ST and suggest that it is critical to construct multiple prevention mechanisms and targeted intervention programs for different suicide risk groups.

Keywords: The Three Step Theory, Latent Profile Analysis, Suicide Risk

负性认知偏向对创伤后应激障碍的联合作用及纵向预测

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摘要 创伤后应激障碍（PTSD）是一种以直接或间接方式接触一个或多个实际的或被威胁的死亡、严重创伤或性暴力事件之后所发展出的心理障碍。根据 PTSD 的认知模型，对负性刺激的认知偏向（注意偏向、评估偏向和记忆偏向）是 PTSD 产生、维持和发展的重要机制，既有较多关注单一认知偏向对 PTSD 的预测作用，而忽略了认知偏向之间的复杂关系及其对 PTSD 症状发展可能存在的联合作用。基于此，本研究采用横断和追踪研究设计，以 60 具有 PTSD 症状的大学生（Mage = 20.17, SDage = 2.11）为被试，使用混乱句子范式和 Eye-Link 眼动追踪方法探究负性信息加工模式（注意偏向、评估偏向、记忆偏向）对 PTSD 症状的联合作用模式及纵向预测效果。研究结果显示：（1）对负性刺激的注意选择/注意维持偏向可通过作用于负性评估偏向进而影响负性记忆偏向，负性注意选择偏向和评估偏向均可显著正向预测 PTSD 症状；（2）与弱环节预测模式相比，累加预测模式对 PTSD 症状的纵向预测效果更佳，即 PTSD 的症状发展并不取决于负性偏向

最严重的单一认知加工阶段，而取决于具有负性偏向的认知加工阶段的整体数量和水平。本研究结果为联合认知偏向假说提供了新的实证研究支持，未来可尝试对 PTSD 个体的负性认知模式进行整体干预。

关键词 创伤后应激障碍，联合认知偏向，注意偏向，评估偏向，记忆偏向

The predictive effect of combined cognitive biases on Posttraumatic stress disorder symptoms

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Abstract: Posttraumatic stress disorder (PTSD) is a psychological disorder which develops after the exposure to actual or threatened death, serious injury, or sexual violence in direct or indirect ways. Cognitive models of PTSD postulate that negative information processing biases of attention, appraisal and memory play key roles in the onset and maintenance of PTSD. The previous studies have revealed the predictive effect of a single negative cognitive bias on the level of PTSD. However, both theoretical and empirical studies in recent years have shown that the effects of negative cognitive bias on PTSD are not independent of each other. On the contrary, they affect the symptom level and longitudinal development of PTSD in a combined manner. In view of above, the present study was to explore the predictive effects of combined cognitive biases (attentional bias, appraisal bias, and memory bias) and the integrative models (additive model vs. weakest link model) on PTSD symptoms. Sixty college students ($M_{age} = 20.17$, $SD_{age} = 2.11$) with PTSD symptoms completed a computerized version of the scrambled sentences test while their eye movements were recorded. Posttraumatic Stress Disorder Checklist-5 was administrated to measure participants' PTSD symptom. Results showed that (1) negative attentional selection bias and maintenance bias could significantly positively predict negative appraisal bias, and negative appraisal bias could significantly positively predict negative memory bias. In addition, negative attentional selection bias and appraisal bias could significantly positively predict the level of PTSD symptoms. (2) The additive model, instead of the weak link model, could significantly predicted the level of PTSD. That was to say, the development of PTSD symptoms does not depend on the dominantly cognitive process toward negative material, but on the overall number and level of negative bias cognitive process. The results of this study provide new empirical support for the combined cognitive biases hypothesis, and also suggest that clinical interventions for PTSD should consider the combined negative cognitive biases, rather than a specific stage of cognitive processing.

Keywords: posttraumatic stress disorder, combined cognitive biases, attention, appraisal, memory

(4) “临床与咨询心理学专业委员会”口头报告分场 4

心理咨询中的责任归因与会谈质量的关系： 两个归因维度和来自咨询师与当事人的不同视角

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摘要 问题解决的责任归因和问题发生的责任归因是心理咨询中两个重要的归因维度，但已有研究对责任归因与咨询效果的关系研究不一致，且只关注当事人视角。本研究首先考察咨询师和当事人评价的问题发生和问题解决责任归因对各自评价的会谈质量以及当事人自评的症状改善之间的影响，其次关注会谈过程中，咨询师和当事人责任归因一致性对会谈质量和当事人症状改善的影响。在一所高校心理咨询中心进行数据收

集,共招募 91 名当事人,44 名咨询师参与研究。每次会谈结束后邀请咨询师和当事人分别填写对当事人问题发生和问题解决的责任归因,以及会谈过程质量评价。纳入分析的共 411 次会谈,采用主客体互倚模型结合多水平模型探究问题发生和问题解决责任归因对会谈质量在被试内水平和被试间水平上的主体效应和客体效应。结果显示,当事人对问题发生和责任归因在被试间既存在主体效应,也存在客体效应,即越将问题发生责任归结为自身的当事人越能预测自评的会谈质量,也能预测咨询师评的会谈质量,该效应在被试内不存在。咨询师和当事人对问题解决的责任归因在被试内和被试间水平都存在主体效应,并只在被试内水平上存在客体效应,问题解决责任归因到当事人越高的咨询师或者当事人,都越能预测自身评价的会谈质量但不能预测对方评价的会谈质量,且随着会谈进程变化,问题解决责任归因越高,自评或者对方评价的会谈质量也越高。进一步采用多项式结合响应面分析考察咨询师和当事人的责任归因一致性对会谈质量的影响。结果显示,以当事人评价的会谈质量为结果变量时,问题发生责任越不一致,当事人评价的会谈质量越差;一致高问题解决责任归因下的会谈质量比一致低问题解决责任归因下的会谈质量好,且问题解决责任归因越不一致,当事人评价的会谈质量越差。以咨询师评价的会谈质量为结果变量时,问题发生责任归因一致性对结果没有影响,但是问题解决责任归因下,一致高问题解决责任归因的会谈质量高于一致低问题解决责任归因,随着随着问题责任归因增加,咨询师评价的会谈质量先升后降。本研究从责任归因的不同维度和不同评价者深入考察了责任归因和会谈质量的关系,为进一步实践和应用提供启示,心理咨询中需要更加关注问题解决的责任归因。

关键词 心理咨询,责任归因,会谈质量,主客体互倚模型,响应面分析

The relationship between responsibility attribution and session quality: Two dimensions and two-person perspectives

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Abstract: The attribution of responsibility for blame and solution are two important attribution dimensions in psychotherapy, but existing studies are inconsistent with the relationship between responsibility attribution and session outcome. The present study aimed to examine the impact of blame and solution attribution evaluated by the therapists and the clients on session quality. Besides, the present study aim to focuses on the relationship between responsibility attribution congruence and session quality. Data collection was conducted in a psychological counseling center in a university, and 91 clients and 44 counselors were recruited to participate in the research. After each session, the therapist and the client were invited to fill in responsibility attribution questionnaire, as well as the session quality evaluation. A total of 411 sessions were included in the analysis, and the actor and partner effect model combined with the multi-level model was used to explore the actor and partner effects of blame and solution attribution responsibility on the session quality at the between and within dyads level. The results shows that the client rated blame attribution responsibility has both a actor effect and a partner effect between dyads. That is, clients who blame themselves more for their problems has higher client-rated or therapist- rated session quality compared the clients who blame themselves less. Actor and partner effect of client-rated blame attribution not exist within dyads. There are actor effects of client rated or therapist rated solution attribution between and within dyads and partner effects only exists within dyads. Polynomials combined with response surface analysis was conducted to investigate the impact of the attribution congruence of clients and therapists on session quality. The results show that when the therapist rated session quality was used as the outcome, the more inconsistent the blame responsibility, the worse the session quality. And the session quality under consistent high solution attribution is higher than that under inconsistent solution attribution. When the client rated session quality was used as the outcome, the congruence of blame attribution has no effect on the result, but under the solution attribution, the session quality with the consistent high solution attribution is higher than that under the consistent low solution attribution. As the solution attribution,

the client-rated session quality first rises and then declines. This study thoroughly investigated the relationship between responsibility attribution and session quality from different dimensions of responsibility attribution and different evaluators, and provided enlightenment for further practice and application. It is necessary to pay more attention to the problem-solving responsibility attribution in psychotherapy.

Keywords: psychotherapy, responsibility attribution, session quality, actor and partner effect model, response surface analysis

双重干预网络游戏障碍的鲁莽冲动和奖赏敏感冲动的效果研究

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摘要 随着网络游戏障碍 (Internet Gaming Disorder, IGD) 被 ICD-11 正式列为一种行为成瘾障碍, IGD 的相关干预研究显得愈发重要。冲动性既是 IGD 的核心症状, 也是其关键心理机制, 因此对 IGD 的冲动性予以干预具有理论和实践的双重价值。但既往的相关干预往往只关注冲动性的单一维度, 且取得的效果也不一致。根据 Dawe 等的冲动二因素模型, 奖赏敏感冲动 (Reward Sensitivity/Reward Drive) 使成瘾者更容易趋近成瘾奖赏, 鲁莽冲动 (Rash Impulsiveness) 使成瘾者无法抑制成瘾行为。本研究以冲动二因素模型为理论基础, 通过《网络游戏成瘾量表》(马庆国, 戴坤懿, 2011) 招募了四组 IGD 被试, 通过比较四组被试在干预前后的不同维度冲动性得分, 探究单一的鲁莽冲动或奖赏敏感冲动干预与综合干预方案是否存在不同效果。前测中使用信号停止任务 (Stop Signal Task, SST) 测量被试的鲁莽冲动, SRC 任务 (Stimulus-Response Compatibility, SRC) 测量被试的奖赏敏感冲动。接着进行行为训练, 对前三组被试分别采用 Go/No-go 训练干预鲁莽冲动、SRC 训练干预奖赏敏感冲动、Go/No-go 和 SRC 综合训练双重干预鲁莽和奖赏敏感冲动, 第四组被试为控制组, 不进行任何训练。训练每天进行 1 次, 持续 15 天, 之后进行 IGD 分数、SST 和 SRC 的后测, 并在后测结束的 30 天后对所有被试进行线上问卷的追踪测量。结果发现: ①与训练前测相比, Go/No-go 训练组被试在后测中的鲁莽冲动水平显著降低, SRC 训练组被试在后测中的奖赏敏感冲动水平显著降低, 而综合训练组被试在后测中的两种冲动水平均显著降低 (图 A、B); ②与训练前测相比, 三组干预被试中, 只有综合训练组被试在追踪测量中的 IGD 分数显著降低 (图 C), 且综合训练组被试的冲动性改变量对 IGD 分数改变量的解释力显著高于单一 Go/No-go 和 SRC 训练组。结果表明, Go/No-go 和 SRC 范式的两种行为训练能够分别有效改善 IGD 的鲁莽冲动和奖赏敏感冲动, 但两种行为训练结合的干预效果优于单一训练。

关键词 网络游戏障碍, 鲁莽冲动, 奖赏敏感冲动, 行为干预

A Study of the Effects of a Dual Intervention for Rash Impulsiveness and Reward Sensitivity in Internet Gaming Disorder

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Abstract: With Internet Gaming Disorder (IGD) officially listed as a behavioral addiction disorder by ICD-11, research on IGD-related interventions has become increasingly important. Impulsivity is both a core symptom and a key psychological mechanism in IGD, and therefore interventions for impulsivity in IGD have both theoretical and practical value. However, previous related interventions have tended to focus on a single dimension of impulsivity and have achieved inconsistent results. According to Dawe et al.'s two-factor model of impulsivity, reward sensitivity/reward drive makes addicts more likely to gravitate toward addictive rewards, and rash impulsiveness prevents addicts from suppressing addictive behaviors. Using the two-factor model of impulsivity as a theoretical basis, four groups of IGD subjects were recruited by the Online Game Addiction Scale (Ma & Dai, 2011) to investigate whether there were different effects of a single rash impulsiveness or reward sensitivity intervention versus a combined intervention program by comparing the impulsivity scores of the four groups on different

dimensions before and after the intervention. The Stop Signal Task (SST) was used in the pretest to measure subjects' rush impulsiveness and the Stimulus-Response Compatibility task (SRC) to measure subjects' reward sensitivity. The first three groups of subjects were trained with Go/No-go training focused on rush impulsiveness, SRC training focused on reward sensitivity, and combined Go/No-go and SRC training focused on both rush impulsiveness and reward sensitivity, and the fourth group of subjects was the control group without any training. Training was conducted once a day for 15 days, followed by post-testing of IGD scores, SST and SRC, and follow-up measurements of the online questionnaire were administered to all subjects 30 days after the post-test. The results found that (1) subjects in the Go/No-go training group only had significantly lower levels of rush impulsiveness, subjects in the SRC training group only had significantly lower levels of reward sensitivity, and subjects in the combined training group had significantly lower levels of both impulsivity (Figure A and B); (2) among the three intervention groups, only the subjects in the combined training group had significantly lower IGD scores in the follow-up measure (Figure C), and the explanatory power of the impulsivity change for the change in IGD scores was significantly higher in the combined training group than in the single Go/No-go and SRC training groups. The results showed that the two behavioral trainings of Go/No-go and SRC were effective in improving rush impulsiveness and reward sensitivity in IGD, respectively, but the intervention effect of the combined behavioral trainings was better than that of the single training.

Keywords: Internet Gaming Disorder, rush impulsiveness, reward sensitivity, behavioral intervention

精神疾病康复期患者社会融入过程中相对剥夺感产生的原因： 基于解释现象学分析的质性研究

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摘要 处于精神疾病康复期患者的社会融入不仅能够反映社会对该类人群的接纳程度，同时也证明患者自身处于一个相对良性的康复进程。然而，多数精神疾病康复期患者的社会融入过程并不理想，甚至会出现由于社会融入失败而导致的精神疾病复发的情况。在社会融入过程中，精神疾病康复期患者会因为与其他正常群体进行比较时产生落差感，进而体验到愤怒和不满等负性情绪。这种主观的认知和情绪体验过程被称为相对剥夺感（relative deprivation, RD）。精神疾病康复期患者的相对剥夺感是影响其社会融入以及后续治疗的心理因素之一。既往研究多数倾向以正常人群为研究对象，对其相对剥夺感以及相关变量进行研究，以精神疾病康复期患者为研究人群的相对剥夺感研究相对较少。本研究通过两名临床精神科主治医师以及内科主任医师会诊筛选，最终选取 26 名处于精神分裂症康复期且之前或当前体验到相对剥夺感的患者为研究群体。在对既往文献进行梳理后拟定半结构化访谈提纲，对患者进行人均不少于 45 分钟的访谈。经过对谈话内容的整理以及信效度校验，采用解释现象学分析法（interpretative phenomenological analysis, IPA）对患者的相对剥夺感的成因进行分析，结果表明：所选取样本中有 23 名处于康复期的精神分裂症患者均有一定程度的相对剥夺感，并且，相对剥夺感围绕以下五点原因生成：1.自我污名与公众污名的消极影响。2.社会支持系统数量与质量的差异性。3.对过去经历的对比。4.当下行动能力的降低与不足。5.对持续治疗的消极情绪。本研究还发现，相对剥夺感会影响患者在院期间的康复以及出院后的用药情况，进而导致其复发率增加。并且部分康复期患者为回避相对剥夺感而对住院治疗产生依赖。本研究为医疗结构对精神疾病患者的康复阶段提供一定的心理支持建议，提升患者的自我价值感，增加患者在康复过程中的社会功能，改善患者社会认知与自我认知。

关键词 相对剥夺感，解释现象学分析，精神疾病康复，精神分裂，社会融入

The Reason of Relative Deprivation with Mental patients during Convalescence in Social Integration : a Qualitative Research based on Interpretive Phenomenological Analysis

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Abstract: The social integration of patients in the convalescent period of mental illness can not only reflect the degree of social acceptance of this group of people, but also prove that the patients themselves are in a relatively benign convalescent process. However, the social integration process of most patients in the convalescent period of mental illness is not ideal, and even the relapse of mental illness may occur due to the failure of social integration. In the process of social integration, patients in the convalescent period of mental illness will experience negative emotions such as anger and dissatisfaction because of the feeling of falling apart from other normal groups. This subjective process of cognitive and emotional experience is known as relative deprivation (RD). It is one of the psychological factors that affect the social integration and convalescence of patients. Previous studies tend to take normal population as the research object and study their relative deprivation and related variables, while there are relatively few studies on the relative deprivation of mental illness convalescent patients as the research population. In this study, two attending clinical psychiatrists and chief physicians were consulted and screened, and 26 patients who were in the recovery stage of schizophrenia and had experienced relative deprivation before or currently were selected as the study group. The semi-structured interview outline was drawn up after reviewing the previous literature, and the patients were interviewed for no less than 45 minutes per person. After sorting out the conversation contents and checking the reliability and validity, interpretative phenomenological analysis (IPA) is adopted to analyze the causes of the relative deprivation of patients. The results showed that 23 schizophrenic patients in the recovery period in the selected samples had a certain degree of relative deprivation, and the relative deprivation was generated around the following five reasons: 1. Negative effects of self-stigma and public stigma. 2. Differences in the quantity and quality of social support systems. 3. Comparison of past experience. 4. The reduction and deficiency of current action ability. 5. Negative feelings about continuing treatment. The study also found that a sense of relative deprivation affected patients' recovery during hospital stay and their medication status after discharge, leading to an increased recurrence rate. In addition, some convalescent patients rely on hospitalization in order to avoid relative deprivation. This study provides some psychological support suggestions for the medical structure in the rehabilitation stage of patients with mental illness, so as to improve the sense of self-worth of patients, increase the social function of patients in the process of convalescence, and improve the social cognition and self-cognition of patients.

Keywords: relative deprivation, interpretative phenomenological analysis, convalescent period of mental illness, schizophrenia, Social Integration

抑郁的核心特征：过高的应激感受性和失调的期待性快感体验

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摘要 背景：抑郁-应激-快感缺失启发模型假设：快感缺失源于过强的应激反应所致的大脑奖励系统功能失调。心理学上，应激感受性影响奖赏体验，从而导致抑郁的作用机制尚不清楚。本研究在该模型理论基础上，以抑郁发作缓解个体为研究对象，与抑郁症状和无抑郁症状的健康个体比较，探讨应激感受性、期待和消费性快感和抑郁的关系，回答：(1)过高的应激感受性和过低的快感体验是否为抑郁的核心特征？(2)应激感受性对奖赏期待和抑郁情绪调控作用的损害是否是抑郁发作的特征？ 方法：经两阶段抑郁障碍病例筛选后的抑郁障碍完全缓解（n=54）、有抑郁症状但追踪观察1年从未有过抑郁发作（n=69）和无抑郁症状的个体（n=320）完成时间性愉快体验量表、应激感受量表、心境与焦虑问卷和贝克抑郁量表第2版（BDI-II）。根据应激感受性得分将三组被试分为高低分组，比较组间组内快感体验、BDI-II得分差异；再进一步检验三组应激感受性对

期待和消费性快感与抑郁的调节作用及差异。结果：(1)三组期待性快感得分差异显著 ($F=15.22, P<.001$)，抑郁障碍完全缓解组依次低于 (36.71 ± 8.15) 抑郁症状组 (39.91 ± 9.28)，无症状组 (43.93 ± 7.54)；抑郁障碍完全缓解组的应激感受性得分 (30.35 ± 3.77) 依次高于其他两组 (27.87 ± 4.96) (25.34 ± 5.58) ($F=15.59, P<.001$)；(2)抑郁障碍完全缓解组的应激感受性高低分组间的期待和消费性快感得分无差异 ($t_s = 0.55-0.56, d_s = 0.15-0.16$)，BDI-II得分差异显著 ($d_s=0.62$)，抑郁症状组组间无任何显著差异 ($t_s < 1.15$)，无症状组组间在快感体验和 BDI-II 得分上均有差异 ($t_s = 2.22-9.65, d_s = 0.25-1.03$)；(3)控制焦虑因子后，应激感受性的增加与较低的快感体验水平有关 ($\beta=-0.18, t(320)=-2.75, P<.001$)；(4)抑郁症状组和无症状组中，应激感受性能调节期待性快感与抑郁 ($B=-0.59, SE=0.14, P=.00$) ($B=-0.18, SE=-0.05, P=.011$)，高应激下，期待性快感才能显著预测抑郁，而抑郁障碍缓解组中不存在调节作用。三组应激感受性均不能调节消费性快感与抑郁。结论：过高的应激感受性和过低的不受调控的期待性快感体验可能是抑郁的核心特征，也可能是区分抑郁发作的重要标志。

关键词 快感体验,期待性,消费性,应激感受性,抑郁

Core characteristics of depression: excessive stress perception and dysfunctional anticipation hedonia

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Abstract: Background: Depression-stress-anhedonia inspired models hypothesize that anhedonia results from brain reward system dysfunction from too strong stress responses. Psychologically, stress perception affects the reward experience, and the mechanism of action leading to depression is unknown. Based on the theory of this model and individuals with depression disorder completely relieved, this study compared with the healthy individuals of depression and without depression, and discussed the relationship between stress perception, anticipatory and consumer pleasure and depression, answering: (1) Is too high stress perception and too low hedonia the core characteristics of depression? (2) Is stress sensory damage to reward anticipatorys and depression regulation characteristic of depressive episodes? Methods: Complete remission of depression disorder ($n=54$), individuals with depression symptoms ($n=69$) and no depression symptoms ($n=320$), the temporal experience of pleasure scale, the perceived stress scale, mood and anxiety questionnaire and Beck self rating depression scale. The three subjects were divided into high groups, compare the differences between hedonia and BDI-II scores, and further test the anticipatory and difference of hedonia and depression. Results: (1) The three groups of expected pleasure scores differ significantly ($F=15.22, P<.001$) successively depression disorder completely relieved below (36.71 ± 8.15) depressive group (39.91 ± 9.28), no depression symptoms (43.93 ± 7.54); stress sensory scores (30.35 ± 3.77) successively higher than the other two groups (27.87 ± 4.96) (25.34 ± 5.58) ($F=15.59, P<.001$); (2) There was no difference between anticipatory and consumption pleasure scores in groups with depression ($t_s = 0.55-0.56, d_s = 0.15-0.16$), The BDI-II scores differ significantly ($d_s=0.62$), No significant differences between depressive groups ($t_s < 1.15$), Anticipatory hedonia and BDI-II scores differ among no depression symptoms groups ($t_s = 2.22-9.65, d_s = 0.25-1.03$); (3) After controlling the anxiety factors, Increased stress perception is associated with lower levels of hedonia ($\beta = -0.18, t(320)=-2.75, P<.001$); (4) Anticipatory hedonia and depression in the depressive and no depression symptoms groups ($B= -0.59, SE=0.14, P=.00$) ($B=-0.18, SE=-0.05, P=.011$), under high stress, anticipation pleasure significantly predicts depression, with no regulatory effects in the depression disorder relief groups. All three groups of stress perception can not regulate consumer pleasure and depression. Conclusion: Excessive stress perception and too low unregulated anticipatory hedonia may be the core characteristic of depression or an important sign of depression differentiation.

Keywords: hedonia, anticipatory, consummatory, stress perception, depression

学龄期儿童情感障碍与精神分裂症访谈问卷筛查 我国青少年抑郁障碍的信度和效度

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摘要 目的: (1)检验学龄期儿童情感障碍与分裂症访谈问卷(K-SADS-PL)筛查我国青少年(10-24岁)抑郁障碍的信度和效度。(2)检查该问卷跨年龄段(即10-18岁青少年和19-24岁早期成人)的效度和信度。方法:(1)样本选取与筛查:分3次从5所中学和1所大学中选取17,132名10-24岁青少年,完成贝克抑郁量表第2版的问卷调查,筛查出有抑郁症状($n=910$)和无抑郁症状($n=425$)样本共1,355人[10-18岁青少年($n=835$,61.2%),19-24岁早期成人($n=517$,38.8%)],完成K-SADS-PL诊断访谈及汉密尔顿抑郁量表(HAMD),根据美国精神障碍诊断手册第四版(DSM-IV)的抑郁障碍诊断标准进行评估和诊断。(2)比较抑郁障碍当前发作青少年($n=103$)和早期成人($n=34$)抑郁症状分布比例和得分差异。(3)采用平行分析分别检测青少年($n=853$)和早期成人($n=517$)样本中的因子个数,再分别进行探索性结构方程模型(ESEM)分析,验证因子结构,比较模型的拟合程度最优。(4)选取部分访谈被试($n=139$)完成贝克抑郁量表(BDI-II)、特质焦虑量表(STAI)、冗思反应量表(RRS)、自杀意念量表(SIQ)评估汇聚效度。(5)评估K-SADS在抑郁障碍样本($n=171$, $n=58$)中的内部一致性信度、评分者一致性信度和重测信度($n=139$)。结果: (1)青少年在精神运动性迟滞、内疚、思维/注意力减退的比例和得分均高于早期成人;早期成人在食欲、睡眠过多的比例高于青少年。疲乏得分青少年高于早期成人。(2)平行分析揭示青少年和成人早期样本均为单因子结构,青少年样本数据与1因子模型的拟合指标($CFI=0.988$, $TLI=0.986$, $RMSEA=0.086$)可在可接受范围,各条目的因子负荷在0.73-0.93之间;早期成人数据1因子拟合指标 $CFI=0.995$, $TLI=0.995$, $RMSEA=0.057$,各条目的因子负荷在0.85-0.97之间。(3)K-SADS-PL抑郁评分总分与HAMD总分($N=1352$)高相关($r=0.73$, $P<0.01$),与RRS量表、SIQ量表($n=139$)中等正相关($r=0.31$ 、 0.38 , $P<0.01$),与STAI量表、BDI-II量表($n=139$)总分均呈低正相关($r=0.17$ 、 0.28 , $P<0.01$)。(4)抑郁障碍青少年($n=171$)早期成人($n=58$)样本的Cronbach α 系数分别为0.71和0.76,青少年中各条目间的相关系数分别在-0.11-0.65(早期成人:-0.16-0.63),各条目与总分的相关系数在0.22-0.53之间(早期成人:0.15-0.49)。评分者一致性kappa系数在0.88-1.00之间;间隔半年和一年后访谈的重测相关系数为0.21和0.24($ps<0.01$)。结论:K-SADS-PL在我国青少年中为单因子结构,具有良好的汇聚效度、内部一致性信度和评分者信度,可作为有效筛查我国青少年抑郁障碍的标准化工具。

关键词 学龄期儿童情感障碍与分裂症访谈问卷, 因素分析, 效度, 信度, 青少年, 早期成人

Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime version in Chinese Adolescents

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Abstract: Objective: (1)To examine validity and reliability of The Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime version (K-SADS-PL) interview in Chinese adolescents (10-24 years old). (2) To examine validity and reliability of K-SADS-PL in transitions from adolescence to early adulthood (adolescence :10-18 years, Young Adult :19-24 years) Methods: (1) Samples selection and K-SADS-PL assessed for depression: From 2013 to 2019, A representative sample of 17,132 adolescents aged from 10 to 24 years at intake was assessed for depression by BDI-II-C firstly. A total of 1,355 adolescents with depressive symptoms ($n=910$) and no depressive symptoms ($n=425$) were screened [Including adolescents aged 10-18 ($n=835$, 61.2%) and early adults aged 19-24 ($n=517$, 38.8%)]. Then The 1,355 subjects were interviewed for MDD utilizing the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime version (K-SADS-PL) and the the diagnosis of MDD was made based on the criteria of DSM-IV. (2) To compare the distribution of depressive symptoms and score differences between adolescents with current onset of depressive disorder ($n=103$) and early adults ($n=34$). (3) To compare the structure validity between adolescents ($n=853$) and young adult ($n=517$), Using Parallel analysis examines the factor structure, and compare the structure which is fitted

the data well. (4) Convergent validity(N=1352,n=139): Selecting some participants (n=141) complete the Hamilton Depression Inventory (HAMD), Beck Depression Inventory (BDI-II), Trait Anxiety Inventory (STAI), Redundancy Response Inventory (RRS), suicidal ideation The scale (SIQ) assesses the convergent validity of K-SADS. Then assess the K-SADS-PL of Convergent validity.(5) Reliability: To examine internal reliability (Cronbach α coefficient) and inter-rater reliability (kappa coefficient) as well as retest reliability (n=139) of K-SADS-PL in Chinese adolescents and young adult. Results: (1) Differences in how depression presents in adolescents and young adults: We found that Psychomotor retardation, Tired, thinking ability or loss of concentration symptoms were more common in adolescents MDD than adult MDD. Appetite changes, Hypersomnia symptoms were more common in adult with MDD. (2) Structure validity: Parallel analysis indicated that the single-factor structure of K-SADS-PL fitted the data well in adolescent and young adult, with CFI=0.988, TLI=0.986, RMSEA=0.086, and the factor loadings of items from 0.78 to 0.93 by EFA in adolescence; with CFI=0.995, TLI=0.995, RMSEA=0.057, and the factor loadings of items from 0.78 to 0.93 by EFA in young adult.(3) Convergent validity: The scores of K-SADS-P was imaginatively correlated with the scores of HAMD($r=0.73, P<0.01$), and appositely correlated with the scores of the dimension of concerning between self and experiences of RRS and SIQ($r=0.31, 0.48, P<0.01$), as well as the scores of BDI-II and STAI($r=0.28, 0.17, P<0.01$). (4) Reliability: The Cronbach alpha coefficient of the K-SADS-PL scores with adolescence and young adult was 0.71, 0.74. With adolescence the intercorrelations of 17 items ranged from -0.11 to 0.65 respectively, and item-total correlations ranged from 0.22 to 0.53, respectively($P<0.05$). With young adult the intercorrelations of 17 items ranged from -0.16 to 0.63 respectively, and item-total correlations ranged from 0.15 to 0.49, (respectively $P<0.05$). The test-retest coefficient was 0.21 and 0.24 respectively($P<0.01$). The inter-rater reliability of kappa coefficient ranged from 0.88 to 1.00. Conclusion: The Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version is a single-factor structure. And it showed good reliability and validity in adolescents and suitable for epidemiological study.

Keywords: K-SADS-PL, Factor analyses, Reliability, Validity, Adolescents

4.14 军事心理专业委员会

(1) “军事心理专业委员会”口头报告分场 1

长期潜水环境暴露对海军职业潜水员基本认知能力的累积影响

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摘 要 目的 海军职业潜水员是执行水下施工和救援打捞的技术人员, 潜水环境是最危险最特殊的作业环境之一。完整的认知能力是海军职业潜水员执行潜水作业的必备条件, 但是潜水环境暴露也可能会对其认知能力产生影响。本研究旨在探索长期潜水环境暴露对海军职业潜水员基本认知能力的累积影响, 以及这种影响在潜水员工龄上的分布特点。方法 采用中科院心理研究所开发的基本认知能力测量系统对某部 170 名海军职业潜水员和 155 名非潜水员的加工速度、工作记忆、空间认知、情景记忆和言语能力五项基本认知能力进行测试, 数据采用 SPSS26.0 软件, 应用 t 检验、协方差分析、双因素方差分析等方法进行统计分析。结果 海军职业潜水员的基本认知能力总平均分显著低于非潜水员 ($F=6.915, p=0.009$)。总体来看, 潜水员的五项基本认知能力得分均值均低于非潜水员, 但是只有工作记忆 ($F=14.334, p<0.001$) 和言语能力 ($F=5.861, p=0.016$) 达到显著水平。将研究对象按照工龄分为工龄 1~5 年组、6~10 年组和 >10 年组, 对各项基本认知能力进行工龄分组和实验分组的双因素方差分析。结果显示, 在工龄 1~5 年分组, 潜水员的加工速度 ($p<0.05$)、工作记忆 ($p<0.001$)、情景记忆 ($p<0.01$)、空间认知 ($p<0.05$) 和言语能力 ($p<0.05$) 低于非潜水员; 在工

龄 6~10 年分组, 潜水员的言语能力 ($p<0.05$) 低于非潜水员, 其余各项能力无组间差异; 在工龄>10 年分组, 潜水员的言语能力 ($p<0.05$) 低于非潜水员, 情景记忆 ($p<0.01$) 高于非潜水员, 其余各项能力无组间差异。结论 海军职业潜水员的基本认知能力会受到长期潜水环境暴露的影响, 不同的能力受影响程度不一样, 潜水时长不同的个体受影响程度也不一样。潜龄 1~5 年的海军职业潜水员的加工速度、工作记忆、情景记忆和空间认知能力受长期潜水环境暴露的不利影响显著, 这种影响随着潜龄的延长而逐渐减弱。而长期潜水环境暴露对海军职业潜水员言语能力的不利影响则贯穿其整个职业生涯。

关键词 海军职业潜水员, 潜水环境, 基本认知能力, 长期影响

Cumulative Effect of Long-term Diving Environmental Exposure on Primary Cognitive Functions of Navy Professional Divers

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Abstract: Objective Navy professional divers are the technicians who carry out underwater construction and rescue, and the diving environment is one of the most dangerous and special working environments. Complete cognitive ability is necessary for navy professional divers to perform diving operations, while environmental exposure may also affect their cognitive ability. This study aimed to explore the cumulative effect of long-term diving environmental exposure on primary cognitive functions of navy professional divers, and the distribution characteristics of this effect on the length of diving. Methods The primary cognitive functions including processing speed, working memory, spatial cognition, episodic memory and speech ability of 170 navy professional divers and 155 non-divers were tested by a computer system developed by the Institute of psychology, Chinese Academy of Sciences. The data were collected and analysed by SPSS 26.0 software using methods including t-test, Covariance and two-way ANOVA. Results The total average score of primary cognitive functions of divers was significantly lower than that of non-divers ($F = 6.915, p = 0.009$). Overall, the average scores of five primary cognitive functions of divers were all lower than those of non-divers, but only working memory ($F = 14.334, p < 0.001$) and speech ability ($F = 5.861, p = 0.016$) reached significant level. According to the length of service, the subjects were divided into 3 groups: 1-5 years group, 6-10 years group and > 10 years group. The primary cognitive functions were analyzed by two-way ANOVA. The results showed that in 1-5 years group, the processing speed ($p < 0.05$), working memory ($p < 0.001$), episodic memory ($p < 0.01$), working memory ($p < 0.01$) and cognitive ability ($p < 0.05$) of divers were significantly lower than those of non-divers; in the group of 6-10 years of service, the speech ability of divers was lower than that of non-divers ($p < 0.05$); in the group of more than 10 years of service, the speech ability of divers ($p < 0.05$) was lower than that of non-divers, and the episodic memory ($p < 0.01$) was higher than that of non-divers. Conclusion The primary cognitive functions of navy professional divers are affected by long-term diving environmental exposure. The effect of long-term diving environmental exposure on navy professional divers varies among different functions and different length of diving. The processing speed, working memory, episodic memory and spatial cognitive ability of navy professional divers serving 1 to 5 years were significantly affected by long-term diving environmental exposure, and the effect gradually weakened with the extension of diving years. While the adverse effects of long-term diving environment exposure on the verbal ability of navy professional divers run through their whole career.

Keywords: navy professional diver, diving environment, primary cognitive functions, cumulative impact

军队文职人员挑战性压力对工作旺盛感的影响： 被调节的中介效应

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摘要 目的：探讨军队文职人员挑战性压力与工作旺盛感的关系及情感体验的中介效应和职业韧性的调节效应。方法：采用挑战性压力量表、情感指数量表、工作旺盛感量表和职业韧性量表对 450 名军队文职人员进行调查，回收有效问卷 426 份。结果：军队文职人员挑战性压力与工作旺盛感显著负相关（ $r=-0.31, P<0.01$ ）、与情感体验显著正相关（ $r=0.27, P<0.01$ ），情感体验与工作旺盛感显著负相关（ $r=-0.41, P<0.01$ ），职业韧性与情感指数显著负相关（ $r=-0.27, P<0.01$ ）、与工作旺盛感显著正相关（ $r=0.61, P<0.01$ ）；层次回归分析的结果表明，控制人口学变量的影响后，挑战性压力对工作旺盛感具有显著的负向影响（ $\beta=-0.30, P<0.001$ ），情感体验在该过程中起部分中介作用（ $\beta_1=-0.26, P<0.001$ ； $\beta_2=-0.36, P<0.001$ ），职业韧性对情感体验的中介作用起调节作用。具体来说，高职业韧性下，情感体验的中介作用较弱，中介效应值为-0.03，95%置信区间为[-0.06, 0.01]，低职业韧性情况下，情感体验的中介效应较强，大小为-0.07，95%置信区间为[-0.11, -0.03]。结论：提高军队文职人员的工作旺盛感可以从降低其面临的挑战性压力、提高积极情感体验等方面入手，尤其要加强对低职业韧性群体的教育和引导。

关键词 挑战性压力，情感体验，工作旺盛感，职业韧性，军队文职人员

Challenge Stressor and Thriving at Work of Military Civilian: A moderated mediation model

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Abstract: Objective: To explore the relationship between the challenging stressor and thriving at work and the mediating effect of emotional experience, the moderating effect of career resilience in this process of military civilian. Methods: A total of 450 military civilian were selected and required to complete challenge stressor scale, index of general affect scale, thriving at work scale and career resilience scale, finally, 426 valid questionnaires were collected. Results: There was a significant negative correlation between challenge stressor and thriving at work ($r=-0.31, P<0.01$), and positive correlation between Emotional experience ($r=0.27, P<0.01$), and there was a significant negative correlation between emotional experience and thriving at work ($r=-0.41, P<0.01$). Finally, there was a significant negative correlation between career resilience and emotional experience ($r=-0.27, P<0.01$), and thriving at work ($r=0.61, P<0.01$). Hierarchical regression analysis shows that challenging stressor had a significant negative effect on thriving at work of military civilian ($\beta=-0.30, P<0.001$), the emotional experience played a part mediating role in this process ($\beta_1=-0.26, P<0.001$; $\beta_2=-0.36, P<0.001$), and the career resilience mediates the mediating effect through emotional experience. Specifically, the mediating effect of emotional experience was weak in the case of high career resilience, the value of mediation is -0.03, 95% CI is [-0.06, 0.01], and strong in the case of low career resilience, the value of mediation is -0.07, 95% CI is [-0.11, -0.03]. Conclusion: Reducing the challenge stressor and improving the positive experience both were effective methods to improve the level of thriving at work of military civilian, and we should especially focus the group with low career resilience.

Keywords: challenge stressor, emotional experience, thriving at work, career resilience, military civilian

军校学员生命意义感对主观幸福感的影响：正念的中介作用

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摘要 主观幸福感一直是积极心理学研究的重要内容，是衡量个体心理健康的重要指标，也是近些年来学界的研究热点。军校学员受特殊环境和严格管理的影响，其心理健康状况理应得到更多的关注。本研究采用生命意义感量表、正念量表和主观幸福感量表分别对 410 名军校学员进行调查，共回收有效问卷 376 份。相关分析结果显示，生命意义感与正念 ($r=0.148, P<0.01$) 和主观幸福感 ($r=0.291, P<0.001$) 显著正相关，正念与主观幸福感间的相关也达到显著性水平 ($r=0.213, P<0.001$)。采用层次回归分析的方法对正念在生命意义感和主观幸福感间的中介作用进行检验，结果显示，在对性别、年龄、家庭所在地等人口学变量进行控制后，生命意义感能够显著正向影响主观幸福感 ($\beta=0.271, P<0.001$)、显著正向影响正念 ($\beta=0.113, P<0.05$)，正念对主观幸福感的影响也达到显著性水平 ($\beta=0.166, P<0.001$)。采用 Hayes 编写的 PROCESS3.3 程序对中介效应的大小进行检验，设置 Bootstrap=5000，结果显示，正念的中介效应值为 0.072，置信区间为 [0.01, 0.16]，生命意义感对主观幸福感的直接效应值为 0.70，置信区间为 [0.44, 0.97]，由此证明，正念在生命意义感影响军校学员主观幸福感的过程中起部分中介作用。最后，本文基于研究结论对军校学员的教育和管理提出了一些建议。

关键词 生命意义感，正念，主观幸福感，军校学员

The influence of the meaning in life on subjective Well-being of military Cadets: the Mediating effect of mindfulness

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Abstract: Subjective well-being has always been important content in the study of positive psychology, it is an important indicator to measure the degree of individual mental health, and is also a research hotspot in the academic field in recent years. Due to the special environment and strict management, more attention should be paid to the mental health of cadets. In our research, 410 cadets were investigated by the Meaning in Life Scale, the mindfulness scale and the subjective well-being scale, and a total of 376 valid questionnaires were collected. The correlation analysis results showed that the meaning in life was positively correlated with mindfulness ($r=0.148, P<0.01$) and subjective well-being ($r=0.291, P<0.001$), and the correlation between mindfulness and subjective well-being also was significant ($r=0.213, P<0.001$). Hierarchical regression was adopted to examine the mediation effect of mindfulness between meaning in life and subjective well-being, the results showed that meaning in life could positive influence subjective well-being ($\beta=0.271, P<0.001$) and mindfulness ($\beta=0.113, P<0.05$) significantly, and the mindfulness also had a positive influence on subjective well-being ($\beta=0.166, P<0.001$) after controlling the demographic variables such as gender, age and home location. PROCESS3.3 written by Hayes was used to verify the size of mediating effect and Bootstrap=5000. The results showed that the mediating effect value of mindfulness was 0.072, the confidence interval was [0.01, 0.16], the direct effect value between meaning in life and subjective well-being was 0.70, and the confidence interval was [0.44, 0.97], thus it could prove that mindfulness played a partial mediating role between meaning in life and subjective well-being of military cadets. Finally, in this paper, we put forward some suggestions on the education and management of military cadets based on the research.

Keywords: meaning in life, mindfulness, subjective well-being, military cadets

“和平方舟”号医院船医务人员远航期间健康相关生活质量的队列研究

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摘要 背景 “和平方舟”号医院船自2010年起,9次执行“和谐使命”海外人道主义医疗援助任务,到访43个国家和地区,为23万多人次提供医疗服务。在和谐使命-2017中,医院船从中国舟山,到访吉布提、塞拉利昂、加蓬、刚果、安哥拉、莫桑比克、坦桑尼亚和东帝汶8个国家,用时155天。执行此次任务的医务人员大多来自原海军总医院和海军军医大学的附属医院。大量文献研究已证实,长远航对船员身心健康有显著影响。对于平时在军队医院工作,临时抽组上医院船的医务人员来说,这155天的远航生活对他们的身心健康提出挑战。本研究旨在调查执行和谐使命-2017任务前后医务人员的生活质量及变化情况,并探讨其影响因素,以为后续任务的人力抽组提供参考建议。方法 通过健康相关生活质量SF-12量表来评价医务人员健康状况。SF-12的条目共计12条,通过生理健康总分(PCS)和心理健康总分(MCS)评估调查对象的总体生理和心理健康水平。问卷还包括年龄、性别、专业等基本信息和个人信心状态、社会与家庭支持等方面的问题。对船上所有医务人员采用队列研究设计,随访医疗队员在航行前(出发时)和航行5个月后的健康状况。资料分析采用描述性统计,两组比较采用t检验、Wilcoxon秩和检验,三组比较采用Kruskal-wallish检验,影响因素分析采用逐步线性回归分析。结果 共有91名医疗队员参加此次队列研究,占有医疗队员人数的82.73%。医疗队员在航行前的PCS和MCS均高于常模,而在经过5个月航行后,PCS和MCS均明显下降。回归分析结果显示,女性船员的PCS下降更为明显。航行前对执行任务缺乏信心的队员PCS下降更为明显;另外,医疗管理人员的PCS下降比医生、护士更为明显。在心理健康得分方面,年龄(年长)和缺乏家庭支持是导致长远航过程中MCS下降的危险因素。结论 航行前,医疗队员的健康状况无论是生理或心理都处在较好水平,而5个月的长远航对他们的身心健康均造成明显影响。女性医疗队员在长远航任务中的身体健康需要更多关注,而医院船海外人道主义救援任务给医疗管理人员造成的工作负荷和巨大压力可能是导致其生理得分较医护人员下降明显的主要原因。个人信心和家庭支持分别对生理变化和心理变化影响明显,提示在任务前做好队员的心理状态调整,获得家人支持非常重要。此外,医疗队员抽组应有一定的年龄限制。

关键词 健康相关生活质量, 医院船, 和谐使命, 和平方舟, 长远航

The health related quality of life in medical staffs working on the hospital ship Peace Ark during long voyage: a cohort study

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Abstract: Background Since 2010, the ark of peace hospital ship has carried out "harmony mission" overseas humanitarian medical assistance missions nine times, visited 43 countries and regions, and provided medical services for more than 230000 person times. In the harmony mission-2017, the hospital ship visited 8 countries, including Djibouti, Sierra Leone, Gabon, Congo, Angola, Mozambique, Tanzania and East Timor, from Zhoushan, China, for 155 days. Most of the medical staff who carried out the mission came from the former Navy General Hospital and the Affiliated Hospital of the Navy Military Medical University. A large number of literature studies have confirmed that long-distance voyage has a significant impact on the physical and mental health of seafarers. For the medical personnel who usually work in military hospitals and are temporarily recruited to the hospital ship, the 155 day long voyage challenges their physical and mental health. The purpose of this study was to investigate the quality of life and its changes of medical staff before and after the implementation of the harmonious mission-2017 mission, and to explore its influencing factors, so as to provide reference and suggestions for the manpower selection of follow-up tasks. Method Health related quality of life SF-12 scale was used to evaluate the health status of medical staff. There

were 12 items in SF-12. The overall physical and mental health level of the subjects was evaluated by PCs and MCS. The questionnaire also includes basic information such as age, gender, major, personal confidence, social and family support. A cohort study design was used to investigate the health status of all medical personnel on board the ship before and 5 months after the voyage. Descriptive statistics was used for data analysis. T test and Wilcoxon rank sum test were used for comparison between the two groups. Kruskal wallish test was used for comparison of the three groups. Stepwise linear regression analysis was used to analyze the influencing factors. Result A total of 91 medical team members participated in the cohort study, accounting for 82.73% of all medical team members. The PCs and MCS of medical team members were higher than the norm before sailing, but after 5 months of sailing, PCs and MCS decreased significantly. Regression analysis showed that PCs of female crew members decreased more significantly. In addition, the PCs of medical managers decreased more significantly than that of doctors and nurses. In terms of mental health score, age (older age) and lack of family support are the risk factors leading to the decline of MCS during long-distance voyage. Conclusion Before the voyage, the health status of the medical team members was in a good level both physically and psychologically, and the long voyage of 5 months had a significant impact on their physical and mental health. More attention should be paid to the health of female medical team members in long-distance voyage. The workload and great pressure caused by the overseas humanitarian rescue mission of hospital ship may be the main reason for the obvious decrease of their physiological scores compared with the medical staff. Personal confidence and family support have significant effects on physiological and psychological changes respectively, which indicates that it is very important to adjust the psychological state of team members before the task and obtain family support. In addition, there should be a certain age limit for the selection of medical team members.

Keywords: Health related quality of life, hospital ship, harmonious mission, peace ark, long voyage

(2) “军事心理学专业委员会”口头报告分场 2

多感觉整合促进空管员视觉搜索

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摘 要 空中交通管制 (Air traffic control, ATC) 是保障航空安全的重要环节, 基于对管制员的人为差错及其影响因素进行研究具有重要意义。伴随我国航空业的蓬勃发展, 管制员的工作负荷逐渐增大, 尤其在机起飞、进近和降落阶段, 管制员面临视觉负荷过载, 严重影响了管制员的视觉搜索。已有研究结果显示, 通过在视觉搜索任务中加入外源性听觉线索能够有效促进视觉搜索。当前有关管制员视觉搜索的研究主要集中在改进单一视觉通道显示, 有关多感觉整合对管制员视觉搜索的影响还未展开。本研究对传统的 pip and pop 视觉搜索范式进行场景化改良, 考察在不同通道条件下外源性空间线索对视觉搜索的影响。研究包括三个实验, 反应变量包括视觉搜索的正确率、反应时和多通道竞争模型指标。实验 1 采用 2 (线索有效性: 有效线索、无效线索) × 3 (感觉通道类型: 听觉、视觉、视听觉) 两因素被试内设计, 结果表明有效的视听觉线索可以促进视觉搜索; 实验 2 采用 2 (线索类型: 常规线索、空间化线索) × 3 (感觉通道类型: 听觉、视觉、视听觉), 结果显示在视听整合条件下, 空间化视听觉线索对视觉搜索的促进作用最大; 实验 3 在实验 2 的基础上, 通过持续播放管制音频作为干扰刺激, 结果表明在干扰条件下只有空间化视听觉线索显著促进视觉搜索。结论: 多感觉整合和空间化线索可以提高管制员的视觉搜索绩效。

关键词 多感觉整合, 空间化线索, 视觉搜索

Multi-sensory integration promotes visual search for air traffic controllers

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Abstract: Air traffic control (ATC) is an important part of ensuring aviation safety, and it is of great significance to study the human error of the controller and its influencing factors. With the vigorous development of our country's aviation industry, the workload of controllers has gradually increased, especially during the take-off, approach and landing phases of aircraft. Controllers face visual overload, which seriously affects the visual search of controllers. Previous research showed that by adding exogenous auditory cues to the visual search task can effectively promote visual search performance. The current research on the controller's visual search is mainly focused on improving the single visual channel display, and the impact of multi-sensory integration on the controller's visual search has not yet been launched. In this study, the traditional pip and pop visual search paradigm was improved in a scene, and the influence of exogenous spatial cues on visual search under different channel conditions was investigated. The research includes three experiments. The response variables include the correct rate of visual search, response time and multi-channel competition model indicators. Experiment 1 used 2 (cue validity: valid cues, invalid cues) $\times$ 3 (sensory channel types: auditory, visual, audio-visual) two-factor design within the subject, and the results showed that effective visual and auditory cues can promote visual search; Experiment 2 used 2 (cue types: conventional cues, spatialized cues) $\times$ 3 (sensory channel types: auditory, visual, audiovisual), the results showed that under the condition of audiovisual integration, spatialized audiovisual cues have the greatest effect on visual search; 3 Based on Experiment 2, we played the control audio continuously as interference stimuli in experiment 3. The results showed that only spatialized audiovisual cues significantly promote visual search under interference conditions. Conclusion: Multi-sensory integration and spatial cues can improve the visual search performance of controllers.

Keywords: multisensory integration, spatialized cues, visual search

军人焦虑变迁的横断历史研究

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摘要 目的: 军人是执行特殊任务的武装集团, 其职业的特殊性决定了军人经常要面临较大的生理和心理压力。他们不但要面临战争的高风险, 还要面临部队、家庭和社会应激事件等诸多问题。由于军事环境的特殊性, 使得军人焦虑发生相对普通人群更高。已有研究发现军人的心理状态随社会变迁而发生改变, 那么军人焦虑水平如何随年代变迁而变化呢? **方法:** 运用横断历史元分析的方法, 在中国学术期刊(CNKI)的中文全文数据库中, 以“军人”、“状态--特质焦虑量表”、“STAI”、“心理健康”、“心理卫生”等字段在题名、关键词、摘要或全文中搜索文献。选取 2002 至 2018 年间采用 Spielberger 编制的状态--特质焦虑量表(STAI)测量军人状态焦虑(共有 28 篇文献、28949 名被试)和特质焦虑(共有 37 篇、46425 名被试)的文献调查数据进行分析, 考察军人状态--特质焦虑水平随年代变化的趋势。结果: (1) 2002 至 2018 年军人的状态焦虑均值与年代有显著负相关($r = -0.34, p < 0.05$)。而特质焦虑均值也随年代逐渐降低, 但相关不显著。说明军人状态焦虑水平随年代变迁明显下降, 特质焦虑水平随年代变迁下降, 但不显著; (2) 2002 至 2018 年军人的状态焦虑得分下降了 6.08 分, 降低了 0.70 个标准差, 即年代的效果量为-0.70; 特质焦虑得分下降了 4.48 分, 降低了 0.56 个标准差, 即年代效果量为-0.56。近 16 年来军人的状态焦虑和特质焦虑水平均有一定程度的下降, 且状态焦虑水平下降幅度要大于特质焦虑, 这与前面的年代相关分析结果相符。结论: 2002 至 2018 年的 16 年间, 军人的焦虑水平总体上是呈下降趋势。

关键词 军人, 状态--特质焦虑, 横断历史研究, 元分析

A cross-temporal meta-analysis of changes in soldiers anxiety

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Abstract: Aim: A soldier is an armed group on a special mission, the particularity of their occupation determines that soldiers often have to face greater physical and psychological stress. They not only face the high risk of war, but also many problems such as military, family and social stress events. Due to the particularity of military environment, the occurrence of soldiers anxiety is higher than that of the general population. The study found that the psychological state of soldiers changes with the society. How does the level of soldiers anxiety change over time? Methods: Using the cross-temporal meta-analysis, In the chinese full-text database of Chinese Academic Journals (CNKI), "Soldier", "State-trait Anxiety Scale", "STAI", "psychological health", "mental health" and other fields were used to search literature in title, keywords, abstract or full text. From 2002 to 2018, the state--trait anxiety scale (STAI) developed by Spielberger was used to measure the stae anxiety of soldiers (28 articles and 28,949 subjects) and the trait anxiety of soldiers (37 articles and 46,425 subjects). The literature survery data were analyzed to investigate the trend of the soldiers state-trait anxiety level over time. Results: (1)From 2002 to 2018,the state anxiety of soldiers was negatively correlated with age ($r = -0.34, P < 0.05$), trait anxiety decreased gradually with age, but the correlation was not significant. The results showed that the level of state anxiety in soldiers decreased with the change of time, and the level of trait anxiety decreased with the change of time, but not significantly;(2)From 2002 to 2018, the score of state anxiety of soldiers decreased by 6.08 points and 0.70 standard deviations, the effect size of age was -0.70. The score of trait anxiety of soldiers decreased by 4.48 points and 0.56 standard deviations, the effect size of age was -0.56. In recent 16 years, the level of state anxiety and trait anxiety of soldiers have decreased to a certain extent, and the level of state anxiety has decreased more than that of trait anxiety, which is consistent with the results of the previous age correlation analysis. Conclusion: Over the 16 years, from 2002 to 2018, the level of soldiers anxiety is on decline.

Keywords: soldier, state and trait anxiety, cross-temporal meta-analysis, meta-analysis

空间定向障碍多因素影响程度分析模型

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摘 要 背景: 飞行空间定向(spatial orientation)是飞行人员对地空目标、自身飞行状态、空间位置以及自身与飞行环境之间空间关系进行识别和判断的一种认知过程。空间定向障碍(spatial disorientation, SD)是飞行员在空中飞行时, 由于视觉、前庭、心理的同时作用而对飞机姿态做出错误判断的感觉, 这种感觉往往会导致严重的飞行事故。影响空间定向障碍发生的因素较为复杂, 且由空间定向障碍(SD)引起的事故率和致死率占比高。分析影响空间定向障碍(SD)发生的因素, 可从飞行员选拔、培训以及飞行场景各个阶段避免空间定向障碍(SD)发生, 从而降低事故率。目的: 本研究旨在探究影响空间定向障碍(SD)发生的因素并对其影响程度进行分析, 得出影响空间定向障碍(SD)发生的多因素影响程度分析模型。方法: 从美国国家航空航天局(NASA)的航空安全报告系统(ASRS)数据库, 以“spatial disorientation”为关键词筛选出 2000 年至今的飞行事故, 共计 48 起。本研究基于这 48 起事故的飞行员主观报告与 50 余篇近 20 年公开发表于国内外杂志研究主题为空间定向障碍(SD)的文献, 从飞行员、飞机、飞行情境三个角度分析, 得出 22 个影响空间定向障碍(SD)发生的风险因素。根据这些影响因素构建影响空间定向障碍(SD)发生风险因素指标体系, 并邀请 120 名飞行员为每个因素的重要程度打分, 采用李克特 6 点量表, 收集到数据后使用物元分析法进行分析。结果: 使用物元分析法确定了 22 个影响因素的权重, 并通过关联度以及综合关联度的计算, 确认了每个因素的评价等级。结论: 空间定向障碍(SD)影响因素较多且关联性较强, 空间定向障碍(SD)发生的多因素影响程度综合模型为实现多因素多阶段多方法避免空间定向障碍(SD)的发生提供了一定的理论支持。

关键词 空间定向障碍, 物元分析法, 航空安全, 军事飞行员

An Analysis Model of the Degree of Influencing Multi-factors of Spatial Disorientation

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Abstract: Background: Spatial orientation (SD) is a cognitive process by which pilots recognize and judge ground-to-air targets, their own flight status, spatial position, and the spatial relationship between themselves and the flight environment. SD is the feeling that a pilot makes a wrong judgment on the attitude of the aircraft due to the simultaneous effects of vision, vestibule, and psychology when flying in the air. This feeling often leads to serious flight accidents. The factors affecting the occurrence of spatial disorientation are more complicated, and the accident rate and fatality rate caused by SD account for a high proportion. Analyze the factors that affect the occurrence of SD, which can avoid the occurrence of space SD from pilot selection, training, and flight scenarios, thereby reducing the accident rate. Purpose: The purpose of this study is to explore the factors that affect the occurrence of SD and analyze the degree of their influence, and obtain a multi-factor influence degree analysis model that affects the occurrence of SD. Method: From the Aviation Safety Reporting System (ASRS) database of the National Aeronautics and Space Administration (NASA), with "spatial disorientation" as the key word, a total of 48 accidents from 2000 to the present were screened. This study is based on the pilot's subjective reports of these 48 accidents and more than 50 articles published in domestic and foreign journals in the past 20 years on the subject of SD. It is analyzed from the three perspectives of pilots, aircraft, and flight situations. 22 risk factors affecting the occurrence of SD. Based on these influencing factors, an indicator system of risk factors affecting the occurrence of SD was constructed, and 120 pilots were invited to score the importance of each factor, using the Likert 6-point scale, and using matter element analysis after collecting the data Perform analysis. Results: The matter-element analysis method was used to determine the weight of 22 influencing factors, and the evaluation level of each factor was confirmed through the calculation of the degree of relevance and the comprehensive degree of relevance. Conclusion: There are many factors influencing SD and the correlation is strong. The comprehensive model of the degree of influence of multiple factors in the occurrence of SD provides a multi-factor, multi-stage and multi-method to avoid the occurrence of SD With certain theoretical support.

Keywords: spatial disorientation, matter-element analysis, aviation safety, military pilots

情境意识的预期功能评估的实验研究

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摘 要 情境意识是飞行员最重要的飞行能力之一，缺失情境意识会提升飞行员人因失误的概率。Endsley(1955)提出了情境意识的信息加工三水平理论，认为情境意识是对外界环境信息的感知、理解以及对情境发展的预期。前人采用冻结探测技术、实时探测技术、SART 评定法等方法对情境意识进行了综合和分解研究，分解研究大部分集中在感知和理解水平，很少涉及预期水平。在动态情境中，感知信息“断片”情况时常发生，需要个体在缺少情境信息的情况下利用情境意识对情境发展做出预期，因此，关注情境意识的预期功能既可以丰富情境意识的多水平研究也能为减少情境缺失情况下预期错误提供理论支持。本研究自创了动态情境片段化的情境缺失来探讨情境意识的预期功能。情境为动态飞行场景，其中飞机和云朵以不同速度移动，背景为静止大山。采用掩蔽范式模拟“断片”式的情境缺失，实验 1a 考察了目标物(飞机)运动速度和遮蔽时间长短(0s、3s、6s、9s)对情境意识预期功能的影响，遮蔽期间云朵保持与飞机同方向缓慢运动，遮蔽结束后被试立刻报告飞机的俯仰角度；实验 1b 在遮蔽阶段加入干扰任务，考察干扰对情境意识中单客体态势判断的影响程度。实验 2a 在实验 1a 基础上控制了云朵运动方向，在遮蔽结束后被试立刻报告飞机和云朵的相对位置关系；实验 2b 在实验 2a 基础上加入干扰任务，考察干扰对情境意识中多客体态势判断的影响程度。

结果发现：(1) 目标速度越快、遮蔽时间越长，对飞机俯仰姿态预期越差；(2) 遮蔽时间越长，飞机与云朵的相对位置关系判断越差；(3) 干扰极大地降低了单客体和多客体态势预期绩效。

结论：“断片”探测技术可用于情境意识的预期功能评估，单客体和多客体态势判断可作为情境意识的预期功能评估指标。此外，干扰会严重影响情境意识预期功能，可能是导致情境意识丧失的重要原因。

关键词 情境意识，预期，“断片”探测技术

Experimental research on the evaluation of the predicted function of situation awareness

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Abstract: Situation awareness is one of the most important flight abilities of pilots. The loss of situation awareness will increase the probability of pilots' human errors. Endsley (1955) proposed a three-level theory about information processing of situation awareness. The theory says that situation awareness is composed of awareness and understanding of external environmental information and the prediction of situation development. Predecessors have used freeze probe techniques, real time probe techniques, situation awareness rating techniques and other methods to comprehensive and decomposed research on situation awareness. Most of the decomposed researches focused on perception and understanding, while rarely involved the prediction of situation awareness. In dynamic situations, “fragments” of perceptual information often occur. Individuals are required to use situation awareness to make predictions of situational development in the absence of situational information. Therefore, paying attention to the predicted function of situation awareness can enrich multi-level research on situation awareness and provide theoretical support for reducing predicted errors in the absence of situational information. This study created the fragments' loss of dynamic situation to explore the predicted function of situation awareness. The situation is a dynamic flight scene, in which an airplane and clouds moved at different speeds, and the background was a static mountain. The masking paradigm was used to simulate the “fragments” of situational loss. Experiment 1a examined the influence of the speed of the target (airplane) and the length of the masking time (0s, 3s, 6s, 9s) on the predicted function of situation awareness. During the masking period, clouds moved slowly with airplane in the same direction, and the subjects immediately reported the pitch angle of the airplane after the masking was over; Experiment 1b added interference tasks during the masking period to investigate the influence of the interference on the situational judgment of the single object in situation awareness. Experiment 2a controlled the directions of clouds movement on the basis of Experiment 1a, and the subjects immediately reported the relative position relationship between the airplane and the cloud after the masking was over; Experiment 2b added interference task on the basis of experiment 2a to investigate the influence of interference on multi-object situation judgment in situation awareness. The findings of the two experiments were as follows. When the target speed was faster and the masking time was longer, the predictions of the airplane' pitch angle were worse; when the masking time is longer, the judgments of the relative position relationship between the airplane and the clouds were worse; the interference greatly reduces the performance of the single-object and multi-object situation. In conclusion, the “fragment” probe technology can be used to evaluate the predicted function of situation awareness, and single-object and multi-object situation judgment can be used as the evaluation indicator of the predicted function of situation awareness. In addition, interference can seriously influence the prediction function of situation awareness and may be an important reason for the loss of situation awareness.

Keywords: situation awareness, prediction, “fragment” probe technology

4.15 人格心理学专业委员会

(1) “人格心理学专业委员会”口头报告分场 1

主动性人格对空乘人员安全绩效的影响：一个有调节的中介模型

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摘 要 飞行安全对于民航产业的稳定快速发展至关重要, 客舱安全又是民航安全的重中之重。作为客舱工作的一线员工, 空乘人员的首要任务是确保客舱安全, 其安全绩效水平对于现代民航安全具有重要意义。已有研究表明, 主动性人格对个体的工作绩效具有显著的预测作用。此外, 个体的工作行为还会受到社会认知和组织氛围的深刻影响。因此, 本研究试图将人格特质方法、社会认知方法和组织方法相结合, 探究空乘人员安全绩效的潜在机制。我们主要关注两个研究问题: (1) 安全态度在主动性人格与安全绩效之间是否起到中介作用; (2) 安全氛围是否会影响主动性人格与安全绩效之间的关系。方法: 本研究采用主动性人格量表、安全态度量表、安全氛围量表和安全绩效量表对中国南方航空公司的 560 名空乘人员进行调查, 运用 SPSS22.0 对数据进行分析 and 处理。结果显示: (1) 主动性人格、安全态度、安全氛围与安全绩效两两之间均呈显著正相关。(2) 控制年龄和工作年限的中介分析表明主动性人格既可以直接影响安全绩效, 也可以通过安全态度的中介作用间接影响安全绩效。(3) 安全态度的中介作用受到安全氛围的调节, 安全氛围调节了主动性人格—安全态度—安全绩效这一中介过程的后半段。具体而言, 随着安全氛围水平的升高, 安全态度对安全绩效的正向影响不断减弱。结论: 本研究揭示了主动性人格对安全绩效的影响及其作用机制, 丰富了相关研究, 同时也为航空安全管理提供了一定的指导意义。首先, 航空公司在招聘过程中可以将主动性人格作为甄选标准之一。其次, 航空管理部门可以开展安全态度培训增强个体的安全态度。最后, 航空公司还可以通过营造良好的安全氛围以提升空乘人员的安全绩效。

关键词 主动性人格, 安全绩效, 安全态度, 安全氛围, 空乘人员

Proactive Personality and Flight Attendants' Safety Performance: a Moderated Mediation Model

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Abstract: Flight safety is essential to the stable and rapid development of the civil aviation industry, and cabin safety is the top priority of civil aviation safety. As front-line employees working in the cabin, the primary task of flight attendants is to ensure cabin safety, and their safety performance is of great significance to the safety of modern civil aviation. Previous studies have shown that proactive personality has a significant predictive effect on individual work performance. In addition, the work behavior of individuals will be profoundly affected by social cognition and organizational climate. Therefore, this study attempts to combine personality traits, social cognitive and organizational methods to explore the potential mechanisms of flight attendants' safety performance. We mainly focus on two

questions: (1) Whether safety attitudes play a mediating role between proactive personality and safety performance; (2) Whether safety climate affects the relationship between proactive personality and safety performance. Method: The Proactive Personality Scale, Safety Attitude Scale, Safety Climate Scale and Safety Performance Scale were used to survey 560 flight attendants of China Southern Airlines and processed the data through SPSS22.0. The results showed that: (1) There was a significant positive correlation between proactive personality, safety attitude, safety climate and safety performance. (2) After controlling for age and working years, the result shows that proactive personality can directly affect safety performance, but also indirectly affect safety performance through the mediating effect of safety attitudes. (3) The mediating role of safety attitude is moderated by the safety climate, which moderates the latter half of the mediation process of proactive personality-safety attitude-safety performance. Specifically, as the level of safety climate increases, the positive impact of safety attitudes on safety performance continues to weaken. Conclusion: This study reveals the influence of proactive personality on safety performance and its mechanism, enriches related research, and also provides certain guiding significance for aviation safety management. First of all, airlines can use proactive personality as one of the selection criteria in the recruitment process. Secondly, aviation management departments can carry out safety attitude training to enhance individual safety attitudes. Finally, airlines can also improve the safety performance of flight attendants by creating a good safety climate.

Keywords: Proactive Personality, Safety Performance, Safety Attitude, Safety Climate, Flight Attendant

君子之乐：君子人格与主观幸福感——敬畏的中介作用

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摘 要 “君子之乐”是儒学的重要议题，自孔子以来，为历代学者广泛研讨。本研究以经典文献中的哲学理论为基础，结合实证研究的相关证据，提出君子人格预测主观幸福感、敬畏在其中起中介作用的假设。为验证这些假设，本研究通过多种方法进行了考察。研究一考察君子人格对主观幸福感的预测作用；研究二引入敬畏的内在机制，采用跨时间点测量的方法对特质性敬畏在君子人格对主观幸福感效应中的中介作用进行考察；研究三考察受到回忆启动操纵的敬畏对主观幸福感的影响，弥补自我报告的问卷测量法的局限；研究四通过视频启动法将敬畏进行人为控制，考察其对君子人格与主观幸福感关系的影响，以进一步厘清因果关系；研究五采用中美两国被试，检验上述效应在不同的文化背景中的适用性。通过多样的研究方法，本研究发现，君子人格显著地正向预测主观幸福感。这一结果具有较强的稳健性，在对主观幸福感的5种不同自我报告问卷测量中表现出了一致性，无论是同时时间点测量还是跨时间点测量都支持这一效应，无论是中国文化背景还是美国文化背景都发现了该效应。此外，君子人格显著地正向预测敬畏，敬畏显著地正向预测主观幸福感，敬畏在君子人格对主观幸福感的正向效应中起到了部分中介作用。无论是测量的敬畏还是操纵的敬畏都支持这一效应，但这一效应只在中国文化背景中存在，在美国文化背景中没有发现该中介作用。本研究通过实证研究验证了经典文献广为论述的君子人格与主观幸福感的关系，并发现其中的内在机制部分地通过敬畏来达成。这对我们丰富对君子人格的理解、探寻“君子之乐处”具有理论意义，对于当今社会积极心理议题也具有现实价值。

关键词 君子人格，儒家文化心理学，主观幸福感，敬畏，本土心理学

Confucian Ideal Personality Traits (Junzi Personality) and Subjective Well-Being: The Mediating Role of Awe

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Abstract: “Junzi and well-being” is an important topic in Confucianism. Since Confucius, it has been widely discussed by scholars of all ages. Based on the philosophical theories in the classical literature and the relevant evidence of empirical research, I proposed the hypotheses that Junzi personality positively predicts subjective well-being through the mediation of awe. In order to examine these hypotheses, five studies were conducted with various methods. In Study 1, the proposed effect of Junzi personality on subjective well-being was examined. Study 2 shed light on the underlying mechanism of awe, and the mediating role of trait awe in the effect of Junzi personality on subjective well-being were examined with the method of measuring in three stages over a 4-month period. In Study 3, awe were manipulated with the method of recall priming, and the effect on subjective well-being were examined, which made up for the limitations of self-reported questionnaire measurement. In Study 4, awe were manipulated with the method of video priming, and how it impacted the effect of Junzi personality on subjective well-being were examined, so as to further clarify the causal relationship. In study 5, both Chinese and American participants participated the study, and the applicability of the above effects in different cultural backgrounds were examined. Through a variety of research methods, the results showed that Junzi personality significantly positively predicted subjective well-being. This result had a strong robustness, showing consistency in the five different self-reported questionnaire measures of subjective well-being. Both the cross-sectional measurement and cross-time point measurement supported this effect. And the effect was found in both Chinese and American cultural background. In addition, Junzi personality significantly positively predicted awe, awe significantly positively predicted subjective well-being, and awe partially mediated the positive effect of Junzi personality on subjective well-being. Both measured awe and manipulated awe supported this effect. But this effect only existed in Chinese cultural background, rather than American cultural background. These studies examined the relationship between Junzi personality and subjective well-being, which was widely discussed in the classical literature, and shed light on awe as a partial underlying mechanism. These findings enriched our understanding of Junzi personality, and were also of practical value for the positive psychological issues in current society.

Keywords: Junzi personality, Confucianism cultural psychology, Subjective well-being, Awe, Indigenous psychology

领悟社会支持对大学生择业焦虑的影响： 应对方式和生命意义感的多重中介作用

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摘要 大学生就业问题一直备受关注，这是大多数大学生必须要面临的问题，对于学生及其背后家庭都有着重要的意义。大学毕业生数量逐年增加、传统就业观念的束缚以及社会提供就业岗位数量的限制等诸多因素可能导致大学生在择业期间承受着不同程度的心理压力，个体难免会产生择业焦虑情绪，缓解大学生择业焦虑对于个体的身心健康及择业工作的顺利进行都具有积极意义。择业焦虑会受到来自周围环境中各方各面的理解与帮助程度、个体在面对择业时所采取的行为方式和态度以及对于目标的明确与坚定程度等诸多因素的影响。为深入探究择业焦虑的影响机制，本研究采用实证研究方式，以《领悟社会支持量表》、《简易应对方式量表》、《生活目的测验》及《高校毕业生择业焦虑问卷》为测量工具，对内蒙古自治区3所高校共

675 名大学生进行调查研究, 探讨领悟社会支持与择业焦虑之间的关系, 以及应对方式和生命意义感在其中的中介作用, 根据研究结果和分析讨论最终得出以下结论: (1) 女生领悟社会支持总分显著高于男生; 大一学生积极应对得分显著高于大三、大四学生; 男生生命意义感总分显著高于女生, 大一学生生命意义感水平显著高于其他年级学生; 女生择业焦虑程度较男生而言更高, 并且择业焦虑在大学生群体中具有明显的学科类别及年级差异, 文史类学生较理工类学生而言会有更多地择业焦虑情绪, 大三及大四学生的择业焦虑程度显著高于大一学生。(2) 领悟社会支持可以通过应对方式间接影响个体的择业焦虑, 领悟社会支持通过应对方式影响择业焦虑的关系中, 应对方式在领悟社会支持与择业焦虑关系间起中介作用; 领悟社会支持通过生命意义感影响择业焦虑, 生命意义感在领悟社会支持与择业焦虑关系间起中介作用; 在多重中介效应模型中, 应对方式和生命意义感为领悟社会支持影响择业焦虑的中介变量, 应对方式及生命意义感在领悟社会支持与择业焦虑关系间起多重中介作用。

关键词 大学生, 领悟社会支持, 应对方式, 生命意义感, 择业焦虑

The Effect of Perceived Social Support on University Student's Vocational Selection Anxiety: The Multiple Mediating Effects of Coping Style and Life Meaning Feeling

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Abstract: The employment of college students has been paid much attention, which is a problem most college students have to face, and it is of great significance to students and their families. There are many factors, such as the increasing number of university graduates, the restriction of the traditional concept and the limitation of the number of jobs provided by the society, which have caused the university students to bear different degrees of psychological pressure during the job-hunting. It is inevitable for the individuals to have job-selection anxiety. Alleviating college students' job anxiety is of great significance for their physical and mental health and the smooth development of job selection. Vocational Selection Anxiety is influenced by many factors, such as the degree of understanding and help from all sides in the surrounding environment, the behavior and attitude of individuals when choosing a career, and the degree of clarity and firmness for the purpose. In order to explore the mechanism of Vocational Selection Anxiety, this study adopts empirical research and qualitative interview, using the Perceived Social Support Scale, the Coping Style Scale, the Purpose in Life Test and the Vocational Selection Anxiety Questionnaire for college graduates as measuring tools to explore the role of Coping Style and Life Meaning Feeling in the relationship between Perceived Social Support and Vocational Selection Anxiety. The 675 college students from three universities in Inner Mongolia were investigated, using semi-structured interview to explore the composition and characteristics of various variables in the group of college students, as well as the specific mechanism of action among the variables. According to the research results and analysis, the conclusions are as follows: (1) The total score of Perceived Social Support of female students is significantly higher than that of male students. The Positive Coping Scores of freshmen are significantly higher than that of juniors and seniors. The total score of Life Meaning Feeling of male students is significantly higher than that of female students, and the level of life meaning of freshmen is significantly higher than that of other grades. There are obvious differences in the subject categories and grades among the college students, and the students of literature will have more Vocational Selection Anxiety than the students of science and engineering. The anxiety degree of junior and senior college students is significantly higher than that of freshmen. (2) Perceived Social Support can indirectly influence individuals' Vocational Selection Anxiety through Coping Style, and Perceived Social Support can influence Vocational Selection Anxiety through Positive Coping Style, Coping Style plays an mediating role in the relationship between Perceived Social Support and Vocational Selection Anxiety, and Perceived

Social Support affects Vocational Selection Anxiety through Life Meaning Feeling, which mediates the relationship between Perceived Social Support and Vocational Selection Anxiety in the model, Coping Style and Life Meaning Feeling are the mediating variables that Perceived Social Support affects Vocational Selection Anxiety. Coping Style and Life Meaning Feeling play multiple mediating roles in the relationship between Perceived Social Support and Vocational Selection Anxiety.

Keywords: College Students, Perceived Social Support, Copying Style, Life Meaning Feeling, Vocational Selection Anxiety

幼儿创造性人格的形成：积极家庭规则的促进机制

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摘 要 创造性人格是指个体所具有的对创造性发展和创造任务完成起促进或保证作用的个性特质。幼儿阶段是创造性人格发展和培养的关键时期，该时期的人格塑造对幼儿以后的创造和成功起着关键的作用。因此，非常有必要对幼儿的创造性人格的形成做更多探索。在幼儿创造性人格形成的过程中，家庭因素是十分重要的。其中关于家庭规则对其的影响，有学者认为规则包含顺从大人的期望、自制力、遵守安全规则、自我照顾等因素，会限制幼儿的行为，导致遵守规则的幼儿缺乏创造性。这种对规则的定义包含了家族长辈的意志指定，具有绝对的权威性和强制性。其实，“规则”也可以是在所有社会成员共同约定之下形成的人人平等思想的体现，这种规则的约束能够保证一种不超越底线的自由状态，使孩子生活在和谐与秩序中。有学者认为，这种人人平等的家庭规则能够维持幼儿发展的持续性和稳定性，并为他们提供安全感和舒适感，从而促进其创造性人格的发展。张帆修订的家庭规则问卷反映的正是这种积极有序的家庭规则。因此，可预期这种规则将促进幼儿创造性人格的发展。因为有研究者认为这种规则越稳定，孩子的独立性、自我监管及自控能力就会增强，进而促进其自主性发展，不少研究表明，幼儿自主性与幼儿创造性人格倾向存在显著正相关，幼儿自主性可以有效促进幼儿创造性人格的形成。综上，本研究采用家庭规则问卷、幼儿自主性发展问卷和Williams 创造性倾向量表对 664 名 3 岁~6 岁幼儿进行调查，考察家庭规则对幼儿创造性人格的影响，以及自主性发展在家庭规则与幼儿创造性人格关系中的中介效应，回答家庭规则是“如何”影响幼儿创造性人格的，为培养和塑造幼儿创造性人格提供理论基础。研究结果表明：（1）家庭规则与幼儿创造性人格存在显著正相关，表明家庭规则的制定有利于幼儿创造性人格的发展；（2）幼儿自主性发展与幼儿创造性人格存在显著正相关；（3）自主性发展是家庭规则与幼儿创造性人格之间关系的中介变量，效应量为 52.9%。

关键词 创造性人格，家庭规则，自主性发展

The formation of preschooler's creative personality: the promotion mechanism of positive family routines

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Abstract: Creative personality refers to the individual's personality characteristics that can promote or guarantee the creative development and the completion of creative tasks. Preschool stage is the key period for the development and cultivation of creative personality, and personality shaping in preschool children plays a key role in children's future creation and success. Therefore, it is very necessary to conduct more exploration on preschooler's creative personality. Family factors are very important in the formation of preschooler's creative personality. As for the influence of family routines, some scholars think that family routines include obedience to adults' expectations, self-control, compliance with safety rules, self-care and other factors, and consider that routines will limit preschooler's behavior, and thus the preschooler who follow the rules lack creativity. This definition of routines includes the will of the family elders, which is absolutely authoritative and mandatory. In fact, the "routines" can also be the embodiment of the idea that everyone is equal under the common agreement of all members of society. Its' restraint and guidance can ensure a

free state that does not exceed the bottom line, so that preschoolers can live in harmony and order. Some scholars believe that the family routines can maintain the continuity and stability of preschooler's development and provide them with a sense of security and comfort, and create a safe and free psychological environment, thus promoting the development of their creative personality. Zhang's revised family routines scale reflects this positive and orderly family routines, and it can be expected that this routine will promote the development of preschooler's creative personality. Some studies believe that the more stable the family routines are, the stronger the preschooler's independence, self-regulation and self-control ability will be, so as to promote their autonomy. Many studies have shown that there is a significant positive correlation between preschooler's autonomy and creative personality, and preschooler's autonomy can effectively promote the formation of their creative personality. In summary, the current study tested 664 participants aged 3 ~6 years by adopting three questionnaires: family routines scale, autonomy of children scale and the Williams creativity assessment packet to explore the influence of family routines on preschooler's creative personality and the mediating role of autonomous. So that we can illuminate how family routines affect preschooler's creative personality, thus providing theoretical basis for cultivating and shaping preschooler's creative personality. The results show that: (1) family routines had a positive effect on among Chinese preschooler's creative personality, which shows that family routines is conducive to the development of preschooler's creative personality; (2) autonomous had a significant effect on preschooler's creative personality; (3) Autonomous is an intermediary variable in the relationship between family routines and creative personality, with an effect of 52.9%.

Keywords: Creative personality, Family routines, Autonomous

社会距离与社会价值取向对大学生利他倾向的影响

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摘要 社会价值取向指个体对自己和他人收益分配的特定偏好。社会距离指个体感知到的自我与他人差异的大小, 或人际距离的亲疏, 可以通过改变人们的认知进一步影响到个体的行为。其中利他行为作为一种积极的社会行为, 在维持人际关系和创建和谐社会方面都有重要意义。探究个体的利他倾向受哪些因素的影响, 有助于提高个体的利他行为水平, 促进社会形成互帮互助的融洽氛围。本研究采用问卷调查法和实验法, 结合人格特质和情境因素, 从内隐和外显两个层面探究社会价值取向和社会距离对利他倾向的影响。实验一以 42 名大学生为研究对象, 采用单因素被试内设计进行内隐联想测验(IAT), 结果显示个体对不同社会距离对象的内隐利他倾向不同, 与他人相比, 对自我的内隐利他倾向更高; 不同社会价值取向个体的内隐利他倾向也存在显著差异, 与亲自我取向个体相比, 亲社会取向个体的内隐利他倾向更高。实验二以 65 名大学生为研究对象, 采用 2(社会距离: 陌生人, 熟悉人)×2(社会价值取向: 亲自我, 亲社会)混合设计, 因变量为研究参与者在捐献意愿上的得分。结果显示社会距离的主效应显著, 相比于陌生他人, 个体对熟悉他人的捐献意愿更高; 社会价值取向主效应不显著, 表明社会价值取向对利他倾向的影响可能在内隐认识与外显态度上相分离。社会距离和社会价值取向的交互作用显著, 相比于亲自我取向个体, 亲社会取向个体受到社会距离的影响小。

关键词 大学生, 社会价值取向, 社会距离, 利他倾向

The Influence of Social Distance and Social Value Orientation on College Students' Altruistic Tendency

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Abstract: Social value orientation refers to the individual's specific preference for income distribution between himself and others. Social distance refers to the size of the self-perceived difference between individuals and others,

or the closeness of interpersonal distance, which can change people's cognition and further affect individual behavior. As a positive social behavior, altruistic behavior plays an important role in maintaining interpersonal relationship and creating a harmonious society. By exploring the factors that influence the altruistic tendency of individuals, it is helpful to improve the level of individual altruistic behavior and promote the formation of a harmonious social atmosphere of mutual help. Combining personality traits and situational factors, we explore the influence of social value orientation and social distance on altruistic behavior from two levels of implicit and explicit. Questionnaire method and experimental method were adopted. In the first experiment, 42 college students were selected as subjects. The Implicit Association Test (IAT) was designed by single factor test. The implicit altruistic tendencies of different social distance objects are different. Compared with the otherness dimension, the implicit altruistic tendency towards ego dimension is higher; the implicit altruistic tendencies of individuals with different social value orientations also have significant differences, that is, the pro-social orientation individuals tend to be higher. In the second experiment, 65 college students were enrolled. The mixed design of 2 (social distance: strangers, familiar people) $\times$ 2 (social value orientation: myself, prosocial) was adopted. The results showed that the main effect of social distance was significant. The main effect of social value orientation is not significant, which indicates that the effect of social value orientation on altruistic tendency may be separated from implicit cognition and explicit attitude. The interaction between the two is significant. Compared with self-oriented individuals, prosocial oriented individuals are less affected by social distance.

Keywords: College students, social value orientation, social distance, altruism

(2) “人格心理学专业委员会”口头报告分场 2

中学生社会排斥与自杀意念的关系：一个有调节的中介模型

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摘 要 自杀是全球性的公共卫生问题。世卫组织的数据显示, 全球每年约有 80 万人自杀身亡。青春期是自杀行为的高发年龄阶段, 也是个体的自杀意念、自杀意图达到峰值的时期。自杀意念是个体在思想或认知上想要结束生命的想法、念头, 是产生自杀行为必然的心理过程, 因此, 阻断自杀意念的形成是防范青少年自杀行为的有效手段。本研究采用青少年社会排斥量表、青少年自杀意念量表、核心自我评价量表和儿童及青少年社会支持量表, 对辽宁省和北京市共 612 名学生进行问卷调查。运用 SPSS 25.0 和 Amos 24.0 对数据进行分析 and 处理, 探讨社会排斥对自杀意念的影响以及核心自我评价和教师支持的作用。在控制性别和年级变量之后, 研究结果表明: (1) 社会排斥正向预测中学生的自杀意念, 即遭受社会排斥越多的学生越容易出现自杀意念。(2) 核心自我评价在社会排斥与自杀意念之间起中介作用, 即社会排斥通过影响中学生的核心自我评价进而影响中学生的自杀意念(3) 教师支持调节该中介模型的直接路径和中介效应前半段。具体而言, 青少年的教师支持水平越低, 社会排斥对青少年自杀意念的正向预测作用越强, 同时对青少年核心自我评价的负向预测作用越弱。本研究一方面揭示了社会排斥是中学生自杀意念的重要心理机制, 同时还强调核心自我评价等积极人格倾向和教师支持对遭受社会排斥后引发的自杀意念均具有较好的抑制作用, 给予了青少年更多的情感支持, 有效地保护和促进了青少年的身心健康发展。

关键词 社会排斥, 自杀意念, 核心自我评价, 教师支持

Relationship between Social Exclusion and Suicide Ideation in Middle School Students: A Moderated Mediation Model

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Abstract: Suicide is a global public health problem. Worldwide, about 800,000 people commit suicide each year, according to the WHO. Adolescence is the age of high incidence of suicidal behavior, and it is also the period when suicidal ideation and suicidal intention reach the peak. Suicidal ideation is an individual's thought of ending life in thought or cognition, and it is the inevitable psychological process of suicidal behavior. Therefore, blocking the formation of suicidal ideation is an effective means to prevent adolescent suicidal behavior. A total of 612 students in Liaoning Province and Beijing were surveyed by using the Ostracism Experience Scale for Adolescents, Positive and Negative Suicide Ideation, Core Self-evaluations Scale, and Child and Adolescent Social Support Scale. The data were analyzed and processed using SPSS 25.0 and Amos 24.0 to explore the impact of social exclusion on suicidal ideation and the role of core self-evaluation and teacher support. After controlling for gender and grade level variables, the results showed that (1) social exclusion positively predicted suicidal ideation among middle school students, the more socially excluded students were, the more likely they were to have suicidal ideation. (2) Core self-evaluation mediated between social exclusion and suicidal ideation, social exclusion influenced middle school students' suicidal ideation by influencing their core self-evaluation (3) Teacher support moderates the direct path and the first half of the mediating effect of this mediation model. Specifically, the lower the adolescent's level of teacher support, the stronger the positive predictive effect of social exclusion on adolescent suicidal ideation and the weaker the negative predictive effect on the adolescent's core self-evaluation. On the one hand, the study reveals that social exclusion is an important psychological mechanism for suicidal ideation among middle school students, and at the same time, it emphasizes that positive personality tendencies such as core self-evaluation and teacher support have a better inhibitory effect on suicidal ideation triggered by social exclusion. Giving teenagers more emotional support, effectively protects and promotes the development of the adolescents' physical and mental health.

Keywords: social exclusion, suicidal ideation, core self-evaluation, teacher support

思维方式与心理健康：心理弹性与自尊的作用

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摘要 社会的快节奏生活和激烈竞争给人们带来了巨大的心理压力, 往往使人们感到焦虑、紧张, 从而威胁他们的心理健康。本研究探究了中国人思维方式对心理健康的影响, 以及心理弹性和自尊在其中的作用。研究采用问卷法, 通过线上发放问卷的方式邀请被试填写了中国人整体思维方式量表、心理弹性量表、罗森伯格自尊量表和一般健康问卷, 共收集有效问卷 630 份。结果表明: (1)思维方式的联系性维度能够显著正向预测心理健康, 矛盾性则显著负向预测心理健康, 变化性维度对心理健康的预测作用不显著; (2)自尊对思维方式的联系性/矛盾性维度与心理健康之间关系的调节作用均显著; (3)心理弹性在思维方式的联系性/矛盾性维度与心理健康的关系中起部分中介作用; (4)在以思维方式的联系性为自变量、心理弹性为中介变量、自尊为调节变量、心理健康为因变量的模型中, 心理弹性部分中介联系性与心理健康的关系, 自尊调节联系性对心理健康的直接影响, 并同时调节心理弹性中介效应的前半路径和后半路径, 有调节的中介模型成立; (5)在以思维方式的矛盾性为自变量、心理弹性为中介变量、自尊为调节变量、心理健康为因变量的模型中, 心理弹性部分中介矛盾性与心理健康的关系, 自尊调节心理弹性中介效应的后半路径, 有调节的中介模型成立。本研究不仅探讨了思维方式在影响中国人心理健康水平方面的重要意义, 而且揭示了思维方式作用于心理健康的内部机制。研究结果启示我们, 通过训练和强化人们的思维方式来增强心理弹性将有助于提高他们的心理健康水平, 未来的研究应进一步探究思维方式的训练对心理健康的促进作用。

关键词 思维方式, 心理健康, 心理弹性, 自尊

The Chinese thinking style and mental health: The role of mental resilience and self-esteem

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Abstract: The fast pace of life and fierce competition in today's society bring people heavy psychological pressure, which often makes people feel anxious and nervous, thus threatening their mental health. The present study explored the influence of Chinese thinking style on mental health, as well as the role of mental resilience and self-esteem. The questionnaire method was used in this study, which invited participants to fill in the Chinese Holistic Thinking Style Scale, the Mental Resilience Scale, the Rosenberg Self-esteem Scale and the General Health Questionnaire by distributing questionnaires online and 630 valid questionnaires were collected. The results showed that: (1) the connectedness dimension of Chinese thinking style could significantly predict mental health in a positive way, while the contradiction dimension significantly predicted mental health in a negative way, and the predicting effect of the change dimension on mental health was not significant. (2) Self-esteem played a significant moderating role in the relationship between the connectedness/ contradiction dimension of Chinese thinking style and mental health; (3) Mental resilience played a partial mediating role in the relationship between the connectedness/ contradiction dimension of Chinese thinking style and mental health; (4) In the model with the connectedness dimension of Chinese thinking style as independent variable, mental resilience as mediator, self-esteem as moderator and mental health as dependent variable, mental resilience partially mediated the relationship between the connectedness and mental health, self-esteem moderated the direct effect of connectedness on mental health and also played a moderating role on the mediating effect of mental resilience, both moderated the first half path and the second half path, thus the moderated mediating model was significant. (5) In the model with the contradiction dimension of Chinese thinking style as independent variable, mental resilience as mediator, self-esteem as moderator and mental health as dependent variable, mental resilience partially mediated the relationship between the contradiction and mental health, and self-esteem moderated the mediating effect of mental resilience, thus the moderated mediating model was significant. The present study not only examined the significance of Chinese thinking style in affecting the level of mental health, but also revealed how Chinese thinking style affected mental health. The results of this study enlighten us that enhancing mental resilience by training and strengthening people's holistic thinking style will contribute to improve their mental health status. Future researchers should further explore the positive influence of Chinese thinking style training on mental health.

Keywords: Chinese Thinking Style, Mental Health, Mental Resilience, Self-esteem

讨好型人格量表的编制

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摘要 近年来, “讨好型人格”作为一种人际交往中常见的人格模式, 在日常生活及公众媒体中引发了广泛的讨论。有观点认为“讨好型人格”是一种负面的人格, 对个体的心理健康发展有着消极作用。但学术领域对“讨好型人格”的研究尚缺乏系统的界定和测量方法。本研究旨在探讨讨好型人格的内涵与结构, 并编制适用于科学研究的讨好型人格量表。根据对讨好行为和讨好型人格的分析, 本研究将讨好型人格界定为: 个体在社会互动中形成的对内贬抑、对外褒扬的稳定心理特质。招募不同年龄段、地区和职业的有效被试共 351 名, 选取霍妮-柯立芝人格问卷、人际敏感性量表、企业员工逢迎行为量表、亲密关系经历量表、艾森克人格问卷和人际反应指针量表的部分项目, 并编制符合讨好型人格特质的新项目, 共评定筛选出 74 项进行

施测。进行了探索性因素分析($N = 175$), 删除在所有因子上载荷均低于 0.3 的题目、两个及以上因子上载荷差值小于 0.2 的题目、不符合维度构想的题目、只有一个项目的因子, 最终保留 32 个项目、6 个因子, 对方差的解释率为 50.40%; 验证性因素分析($N = 176$)显示, 量表六因子模型拟合指数良好($\chi^2/df = 1.68$, $CFI = 0.79$, $TLI = 0.76$, $RMSEA = 0.06$, $SRMR = 0.08$), 确定量表由妥协牺牲、自卑抑制、和善恭顺、换位思考、恭维迎合、人际敏感六个维度构成, 共计 28 个项目。量表总体的内部一致性 α 系数为 0.83, 六维度的 α 系数为 0.62~0.78。总体的分半信度为 0.88, 六维度的分半信度为 0.63~0.81。结果表明量表具有较好的信度。各个参数基本符合测量学指标, 可以用于进一步的研究。讨好型人格的六维度中, “人际敏感”与“换位思考”是讨好型人格的能力基础和先决条件, “自卑抑制”和“和善恭顺”是讨好型人格的特质基础和人格动力, “妥协牺牲”和“恭维迎合”则是讨好型人格的外部表现。六维度模型在特质和行为层面共同作用, 有机统合为讨好型人格的组合系统。本研究填补了讨好型人格的结构与测量方面的理论空缺, 对个体社会化、心理健康教育和社会心理建设方面有重要的现实意义。

关键词 讨好型人格, 人格结构, 信度, 因素分析

The Development of Compliant Personality Scale

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Abstract: In recent years, "compliant personality", as a common personality model in interpersonal communication, has aroused extensive discussion in daily life and public media. Some argument goes that "compliant personality" is a personality that has a negative effect on the individual's mental health and personal growth. However, there is still a lack of systematic definition and measurement methods in the academic field. The purpose of this study is to explore the connotation and structure of compliant personality and develop a scale of compliant personality suitable for scientific research. Based on the analysis of compliant behaviors and compliant personality, this study defined compliant personality as a stable psychological trait formed by individuals in social interaction, which is derogatory towards oneself and complimentary towards others. Three hundred and fifty-one valid participants of different ages, regions and occupations were recruited. Some items of the Horney-Coolidge Type Inventory, Inter-personal Sensitivity Measure, Enterprise Employee Ingratiation Behavior Scale, Experiences in Close Relationship Inventory, Eysenck Personality Questionnaire and Interpersonal Reactivity Index were selected and new items consistent with the compliant personality trait were developed. A total of 74 items were selected for evaluation. Exploratory factor analysis was conducted ($N = 175$). Delete items with loads lower than 0.3 on all factors, items with loads difference less than 0.2 on two or more factors, items that do not conform to the dimensional vision, and factors with only one item. In the end, 32 items and 6 factors were retained, and the explanatory rate of the variance was 50.40%. Confirmatory factor analysis ($N = 176$) showed that the six-factor model fits well ($\chi^2/df = 1.68$, $CFI = 0.79$, $TLI = 0.76$, $RMSEA = 0.06$, $SRMR = 0.08$). The scale consists of six dimensions, namely, self-sacrifice, self-abasement, submissiveness, perspective-taking, flattery, and interpersonal sensitivity, with a total of 28 items. The Cronbach's Coefficient Alpha of the whole scale is 0.83. The Cronbach's Coefficient Alpha of each dimension is at least 0.62 and at most 0.78. The split and half reliability of the whole scale is 0.88. The split and half reliability of each dimension is at least 0.63 and at most 0.81. The results show that the reliability of this scale was good. Each parameter basically conforms to the measurement index, and can be used for further research. In the six dimensions of compliant personality, "interpersonal sensitivity" and "perspective-taking" are the ability basis and prerequisite of the compliant personality, "self-abasement" and "submissiveness" are the trait basis and personality drive of the compliant personality, and "self-sacrifice" and "flattery" are the external manifestations of the compliant personality. The six dimensional model is a combination system of compliant personality, which works together at the level of trait and behavior. This study fills the theoretical vacancy in the structure and measurement of gratified personality, and has practical value in individual socialization, mental health education and social psychosocial construction.

Keywords: compliant personality, personality structure, reliability, factor analysis

基于三元精神病态模型的精神病态亚型研究：一项潜在剖面分析

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摘要 精神病态作为暴力犯罪、累犯和青少年犯罪的重要预测变量，在临床心理学和司法领域受到了广泛重视。早期研究发现了精神病态群体内部的异质性，即精神病态亚型的存在。三元精神病态模型通过大胆、卑劣和去抑制三个维度对精神病态进行了操作化定义，提供了一条理解不同精神病态亚型的框架。通过三元精神病态量表，以及其他精神病态相关特征（特质焦虑、情绪失调、行为抑制与激活系统），当前研究在中国大学生群体内（ $n=791$ ）检验了精神病态亚型的存在。潜在剖面分析的结果表明，在高精神病态特征的大学生（ $n=131$ ）群体中存在三种符合理论描述的精神病态亚型：（1）成功精神病态，具有高水平的大胆和卑劣特征，在去抑制、特质焦虑、情绪失调、行为抑制系统上得分最低；（2）原发性精神病态，表现出显著高于正常群体的大胆、卑劣和去抑制得分，以及低于正常群体的特质焦虑、行为抑制系统得分；（3）继发性精神病态，具有低于正常群体的大胆分数，在其他特征上均显著高于正常群体。这些结果表明了三元精神病态模型在区分不同的精神病态亚型方面的有效性。高大胆和卑劣是成功精神病态的重要特征，原发性精神病态则在大胆、卑劣和去抑制上均表现出较高水平，而继发性精神病态则表现出高度的卑劣和去抑制。此外，三个亚型的卑劣特征均显著高于正常群体的水平，也表明了卑劣在精神病态人格中的核心地位。这些结果表明了亚型之间的异质性，对不同亚型的临床评估和干预提供了启示。

关键词 三元精神病态模型，精神病态亚型，原发性精神病态，继发性精神病态，成功精神病态

The Utility of TriPM in Distinguishing Psychopathic Subtypes: A Latent Profiles Analysis in Chinese Undergraduates

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Abstract: As an important predictor of violent crime, recidivism, and juvenile delinquency, psychopathy has received extensive attention in clinical psychology and justice research. Early theoretical concepts indicate that psychopathy is a heterogeneous structure. The Triarchic Model of Psychopathy conceptualizing psychopathy as the constellation of three different phenotypic structures including boldness, disinhibition, and meanness, provides a framework to further understand the etiology of distinct psychopathic subtypes. The current study examined psychopathic subtypes in a mixed sample of Chinese college students ($n = 791$). Based on the subscales of TriPM (i.e., boldness, meanness, and disinhibition) and other psychopathy-related traits including trait anxiety, emotion dysregulation, behavioral inhibition system (BIS), and behavioral activation system (BAS), we obtained three distinct psychopathic variants through latent profile analysis in a subsample ($n = 131$) with high psychopathic characteristics: 1) successful psychopathy displayed high boldness and meanness, low disinhibition, trait anxiety, emotion dysregulation, and BIS; 2) primary psychopathy evidenced moderately high boldness, meanness, and disinhibition, low trait anxiety, and BIS, slightly high emotion dysregulation, and BAS; 3) secondary psychopathy exhibited low boldness, high meanness, disinhibition, trait anxiety, emotion dysregulation, and BIS. These results indicate the availability of the TriPM model in distinguishing different psychopathic subtypes. Moreover, the broad nomological network of TriPM not only provides perspectives from neurobiological and developmental precursors to further understand the psychopathic subtypes but also information for clinical assessment and intervention of psychopathy.

Keywords: TriPM, psychopathic subtypes, successful psychopathy, primary psychopathy, secondary psychopathy

物质主义对不道德行为的影响：来自多角度的证据

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摘要 高铁霸座、碰瓷、老赖等现象近年来多次出现在人们的视野之中，每次都引起全社会的热议，造成了诸多不良影响。不道德行为是指违法的或道德上不被大众所接受的行为，它包括暴力、非暴力犯罪、违法、欺骗等诸多行为。前人研究发现物质主义是不道德行为的重要影响因素，但是以往研究多使用问卷法对二者的关系进行探讨，缺乏多样的视角对二者关系进行验证。本研究将从大数据、问卷法和实验法三个角度，共四个研究探讨物质主义对不道德行为的影响，以期丰富二者关系研究的角度，并增强研究结论的可靠性。研究1使用第六次世界价值观调查，共89565个样本，在控制收入、年龄和性别后，物质主义显著正向预测欺骗、盗窃、受贿、家暴等多种不道德行为。研究2a使用物质主义价值观量表和诚实-谦虚子量表对四川、上海和辽宁三地的245名被试进行调查，在控制性别、年龄和主观社会阶层后发现，物质主义可以正向预测个体的不诚实行为；为增加样本的代表性和提高结论的可靠性，研究2b使用物质主义价值观量表、不道德决策量表和道德基础神圣性问卷对浙江、湖南和陕西三地的342名被试进行调查，在控制性别、年龄和主观社会阶层后发现，物质主义可以正向预测个体在社会生活情境中的不道德行为。研究3使用实验法探讨物质主义与不道德行为的因果关系，通过想象范式启动个体的物质主义，使用不可能任务测量个体的不道德行为，结果发现：物质主义启动组的不道德行为高于控制组。本研究从多角度证实了物质主义对不道德行为的影响，不仅丰富了二者关系的研究方式，也启示我们对于不道德行为的干预可以从物质主义价值观着手。

关键词 物质主义，不道德行为，多角度

The Influence of Materialism on Unethical Behavior: Evidence from Multiple Perspectives

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Abstract: People such as deadbeats, incident-faking extortionists and seat robbers have appeared in people's field of vision many times in recent years, each time it has caused heated discussions in the whole society and led to adverse impact. Unethical behavior is defined as behavior that is illegal or morally unacceptable to the larger community, which includes violent and nonviolent crime, delinquency, cheating, and other behaviors that violate ethical principles. Previous studies mostly used questionnaires to explore the relationship between materialism and unethical behavior, and found that materialism was an important influencing factor of unethical behavior, but lacked a variety of perspectives to verify the relationship between the two. In the present research, we explored the influence of materialism on unethical behavior in 4 studies, using big data, questionnaires and experiments, to enrich the perspective of the study on the relationship between the two and enhance the reliability of the research conclusions. Using the Sixth World Values Survey, Study 1 ($N=89565$) found that materialism positively predicted a wide range of unethical behaviors such as cheating, theft, bribery and domestic violence, after controlling for income, age and gender. Studies 2a and 2b replicated the finding of Study 1 by presenting evidence from surveys. Specifically, study 2a surveyed 245 participants from Sichuan, Shanghai and Liaoning using the Materialistic Values Scale and the Honest-Humility subscale. Study 2b surveyed 342 participants from Zhejiang, Hunan and Shaanxi provinces using the Materialistic Values Scale, the Unethical Decision Making Scale and the Moral Foundations Sacredness Scale. Both studies controlled for gender, age and subjective social class. In Study 3, we manipulated individuals' materialism through the imagination paradigm and used impossible tasks to measure individuals' unethical behavior, the result confirmed that experimentally induced materialism increased unethical behaviors. This study provides multi-angle evidence for the influence of materialism on unethical behavior, and suggests that the intervention of unethical behavior can start from materialism values.

Keywords: materialism, unethical behavior, multiple perspectives

4.16 工程心理学专业委员会

(1) “工程心理学专业委员会”口头报告分场 1

虚拟现实环境中身体偏转对头控操作表现的影响研究

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摘要 头控操作是虚拟现实(VR)中的主要交互方式之一, 了解头控的操作特性对三维交互设计有重要的指导意义。近几年, VR 技术广泛应用于娱乐和训练等领域, 用户经常需要在身体偏转的情况下完成操作, 比如在飞行模拟器上完成射击游戏等。然而目前还不清楚头控在身体偏向情况下的操作表现。本研究通过两个实验探讨了身体朝向以及朝向角度对人类头控操作表现的影响。在实验 1 中, 被试坐在模拟器内, 佩戴 Oculus Rift 虚拟现实头盔, 通过转头的方式将一个光标小球快速准确地放入静止的目标球体内。我们改变了模拟器的偏转方向(前, 后, 左, 右)和偏转角度(0°, 30°, 45°, 60°), 并记录了被试的操作时间和错误率。实验任务完成后, 被试填写一份 7 点评分的操作难度问卷。结果显示, 向前偏转的难度得分最低, 操作时间最短, 并且随着目标尺寸的减少操作时间优势逐渐增大。其他三个方向的操作时间没有显著区别, 但是向后偏转的难度得分显著高于向左偏转和向右偏转。此外, 偏转角度对操作时间的影响有限, 操作时间随着偏转角度的增大缓慢增加。在实验 2 中, 我们进一步增加任务的难度, 被试在相同的场景中通过头控将光标快速准确地放入移动的目标球体内。实验 2 获得了与实验 1 相似的结果。向前偏转操作效率和正确率最高, 向后偏转的效率和正确率最低, 向左和向右偏转的操作表现没有显著差异。本研究结果表明头控在身体向前偏转时操作难度最低, 向后偏转时操作难度最大, 向左和向后偏转的难度一致, 并且在 60°的偏转范围内能够保持较好的稳定性。本研究结果将为基于头控操作的三维应用设计人员以及特殊人群的训练提供重要的参考。

关键词 虚拟现实, 头控操作, 身体偏转, 静止目标, 运动目标

The effect of body tilt on human performance of head-gaze interaction in virtual reality environment

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Abstract: Head-gaze interaction is one of the main interactive modes in virtual reality. Knowing the human performance of head-gaze interaction is helpful for user interface design in three-dimensional space. In recent years, virtual reality has been widely used in various fields, like entertainment and training, and users often operate in virtual scene when body is not upright, such as playing shooting games in a flight simulator. However, it remains unclear how human with tilted body performs when using head-gaze interaction. In this study, we conducted two experiments to explore the effect of different tilted directions and angles of body on human performance. In the first experiment, participants sat in a flight simulator and wore an Oculus Rift helmet-mounted display to position a cursor sphere from a start position into a larger stationary target sphere as quickly and accurately as possible by rotating their head. We varied the tilted direction (front, back, left, right) and angle (0°, 30°, 45°, 60°) of the simulator and recorded the participants' operating time and error rate. After the task, participants filled out a 7-point scale for evaluating the operation difficulty of various tilted directions and angles. The results showed that tilting forward had the best performance of the easy-of-operation score and operating time and the time advantage increased as the target

size decreased. Although there was no significant difference in the operating time among the other three tilted directions, the easy-of-operation score of back tilt was significantly higher than that of left and right tilt. In addition, the tilted angle had a limited effect on the operating time which increased slowly with the increasing of the tilted angle. In the second experiment, we further increased the difficulty of the task to ask participants to position the cursor into a moving target sphere in the same condition as experiment 1. Experiment 2 obtained the similar results as experiment 1. Tilting forward had the highest operating efficiency and correct rate, and tilting backward had the lowest performance. There was no significant difference between the performance of left and right tilt. The results of this study indicated that head-gaze interaction is most difficulty when body tilts backward, followed by tilting leftward and rightward, and is the most easily for tilting forward. Moreover, head-gaze interaction can maintain a good stability when body tilts within a range of 60°. Our findings help to further understand the process of head-gaze interaction and provide useful guidelines for 3D application designers and special human trainings.

Keywords: Virtual reality, head-gaze interaction, body rotation, stationary target, moving target

多目标追踪情境交互测验的开发与信效度检验

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摘要 多目标追踪是在动态场景中同时追踪多个目标物体并排除其它干扰的一种认知能力, 无论在日常生活中, 还是对驾驶员、飞行员、运动员等特殊职业群体都具有重要意义。然而, 传统多目标追踪范式由于任务无意义和反应单一等问题而缺乏生态效度。因此, 本研究旨在开发基于情境交互的目标追踪情境测试, 试图提高多目标追踪能力评估的有效性, 为特殊职业群体的心理选拔和训练提供技术支持。基于此, 本研究开展了两个实验。实验一基于 Pylyshyn(2004)的经典范式, 构建了多目标追踪情境交互测验, 共 30 个试次。招募 85 名被试 (男性 20 名, 女性 65 名, 18-28 岁), 检验多目标追踪情境交互测验的可靠性和有效性。实验二招募 137 名被试 (男性 61 名, 女性 76 名, 17-28 岁), 采用近红外脑功能成像技术 (fNIRS) 揭示了多目标追踪情境交互测验激活的脑区以及多目标追踪高能力组和低能力组的脑区激活程度差异。结果表明: 1) 多目标追踪情境交互测验具有良好的实证效度、效标关联效度和内部一致性信度; 2) 多目标追踪情境交互测验主要激活的脑区有额叶 (包括额上回、额中回)、顶叶 (包括顶下叶、顶上叶) 和楔前叶, 这一结果与以往研究基本一致; 3) 高能力组比低能力组的脑区激活程度更大。总体上, 本研究开发的多目标追踪情境交互测验具有较好的可靠性和有效性, 达到了测量学的基本要求, 可以作为复杂视觉条件下多目标追踪能力评估的有效工具, 为特殊职业心理选拔和训练提供了重要的技术支持。

关键词 多目标追踪, 情境交互测验, 开发与检验, 信效度

Development and Reliability and Validity Test of Multiple object Tracking Situational Interaction Test

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Abstract: Multiple object tracking (MOT) is a cognitive ability to track multiple objects simultaneously in dynamic scenes and eliminate the interference of other objects. It is vital for both daily life and various professional groups such as pilots, pilots and athletes. However, the traditional MOT paradigm lacks certain ecological validity due to meaningless task and single response. Therefore, this study aims to develop a multiple object tracking situational interaction test, improving the effectiveness of MOT ability assessment and providing technical support for psychological selection and training of special professional groups. Based on this, two experiments were carried out in this study. In Experiment 1, based on the classic MOT paradigm(Pylyshyn,2004), this study constructed a MOT

situational interaction test with 30 trials. A total of 85 subjects (20 males, 65 females, 18-28 years old) were recruited to examine the reliability and validity of MOT situational interaction test. In Experiment 2, 137 subjects (61 males and 76 females, aged 17-28) were recruited to study the brain regions activated by the MOT situational interaction test and the differences of the activation degree between the high and low ability groups of MOT by using fNIRS technique. The results show as follows: 1) the MOT situational interaction test has good empirical validity, criterion correlation validity and internal consistency reliability; 2) The frontal lobe (including superior frontal gyrus, middle frontal gyrus), parietal lobe (including inferior parietal lobe, superior parietal lobe) and precuneus are the main brain regions activated by the MOT situational interaction test, which is basically consistent with previous studies. 3) The high ability group has a greater degree of brain activation than the low ability group. In general, the MOT situational interaction test developed in this study has good reliability and effectiveness, and meets the basic requirements of metrology. It can be used as an effective tool for the evaluation of MOT ability with complex visual conditions, and provides important technical support for the psychological selection and training of special professional groups.

Keywords: multiple object tracking, situational interaction test, development and test, reliability and validity

无人机编队飞行中飞行参考信息的转换对操控员空间定向的影响

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摘 要 随着无人机制造水平的提高, 无人机编队飞行如今胜任各种任务, 如战地探情, 阅兵表演等。在无人机操控台中, 无人机操控员可以参考无人机本体姿态信息 (从无人机后侧拍摄的无人机本体姿态) 进行目视飞行, 也可以参考无人机的姿态仪信息进行仪表飞行。研究表明, 对飞行姿态信息的错误整合会导致飞行员产生空间定向障碍 (spatial disorientation, SD), 具体表现为飞行员在姿态复原任务中向错误的方向调整飞行姿态, 产生反转错误 (roll reversal error, RRE), 使飞行姿态进一步偏离水平位置。本文主要探讨无人机操控员在面临不同飞行参考信息间的转换与冲突时, 是否会产生空间定向障碍。研究结果有助于减少无人机飞行事故的发生。三个实验均采用掩蔽范式。实验 1 探讨当僚机操控员在丢失长机飞行姿态信息后, 被迫从目视飞行转换为仪表飞行时, 飞行参考信息的转换对操控员空间定向的影响。实验 1 任务: 模拟地面站中无人机操控台情境, 提醒被试相信姿态仪信息。在左侧屏幕呈现长机飞行视频 30 秒, 要求被试关注长机的飞行状态, 随后左屏黑屏, 2 秒后, 右侧屏幕显示无人机姿态仪信息, 并要求被试立即根据姿态仪指令将无人机姿态复原至水平位置, 记录被试反应的正确率和反应时。实验 1 关注长机本体姿态信息与无人机姿态仪信息的转换, 实验 2 进一步讨论无人机本体姿态信息与无人机姿态仪信息发生转换时对操控员空间定向的影响。实验 1、2 中不同飞行参考信息继时呈现, 在实验 3 中将不同飞行参考信息综合呈现, 探讨无人机本体姿态信息、长机本体姿态信息和无人机姿态仪信息呈现不同偏转角度关系时 (完全相同、完全相反、不一致) 对操控员空间定向的影响。研究结果表明, 飞行参考信息的转换会导致无人机操控员产生空间定向障碍。飞行参考信息发生转换时, 被试产生更多的反转错误, 且错误试次的反应时显著长于正确试次。当不同飞行参考信息以不同的偏转角度综合呈现时, 被试在完全相反条件下的飞行绩效最差。研究结果对无人机操控员的空间定向障碍研究提供了新方向。

关键词 人机工效, 无人机, 反转错误, 空间定向障碍

The Influence of the Conversion of Flight Information from Different Reference System on the Space Orientation of the Operator during the Formation Flight of Uninhabited Aerial Vehicles

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Abstract: In the console of uninhabited aerial vehicles (UAV), the operator can refer to the body attitude information of UAV for visual flight, or reference the attitude indicator information of UAV for instrumentation flight. Studies have shown that the incorrect integration of flight attitude information can cause pilots to produce spatial disorientation (SD), which is specifically manifested in the pilot's adjustment of the flight attitude in the wrong direction during attitude restoration tasks, resulting in roll reversal errors to further deviate the flight attitude from the horizontal position. This article aims to explore whether the UAV operator's spatial disorientation will be caused when the flight information from different reference system are converted or conflicted. All experiments adopt the masking paradigm. Experiment 1 explores the impact of the conversion of flight reference information on the space orientation of the operator when the operator of wingman is forced to switch from visual flight to instrument flight after losing the information of the lead plane. Experiment 1 focuses on the relationship between the lead plane and the attitude indicator of UAV; Experiment 2 discusses the impact of the conversion between the posture of UAV and the attitude indicator of UAV on the operator's spatial orientation. In experiment 3, the information from different reference was comprehensively presented at the same time, discussing the posture of UAV, and the posture of lead plane and attitude indicator of UAV at different angles simultaneously presents the influence on the operator's spatial orientation. The result reveals that the flight information from different reference system will affect the operator's decision on the deflection direction, resulting in more roll reversal errors.

Keywords: ergonomics, uninhabited aerial vehicle (UAV), roll reversal error, spatial disorientation

安全氛围对城市轨道交通调度员安全行为的影响： 心理资本的中介与工作压力的调节效应

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摘要 近年来党和国家高度重视人民安全，但现实案例中公共交通领域安全事故仍屡见不鲜，新形势下公共交通安全面临的各種风险挑战联动效应日益明显。城市轨道交通调度员作为负责行车组织、设备维修、信息收发、故障应急处理等重要任务的安全关键岗位，是轨道交通运营的“心脏”和“大脑”，对全线运行所有列车、区间线路、车站进行监控管理和调度指挥，负责处理各种突发事件。为探究组织的安全氛围与调度员的安全行为、心理资本、工作压力之间的关系，促进企业安全管理持续健康发展。基于社会认知理论和人本安全理论，本研究采用整群抽样法，对某市轨道交通集团运营分公司全部调度员（共 270 名）施测安全氛围量表、安全行为量表、心理资本问卷和工作压力量表，有效问卷 265 份。研究表明：（1）安全氛围对调度员安全行为有显著的正向预测作用($\beta = 0.84, t = 20.13, p < 0.001$)；（2）心理资本在安全氛围与调度员安全行为间具有显著的部分中介效应(间接效应大小为 0.13, 占总效应的 15.66%, 95%CI: 0.05-0.24)；（3）工作压力显著调节了心理资本中介作用的前半段($\beta = 0.17, t = 2.16, p < 0.05$)；（4）工作压力显著调节了安全氛围对调度员安全行为的直接作用($\beta = -0.15, t = -3.01, p < 0.01$)。因此，城市轨道交通调度员的安全行为不仅受到自身感知到的安全氛围这一安全环境因素的影响，心理资本和工作压力等个体心理状态和认知因素也发挥着重要作用。企业要塑造和培养本质安全型员工，实现人本安全目标，从安全观念文化和安全行为文化入手，创造良好的安全物态及环境文化，提升企业安全管理水平，以构建企业安全文化新模式，建设本质安全型企业。

关键词 安全氛围, 安全行为, 心理资本, 工作压力, 安全文化

The relationship between safety climate and safety behavior among urban rail transit dispatchers: Work stress as mediator and psychological capital as moderator

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Abstract: In recent years, the party and China attach great importance to people's safety, but in reality, accidents in the field of public transport are still common. Under the new situation, the coupling Induction of various risks and challenges faced by public transport safety is increasingly obvious. As a key safety position responsible for traffic organization, equipment maintenance, information sending and receiving, fault emergency treatment and other important tasks, urban rail transit dispatchers are the "heart" and "brain" of rail transit operation. They are responsible for monitoring, managing and dispatching all trains, section lines and stations in the whole line, and handling all kinds of emergencies. In order to explore the relationship between the safety climate of the organization and the safety behavior, psychological capital and work stress of dispatchers, and promote the sustainable and healthy development of enterprises safety management. Based on the social cognitive theory and people-oriented safety theory, this study adopts cluster sampling method to measure the safety climate scale, safety behavior scale, psychological capital questionnaire and work stress scale of all dispatchers (a total of 270 people) in the operation branch of a city rail transit group. There were 265 valid questionnaires. The results show that: (1) Safety climate has a significant positive predictive effect on the safety behavior of dispatchers ($\beta = 0.84, t = 20.13, p < 0.001$). (2) Psychological capital had significant partial mediating effect between safety climate and safety behavior (indirect effect was 0.13, accounting for 15.66% of the total effect, 95% CI: 0.05-0.24). (3) Work stress significantly moderates the first half of the mediating role of psychological capital ($\beta = 0.17, t = 2.16, p < 0.05$). (4) Work stress significantly moderates the direct effect of safety climate on safety behavior of dispatchers ($\beta = -0.15, t = -3.01, p < 0.01$). Therefore, the safety behavior of urban rail transit dispatchers is not only affected by their perceived safety climate, but also affected by individual psychological state and cognitive factors such as psychological capital and work stress. The enterprise should shape and cultivate intrinsically safe employees, realize the goal of people-oriented safety, start with safety concept culture and safety behavior culture, create good safety material state and environment culture, and improve the safety management level of enterprises, so as to build a new mode of enterprises safety culture and build intrinsically safe enterprises.

Keywords: safety climate, safety behavior, psychological capital, work stress, safety culture

基于情景交互模式的空间视觉化能力测试构建

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摘要 空间视觉化是空间认知能力的核心要素, 对飞行员的作业绩效产生重要影响。然而, 以往空间视觉化实验任务大多缺乏空间情景和生态效度。因此, 本研究基于情景交互技术构建空间视觉化能力测试。研究基于立方体测试(the Cube Construction Task)范式并与现实场景相结合, 编制了不同难度的36个试次。实验一招募了39名大学生(男性18名, 女性21名, 18-25岁)与32名飞行员(均为男性, 18-28岁), 进行项目分析并检验信效度。实验二招募33名被试(男性14名, 女性19名), 采用近红外脑功能成像(fNIRS)氧合血红蛋白浓度指标检测空间视觉化情境交互测验激活的脑区以及空间视觉化不同能力组脑区激活程度差异。结果表明: (1)27个测试项目具有较好的区分度; (2)修正后测试具有较高的分半信度和内部一致性;

(3) 空间视觉化情景交互测试准确率与传统测试准确率、图形推理能力测试分数和客体-空间表象和言语认知风格测验分数显著相关, 高能力组和低能力组在情境交互测试中出现显著性差异, 说明情境测试具有较好的效标关联效度、结构效度与实证效度; (4) 空间视觉化情景测试有效地激活了被以往研究证实的额上回、辅助运动区和顶叶(顶下叶、上顶叶)等脑区, 高低能力组在额中回、额上回、中央前回、中央后回、顶下叶区域激活中出现显著性差异, 飞行员、飞行学院和大学生群体在额上回、额中回、辅助运动区、中央前回、上顶叶区域激活中出现显著性差异, 表明情境交互测试具有良好的区分效度和实证效度。上述结果表明空间视角化情景测验具有较好的可靠性和有效性, 可以作为空间视觉化能力评估的有效工具, 为飞行员心理选拔提供了重要的技术支持。

关键词 空间视觉化, 空间能力, 测验开发, fNIRS

Construction of Spatial Visualization Test Based on Situational Interaction Pattern

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Abstract: Spatial visualization is the core element of spatial ability, which has an important impact on pilot performance. However, the previous methods for evaluating and testing spatial visualization lack ecological validity. Therefore, the purpose of this study is to construct a spatial visualization ability test using situational interaction model. This research is adapted from the Cube Construction Task, combined with the real scene, using real objects as the test material, and compiling 36 trials of different difficulty. In Experiment 1, 39 students (18 males, 21 females, 18-25 years old) and 32 pilots (all males, 18-28 years old) were recruited to conduct project analysis and test reliability and validity. In the experiment 2, 33 students (14 males and 19 females) were recruited. Functional Near-infrared Spectroscopy (fNIRS) was used to detect the brain regions activated by spatial visualization interaction test and the differences in the brain regions activated by different ability group. Results:(1) 27 test items had great differentiation. (2) The modified test has a high split and half reliability and the internal consistency. (3) The Spatial Visualization Test was significantly associated with traditional test, the spatial reasoning test and the Object-Spatial-Verbal cognitive style test, significant differences appear in the different ability group, show that spatial visualization test has great criterion correlation validity, structure validity and empirical validity.(4) The results of fNIRS showed spatial visualization test effectively activated the frontal gyrus, the auxiliary motor area and the parietal lobe (inferior parietal lobe and superior parietal lobe), which had been confirmed by previous studies. Different ability group show the significantly differences in the activation of the middle frontal gyrus, superior frontal gyrus, anterior central gyrus, posterior central gyrus and inferior parietal lobe, and different type group show the significant differences in the activation of superior frontal gyrus, middle frontal gyrus, auxiliary motor area, anterior central gyrus and superior parietal lobe, indicating that the situational interaction test had great discriminant validity and empirical validity. In general, the spatial perspective situational test developed in this study meets the basic requirements of surveying, can be used as an effective tool for spatial visualization ability assessment and selection, and provides an important technical support for pilot psychological selection.

Keywords: spatial visualization, spatial ability, development of test, fNIRS

全面屏手机屏幕交互舒适区用户体验研究

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摘要 全面屏智能手机的显示功能对用户视觉体验产生重要影响, 而屏幕交互区域位置则成为影响用户操作体验的核心要素。本研究旨在探究用户屏幕交互舒适区位置及影响舒适区操作体验的因素。实验 1 选取 40 名大学生被试在单手拇指操作手机的条件下, 屏幕不同区域的操作舒适度。实验 2 选取 40 名大学生被试探讨不同任务(单击、双击、拖动), 操作姿势(坐立、行走)和操作频率(慢、中、快)条件下对手机屏幕不同区域操作体验的影响。因变量采用绩效指标、肌电数据(EMG)和主观舒适度对操作体验进行测量和分析。结果表明:(1)单手拇指操作全面屏手机完成单击任务时, 根据操作效率和主观舒适度可将屏幕划分成舒适区、可触及区和困难区, 用户操作效率和主观舒适度在舒适区显著高于可触及区, 可触及区显著高于困难区。(2)任务类型不同时, 单击任务和双击在舒适区比其他区域的操作效率、主观舒适度较高, 肌肉疲劳程度较低, 而这一差异在拖动任务中并不显著。(3)操作姿势不同时, 前臂有支撑坐立和前臂无支撑坐立操作手机在舒适区的操作效率和主观舒适度显著高于其他区域, 肌肉疲劳程度更低, 而在行走时差异不显著。(4)点击频率不同时, 较慢和中等频率的点击在舒适区比其他区域的操作效率、主观舒适度较高, 肌肉疲劳程度较低, 频率较快时差异不显著。上述结果表明, 单手拇指操作时用户在屏幕舒适区进行交互的用户体验更好, 在简单任务、操作频率中等和坐立条件下屏幕舒适区的用户体验更好。研究这一结论为交互设计优化提供了重要参考, 也为提升全面屏手机操作体验提供了科学依据。

关键词 全面屏手机, 操作舒适区, 交互设计, 用户体验

Research on user experience in the screen interaction comfort area of full-screen mobile phone

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Abstract: The display function of a full-screen smartphone has an important impact on the user's visual experience, while the location of the screen interaction area becomes the core factor affecting the user's operation experience. The purpose of this study is to explore the location of user's screen interaction comfort area and the factors that affect the operating experience of the comfort area. In experiment 1, 40 college students were selected to study the operating comfort of different areas of the screen under the condition that they operated the mobile phone with one hand thumb. In experiment 2, 40 college students were selected to explore the effects of different tasks (click, double click, drag), operation posture (sitting, walking) and operation frequency (slow, medium, fast) on the operation experience in different areas of the mobile phone screen. The dependent variables were measured and analyzed by performance indicators, EMG data and subjective comfort. The results show that : (1) when using a full-screen phone with one hand thumb to complete the click task, the screen can be divided into comfort area, reachchable area and difficult area according to the operation efficiency and subjective comfort. The user's operation efficiency and subjective comfort area are significantly higher in the comfort area than in the touchable area, and the touchable area is significantly higher than in the difficult area. (2) When the task types were different, the operating efficiency and subjective comfort were higher in the comfort area, and the muscle fatigue was lower in the comfort area. However, this difference was not significant in the drag task. (3) When the operating posture is different, the operating efficiency and subjective comfort in the comfort area of the mobile phone with and without forearm support are significantly higher than those in other areas, and the muscle fatigue degree is lower, while the difference in walking is not significant. (4) When the click frequency is different, the operation efficiency and subjective comfort of the slow and

medium click frequency in the comfort area are higher than other areas, and the muscle fatigue degree is lower. When the click frequency is faster, the difference is not significant. The above results indicate that the user experience in the comfort area of the screen is better when the user operates with the thumb of one hand, and the user experience in the comfort area of the screen is better when the user performs simple tasks, medium operation frequency and sitting condition. The conclusion of this study provides an important reference for the optimization of interaction design, and also provides a scientific basis for improving the full-screen mobile phone operating experience.

Keywords: full-screen mobile phone, operating comfort areas, interaction design, user experience

(2) “工程心理学专业委员会” 口头报告分场 2

听觉干扰负荷与工作记忆能力对飞行员情境意识的影响 ——基于眼动的证据

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摘要 情境意识是个体对动态环境信息的感知、理解以及对未来状态的预测。在飞行过程中, 维持良好的情境意识是飞行员做出正确决策的前提条件。有研究表明, 听觉干扰会争夺认知资源, 对个体获取和处理信息的过程产生负面影响, 进而损害情境意识。然而, 不同听觉干扰负荷对情境意识的影响尚不明确。工作记忆能够引导和优化认知资源分配, 保持良好情境意识, 同时能够维持个体更好的认知控制。本研究旨在探讨听觉干扰负荷与工作记忆能力对飞行员情境意识的影响及作用机制。本实验招募 52 名航线飞行员, 采用 2(听觉干扰负荷: 高负荷 vs. 低负荷) × 2(工作记忆能力: 高 vs. 低) 混合设计, 听觉干扰负荷为被试内变量, 工作记忆能力为被试间变量。因变量指标为情境意识得分和眼动数据(任务相关兴趣区的平均注视时间、平均注视率和眼动熵)。结果表明: (1) 在情境意识得分方面, 听觉干扰负荷和工作记忆能力的主效应与交互效应均显著, 工作记忆能力低的被试在高听觉干扰负荷下情境意识得分显著小于低听觉干扰负荷下得分。(2) 在眼动指标方面, 听觉干扰负荷和工作记忆能力对眼动熵的主效应显著, 对任务相关兴趣区的平均注视时间、注视率的主效应与交互效应均显著, 工作记忆能力低的被试在高听觉干扰负荷下对任务相关兴趣区的平均注视时间、注视率显著小于低听觉干扰负荷下的表现。结论: 工作记忆能力较高的飞行员能够保持更好的情境意识; 听觉干扰负荷对工作记忆能力较低飞行员的情境意识损害更大; 高负荷听觉干扰对视觉注意及视觉扫描模式产生负面影响, 而低负荷听觉干扰只对视觉注意产生负面影响。本研究结论拓展了情境意识相关理论, 并为飞行员选拔及对其在干扰条件下维持良好情境意识的训练提供了科学依据。

关键词 情境意识, 听觉干扰负荷, 工作记忆, 眼动, 航空

The Effect of Auditory Distraction Load and Working Memory Capacity on Pilots' Situation Awareness——An Eye-tracking Study

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Abstract: Situation awareness is defined as the individual's perception and comprehension of dynamic environmental information and the projection of the future state. Maintaining good situation awareness is the precondition to make correct decision during the flight. Auditory distractions compete for cognitive resources, which negatively affects the pilots' information acquisition and processing process, and further impair situation awareness. However, the impact of different auditory distraction loads on situation awareness is still unclear. Working memory guides and optimizes the allocation of cognitive resources, maintains good situation awareness, and at the same time maintains individuals'

better cognitive control. The purpose of this study was to investigate the effects of auditory distraction load and working memory capacity (WMC) on pilots' situation awareness and the mechanism. Methods: This experiment recruited 52 airline pilots and used 2 (auditory distraction load: high load vs. low load) $\times$ 2 (working memory capacity: high WMC vs. low WMC) mixed design. The within-subject variable was auditory distraction load and the between-subject variable was working memory capacity. The dependent variables were situation awareness score and eye movement data (average fixation time of the task-related AOIs, average fixation rate of the task-related AOIs, and entropy). The results showed that: (1) In terms of situation awareness score, the main effects and interaction effects of auditory distraction load and working memory capacity were both significant. The situation awareness scores of participants with poorer working memory ability in high auditory distraction load condition were significantly lower than those in low auditory distraction load condition. (2) In terms of eye movement indicators, the main effects of auditory distraction load and working memory capacity on entropy were significant; the main effects and the interaction effects of auditory distraction load and working memory capacity on average fixation time and average fixation rate of task-related AOIs were significant, the average fixation time and fixation rate of participants with low working memory capacity on the task-related AOIs in high auditory distraction load condition were significantly lower than those in low auditory distraction load condition. Conclusions: Pilots with good working memory capacity maintain better situation awareness than pilots with poor working memory capacity; auditory distraction load has more serious damage to situation awareness of pilots with low working memory capacity; high-load auditory distraction has negative effects on visual attention and visual scanning mode, and low-load auditory distraction only has a negative effect on visual attention. The conclusions of this study expand the relevant theories on situation awareness, and provide scientific bases for pilot selection and training to maintain good situation awareness in distraction conditions.

Keywords: Situation awareness, Auditory distraction load, Working memory, Eye tracking, Aviation

社会规范对驾驶员让行行为的助推作用

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摘要 驾驶员未按规定让行是造成交通事故的主要原因, 探讨有效方法提升驾驶员的让行行为尤为重要。社会规范是一种有效、易操作的助推方式, 在环境保护、健康等领域得到了广泛证明, 但并未应用在驾驶情境中, 因此本研究尝试使用呈现社会规范标语的方式来促进驾驶员的让行行为。本研究从社会规范类型(动态规范、静态规范、命令性规范及动态+静态规范)和社会规范焦点(积极、消极)两方面入手, 设计了8种社会规范标语。使用联合分析和方差分析的方法来对比不同社会规范标语对驾驶员让行行为的助推作用, 并进一步探究行人特征(行人数量、行人年龄、行人性别、是否遵守交通规则)及情境因素(行人与车辆的横向距离、纵向距离)对驾驶员右转路口处让行决策的影响。通过对254份有效问卷的分析, 发现与静态规范、命令性规范和动态+静态规范相比, 积极焦点的动态规范对驾驶员的让行行为有更强的助推作用。联合分析结果显示, 社会规范对驾驶员让行决策的影响最大(32.28%), 其次是行人是否遵守交规(23.33%)以及行人年龄(18.40%)。本研究结果支持了社会规范作为一种简单易行的方法来促进驾驶员让行行为的可能性, 有助于道路标语的内容设计, 为促进驾驶员做出更多的积极行为提供了一个新的干预视角。此外, 研究结果还表明, 研究者不仅要从驾驶员特征出发来促进驾驶员的让行行为, 也要关注影响驾驶员让行决策的重要因素, 从改善整体交通环境的角度促进驾驶员与行人的友好互动。

关键词 让行行为, 社会规范, 助推, 联合分析

The nudging effect of social norms on drivers' yielding behaviour

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Abstract: Failing to yield is one of main causes of traffic accidents, so it is important to explore effective methods to improve drivers' yield behavior. Social norms are effective and practicable nudging ways, which has been widely proved in environmental protection, health and other fields, but not applied in driving situations. Therefore, this study tried to use the way of presenting social norms to promote drivers' yielding behaviors. This study designed eight kinds of social norm slogans from two aspects: the types of social norms (dynamic norms, static norms, injunctive norms and dynamic + static norms) and the focus of social norms (positively worded and negatively worded). Using the methods of conjoint analysis and variance analysis, this study compared the nudging effect of different social norms slogans on drivers' yielding behavior, and further explored the impact of pedestrian characteristics (number of pedestrians, pedestrian age, pedestrian gender, and whether the pedestrian complied with traffic rules) and situational factors (lateral distance and longitudinal distance between pedestrians and vehicles) on drivers' yielding decision at turning-right intersection. By analysing 254 valid questionnaires, it was found that compared with static norms, injunctive norms and dynamic + static norms, positively worded dynamic norms have a better nudging effect on drivers' yielding behaviour. The results of conjoint analysis showed that social norms have the greatest impact on drivers' decisions to yield (32.28%), followed by whether pedestrians comply with traffic rules (23.33%) and the age of pedestrian (18.40%). The results of this study support the possibility and application significance that social norms can be used as a simple and easy-operated method to nudge driver's giving way behaviour, contribute to the content design of road slogans, and provide a new intervention perspective for promoting more positive behaviour among drivers. What's more, the results also indicated that we should not only start with the drivers' characteristic to nudge yielding behaviour, but also pay attention to the important factors that influence driver's yielding decision-making, promoting the friendly interaction between drivers and pedestrians from the perspective of improving the overall traffic environment.

Keywords: Yielding behavior, Social norms, Nudging, Conjoint analysis

脑机接口技术环境下小学低年级学生学习分享意愿的研究：

AR 学习与文本学习的学业情绪是否是一致的？

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摘 要 学业情绪是反映个体发展的重要指标，积极学业情绪可以帮助学生培养积极的学习态度，促进学生自主学习。随着学生学习压力的增加，培养学生积极的学业情绪至关重要，增强现实作为目前教育应用的新兴技术，在教学过程中得到了长足的应用，以往研究表明，增强现实技术辅助学校教育，其虚实结合、立体成像等特点带给学生多感官刺激，AR 仿真交互让学生亲身参与体验，更具有沉浸感，产生积极的学习情绪。增强现实技术为教育教学提供了全新的可能性，AR 新技术在未来课堂中的应用前景研究有利于优化教育教学过程，帮助小学生培养更积极的学业情绪。本研究以小学三年级学生为研究对象，采用实验方法，旨在考察相对于文本学习模式，AR 学习模式是否激活了学习者更良好的学业情绪。采用 AR 设备、12 张 AR 识别卡和印有相同 AR 卡片图案的英语课本以及基于脑机接口技术的 BrainLink Pro 系统对 116 名学生进行研究。结果发现：(1)在学习过程中，AR 学习组在学习时的注意力和放松度与文本学习组没有显著差异；(2)在分享过程中，注意力方面，学习模式主效应显著，AR 学习组在分享时的注意力显著高于文本学习组，是否分享主效应不显著且二者交互作用不显著；放松度方面，学习模式、是否分享主效应及二者交互作用不显著；(3)在分享意愿上，学习模式主效应显著，AR 学习组的分享意愿显著高于文本学习组。在分享过程中，无论是否分享，AR 组学生的注意力都显著高于文本组，且学习者分享行为偏好作为良好学业情绪的观测指标。AR 支持下的教育环境能够激发学生良好的学业情绪，为改善小学生学业情绪提供了一定的指导意义。

关键词 增强现实学习,学业情绪,分享意愿,小学低年级学生

Learning sharing willingness of lower grades students under the environment of brain computer interface technology: are the academic emotions of AR and text learning consistent?

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Abstract: Academic emotion as an important indicator of individual development, positive academic emotion can help students develop positive learning attitude and promote students' autonomous learning. With the increase of students' learning pressure, it is very important to cultivate students' positive academic emotions. As an emerging technology of educational application, augmented reality has been widely applied in the teaching process. Previous studies have shown that augmented reality technology assisted school education, its combination of virtual and real, three-dimensional reconstruction bring students multi-sensory stimulation, AR simulation interaction enables students to experience personally, have a sense of immersion, and produce positive learning emotions. Augmented reality technology provides a new possibility for education. The research on the application prospect of AR in the future teaching is conducive to optimize the education and teaching process and help primary school students develop more positive academic emotions. This study takes the third grade students as the research object, using the experimental method, aims to investigate whether AR learning model activates better academic emotions than text learning model. 116 students were studied by the AR equipment, 12 AR cards and English textbooks with the same pattern on the AR cards, and BrainLink Pro system based on brain computer interface. the results showed that (1) In the process of learning, there was no significant difference in attention and relaxation between AR group and text group; (2) In the process of sharing, in terms of attention, the main effect of learning mode is significant. The attention of AR learning group is significantly higher than that of text learning group. The main effect of sharing and the interaction between the two is not significant; In terms of relaxation, the main effect of learning mode, sharing and the interaction between them are not significant; (3) On the sharing willingness, the main effect of learning mode is significant, and the sharing willingness of AR learning group is significantly higher than that of text learning group. In the process of sharing, regardless of sharing or not, the attention of the AR group is significantly higher than that of the text group, and the learners' sharing willingness is used as an observation index of good academic emotions. The education environment supported by AR can stimulate students' good academic emotions, and provides some guidance for improving primary school students' academic emotions.

Keywords: Augmented reality learning, academic emotions, sharing willingness, lower grades students

不同表征方式对小学生 AR 多媒体学习绩效的影响研究： 视听设计与情绪设计

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摘 要 随着科技的发展，AR 多媒体技术逐渐应用到教育学习领域。为探讨 AR 多媒体技术对学习效果的影响，本研究以 225 名小学低年级学生为被试，以 AR 英语识别卡片为材料，通过两项实验探究 AR 多媒体学习中不同视听设计和情绪设计对学习动机和认知负荷的影响。实验 1 采用 2（AR 材料性别：男、女）×3（音高：原始音、高音、低音）的被试间设计，探讨不同条件下听觉设计对小学生学习动机和认知负荷的影响。实验 2 采用 2（材料性别：男、女）×2（情绪设计：积极、中性）×2（感知互动：AR、文本）×3（音高：原始音、高音、低音）的混合实验设计，探讨不同视听设计和情绪设计对小学生学习动机和认知负荷的影响。结果表明：（1）小学生的学习动机和认知负荷在 AR 材料性别上存在差异，AR 女性材料的学习动机高于 AR 男性材料的学习动机，AR 男性材料的认知负荷低于 AR 女性材料的认知负荷。（2）接受情绪设计组(实验组)

的积极情绪显著高于中性组(对照组);实验组与对照组在认知负荷上不存在显著差异,但在学习动机上存在显著差异,即相对于对照组来说,实验组的学习动机更低。(3)在认知负荷上,情绪和 AR 材料性别存在交互作用,即在实验组中,男性材料组的认知负荷显著高于女性材料组的认知负荷,而在对照组中,男性材料组的认知负荷与女性材料组的认知负荷无显著差异。(4)在学习动机上,情绪和 AR 材料性别存在交互作用,即在实验组中,男性材料组的学习动机显著低于女性材料组的学习动机;而在对照组中,男性材料组的学习动机显著高于女性材料组的学习动机。可见,AR 多媒体学习能够激发小学生学习兴趣,加强小学生学习体验,进而提高小学生英语学习能力。

关键词 AR 多媒体学习, 认知负荷, 学习动机, 小学生

A Study on the Influence of Different Representations on Learning Effects of Primary School Students' AR Multimedia Learning : Audiovisual Design and Emotional Design

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Abstract: With the development of science and technology, AR multimedia technology has been gradually applied to the field of education and learning. In order to explore the impact of AR multimedia technology on learning effects, this study took 225 students in the lower grades of elementary school as the subjects and used AR English recognition cards as materials to explore the influence of different audiovisual design and emotional design on learning motivation and cognitive load in AR multimedia learning. In Experiment 1, an inter subject design of 2 (AR material gender: male, female) $\times$ 3 (pitch: original tone, high pitch, low pitch) was used to explore the effects of auditory design on pupils' learning motivation and cognitive load under different conditions. Experiment 2 used a mixed experimental design of 2 (material gender: male, female) $\times$ 2 (emotional design: positive, neutral) $\times$ 2 (perceptual interaction: AR, text) $\times$ 3 (pitch: original tone, high pitch, low pitch) to explore the effects of different audiovisual design and emotional design on the learning motivation and cognitive load of primary school students. The results show that (1) In Experiment 1, the learning motivation and cognitive load of primary school students are different on the gender of AR materials. The learning motivation of female AR materials is higher than that of male AR materials, and the cognitive load of male AR materials is lower than that of female AR materials. (2) In Experiment 2, the positive emotions in the receiving emotional design group (experimental group) were significantly higher than those in the neutral emotional design group (control group). There was no significant difference in cognitive load between the experimental group and the control group, but there was a significant difference in learning motivation, that is, compared with the control group, the learning motivation of the experimental group was lower. (3) In terms of cognitive load, there is an interaction between emotion and gender of AR materials, that is, in the experimental group, the cognitive load of male materials group is significantly higher than that of female materials group, while in the control group, there is no significant difference between the cognitive load of male materials group and that of female materials group. (4) In terms of learning motivation, there is an interaction between emotion and gender of AR materials, that is, in the experimental group, the learning motivation of male materials group is significantly lower than that of female materials group; In the control group, the male material group had significantly higher motivation than the female material group. The results show that AR multimedia learning can stimulate primary school students' interest in learning, enhance their learning experience, and improve their English learning ability.

Keywords: AR multimedia learning, cognitive load, learning motivation, primary school student

头-躯失谐对空间构图中内在偏向的影响

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摘要 空间内容体的物理特征及客体的空间位置影响着构图审美的判断。空间框架内的物体位置有朝向中心的审美偏向, 这被称为空间构图中的内向偏差。以往研究通过采用实物、动物和人的图像发现其位置、隐含运动、朝向和目光等都影响个体对其空间和谐性的判断。身体姿态中特别是头部和躯体在空间构图的内在偏向中起到的影响尚未有研究, 而在一副画作中或照片中人的身体姿态并不都是正襟危坐式, 艺术作品中人物姿态更是千变万化, 因此, 关注头部和躯干之间的位置关系对内在偏向的影响既是空间知觉理论研究的拓展也是艺术审美的理论支撑。故本研究旨在探讨当头部和躯干不在同一冠状面时, 如何影响空间构图中的内在偏向。采用失谐范式, 将模拟人的头部和躯干进行解离, 三个实验分别考察了单因素条件下头部角度(正面 0°、向左转动+15°或右转动-15°、向左+30°或右转动-30°)和躯干朝向(朝前 0°、向左转动+15°或右转动-15°、向左+30°或右转动-30°)对空间中内在偏向的影响, 以及在头部与躯干转向叠加时空间构图中的内在偏向竞争。模拟人随机出现在图片的不同位置, 被试可以拖动模拟人将其放置在被试认为最合适的位置, 因变量为模拟人移动距离和其与中轴线的距离。研究发现: (1)单因素条件下, 不论是头部还是躯干转动, 随二者转动角度的增加, 模拟人与空间中轴线的距离随之增加; (2)当头部和躯干的转动方向一致时, 模拟人出现偏离空间中轴线的趋势, 具体表现为头部和躯干的转动角度和越大距离越远; (3)当头部和躯干的转动方向不一致时, 如果头部和躯干角度和的绝对值越大距离中轴线就越远。

结论: 头部和躯干都对空间构图中的内在偏向产生影响, 随着相应部位的角度增加, 中心趋向性也随之减少。同时, 头部-躯干之间存在对内在偏向影响的竞争关系。

关键词 头-躯解离, 内在偏向, 空间构图, 审美偏好

The effect of head-to-body dissociation on the inward bias of space composition

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Abstract: The objects' physical properties and their positions in space affect the judgment of the composition aesthetics. The position of objects in the space frame has an aesthetic bias toward the center, which is called the inward bias in the spatial composition. Previous studies have used images of objects, animals and humans to find that their position, implied motion, orientation and gaze all affect individuals' judgment of spatial harmony. The influence of body postures, especially the inward bias of the head and body in the spatial composition has not been studied, and the body postures of people in a painting or photograph are not all in a sitting style with neat attires and proper posture. On the contrary, it is ever-changing. Therefore, paying attention to the influence of the positional relationship between the head and the trunk on the inward bias is not only the expansion of the spatial perception theory research but also the theoretical support of artistic aesthetics. The purpose of this study was to explore how the inward bias in spatial composition is affected when the head and body are not on the same coronal plane. The misalignment paradigm was adopted to dissociate the simulated human head and body. Three experiments respectively examined the effects of the head angle (0°, +15° left or -15° right, +30° left or -30° right) and body angle (0°, +15° or -15°, +30° or -30°) on the inward bias of space composition under single factor conditions, and the inward bias competition in spatial composition when the head and torso turn superimposed. Simulators appeared randomly at different positions in the picture. The subjects dragged the simulator to place it in the most suitable position. The dependent variables were the distance the simulator moves and its distance from the central axis. The findings of the three experiments were as follows. First, under the condition of single factor, the distance between the simulated person and the central axis of space increased with the increase of the rotation angle of both the head and the body. Second, when the rotation direction of the head and torso was the same, simulators had a tendency to deviate from the central

axis of space, which was specifically manifested as the greater the angle and distance between them. Third, when the rotation direction of the head and torso was inconsistent, the greater the absolute value of the angle sum between the head and torso, the farther it was from the central axis. In conclusion, the results of this study suggested that both the head and body have an effect on the inward bias in spatial composition, and the central tendency decreases with the increase of the angle of the corresponding parts. At the same time, there is a competition between the head and the body for the influence of inward bias.

Keywords: Head-to-body dissociation, inward bias, space composition, aesthetic preferences

4.17 决策心理学专业委员会

(1) “决策心理学专业委员会”口头报告分场 1

跨期决策中的维度差别判断强度：来自眼动追踪的信息加工证据

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摘要 跨期决策是指对发生在未来不同时间点上的结果做出选择的决策过程, 它需要决策者在眼前利益与未来利益之间做出权衡与取舍。例如, 是选择今天获得 10 元钱还是一周后获得 12 元钱。跨期决策中的单维占优模型, 如齐当别模型、权衡模型、相似性模型等, 假设人们在跨期决策过程中会比较时间维度和金钱维度的差别, 并基于差别最大的维度进行决策。大量基于结果检验和过程检验的证据均表明, 单维占优模型能够很好地描述个体的跨期决策行为。然而, 现有单维占优模型往往基于确定性模型的假设, 关注于对跨期决策行为的定性解释, 更关注于维度差别的判断过程中“哪个维度差别更大”, 却忽视了维度差别判断的强度, 即“两个维度的差别究竟有多大”。鉴于此, 本研究采用已被前人验证有效的“直观模拟天平”范式测量跨期决策中的维度差别判断强度, 并结合眼动追踪技术, 考察了跨期决策中的信息加工过程是否能够反映个体的维度差别判断强度。本研究发现: 1) 维度差别判断强度越大, 个体违背转移性原则的可能性越大; 2) 反应时和眼跳熵(衡量眼跳数量的指标)可负向预测维度差别判断强度; 3) 维度相对注视时间和瞳孔大小可预测维度差别判断强度。研究结果证实了维度差别判断强度与信息加工过程的联系, 为单维占优模型提供了进一步的过程证据。同时, 本研究结果也提示, 相比于确定性模型, 概率性的跨期模型能更好地描述跨期决策行为, 为今后跨期决策模型的发展指明了方向。

关键词 跨期决策, 单维占优, 维度差别判断强度, 眼动追踪技术

The strength of the dimension-based difference judgment in intertemporal choice: Evidence from eye-tracking

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Abstract: Intertemporal choice refers to decisions that involve tradeoffs among outcomes at different points of time. It is not only a unique characteristic of human behavior, but is also a relevant matter to policymaking and national welfare. The dimension-based models, such as equate-to-differentiate theory, tradeoff model, and similarity model, show that individuals tend to compare the difference between dimensions of delay and outcome before deciding in a single dimension when selecting between a smaller, sooner outcome (SS) and a larger, later outcome (LL). Considerable empirical evidence from behavioral data and process data supports the use of dimension-based models. The existing dimension-based models provide qualitative explanations for individual's intertemporal choice and focus

“which dimension is the greater difference dimension”, but ignore the strength of dimension-based difference judgment (i.e., “how much different of the difference between the two dimensions”). Accordingly, the present study examined the relationship between the strength of dimension-based difference judgment, which is measured by the visual analogue scale paradigm, and the information process, which is measured by eye-tracking technique. We found that: 1) the greater of the strength of dimension-based difference judgment, the more violations of transitivity; 2) response time and transition entropy can negatively predict the strength of dimension-based difference judgment; 3) the dimension-based time advantage and pupil size can predict the strength of dimension-based difference judgment. Our findings approved the correlation between the strength of dimension-based difference judgment and information process, providing further process evidence for priority models. The results of present research also suggest that compared to the determinant models, the probabilistic models can better describe individual’s intertemporal choice, highlighting the direction of the development of intertemporal models.

Keywords: intertemporal choice, priority, strength of dimension-based difference judgment, eye-tracking technique

内隐风险感知对跨期决策即时偏好的影响

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摘 要 跨期决策领域研究发现, 相比于未来选项, 人们更加偏好即时选项, 为什么在跨期决策中存在偏好即时选项? 研究通常使用“时间折扣”对这一现象加以描述。“时间折扣”是指随着时间的延迟人们对于同等数量的获益或损失的价值加以折扣, 因此更加倾向选择效用更大的即时选项。与此同时, 有研究指出, 时间延迟增加了未来选项的风险性进而影响选择偏好。然而, 人们对于未来往往是内隐风险感知, 特别是现有的经典跨期决策任务的研究范式难以分离出内隐风险对跨期决策的影响。本研究设计一个回溯选择任务范式, 试图将潜在风险从延迟折扣任务中分离出来, 明确内隐风险在跨期决策中的影响机制。基于此, 我们开展了两项研究。研究 1a 采用单因素被试内实验设计, 招募 216 名有效被试, 所有被试均完成标准条件、过去条件和未来条件三个条件。首先要求被试完成时间间隔为 1 个月的跨期决策任务, 并测量内隐风险感知程度。结果表明, 相比于现在条件和未来条件($M_{\text{now}} = 0.36, M_{\text{future}} = 0.42$), 被试在分离内隐风险感知后的过去条件下, 时间折扣率显著降低($M_{\text{past}} = 0.28, p_{\text{past-now}} < 0.001; p_{\text{past-future}} < 0.003$)。风险感知程度上, 过去条件下被试的风险感知 (44.51 ± 25.94) 显著低于现在条件 (48.71 ± 23.13) 与未来条件 (53.91 ± 24.63)。研究 1a 采用被试内设计可能存在共同方法偏差, 且可能存在冲动性等混淆变量的影响。因此, 设计研究 1b 采用被试间设计, 招募 294 名有效被试, 要求每位被试只完成一个条件, 同时控制冲动性等变量, 结果与研究 1a 类似, 相比于现在条件和未来条件($M_{\text{now}} = 0.39, M_{\text{future}} = 0.47$), 被试在分离内隐风险感知后的过去条件下, 时间折扣率显著降低 ($M_{\text{past}} = 0.19, p_{\text{past-now}} < 0.05; p_{\text{past-future}} < 0.01$)。风险感知程度上, 过去条件下被试的风险感知显著低于现在条件与未来条件。为进一步检验结果的稳健性, 明确风险感知在其中的作用, 研究 2 同样采用单因素被试间研究设计, 但将跨期决策任务调整为长时距情境 (10 年)。该研究招募 238 名有效被试, 要求每位被试完成与研究 1 类似的跨期决策任务。结果与研究 1 相一致, 相比于现在条件和未来条件相比, 过去条件降低被试的跨期决策时间折扣率, 具有更低的风险感知程度。此外, 内隐风险感知在时间框架与跨期选择偏好之间起中介作用。本研究创制了回溯选择任务范式, 有效地在跨期决策中分离内隐风险感知。研究 1 和研究 2 的结果深入探讨了内隐风险感知对跨期决策选择即时偏好的影响。

关键词 跨期决策, 时间折扣, 内隐风险感知, 即时偏好

The Effect of Implicit Risk Perception on the Immediate Preference of Intertemporal Choice

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Abstract: When given the choice between two different outcomes displaced only by time, we are invariably drawn to the more immediate outcome. This is, as outcomes displaced by time, have questionable certainty relative to more immediate options. In past studies of intertemporal choice, this fundamental attribute of time (future) displaced choices has been reasoned to be a confound in tasks designed to manipulate the quantitative or subjective risk perception of participants. However, no real attempt has been made to effectively control this effect. We hope to demonstrate that this fundamental attribute of future-displaced choices can be nullified in tasks aimed at assessing the effect of risk on time preference by effectively shifting the temporal framework of choice tasks. In this particular instance, we seek to demonstrate how the shifting of the decision frame from present-future to past-present effectively maintains the original uncertainty manipulations. This particular demonstration will be of interest to the study of time preference as well as to our fundamental understanding of the effects of implicit risk on intertemporal choice and choice in general, through the isolation of the implicit risk factor in intertemporal choice tasks. Based on this, we conducted two studies. In Study 1a, 216 participants completed the intertemporal choice task under past condition, present condition and future condition respectively (the time interval was 1 month). The repeated measurement variance analysis showed that, compared with the present condition ($M_{\text{now}} = 0.36$, $M_{\text{future}} = 0.42$), the participants preferred the delayed option in the intertemporal choice under the past condition ($M_{\text{past}} = 0.28$, $p_{\text{past-now}} < 0.001$; $p_{\text{past-future}} < 0.003$). However, there may have comparatively effective due to use within-subject design in Study 1a. In addition, Study 1a may be affected by personality traits such as impulsive personality. Although we don't think impulsive personality traits are enough to affect results of Study 1a, to further test the robustness of the research results. Study 1b used between-subject design was carried. In Study 1b, 294 participants completed the intertemporal decision task. There are three conditions, and each participant was asked to completed one condition. Similar with Study 1a, the results of Study 1b showed that, compared with the present condition ($M_{\text{now}} = 0.39$, $M_{\text{future}} = 0.47$), the participants preferred the delayed option in the intertemporal choice under the past condition ($M_{\text{past}} = 0.19$, $p_{\text{past-now}} < 0.05$; $p_{\text{past-future}} < 0.01$). In Study 2, 238 participants completed the intertemporal decision task of the same three conditions as Study 1 (the time interval was 10 year). The repeated measure variance analysis showed that, compared with the present condition, the subjects preferred the delay option in the intertemporal decision making under the past condition. Additionally, both Study 1 and Study 2 verify the mediating effect of implicit risk perception between the conditional setting and the time delay discount rate.

Keywords: Intertemporal choice, Temporal discounting, Implicit risk perception, Immediate preference

健康匮乏对不同特征健康行为偏好的影响

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摘要 全球健康现状严峻。健康行为有利于改善现状, 然而大多数人存在健康行为偏差问题, 亟需探讨造成健康行为偏差的原因。跨期决策是理解和解释健康行为的重要视角, 但前人研究未区分不同健康行为在跨期决策性质上的差异。同时, 近年提出的资源匮乏理论从资源匮乏的角度, 解释了金钱、时间的匮乏对人们行为偏差的影响, 但其在健康领域的适用性尚不清楚。因此, 本研究从跨期决策的视角理解和归类健康行为,

并借鉴资源匮乏理论的基本假设,探索健康匮乏对不同种类健康行为偏好及其特征偏好的影响。研究1通过问卷调查,在中国文化情境中验证了跨期决策视角下健康行为的分类结构。结果发现,基于努力、时间、健康影响三个特征可将健康行为分为长期-费力的与短期不费力的两类。研究2利用公开的数据库数据,通过多层回归建模的方法,探索了居民健康状况与两类健康行为偏好的相关关系。结果发现,健康匮乏者对长期-费力的健康行为的偏好更弱,对短期-不费力的健康行为的偏好更强。研究3采用组间比较的实验设计,通过提供不同特征维度占优的选择,探讨健康匮乏对健康行为特征偏好的影响。结果发现,相较于健康良好者,在努力和时间特征中,健康匮乏者更偏好努力特征占优的选项;但在时间与健康影响特征中,健康匮乏者则更偏好时间特征占优的选项。研究4采用了准实验设计,借助2020年新冠肺炎疫情,在健康匮乏的真实环境测量人们的主客观健康匮乏状况,综合探讨了健康匮乏对两类健康行为及其特征偏好的影响。结果发现,存在健康行为类别的效应,但并未发现健康匮乏与健康行为类别的交互影响。总之,本研究表明健康匮乏是造成健康行为偏差的重要原因,为现实生活中健康行为的干预、改善不良健康行为提供了新思路。

关键词 健康匮乏, 健康行为, 健康跨期决策, 资源匮乏理论, 特征偏好

The effect of health scarcity on different characteristics of health behavior preferences

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Abstract: The health status of China and the world is grim, and many people are in a state of health scarcity, such as sub-health. Healthy behaviors can promote and improve people's health status. However, most people have poor healthy behaviors and health behavior bias. People are prone to perform health behaviors, such as medical treatment and health care, excessively while under-executing long-term behaviors, such as a balanced diet and physical activity. Therefore, the key to solving the problem of health behavior bias is to enable people to make beneficial and long-term decisions when facing health choices. Previous studies have linked health behaviors with intertemporal decision-making and explained people's health behavior from the perspective of intertemporal preference. However, these studies only focused on the relationship between the two in general and did not distinguish the differences among different health behaviors in the nature of intertemporal decision-making. As a consequence, they failed to study health behaviors well within the framework of intertemporal decision-making. Recently, resource scarcity theory proposed that many behavioral biases can be explained from the perspective of resource scarcity, such as poverty, lending, and busyness. However, whether resource scarcity theory can apply to the field of health behavior remains unclear. Therefore, this study aims to understand and classify health behaviors from the perspective of intertemporal decision-making. Based on the basic hypothesis of resource scarcity theory, this study attempts to explore the effect of health scarcity on the different categories of health behavior preferences and their characteristic preference and explain the causes of health behavior bias from the perspective of health scarcity. This study has four sub-studies, all of which are based on Chinese adult samples. Study 1 validates the classification structure of health behaviors from the perspective of intertemporal decision-making using a questionnaire in the Chinese cultural context. Study 1 assesses the differences among different health behaviors from their three characteristics, including effort time and health influence. Results show that differences are observed in three characteristics among different health behaviors. Health behaviors could be classified into "effortful long-term pay-offs" and "easy immediate pay-offs." Study 2 explores the correlation between residents' health status and preferences for the health behaviors of "effortful long-term pay-offs" or "easy immediate pay-offs" by using open database data and multilevel regression modeling. Results show that health scarcity predicts the preference for health behaviors. Those with poor health have a weaker preference for the health behavior of "effortful long-term pay-offs" and a stronger preference for the health behavior of "easy immediate pay-offs." Study 3 explores the effect of health scarcity on preferences for different characteristics in the same type of health behavior by comparing experimental designs between groups. The study

provides superior choices in different characteristic dimensions. The study also observes the behavioral preferences of the health-deficient group and the control group in health behaviors dominant in different characteristic dimensions. Results show that health scarcity has an impact on health behavior preference. In terms of the effort and time characteristics of healthy behaviors, those with poor health are concerned more about effort characteristics than those with good health and prefer the option in which effort characteristics prevail. In terms of the characteristics of time and health influence of health behaviors, those with poor health are more concerned about time characteristics than those with good health and prefer the option in which time characteristics prevail. Study 4 adopts a quasi-experimental design to measure people's subjective and objective health scarcity in a real environment in the context of the novel coronavirus pneumonia epidemic in 2020. It comprehensively explores the effect of health scarcity on the two types of health behaviors and characteristic preferences. Results show the effects of health behavior categories, compared with the health behaviors of "easy immediate pay-offs", in the health behaviors of "effortful long-term pay-offs", Individuals pay more attention to effort characteristics than time characteristics and prefer the option in which effort characteristics prevail. Moreover, they are concerned more about time characteristics than health influence characteristics and prefer the dominant option of time characteristics. However, the results do not show an interaction between health scarcity and health behavior categories. In the two types of health behavior, those with poor health have the same preference for health behavior characteristics. In summary, this research indicate that health scarcity is an important cause of health behavior bias, confirming the applicability of resource scarcity theory in the field of health and providing new ideas and basic evidence for the intervention of health behaviors in real life.

Keywords: health scarcity, health behavior, intertemporal decision-making, resource scarcity theory, characteristic preferences.

跨期决策中奖赏大小与延迟时间的神经表征机制

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摘要 为了长期目标而抵制眼前的诱惑的能力对个人的发展和成功至关重要。许多研究探讨了跨期决策的神经基础，但很少有人系统地研究了未来奖赏的两个属性（即奖励金额和延迟时间）的独立神经表征。更重要的是，目前还没有研究使用表征连接分析（RCA）的新方法，该方法允许我们在多元神经表征水平上绘制二维功能性脑网络（Kriegeskort et al., 2008）。本研究同时独立地操控跨期决策任务中报酬的金额和延迟时间。单变量和多变量模式分析均表明，背内侧前额叶皮质（DMPFC）和额叶外侧皮质（LFPC）的大脑活动受奖赏大小的调节，而 DMPFC 和背外侧前额叶皮质（DLPFC）的大脑活动受延迟时间的调节。此外，表征相似性分析（RSA）显示，即使在 DMPFC 的两个维度之间重叠的区域，它们也表现出不同的神经活动模式。在个体差异上，延迟折扣率（ k ）较大者，其 DMPFC 和 LFPC 活性随奖励金额的增加而增加，但随着延迟时间的增加，DMPFC 和 DLPFC 活性降低。最后，RCA 发现，隶属延迟时间的功能连接的拓扑度量（即全局和局部效率）可以反向预测个体的冲动性。这些发现为跨期决策中奖赏的两个维度的神经表征提供了新的见解，并为构建拓扑特性与冲动性相关的任务型功能性脑网络提供了新的途径。

关键词 跨期决策，多变量模式识别分析，背内侧前额叶皮层，图论

Neural representations of the amount and the delay time of reward in intertemporal decision making

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Abstract: The ability to resist immediate temptations in favor of long-term goals is critical for an individual's development and success. Numerous studies have examined the neural substrates of intertemporal decision-making, but few have systematically investigated separate neural representations of the two attributes of future rewards (i.e., the amount of the reward and the delay time). More importantly, no study has used the novel analytical method of representational connectivity analysis (RCA), which allows us to map the two dimensions' functional brain networks at the level of multivariate neural representations. This study simultaneously and independently manipulated the amount and delay time of rewards during an intertemporal decision task. Both univariate and multivariate pattern analyses showed that brain activity in the dorsomedial prefrontal cortex (DMPFC) and lateral frontal pole cortex (LFPC) was modulated by the amount of rewards, whereas brain activity in the DMPFC and dorsolateral prefrontal cortex (DLPFC) was modulated by the length of delay. Moreover, representational similarity analysis (RSA) revealed that even for the regions of the DMPFC that overlapped between the two dimensions, they manifested distinct neural activity patterns. In terms of individual differences, those with large delay discounting rates (k) showed greater DMPFC and LFPC activity as the amount of rewards increased but showed lower DMPFC and DLPFC activity as the delay time increased. Finally, RCA suggested that the topological metrics (i.e., global and local efficiency) of the functional connectome subserving the delay time dimension inversely predicted individual impulsivity. These findings provide novel insights into neural representations of the two dimensions of rewards in intertemporal decision making, and offer a new approach to constructing task-based functional brain networks whose topological properties are related to impulsivity.

Keywords: intertemporal decision-making, multivariate pattern analysis, dorsal medial prefrontal cortex, and graph theory

跨期选择中对金额和时间信息的交互式注意分配机制和计算模型

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摘要 经济决策不仅影响决策者的当前处境, 还常常关忽决策者长远的工作和生活。这种同时影响多个时间点的决策行为通常被称为跨期选择。跨期选择一直是心理学、管理学和认知神经科学等学科的重要研究课题之一。最近, Amasino 等人 (2019, *Nature Human Behaviour*) 通过分析 190 名被试的跨期选择眼动数据, 得出了“金额信息和时间信息对跨期选择的影响相互独立”这一结论。然而, 这一结论与以往的行为决策研究有两大矛盾之处。首先, 绝大多数跨期选择的理论和实证研究都认为金额信息和时间信息对跨期选择的影响不是独立的、而是交互式的。特别是有经济学渊源的折扣效价理论, 这些理论认为人们会综合考虑每个选项的金额和时间信息, 在此基础上形成对每个选项的效用值。即便是基于属性的 (attribute-wise) 跨期选择理论, 也常常假设金额信息与时间信息之间存在某种交互影响, 并以此来解释跨期选择中的常见行为现象。其次, 在其它经济决策 (例如风险决策和多属性决策) 的眼动研究中, 被试对不同属性的注意分配通常不是相互独立的, 而是相互影响的。基于此, 我们用计算建模的方法重新分析了 Amasino 等 (2019) 公开的眼动数据, 发现人们对金额信息和时间信息的注意分配存在极强的相互关联性。具体地说, 如果选项的金额很高, 人们

会更关注该选项中的时间信息，因为高金额使得与之相应的时间信息变得更重要。相应地，如果选项的时间延时很短，人们也会更加关注该选项中的金额信息，因为短的时间延时使得与之相应的金额信息变得更加重要。本论文还进一步讨论了这种交互式注意机制在连接偏好累积（preference accumulation）的认知模型与传统的经济学意义上的效用模型上的重要意义。总之，本论文通过对跨期选择的眼动数据进行计算建模分析，表明金额信息和时间信息对跨期选择的影响并不是相互独立的、而且是相互作用的。

关键词 决策心理，计算建模，跨期选择，眼动，开放科学

Interdependent attention to amount and time information in intertemporal choice and computational model of attention dynamics

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Abstract: Most economic decisions involve consequences spread over time and can thus be considered intertemporal choice. Understanding how people make intertemporal choice has been a major focus of research across numerous academic disciplines. Recently, Amasino et al. (2019, Nature Human Behaviour) have contributed to this topic with a large-scale eye-tracking study (with 190 participants), in which they claim that “amount and time exert independent influences on intertemporal choice”. Amasino et al.’s contribution is important, and that their dataset offers a valuable resource for research on intertemporal choice. Yet, their main claim contradicts nearly all theories of intertemporal choice, which posit an interactive relationship between amount and time (usually in the form of a discounted utility). Even attribute-wise models of intertemporal choice (which posit that amount and time are compared as separate attributes, rather than directly multiplied together into a discounted utility) assume some type of interaction between amount and time in order to explain common behavioral regularities in choice involving single-dated amounts, as well as sequences of outcomes. Their claim also contradicts prior empirical work on attention in decision making, which finds that attention probabilities to attributes (e.g. time) depend on the values of the other attributes (e.g. amount). Here, we re-analyze data from Amasino et al., and find a strong relationship between attention to time delays and the monetary amounts associated with the time delays, and vice versa, using a computational model of attention dynamics. Specifically, a higher (more desirable) amount leads to more attention to its associated time delay and a lower (more desirable) time delay leads to more attention to its associated monetary amount. Thus the probability of attending to and evaluating one attribute depends on the value of the other. Furthermore, we argue that the interactive attention dynamics, combined with independent accumulators of amount and time information posited by Amosino et al., can yield emergent interactive preferences similar to those assumed by economic utility-based models. Overall, our re-analysis indicates that amount and time do not exert independent influences on intertemporal choice, and by doing so, we resolve the inconsistencies between Amasino et al.’s conclusions and the existing research. Our re-analysis also demonstrates the benefits of transparent data-sharing and open science.

Keywords: Decision psychology, Computational modeling, Intertemporal choice, Eye-tracking, Open science

“早死早超生”个体决策的神经机制

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摘要 在日常生活中，人们面对未来损失奖赏抉择时存在两种截然不同的决策模式，分别为“早死早超生”（FDG）和“好死不如赖活”（DG）类型。我们先前的行为研究已经证实该两组被试在选择立即损失和反应时指标上存在显著差异，表现为“早死早超生”更倾向于选择立即损失和更快的决策。然而，“早死早超生”个体特异的决策模式背后的认知和神经机制仍然不清晰。本研究将继续采用新颖的损失框架下延迟折扣范式，独立操纵立即和延迟损失（固定时间为半年后）奖赏大小，通过单变量和多体素模式分析（MVPA）考察该个

体的价值计算和抉择的神经基础。根据价值决策理论,我们预测“早死早超生”个体可能对于立即损失有着更好的敏感性和未来损失的不敏感性。为了回答上述问题,我们招募了 57 名大学生被试 (FDG=33 人, DG=24 人) 在磁体间完成行为实验决策任务,同时采集其脑影像数据。在价值编码阶段,单因素和 MVPA 分析结果显示, DG 组负责表征立即损失奖赏大小的脑区为右侧背内侧前额叶皮层 (DMPFC)、右外侧枕叶 (LOC)、左侧颞下回 (ITG) 和左侧背外侧前额叶皮层 (DLPFC); 负责表征延迟损失奖赏大小的脑区有, 顶下小叶 (IPL)、右侧楔前叶/后扣带回皮层 (PCC) 和 LOC。对比与 DG 组, FDG 组表现出不同的价值计算特点, 具体为, 负责表征立即损失奖赏大小的脑区为右侧楔前叶; 而负责延迟损失奖赏大小的脑区为顶上小叶 (SPL) 和右侧楔前叶/PCC。进一步组间比较显示, DG 组在 DMPFC、LOC 和 SPL 负责未来价值计算脑区上的激活显著强于 FDG 组, 这说明 FDG 对未来损失的恐惧是由于 DMPFC、LOC 和 SPL 对未来损失主观评价的敏感性降低导致的, 这可能是 FDG 更有可能选择立即损失而不是延迟损失的关键解释。随后, 脑-行为关联分析发现, 负责延迟损失奖赏价值计算的上述脑区 (DMPFC, SPL, LOC) 激活程度越低, 个体越倾向于选择立即损失选项。我们的结果表明, 之所以会表现出“早死早超生”决策模式, 可能是由于对于未来奖赏损失价值计算异常有关。这些发现为探究在面临未来损失时“早死早超生”个体决策的神经表征提供了新的见解, 并为深入探究其认知调控机制提供了思路。

关键词 未来损失, 跨期决策, 多体素模式分析, fMRI

Neural substrates of individual decision making of “future-dread group”

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Abstract: In daily life, people face two completely different decision-making modes when they make decisions about future losses and rewards, namely, “future-dread group” (FDG) and “discounting group” (DG). Our previous behavioral research had confirmed that the two groups of subjects had significant differences in choosing immediate loss and reaction indicators, which was manifested as “future-dread group” was more inclined to choose immediate loss and faster decision-making. However, the cognition and neural substrates behind the individual-specific decision-making model of “future-dread group” are still unclear. The study would continue to adopt the delayed discount paradigm under the novel loss framework, independently manipulated the immediate and delayed loss (fixed time is half a year later) reward size, and examined the neural basis of the individual's value calculation and decision through univariate and multi-voxel pattern analysis (MVPA). According to the value decision theory, we predicted that individuals with “future-dread group” may have better sensitivity to immediate losses and insensitivity to future losses. In order to answer the above questions, we recruited 57 college students (FDG=33, DG=24) to complete behavioral experiment decision-making tasks in the magnetic room, and collect their brain image data. In the value coding stage, the results of univariate and MVPA analysis showed that the brain areas in the DG group that was responsible for representing the magnitude of the immediate loss of reward was the right dorsomedial prefrontal cortex (DMPFC), the right lateral occipital lobe (LOC), the left inferior temporal gyrus (ITG) and the left dorsolateral prefrontal cortex (DLPFC); brain areas responsible for characterizing delayed loss rewards was the inferior parietal lobule (IPL), the right precuneus/posterior cingulate cortex (PCC) and LOC. Contrast with the DG group, the FDG group showed different value calculation characteristics. Specifically, the brain area responsible for the size of the immediate loss reward was the right precuneus; while the brain area responsible for the delayed loss reward was the parietal lobule (SPL) and the right precuneus /PCC. Further comparisons between groups showed that the DG group had significantly stronger activation in DMPFC, LOC, and SPL in the brain regions responsible for future value calculations than the FDG group, indicating that FDG's fear of future losses was due to the subjective evaluation of future losses by DMPFC, LOC and SPL. The reduced sensitivity may be the key explanation that FDG is more likely to choose immediate loss instead of delayed loss. Subsequently, the brain-behavioral association analysis found that the lower the activation degree of the above-mentioned brain regions (DMPFC, SPL, LOC) responsible for the

calculation of the delayed loss reward value, the more likely individuals are to choose the immediate loss option. Our results show that the reason for the “future-dread” decision-making model may be due to the abnormal calculation of the value of future rewards and losses. These findings provide new insights into the neural representations of individual decision-making in the face of future loss, and provide ideas for in-depth exploration of their cognitive regulation substrates.

Keywords: future losses, intertemporal decision-making, multi-voxel pattern analysis. fMRI

(2) “决策心理学专业委员会”口头报告分场 2

表征方式对小概率持续风险决策的影响机制

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摘要 小概率持续风险决策指的是人们对发生概率较小但风险会持续存在的风险选项之间的权衡与取舍, 其结果可影响关乎国计民生的重要领域。在描述小概率持续风险时, 通常使用风险事件的单次发生概率(如, 每月发生概率为 1%)来表征风险选项, 但此种表征方式可能阻碍个体正确地认知风险, 导致个体做出非理性决策。以平均风险时间(如, 平均 10 个月发生一次)来表征风险选项或可提高风险维度(即, 概率维度或平均风险发生时间维度)的可评估性, 改变决策者对风险维度与结果维度的相对决策权重, 或可引导个体作出更理性决策。因此, 本研究通过 3 个实验考察了概率和平均风险时间两种表征方式对小概率持续风险决策行为的影响特点及心理机制。实验 1 和实验 2 的结果表明, 两种表征方式下, 个体的小概率风险决策行为存在差异, 且受到选项风险大小的调节。当选项风险较高(即概率较小或平均风险发生时间较长)时, 相比概率表征, 平均风险时间表征方式能促进个体更加风险规避; 当选项风险相对较低(即概率较大或平均风险发生时间较短)时, 相比于概率表征, 平均风险时间表征方式能促进个体更加风险寻求。进一步的眼动实验(实验 3)结果表明, 两种表征方式改变了个体在小概率持续风险决策中对不同维度的注意权重, 个体对风险维度的相对注意权重可中介表征方式对小概率持续风险决策行为的效应。本研究加深了人们对小概率持续风险决策的心理机制与理论构建的深层次理解。同时, 该研究结果提示我们, 用平均风险时间表征风险, 或可避免决策者高估小概率, 低估中大概率, 使决策更理性, 这为干预个体的风险决策行为提供了理论与方法支持。

关键词 小概率持续风险决策, 平均风险时间, 表征方式, 眼动追踪

The effect of the presentation format on the low probability continuing risk decisions making and the mechanism behind

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Abstract: Low probability continuing risk decision refers to decisions that involve tradeoffs among the options with low but continuing risk. It is a relevant matter for policymaking and national welfare. People often use the probability of a single event (e.g., the probability of occurrence is 1% per month) to present the low probability continuing risk options. However, such presentation format may induce misunderstanding of risk and lead to irrational risky decisions. Representing the low risk by the average time of risk occurrence (e.g., on average, it happens once every 10 months) may improve the evaluability of the risk dimension (i.e., the probability dimension or the average time of risk occurrence dimension), and change the relative decision weight of risk dimension to outcome dimension, thereby leading to more rational decision making. Therefore, three studies were conducted in the present research to examine

the effect of the presentation format of average time of risk occurrence and the presentation format of probability on low probability continuing risk decisions and further explored the underlying mechanism. Study 1 and Study 2 showed that in two of the presentation formats, people behaved differently in low probability continuing risk decisions making, and the differences were moderated by options' magnitude of risks. When the risk is relatively high (i.e., the probability is very small or the average time of risk occurrence is very long), compared to the presentation format of probability, the presentation format of average time of risk occurrence can make people be more risk aversion; whereas, when the risk is relatively low (i.e., the probability is relatively large or the average time of risk occurrence is relatively short), compared to the presentation format of probability, the presentation format of average time of risk occurrence can make people be more risk seeking. Further results from an eye-tracking study (Study 3) showed that the presentation format changed the attentional weight of different dimension during the low probability continuing risk decisions making. The relative attentional weight of risk dimension mediated the effect of the presentation format on the low probability continuing risk decisions making. The present research helped us have a deep understanding of the mechanism of the low probability continuing risk decisions making and the results were conducive to further theory development in the relevant field. Meanwhile, the findings indicated that the presentation format of average time of risk occurrence may prevent decision maker from overestimating the small probability and underestimating the moderate and large probability, therefore help them make decision more rational. The research provided both theoretical and methodological support for risk decision making intervention.

Keywords: low probability continuing risk decision, the average time of risk occurrence, the presentation format, eye-tracking technique

自我-他人决策的风险偏好：收益分配框架的影响

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摘要 框架效应已得到普遍证实：决策偏好会受到对结果或属性描述方式的影响。在金融领域，个体经常为自己和他人决策。而在两人情境中，当决策结果平均分配给两个人时可以用两种不同的方式来表述，也即分配框架：1.自我分配框架：为自己做决策，他人分得一半结果；他人分配框架：为他人做决策，自己分得一半结果。本研究包含4项实验，提供了一致的证据表明，人们在自我分配框架下比他人分配框架下决策时更加风险寻求。在实验1中，研究假设得到了证实，同时研究表明分配框架效应只存在于收益情境，而非损失情境中。实验2重复了实验1的研究结果，同时排除了决策对象（即为谁做决策）这一可能的其他解释。实验3旨在实验室中模拟两种真实的分配框架情境，同时采用真实的金钱激励，再次重复研究结果。实验4通过改变分配给决策者的收益百分比，将研究结果扩展到其他分配情境中。我们认为风险偏好的差异是由参考点所引起的。由于决策对象的差异（对自己和对他人），个体的参考点会发生变化。因此，在不同分配框架下，给定的分配结果（分得一半）会被个体视为相对收益和相对损失，进而影响个人的风险偏好。分配框架的发现对自我-他人决策的研究有着重要的研究价值。

关键词 分配框架，自我-他人决策，框架效应，风险偏好

Risk Preferences in Self-Other Decisions: The Effect of Payoff Allocation Framing

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Abstract: The effect of framing is well established: decision makers' preferences are influenced by how outcomes or attributes are phrased. In the financial domain, individuals often make decisions for themselves as well as for others. Therefore, decisions in a two-person context with the outcome equally allocated can be framed in two different ways, defined as the *allocation framing*: 1. Self-allocation frame: making a decision for oneself, with half of the outcome shared by another person; 2. Other-allocation frame: making a decision for the other person, and sharing half of the outcome. The results of four studies provided consistent evidence that people are more risk-seeking in self-allocation frame than other-allocation frame. In Study 1, we demonstrated that the effect of different allocation conditions was only noteworthy in the gain domain but not loss. Study 2 replicated findings from Study 1 with an alternative explanation of decision target (i.e., for whom such decisions are made) excluded. Study 3 was designed to include actual monetary payoffs rather than hypothetical ones in two simulated conditions. Study 4 extended our findings to various allocation proportions by changing the percentage of payoffs allocated to the decision maker. We suggest that the difference in risk preference was induced by the reference point. The reference point shifts due to differences in the decision target (for oneself vs. for others). Therefore, the given outcome (half of the payoffs) would be perceived as relative gains and relative losses in different allocation frames, which would then influence individuals' risk preferences. Findings of allocation framing serve meaningful contributions to studies of self-other decision making.

Keywords: allocation framing, self-other decision making, framing effect, risk preference

知“心”者更留心：内感受知觉对悬空情境中 风险决策的调节作用

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摘要 具身认知视角下，躯体标记假设认为决策过程受情绪等在生物调节过程中产生的躯体状态（标记信号）的调节。而内感受作为个体对躯体状态的感知，除了是对自身生理反应的觉察，亦影响着情绪体验与决策过程。一般认为，内感受知觉较为稳定，但近年来也有研究支持内感受知觉的可变性，关于其是否可变及变化的条件仍有待探索。已有研究表明，个体内感受知觉与情绪体验强度、唤醒关注关系密切，也与情绪调节、行为调控及直觉性决策等认知过程相关。心跳知觉任务作为内感受测量中的常用范式，以心跳知觉为主要指标，代表个体对躯体状态的综合感知能力。基于以上理论，本研究假设，个体内感受知觉（Interoceptive awareness, IA）会受实验情境影响而发生改变，个体内感受知觉水平高低及其在场景中的变化会影响个体的情绪体验强度与风险决策过程。研究采用被试间设计，通过虚拟现实(VR)设置悬空/平地场景模拟悬空/平地感受，实验组为悬空情境，控制组为控制相同元素及视角的平地情境。实验以在VR情境中采集的指脉率作为生理指标，采用心跳知觉任务中的精神追踪范式前后测被试的内感受知觉，并通过气球模拟风险决策任务考察被试的风险偏好，以探究IA高低、变化对情绪体验及风险决策的影响。结果显示，悬空组的后测IA显著高于平地组，其中悬空组前测IA较低的被试IA提升更为显著。悬空组较平地组表现出显著的情绪唤起与更多的风险规避，且在悬空组中，前测IA较高的被试比低IA被试及平地组被试在风险决策任务中表现出更多的风险回避。研究结果表明，内感受知觉水平在悬空情境较平地情境有所提升。内感受知觉调节了不同高度情境对风险决策的影响，悬空情境下前测内感受知觉水平较高的被试更趋于风险规避。本研究揭示了内感受知觉

存在一定的情境可变性，内感受知觉或可调节不同高度情境中的风险决策行为，在探究内感受知觉本身同时，也为系统探究躯体标记假设下，内感受在身心复杂交互关系中的作用拓展了方向。

关键词 内感受知觉，风险决策，躯体标记假设

Those Who Know The "Heart" Are More Cautious: The Moderating Effect of Interoceptive Awareness on Risk Decision-Making in The Suspended Situation

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Abstract: From the perspective of embodied cognition, the somatic marker hypothesis suggests that decision-making is a process that is influenced by somatic states (marker signals) that arise in bioregulatory processes such as emotions. And interoception, as the perception of somatic states, is not only a kind of perception of one's own physiological responses but also influences the emotional experience and decision-making process. It is generally accepted that interoceptive awareness is stable, and in recent years there have been studies supporting the variability of interoceptive awareness, and the conditions as to whether it is variable and how it changes remain to be explored. It has been shown that interoceptive awareness is closely related to the intensity of emotional experience and arousal attention, as well as to cognitive processes such as emotion regulation, behavior regulation and intuitive decision-making. Among the measurements of interoceptive awareness, the heartbeat perception tasks, as a common paradigm, take heartbeat perception as the main index, which represents an individual's comprehensive perception of the physical state. Based on the above theories, this study hypothesizes that the interoceptive awareness (IA) will be altered by experimental situations and that the level of IA and its changes in the situation will affect the intensity of emotional experience and risk decision-making process. This study used a between-subjects design. The virtual reality (VR) of hanging or leveling situation was used to simulate the experience of being hanging or leveling. The experimental group was in the hanging situation and the control group was in the leveling situation with the same elements and perspectives controlled. The finger pulse rate collected during the situation of VR was used as a physiological indicator, and the subjects' interoceptive awareness was measured before and after using the mental tracking paradigm within the heartbeat perception task. The subjects' risk preference was measured via the balloon analogue risk task to investigate the effects of IA and its change on emotional experience and risk decision-making. The results showed that the post-test IA of the hanging group was significantly higher than that of the flat ground group, and the IA of the hanging group with lower pretest IA improved more significantly. The hanging group showed significantly greater emotional arousal and risk avoidance than the flatland group, and the subjects in the hanging group with higher pretest IA showed more risk avoidance in the balloon analogue risk task than the subjects with lower IA and the flatland group. The results indicated that interoceptive awareness was enhanced in the hanging situation compared to the flat ground situation. Interoceptive awareness modulated the effect of situations of different altitudes on risk decision-making, and subjects with higher pretest interoceptive awareness tended to be more risk-averse in the hanging situation. This study reveals that interoceptive awareness has a certain degree of contextual variability, and that it may regulate risk decision-making behavior in situations of different altitudes. While exploring interoceptive awareness itself, this study also expands the direction for systematic inquiry into the role of interoceptive awareness in the complex interactions between mind and body under the somatic marker hypothesis.

Keywords: interoceptive awareness, risk decision-making, somatic marker hypothesis

群际情境中，社会比较对为自我和为群体风险决策的影响

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摘要 社会比较理论认为，与他人社会比较的结果对风险决策具有不可忽视的意义，但目前社会比较影响个体风险决策的研究尚处于起步阶段。以往研究仅从个人层面关注社会比较方向，聚焦于为自我决策，尚未考虑到群际情境中社会比较对个体为自我和为群体风险决策的影响。本研究设计两个实验，实验一聚焦内群体情境，实验二聚焦外群体情境，均采用2（社会比较：上行比较，下行比较） $\times$ 3（决策者角色：为自我，为“我们”，为“他们”）的被试内设计，探究群际情境中社会比较对为自我和为群体风险决策的影响。结果发现：（1）在外群体情境，被试在上行比较条件下比下行比较条件下更加风险寻求。而在内群体情境，上行比较与下行比较之间不存在显著差异。（2）不同决策者角色条件下，被试的风险寻求倾向存在差异，该结果在外群体和内群体情境中是一致的。为他们决策比为自我和为我们决策更加冒险，后两者之间的风险寻求倾向无显著差异。（3）决策者角色与社会比较的交互作用显著，但在内群体情境和外群体情境中表现有差别。在外群体情境中，为我们决策和为他们决策时，被试在上行比较条件下比下行比较条件下更加风险寻求，为自我决策时，上行比较和下行比较之间不存在显著差异。而在内群体情境中，为他们决策时，被试在上行比较条件下比下行比较条件下更加风险寻求，为自我决策和为我们决策时，上行比较与下行比较之间不存在显著差异。

关键词 社会比较，群际情境，决策者角色，风险决策

The Effect of Social Comparison on Self-Group Risk Decision-making in Intergroup Contexts

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Abstract: Social comparison theory holds that the results of social comparison with others are of great significance to risk decision-making, but the research on the influence of social comparison on individual risk decision-making is still in its infancy. Previous studies only focused on the direction of social comparison from the individual level, focusing on self decision-making, but did not consider the impact of social comparison in intergroup contexts on individual self-group risk decision-making. Two experiments were designed in this study. Experiment 1 focused on in-group situation, and Experiment 2 focused on out-group situation. Both of them used 2 (social comparison: upward comparison, downward comparison) $\times$ 3 (decision maker role: for self, for "us", for "them") within-subjects design to explore the influence of social comparison on risk decision-making for self and for group in intergroup contexts. The results showed that: (1) In the out-group situation, participants were more risk seeking under the condition of upward comparison than under the condition of downward comparison; while in the in-group situation, there was no significant difference between the upward comparison and the downward comparison. (2) Under the condition of different decision-maker roles, there is distinction in the risk seeking tendency of the participants, and the results are consistent in the situation of out-group and in-group. Decision making for "them" was more risky than making decisions for "us" and for self; while no significant difference was found in risk seeking tendency between the latter two. (3) The interaction between decision maker role and social comparison is significant, but there are differences between the in-group situation and the out-group situation. In the out-group situation, when making decisions for "us" and for "them", participants were more risk seeking under the condition of upward comparison than that under the condition of downward comparison; while making decisions for self, there was no significant difference between the upward comparison and the downward comparison. In the in-group situation, when making decisions for "them", participants were more risk seeking under the condition of upward comparison than under the condition of downward comparison; while no significant difference was found between the upward comparison and the downward comparison when making decisions for self and for "us".

Keywords: social comparison, intergroup contexts, decision maker role, risk decision making

快速而简洁（且准确）的银行放贷决策

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摘要 是否给一家企业贷款是银行要做的一项重要决策。企业在申请贷款过程中提供的信息或线索是判断其是否能正常还贷的基础。但银行职员们能合理利用这些线索, 做出准确的决定吗? 如果不能的话, 有何方法可以帮助他们? 在本研究中, 我们收集了 411 个在某银行成功获得贷款的企业的数据, 包括每个企业的信用等级、职工人数、担保方式等 17 条线索及其最终的还贷情况(正常或不良)。此后, 我们邀请了 19 名从事银行信贷业务的资深职员, 让他们根据每个企业的线索, 在不知道该企业还贷结果的情况下, 决定是否给其发放贷款。每个受邀请对象需要对 20 个随机选取的企业进行决策, 我们共收集到 376 个有效决策。结果发现, 这些职员的整体决策准确率为 53.0%, 略高于随机猜测水平。这表明, 即使是一线的工作人员, 他们对企业是否能够正常还贷的判断力还存在很大不足。以往的研究发现, 在是与否的二元决策中, 一个名为“快速简洁树”(Fast-and-frugal Trees, FFT) 的启发式往往可以帮助人们做出快速且准确的决策。在一个二元决策中, 如果共有 m 个线索可以利用, 那么 FFT 是一种具有 $m+1$ 个决策出口, 其中前 $m-1$ 个线索只有一个出口, 第 m 个线索具有两个出口的决策树。每个 FFT 都可以用几个顺序执行的、简单的“If-then”法则来描述。我们对现有的样本进行大量建模和测试, 发现一个仅利用 17 条线索中 4 条线索(征信报告、存贷比、担保方式和与银行合作关系)的 FFT 的决策效果最佳。而且, 与 8 种常用的机器学习算法相比, 该 FFT 在学习样本较小的情况下可以达到与最好的算法相同的准确率; 随着学习样本的增加, 最好的算法的准确率会比该 FFT 更好, 但两者之间的差距并不大。我们将该 FFT 应用到银行职员所完成的 376 个决策中时, 结果得到的准确率为 82.2%, 远高于职员们的准确率。与机器学习算法相比, FFT 具有结构简单, 过程透明, 执行灵活等优点, 且在信息不足的“小数据”任务中的准确率尤为出色。本研究验证了 FFT 可在放贷决策中大幅度提升职员的决策准确率, 是一个值得大力推广的决策辅助工具。

关键词 快速简洁树, 启发式, 银行贷款, 机器学习

Fast and Frugal (and Accurate) Loan Decision-Making

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Abstract: To decide whether to approve companies' loan applications is an important type of decisions for a bank. The information or cues provided by a company during its application is the basis for such a decision. Can bank managers integrate and utilize these cues effectively to make accurate loaning decisions? If not, how to improve? In this study, we collected information of 411 companies whose loan applications to a bank were approved. For each company, there were 17 different cues, such as number of employees, relationship with the bank, and credit grade; and importantly, we knew whether the company had successfully repaid the loan at the end. We then invited 20 senior bank employees to make loan decisions based on the 17 cues. Each employee was asked to decide on 20 randomly selected companies without knowing the result, and there were 376 valid decisions made in total. The overall accuracy of their decisions was 53.0%, only slightly better than guessing. This suggests that even employees working in the frontline are poor in judging whether a company can repay its loan. Previous research shows that in this type of “yes/no” binary decision tasks, a heuristic named “Fast-and-frugal Trees” (or FFT) often can help people make quick and accurate decisions. Given there are m cues available for a decision, an FFT is a decision tree that has $m+1$ exits, with one exit for each of the first $m-1$ cues and two exits for the last cue. Each FFT can be described by a

bunch of sequentially ordered simple “if-then” rules. We conducted much modeling and testing in the 411-company dataset, and found that an FFT composed of only four cues out of the 17 achieved the best overall performance. In comparison to 8 commonly applied machine-learning algorithms, this FFT could be as accurate as the best machine-learning algorithm when learning sample was small; when the learning sample became larger, the best algorithm became better than this FFT, but not by much. When we applied this FFT to the 376 decisions made by the bank employees, it resulted in an accuracy of 82.2%, substantially better than the employees’ accuracy. Compared to sophisticated machine-learning algorithms, FFTs have a simpler structure, their decision-making processes are more transparent, the implementation of an FFT is more flexible, and FFTs perform especially well in limited “small data” task environments. We demonstrated that an FFT could help banks improve the accuracy of their loan decisions drastically. Given this and results of previous studies, we suggest that FFTs need to be studied and applied more extensively for financial and other types of decisions.

Keywords: Fast-and-frugal Trees, decision heuristic, bank loan, machine learning

(3) “决策心理学专业委员会”口头报告分场 3

物质利益如何抵扣精神损失？

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摘要 分配公平是合作行为产生的重要前提。个体在公平条件下的合作行为显著多于在劣势不公平条件下的合作行为。值得注意的是，分配不公平不仅包括劣势不公平还包括优势不公平。然而，已有的研究仅仅关注了人们在公平及劣势不公平分配条件下的合作行为，尚未明确优势不公平分配如何影响人们的合作行为。此外，已有的研究指出，经历过不同程度社会排斥的个体在合作行为上存在差异，受到低社会排斥的个体会比受到高社会排斥的个体做出更多的合作行为。同时，这些个体在分配公平感知上也存在差异，受到高社会排斥的个体会对不公平分配更敏感。那么，社会排斥是否会与分配公平共同对合作行为产生影响呢？目前鲜有研究对此进行探讨。为了解决上述两个问题，本研究设计了三个实验。实验 1 通过独裁者游戏操纵分配公平，初步考察个体在公平、劣势不公平及优势不公平分配条件下的合作行为。实验 2 通过社会排斥问卷测量社会排斥水平，进一步考察长期社会排斥经历对分配公平与合作行为间关系的调节作用。实验 3 通过网络掷球游戏操纵社会排斥，进一步考察状态性社会排斥对分配公平与合作行为间关系的调节作用。结果发现：（1）被试在公平分配条件下的合作行为显著多于两种不公平（劣势、优势）分配条件下的合作行为，在优势不公平条件下的合作行为显著多于在劣势不公平条件下的合作行为（实验 1）；（2）社会排斥调节分配公平与合作行为的关系（实验 2，3）：社会排斥一定程度上减少了公平分配条件下的合作行为，显著减少了劣势不公平条件下的合作行为，却显著增加了优势不公平条件下的合作行为。这些发现揭示了社会排斥对于理解分配公平和合作行为之间的关系的重要作用，说明物质利益在一定程度上可以弥补精神损失带来的负面作用。

关键词 合作行为，分配公平，优势不公平分配，社会排斥

How does material interest compensate for mental loss?

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Abstract: Distributive fairness is the vital premise to cooperative behavior. Specifically, individuals would cooperate more in the fair-outcome condition rather than in the disadvantageous-unfair-outcome condition. Notably, distributive unfairness conditions involve both disadvantageous unfairness and advantageous unfairness conditions. Nevertheless, previous studies exclusively focused on individuals’ cooperative behavior in fair-outcome and disadvantageous-unfair-outcome conditions, leaving an open question whether and how

advantageous-unfair-outcome affect individuals' cooperative behavior remains unknown. Additionally, it has been found that cooperative behavior differs in individuals with different social exclusion experience, and individuals who experienced lower level of social exclusion would cooperate more than those who experienced higher level of social exclusion. Moreover, fairness perception differs in individuals with different social exclusion experience, and individuals who experienced higher level (vs. lower level) of social exclusion would be more sensitive to unfairness. So far, whether and how social exclusion moderates the association between distributive fairness and cooperative behavior remains unclear. To address the aforementioned two issues, we designed three experiments. In Experiment 1, participants' cooperative behavior was measured in fair-outcome, disadvantageous-unfair-outcome, and advantageous-unfair-outcome conditions by using the Dictator Game to manipulate distributive fairness. Experiment 2 investigated the moderating effect of social exclusion on the relationship between distributive fairness and cooperative behavior by using the Social Exclusion Scale to measure long-lasting social exclusion. Experiment 3 further investigated the moderating effect of social exclusion on the relationship between distributive fairness and cooperative behavior by using the Cyberball Game to prime social exclusion. Results showed that: (1) in Experiment 1, participants' cooperative behavior in fair-outcome condition was higher than that in the two unfair-outcome (disadvantageous-unfair-outcome and advantageous-unfair-outcome) conditions. (2) in Experiments 2 and 3, social exclusion moderated the relationship between distributive fairness and cooperative behavior. Specifically, in fair-outcome condition, participants with higher social exclusion experience cooperated the same as those with lower social exclusion experience; in disadvantageous-unfair-outcome condition, participants with higher social exclusion experience behaved less cooperatively than those with lower social exclusion experience; in advantageous-unfair-outcome condition, participants with higher social exclusion experience behaved more cooperatively than those with lower social exclusion experience. The present study shed light on the vital role of social exclusion in understanding the relationship between distributive fairness and cooperative behavior, and reveal that material interest may compensate for mental loss to some degree.

Keywords: cooperative behavior, distributive fairness, advantageous-unfair-outcome, social exclusion

空间选择中违背不变性原则的新时空框架效应

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摘要 一段给定的空间距离既可以用长度单位也可以用时间单位来测量。对于同一空间选择问题而言, 采用空间框架和时间框架来描述同一距离在逻辑上是等价的。根据不变性原则, 同一选择问题的不同表现形式会产生相同的偏好。本研究旨在考察: (1) 当空间选择问题采用时间和空间框架等价描述时, 是否会出现违背不变性原则的行为(命名为“时空框架效应”); (2) 如果存在, 这一效应究竟是如何产生的? 为回答第一个问题, 我们利用恒定的速度构建了6组空间(跨期)选择问题, 设置不同的决策情境(研究1-2包括求职情境、租房情境、选择餐厅情境和春节探亲情境, 研究3包括3组不同的求职情境), 不同的研究设计(研究1和3采用被试间设计, 研究2采用被试内设计), 以及多种网络样本(研究1-2采用普通成人样本, 研究3采用特定的应届大学毕业生样本), 进行了3项研究。为回答第二个问题, 我们进一步增设了维度差异比较任务(研究2-3)和折扣值比较任务(研究3), 以考察以下两类模型是否能进行有效解释, 并比较这两类模型的解释效力: (1) 属性比较模型, 该模型假设产生框架效应是因为框架改变了人们对两个选项在时间/空间维度上的差异与结果维度上的差异之间的相对大小关系的判断; (2) 效用比较模型, 该模型假设产生框架效应是因为框架改变了人们对两个选项总体效用之间的相对大小关系的判断。结果表明, 采用时间和空间框架描述同一空间选择问题会显著改变人们的选择偏好, 即存在时空框架效应; 且这种新的时空框架效应可以用属性比较模型而非效用比较模型来解释。我们的发现可以支持创建一种新的选择架构, 以改善关于健康、财富和幸福的决策。

关键词 框架效应, 不变性原则, 齐当别模型, 维度差异比较, 折扣值比较

A new effect of time–space framing that violates the invariance principle in spatial choice

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Abstract: A given spatial distance can be measured using either a length or a time unit. A spatial-choice problem with given distances represented in a *space* frame and in a *time* frame is logically equivalent. Different representations of the same choice problem should yield the same preferences according to the invariance principle. The purpose of this study was twofold: first, to examine whether invariance-violating behavior (defined as the *time–space framing effect*) could be detected when the spatial-choice problem is described by space and time frame equivalently; and second, if so, how is this effect achieved. To address the first purpose, six spatial- (intertemporal-) choice problems were constructed and performed in three experiments using different scenarios (job-hunting, apartment-renting, restaurant-selection, and visiting parents during the Spring Festival choice problems in Studies 1 and 2, three pairs of job-hunting choice problems in Study 3), different experimental designs (between-subjects in Studies 1 and 3, and within-subjects in Study 2), and multiple online samples (ordinary adults in Studies 1 and 2, fresh graduates as special adults in Study 3). To address the second purpose, an intradimensional difference comparison task in Studies 2–3 and a discounted value comparison task in Study 3 were added and performed, to determine whether two models—the *attribute comparison* model, which predicts a framing effect occurs if framing shifts people’s judgment of the inequality relationship between the differences of two options in time/space dimension and that in outcome dimension, and the *utility comparison* model, which predicts that a framing effect occurs if framing shifts people’s judgment of the inequality relationship between two options’ overall utility—could account for it, and which of these two models wins the race (Studies 2–3). The results indicate that a time–space framing effect existed, as people’s preference orders were significantly changed by the different descriptions of spatial-choice problems, and this new time–space framing effect could be satisfactorily explained by the *attribute-comparison* rather than the *utility comparison* model. Our findings could support the creation of new forms of choice architecture that improve decisions about health, wealth, and happiness.

Keywords: framing effect, invariance principle, equate-to-differentiate model, intradimensional difference comparison, discounted value comparison

众人围观者必为高手？观众人数的过度泛化效应

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摘要 在日常生活中, 能力强的表演者往往可以吸引更多观众。相反, 观众多却可能由外部偶然因素所造成, 并不意味着表演者能力强, 错误理解二者的关系可能导致不合理的判断。本研究提出观众人数的泛化效应, 即观众人数较多时（与观众人数较少时相比）, 判断者认为表演者能力更强, 即使观众人数由偶然因素所决定、无助于判断。我们认为这是由于人形成了根据观众人数推测表演者能力的启发式, 并将其过度泛化到不适用的情境下。我们通过六项研究检验了该效应及其下游影响。研究将被试随机分配至观众人数多或观众人数少的情境, 要求其想象将展示某种能力（例如舞蹈、演奏等）, 情境中观众人数由工作人员的偶然失误所决定（例如发错邮件）, 无法有效反映被试的能力。随后被试评价自身能力强弱。研究 1a 和 1b 分别以数字或文字描述观众人数, 检验了基本效应, 并排除了数字锚定的解释。研究 2a 和 2b 考察了该效应的

下游影响。结果表明，观众多时，被试认为自己能力强，进而自信可在新业务中获取更高的报酬、有更大的可能被聘用。研究3探究了效应的边界条件，操纵被试对自身能力的认知（了解或不了解自身能力）。结果显示，在被试了解自身能力时，观众人数对能力判断的影响减弱。研究4将被试从表演者改为旁观者，并以录播的形式展示能力，效应仍然稳定存在，排除了自我增强解释（相信任何对自己有利的线索）以及人数影响实时表演过程的可能性。本研究发现了一种新的启发式——依据观众人数推断表演者能力，加深了对过度泛化和启发式决策的理解，即过度泛化不仅影响个体对外部世界的认知，也影响个体对自身的判断，并揭示了其下游影响。本研究的结果提示人们理性看待观众人数，形成正确的自我认知。

关键词 观众人数，能力，过度泛化，启发式

The Mere Audience-Size Effect: A large Audience Nonnormatively Inflates Perceived Competence of Actors

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Abstract: Oftentimes, competent actors attract more audience members. But a large audience does not necessarily mean that actors are competent, which could lead to irrational judgment. The current study identifies a mere audience-size effect, showing that actors who are observed by a large (vs. small) audience are inferred to be more competent, even when the audience size results from incidental factors and offers nondiagnostic information about actors' competence. We propose that this is the overgeneralization of a heuristic that connecting actors' competent with the audience size. We conducted six studies to test the hypothesized effect and its downstream consequences. Participants imagined the actor (themselves or another person) performing (e.g., dancing and playing the piano) to a large or small audience. The audience size was determined by incidental mistakes (e.g., a new employee sent a wrong email by accident), thus offered nondiagnostic information about the actor's competence. Then participants evaluated the actor's competence. Studies 1a and 1b revealed the basic pattern—actors believed that they were more competent when observed by a large (vs. small) audience described by number or text, ruling out the account of numeric anchoring. Studies 2a and 2b showed the downstream consequences of this mere audience-size effect—actors perceived themselves as more competent, thus they believed that they deserved a higher salary and were more likely to be employed. Study 3 manipulated actors' knowledge about their competence and found that the mere audience-size effect was attenuated when actors explicitly received feedbacks about their competence. In Study 4, the actors' show was prerecorded to minimize the influence of audience on live performance. Besides, participants imagined themselves as observers. The mere audience-size effect was replicated, ruling out the account of self-enhancement. This research shows a new heuristic—inferring actors' competence from the audience size and contributes to research on overgeneralization and heuristic decision making. Our findings reveal that overgeneralization biases not only judgement about others but also judgment about oneself. This overgeneralization is consequential. Understanding the current heuristic promotes an accurate perception of competence.

Keywords: audience-size, competence, overgeneralization, heuristic

时间压力和深思熟虑对确证性偏差的影响

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摘要 确证性偏差 (confirmation bias) 是人们判断和决策中的一种常见偏差, 它指的是人们倾向于以支持自己原有观念、期望或假设的方式来解释或搜索证据。这一偏差会带来诸如有偏判断、忽视反方证据等负面影响。在快节奏而又信息过载的现代生活中, 人们总是感受到巨大的时间压力, 这一环境因素可能对人们日

常生活中的判断与决策产生影响。本文试图探索不同的时间条件（时间压力 vs. 时间宽裕）会如何影响不同情境中确证性偏差的强弱。通过 7 个实验，我们变换了不同信念和不同的确证性偏差测量方式，最终在美国和中国样本中验证了确证性偏差独立于时间条件的稳定性。研究 1 通过测量人们与日常辐射相关的信念和对辐射有害信息的判断来衡量确证性偏差的强弱，结果发现个体日常感知到的时间稀缺性与确证性偏差不相关，研究 2 通过指导语操纵了时间压力和时间宽裕两种时间条件，并使用了食品天然性信念，结果发现时间压力组的确证性偏差强于时间宽裕组。研究 3 和 4 分别使用相对固定（政治意识形态）和可变（即时决策结果）的信念及相应的信息判断任务，并加入无时间提示的控制组，结果发现三组的确证性偏差并无显著差异。为确认效应的稳定性，研究 5 在更广泛的样本中重复了研究 2，结果并未发现时间条件对确证性偏差的效应。研究 6a 和 6b 使用转基因相关信念，并在判断任务中使用了与信念一致/不一致及正确/错误的信息，在美国和中国样本中再次验证了不显著的结果。单文章元分析结果显示，时间压力不会加剧、时间充裕（深思熟虑）也不会减弱确证性偏差。我们的研究结果表明，环境因素在影响人们日常生活中的确证性偏差上可能作用甚微，未来的研究可以探讨其它环境因素对于确证性偏差的影响。

关键词 确证性偏差，时间压力，深思熟虑，谣言信息

Confirmation Bias and the Effects of Time Pressure and Deliberation

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Abstract: Confirmation bias refers to a tendency to interpret or seek evidence in ways that support one's existing beliefs, expectations, or hypotheses, which is very common in people's judgments and decision making. It would cause serious negative consequences such as biased judgment and ignorance of opposite evidence. In the ubiquitous stresses and information overload of modern life, people always feel tremendous time pressure, impacting their daily judgment and decision making. We, therefore, wanted to understand how different time-related conditions (time pressure vs. time affluence) would influence the degree of confirmation bias in different situations. By varying the prior belief and the measure of confirmation bias with both the U.S. and Chinese samples in seven studies, we found the robustness of confirmation bias regardless of time-related conditions. In Study 1, we examined the correlation between the perceived time scarcity and confirmation bias that results from a prior belief and the associated perceived reliability of misinformation regarding daily radiation harmfulness and found no relation between time scarcity and confirmation bias. In Study 2, we manipulated time pressure and time affluence conditions and used belief regarding food naturalness and found that people under time pressure suffered a higher degree of confirmation bias in contrast to those in the time affluence condition. In Studies 3 and 4, we employed a more fixed belief regarding personal political ideology and a more flexible belief regarding the instant decision after reading the materials with an additional third neutral condition. We found no effect of time conditions on the confirmation bias. To further confirm our results, we conducted Study 5 to replicate Study 2 with a larger and more representative sample and found no significant effect of time conditions. In Studies 6a and 6b, we employed beliefs regarding genetically modified organisms and included both consistent/inconsistent facts and misinformation to rule out the influence of information veracity and belief-consistent information on confirmation bias and further confirmed the non-significant effect of time conditions. Furthermore, we conducted a single-paper meta-analysis and revealed that time pressure would not aggravate, and time affluence (deliberation) would not alleviate confirmation bias. Our findings suggested that environmental factors might play a minor role in reducing confirmation bias in people's daily lives.

Keywords: confirmation bias, time pressure, deliberation, misinformation

决策信心的形成机制：来自眼动的证据

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摘要 决策信心是指个体在决策后, 对自己决策的最优性或正确性的信心程度评价。对决策信心的形成机制一直备受研究者关注。研究者将近年来能够良好解释决策行为的顺序抽样模型用于解释决策信心的形成机制, 发展了一系列新的模型, 如基于扩散的信心理论与基于累积的信心理论。此类模型认为, 决策者在各选项中随机抽样并累积证据, 选项间累积证据的差异即可反映决策信心。然而, 目前关于此类模型的证据多基于反应时数据的拟合, 缺少更直接的过程证据支持。鉴于此, 本研究借鉴注意漂移扩散模型的相关假设, 提出了用于解释决策信心机制的注意信心累积模型, 基于眼动注视去解释决策信心的形成过程。本研究采用眼动追踪技术, 考察个体在基于价值的决策中的眼动注视信息, 并记录其随后的决策信心评价。研究结果发现, 注意信心累积模型可定量描述视觉注视与决策信心的关系。具体来说: 1) 注意信心累积模型的预测优于现有模型; 2) 注意信心累积模型可预测决策信心反映于视觉注视的一些特性; 3) 注意信心累积模型的相关参数可反映个体的决策信心特点。本研究结果为描述视觉注视与决策信心的关系提供了新的证据, 加深了人们对决策信心形成机制的理解, 为今后决策信心的相关研究提示了新的方向。

关键词 决策信心, 基于价值决策, 视觉注视, 顺序抽样模型, 注意信心累积模型

Mechanism underlying the Formation of Decision Confidence: Evidence from Eye-tracking

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Abstract: Decision confidence is the strength an individual's belief about the optimization or correctness of a prediction, judgment, or choice. The mechanism underlying the formation of decision confidence has raised considerable concern. Researchers have used sequential sampling models, which have successfully explained individuals' decisions in recent years, to explain the formation mechanism of decision confidence, and developed a series of new models, such as diffusion-based confidence theory and cumulator-based confidence theory. Such models assume that decision makers randomly sample among options and accumulate evidence, and that differences in the cumulative evidence among options reflect the decision confidence. However, the current evidence on such models is mostly from the model fitting based on the response time data and lacks more direct process evidence. Accordingly, in the present research, we proposed an attentional accumulative confidence model to explain the mechanism underlying decision confidence based on eye-tracking data, drawing on the assumptions related to the attentional drift diffusion model. This study used eye-tracking technique to examine individuals' visual attention in the value-based choice and to record their subsequent evaluation of decision confidence. The results revealed that the attentional accumulative confidence model can quantitatively describe the relationship between visual fixation and decision confidence. Specifically: 1) attentional accumulative confidence model performed better than existing models; 2) the model predicted some characteristics of the decision confidence reflected in visual fixation; and 3) the relevant parameters of the model reflected some characteristics of individual decision confidence. This study provides new evidence to describe the relationship between visual fixation and decision confidence, deepen the understanding of the mechanism of decision confidence formation, and suggest new directions for future research related to decision confidence.

Keywords: decision confidence, value-based choice, visual fixation, sequential sampling model, attentional accumulative confidence model

4.18 老年心理学专业委员会

(1) “老年心理学专业委员会”口头报告分场 1

新冠肺炎疫情期间居家高血压老年人的生活方式与认知健康

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摘要 目的: 不良生活方式是造成慢性病高发的重要原因, 而高血压是一种典型的“生活方式病”。同时, 生活中的生活习惯、行为都影响着认知健康。新冠肺炎疫情期间, 人们过上了居家隔离的生活, 生活方式有很大改变。因此, 本研究旨在调查新冠肺炎疫情居家期间高血压老年人生活方式改变与认知健康状况。方法: 认知测试部分采用电话询问版成人认知测试(Test of adult cognition by telephone, TACT)(Tun & Lachma, 2005)中即时与延迟词语回忆、数字倒背、词语类别、数字计数五项分测验, 分别来测试即时与延迟情景记忆、工作记忆广度、言语流畅性、加工速度。通过自编问卷对老年人的人口学信息、生活方式进行调查。生活方式因素主要包括身体活动(身体活动量、久坐时间)与饮食(吸烟饮酒情况、饮食口味)两大因素。采取方便取样方法, 通过微信报名的方式招募了 86 名 60 岁以上高血压老年参与者, 所有参与者均签署知情同意书。结果: (1) 疫情期间, 高血压老年人生活方式发生改变, 但改变程度不大, 其中 46 人认为生活方式改变很小, 18 人认为改变比较很小, 23 人认为改变中等, 其中有 76.2% 的人自述最大改变在于活动量变少。同时, 所有参与者都认为疫情期间活动量减少或基本持平, 这说明疫情期间高血压老年人生活方式改变主要体现在身体活动的减少。单因素方差分析结果表明, 不同程度身体活动量改变下, 整体认知能力无显著差异($F = 1.255, p = 0.290$)。但在词语类别($F = 4.656, p = 0.012$)、数字计数($F = 5.685, p = 0.005$)成绩上有显著差异, 身体活动量减少越多, 认知成绩越差。单因素方差分析结果表明, 不同身体活动量下, 整体认知能力无显著差异($F = 1.430, p = 0.240$)。但不同身体活动量下, 延迟词语回忆($F = 4.130, p = 0.009$)、数字计数($F = 4.750, p = 0.004$)成绩差异显著, 身体活动量越少, 认知成绩越差。结论: 疫情期间, 高血压老年人生活方式发生改变, 但改变不大, 主要体现在身体活动减少; 活动量改变影响认知健康, 活动量少的高血压老年人记忆、言语流畅性、加工速度受损更大。因此, 提示我们改善高血压老年人认知能力要尤其注重加强身体活动, 减少久坐时间。

关键词 高血压, 生活方式, 认知健康, 老年, 新冠肺炎疫情

老年人身体意象对主观幸福感的影响: 控制感的中介及社会支持的调节

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摘要 身体意象是指一个人对自己的外表和身体机能的心理感受, 是衡量生理健康和心理健康的重要指标之一。但相关研究大多聚焦于青少年和中年人群, 而忽略了身体意象对老年人群的特殊含义。衰老带来的一系列身体外观和功能的重大变化都导致了老年人成为身体意象脆弱群体, 因此探讨老年人身体意象及其内在机制具有重要意义。本研究将身体意象、主观幸福感、控制感和社会支持(包括家庭支持和朋友支持)整合到一个模型中, 系统地考察了身体意象对老年人主观幸福感的可能影响, 并探讨控制感在这一效应中的中介作用和社会支持在这一效应中的调节作用。采用身体意象量表, 控制感量表, 纽芬兰纪念大学幸福度量表以及社会网络量表, 对 814 名老年人进行调查。结果发现: (1) 身体意象显著预测主观幸福感。(2) 控制感在身体意象和主观幸福感之间起到中介作用。(3) 社会支持调节了身体意象与控制感以及控制感与主观幸福感之间的关系, 且家庭支持和朋友支持调节了不同的路径, 具体而言, 家庭支持调节了身体意象与控制感的关系。

关系,相较于低家庭支持的老年人,在高家庭支持的老年人中身体意象对控制感的影响更强;朋友支持调节了控制感与主观幸福感之间的关系,相较于高朋友支持的老年人,在低朋友支持的老年人中,控制感对幸福感的影响更强。本研究关注了身体意象对老年人的重要影响,以及家庭支持和朋友支持作为重要外部资源对老年人的不同作用和意义,揭示了身体意象对主观幸福感的作用机制,丰富了老年人幸福感的研究领域。

关键词 身体意象,主观幸福感,控制感,社会支持,老年人

Body image and subjective well-being in old adults: the mediating role of sense of control and the moderating role of social support

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Abstract: body image refers to the psychological feeling that one has about his or her appearance and body functioning, which is one of the important indicators to measure physical and mental health. However, most of the studies on body image mainly focused on the populations of adolescents and middle-aged people, while ignoring the special meaning of body image for older adults. A series of significant changes in physical appearance and function brought by aging have led to older adults becoming a group fragile to the body image, thus, it is of great significance to explore the body image of the older adults and its internal mechanism. This study integrated body image, sense of control, subjective well-being, and social support (including family support and friend support) into a model to systematically explore the relationship between body image and subjective well-being, as well as the mediating role of sense of control and the moderating roles of family support and friend support. 814 older adults were surveyed using the Body Image Concern Inventory, the Sense of Mastery Scale, the Memorial University of Newfoundland Scale of Happiness, and the Lubben Social Network Scale. The results showed that: (1) Body image was a significant predictor of subjective well-being in older adults. (2) Sense of control partially mediated body image and subjective well-being. (3) Social support moderated the patterns of relationship between body image and sense of control, as well as that sense of control and subjective well-being, and family support and friend support moderated different pathways. Specifically, family support moderated the relationship between body image and sense of control. Compared to older adults with a low level of family support, there is a stronger relationship between body image and sense of control in those with a high level of family support. And friend support moderated the relationship between sense of control and subjective well-being. The association between sense of control and subjective well-being was stronger for older adults with a low level of friend support than for those with a high level. This study focuses on the important impact of body image, as well as the different roles of family support and friend support which are important external resources for older adults, and reveals the mechanism of body image on subjective well-being, enriches the research field of well-being of older adults.

Keywords: body image, subjective well-being, sense of control, social support, older adults

快慢速整体运动知觉老化具有不同的脑灰质结构基础

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摘 要 整体运动知觉(global motion perception)指个体将视觉场景中局部运动元素的单个轨迹按照一定的规则进行选择整合,从而形成更大的全局性的运动知觉,并获得运动物体的方向和速度等信息。研究发现快速和慢速 GMP 的发育和老化存在不同步性,提示 GMP 的快、慢速两种不同的知觉系统具有不同的神经基础。然而目前尚无研究考察这两种知觉系统的老化是否存在脑结构老化的分离。本研究拟通过比较老年人和

年轻人在不同速度下的运动一致性阈值的变化及其与背侧视觉通路相关皮层灰质体积变化的相关性,旨在分离快、慢速 GMP 老化的脑灰质结构基础。实验招募 93 名健康老年人 (65.50 ± 4.17 岁) 和 95 名大学生 (21.09 ± 2.04 岁), 运用随机点阵范式采集被试在 10 种速度条件下的整体运动知觉一致性阈值(下简称“阈值”), 采用结构磁共振成像技术采集他们 T1 结构像数据。行为数据分析发现, 老年人 10 种速度条件下的阈值均显著大于年轻人, 提示存在 GMP 老化现象。以阈值变化率((老年人-年轻人)/年轻人)为指标, 将 10 种速度条件均分为快、慢两种条件, 发现慢速条件下阈值变化率平均为 64.98%, 快速条件为 41.92%, 提示慢速 GMP 老化更为显著。基于双侧 V1 区、V3 区和 MT+ 区的兴趣区分析发现, 老年人上述脑区灰质体积均显著小于年轻人。进一步的脑与行为相关分析发现, 当以性别和全脑灰质体积作为协变量后, 快速条件下的阈值与右侧 V3 区、双侧 V5 区灰质体积呈显著负相关(右侧 V3 区: $r=-0.18$, $p<0.01$; 左侧 V5 区: $r=-0.19$, $p<0.01$; 右侧 V5 区: $r=-0.24$, $p<0.001$); 慢速条件下的阈值与所有脑区灰质体积相关均不显著; 但老年人快慢速条件下的阈值与其上述脑区灰质体积的相关不显著。综上, 本研究结果初步提示, 快慢速 GMP 的老化可能有着不同的神经基础, 快速 GMP 系统的老化可能和右侧 V3 区、双侧 V5 区灰质体积的萎缩有关, 而慢速 GMP 老化似乎不依赖于背侧视觉通路上灰质结构的变化。后继研究宜结合基于多模态脑成像技术获得的数据更好地揭示不同速度 GMP 系统老化潜在的神经基础。

关键词 整体运动知觉, 老化, 结构基础

The different neural basis underlying aging of the fast and the slow global motion perception

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Abstract: Global motion perception (GMP) is an important aspect of visual perception. Numerous studies have found that GMP of cognitively healthy elderly declines with aging. It is found that the maturation and aging of the fast GMP and the slow GMP are not synchronous, which suggests that there be different neural basis underlying fast GMP and slow GMP. However, there is no empirical evidence to show that two types of GMP aging have different basis of brain structure. This study compared the differences in the motion coherence threshold between the elderly and the young at different speeds and their correlation with the differences in cortical gray matter volume in the dorsal visual pathway, in an attempt to reveal the different brain structure alteration underlying the fast and slow GMP aging. Ninety-three healthy older adults (mean age 65.50 ± 4.17 years) and 95 college students (mean age 21.09 ± 2.04 years) were recruited in this study. Global motor perceptual coherence thresholds were collected using random dot kinematogram paradigm at ten different speeds and structural magnetic resonance imaging was used to acquire their T1 Structural image data. Behavioral data analysis revealed that the coherence thresholds at 10 speeds were significantly greater in the elderly than those in the young. Using the threshold change rate as the index, it was found that the average threshold change rate was 64.98% in the slow speed condition and 41.92% in the fast speed condition, suggesting the decline of GMP was more obviously in slow condition. Region of interest analysis based on bilateral regions V1, V3, and MT+ revealed that gray matter volumes in all of those brain regions were significantly smaller in the old than in the young. Brain-behavior correlation analysis revealed that, when gender and whole-brain gray matter volumes were used as covariates, thresholds in the fast condition were negatively correlated with gray matter volumes in the right V3 and bilateral V5 (right V3: $r=-0.18$, $p<0.01$; left V5: $r=-0.19$, $p<0.01$; right V5: $r=-0.24$, $p<0.001$). The correlation between the thresholds in the slow speed condition and the gray matter volumes of all brain regions was not significant; however, the correlation between the thresholds in the fast or slow speed conditions and the gray matter volumes of those brain regions in the elderly was not significant. In summary, the results suggest that the aging

of the fast GMP and the slow GMP may have different neural basis, and aging of the fast GMP may be related to the decrease of gray matter volumes in the right V3 and bilateral V5 regions, while the aging of the slow GMP does not seem to depend on the changes of gray matter in dorsal visual stream. Multimodal MRI data should be used to better discover the unique neural basis underlying the fast and the slow GMP aging.

Keywords: global motion perception, aging, structural basis

4.19 民族心理学专业委员会

(1) “民族心理学专业委员会” 口头报告分场 1

民汉混合班铸牢大学生中华民族共同体意识的逻辑再探索 ——基于群际接触理论分析

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摘要 在新的历史时期, 民汉混合班因其新的时代特征和自身的独特价值, 对铸牢大学生中华民族共同体意识具有重要的现实意义。群际接触理论是分析不同群体之间交往的一整套理论体系, 其“最优条件”和“范畴化策略”为民汉混合班铸牢大学生中华民族共同体意识提供了新的理论视角和实践策略。在具体实践中, 民汉混合班并不具备铸牢大学生中华民族共同体意识的“最优条件”和环境。为此, 民汉混合班铸牢大学生中华民族共同体意识, 先从平等地位、共同目标、群体合作、制度支持等几个方面优化“培育环境”, 在此基础上, 结合民汉混合班各民族学生的实际情况, 从“去范畴化”到“突显范畴化”、再到“重新范畴化”逐渐打牢“共同体意识”。

关键词 民汉混合班, 群集接触理论, 中华民族共同体意识

A further exploration of the logic of Cultivating College Students' sense of Chinese national community in the mixed class ——Analysis based on group contact theory

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Abstract: In the new historical period, because of its new characteristics of The Times and its own unique value, the mixed class of people and Han has an important practical significance for the formation of college students' consciousness of Chinese nation community. Intergroup contact theory is a set of theoretical system to analyze the communication between different groups, and its "optimal conditions" and "categorization strategy" provide a new theoretical perspective and practical strategy for the mixed class to forge the consciousness of Chinese nation community among college students. However, in practice, the mixed class does not have the "optimal conditions" and environment to consolidate the consciousness of the Chinese nation community among college students. For this purpose, the people of the han class cast on college students' community consciousness of the Chinese nation, begin with equal status, common goals, group cooperation, institutional support from several aspects such as optimizing the cultivation environment ", on this basis, combining with the actual situation of han people mixed ethnic students, from the "category" to "highlights the category" to "new category" stress gradually a "community".

Key Words: Min-Han mixed class, Cluster contact theory, Consciousness of Chinese national community

4.20 护理心理学专业委员会

(1) “护理心理学专业委员会”口头报告分场 1

晚期肺癌患者及其照顾者的心理弹性与生活质量的关系： 基于主客体互倚模型

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摘要 目的: 心理弹性是指个体从重大创伤性事件中恢复的能力, 亦是一种积极适应逆境的过程。弹性可以帮助个体更好的面对现实, 缓解负面压力的不利影响, 从而促进较好的健康结局, 提高生活质量。以往的研究多从患者或照顾者的单一角度探讨心理弹性与生活质量的关系。根据互倚理论, 患者和照顾者具有较强的人际关系互动, 在应对癌症过程, 是相互依赖的整体。然而, 目前尚缺乏从二元水平探讨患者和照顾者的心理弹性对生活质量影响的研究。本研究采用主客体互倚模型, 探究晚期肺癌患者和照顾者心理弹性对生活质量的影响, 并考察照顾者身份(配偶/非配偶)是否会调节这一关系。**方法:** 选取山东省三家三级甲等医院 304 名晚期肺癌患者及其照顾者进行问卷调查, 研究工具包括一般资料调查表, 心理弹性量表、8 条目简明生活质量问卷。**结果:** 患者的心理弹性对生活质量的主体效应显著, 但客体效应不显著; 即患者的心理弹性可以正向预测其自身生活质量, 但不能预测照顾者的生活质量。照顾者的心理弹性对生活质量的主体效应显著, 客体效应也显著; 即照顾者的心理弹性可以正向预测其自身的生活质量, 同时也可以预测对方的生活质量。为了探讨心理弹性对生活质量的关系是否存在由照顾者身份(配偶/非配偶)造成的差异, 多群组分析结果显示, 照顾者身份对心理弹性与生活质量关系的调节效应不显著影响。**结论:** 患者、照顾者的心理弹性可以促进自身生活质量的提高, 同时, 照顾者的心理弹性可作为患者处理癌症这一重大创伤事件的应对资源, 促进其生活质量的提高。

关键词 肺癌, 心理弹性, 生活质量, 主客体互倚模型

Relationship between psychological resilience and quality of life among patients with advanced lung cancer and their caregivers: A Study Based on Actor-Partner Interdependence Model

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Abstract: Objectives: Resilience refers to the ability to recover from traumatic events, and it is also a good adaption process to adversity. Resilience can help individuals have a better grasp of reality, alleviate the adverse effects of negative stressors, and thus improve the quality of life (QoL). Previous studies mostly examined the relationship between resilience and QoL from the single perspective of patients or caregivers. According to interdependence theory, there is a strong interpersonal interaction between patients and caregivers. Patients and caregivers should be regarded as an interdependent unit when coping with cancer. Whereas, there is still a lack of evidence exploring the relationship between resilience and QoL in patients and caregivers simultaneously. The objective of this study is to examine the effects of resilience and QoL in advanced lung cancer patients and their caregivers and to examine whether caregiver identity (spouse/non-spouse) can moderate this relationship. **Methods:** A total of 304 dyads of advanced lung cancer patients and caregivers were recruited from three tertiary hospitals in Shandong Province to finish a questionnaire survey. Measurement tools included the general information questionnaire, the Connor-

Davidson Resilience Scale, Short Form-8 (SF-8) Health Survey. **Results:** Patients' resilience had a significant actor effect on patients' QoL, whereas, the partner effect of patients' resilience was not significant. In other words, patients' resilience positively predicted their own QoL, but didn't predict caregivers' QoL. Caregivers' resilience had significant actor and partner effects on QoL, which mean that caregivers' resilience not only positively predicted their own QoL, but also positively predicted patients' QoL. In order to explore whether there is any difference in the relationship between resilience and QoL among different caregivers' identity(i.e., spouse/non-spouse), the results of multi-group analysis indicated that the moderating effect of caregivers' identity on the relationship between resilience and quality of life was not significant. **Conclusion:** The resilience of patients and caregivers can promote their own quality of life. Meanwhile, the resilience of the caregivers also can be considered as one coping resource for patients to deal with traumatic events and promote the improvement of patients' QoL.

Keywords: lung cancer, resilience, Quality of life (QoL), Actor-Partner Interdependence Model

晚期肺癌患者生命意义与影响因素的质性研究

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摘要 **目的** 探讨晚期肺癌患者生命意义的内涵及相关影响因素。**方法** 采用质性研究法对 21 例住院晚期肺癌患者进行深度访谈, 对收集的资料采用 Colaizzi7 步分析法整理得出结果。**结果** 晚期肺癌患者的生命意义包含 3 个维度, 涉及 7 个主题 10 个亚主题, 分别为: 纬度(一)生命意义的核心为“自我迭代”, 包含自我再认识、珍惜生命 2 个主题; 纬度(二)生命意义的存在形式为“有为”, 包含自立和利他 2 个主题; 纬度(三)生命意义体现在 3 个层面: 过去、当下和未来, ①回顾过往的感动, 包含感恩、愧疚与自责、回避 3 个亚主题; ②珍惜当下的生活, 包含利用支持系统、积极应对、独立与完整 3 个亚主题; ③未来可期, 包含陪伴亲人、死亡准备、高质量地生活、担忧 4 个亚主题。生命意义的各个维度受到宗教信仰、价值观和社会文化的影响。生命意义的核心与生命意义的存在形式相互构成影响。**结论** 医护人员可根据患者特征提供有针对性专业指导和心理支持, 帮助患者发现生命意义, 从而提升其生命意义感, 提高生活质量, 达到善终。

关键词 晚期肺癌, 生命意义, 影响因素, 质性研究

焦虑障碍患者自我管理量表的编制及信效度检验

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摘要 **目的** 研制焦虑障碍患者自我管理量表并验证其信效度。**方法** 以 Lorig 自我管理理论和邹海鸥五因子模型为理论框架, 通过文献研究法、理论分析法、内容分析法和专家咨询法建立初量表。分别选取 185 和 205 例患者进行条目筛选和信效度验证。**结果** 正式量表包括 2 个分量表, 31 个条目, 疾病医学管理分量表 15 个条目、社会心理管理 16 个条目。总量表的 Cronbach's α 系数为 0.920, 分半信度为 0.787, 重测信度为 0.843。各分量表的 Cronbach's α 系数为 0.873~0.879, 分半信度为 0.729~0.835, 1 周后重测信度为 0.815~0.863。分量表通过探索性因子分析分别提取 3 个公因子, 累计方差贡献率分别为 61.003%和 53.788%。验证性因子分析显示, 该量表具有较好的结构的效度。该量表与席汉残疾量表及焦虑自评量表均呈负相关($P<0.001$)。**结论** 焦虑障碍患者自我管理量表具有良好的信效度, 可作为科学评估焦虑障碍患者自我管理能力的评估工具。**关键词** 焦虑障碍; 自我管理; 量表; 信度; 效度

Development and psychometric test of Self-management Scale for Patients with Anxiety Disorder

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Abstract: Objective: To develop a scale for measuring the level of self-management in patients with anxiety disorder and test its reliability and validity. Methods: On basis of self-management theory and five-factor model, the first version of self-management scale was formed through literature review, theoretical analysis and content analysis. Totally 185 and 205 patients were recruited to preform item screening and verify its reliability and validity. Results: The Self-management Scale for Patients with Anxiety Disorder included two subscales, medical management of disease (15 items) and psychosocial management (16 items), with 31 items. The Cronbach's α coefficient of the total scale was 0.920, split-half reliability coefficient was 0.787, and one-week test-retest reliability was 0.843. The Cronbach's α coefficient of two subscales was a range with 0.873 ~ 0.879, a range with 0.729 ~ 0.835 for a split-half reliability coefficient and a range with 0.815 ~ 0.863 for one-week test-retest reliability, respectively. Three common factors were extracted from the subscales by exploratory factor analysis, and the cumulative variance contribution rates were 61.003% and 53.788%, respectively. Confirmatory factor analysis showed that the scale had good construct validity. The scale was negatively correlated with both Sheehan Disability Scale and Self-Rating Anxiety Scale ($P < 0.001$). Conclusion: The Self-management Scale for Patients with Anxiety Disorder has good validity and reliability. It can be used as a tool to evaluate the self-management level of patients with anxiety disorder scientifically.

Keywords: Anxiety disorder; Self-management; Scale; Reliability; Validity

拓展建构理论视角下肝移植术后患者心理整合的质性研究

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摘要 目的: 探索肝移植术后患者心理整合情况及其心理体验。方法: 2021年3-4月通过目的抽样选取湖南省某三甲医院30名肝移植术后患者。采用现象学研究法, 对其进行面对面半结构式访谈, 现场录音, 借助NVivo 8.0软件, 根据Colaizzi分析法对资料进行分析编码, 提炼主题。结果: 提取出3个主要主题和8个次要主题。1) 接受移植肝主要表现为承认移植肝是自己身体的一部分且爱护移植肝。2) 对捐肝者的情感主要表现为感激捐肝者提供给自己生命延续的机会; 受到捐肝者奉献精神的感染和激励; 为捐肝者的不幸感到惋惜。3) 活在当下主要表现为做好移植后自我照护; 调整负面心理状态; 随遇而安地生活。肝移植术后患者在心理整合方面情况良好, 没有访谈对象认为移植肝是外来异物或出现心理上排斥移植肝的情况。这一方面他们文化程度较高且不信仰宗教有关, 另一方面因为尸肝移植更有利于促进患者心理整合。国外研究指出活体肝移植术后患者在自身或捐肝者的健康状况出现问题时更容易感到担忧和自责, 这些负面状态加强了“移植肝是外来器官”的认知并阻碍患者心理上接纳移植肝。而对于尸肝移植术后患者来说, 他们感激捐肝者并受到其激励, 他们认为移植肝是自己的一部分且应当爱护移植肝, 这样才没有辜负捐肝者。他们在日常生活中做好自我照护及调整负面心理状态, 但是不忧虑潜在的健康问题和经济压力, 随遇而安地生活, 展现了活在当下的人生智慧。结论: Fredrickson的拓展-建构理论提出积极情绪具有拓展和建构功能, 积极情绪体验可以拓展个体即时的思维—行动范畴并建构个体长久的身体、认知和社会等的资源。对捐肝者的感恩和生命延续带来的希望和幸福让患者赋予珍惜健康更厚重的意义, 长远来看, 患者以乐观豁达的态度和积极行动来面对生

活，对于改善移植术后健康水平和生活质量具有重要意义。后期研究可进一步积极心理学在促进肝移植术后患者身心健康上的作用。

关键词 肝移植，心理整合，拓展建构理论，质性研究，积极心理学

A qualitative study on psychological integration of patients after liver transplantation based on Extended-Construction theory

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Abstract: Aims: to explore the psychological integration and experience of patients after liver transplantation. Methods: a total of 30 patients with liver transplantation from March to April in 2021 were selected by objective sampling. By using phenomenological method, the author conducted a face-to-face semi-structured interview and recorded on the spot. With the help of NVivo 8.0 software, the data were analyzed and coded according to Colaizzi analysis method, and the subject was extracted. Results: 3 major themes and 8 minor themes were extracted. 1) accepting a liver transplant is primarily about acknowledging that the liver is part of your body and caring for it. 2) emotions for the donor are expressed in gratitude to the donor for the opportunity to extend their lives; being inspired by the donor's spirit of dedication; and feeling sorry for the donor's misfortune. 3) living in the moment, which includes self-care after transplantation, adjustment of negative mental state, and living with ease. After liver transplantation, the patients' psychological integration is good. No interviewees think that the transplanted liver is a foreign body or psychologically reject the transplanted liver. On the one hand they are highly educated and not religious related, on the other hand because cadaveric liver transplantation is more conducive to the psychological integration of patients. Foreign studies indicate that patients are more likely to feel worried and self-blame when their own or donor's health status is wrong after liver transplantation. These negative states strengthen the perception that the transplanted liver is a foreign organ and prevent patients from accepting the transplanted liver psychologically. And for cadaveric liver transplant patients, they are grateful and inspired by the donor, they think the liver transplant is a part of themselves and should cherish the transplant, so as not to disappoint the donor. They take good care of themselves and adjust negative mental state, but don't worry about potential health problems and economic pressure, Which show the wisdom of living in the present. Conclusion: Fredrick son's theory of Expansion-Construction suggests that positive emotions have the function of expansion and construction, and that positive emotion experience can expand the individual's immediate thinking and action and construct the individual's long-lasting physical, cognitive and social resources. The gratitude to the donor and the hope and happiness brought by the continuation of the life of the donor endows the patient with a more profound meaning of cherishing health. In the long run, the patient live with an optimistic and open-minded attitude and positive actions, which is of great significance for improving the physical and mental health and quality of life after transplantation. The late research may further promote the role of positive psychology in promoting the physical and mental health of patients after liver transplantation.

Keywords: Liver transplantation, Psychological integration, Extended-Construction theory, Qualitative research, Positive psychology

乳腺癌患者反刍性沉思与自我感受负担的相关性研究

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摘要 目的 乳腺癌是全球女性常见的恶性肿瘤, 根据 2018 年全球癌症统计数据显示, 乳腺癌新增病例约 210 万, 占女性癌症新增病例的四分之一, 死亡病例约 63 万, 高居首位。另外, 乳腺癌诊断、治疗及化疗过程中, 往往需要他人的长期照顾, 在长期接受别人照顾的同时常存在成为别人负担的心理感受, 且较高的心理负担将导致患者出现抑郁、焦虑、内疚等不良情绪, 影响患者的生活质量和治疗效果, 而积极反刍心理可减轻患者焦虑、抑郁情绪, 提高生活质量。因此, 本研究调查乳腺癌患者反刍性沉思与自我感受负担的相关性, 为改善乳腺癌患者自我感受负担提供参考。方法 采用方便抽样法对辽宁省某三级甲等医院 182 名乳腺癌患者应用反刍性思维量表、自我感受负担量表进行问卷调查。结果 乳腺癌患者反刍性沉思总分为(48.67±27.68)分, 反刍性沉思各维度由高到低依次为强迫性反刍、侵入性反刍、建设性反刍, 得分分别为(18.71±13.01)、(18.39±12.92)、(11.57±5.79); 乳腺癌患者自我感受负担总分为(46.35±16.52)分, 自我感受负担各维度由高到低依次为经济负担、情感负担、照护负担、治疗负担, 得分分别为(16.86±7.73)、(11.23±4.64)、(10.68±4.64)、(7.59±2.85)。乳腺癌患者反刍性沉思与自我感受负担呈正相关($P < 0.05$)。结论 乳腺癌患者的反刍性沉思与自我感受负担水平处于中等水平, 反刍性沉思越强, 自我感受负担越重, 两者仍需进一步减轻。因此, 可通过降低乳腺癌患者反刍性沉思从而降低患者的自我感受负担水平。

关键词 乳腺癌, 反刍性沉思, 自我感受负担, 相关性

Correlation between Rumination and Self-perceived burden in breast cancer patients

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Abstract: Objective Breast cancer is a common malignant tumor in women all over the world. According to the global cancer statistics in 2018, there are about 2.1 million new cases of breast cancer, accounting for a quarter of the new cases of female cancer, with about 630,000 deaths, ranking first. In addition, in the process of diagnosis, treatment and chemotherapy of breast cancer, long-term care of others is often needed, and while taking care of others for a long time, there is often a psychological feeling of being a burden to others. Higher psychological burden will lead to depression, anxiety, guilt and other bad emotions, which will affect the quality of life and treatment effect of patients. Active rumination can alleviate patients' anxiety and depression and improve their quality of life. Therefore, this study investigated the correlation between rumination and self-perceived burden of breast cancer patients, and provided reference for improving self-perceived burden of breast cancer patients. Methods Using convenient sampling method, 182 breast cancer patients in a third-class first-class hospital in Liaoning Province were investigated with rumination scale and self-perceived burden scale. Results The total score of rumination in breast cancer patients was (48.67±27.68), and the dimensions of ruminant meditation from high to low were forced ruminant, invasive ruminant and constructive ruminant, with scores of (18.71±13.01), (18.39 ±12.92) and (11.57±5.79) respectively. The total score of self-feeling burden of breast cancer patients is (46.35 16.52). The dimensions of self-feeling burden are economic burden, emotional burden, care burden and treatment burden from high to low, and the scores are (16.86±7.73), (11.23±4.64), (10.68±4.64) and (7.59±2.85) respectively There is a positive correlation between ruminaion and self-perceived burden in breast cancer patients ($P < 0.05$). Conclusion The rumination and self-perceived burden of breast cancer patients are at a medium level. The stronger rumination is, the heavier the self-perceived burden is, and both need to be further reduced. Therefore, the self-perceived burden level of breast cancer patients can be reduced by reducing rumination.

Keywords: breast cancer, rumination, self-perceived burden, relevance

(2) “护理心理学专业委员会”口头报告分场 2

电子护理文书任务中工作干扰与护士心理负荷的混合性研究

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摘要 背景: 电子病历系统 (Electronic Health record, EHRs) 护理文书是现代护理工作的重要组成部分, 但文书任务中的干扰已成为护理工作之常态。工作干扰分散护士的工作注意, 影响工作效率, 甚至导致重要信息的疏漏与人误事件的发生, 最终可能影响护理质量与患者安全。**目的:** 本研究旨在观察电子护理文书任务中的工作干扰、护士行为以及错误发生, 并分析护士心理负荷及错误与干扰等因素之间的相关性。**方法:** 本研究于 2021 年 6 月至 7 月于上海某三级甲等医院开展临床观察与调查。42 位护士接受了完整工作班次的观察, 研究通过观察记录表记录全天 EHRs 护理任务中的干扰、中断 (任务切换)、双任务、错误或接近错误的发生情况; 并调查护士 EHRs 护理任务工作心理负荷、环境 (干扰)、任务 (任务复杂度与执行时间)、技术 (系统可用性)、个体特征 (一般人口学资料、工作能力、自我效能) 四层面的潜在影响因素; 且通过相关性分析, 探究各因素间的相关性。**结果:** 42 个班次的 EHRs 护理任务净执行时间为 46.55 小时, 共发生 620 次干扰 (平均 13.23 次/小时), 排位前五的干扰源为: 患者 (216, 34.84%)、护士 (175, 28.32%)、自身 (86, 13.87%)、医生 (32, 5.16%)、系统或设备问题 (30, 4.84%); 其中, 73.39% 的干扰导致了任务中断或任务切换, 26.61% 转为双任务状态。共计观察到错误或接近错误 65 次 (1.55 次/班), 但 89.23% 均可自行纠正。护士 EHRs 护理任务心理负荷水平为 $49.25 \pm SD 16.56$, 其与错误发生 ($r = 0.341, p = 0.027$)、环境音量 ($r = 0.497, p = 0.001$)、积极情绪 ($r = -0.573, p = 0.000$)、消极情绪 ($r = 0.667, p = 0.000$) 及自我效能 ($r = -0.376, p = 0.014$) 具有相关性; 错误发生与心理负荷 ($r = 0.341, p = 0.027$)、任务执行时间 ($r = 0.438, p = 0.004$)、环境音量 ($r = 0.347, p = 0.024$)、任务中断 ($r = 0.391, p = 0.01$) 和负性情绪 ($r = 0.358, p = 0.02$) 相关。**结论:** 工作干扰在 EHRs 护理任务中具有普遍性与多源性的特征, 并可导致不良影响。研究通过观察工作干扰后的中断与双任务事件, 为 EHRs 护理任务干扰问题提供了新的理解视角; 并通过分析影响工作心理负荷与任务错误的潜在因素, 可为干预策略的提出提供参考依据。

关键词 工作干扰, 任务切换, 双任务, 电子病历系统, 护理心理, 混合性研究

Workflow interruption and nurses' mental workload in electric health records task: a mixed-method study

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Abstract: Background Electronic health record (EHR) plays an integral role in nursing care to facilitate documentation practice such as assessment, care planning and evaluation. However, nursing interruptions are frequently encountered by nursing staff during EHRs tasks, which may affect nurse's attention, increasing the time required to perform activities and reducing work efficiency, leading to an increase in negligence and human error. This adversely affects the quality of care and patient safety. **Objective** This study aims to observe the occurrence of interruption, reaction and error of nurses during EHRs tasks, and investigate the relationship between interruption and nurses' mental workload as well as errors. **Methods** A prospective observational and investigational study were conducted in a tertiary hospital during June to July in 2021. Forty-two nurses were observed during the EHRs tasks, documenting for each interruption and the reaction (task switching or concurrent multitasking), as well as error and near error in whole shift. Questionnaire surveys were followed at the end of EHRs tasks to measure their mental

workload towards EHRs tasks and to explore the correlation between environmental factors (interruptions), task demand (task complexity and task time), technology (system usability), characteristics (professional experience and self-efficacy) and mental workload based on the human factors and ergonomics archetype. **Results** In 42 shifts' observations, 620 nursing interruptions occurred (mean of 13.23 interruptions per hour) in a total duration of EHR tasks (46.55 hours). The top five sources of interruption events were as followed: patients (216, 34.84%), nursing colleagues (175, 28.32%), the nurses themselves (86, 13.87%), doctors (32, 5.16%), system and equipment disorder (30, 4.84%). Of these interruptions, 73.39% were priority events leading to the task switching, while 26.61% were concurrent multitasking. The incidence of error or near error due to interruptions was 65, with average 1.55 errors per shift, while 89.23% could be corrected by themselves. The total mean average level of mental workload in EHR task was 49.25 (SD 16.56), which was associated with task errors ($r=0.341$, $p=0.027$), environmental sound ($r=0.497$, $p=0.001$), positive emotion ($r=-0.573$, $p=0.000$), negative emotion ($r=0.667$, $p=0.000$) and self-efficacy ($r=-0.376$, $p=0.014$). The occurrence of error was associated with mental workload ($r=0.341$, $p=0.027$), task time ($r=0.438$, $p=0.004$), environmental sound ($r=0.347$, $p=0.024$), task switching ($r=0.391$, $p=0.01$) and negative emotion ($r=0.358$, $p=0.02$). **Conclusions** Nursing interruption events occur frequently in EHRs tasks, and come from different sources and may lead to negative outcomes. By analyzing the reaction of the interruption, we propose a novel approach to understanding the interruption during EHRs tasks, and by explore the potential variables related to mental workload and task errors, we offer a new perceptible for prevention strategies.

Keywords: Workflow interruption, task switching, Dual task, Electronic nursing records, Psychological Nursing, Mixed-method study

重大传染病疫情应急护理人员压力源的质性研究

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摘要 **目的:**了解重大传染病疫情应急护理人员在救援过程中的压力源,从而为预防或解决这些压力源以及进一步保护应急护理人员的身心健康提供参考。**方法:**2020年10月—12月,对18名援鄂应急护理救援人员进行半结构式访谈,并运用 Colaizzi 7步分析法进行资料分析。**结果:**应急护理救援人员压力源可归纳为3个主题:救援前压力源,救援中压力源(防护用具相关压力、医疗工作管理相关压力、日常生活保障相关压力、患者相关压力、专业知识技能及医疗资源短缺相关压力以及新闻媒体相关压力),救援后压力源。**结论:**应急护理救援人员家庭、医院、政府以及社会均需采取积极的措施帮助应急护理人员在救援前、中、后解决压力源相关问题。

关键词 重大传染病疫情, 应急护理救援人员, 压力源, 质性研究

A qualitative study of stress among emergency nurses against major infectious diseases

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Abstract: Objective To understand the stressors of emergency nurses in the rescue process of major infectious disease epidemic, so as to provide reference for preventing or solving these stressors and further protecting the physical and mental health of emergency nurses. **Methods** From October to December in 2020, a semi-structured interview was conducted among 18 emergency nurses in Hubei Province, and the data were analyzed by Colaizzi's 7-step analysis method. **Results** The stressors of emergency nurses can be divided into three themes: pressure source before the rescue, pressure source in the rescue (stressors of protection appliance, stressor of management, stressors

of daily life health care, stressors of patients, stressors of shortage professional skills and medical resources and stressors of the news media), and pressure source after the rescue. **Conclusion** The family, hospital, government and society should take active measures to help the emergency nurses solve the problems related to stressors in the whole process of rescue.

Key words: Major infectious diseases, Emergency nurses, Stressor, Qualitative research

护士职业妥协与工作压力、主观幸福感的关系研究——中介效应模型分析

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摘要 目的: 探讨护士职业妥协、工作压力和主观幸福感的关系, 探究工作压力在职业妥协和主观幸福感的中介效应, 为护士调节工作压力、提升幸福感提供理论依据和参考。方法: 对安徽省北部多家医院的护士进行了职业妥协量表、护士工作压力源量表和主观幸福感量表的调查。结果: 共收集到 14 所公立医院共计 1624 名护士的数据。用人单位用工性质影响护士职业妥协水平, 合同制护士的职业妥协水平显著高于标志护士 ($P<0.05$); 护士参加工作的前 10 年内, 工作压力水平随工龄的增长而增加, 工龄 <2 年的护士与工龄 2-5 年、工龄 6-10 年的护士工作压力水平差异显著 ($P<0.05$)。护士职业妥协与工作压力水平显著正相关 ($r=0.23$, $P<0.05$); 职业妥协与幸福感显著负相关 ($r=-0.25$, $P<0.05$); 工作压力与幸福感显著负相关 ($r=-0.45$, $P<0.05$)。职业妥协对幸福感的总效应显著 ($\beta=-0.29$, $P<0.05$), 职业妥协对幸福感的间接效应显著 ($\beta=-0.26$, $P<0.05$), 职业妥协对幸福感的直接效应不显著 ($\beta=-0.03$, $P>0.05$)。结论: 护士的职业妥协水平正向预测工作压力, 负向预测幸福感; 工作压力在职业妥协和幸福感之间起到完全中介作用。可以通过就业指导或相关干预降低护士的职业妥协水平以调节护士工作压力, 提高幸福感。

关键词 护士, 职业妥协, 工作压力, 幸福感, 中介效应

Relationship between career compromise and subjective well being of nurses: A mediation model of job stress

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Abstract: Objective: To explore the relationship between nurses' career compromise, job stress, and subjective well-being, and to explore the mediating effect of job stress on career compromise and subjective well-being, so as to provide a theoretical basis and reference for nurses to adjust job stress and improve well-being. Methods: Totally 1624 nurses from 14 public hospitals in northern Anhui Province were investigated with career compromise scale, nurse job stressors scale and subjective well-being scale. Results: The nature of the employment affected the level of nurses' career compromise. The level of career compromise of contract nurses was significantly higher than that of authorized nurses ($P<0.05$). In the first 10 years of nurses' employment, the level of job stress increased with the increase of working years, and there was significant difference between nurses working years less than 2 years and those working years 2-5 years and 6-10 years ($P < 0.05$). Nurses' career compromise was significantly positively correlated with job stress ($r=0.23$, $P<0.05$); career compromise was significantly negatively correlated with well-being ($r=-0.25$, $P<0.05$); job stress was significantly negatively correlated with well-being ($r = -0.45$, $P<0.05$). The overall effect of career compromise on well-being was significant ($\beta=-0.29$, $P<0.05$), the indirect effect of career compromise on well-being was significant ($\beta=-0.26$, $P<0.05$), and the direct effect of career compromise on well-being was not significant ($\beta=-0.03$, $P>0.05$). Conclusion: The level of nurses' career compromise positively predicts job stress, and negatively predicts subjective well-being; job stress plays a complete mediating role between career compromise and

subjective well-being. Career guidance or related interventions could be used to reduce the level of nurses' career compromise to adjust job stress and improve their well-being.

Keywords: Nurse, Career Compromise, Job Stress, Subjective Well-being, Mediation Effect

(3) “护理心理学专业委员会”口头报告分场 3

新型冠状病毒肺炎患者心理痛苦的护理经验： 一项混合方法的横断面研究

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摘要 [目的]本研究的目的是调查影响新型冠状病毒肺炎(COVID-19)患者心理痛苦的个人内部和人际关系因素,并描述医护人员照护患者心理痛苦的经验。[方法]本研究采用了横断面调查和质性访谈的混合研究方法。在量性部分,采用 CD-RISC-10、Herth 希望指数、心理痛苦温度计、修订版的 Mishel 疾病不确定感量表、维克森林医师信任量表对 120 名 COVID-19 患者进行了问卷调查。在质性部分,邀请了在抗疫一线工作的 17 名护士和 8 名医生共 25 名医务工作者参加访谈,使用半结构化的在线视频采访来收集数据。使用 Colaizzi 的现象学方法对转录的文本进行了分析。[结果]结果显示,25.7%的患者报告了较高水平的心理痛苦水平($n=31$, 评分 ≥ 4 被认定为存在心理痛苦)。在控制了社会人口统计学变量后,在回归模型中,只有 COVID-19 的严重程度($\beta=0.282, P=0.025$)和疾病不确定感($\beta=0.345, P=0.007$)对心理痛苦有显著影响($F=10.862, R^2=0.222, P<0.001$)。医务工作者的心理护理经验出现了五个主题:特别需要的心理护理、消极情绪的表现、主动适应的表现、缓解心理痛苦的策略。以及提供有效的心理护理后的收获。[结论] 本研究表明,25.7% 的 COVID-19 患者仍遭受心理痛苦。在这次疫情中,应及时关注 COVID-19 患者的心理痛苦程度,同时疾病的严重程度和疾病的不确定感是影响其心理痛苦的重要因素。未来应考虑培训医务工作者甄别患者的心理痛苦的不同表现形式,提供准确及时的疾病信息以减少对疾病的不确定感,并运用沟通策略缓解心理痛苦,帮助医务工作者获得心理成长,减轻工作压力。

关键词 新型冠状病毒肺炎, 患者, 心理痛苦, 医务工作者, 混合性研究

Caring for psychological distress of patients with Coronavirus Disease 2019: A mixed-method cross-sectional study

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Abstract: [Objective] The purposes of this study were to: analyze the intrapersonal and interpersonal factors of psychological distress of patients with COVID-19; and to describe the experience of healthcare workers dealing with the psychological distress of the patients. [Methods] This study uses a mixed research method of cross-sectional survey and qualitative interviews. In the quantitative part, a cross-sectional survey of 120 patients with COVID-19 was conducted using the Connor-Davidson Resilience Scale-10, the Herth Hope Index, the Distress Thermometer, the

Revised Chinese Version of Mishel Uncertainty in Illness Scale, the Chinese Version of Wake Forest Physician Trust Scale and several sociodemographic variables. In the qualitative part, 25 healthcare workers (HCWs) of 17 nurses and 8 physicians working in the frontline were invited using convenient and purposive sampling. Data was collected using a semi-structured online video interview. The transcribed text was analyzed using Colaizzi's phenomenological method. [Results] The results reveal that 25.7% of patients reported higher level of psychological distress ($n=31$, scoring ≥ 4). After controlling the sociodemographic variables, only severity of COVID-19 ($\beta=0.282$, $P=0.025$) and uncertainty in illness ($\beta=0.345$, $P=0.007$) shown significant effect on psychological distress in the regression model ($F=10.862$, $R^2=0.222$, $P<0.001$). The experience of healthcare workers emerged five themes: particularly needed psychological care, manifestation of negative emotion, Manifestation of proactive adaptation, Strategies relieving psychological distress, and gains of healthcare workers after delivering effective psychological care. [Conclusion] In conclusion, the current study has demonstrated that 25.7% of patients with COVID-19 still suffered from psychological distress. In this new epidemic, the psychological distress level of patients with COVID-19 should be given timely attention, and the severity of disease and uncertainty in illness had significant effect on distress. Training the healthcare workers on detecting the different manifestation of inner feelings of distress, offering exact and timely information about disease to decrease the uncertainty, and applying communication strategies to relieve psychological distress should be considered in the future, which may help the healthcare workers to gain psychological growth and mitigate working stress as well.

Keywords: coronavirus disease 2019, patients, psychological distress, healthcare workers, mixed-method study

炎症性肠病患者疾病获益感的潜在剖面分析

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摘要 目的 探究炎症性肠病患者疾病获益感的潜在类别, 分析不同类别患者的特征差异。**方法** 采用便利抽样法选取于2020年9月至2021年4月在南京市某三级甲等医院就诊的226例炎症性肠病患者为研究对象, 使用一般资料调查表、疾病获益感量表、伯克利情绪表达量表和社会支持评定量表进行调查。**结果** 炎症性肠病患者疾病获益感可分为3个类别: 低获益-应对无力组(51.0%)、中等获益组(28.3%)和高获益-感知被爱组(20.7%); Logistic回归分析显示, 相比于低获益-应对无力组, 中等获益组中处于中重度活动期的患者比例更低($OR=0.141$, $P=0.038$), 且中等获益组和高获益-感知被爱组中患者正性情绪表达更多($OR=1.272$, $P=0.029$; $OR=1.627$, $P=0.021$), 主观支持更高($OR=2.356$, $P<0.001$; $OR=8.031$, $P<0.001$)。**结论** 炎症性肠病患者疾病获益感存在明显的分类特征, 类别的影响因素涉及疾病活动度、正性情绪表达和主观支持, 需多关注疾病活动度高的患者, 鼓励患者表达疾病相关积极感受并促进其对社会支持的感知, 以提高患者的疾病获益感。

关键词 炎症性肠病, 疾病获益感, 潜在剖面分析, 社会支持, 自我表露

Latent profile analysis of benefit finding in patients with inflammatory bowel diseases

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Abstract: Objective To explore the potential categories of benefit finding in patients with inflammatory bowel diseases (IBD), and the different characteristics of each category. **Methods** 226 patients with IBD were selected in a

tertiary hospital in Nanjing by convenient sampling method from September 2020 to April 2021. General information questionnaire, benefit finding scale, Berkeley expressivity questionnaire and social support rating scale were used to conduct the investigation. **Results** The benefit finding in patients with IBD has 3 potential categories, namely low benefit finding-coping disability class (51.0%), moderate benefit finding class (28.3%) and high benefit finding-perceived loved class (20.7%). Logistic regression analysis showed that compared to low benefit finding-coping disability class, the proportion of patients with moderate to severe activity in moderate benefit finding class was lower ($OR=0.141$, $P=0.038$), and the patients in the moderate benefit finding class and high benefit finding-perceived loved class expressed more positive emotion ($OR=1.272$, $P=0.029$; $OR=1.627$, $P=0.021$) and perceived higher support ($OR=2.356$, $P<0.001$; $OR=8.031$, $P<0.001$). **Conclusion** Patients with IBD had obvious classification characteristics of benefit finding. The influencing factors were disease activity, positive emotional expression and perceived support. To improve benefit finding of patients, medical staff should pay more attention to patients with high disease activity, encourage to express disease-related positive feelings and promote the perception of social support.

Keywords: Inflammatory Bowel Disease; Benefit Finding; Latent Profile Analysis; Social Support; Self-Disclosure

失独父母的社会认同威胁与心理弹性：一项诠释学研究

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摘要 目的: 将社会认同威胁应用于解读失独父母的丧亲体验, 探索社会认同威胁的发生发展、以及心理弹性与社会认同威胁相互作用。方法: 采用目的抽样, 选择不同年龄组, 性别, 居住地区, 婚姻状况和孩子离世信息的 17 名失独者进行访谈, 以 Gadamer 诠释学范式解读其丧子体验, 采用 Van Manen 方法进行提炼主题。结果: 访谈结果诠释出三个主题: “带着新身份复原”、“身份威胁触发的再次崩溃”、“弹性和威胁交叉的不同模式”。社会认同威胁始于身份重建, 自我认同和社会认同相继进行, 悲伤随着身份重构而缓解。一旦被归类为失独群体, 失独父母会因内在自卑和外任污名而产生社会认同威胁, 社会认同威胁导致绝望和社会隔离, 加剧了痛苦和悲伤。个体弹性和威胁交织形成了四种不同的反应模式: 低弹性高威胁、低弹性低威胁、高弹性高威胁、高弹性低威胁。结论: 社会认同威胁是促进失独父母心理复原不可忽略的重要部分。结合中国文化观念, 开发心理弹性干预方案来促进身份重建、减少内化自卑非常有必要。本研究所发现的一些韧性应对策略, 可以考虑被纳入到心理弹性的干预方案当中。同时, 解除或者弱化内在威胁感, 可以减少对政府的苛责促进社会和谐、改善社交回避。

关键词 失独, 丧亲, 社会认同威胁, 心理弹性, 质性研究

Social identity threat and resilience of Chinese parents following the loss of an only child: an interpretive qualitative study

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Abstract: Objective: To interpret the social identity threat of those parents who have lost their only child, and explain how the psychological resilience acts to the threat of social identity, and to enrich the content of each theme in resilience program. Method: In the three administrative regions of urban, rural and urban-rural integration (town), 17 parents who have lost their only child were interviewed, with different age, gender, areas of residence, marital status and loss-related information. The Gadamer hermeneutic paradigm was used to interpret the experience, and the Van Manen method was used to identify the theme. Results: Three themes were identified: “Recovering with a new

identity", "Collapse again triggered by identity threat", "Different patterns of resilience and threat". The social identity threat began with identity reconstruction, self-identification and social identity were carried out one after another, and grief was alleviated with identity reconstruction. Once classified as a group of parents who have lost their only child, the parents were threatened by this social identity due to intrinsic inferiority and external stigma. The social identity threat led to despair and social isolation, which exacerbated pain and sorrow. Resilience and threat interweaved and formed four different reaction patterns, which were low resilience-high threat, low resilience-low threat, high resilience-high threat, and high resilience-low threat. Conclusions: The social identity threat was an important part of promoting the psychological recovery of parents who have lost their only child. It was necessary to develop a psychologically resilience intervention program, to promote identity reconstruction and reduce internalized inferiority. Some resilient strategies can be incorporated into interventions. Relieving or weakening the inner threat could reduce the blame on the government, promote social harmony, properly balance external exclusion, and improve the social avoidance of parents.

Keywords: only child loss, bereavement, social identity threat, resilience, qualitative study

接纳与承诺疗法对疾病照顾者的心理灵活性影响的 meta 分析

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摘要 背景: 接纳与承诺疗法 (Acceptance and commitment therapy) 是“认知与行为疗法第三浪潮”中最具代表性的治疗方法之一, 该疗法基于功能性语境主义和关系框架理论, 由两个过程六大核心技术组成。正念和接纳过程包括认知解离、以己为景和接纳, 行为改变过程包括承诺行动、关注当下以及明确价值。有研究证明该方法对慢性疼痛, 癌症患者干预有效。但是目前没有对疾病照顾者的干预效果进行评价, **目的** 通过 META 分析系统评价接纳与承诺疗法 (ACT) 对疾病照顾者心理灵活性, 疾病接受度及焦虑、抑郁和压力的干预效果。**方法** 计算机检索 Web of Science、EBSCO、PubMed、Ovid、EMbase、Cochrane Library、中国生物医学文献数据库、CNKI 和万方数据库中关于接纳与承诺疗法 (ACT) 对疾病照顾者的随机试验, 采用 RevMan5.3 软件进行分析。**结果** 最终纳入 13 篇文献, 合计样本量 1276 例, 其中干预组 607 例, 对照组 669 例。结果显示, ACT 能够提高疾病照顾者的心理灵活性[MD=-10.38, 95% (-18.89~-1.87), P<0.001], 疾病照顾者的接受度[MD=1.02, 95% (0.76~1.26), P<0.001], 减轻焦虑 [SMD=-0.63, 95% CI (-1.23~-0.03), P<0.001], 抑郁[SMD=-0.56, 95% (-1.10~-0.01), P<0.001]和压力[MD=-2.44, 95% (-2.68~-2.21), P<0.001]。**结论** 接纳与承诺疗法 (ACT) 对疾病照顾者的心理灵活性, 疾病接受度和焦虑、抑郁、压力的干预是有效的。

关键词 接纳与承诺疗法, 疾病照顾者, 心理灵活性, meta 分析

The effect of acceptance and commitment therapy on psychological flexibility of disease caregivers:meta analysis

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Abstract: Background: acceptance and commitment therapy is one of the most representative treatment methods in the "third wave of cognitive and behavioral therapy". Based on functional Contextualism and relational framework theory, it consists of two processes and six core technologies. The process of mindfulness and acceptance includes cognitive dissociation, taking oneself as the scene and acceptance. The process of behavior change includes commitment to action, paying attention to the present and clarifying value. Studies have proved that this method is effective in the intervention of patients with chronic pain and cancer. However, there is no evaluation of the

intervention effect of disease caregivers. **Objective:** to evaluate the intervention effect of acceptance and commitment therapy (ACT) on mental flexibility, disease acceptance, anxiety, depression and stress of disease caregivers through meta analysis system. **Methods:** the randomized trials of acceptance and commitment therapy (ACT) on disease caregivers in web of science, EBSCO, PubMed, Ovid, EMBASE, Cochrane Library, Chinese biomedical literature database, CNKI and Wanfang database were searched and analyzed by revman5.3 software. Results 13 literatures were finally included, with a total sample size of 1276 cases, including 607 Cases in the intervention group and 669 cases in the control group. The results showed that act could improve the psychological flexibility of disease caregivers [MD = - 10.38, 95% (- 18.89 ~ - 1.87), $P < 0.001$], the acceptance of disease caregivers [MD = 1.02, 95% (0.76 ~ 1.26), $P < 0.001$], reduce anxiety [SMD = - 0.63, 95% CI (- 1.23 ~ - 0.03), $P < 0.001$], depression [SMD = - 0.56, 95% (- 1.10 ~ - 0.01), $P < 0.001$] and stress [MD = - 2.44, 95% (- 2.68 ~ - 2.21), $P < 0.001$]. **Conclusion:** acceptance and commitment therapy (ACT) is effective in intervening the psychological flexibility, disease acceptance, anxiety, depression and stress of disease caregivers.

Keywords: acceptance and commitment therapy, disease caregivers, psychological flexibility, meta-analysis

4.21 语言心理学专业委员会

(1) “语言心理学专业委员会”口头报告分场 1

语言转换促进双语者不同认知控制成分

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摘要 双语认知控制优势一直是双语研究中的热点, 最新的研究发现, 语言转换训练能促进双语者的监控与抑制控制能力, 说明语言转换是促进双语认知控制优势产生的一个重要因素。同时, 也表明双语语言控制与一般认知控制在机制上存在一定程度的重叠。那么语言转换是如何作用并影响一般认知控制的发展? 进一步讲, 与一般语言训练相比, 语言转换训练有对非目标语言的抑制, 也有不同语言的转换。语言转换是如何促进一般认知控制中抑制和转换能力的发展? 已有的研究尚无法做出解释。针对以上问题, 本研究设计两个行为实验, 系统探究语言转换对双语者不同认知控制成分的影响。实验一探讨不同语言转换频率双语者在不同认知控制成分上的差异, 结果表明, 高语言转换频率双语者在干扰抑制任务和转换任务中的表现显著好于低语言转换频率双语者, 但高、低语言转换频率双语者在反应抑制任务的表现没有差异。实验二探讨语言训练和语言转换训练对认知控制成分的影响, 低语言转换频率双语者随机进行不同的数字命名训练: 中文命名、英文命名和中英命名, 训练前、后分别完成同实验一的认知控制任务。实验二结果表明, 中文命名训练的双语者在认知控制任务上没有显著差异; 英文命名训练的双语者在干扰抑制任务的表现存在显著差异, 训练后的成绩显著好于训练前, 在反应抑制和转换任务上的表现没有显著差异; 中英命名训练的双语者在干扰抑制和转换任务的表现存在显著差异, 训练后的成绩显著好于训练前, 在反应抑制任务上的表现没有显著差异。综合两个实验结果, 双语者进行语言转换包括了两个认知加工: 一是对非目标语言的抑制; 二是不同语言的转换。抑制非目标语言的加工提高了双语者认知控制的干扰抑制能力; 转换至目标语言的加工促进了双语者认知控制的转换能力, 但语言转换并未促进认知控制中反应抑制能力的提高。综上所述, 本研究认为语言转换会促进双语者认知控制能力并在干扰抑制和转换成分上进一步表现出双语认知控制优势。

关键词 语言转换, 认知控制, 双语

Language Switching Facilitates Cognitive Control Components in Bilinguals

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Abstract: The advantage of bilingual cognitive control has stayed a hot issue in bilingual research. The latest research has found that language switching training promotes the ability of monitor and inhibit control in bilinguals, indicating that language switching is an important factor on the bilingual cognitive control advantages. At the same time, it demonstrates that there is a certain extent of overlap between bilingual language control and domain-general cognitive control. However, how does language switching function and affect the development of domain-general cognitive control? Furthermore, compared with general language training, language switching training includes the inhibition of non-target languages and the switch of different languages. How does language switching promote the development of inhibition and switching in domain-general cognitive control? It still remains unexplainable in current studies. This study designed two behavioral experiments, so as to systematically explore the influence of language switching on different cognitive control components in bilinguals. Experiment 1 explored the influence of different language switching frequencies on cognitive control components. Bilinguals with high and low language switching frequency were required to complete the same cognitive control tasks. Experiment 1 demonstrated that in the interference suppression and switching tasks, bilinguals with high language switching frequency performed significantly better than low language switching frequency. However, there was no difference in response inhibition task between bilinguals with high and low language frequency. Experiment 2 investigated the effects of language switching training on cognitive control components. Bilinguals with low language switching frequency randomly participated in different number naming trainings: Chinese naming, English naming and Chinese-English naming tasks. All bilinguals got through the same tasks with Experiment 1 before and after training. No significant differences were found in the cognitive control tasks for bilinguals trained in Chinese naming; The performance of bilinguals trained in English naming had significant differences in the interference suppression tasks, which was better after training than before training. But no significant differences were found in response inhibition and switching tasks; The performance of bilinguals trained in Chinese-English naming had significant differences in interference suppression and switching tasks, which was better after training than before training. Yet no significant differences were found in response inhibition task. Considering the results of two experiments, language switching includes two cognitive processes: the inhibition in the non-target languages and the switching to the target languages. Suppressing the non-target languages promotes bilinguals' ability of inhibition, switching to the target language facilitates bilinguals' ability of switching, whereas language switching does not promote the ability of response inhibition in domain-general cognitive control. In summary, this study believes that language switching facilitates the domain-general cognitive control and further shows the bilingual advantages in terms of interference suppression and switching.

Keywords: Language switching, Cognitive Control, Bilingualism

高低熟练英汉双语者执行注意的差异研究

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摘要 近几十年来, 有关双语经验的认知效应受到研究者的广泛重视, 有研究者提出, 执行注意是双语认知效应的解释框架, 其中, 执行注意是指记忆表征在外界干扰下保持高度活跃状态的一种能力, 这些表征可能反映了环境中的行动计划、目标状态或任务相关刺激。这种执行注意的能力是潜在的, 可以由两个成分——目标维持和干扰维持作为测量指标。那么执行注意是否可以作为双语认知效应的内在机制? 本研究试通过将英语过专业八级作为高熟练英汉被试, 英语没过四级的作为低熟练英汉被试, 探讨高低熟练英汉双语者在目标维持和干扰维持上的差异及电生理机制。预期结果, 研究一: 在高任务难度程度下, 高熟练双语组延迟匹配任务上的表现优于低熟练组 (实验 1a); 高熟练双语组和低熟练双语组在不同的延迟时间中信息维持程度不同 (实验 1b), 具体表现为高熟练双语者的表现优于低熟练双语者。高熟练组在低任务难度中的 N2 幅度与低熟练组无差异, 随着任务难度增加, 高熟练组的 N2 成分更大, 并具有更大的 P2 振幅, 高熟练组的 P3 随着任务难度增加而增加, 而在更高的任务难度上降低。研究二: 在有干扰任务情况下, 高熟练双语者对目标信息的保持和对干扰任务的处理更好。在有干扰任务下, 高熟练双语者的 P300 振幅低于低熟练双语者, 高熟练组的 N2 成分更大。

关键词 英汉双语者, 执行注意, ERP

A Study on the Difference of Executive Attention of High and Low Proficiency Bilinguals

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Abstract: In recent decades, researchers have paid extensive attention to the cognitive effects of bilingual experience. Some researchers have proposed that executive attention is the explanatory framework of bilingual cognitive effects. Executive attention refers to the ability of memory representation to maintain a highly active state under external interference. These representations may reflect action plans, target states or task related stimuli in the environment. This ability to perform attention is potential and can be measured by two components - goal maintenance and interference maintenance. So can executive attention be the internal mechanism of bilingual cognitive effect? This study attempts to explore the differences and electrophysiological mechanisms of goal maintenance and interference maintenance between high and low skilled English-Chinese bilinguals. Expected results: Study 1: under the high task difficulty, the performance of the highly skilled bilingual group on the delayed matching task is better than that of the low skilled group (Experiment 1a); High skilled bilingual group and low skilled bilingual group had different degrees of information maintenance in different delay time (Experiment 1b); specifically, the performance of highly skilled bilinguals is better than that of low skilled bilinguals. The N2 amplitude of the highly skilled group in the low task difficulty is no different from that of the low skilled group. With the increase of task difficulty, the N2 component of the highly skilled group is larger and has a larger P2 amplitude. The P3 of the highly skilled group increases with the increase of task difficulty and decreases in the higher task difficulty. Study 2: in the case of interference tasks, highly skilled bilinguals had better retention of target information and processing of interference tasks. Under the interference task, the P300 amplitude of high skilled bilinguals was lower than that of low skilled bilinguals, and the N2 component of high skilled group was greater.

Keywords: English-Chinese bilinguals, executive attention, ERP

自主语言转换中的抑制控制机制：来自 ERP 的证据

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摘要 基于抑制控制模型, 先前研究对语言转换的内在加工机制进行了系统的探讨, 发现抑制控制是双语者语言转换的重要加工机制。然而, 先前的研究发现主要是基于生态效度较低的强制语言转换, 而日常生活中较常发生的自主语言转换的内在加工机制尚不清楚。本研究拟基于抑制控制模型和词汇通达理论之争, 借助事件相关电位(ERP)技术, 通过对比自主语言转换和强制语言转换内在加工机制的异同, 系统探讨双语者在自主语言转换中是否存在抑制控制机制, 以及如何进行抑制控制加工。非熟练的汉-英双语者分别完成强制语言转换任务和自主语言转换任务, 同步采集其脑电数据。结果发现, 在自主语言转换中出现了经典的语言转换代价和语言优势反转效应, 以及 N2 和 LPC 成分, 表明自主语言转换中同样存在抑制控制加工, 并且该抑制控制加工同时发生在自主语言转换的早期和晚期阶段; 此外, 我们发现, 与强制语言转换相比, 自主语言转换中存在更小的转换代价和语言优势反转效应, 并且两者引发的 N2 与 LPC 波幅大小也存在显著不同。综上, 本研究的实验结果表明了抑制控制是自主语言转换的重要加工机制, 并且其抑制控制加工过程与强制语言转换存在显著不同。

关键词 自主语言转换, 抑制控制机制, 转换代价, ERP

Inhibitory Control mechanism in voluntary language switching: evidence from an ERP study

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Abstract: Basing on the Inhibitory Control Model (Green,1998), previous studies have systematically explored the internal processing mechanism of language switching and found that inhibitory control is an important processing mechanism of bilingual language switching. However, findings of previous studies mainly based on the mandatory language switching which had low ecological validity. The processing mechanism of the voluntary language switching which occurs more frequently in daily life, remains controversial. Based on the controversy between the inhibitory control model and the lexical accessibility-only account, the present study aimed to investigate if the inhibitory control processing existed in the voluntary language switching and how the inhibition control processing was implemented in the voluntary language switching, by comparing the internal cognitive processing mechanism underlying the voluntary and mandatory language switching through the event related potential (ERP) technique. Non-proficient Chinese-English bilinguals completed the mandatory language switching and voluntary language switching task respectively, and the EEG data were collected simultaneously. Significant language switching cost and reversed language dominance effect were observed in the voluntary language switching, as well as the N2 and LPC components, which suggested that the inhibitory control processing existed in the voluntary language switching and it occurred in both the early and late stages of the voluntary language switching. Furthermore, we found smaller switching cost and reversed language dominance effect in the voluntary language switching as compared to the mandatory language switching. The differences in amplitude of N2 and LPC between the voluntary language switching and the mandatory language switching also reached significance. In sum, our findings indicated that the inhibitory control was an important processing mechanism of the voluntary language switching, but such inhibitory control processing was significantly different from that in the mandatory language switching.

Keywords: voluntary language switching, inhibitory control mechanism, switch cost, ERP

二语熟练度调节双语控制对一般领域认知控制的依赖

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摘要 双语控制与一般领域认知控制的关系一直是双语领域的热点研究问题。前人研究大多通过考察同一批双语者在语言控制与非语言控制任务下行为表现的相关来回答这一问题, 并根据相关系数的显著性一般做出三类论断: 语言控制与一般领域认知控制完全相同、部分相同或者完全不同。这些矛盾的论断很可能是因为以往研究在考察该问题时忽略了二语熟练度可能的调节作用, 即双语控制与一般领域认知控制的关系可能在二语熟练度不同的双语者中有不同的表现。为了检验这一假设, 本研究招募了 36 名汉-英非平衡双语者, 让他们完成西蒙任务 (Simon task) 以测试一般领域认知控制能力, 完成牛津分级测试 (Oxford Placement Test) 以测试二语熟练度, 完成单语和双语情境下的图片命名任务以测试局部和全局的语言控制。结果发现: 低熟双语者的切换代价 (即, 在双语情境下切换到另一种语言比重复同一种语言所额外花费的时间) 能够显著地被其西蒙分数所正向预测, 但该现象没有在高熟双语者中出现; 高熟双语者的混合代价 (即, 在双语情境下重复同一种语言比在单语情境下重复同一种语言所额外花费的时间) 能够被其西蒙分数所正向预测, 但该现象没有在低熟双语者中出现。该结果表明双语者的二语熟练度确实会调节其双语控制对一般领域认知控制的依赖。即, 二语熟练度越低的双语者越依赖一般领域认知控制发挥语言局部控制功能, 语言熟练度越高的双语者越依赖一般领域认知控制发挥语言整体控制功能。这意味着, 在语言发展的过程中, 双语者调用一般领域认知控制系统来解决语言领域认知冲突的过程存在者从局部主导向全局主导的转变。

关键词 双语控制, 二语熟练度, 一般领域认知控制, 全局控制, 局部控制

Second language proficiency modulates the dependency of bilingual language control on domain-general cognitive control

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Abstract: The relationship between bilingual language control (BLC) and domain-general cognitive control (DGCC) has been a hot topic in the research field of bilingualism. Previous studies mostly examined the correlation between performances for bilinguals in language control tasks and that in non-verbal control tasks and came to conclusions like BLC and DGCC are overlap, partially overlap, or qualitatively different. These contradictory conclusions are possibly due to the neglect of moderating effect of second language (L2) proficiency, that is, the relationship between BLC and DGCC might vary with the L2 proficiency of bilinguals. To exam this hypothesis, we recruited 36 unbalanced Chinese-English bilinguals to perform the Simon task (to assess DGCC), Oxford Placement Test (to assess L2 proficiency), and picture naming tasks in single-and dual-language contexts (to evoke local and global language control). We find a significant positive correlation between switching costs (the extra time spent in switching to a different language than repeating the same language) and Simon scores in bilinguals with low L2 proficiency, but not in bilinguals with high L2 proficiency. Furthermore, a significant positive correlation between mixing costs (the extra time spent in repeating the same language in dual-language context than that in single-language context) and Simon scores in bilinguals with high L2 proficiency, but not in bilinguals with low L2 proficiency. These results verify the moderating effect of L2 proficiency on the relationship between DGCC and BLC, that is, bilinguals with less proficient L2 rely on DGCC more for local language control, whereas bilinguals with more proficient L2 rely on DGCC more for global language control. This may imply a shift from local to global for the dependency of BLC on DGCC during the L2 development of bilinguals.

Keywords: bilingual language control, second language proficiency, domain-general cognitive control, local control, global control

语言相似性影响双语者执行控制相关脑机制的元分析

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摘要 双语者需要在两种语言之间切换，他们比单语者往往表现出更强的执行控制加工能力。而且，语言间的相似性越高，双语者完成语言切换任务时需要的执行控制加工负荷就越强。但是，双语者的执行控制加工负荷受语言相似性的影响还缺乏神经生理方面的研究证据。本研究通过对现有双语者的脑功能成像研究进行元分析，对比考察高、低语言相似性的双语者的在完成语言执行控制加工时的大脑神经机制。本元分析共纳入了1990年到2020年发表的26篇fMRI研究，主要收集了双语者在完成语言切换、翻译任务时的神经激活。将双语者分为语言高、低相似两组：高相似组双语者的母语和第二语言均为英语、法语等拼音文字，共有24个实验对比；低相似性组的母语为中文，第二语言为英语、法语等拼音文字，共有20个实验对比。激活似然估计(ALE)发现低相似组比高相似组更多激活了右侧扣带回、左侧中央前回和枕下回区域，表明语言低相似组需要征用更多的脑区进行语言学属性的加工。而高相似组比低相似组更多激活的脑区主要分布在左侧前额叶及右侧额下回后部，这些脑区与执行控制网络有较大关联，表明双语者在进行翻译、语言切换过程时，较高的语言相似性会带来更大的执行控制负荷。本研究揭示了双语者所掌握的两种语言的相似性会影响其执行控制加工负荷，并塑造双语者在完成语言切换时独特的大脑神经机制。

关键词 双语者，语言相似性，执行控制，神经网络，元分析

Meta-analysis of brain mechanisms related to language similarity affecting executive control of bilinguals

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Abstract: Bilinguals showed a higher capability of executive control processing than monolinguals because bilinguals require more switch processing between the two languages. Evidences have shown that bilinguals with higher similar languages required a heavier load of the executive control processing in language switching tasks. However, there is still a lack of neurophysiological research evidence that the executive control load of bilinguals is affected by language similarity. This study used a meta-analysis of existing bilingual brain function imaging research to compare and investigate the brain neural mechanisms of bilinguals with high and low language similarity when they completed language executive control processing. This meta-analysis included 26 fMRI studies published from 1990 to 2020 and mainly collected the neural activation of language switching and translation tasks in bilinguals. Bilinguals were divided into two groups: high and low similarity groups. The high similarity group refers that the first and second language are both alphabetic languages such as English-French, and this group included a total of 24 contrasts; The low similarity group refers that the first language is Chinese and the second language is alphabetic languages such as English, and this group included a total of 20 contrasts. Activation Likelihood Estimation (ALE) found that the low similarity group activated the right cingulate gyrus, left precentral gyrus, and inferior occipital gyrus more than the high similarity group, indicating that the low similarity group needs to recruit more brain regions for processing linguistic differences. The high-similarity group activated more left prefrontal cortex and the right inferior frontal gyrus than the low-similarity group. These brain regions are closely related to the executive control network, indicating that higher language similarity will bring greater execution control processing load in language switching and translation tasks. This study reveals that the similarity of languages mastered will affect the executive control processing load and shape bilinguals' unique brain neural mechanism when they complete language switching.

Keywords: Bilingual, language similarity, executive control, neural networks, meta-analysis

(2) “语言心理学专业委员会”口头报告分场 2

文化，就是如此根深蒂固： 汉英双语者母语和二语间文化场景语义启动效应的差异

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摘要 语言与文化关系密切, 但以往概念加工的研究较少关注文化语义加工。本文将探讨汉英双语者母语和二语表征的背景和客体概念间文化语义关系加工差异, 以进一步明确文化场景语义的加工及其机制。本研究将操纵文化场景关系 (一致 vs. 不一致), 并纳入文化背景词启动 (中国文化 vs. 西方文化) 与呈现语言 (汉语 vs. 英语) 为自变量, 采用语言内语义启动范式, 以探究文化场景启动效应是否受呈现语言的影响。实验前匹配中国文化属性和西方文化属性的背景客体配对词, 以汉语或英语呈现的文化背景词和文化客体词分别为启动词和目标词。实验 1 任务为语义分类, 对词汇的加工程度较深; 实验 2 任务为词汇命名, 对词汇的加工程度较浅。两个实验分别有 47 名和 56 名中国大学生参与。结果发现无论是语义分类任务出现了语义启动效应在母语与二语呈现的分离: (1) 语义分类任务中, 材料以汉语呈现时, 中国文化背景词与西方文化背景词启动均能出现语义启动效应, 即文化场景一致条件下的反应要显著快于文化场景不一致条件; 材料以英语呈现时, 只有西方文化背景词启动出现了语义启动效应。(2) 词汇命名任务中, 材料以汉语呈现时, 中国文化背景词与西方文化背景词启动均能出现语义启动效应; 材料以英语呈现时, 两种文化背景词均启动下未能出现语义启动效应。结果表明, 母语表征的具有母语所在文化属性背景概念和客体概念以及具有二语所在文化属性背景概念和客体概念能通过文化场景知识在母语语义网络中紧密联结, 无论是在语义加工深还是浅的任务中均能激活这些联结; 二语表征的具有二语所在文化属性背景概念和客体概念在二语语义网络中存在相对较弱的联结, 只有在语义加工较深的情况下被激活; 二语呈现的母语所在文化场景词对的文化语义关系则较难被提取, 无论是在语义加工深还是浅的任务中均没能激活这些联结。

关键词 文化场景关系, 语言内语义启动, 概念加工, 双语

Differences in priming effects of cultural scene relations between L1 and L2 in Chinese-English bilinguals

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Abstract: Concept processing is subject to the cultural system of a given group. This study continues to explore the conceptual processing of cultural scene relations in Chinese-English bilingual people in order to further clarify the processing mechanism of cultural scene semantics. Specifically, based on previous research, the present study took presented language as an independent variable and adopted a within-language semantic priming paradigm to explore whether the cultural scene semantic priming effect is affected by the presented language. In Experiments 1 and 2, researchers administered a semantic categorization task and a word-naming task, respectively. Before the main experiment, the background-object pairs with Chinese cultural attributes and Western cultural attributes were strictly

matched (e.g., spring festival-dumplings; Christmas eve-pizza). The results showed that the priming effect of L1 and L2 presentation were disassociated: (1) in the semantic categorization task, when the materials were presented in L1, semantic priming effects were found when the priming words were Chinese and Western background words, that is, the reaction under the condition of cultural scene consistency was significantly faster than that under the condition of cultural scene inconsistency; while when the materials were presented in English, the semantic priming effect was only found when the priming words were Western background words. (2) In the naming task, when the materials were presented in L1, semantic priming effects were found when the priming words were Chinese and Western background words, that is, the reaction under the condition of cultural scene consistency was significantly faster than that under the condition of cultural scene inconsistency; while when the materials were presented in English, no semantic priming effect was found when the priming words were Western background words. The results of indicated that for unbalanced Chinese-English bilingual people, words associated with cultural scene relations with the culture of L1 and L2 presented in L1 Chinese are stored closely to each other in L1 semantic networks; the association between word pairs in cultural scene relations of L2 presented in L2 English is relatively weaker; Chinese-English bilinguals cannot establish a cultural scene semantic connection with the culture of L1 in L2 semantic networks. This indicates that it is difficult for Chinese-English bilingual people to extract the cultural semantic relations of word pairs in cultural scene relations with the culture of L1 presented in L2. This study further enriches our understanding of concept processing in bilingual people with regard to the relations between background and object in L1 and L2 representations and expands the theory of semantic memory and conceptual knowledge.

Keywords: cultural scene relations, within-language semantic priming, concept processing, bilingual

音高手势在二语词汇声调学习中的作用

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摘要 声调是声调语言 (例如汉语和泰语) 的一个重要语音特征, 能够用于区别词汇的意义, 对声调语言作为第二语言的学习有重要意义。声调的主要特征在于音节水平的音高变化, 音高手势则是学习者利用手部动作来模拟声调的音高变化。具身认知理论认为, 手势的使用能够为学习者提供感知与运动等多模态的经验, 有助于个体的认知加工。相比对声调音高变化的观察 (音高观察), 音高手势更有具身性。但这种方法是否更有助于二语词汇声调的学习, 先前的研究结果并不一致。此外, 先前研究只初步探讨了音高手势对声调范畴学习 (识别声调的范畴) 的影响。而声调学习除了范畴的学习外, 还有音高声学特征 (区分声调的音高声学特征) 和语音-语义联结 (判断声调词的语义) 的学习。音高手势对这两方面声调学习的影响仍有待探讨。因此, 本研究的目的在于进一步考察音高手势在音高声学特征, 声调范畴和语音-语义联结等多个层面二语词汇声调学习中的作用。具体来说, 本研究以没有泰语学习经验的汉语母语者为研究对象, 采用区分范式、辨认范式和词图匹配范式, 分别比较了三种方法 (音高手势, 音高观察, 无手势与观察) 对泰语声调的音高声学特征, 声调范畴和语音-语义联结学习的影响。总体研究结果显示, 相比音高观察和无手势与观察两种方法, 音高手势对泰语声调的学习有显著的促进作用, 这种促进作用表现在各个层面的声调学习中。而音高观察和无手势与观察对泰语声调各层面学习的影响均没有显著差异。本研究揭示了音高手势在二语词汇声调学习中的作用, 也体现了具身经验对二语语音学习的促进作用。

关键词 音高手势, 词汇声调学习, 二语, 具身认知

The role of pitch gesture in the learning of second language lexical tones

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Abstract: Lexical tone is an important phonological feature for tonal languages like Mandarin and Thai. It could differentiate the word meanings, and is significant to tonal language as a second language (L2) learning. Lexical tone is a kind of pitch variation on the syllable level, and pitch gesture refers to that learners adopt their hand movements to simulate the pitch variation of lexical tones. The embodied cognition theory proposes that the use of gesture provides learners multi-model experience including perception and motion, which can promote individuals' cognitive processing. Compared with pitch observation, pitch gesture could provide learners more embodied experience. But it was controversial that whether the pitch gesture could facilitate L2 lexical tone learning better than the pitch observation. Moreover, previous studies mainly explored the role of pitch gesture in lexical tone identification. How this method affects lexical tone discrimination and word-meaning association remains to be further investigated. Therefore, the present study aims to explore the role of pitch gesture in L2 lexical tone learning, including lexical tone discrimination, lexical tone identification, and word-meaning association. Specifically, we recruited native speakers of Mandarin who did not have Thai learning experience to participate in the experiment, and compared the effects of three approaches (pitch gesture, pitch observation, no gesture or observation) on the three aspects of Thai lexical tone learning, via discrimination, identification, and word-picture matching paradigms respectively. The results showed that the pitch gesture played a significant better role than the pitch observation and no gesture or observation in the learning of Thai lexical tones, including lexical tone discrimination, lexical tone identification, and word-meaning association. But the pitch observation and no simulation or observation played similar roles in the three aspects of lexical tone learning. These results revealed the role of pitch gesture in the learning of L2 lexical tones, and suggested that the embodied experience could facilitate L2 speech learning.

Keywords: pitch simulation, lexical tone learning, second language (L2), embodied cognition

汉语双字词加工中的家族大小效应 以及个体语言认知能力差异的影响

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摘要 词汇是文本阅读最基本也是最重要的单位。中英文研究表明, 视觉词汇识别会受其正字法家族大小的影响。目前拼音文字的家族大小效应研究已经得出较为一致的结果, 而家族大小在汉语双字词识别中的影响作用目前仍然存在争议, 尤其是忽视了语义加工在汉语词汇识别中的作用以及首字字频与家族大小间的共变。此外, 拼音文字的研究表明成年熟练读者的个体差异也是影响词汇通达的重要因素, 而汉语阅读研究极少关注词汇识别中熟练读者的个体差异因素, 并且目前仍秉持“所有熟练阅读者以相同的方式进行阅读”的观点, 极少关注熟练读者的个体语言认知能力的差异对词汇识别的影响。基于此, 本研究以成年正常汉语读者为研究对象, 采用词汇判断任务, 同时操纵词频和首字家族大小, 严格控制首字字频、笔画数等因素, 探讨汉语双字词识别中的家族大小效应。然后采用根据汉语成年读者的特点自编的拼写听写测验和阅读理解测验对被试的语言能力进行测验, 探讨成年读者在语言能力上的个体差异对词汇识别的影响。结果表明: (1) 在汉语双字词识别中, 首字家族大小表现为促进效应, 但这一效应受词频的调节, 主要表现在低频词的识别中; (2) 相对于高能力者来说, 这种促进效应在低能力者身上更为明显。

关键词 家族大小, 家族词, 词频, 汉语双字词, 个体差异

The effects of neighborhood size and individual differences in linguistic skills on the recognition of Chinese words

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Abstract: Recognizing word is the most basic and important process during reading. A large number of studies have shown that neighborhood size is an important factor affecting word recognition. At present, the research on the of neighborhood size effect of alphabetic writing had reached relatively consistent results. The effect of neighborhood size on Chinese word recognition is unclear, especially ignoring the role of semantic processing in Chinese lexical recognition and the covariation between the frequency of the initial character and the neighborhood size. In addition, the study of alphabetic writing shows that the individual difference of adult skilled readers is also an important factor affecting word access, while the research on Chinese reading still adheres to the view that "all skilled readers read in the same way" and pays little attention to the influence of individual differences in linguistic skills on word recognition. In this research, we studied recognition of Chinese two-character words in a lexical decision task by manipulating neighborhood size and word frequency, and controlling the frequency of the initial constituent character. Individual differences in linguistic skills were assessed through tests of spelling and reading comprehension. The results of Linear Mixed Models showed that: (1) a larger neighborhood size of the initial character had a facilitative effect on Chinese word recognition, but mainly for low-frequency words, and (2) this pattern was clearer for readers with lower vs. higher linguistic abilities.

Keywords: Neighborhood effect, neighbors, word frequency, Chinese two-character words, linguistic skills

汉语双字词的家族大小效应——来自三个实验任务的证据

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摘要 书面阅读是个体从外界获取语言视觉信息的重要方式, 包括篇章阅读、句子阅读、词汇识别和单字识别。其中词汇识别是语言学习中不可缺少的一部分。一些已知的中英文研究表明, 词汇识别会受其一些词汇特性影响, 本研究更感兴趣的是正字法家族词和词频。拼音文字中的家族大小效应已经确定为在低频词上, 大家族词比小家族词表现出促进性效应。拼音文字和汉语的语言系统之间的正字法深度有所不同。并且已有研究表明在汉语双字词的家族大小效应上没有一致的结论。本研究通过操纵首字家族大小和词频, 同时控制尾字家族大小、首尾字字频和笔画数等, 采用了能够分别表现出词汇识别不同阶段的三个实验任务, 包括命名、词汇决策和阅读 (测量目标单词的眼睛注视时间) 来观察家族词作用于词汇识别的阶段及作用效果量。最后使用 R 线性混合模型进行数据分析, 结果显示: 在命名和词汇判断任务中的反应时和正确率上均表现出家族大小和词频的促进性效应, 即大家族的反应时显著低于小家族; 高频词的反应时显著小于低频词; 在句子阅读中的首次注视时间和凝视时间上均表现出促进的家族效应。但家族大小在三个实验任务中表现出具体效应量不同, 词汇判断的家族效应量要大于句子阅读, 命名次之, 根据 Li(2015)的语义激活模型, 这种促进效应可能是由于目标词与家族词之间形成的语义网络链接系统, 家族词越多, 链接越强, 进而导致语义激活以加速单词的识别。

关键词 家族词, 家族效应, 正字法, 汉语双字词

Orthographic Neighborhood Size Effects of Chinese two-character words--Evidence from three experimental tasks

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Abstract: Written reading is an important way for individuals to obtain language visual information from the outside world, including text reading, sentence reading, lexical recognition and character recognition. Among them, lexical recognition is an indispensable part of language learning. Some known Chinese and English studies have shown that lexical recognition will be influenced by its lexical characteristics, and this study is more interested in orthographic neighborhood words and word frequency. The neighborhood size effect in alphabetic language has been determined to be that in low-frequency words, large neighborhood words show a promoting effect compared with small neighborhood words. There are differences in orthographic depth between alphabetic and Chinese language systems. Studies have shown that there is no consistent conclusion on the neighborhood size effect of Chinese double words. In this study, three experimental tasks, including naming task, lexical decision task and reading (measuring the eye gaze time of target words), were adopted to observe the stages and effects of neighborhood words on lexical recognition by manipulating the first character neighborhood size and word frequency, controlling the size of the last word neighborhood, the frequency of the first and last words and the number of strokes. Finally, the R linear mixed model is used to analyze the data. the results show that the neighborhood size and word frequency show facilitative effect on the reaction time and accuracy in naming and lexical judgment tasks, that is, the reaction time of large neighborhood is significantly lower than that of small neighborhood; The reaction time of high-frequency words is significantly smaller than that of low-frequency words. Both the first fixation time and gazing time in sentence reading show the facilitative effect of neighborhood size. However, neighborhood size has different specific effects in the three experimental tasks, and the neighborhood effect of lexical decision task is greater than that of sentence reading, followed by naming. According to the semantic activation model of Li(2015), this promotion effect may be due to the semantic network link system formed between target words and neighborhood words. The more neighborhood words, the stronger the link, which leads to semantic activation to accelerate word recognition.

Keywords: Neighborhood words, Neighborhood Size Effects, Orthography, Chinese two-character words

参数相关的 fMRI 揭示汉字阅读的正字法、语音和语义加工脑机制

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摘要 视觉词汇阅读涉及了正字法、语音和语义三种认知加工。汉字阅读的认知神经科学研究对上述认知加工相关的脑机制积累了大量证据, 但仍然存在着不一致的认识。主要是因为大量研究都是采用因素设计的方法来探讨与上述加工相关的脑区, 从而发现相同的脑区可能对应着不同的认知加工。本研究采用多参数相关的 fMRI 研究, 收集了 10 名健康大学生被试阅读 360 个汉字材料时的脑区激活, 这些汉字材料同时考察了与正字法加工相关的部件数和笔画数、与语音加工相关的声旁规则性和一致性、以及与语义加工相关的可表象性、具体/抽象性以及形旁透明度等词汇属性。基于数据驱动的独立成分分析(ICA)方法, 通过计算每种词汇属性值的时间序列与独立脑成分的时间序列之间的相关性, 系统地探讨汉字阅读神经网络中与不同属性相关的脑区激活。结果发现与词形、语音和语义属性都相关的脑区涉及了前人发现的整个阅读神经网络, 主要分布在双侧枕下至梭状回, 扣带回后部以及楔叶, 颞叶区域包括颞上回、颞下回及其附近的颞中回, 以及前额叶和脑岛。进一步的联合分析发现, 与正字法加工相关的脑区主要包括双侧梭状回和楔前叶、颞上回前部、额上回和额中回脑区。而与语音加工相关的脑区主要位于左侧颞上回; 与语义加工相关的脑区主要包括左侧

角回和脑岛。研究结果基于数据驱动的方法为汉字阅读的正字法、语音和语义三种认知加工相关的脑区激活提供了新的研究证据。

关键词 汉字阅读, 正字法, 语音, 语义

A Multiparametric fMRI reveals the brain mechanism of orthographic, phonetic, and semantic processing in Chinese character reading

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Abstract: Visual word reading involves the cognitive processing of orthography, phonology, and semantics. A considerable amount of evidence for the brain mechanisms of the above-mentioned cognitive processing has been accumulated from cognitive neuroscience research on Chinese character reading. However, there are still inconsistent understandings. The main reason is that many studies adopted the method of factor design to explore the brain areas related to the processing mentioned above and found that the same brain area may correspond to different cognitive processing. The current study used a multiparametric approach in fMRI to collect the brain activation of ten healthy university students when they read 360 Chinese characters. These Chinese characters were well-designed by evaluating their attributes, including the number of radicals and strokes associated with orthographic processing, the regularity and the consistency of the phonetic radical associated with phonological processing, as well as the imageability, concreteness/abstraction, and transparency of the semantic radical associated with semantic processing. Based on the data-driven independent component analysis (ICA) method that calculates the correlation between the time series of each attribute score and independent brain components, we systematically explored the brain activation related to different attributes in the neural network of Chinese character reading. The results showed that the brain areas associated with orthographic, phonological, and semantic attributes involved the entire reading neural network discovered by previous studies, mainly distributed in the bilateral inferior occipital cortex to fusiform gyrus, the posterior of the cingulate gyrus, the cuneus, and the temporal lobes including the superior temporal gyrus, the inferior temporal gyrus, and the nearby middle temporal gyrus, as well as the prefrontal lobe and insula. Further conjunction analysis revealed that the brain areas associated with orthographic processing mainly included bilateral fusiform gyrus and precuneus, anterior superior temporal gyrus, superior frontal gyrus, and middle frontal gyrus. The brain areas associated with phonological processing were mainly located in the left superior temporal gyrus, while the brain areas associated with semantic processing mainly included the left angular gyrus and the insula. The current data-driven approach provided new evidence for the activation of brain regions associated with the cognitive processing of orthography, phonology, and semantics in Chinese character reading.

Keywords: Chinese character reading, orthography, phonology, semantics

汉语二语学习者语言层级结构的神经追踪研究

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摘要 在言语知觉中, 母语者能够快速构建和识别语言层级结构(如字、词和句子)从而达成语言理解。这一过程依赖于大脑中枢神经系统对语言层级结构的内部神经表征, 是实现言语交流和沟通的基础。二语学习者的语言加工能力与母语者存在差距, 与第二语言相关的神经加工与表征能力可能受到限制。目前尚不清楚的是: 与汉语母语者相比, 以汉语为第二语言的学习者加工语言层级结构的神经活动有怎样的特点? 针对这一问题, 本研究采用脑电记录方法和多层级神经追踪实验范式, 将连续语音刺激中不同语言结构(字、词和句)标记在 4 Hz、2 Hz 与 1 Hz 三个目标频率上, 从而考察汉语母语者(24 名, 19-31 岁)与汉语二语学习者(24 名, 21-31 岁)两组被试在主动注意和被动注意两种实验条件下对不同语言结构的神经追踪活动。通过试次间相位相干性分析, 研究结果发现汉语母语者在不同注意条件下对字、词和句频率均有显著的高相干

性，即无论是否注意听觉通道，汉语母语者均能够成功追踪不同层级的语言结构，同时注意对字和词频率的相位相关性具有调节作用。汉语学习者仅在主动注意的条件下能够追踪字和词层面的语言结构，对句层面的结构无法成功追踪；在非注意状态下无法追踪高级语言结构（词和句）。这一结果表明，相对于汉语母语者的自动化语言层级加工，汉语学习者对更高级的语言结构（例如句子）的神经表征受到局限且依赖于注意。本研究从皮层神经追踪的角度出发，为二语习得中的汉语学习者构建语言层级结构的加工过程提供了神经层面的重要实证证据。

关键词 二语习得，汉语学习者，语言层级结构，脑电图

Cortical tracking of hierarchical linguistic structures in Chinese as Second Language learners

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Abstract: In speech perception, native speakers can rapidly construct and recognize hierarchical linguistic structures (such as syllables, words, phrases and sentences) to achieve language comprehension. This progress relies on the internal neural representation of hierarchical linguistic structures in brain's center system, which is the basis for speech communication. It is known that the language processing ability of second language learners is weaker than that of native speakers, which probably limits brain's capacity to precisely represent language structures. So far to our knowledge, an exploration of how the brain tracks hierarchical linguistic structures in Chinese as Second Language (CSL) learners is to-date missing. To address this issue, we applied electroencephalogram (EEG) recording and frequency tagging paradigm to track the neural activities in line with the internal construction of linguistic structures of syllables, phrases and sentences at 4 Hz, 2 Hz and 1 Hz, correspondingly, in 24 native Mandarin speakers (19 to 31 years) and 24 CSL learners (21 to 31 years) when they were actively or passively listened to the connected speech stimuli. Inter-trial phase coherence (ITPC) analysis revealed that in both active and passive conditions, there were significant spectral peaks at the syllable-, phrase- and sentence-level frequencies with a modulational effect of attention. However, CSL learners could only track the syllable- and phrase-level structures when they were paying attention to the auditory stimuli but not when passively listened to them. These results indicated that the hierarchical language processing in native speakers were automatic, while CSL learners' cortical tracking of higher-order linguistic structures were limited and were largely modulated by attentional resources. The present study provided important empirical evidence of the hierarchical linguistic structure construction in second language acquisition from the perspective of brain cortical tracking.

Keywords: Second language acquisition, Chinese as Second Language learner, hierarchical linguistic structure, EEG

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Not all abstract words benefit from social experience in semantic priming

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Abstract: Humans have the ability to learn and use thousands of abstract words (e.g., *freedom*, *idea*), even when they do not have bounded or clearly perceivable referents. The way in which abstract concepts are represented has recently

become a topic of intense debate, especially after the emergence of the embodied (grounded) approaches to cognition. A novel embodied view, multiple representation theory, recently proposed a crucial role for social experience in the grounding of abstract words, but empirical work in this area is still in its infancy. The present study investigated the contribution of social experience that is provided by real-life pictures to different categories of abstract words and the influence of stimulus onset asynchronies (SOAs) and valence on this contribution. We employed a picture-word semantic priming paradigm using a lexical decision task at SOAs of 250 ms (Experiment 1) and 900 ms (Experiment 2). Eight experimental conditions were compared: semantically related/unrelated pictures-emotional abstract words (EA words) and semantically related/unrelated pictures-social abstract words (SA words). All prime-target pairs shared a positive or negative valence. The results of the two experiments consistently indicated that the semantic priming effect was only observed for picture-SA word pairs, with quicker responses to semantically related pairs than to semantically unrelated pairs. By contrast, no significant differences in response times were observed between semantically related and unrelated picture-EA words pairs. Moreover, this pattern of results was not modulated by SOA or the valence of pairs. According to spreading activation theory, we infer that a possible reason for the difference in the semantic priming effect between EA and SA words is that SA words share a closer semantic association with related pictures than EA words, because SA words might more readily benefit from the related social experience of prime pictures to strengthen the semantic association between them, whereas EA words do not. These findings imply that not all abstract words can equally benefit from social experience that is based on personal preexisting social situational knowledge, at least in the present lexical decision-priming task. In short, the present study provides evidence of the multiple represent view and suggest a limited contribution of social experience to the grounding of abstract words, because of the subtle difference in the degree of embodiment between them. Further research is needed to determine how different kinds of abstract words impact other behavioral tasks and investigate whether and how their neural representation differs.

Keywords: abstract words, social experience, influencing factors, semantic priming, lexical decision

粤语喻意型歇后语前、后语节相互作用的研究

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摘要 采用启动范式设计，通过实验探讨粤语、潮汕语、客家语、汉语四类不同母语被试在加工粤语喻意型歇后语前、后语节过程中的异同规律，并探究熟悉度这一重要语义性质在粤语语汇理解中的作用。实验1结果发现，前一语节启动后一语节时的启动量在正确率和反应时上都大于相反方向，但四类人群中正确率和反应时的启动量差异均不显著，说明结果不受被试个人粤语熟练度影响。实验二加入熟悉度变量，结果表明，前一语节启动后一语节比相反方向的启动的反应时更小，正确率更高；粤语人群中熟悉度对正确率的效应显著，高熟悉度条件下正确率显著高于低熟悉度条件；汉语人群中熟悉度对反应时的效应显著，高熟悉度条件下反应时显著低于低熟悉度条件。总体而言，相较于非粤语母语人群，粤语母语人群对粤语歇后语的判断更为快速和准确。研究结果认同粤语喻意型歇后语前一语节是“流”，后一语节是“源”，前、后语节具有结构和语义上的同一性。本研究支持概念合成理论以及心理模型的语用推理理论，不完全支持概念隐喻理论。歇后语是语言中文化内涵高度浓缩的部分，而粤语又具备较多的特殊词汇和表达，因此对粤语歇后语的理解是与其熟悉度紧密相关的。研究还认为需重视当下粤语、潮汕语、客家语三种方言互相渗透影响和磨蚀的现象，思考方言的保留与发展之道。

关键词 粤语歇后语，前、后语节，母语，熟悉度

Cantonese metaphor type two-part allegorical sayings section preceding and concluding part interaction research

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Abstract: Start paradigm was adopted to design, through the experiment to investigate the cantonese, chaoshan language and hakka language, Chinese four kind of different language subjects before processing type cantonese metaphor two-part allegorical sayings, after the similarities and differences in the process of law, and to explore the familiarity nature of this important semantic role in cantonese vocabulary to understand. The results of Experiment 1 showed that the priming amount in the first and second language sections was larger than the opposite direction in both accuracy and response time, but the difference in accuracy and response time was not significant among the four groups, indicating that the results were not affected by the subjects' individual Cantonese proficiency. In experiment 2, familiarity variables were added, and the results showed that the response of the first section was smaller and the accuracy rate was higher than that of the other side. In Cantonese, the effect of familiarity on accuracy was significant, and the accuracy under the condition of high familiarity was significantly higher than that under the condition of low familiarity. In Chinese population, the effect of familiarity on reaction time is significant, which is significantly lower under the condition of high familiarity than under the condition of low familiarity. In general, compared with non-native Cantonese speakers, native Cantonese speakers judge Cantonese two-part allegorical sayings more quickly and accurately. The results agree with cantonese metaphor type two-part allegorical sayings language before a day is a "flow", after a day is the "source", before and after language section with identity on the structure and semantics. This study supports the theory of conceptual synthesis and pragmatic inference theory of mental models, but not fully supports the theory of conceptual metaphor. Two-part allegorical sayings is a highly concentrated part of the cultural connotation in the language, and Cantonese has many special words and expressions, so the understanding of two-part allegorical sayings in Cantonese is closely related to its familiarity. The study also suggests that we should pay more attention to the interpenetrating influence of Cantonese, Chaoshan and Hakka dialects, and consider the ways to retain and develop dialects.

Keywords: Two-part Cantonese allegorical sayings, preceding and concluding part, Mother tongue, Familiarity

说话者嗓音中的身份信息对言语理解的影响

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摘要 嗓音是语言的一个重要媒介，承载了多重信息，包括语音、语义等语言学信息以及身份、情绪等副语言学信息。在人际交流与沟通中，听话者需要同时加工说话者嗓音中的这些多重信息。先前研究对这些信息的加工存在不同观点：“抽象观”认为，嗓音中的身份信息不影响言语理解（语言学信息的加工）；而“情节观”则认为，身份信息会影响言语理解。另外，如果身份信息会影响言语理解，那么这种影响的发生阶段是在早期还是晚期，先前研究也还存有争议。本研究采用 ERPs 技术，通过两个实验进一步探讨了身份信息对言语理解的作用机制。实验一首先采用启动范式与真假词判断任务，通过比较身份信息、语音信息和语义信息等三种启动条件对目标词判断的影响，考察身份信息是否影响言语理解以及影响的发生阶段。结果显示，身份信息会影响言语理解的早期阶段（P2）和晚期阶段（晚期负波），并且，身份信息和语音信息条件引发的 P2 和晚期负波的平均波幅均不存在显著差异，但两者都和语义信息条件引发的 P2 和晚期负波的平均波幅存在显著差异，表明嗓音身份信息对言语理解的影响与语音信息类似，但和语义信息存在差异。由于实验 1 的实验材料无法完全分离语音和语义信息，实验二进一步采用真词（既有语义信息，也有语音信息）和假词（只有语音信息）更好地分离了这两种信息，并采用被动 Oddball 范式，通过比较真词身份信息和真词语义信息，假词身份信息和假词语音信息等变化条件对 MMN 波幅的影响，考察身份信息对言语理解的影响是否会受到语

义信息的调节。结果显示,在真词条件下,语义信息变化诱发的MMN波幅大于身份信息变化,而在假词条件下,身份信息与语音信息变化诱发的MMN波幅没有显著差异,说明身份信息对言语理解的影响还会受到语义信息的调节。综合实验1和实验2的结果,嗓音中的身份信息对早期和晚期的言语理解均有一定影响,并且,身份信息对言语理解的影响还会受到语义信息的调节。

关键词 嗓音,身份信息,语音信息,语义信息,言语理解

The identity information in speaker's voice affects speech comprehension

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Abstract: The human voice is the carrier of language, which carries not only linguistic information like phonological and semantic information but also paralinguistic information such as speakers' identity and affective information. In interpersonal communication, the listener needs to process these multiple information in the speaker's voice. Previous studies proposed different views on the processing of these information: the Abstractionist View considers that the identity information does not play a role in speech comprehension (that is, the processing of linguistic information), while the Episodic View considers that the identity information affects speech comprehension. Moreover, whether the identity information affects the early or late processing stage of speech comprehension remains to be controversial. Therefore, the present study aimed to use ERPs to explore whether and how the identity information affects speech comprehension via two experiments. Specifically, Experiment 1 adopted the priming paradigm with a lexical decision task. By comparing the effects of three priming conditions, including identity information, phonological information and semantic information, we found that the identity information affected the early stage (P2) and late stage (late negative potential) of speech comprehension. Moreover, there was no significant difference between the identity and phonological information as reflected by P2 and late negative potential amplitudes. But both of them were significantly different from semantic information. The results indicated that the influence of identity information on speech comprehension was similar to that of phonological information, but their roles in speech comprehension were different from the semantic information. Since the experimental materials in Experiment 1 could not completely separate the phonological from semantic information, we further distinguished these two types of information by using real words (both including semantic information and phonological information) and pseudo words (including only phonological information) in Experiment 2 and adopted a passive oddball paradigm to investigate whether the role of identity information would be modulated by the semantic information. We compared the mismatch negativity (MMN) amplitudes elicited by the identity and semantic information in the real words, and the identity and phonological information in the pseudo words, and found that for the real words, the MMN amplitude of the semantic information was larger than that of the identity information, while in the pseudo words, there was no significant difference between the amplitude of MMNs evoked by the identity and phonological information. The results indicated that the semantic information modulated the role of identity information in speech comprehension. Based on the findings from Experiment 1 and 2, the identity information affected the early and late processing stage of speech comprehension, and the role of identity information in speech comprehension was modulated by the semantic information.

Keywords: Voice, identity information, phonological information, semantic information, speech comprehension

自闭特质与统计学习的关系：来自成人样本的证据

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摘要 自闭症是一种具有临床多样性、病原学异质性并常伴发多种其他疾病的神经发育障碍。自闭特质指自闭症状在正常群体中的谱系性存在状态。正常人群中的高自闭特质者会表现出与临床的自闭症障碍个体程度较轻但具有高度相似的特异性行为表现。近年来,越来越多的研究者关注自闭特质个体的言语习得过程——统计学习。统计学习指个体通过对包含在序列性材料中的统计信息的无意识计算(Daikoku, 2018),自动地、无意识地获得环境中的复杂知识、模式或结构的过程。为了考察自闭特质水平是否对个体的统计学习有影响,本研究通过两个实验分别考察了非社会性刺激和社会性刺激作为学习材料时,不同自闭特质水平的个体的统计学习是否存在差异。实验一采用自闭谱系商数问卷(AQ)对 877 名大学生进行自闭特质水平调查,以 AQ 量表总分的第一个四分位数和第三个四分位数(分别为 109 和 124)作为划分高低自闭特质者的界限(Stevenson & Hart, 2017),随机选取高自闭特质组被试 38 名,低自闭特质组被试 38 名。采用语词切分任务考察自闭特质水平对统计学习的影响。结果显示,以纯音为学习素材时,高低自闭特质组均能习得声音刺激流中所包含的语词,且高自闭特质组的统计学习成绩显著高于低自闭特质组。实验二除了学习材料为汉语双拼音节之外,其他与实验一相同。结果显示,低自闭特质组的统计学习成绩显著高于几率水平(50%)且显著高于高自闭特质组,而高自闭特质组的统计学习成绩与几率水平不存在显著差异。本研究对于理解“学习如何受到自闭特质水平的影响”具有重要意义,此外,这项研究对自闭症患者和高自闭特质个体的临床干预有重要意义。

关键词 自闭特质, 统计学习, 谱系

The Relationship between Autistic Traits and Statistical Learning: Evidence from a Normative Adult Sample

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Abstract: Autism spectrum disorder (ASD) is associated with classical weaknesses in social communication and interaction but potential strengths in perceptual processing of non-social stimuli. Here, we examine this dissociation in the context of statistical learning (SL), which is the ability to learn statistical regularities from environmental input. Rather than focus on individuals with a diagnosis of ASD, we take a spectrum approach to autism and examine undiagnosed adults who either have high or low levels of autistic traits (ATs). The well-studied word segmentation SL task was adopted to investigate the possible influences of ATs on SL by selecting Chinese college students with different ATs levels as assessed with the Autism-Spectrum Quotient. Experiment 1 incorporated non-social and non-linguistic auditory input (pure tones) whereas Experiment 2 used socially-meaningful input (spoken Chinese disyllables). The results showed a striking dissociation between the different SL tasks. For the non-social stimuli (Experiment 1), both individuals with high and low ATs showed evidence of SL of the input regularities, but the individuals with high levels of ATs showed significantly better performance than those with low levels of ATs. On the other hand, when socially-meaningful stimuli were incorporated (Experiment 2), only the individuals with low ATs showed evidence of SL; the high ATs group performance was not significantly different from chance levels. This research improves our understanding of how cognitive processing and learning for non-social and socially-meaningful stimuli are affected by the presence of ATs. Moreover, this research has implications for clinical interventions for ASD and individuals with high ATs.

Keywords: autistic traits, statistical learning, spectrum

汉英时空差异对时空感知的影响

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摘要 语言和思维相互影响, 语言是民族思维的历史沉淀, 能折射出一个民族观察、感知和理解世界所独具的思维方式。有研究提出“汉语具有空间性特征, 英语具有时间性特征”, 从构词上, 相较于汉语, 英语更加遵循一维的线序时间特征, 从左往右并且不可逆地进行构词。另一方面, 汉语的表达中更加关注名词信息, 名词所负载的是事物的空间属性, 而英语更关注能够体现时间发展的动词信息。但是, 汉语和英语在时空特征上的差异是否以及如何影响时空的认知加工有待进一步的探讨。因此, 本研究试图从对时间感知和空间感知出发, 通过两个行为实验来探讨这一问题。具体而言, 实验 1 采用启动范式初步考察汉英两种语言在时空特征上的差异对时空感知的影响。结果显示, 在空间感知上, 相比于英语启动条件, 汉语启动条件下的表现更好。但是在时间感知上, 汉语和英语两种启动条件没有表现出差别。实验 2 在实验 1 的基础上, 针对时间感知进行进一步的研究, 实验同样采用启动范式, 但是控制了实验材料(句子)对结果可能产生的调节作用。结果显示, 相比汉语启动条件, 英语启动条件下的表现更好。综合实验 1 和实验 2 的结果, 本研究发现, 汉英时空特征上的差异会相应地对个体的时空感知产生影响, 汉语的空间性会促进空间感知, 英语的时间性会促进时间感知。本研究也进一步为语言影响思维提供了证据。

关键词 双语, 思维, 时间性, 空间性

Temporality and Spatiality: Chinese and English Affect Individuals' Spatio-temporal Cognition

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Abstract: Language and thinking influence each other. A language represents a nation's unique way of thinking in observing, perceiving, and understanding the world. There have been several researches put forward that Chinese is spatiality-dominant and English is temporality-dominant. In terms of morphology, compared with Chinese, English is constructed by one-dimensional letters in irreversible order. On the other hand, for the textual construction, Chinese focuses on the nouns which can reflect spatial properties or relations of entities or substances. While English pays more attention to the verbs, indicating a subject's motions and changes over time. However, it remains to be further discussed whether and how the differences between Chinese and English in spatio-temporality affect the time and spatial cognitive processing. In the present study, we aim to investigate it from the perspective of time and spatial perception through two behavioral experiments. Experiment 1 investigated the influence of the differences in spatiotemporal characteristics between Chinese and English on spatiotemporal perception via priming paradigm. The results showed that in the spatial perception, compared with the English priming condition, the Chinese priming condition performed better. However, there was no difference in time perception between Chinese and English priming conditions. Based on Experiment 1, Experiment 2 used the same priming paradigm to further explore the different influences of Chinese and English on time perception, but the underlying moderating effect of experimental materials (sentences) was controlled. Results showed that the English priming condition performed better than the Chinese priming condition in time perception. In summary, this study found that the differences between Chinese and English spatiotemporal characteristics have an impact on individual spatiotemporal cognition. Chinese spatiality

promoted spatial cognition, while English temporality promoted time cognition. The current study provides more evidence for the influence of language on thinking.

Keywords: bilingualism, thinking, temporality, spatiality

4.22 社区心理学专业委员会

(1) “社区心理学专业委员会”口头报告分场 1

不同社区责任感的居民对利他信息意识与无意识加工的分离

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摘要 已有研究发现居民的内隐利他行为倾向在社区责任感水平上存在显著差异, 但是研究者们发现内隐社会认知的直觉加工中也有着理性加工的参与。目的: 本研究旨在以行为习惯化理论为基础, 探讨个体对利他信息加工过程中意识和无意识的贡献率以及社区责任感的影响。方法: 参照经典的加工分离程序, 设计了 $2 \times 2 \times 2$ 的混合实验, 102 名城市居民参加了实验, 其中男性 25 人, 女性 77 人, 年龄段为 20~50 岁($M = 33.58$, $SD = 8.71$)。结果: (1) 无论是包含测验还是排除测验, 被试对利他词汇的再认成绩都显著优于中性词汇的再认成绩; (2) 具体的加工过程中, 被试对利他词汇的提取比中性词汇需要更多的意识参与和更多的无意识参与, 且无意识的贡献率大于意识的贡献率; (3) 重复测量方差分析显示, 词汇类型与加工方式的主效应显著, 词汇类型、加工方式与被试类型的三重交互作用显著, 进一步比较发现, 社区责任感的个体差异只体现在对利他词汇的意识提取上。结论: 高社区责任感的个体比低社区责任感的个体对利他词汇进行加工时需要更少的意识参与, 更多的是一种无意识的、自动化的加工过程。

关键词 社区责任感, 利他信息, 加工分离, 行为习惯化理论

Residents with Different Sense of Community Responsibility Separate the Awareness and Unconscious Processing of Altruistic Information

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Abstract: Studies have found that residents' implicit altruistic behavior tendencies have significant differences in the level of sense of community responsibility, but researchers have found that the intuition processing of implicit social cognition also involves rational processing. Purpose: Based on the theory of behavior habituation, this research aims to explore the individuals' conscious and unconscious contribution rate of the process of altruistic information processing and the influence of sense of community responsibility. Method: According to the classic processing dissociation procedure, a $2 \times 2 \times 2$ mixed experiment was designed. 102 urban residents participated in the experiment, including 25 males and 77 females, aged 20-50 years ($M = 33.58$, $SD = 8.71$). Results: (1) Regardless of whether it is an inclusion test or an exclusion test, the subjects' recognition of altruistic vocabulary is significantly better than that of neutral vocabulary; (2) The subjects' extraction of altruistic vocabulary during the specific processing require more conscious participation and more unconscious participation than neutral words, and the unconscious contribution rate is greater than the conscious contribution rate; (3) Repeated measures analysis of variance shows that the main effect of vocabulary type and processing method is significant. The triple interaction among vocabulary type, processing methods and subject types is significant. Further comparisons show that individual differences in sense of community responsibility are only reflected in the awareness of altruistic vocabulary. Conclusion: Individuals with high sense of community responsibility need less conscious participation in processing altruistic vocabulary than individuals with low sense of community responsibility. It is an unconscious and automated processing process.

Keywords: sense of community responsibility, altruistic information, processing dissociation, theory of behavior habituation

保障公平与政府信任的关系： 社会保障满意度及生活满意度的中介作用

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摘要 政府信任与政府绩效密切相关。新时代社会公平、民生福利以及纯公共产品领域绩效已经超过经济绩效对政府信任的影响。保障公平反映了社会保障服务过程和结果的公平程度，涉及养老保障、医疗保障、就业保障等保障系统的公平。目前已有不少研究探讨公共服务供给、公共服务满意度、社会公平、社会保障服务对政府信任的影响，但鲜少关注保障公平与公众政府信任的关系及其心理机制。本研究基于公平理论和期望失验理论，考察保障公平与政府信任的关系及社会保障满意度和生活满意度在其中的链式中介作用。通过分析 2019 年中国社会状况综合调查数据（N=7403）并用 2017 年数据（N=6973）进行稳健性检验，结果发现：（1）保障公平、社会保障满意度、生活满意度与政府信任之间呈显著正相关；（2）保障公平对政府信任的正向预测随着政府层级的下降而逐渐增强，呈“央弱地强”态势，相对于高层级政府而言，保障公平对区县、乡镇等低层级政府信任水平的提升作用更为明显，其中公共医疗公平不论是对整体的政府信任还是中央、区县、乡镇三级政府信任的影响均强于养老保障公平和就业公平，就业公平的影响最弱；（3）保障公平可以通过社会保障满意度、生活满意度以及二者的链式中介作用三条间接路径预测政府信任。本研究揭示了保障公平与政府信任之间的内在机制，为提升政府信任水平提供了新的思路。

关键词 政府信任，保障公平，社会保障满意度，生活满意度

Relationships between Security Equity and Government Trust: The Mediating Role of Social Security Satisfaction and Life Satisfaction

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Abstract: Government trust is closely related to government performance. In the new era, the impact of social equity, people's livelihood welfare and pure public goods performance has exceeded the impact of economic performance on government trust. Security equity refers to the degree of equity in the process and outcome of social security services, involving the equity of pension security, medical security, employment security systems. Previous research has shown that public service supply, public service satisfaction, social equity and social security services play important roles in government trust, but few studies have explored the impact of security equity on public government trust and its psychological mechanism. Based on Equity Theory and Expectancy Disconfirmation Theory, we examine the impact of security equity on government trust and the chain mediating role of social security satisfaction and life satisfaction. By Analyzing the data of Chinese Social Survey in 2019(N=5403) and using the data of 2017(N=6973) for robustness test, it is found that: (1) Security equity, social security satisfaction and life satisfaction were positively related to government trust. (2) The positive impact of security equity on government trust gradually increases with the decline of government level, showing a trend of "the central government is weak and the local government is strong". Compared with high-level government, security equity plays a more significant role in promoting the trust level of low-level government such as district and country, township government. The impact of public health care equity on the overall government trust and the trust of central, district and country, township government is the strongest, and the influence of employment equity is the weakest. (3) Security equity can not only affect government trust through the independent mediating role of social security satisfaction or life satisfaction, but also have a positive impact on local government trust through the chain mediating role of "social security satisfaction → life satisfaction". This

study reveals the internal mechanism between security equity and government trust, and provides valuable new ideas on how to improve the level of government trust.

Keywords: Government Trust, Security Equity, Social Security Satisfaction, Life Satisfaction

4.23 网络心理学专业委员会

(1) “网络心理学专业委员会”口头报告分场 1

无手机恐惧心因性预测因素的探索：基于 Lasso 回归

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摘 要 据《第 45 次中国互联网统计报告》统计, 我国手机网民人数高达 8.97 亿, 其中即时通讯用户占比 99.2%, 网络新闻用户占比 81.0%, 网络视频用户占比 85.6%...可见, 手机已经普及到个体生活的方方面面, 但它也给我们带来了一些消极的影响, 如无手机恐惧(Nomophobia, NMP)。而无手机恐惧仅是种行为表现, 其背后的心理机制才是问题的关键。研究表明个体的人格特质、自尊水平、独处行为、社会支持都能显著预测与无手机恐惧概念相近的手机成瘾, 那这些变量是否也可以显著预测无手机恐惧? 此外, 目前针对于无手机恐惧的研究大多数都是选用基础统计方法去探索变量间的关系, 但这些方法在预测变量较多且存在测量误差时, 得到的结果并不会很稳定。因此, 本研究以线性回归为基础, 选用机器学习中的收缩法 Lasso 进一步“理解”无手机恐惧和人格特质、自尊水平、独处行为和社会支持各变量间的关系。第一步, 先用 Pearson 相关探索各变量的关系, 结果表明无手机恐惧与五种人格特质($r \in [0.11, 0.33]$, $p < 0.001$)、四种独处行为($r \in [0.24, 0.61]$, $p < 0.001$), 与社会支持中的主观社会支持($r = 0.315$, $p < 0.001$), 与个体自尊水平($r = 0.315$, $p < 0.001$)均呈显著正相关。第二步, 使用 t-test 检验无手机恐惧在不同性别水平上是否存在差异, 结果显示不同性别间的无手机恐惧水平存在显著差异($t_{(676)} = 2.599$, $p < 0.05$)。第三步, 将人口学变量(性别)、心理学变量(5 种人格特征、4 种独处行为、3 种社会支持和自尊水平), 共 14 个都为自变量, 无手机恐惧为因变量, 并用 R 包 *glmnet* 中的 Lasso 回归探索影响无手机恐惧的关键因素。使用 Lasso 算法, 通过训练集得到最小均方误差(Mean Squared Error, MSE)处的 λ 为 0.05, $\lambda + 1se$ 为 0.27, 本研究选用的最佳 λ 值为 $\lambda + 1se$, 这是因为最小 MSE 对应 λ 的惩罚幅度小, 不能完全解决过拟合的问题。故将 0.27 代入测试集中, 最终保留的变量有孤独(LON)、孤僻(ECC)、社交回避(SCO)、神经质(NEU)、责任性(CON), 而通过 *covTest* 包显著性检验的只有 LON 和 ECC 变量, 模型 R^2 为 0.33, MSE 为 0.99。第四步, 进一步验证孤独和孤僻的重要作用, 将其从模型中剔除后再次建模, 最终模型的 R^2 下降为 0.21, MSE 增大为 1.16。因此, 最终确定回归方程为 $NMP = 2.023 + 0.547 * LON + 0.008 * ECC$ 。综上所述, 可推断出个体的孤独感和孤僻感是预测无手机恐惧的关键因素, 也就是说个体的孤独感和孤僻水平较高时, 很可能会导致个体无手机恐惧现象加重, 而其中孤独感的预测作用相对较大。

关键词 无手机恐惧, 孤独, 孤僻, 机器学习, Lasso 回归

The exploration of psychogenic predictors for nomophobia: Based on LASSO regression

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Abstract: According to the "45th Statistical Report on Internet Development in China", the number of mobile phone users is 817 million., among them, messaging users accounted for 99.2%; the user who browses the web news accounted for 81.0%, the user of the web video accounted for 85.6... Visible, mobile phones have been popular in every aspect of individual life, which also brought some negative effects, such as nomophobia (NMP). The nomophobia is only a kind of behavior, and the psychological mechanism behind it is the key to the problem. Studies have shown that individual personality traits, self-esteem, solitude behavior, social support and so on can significantly predict smartphone addiction which was similar to the concept of nomophobia. Can these variables also significantly predict nomophobia? In addition, most of the current research on nomophobia had chosen some basic statistical methods to explore the relationship between variables, but the results of these methods will not be very stable when there are many prediction variables and there are measurement errors. Therefore, the study based on linear regression, Lasso, a shrinkage method in machine learning, was selected to further "understand" the relationship between nomophobia and personality traits, self-esteem, solitude behavior and social support. Firstly, Pearson correlation was used to explore the relationship between the variables. The results showed that there were significantly positive correlations between nomophobia with five personality traits ($r \in [0.11, 0.33]$, $p < 0.001$), four kinds of solitude $r \in ([0.24, 0.61]$, $p < 0.001$), subjective social support in social support ($r = 0.315$, $p < 0.001$), and the individual self-esteem level ($r = 0.315$, $p < 0.001$). Secondly, using a separate t-test to test whether there were gender differences in nomophobia. The final results showed a significant difference in nomophobia levels between men and women ($t_{(676)} = 2.599$, $p < 0.05$), that is to say, the level of nomophobia is affected by gender. Thirdly, gender, personality characteristics, solitary behavior, social support and self-esteem level all as independent variables, nomophobia as a dependent variable. Using *glmnet* package in R to predict the regression equation by Lasso algorithm, and further explore the key factors that affect the nomophobia. Using Lasso algorithm, the λ is 0.05 at the minimum Mean Squared Error (MSE) through the training set. The best λ value selected in this study is $\lambda + 1se$. because the penalty range of the minimum MSE corresponding is small, and the problem of overfitting can't be solved. Therefore, 0.27 will be included in the test data, the final retention of variables were loneliness (LON), eccentricity (ECC), social avoidance (SCO), neuroticism (NEU) and conscientiousness (CON), while only LON and ECC passed the significance test of the *covTest* package, R^2 is 0.33, MSE is 0.99. Fourthly, removing LON and ECC from the model and re-modeling in order to verify the importance of them, the final R^2 dropped to 0.21, MSE increased to 1.16. Therefore, the regression equation is $NMP = 2.023 + 0.547 * LON + 0.008 * ECC$. To sum up, it can be inferred that the loneliness and eccentricity of the individual are the key factors to predict the nomophobia. That is to say, when the level of loneliness and eccentricity was higher, it was likely to lead to the aggravation of the nomophobia, and the predictive effect of loneliness is relatively greater.

Keywords: nomophobia, loneliness, eccentricity, machine learning, Lasso regression

负性情绪，还是人际问题和压力会使人们更常使用手机社交媒体？

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摘要 随着科技的进步，手机和互联网的普及使得在线社交网站得到了广泛的使用。根据社交增强假说和社交补偿假说，网络给个体和他人的交流提供了新的可能的方式，那些在线下感到孤独的人可能会通过访问社交媒体来获得另一种与他人交流的途径，从而扩大他们的社交世界和获得慰藉（Song et al., 2014; Bessière et al., 2008）。还有研究表明负性情绪和压力水平高的个体倾向于使用社交媒体来缓解这些不好的体验。但以往研究较少采用追踪研究设计来探寻变量间的预测关系，并且受传统研究方法限制，无法同时梳理诸多变量间纷繁复杂的关系。因此，本研究基于网络分析方法，采用追踪设计探究负性情绪、人际问题和压力是否会影响个体的手机社交媒体使用行为。研究一采用问卷法调查了 431 名在校大学生的手机社交媒体使用时长、孤独、错失恐惧、抑郁、焦虑、人际问题和压力状况，回收得到有效问卷 425 份。利用相关网络分析、贝叶斯网络分析方法探究这 7 个变量之间的相关关系以及可能存在的因果关系。结果表明大学生社交媒体使用时长与错失恐惧（ $r = .16, p < .01$ ）和孤独（ $r = .10, p < .05$ ）存在正相关关系；错失恐惧具有最高的中介中心度和接近中心度，居于相关网络的中心位置，且可能是直接影响社交媒体使用需求的因素。研究二采用追踪研究设计（2 次调查，间隔时间为 2 周）对 336 名在校大学生进行了调查。利用交叉滞后分析方法探究社交媒体使用与负性情绪、人际问题和压力之间的相互影响，结果表明只有错失恐惧可以显著正向预测手机社交媒体使用（ $\beta = .09, SE = 0.04, p < .05, 95\% CI = [.01, .17]$ ），其余变量的模型过拟合或路径系数不显著。本研究的研究结果提示错失恐惧可以直接正向预测个体的手机社交媒体使用行为。并且，错失恐惧在变量的相关网络中占据中心位置，与其他变量联系紧密。因此当个体错失恐惧水平较高时，应该多加注意，以防引起共病。

关键词 社交媒体使用，人际问题，心理健康，网络分析，交叉滞后模型

What motivate people to use mobile social media more often, negative affect, interpersonal problems, or stress?

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Abstract: With the rapid development of technology, mobile phones and the Internet have been popular. Consequently, online social networking sites have been widely used. According to the social augmentation hypothesis and the social compensation hypothesis, the Internet provides a new possibility for communicating with others. Individuals who feel lonely offline would find another way to communicate with others by using social media in order to augment their social network and get comfort (Song et al., 2014; Bessière et al., 2008). Many studies showed that individuals having higher levels of negative affect and stress would relief these negative experiences by using social media. Nonetheless, few longitudinal studies were conducted to explore the predictable relationship between these variables. Furthermore, limited by traditional analysis methods, the complex relationship between these variables cannot be clarified clearly. Thus, the present study was based on the network analysis. And a longitudinal study was conducted to examine whether negative affect, interpersonal problems, and stress would affect SMU. In the first study, 431 college students answered the questions about social media use, loneliness, FoMO, depression, anxiety, interpersonal problems, and stress. There were 425 valid questionnaires. Correlation network analysis and Bayesian network analysis were conducted to examine the relationship between these variables and potential causal relationship. Results showed that SMU was positively correlated with FoMO ($r = .16, p < .01$) and loneliness ($r = .10, p < .05$). In the correlation network, FoMO had the highest betweenness centrality and closeness centrality, indicating it was the central node. And FoMO might directly affect SMU. The second study was a longitudinal study (including 2 surveys, with an interval of 2 weeks), involving 336 college students. Cross-lagged panel analysis was conducted to explore

the interactions between SMU and negative affect, interpersonal problems, and stress. Results showed that only FoMO can positively predict SMU ($\beta = .09$, $SE = 0.04$, $p < .05$, 95% $CI = [.01, .17]$). The rest models were over-fitted, or the path coefficients were not significant. The results of the present study indicated that FoMO can directly positively predict SMU. And FoMO was in the center of the correlation network, having close relationship with other variables. So, people should pay more attention when having higher level of FoMO to prevent comorbidities.

Keywords: social media use, interpersonal problem, mental health, network analysis, cross-lagged panel model

青少年网络利他行为的发展趋势及社会阶层的影响： 一项 2 年追踪研究

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摘要 通过文献梳理发现，研究者对网络利他行为的特征、现状、影响因素与机制及对个体的影响等方面进行了探讨。但目前研究大多是横断设计，缺乏对网络利他行为发展趋势的纵向研究。另外，从个体发展的过程来看，青少年时期是一个重要的过渡阶段，该阶段中的个体常表现出动态性、连续性和发展性等特征。青少年的亲社会行为也经历了一个发展历程，网络利他行为是在互联网情境中发生的不求回报的亲社会行为。那么，青少年网络利他行为的发展模式会和现实中的亲社会行为的发展模式一样吗？综上，本研究拟采用纵向研究设计考察青少年网络利他行为的发展趋势以及社会阶层对青少年网络利他行为发展趋势的影响，以便丰富和深化网络利他行为的研究内容，为青少年网络行为的引导提供参考依据。以 832 名 12~20 岁的青少年为研究对象进行为期 2 年共 4 次的追踪调查，考察青少年网络利他行为的发展趋势以及社会阶层与青少年网络利他行为发展趋势的关系。考虑到在追踪研究过程中部分被试的流失以及被试参与调查的次数不相同，本研究的数据分析采用多层线性模型技术，运用 HLM 软件对数据进行分析，结果表明：(1)时间对青少年网络利他行为有显著的正向预测作用，即青少年网络利他行为随着时间的推移呈现上升趋势。(2)性别、每周上网时间和客观社会阶层对青少年网络利他行为发展趋势的影响不显著。(3)主观社会阶层对青少年网络利他行为发展趋势的影响显著，即青少年的主观社会阶层越高，其网络利他行为随着时间的推移呈现的上升趋势越强。上述结果进一步阐明了青少年网络利他行为的发展特点，丰富了网络利他行为的研究内容。主观社会阶层对青少年网络利他行为发展趋势具有正向影响，这对鼓励和引导青少年网络利他行为、培养青少年良好的道德品质具有一定的实践意义。

关键词 网络利他行为，主观社会阶层，客观社会阶层，追踪研究，青少年

Development Trends of Adolescents' Internet Altruistic Behavior and the Influence of Social Class: A 2-year Longitudinal Study

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Abstract: Through literature review, it is found that researchers have discussed the characteristics, current situation, influencing factors and mechanisms of Internet altruistic behavior and its impact on individuals. However, most of the current researches are about cross-sectional design, and lack of longitudinal research on the development trend of Internet altruistic behavior. In addition, from the perspective of the process of individual development, adolescence is an important transitional stage, in which individuals often show dynamic, continuous and developmental characteristics. Teenagers' prosocial behavior has also gone through a development process. Internet altruistic behavior is a kind of prosocial behavior that occurs in the Internet situation and does not ask for return. So, will the development model of teenagers' Internet altruistic behavior be the same as that of prosocial behavior in reality? To sum up, this study intends to use a longitudinal research design to investigate the development trend of teenagers'

Internet altruistic behavior and the influence of social class on the development trend of teenagers' Internet altruistic behavior, so as to enrich and deepen the research content of Internet altruistic behavior and provide reference for the guidance of teenagers' Internet altruistic behavior. 832 adolescents aged 12-20 were selected as the research objects, and four follow-up tests were conducted for two years to investigate the development trend of Internet altruistic behavior of adolescents and the relationship between social class and the development trend of Internet altruistic behavior of adolescents. Considering the loss of some subjects in the process of tracking research and the different times of participants participating in the test, the data analysis of this study adopts multi-layer linear model technology, and uses HLM software to analyze the data. The results show that: (1) time has a significant positive predictive effect on Teenagers' Internet altruistic behavior, That is to say, the Internet altruistic behavior of teenagers shows an upward trend over time. (2) Gender, weekly online time and objective social class have no significant influence on the development trend of Internet altruistic behavior. (3) The higher the subjective social class is, the stronger the upward trend of the Internet altruistic behavior is. The above results further clarify the development characteristics of adolescent Internet altruistic behavior and enrich the research content of Internet altruistic behavior. Subjective social class has a positive impact on the development trend of teenagers' Internet altruistic behavior, which has a certain practical significance for encouraging and guiding teenagers' Internet altruistic behavior and cultivating teenagers' good moral quality.

Keywords: Internet altruistic behavior, subjective social class, objective social class, longitudinal study, adolescents

孤独在大五人格与问题性手机使用之间的中介作用： 一项结构方程模型元分析

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摘 要 随着时代的发展，手机已经成为日常生活中必不可少的沟通交流工具。尽管手机的使用能为日常生活带来便利，但是过度依赖手机就会引发问题性的手机使用，影响个体的身心健康。众多的研究表明人格特质与问题性手机使用的关系密切，以往的研究表明不同的人格特质会引发不同的手机使用行为，例如神经质、开放性和外向性是问题性手机使用的重要预测源，而情绪稳定性与问题性手机使用呈负相关关系。由于手机在日常生活中的作用是联系与沟通，因此孤独感较高的个体更容易引发问题性的手机使用。此外，孤独感背后更深层次的原因可能是不同的人格特质所导致，因此可以推测存在一条人格-孤独-问题性手机使用的路径。尽管已经有较多的研究考察了孤独与手机、人格与孤独以及人格与手机的关系，但是很少有同时探究三者的关系，而且不同人格特质与问题性手机使用的关系尚且存在争议。基于上述问题，本研究采用结构方程模型元分析的方法来探究大五人格与问题性手机使用的关系，以及孤独起到的中介效应，使用 R 语言的 metafor 和 metaSEM 包对数据进行分析。本研究使用 CNKI 知网、万方、维普、Web of Science、PsycINFO 以及 EBSCO 数据进行文献检索，以 r 值作为效应值进行提取，最终得到符合要求的 55 篇文献（中文文献 26 篇，英文文献 29 篇），共 60 个独立样本，总样本量为 44024。主效应结果表明宜人性和严谨性与问题性手机使用呈现显著负相关关系，神经质与问题性手机使用呈现显著正相关关系，孤独与问题性手机使用呈现显著正相关关系。中介效应分析结果表明孤独在神经质与问题性手机使用关系的模型中起到了正向的部分中介效应，孤独在严谨性、外向性和问题性手机使用关系的模型中起到了负向的部分中介效应，此外孤独在宜人性、开放性和问题性手机使用的关系中起到了负向的完全中介效应。本研究结果提示在未来问题性手机使用的研究中要更多地关注人格、孤独产生的影响，以及这些影响在不同的条件下是否存在不同的效应，从而更好地解释问题性手机使用的发生机制。

关键词 大五人格，孤独，问题性手机使用，结构方程模型元分析

The Mediation of Loneliness between Big-five Personality and Problematic Mobile Phone Use: Meta-analysis Structure Equation Model

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Abstract: With the development of society, mobile phone has become an essential tool for communication. Although the use of mobile phone can bring convenience, excessive reliance on mobile phones will lead to problematic mobile phone use (PMPU), which can cause a lot of harm to individuals' physical and mental health. Lots of researches indicate that personality has close relationship with PMPU, and different personality traits can trigger different mobile phone use behaviors. For example, neuroticism, openness and extraversion are important predictive factors of PMPU, while emotional stability has a negative correlation with PMPU. Due to the main function of mobile phone is to contact and communicate with others, so individuals with higher loneliness level are more likely suffering from PMPU. Furthermore, the deeper reasons behind loneliness may be caused by different personality traits. Therefore, it can be inferred that there is a path of personality - loneliness - problem mobile phone use. Although there are many researches that are explored relationship between loneliness and PMPU, personality and PMPU, and loneliness and personality, there are few studies that investigate relationships among three concurrently. And it is controversial about the relationships between different personality traits and PMPU. Based on the above problems, a meta-analysis structural equation modelling was conducted to investigate the relationship between big-five personality and PMPU, and the moderating effect of loneliness. metafor and metaSEM packages of R language were used to analyze the data. Firstly, the databases of CNKI, Wanfang, Weipu, web of science, PsycINFO and EBSCO were used to retrieval and select literatures, and the r value was used as the effect value. After screening according to the criteria, 55 articles (29 in English and 26 in Chinese) met the requirements, with 60 independent samples and 44024 total sample sizes. The results of main effect analysis showed that agreeableness and conscientiousness had negative correlation with PMPU, and neuroticism and loneliness had negative correlation with PMPU. The results of mediation effect analysis showed that loneliness played a positive partial mediating effect in the model of neuroticism and PMPU, and played a negative partial mediating effect in the model of conscientiousness, extraversion and PMPU. In addition, loneliness played a negative complete mediating effect in the relationship between agreeableness, openness and PMPU. The results of this study suggest that in the future research on problem mobile phone use, the more attention should be paid to the effects of personality and loneliness, and whether these effects have different effects under different conditions. It is helpful to better explain the mechanism of problem mobile phone use.

Keywords: Big Five Personality, Loneliness, Problematic Mobile Phone Use, Meta-analysis Structure Equation Model

亲子关系与青少年手机依赖的关系： 个人成长主动性的中介效应与同伴关系的调节效应

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摘 要 在我国，青少年群体中手机的使用越来越普遍。手机在带给青少年新的学习资源和机会的同时，也容易诱发青少年对其的过度使用，导致手机依赖行为的产生，从而对青少年的身心健康造成不良影响。在影响青少年手机依赖的诸多因素中，家庭因素尤为重要。其中，家庭因素中的亲子关系是影响手机依赖的最重

要因素之一。以往许多研究也证明了亲子关系不良的青少年更容易产生手机依赖，但很少有研究全面考察家庭、个人和学校因素对青少年手机依赖的影响机制。因此，为拓展现有研究的内容，本研究构建了一个有调节的中介模型来考察家庭因素（如亲子关系）与青少年手机依赖之间的作用，并考察了个体因素（如个人成长主动性）在其中的中介作用以及学校因素（如同伴关系）的调节作用。本研究采用方便取样法选取了山东省青岛市 65 所中学 3355 名高二年级学生为被试，采用关系网络问卷、简版问题性手机使用量表、个人成长主动性量表、同伴关系量表对其进行了调查。结果发现：（1）在控制了性别和上网时间后，亲子关系对青少年手机依赖具有显著的负向预测作用；（2）个人成长主动性在亲子关系与青少年手机依赖之间起部分中介作用；（3）亲子关系对青少年手机依赖的直接作用、个人成长主动性的中介作用均受到同伴关系的调节，且相对于同伴关系水平低的个体，亲子关系对手机依赖、亲子关系对个人成长主动性以及个人成长主动性对手机依赖的作用都在同伴关系水平高的个体中更强。本研究有利于揭示亲子关系是如何影响青少年手机依赖的，以及在何种条件下对青少年手机依赖的影响更强/更弱，对移动互联网时代预防青少年手机依赖有一定启示意义。

关键词 亲子关系，个人成长主动性，同伴关系，手机依赖

Parent-child relationship and smartphone dependence among Chinese adolescents: The Mediating Role of personal growth initiative and the Moderating Role of peer relationship

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Abstract: In China, the use of smartphones is becoming more and more common among adolescents. Smartphones have brought learning resources and opportunities to adolescents, but also easily induced adolescents' excessive use of them, leading to the generation of smartphone dependence, which has a negative impact on the physical and mental health of adolescents. Among the many factors that affect smartphone dependence, family factors are particularly important. Among them, family relationships, especially parent-child relationship, are one of the most important factors affecting smartphone dependence. Although many prior studies have provided ample evidence of the negative effects of poor parent-child relationship on adolescents' smartphone dependence, little research exists that comprehensively examines the influence of family, individual, and school factors on adolescents' smartphone dependence. In order to expand the content of existing research, the present study constructed a moderated mediation model to test the mediating role of individual factors (e.g., personal growth initiative) and the moderating role of school factors (e.g., peer relationship) in the connection between family factors (e.g., parent-child relationship) and smartphone dependence among Chinese adolescents. A sample of 3355 high school students who come from Qingdao, China, an economically developed coastal city completed a battery of self-report questionnaires measuring their parent-child relationship, smartphone dependence, personal growth initiative and peer relationship. The results are as follows. (1) After controlling for gender and time spent online per day, parent-child relationship have a negative direct effect on smartphone dependence. (2) The negative association between parent-child relationship and smartphone dependence is mediated by the personal growth initiative. (3) The effect of parent-child relationship on smartphone dependence, the effect of parent-child relationship on personal growth initiative, and the effect of personal growth initiative on smartphone dependence were all moderated by peer relationship and were stronger in adolescents with a high level of peer relationship. The present study highlights the mediating role of personal growth initiative and the moderating role of peer relationship in the effect of parent-child relationship on smartphone dependence. This study also contributes to a better understanding of the effects, paths, and conditions of parent-child relationship on the smartphone dependence of adolescents and provides constructive suggestions for preventing adolescents' smartphone dependence in the mobile Internet era.

Keywords: parent-child relationship, personal growth initiative, peer relationship, smartphone dependence

(2) “网络心理学专业委员会”口头报告分场 2

网络受欺负与网络欺负的关系：压力与反刍的链式中介作用

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摘要 随着网络的普及, 欺负出现了新的形式: 网络受欺负和网络欺负, 并且引起了研究者的广泛关注。网络欺负是由个人或团体带有攻击性、蓄意地通过信息与通信技术实施的攻击行为, 会导致权力失衡, 这种行为会重复发生, 在该过程中受害者难以保护自己。网络受欺负是个体或团体在网络欺负中受到攻击的行为, 可以被认为是一种有压力的生活事件。网络受欺负对网络欺负有显著的预测作用, 同时是促使个体产生压力感的重大因素。个体在面临压力事件时, 通常会对消极事件进行自发性的反复思考, 即反刍, 同时会促使个体采取消极的应对措施(如网络欺负)来释放压力。目的: 本研究拟构建模型, 探讨压力感和反刍在网络受欺负与网络欺负之间所起的链式中介作用。方法: 采用方便抽样, 使用了《网络受欺负量表》、《网络欺负量表》、《压力感量表》和《反刍思维量表》4个量表对来自两所大学共 890 名被试进行了施测。结果发现: (1) 网络受欺负和网络欺负在性别和家庭来源上存在显著差异, 其中男性的网络受欺负与网络欺负程度均高于女生, 来源于城市的大学生更容易遭受网络欺负且更容易有网络欺负行为; (2) 网络受欺负、压力感、反刍思维及网络欺负之间均存在显著的相关, 网络受欺负对网络欺负有显著的预测作用; (3) 反刍思维在网络受欺负与网络欺负之间起部分中介作用; (4) 压力感与反刍思维在网络受欺负与网络欺负之间起链式中介作用。结论: 压力感与反刍思维在网络受欺负与网络欺负之间起链式中介作用。由于网络欺负发生在虚拟空间, 被欺负的个体难以找到欺负的源头和对象, 导致欺负行为无法得到及时制止, 由此对被欺负者所造成了一系列压力, 如果不能使用合理的方式来纾解压力, 可能会促使被欺负者用“以牙还牙”的方式去欺负其他人, 造成了被欺负者去欺负他人的连锁反应。

关键词 网络欺负, 网络受欺负, 压力, 反刍

The Relationship Between Cyber Victimization and Cyberbullying: The Chain Mediating Effect of Stress and Rumination

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Abstract: With the popularity of Internet, new forms of bullying have emerged: cyberbullying and cyber victimization. Cyberbullying refers to aggressive, deliberate attacks committed by individuals or groups through information and communication technologies that lead to power imbalances, which can be repeated, and in which victims have difficulty protecting themselves. Cyber victimization refers to the act of an individual or group being attacked in cyberbullying and can be considered as a stressful life event. Cyberbullying had a significantly predicted effect on Cyber victimization, as well as was a significantly factor contributing to individuals' feelings of stress. When faced with a stressful event, individuals usually engage in spontaneous recurrent thinking about the negative event, i.e., rumination, and are prompted to adopt negative coping measures (e.g., cyberbullying) to release the stress. Aim: This study proposes to construct a model to explore the chain mediating effect of stress and rumination in the

relationship between cyber victimization and cyberbullying. Method: The questionnaire survey was carried out on 445 college students from two universities with convenient sampling by using the questionnaires of Cyber Victimization questionnaire, Cyberbullying questionnaire, Perception of Stress Scale, and Rumination questionnaire. Results: (1) There were significant differences in cyberbullying and cyberbullying in terms of gender and family origin, with males having higher levels of cyber victimization and cyberbullying than females, and college students from urban areas being more vulnerable to cyber victimization and more likely to engage in cyberbullying behaviors; (2) There was a significant correlation between cyber victimization, stress, rumination and cyberbullying, and cyber victimization was a significant predictor of cyberbullying; (3) Rumination partially mediated the relationship between cyber victimization and cyberbullying; (4) Stress and rumination played a chain mediating effect between cyber victimization and cyberbullying. Conclusion: Stress and rumination played a chain mediating effect between cyber victimization and cyberbullying. Because cyberbullying occurs in virtual space, it is difficult for the bullied individual to find the source and target of the bullying, which makes it impossible to stop the bullying behavior in time. If failure to use reasonable ways to relieve stress, may encourage the cyber victimization to bully others in an "eye for an eye" manner, creating a chain reaction of the bullied bullying others.

Keywords: Cyberbullying, Cyber Victimization, Stress, Rumination

粗暴养育与网络成瘾： 情绪调节困难与非适应性认知的序列中介作用

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摘 要 互联网技术的普及极大便利人们的同时，也带来了网络成瘾的负面影响。网络成瘾指个体过度沉迷网络，且因无法控制这种行为造成其出现健康问题、社会适应问题和学业成绩下降等。由于青少年时期是个体身心发展的关键阶段，研究者重点关注导致学生群体网络成瘾的影响因素及其内在机制，以期进行针对性预防和干预工作。尽管已有研究关注家庭和个体因素对学生网络成瘾的影响，但聚焦于特定教养方式对网络成瘾影响机制的研究尚不充分，且涉及个体的情绪和认知因素的内在机制仍未明确。根据病理性网络使用的认知-行为模型(Pathological Internet Use, PIU)与自我情绪调节模型，本研究旨在探究情绪因素（情绪调节困难）与认知因素（非适应性认知）在粗暴养育与网络成瘾关系中的作用。采用问卷法对 927 名中学生进行施测，以了解其粗暴养育经历、情绪调节困难、非适应性认知、网络成瘾的情况。采用 SPSS 22.0 进行数据统计与分析。结果发现：（1）各量表的信效度良好，本研究不存在严重的共同方法偏差；（2）相关分析表明，粗暴养育、情绪调节困难、非适应性认知和网络成瘾两两呈正相关；（3）中介效应检验显示，情绪调节困难和非适应性认知在粗暴养育对网络成瘾的影响中起中介作用，且该中介作用包含三条中介路径：情绪调节困难的单独中介作用、非适应性认知的单独中介作用、情绪调节困难和非适应性认知的序列中介作用。因此，粗暴养育不仅能直接影响中学生的网络成瘾，还能通过情绪调节困难和非适应性认知的单独中介作用及序列中介作用间接影响其网络成瘾。本研究结果进一步拓展了病理性网络使用的认知-行为模型模型的内部机制，验证了以往有关环境因素通过情绪和认知因素共同影响网络成瘾的假设，有助于家庭和学校开展中学生网络成瘾的预防和干预工作。

关键词 青少年，粗暴养育，情绪调节困难，非适应性认知，网络成瘾

Harsh Parenting and Internet Addiction: The Chain Mediating Effect of Difficulties in Emotional Regulation and Maladaptive Cognitive

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Abstract: The popularity of Internet technology greatly facilitates people, but also brings the negative impact of Internet addiction. Internet addiction refers to excessive Internet addiction, which leads to health problems, social

adaptation problems and academic performance decline. As adolescence is the key stage of individual physical and mental development, researchers focus on the influencing factors and internal mechanism of students' Internet addiction, in order to carry out targeted prevention and intervention. Although previous studies have focused on the influence of both family factors and individual factors on Internet addiction, the research which focusing on the influence mechanism of specific parenting style on Internet addiction is still not enough, and the internal mechanism involving individual emotional and cognitive factors is still unclear. According to the pathological internet use (PIU) and self emotion regulation model, this paper aims to explore the role of emotional factors (difficulties in emotional regulation) and cognitive factors (maladaptive cognitive) in the relationship between harsh parenting and Internet addiction. 927 adolescents were tested by four questionnaires to understand their harsh parenting experience, difficulties in emotional regulation, maladaptive cognitive and Internet addiction. SPSS 22.0 was used for data statistics and analysis. The results showed that: (1) All questionnaires have adequate reliability and validity, and there was no seriously common method biases. (2) The association between harsh parenting and Internet addiction coincided with the PIU. That was to say, harsh parenting experience would lead to high levels of Internet addiction in adolescents. (3) The analyses of the underlying mechanisms showed that difficulties in emotional regulation and maladaptive cognitive played multiple mediating roles in the influence of harsh parenting on Internet addiction. Specifically, harsh parenting can influence Internet addiction through the simple mediating effects of difficulties in emotional regulation, maladaptive cognitive, and through the chain-mediating role of difficulties in emotional regulation and maladaptive cognitive. In conclusion, the results of the study further expand the internal mechanism of the cognitive behavioral model of PIU, verify the previous hypothesis that environmental factors affect Internet addiction through emotional and cognitive factors, and help families and schools to carry out the prevention and intervention of Internet addiction among adolescents.

Keywords: adolescents, harsh parenting, difficulties in emotional regulation, maladaptive cognitive, Internet addiction

移动社交媒体使用对情绪图片注意偏向的影响： 社会比较方向的中介作用

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摘 要 目的: 通过探讨不同类型移动社交媒体使用对不同效价情绪图片注意偏向的影响以及社会比较方向在二者关系之间的中介作用, 进而揭示移动社交媒体使用者情绪图片注意偏向的表现模式特点及其影响机制。

方法: 本研究共包含两个实验。正式实验开始前, 均先通过填写问题性移动社交媒体使用量表筛选被试, 后根据量表得分, 实验 1 和实验 2 分别选取了 89 名被试 (问题性使用组: 41 人, 正常使用组: 48 人)、90 名被试 (问题性使用组: 45 人, 正常使用组: 45 人)。用点探测范式测量注意偏向; 用社会比较量表测量社会比较方向。**结果:** (1) 重复测量方差分析结果显示, 配对情绪图片类型的主效应不显著, 而被试分组的主效应、配对情绪图片类型与被试分组的交互作用均显著; (2) 简单效应分析结果显示, 问题性使用组被试对负性情绪图片存在更高的注意偏向得分, 而正常使用组被试对正性情绪图片存在更高的注意偏向得分; (3) 中介作用分析结果显示, 下行社会比较在问题性移动社交媒体使用和负性情绪图片注意偏向之间的关系中起部分中介作用, 而在正常移动社交媒体使用和正性情绪图片注意偏向之间起完全中介作用。上行社会比较在二者之间的中介作用均不显著。**结论:** 本研究结果表明, 问题性使用者倾向于对负性情绪图片投入更多的认知资源, 而正常使用者则倾向于更关注正性情绪图片。下行社会比较为移动社交媒体使用者情绪图片注意偏向产生的中间机制。因此, 未来研究一方面可结合眼动技术进一步对情绪图片注意偏向的成分进行探讨。另一方面可通过正性注意偏向训练来改善问题性移动社交媒体使用者的情绪状态, 通过引导其适中地下行社会比较来促进其情绪健康。

关键词 移动社交媒体使用, 情绪图片, 注意偏向, 社会比较方向

The impact of mobile social media use on emotional picture attention bias: The mediating effect of social comparison direction

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Abstract: **Objective:** By exploring the impact of different types of mobile social media use on different valence emotional picture attention bias and the mediating effect of social comparison direction in the relationship between them, this paper reveals the performance mode characteristics and influence mechanism of emotional picture attention bias of mobile social media users. **Methods:** This study included two experiments. Before the formal experiment, subjects were screened by filling in the problematic mobile social media use scale. Then, according to the score of the scale, 89 subjects (problematic use group: 41 people, normal use group: 48 people) and 90 subjects (problematic use group: 45 people, normal use group: 45 people) were selected in experiment 1 and experiment 2 respectively. Attention bias was measured by point detection paradigm; The direction of social comparison was measured by social comparison scale. **Results:** (1) the results of repeated measurement analysis of variance showed that the main effect of paired emotional picture types was not significant, but the main effect of subject groups and the interaction between paired emotional picture types and subject groups were significant; (2) The results of simple effect analysis showed that subjects in the problematic use group had higher attention bias scores on negative emotion pictures, while subjects in the normal use group had higher attention bias scores on positive emotion pictures; (3) The mediation analysis results show that downward social comparison plays a partial mediating role in the relationship between problematic mobile social media use and negative emotional picture attention bias, while it plays a complete mediating role between normal mobile social media use and positive emotional picture attention bias. The mediating effect of upward social comparison between the two is not significant. **Conclusion:** the results of this study show that problematic users tend to invest more cognitive resources in negative emotional pictures, while normal users tend to pay more attention to positive emotional pictures. Downward social comparison is the intermediate mechanism of mobile social media users' emotional picture attention bias. Therefore, on the one hand, future research can further explore the components of attention bias in emotional pictures in combination with eye movement technology. On the other hand, we can improve the emotional state of problematic mobile social media users through positive attention bias training, and promote their emotional health by guiding them to make moderate social comparison.

Keywords: mobile social media use, emotional pictures, attention bias, social comparison direction

不同情绪信息对游戏成瘾者反应抑制的影响及其神经机制

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摘要 游戏成瘾是对于游戏行为缺乏控制并导致功能损害的成瘾行为, 成瘾者通常具有高冲动性的特质, 表现为较弱的反应抑制能力。在情绪信息加工上, 游戏成瘾者拥有更多的负性情绪和较弱的情绪调节能力, 并且更加偏向负性刺激。已有大量研究证实游戏成瘾者的反应抑制能力受损, 然而其成因及影响因素仍是未解之谜。因此, 本研究基于情绪认知交互作用的理论, 采用 Go/Nogo 范式与事件相关电位技术 (ERP), 探究不同类型的情绪信息对游戏成瘾者反应抑制的影响。研究将情绪信息分为加工水平 (内隐和外显) 和情绪效价 (正性和负性) 两个部分, 采用 2 (加工水平: 内隐、外显) × 2 (情绪效价: 正性、负性) × 2 (组别: 游戏成瘾组、控制组) 的混合实验设计。实验过程中记录被试脑电波的变化, 以 Nogo-N2 和 Nogo-P3 的平均波幅作为测量反应抑制的指标。结果显示: (1) 游戏成瘾组的 Nogo 正确率: 内隐任务显著小于外显任务, 愤怒面孔显著小于开心面孔下; (2) 在内隐任务中, 游戏成瘾组的 Nogo-N2 波幅显著小于控制组, Nogo-P3 波幅显著大于控制组; 外显任务中两组的 Nogo-N2 和 Nogo-P3 波幅差异不显著。以上结果表明, 游戏成瘾者

的反应抑制能力受到情绪加工水平和情绪效价的影响,在内隐和负性情绪信息下的反应抑制能力减弱,表现为行为抑制失败、冲突控制减弱,以及需要付出更多的认知资源和意志努力来完成反应抑制。这一结果从情绪认知交互作用的角度,为游戏成瘾者反应抑制能力受损的问题提供了证据,并为游戏成瘾的干预提供了更加具体的线索。

关键词 情绪信息, 游戏成瘾, 反应抑制, Go/Nogo

Influences of Different Emotional Information on Response Inhibition in Gaming Disorder and Its Neural Mechanism

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Abstract: Gaming disorder (GD) is an addictive behavior which lacks control over gaming behaviors and leads to functional impairment. Individuals with GD usually have high impulsivity characteristics, manifested by weak response inhibition ability. In terms of emotional information processing, individuals with GD have more negative emotions, weaker emotional regulation ability and attentional bias towards negative stimuli. A large number of studies have found that Individuals with GD have impaired response inhibition, but its causes and influencing factors are still an unsolved mystery. Therefore, based on the theory of emotion and cognitive interaction, this study adopted event-related potential (ERP) technology to explore the response inhibition ability of individuals with GD under different emotional information through the Go/Nogo task. In this study, emotional information was divided into two aspects: processing level (implicit or explicit) and valence (happy or angry). The design was a 2 (groups: gaming disorder group versus control group) $\times$ 2 (processing levels: implicit versus explicit) $\times$ 2 (valences: happy versus angry) mixed design. The electroencephalograms of participants were recorded during the experiment and average amplitudes of Nogo-N2 and Nogo-P3 were used as indicators for measuring response inhibition. The results indicated that: (1) Nogo accuracy in GD group: implicit task was significantly lower than explicit task; angry faces was significantly lower than happy faces. (2) In implicit task, the amplitudes of Nogo-N2 in the GD group were significantly smaller than those in the control group; the amplitudes of Nogo-P3 were significantly larger than those in the control group, the changes of Nogo-N2 and Nogo-P3 were not significant in the explicit task. The findings showed that the response inhibition of individuals with GD is regulated by the level of emotional processing and emotional valence. Under the condition of implicit and negative emotional information, the response inhibition ability of individuals with GD is weakened. This effect is manifested as failure of behavior inhibition and weakened conflict control, resulting in more cognitive resources and volitional efforts required to complete response suppression. This study provided evidence for impaired response inhibition of GD from the perspective of interaction between emotion and cognition, and provided more detailed clues for the intervention of GD.

Keywords: emotional information, gaming disorder, response inhibition, Go/Nogo

网络使用对青少年抑郁症状的影响： 认知专注和网络警觉的链式中介作用

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摘 要 青少年时期是个体生理和心理发展的重要时期,也是抑郁症状的高发阶段。尽管前人基于不同角度对青少年抑郁的前因变量展开了研究,但对于“数字土著”一代而言,其网络使用行为与抑郁症状的关系仍值得进一步探索。初中生身心尚未成熟,其大量的网络使用可能会对其认知变化和倾向产生影响。一方面,研究表明大量的网络使用可能会强化个体与网络的认知联结,促进深度参与;另一方面,网络已经渗透到人们生活的方方面面,个体大量的网络使用行为可能会使其进一步表现出对网络相关信息的持续关注。以上过程均可能会干扰青少年正常的学习和生活,增大抑郁风险。因此,本研究构造了一个链式中介模型,旨在考察网络使用对青少年抑郁症状的影响,以及认知专注和网络警觉的作用机制。本研究采用网络使用行为问卷、

认知专注量表、网络警觉量表和抑郁症状问卷，对湖北省两所中学共 1528 名初中生（男生 50.3%， $M_{age}=12.84\pm0.72$ ）进行了为期两年的纵向调查。本研究采用自我报告法，在 T1 时收集被试的网络使用情况，间隔 1 年（即 T2）后要求被试完成认知专注量表、网络警觉量表和抑郁症状问卷。结果表明：（1）T1 网络使用行为与 T2 认知专注、T2 网络警觉和 T2 抑郁症状存在显著的两两相关。（2）T1 时初中生的网络使用行为能够正向预测其 T2 时的抑郁症状。（3）T2 认知专注和 T2 网络警觉在网络使用对青少年抑郁症状的影响中发挥着链式中介作用。本研究从认知层面揭示了青少年网络使用行为对其抑郁症状的潜在机制，启示人们应合理监管青少年的网络使用，减少抑郁症状。

关键词 网络使用，抑郁症状，认知专注，网络警觉

The Effect of Internet use on Adolescents' Depressive Symptoms: The Mediating Role of Cognitive Absorption and Online Vigilance

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Abstract: Adolescence is not only an important period for physiological and psychological development but also the main stage of depressive symptoms. Although previous researchers have studied the antecedents of adolescent depression from different perspectives, however, for the “digital native” generation, the relationship between adolescents' Internet use behavior and depressive symptoms deserves further exploration. Junior middle school students are physically and mentally immature. Their extensive Internet use may have an impact on their cognition and behavior. On the one hand, research indicated that excessive Internet use may strengthen the cognitive connection between individuals and the Internet, and promote adolescents' deep involvement. On the other hand, Internet has penetrated various aspects of people's life. A large number of Internet use behaviors may further make adolescents show continuous attention to Internet-related information. The above processes could interfere with adolescents' study and life, and further increase the risk of depression. Therefore, this study constructed a multiple mediation model to investigate the effect of Internet use on adolescents' depressive symptoms and explore the roles of cognitive absorption and online vigilance. The current study used the Internet use questionnaire, cognitive absorption scale, online vigilance scale, and depressive symptoms questionnaire. This two-year longitudinal study investigated 1528 junior middle school students (male 50.3%, $m_{age} = 12.84 \pm 0.72$) from two schools in Hubei Province. In this study, the self-report method was used to collect data about participants' Internet use at Time1 (T1). One year later (i.e., Time2, T2), participants need to complete the cognitive absorption scale, online vigilance scale, and depressive symptom questionnaire. The results showed that: (1) Internet use behavior at T1 was significantly correlated with cognitive absorption at T2, online vigilance at T2, and depressive symptoms at T2. (2) Adolescents' Internet use at T1 could positively predict their depressive symptoms at T2. (3) Cognitive absorption at T2 and online vigilance at T2 played the mediating role in the effect of Internet use on adolescents' depressive symptoms. This study reveals the potential mechanism of adolescents' Internet use behavior on their depressive symptoms from the aspect of cognition, and further enlightens people to appropriately manage adolescents' Internet use to reduce depressive symptoms.

Keywords: Internet use, depressive symptoms, cognitive absorption, online vigilance

(3) “网络心理学专业委员会” 口头报告分场 3

大学生网络表情符号使用对在线交流效果的影响

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摘要 近年来, 线上交流已经成为研究者关注的话题之一, 作为线上交流中的辅助工具, 网络表情符号已被人们广泛接受和认可, 有研究发现, 网络表情符号能够有效弥补线上交流中缺乏非语言线索这一缺陷, 并能有助于个体准确理解信息, 在一定程度上对在线交流效果具有积极影响。目前的研究对于网络表情符号这一具体的网络使用行为对在线交流效果的影响研究相对较少。本研究结合问卷调查和线上实验法, 在了解大学生网络表情符号使用特点的基础上, 关注网络表情符号具体使用对在线交流效果的影响。研究一: 自编《大学生网络表情符号使用情况调查问卷》调查了 334 名大学生在社交平台中网络表情符号的使用情况, 结果发现, 微信是使用频率最高的社交工具; 以使用图片类表情为主; 聊天对象和聊天主题均会对个体的表情符号使用产生影响; 个体更习惯将表情符号置于句子的末尾。基于研究一的结果制作后续研究实验材料。研究二: 采用 2 (主题: 社交、任务) × 3 (强度: 高、中、低) 组内实验设计考察 43 名大学生在社交主题和任务主题下不同表情符号强度对在线交流效果的影响, 结果发现, 使用中等强度表情符号的在线交流效果最好; 相比于任务主题, 社交主题下网络表情符号使用对在线交流效果的影响更显著。研究三: 采用 2 (主题: 社交、任务) × 3 (类型: 纯文字、文字+图释、纯图释) 组内实验设计考察 39 名大学生在社交主题和任务主题下不同表情符号类型对在线交流效果的影响, 结果发现, 使用文字+图释的表情符号和使用纯图释表情符号的在线交流效果比纯文字的表情符号的在线交流效果更好。研究四: 将文本+图释的表情符号根据非语言信息和语言信息的不同互动性质细分为加强型表情符号、否认型表情符号以及取代型表情符号, 采用 2 (主题: 社交、任务) × 3 (互动性质: 加强、取代、否认) 组内实验设计考察 42 名大学生网络表情符号内部信息的不同互动性质对在线交流效果的影响, 结果发现, 使用加强型网络表情符号能够积极影响在线交流效果。

关键词 网络表情符号, 聊天主题, 强度, 类型, 在线交流效果

The influence of college students' emoticons usage on the online communication effect

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Abstract: In recent years, online communication has become one of the topics that researchers pay attention to. As an indispensable part of online communication, online emoticons have been widely accepted and recognized by people. Related research has found that online emoticons can effectively compensate for the lack of non-verbal clues in online communication, and can help individuals understand information accurately, and can achieve good online communication effect. In the current stage of research, there is relatively little research on the influence of the specific internet use behavior of emoticons on the effect of online communication (the OC effect). Therefore, this study uses a combination of questionnaires and online behavioral experiments to understand the characteristics of college students' use of emoticons, and investigate the influence of the specific emoticon usage on the OC effect. Study 1: The questionnaire method was used to get a preliminary understanding of college students' online emoticons usage on social platforms among 334 college students. The results showed that WeChat is the social tool most frequently used by college students; college students mainly use picture facial expressions; both the chat object and the chat topic will affect the individual's use of emoticons; individuals are more accustomed to placing emoticons at the end of sentences. Based on the results of study 1, make experimental materials for follow-up research. Study 2: Adopt 2 (theme: social, task) × 3 (intensity: high, medium, low) behavioral experimental design to investigate the influence of the intensity of emoticons usage on the OC effect under social or task theme among 43 college students.

The results showed that the effect of online communication is the best when using medium-strength emoticons. Compared with task-theme, the OC effect is better with the intensity of online emoticon usage under social-theme than that under task-theme. Study 3: Adopt 2 (theme: social, task) $\times$ 3 (type: text, text + sticker, sticker) behavioral experimental design to investigate the influence of the type of emoticons usage on the OC effect under social or task theme among 39 college students. The results showed that the type of online emoticons usage can significantly affect the OC effect. The OC effect of text + sticker and sticker emoticons was better than that of high-purity text emoticons. Study 4: it further subdivided the text + sticker emoticons into enhanced emoticons, denial emoticons, and replacement emoticons according to the different interactive nature of non-verbal information and language information. In this study, adopt 2 (theme: social, task) $\times$ 3 (interactive nature: enhanced, denial, substitution) behavioral experimental design to investigate the influence of different interactive nature of internal information of the network emoticons on the OC effect among 42 college students. The results showed that using enhanced emoticons has the best OC effect.

Keywords: Emoticons, chat theme, intensity, types, Online communication effect

同伴性话题沟通对网络色情偏差行为的影响： 羞耻感和性感觉寻求的链式中介作用

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摘要 随着网络技术的持续发展, 互联网让生活更加丰富与便利, 但同时网络的隐匿性与便捷性使偏差行为容易在网络社会中发生, 网络色情偏差行为是指在互联网上进行与性有关的活动, 具体包括色情聊天、浏览色情图文、观看色情录像以及进行网络虚拟性爱等方式。研究表明大学生在网络上与同伴或者与现实中同性同伴进行性话题的沟通对其性适应中的社会适应和性控制力会造成负面影响; 当与同伴进行性话题的沟通时, 个体会产生对自我的省察, 而对性话题内容的兴趣以及对社会规范的逃避会使个体产出负性的自我评价, 随之而来的则是强烈的羞耻感。羞耻感常常引发个体出现言语、身体攻击等偏差行为, 高羞耻感体验使个体更容易进入不能冷静的应激状态; 性感觉寻求作为一种人格特质, 对个体的日常行为会产生影响, 高性感觉寻求的个体更容易被奇异、变化的活动吸引, 可能有更多的危险性行为。本研究为探讨同伴性话题沟通对网络色情偏差行为的影响机制, 以及羞耻感和性感觉寻求在二者关系中的作用机制, 采用同伴性话题沟通频率量表、羞耻体验量表、性感觉寻求量表、青少年网络偏差行为量表对 781 名大学生进行测试。结果表明: (1) 同伴性话题沟通、羞耻感、性感觉寻求及网络色情偏差行为水平彼此之间显著正相关。(2) 同伴性话题沟通可以显著预测大学生网络色情偏差行为水平。(3) 同伴性话题沟通通过羞耻感和性感觉寻求的链式中介作用预测大学生网络色情偏差行为水平。研究结果启示, 要引导大学生进行健康的同伴性话题沟通; 从减少网络色情偏差行为产生的角度, 为教育者们的性健康教育提供一些思考, 如何减少大学生与同伴间不健康的性话题沟通, 减少羞耻感体验, 控制寻求性方面的新奇体验, 从而使大学生网络色情偏差行为有所减少, 值得未来研究者的关注。

关键词 同伴性话题沟通, 网络色情偏差行为, 羞耻感, 性感觉寻求

Influence of Peer Sex Topic Communication on Deviant Behavior of Internet Pornography: The Chain Mediating Role of Shame and Sexual Sensation Seeking

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Abstract: With the continuous development of network technology, the Internet makes life richer and more convenient, but at the same time, the concealment and convenience of the Internet make deviant behavior easy to occur in the network society. Internet pornographic deviant behavior refers to sex-related activities on the Internet,

including pornographic chatting, browsing pornographic pictures and texts, watching pornographic videos and having virtual sex on the Internet. Studies have shown that college students' communication on sexual topics with their peers on the Internet or with their peers of the same sex in reality will have a negative impact on their social adaptation and sexual control in sexual adaptation; When communicating with peers on sexual topics, individuals will have self-examination, while interest in sexual topics and evasion of social norms will lead to negative self-evaluation, followed by a strong sense of shame. Shame often leads to deviant behaviors such as speech and physical attack, and high shame experience makes it easier for individuals to enter a stress state that can not be calm; As a personality trait, sexual sensation seeking will have an impact on individual's daily behavior. Individuals seeking high sexual sensation are more likely to be attracted by strange and changing activities, and may have more dangerous behaviors. In order to explore the mechanism of influence of peer-to-peer topic communication on the behavior of internet pornography bias, and the mechanism of shame and sexual feeling seeking to play a role in the relationship between the two, 781 college students were tested by using peer-to-peer topic communication frequency scale, shame experience scale, sexual feeling seeking scale and adolescent network bias behavior scale. The results show that: (1) Peer sexual topic communication, shame, sexual sensation seeking and online pornography deviation behavior level are significantly positively correlated with each other. (2) Peer-to-peer topic communication can significantly predict college students' deviant behavior level of online pornography. (3) Peer-to-peer topic communication predicts college students' deviant behavior level of online pornography through the chain mediation of shame and sexual sensation seeking. The results of the study suggest that college students should be guided to communicate on healthy peer topics. From the perspective of reducing the deviation behavior of online pornography, this paper provides some thoughts for educators' sexual health education, and how to reduce unhealthy sexual topic communication between college students and peers, reduce shame experience and control novelty experience in seeking sex, so as to reduce the deviation behavior of online pornography of college students, which deserves the attention of future researchers.

Keywords: Communication on peer sex topics, Deviant behavior of Internet pornography, The sense of shame, Sexual sensation seeking

儿童青少年问题性手机使用症状的动态网络视角：三年追踪研究

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摘要 背景: 近两年大量的纵向研究和元分析表明, 儿童青少年问题性手机使用会影响其心理健康、学业水平、睡眠质量及生活质量。基础和临床研究者基于传统的干预视角, 提供了一些治疗建议和干预方案。但近年来, 随着精神疾病网络理论和相应的网络分析方法的发展, 一些研究者开始从网络视角探索儿童青少年问题性手机使用症状之间的关系, 并提出对网络中重要核心症状进行干预将更加有利于促进儿童青少年问题性手机使用的治疗。尽管以往研究基于网络视角提出了儿童青少年问题性手机使用的核心症状, 但是均基于横断数据, 难以得出因果推论。此外, 横断数据下的网络视角通常无法区分被试间和被试内变异, 难以做出正确的统计推论。方法: 为此, 本研究对 3,377 名儿童青少年 (Male = 1735, $M_{age} = 12.27 \pm 2.27$) 进行三年追踪研究, 使用图形向量自回归模型 (GVAR) 对数据进行网络模型拟合, 以探索问题性手机使用症状 (教育/关系损害、戒断反应、沉迷、注意偏差、情绪缓解、失控、失去兴趣、陷入循环) 的被试内时间变化网络、被试内同时性网络和被试间网络, 并计算各个网络的中心性。结果: 时间变化网络中, 陷入循环可以预测下一年的其余 7 个症状 ($\beta = 0.04$ to $0.16, p < 0.05$), 自我控制可以预测下一年的教育/关系损害 ($\beta = 0.04, p < 0.05$) 和陷入循环 ($\beta = 0.04, p < 0.05$), 其余症状不存在相互预测效应; 同时性网络中, 各个症状之间连接紧密, 存在正向的相关关系 (partial $r = 0.05$ to $0.29, p < 0.05$), 核心症状是陷入循环和失控; 被试间网络中, 网络整体十分稀疏, 教育/关系损害与戒断反应存在较高的负相关 (partial $r = -0.42, p < 0.05$)。结论和讨论: 儿童青少年问题性手机使用的核心症状是陷入循环和自我控制, 未来的干预手段中融入对陷入循环和自我控制能力的干预, 或许更能够更加有效。但是, 被试间教育/社会关系损害与戒断反应的负向关系进一步证实中小手机管理

政策及家庭教育对学生手机使用的干预或许有利于减少学生手机使用的沉迷性，这为相关政策制定提供了潜在的科学基础。另外，被试间稀疏的网络表明问题性手机使用的个体差异较大，未来干预治疗应该更加注重制定个性化的干预方案。

关键词 问题性手机使用，精神疾病网络理论，动态网络分析，儿童青少年

Dynamic network of problematic smartphone use symptoms in children and adolescents: A three years cohort study

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Abstract: BACKGROUND: A large number of longitudinal studies and meta-analyses in the last two years have shown that problematic smartphone use in children and adolescents affects their mental health, academic performance, sleep quality and quality of life. Basic and clinical researchers have provided a number of treatment recommendations and intervention programmes based on traditional intervention perspectives. In recent years, however, with the development of network theories of mental illness and corresponding network analysis methods, some researchers have begun to explore the relationship between symptoms of problematic smartphone use in children and adolescents from a network perspective, and suggest that interventions that address the core symptoms of problematic smartphone use in the network would be more beneficial in promoting the treatment of problematic smartphone use in children and adolescents. Although previous studies have suggested core symptoms of problematic smartphone use in children and adolescents based on a network perspective, they are based on cross-sectional data, making it difficult to draw causal inferences. In addition, the network perspective with cross-sectional data often fails to distinguish between and within-subject effect, making it difficult to make correct statistical inferences. METHODS: To this end, this study followed 3,377 children and adolescents (Male = 1735, $M_{age} = 12.27 \pm 2.27$) for three years and fitted network models to the data using a graphical vector-autoregressive model (GVAR) to explore the relationships between problematic smartphone use symptoms (educational/relationship impairment, withdrawal, preoccupation, distraction, emotional alleviation, loss of control, loss of interests, caught in the loop) in the within-subject temporal network, within-subject contemporaneous network and between-subject network. Besides, the centrality of each network was calculated. RESULTS: In the temporal network, caught in the loop (lag-n-1) predicted the remaining seven (lag-n) symptoms in the next year ($\beta = -0.04$ to 0.17 , $p < 0.05$), loss of control predicted the next year caught in the loop ($\beta = 0.04$, $p < 0.05$) and educational/relationship impairment ($\beta = 0.04$, $p < 0.05$), and no reciprocal predictive effect existed for the remaining symptoms; in the contemporaneous network, symptoms were strongly and positively correlated (partial $r = 0.05$ to 0.29 , $p < 0.05$), with the core symptom remaining Caught in the loop; for the between-subjects network, the whole network was very sparse, with a high negative correlation between educational/relational impairment and withdrawal (partial $r = -0.42$, $p < 0.05$). CONCLUSIONS AND DISCUSSION: The core symptom of problematic smartphone use in children and adolescents is caught in the loop, and future interventions that incorporate interventions for caught in the loop and loss of control may be more effective. However, the negative relationship between educational/social relationship impairment and withdrawal in between-subject network further confirms that smartphone management policies for students and family education interventions on students' smartphone use may be beneficial in reducing the addictive nature of students' smartphone use, which provides a potential scientific basis for relevant policies. In addition, the sparse between-subject network suggests that there may exist dramatic individual differences in PSU and future intervention should focus more on developing personal intervention program.

Keywords: Problematic smartphone use, network theory of mental disorder, dynamic network analysis, children and adolescents

异性拒绝与大学生网络色情偏差行为： 一个有调节的中介模型

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摘要 随着科技的进步和互联网的不断发展，网络已经在人们日常生活中占据着十分重要的地位。网络在带给人们便利的同时，其消极影响也日益为研究者所关注，如不良信息泛滥、网络成瘾和网络偏差行为等。网络色情偏差行为指的是在互联网上浏览色情图片、进行色情聊天、观看色情录像以及进行网络虚拟性爱等与性有关的活动，网络色情偏差行为属于网络偏差行为的一种。已有的研究发现网络色情偏差行为会对大学生的身心发展带来不利的影响，且大学生群体与其他群体相比网络偏差行为有着更高的发生率且情况更为复杂。而异性拒绝是指个体在日常生活中遭受来自异性的拒绝和排斥，它作为社会排斥的一种形式，会阻碍个体亲密关系和性欲望的满足。以往的研究发现社会排斥致使个体的社会联结受损，并显著增强了个体的网络偏差行为。本研究为了探讨异性拒绝对大学网络色情偏差行为的影响，以及羞耻感和性别在二者关系中的作用机制，采用异性拒绝经历量表（MRES）、羞耻体验量表（ESS）以及青少年网络偏差行为量表（SAID），对 775 名高校学生进行集体实测。在控制恋爱经验的基础上，结果发现：（1）异性拒绝、羞耻感和网络色情偏差行为之间均呈显著正相关；（2）异性拒绝通过羞耻感中介作用对网络色情偏差行为产生影响（ $\beta=0.05$ $t=5.90$, $p<0.001$ ）；（3）在羞耻感对网络色情偏差行为的简单效应中，性别起调节作用（羞耻感与性别的乘积项： $\beta=0.05$, $t=-2.66$, $p<0.01$ ）。研究结果启示，教育工作者要关注生活中经常被异性拒绝的大学生，着重提升大学生的人际交往能力，从源头上减少个体被拒绝的经历；引导他们进行合理的归因、掌握调节情绪的好方法；引导大学生安全文明地上网。

关键词 异性拒绝，网络色情偏差行为，羞耻感，性别

Opposite-sex refusal and deviant behaviors of College Students' Internet pornography: A moderated mediation model

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Abstract: With the progress of science and technology and the continuous development of the Internet, the network has played a very important role in People's Daily life. While the Internet brings convenience to people, its negative effects are also increasingly concerned by researchers, such as the flood of bad information, Internet addiction and network deviant behavior. The deviant behavior of Internet pornography refers to the activities related to sex such as browsing pornographic pictures, chatting, watching pornographic videos and having virtual sex on the Internet. The deviant behavior of Internet pornography belongs to one kind of deviant behavior of Internet. Existing studies have found that deviant behaviors of Internet pornography will have a negative impact on the physical and mental development of college students, and college students have a higher incidence of deviant behaviors and the situation is more complex than other groups. Opposite-sex rejection means that individuals are rejected and excluded by the opposite sex in daily life. As a form of social exclusion, it will hinder the satisfaction of intimate relationship and sexual desire of individuals. Previous studies have found that social exclusion damages individuals' social connection and significantly enhances individuals' network deviant behavior. In order to explore the influence of opposite-sex rejection on deviant behaviors of college Internet pornography, and the mechanism of the relationship between shame and gender, this study used the Opposite-sex rejection Experience Scale (MRES), shame Experience Scale (ESS) and Adolescent Deviant Behaviors Scale (SAID) to conduct collective measurement on 775 college students. After controlling for love experience, the results showed that : (1) there was a significant positive correlation between opposite-sex rejection, shame and deviant behavior of Internet pornography; (2) The opposite sex rejection had an effect on the deviant behavior of Internet pornography through the mediating effect of shame ($\beta = 0.05$, $t=5.90$, $P < 0.001$); (3) Gender moderated the simple effect of shame on deviant behavior of Internet pornography ($\beta=0.05$, $t=-2.66$, $P < 0.01$). The results suggest that educators should pay attention to college students who are often rejected

by the opposite sex in their daily life, focus on improving their interpersonal skills, and reduce the experience of individual rejection from the source. Guide them to make reasonable attribution and master the good method of emotion regulation; Guide college students to surf the Internet safely and civilized.

Keywords: opposite-sex rejection, Internet porn deviant behavior, shame, gender

社交媒体情感依赖和大学生人际科技干扰与问题性社交网络使用的关系：错失焦虑与孤独感的中介作用

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摘要 错失焦虑是个体因担心错失他人的新奇经历或正性事件而产生的一种弥散性焦虑，其本质是一种稳定的个体特质变量，近年来受到了越来越多研究者的关注。在前期影响因素方面，现有研究大多探讨一些内源性因素对错失焦虑的影响，比如个体的负性情绪、认知方式、人格特质等，而较少探讨外源性因素与错失焦虑的关系，比如人际因素与群际因素。人际科技干扰是指在人际交往过程中随着电子科技产品的侵入，对人与人之间的沟通以及其他日常人际交往所产生的干扰。作为重要的人际因素，人际科技干扰应该会对个体问题性社交网络使用产生影响，而这项研究并未开展。为了探讨和比较作为内源性因素的社交媒体情感依赖与作为外源性因素的人际科技干扰对错失焦虑以及问题性社交网络使用的影响，本研究以 500 名中国高校大学生为研究对象，考察了社交媒体情感依赖和人际科技干扰与问题性社交网络使用的关系，以及错失焦虑和孤独感在其间的中介作用。本研究的测量工具包括社交媒体情感依赖量表、大学生人际科技干扰自编量表、错失焦虑量表、孤独感量表和问题性社交网络使用量表，数据分析采用描述性统计、Pearson 相关系数和 bootstrap 方法。结果发现：（1）大学生错失焦虑在性别上差异显著，女生错失焦虑更高，更容易受到人际科技干扰的影响。（2）社交媒体情感依赖与错失焦虑、孤独感以及问题性社交网络使用呈显著正相关，人际科技干扰与错失焦虑和问题性社交网络使用呈显著正相关，与孤独感相关并不显著。（3）社交媒体情感依赖能够通过错失焦虑影响问题性社交网络使用，也可以通过错失焦虑——孤独感链式中介影响问题性社交网络使用，大学生人际科技干扰能够通过错失焦虑影响问题性社交网络使用。结论：内源性的个体因素和外源性的人际因素可以共同预测问题性社交网络使用，错失焦虑在两条作用途径中均可起到中介作用。

关键词 社交媒体情感依赖，人际科技干扰，错失焦虑，孤独感，问题性社交网络使用

The correlation of problematic use of social networks with the emotional dependence on social media and the interpersonal technology interference of college students: the mediating roles of missing anxiety and loneliness

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Abstract: Missing anxiety, a stable individual characteristic variable, is a kind of diffuse anxiety caused by individuals worrying about missing other people's novel experiences or positive events, which has received extensive attention from numerous researchers in recent years. In terms of the early influencing factors of missing anxiety, most of the existing studies focused on the influence of endogenous factors, such as negative emotions, cognitive styles, personality traits, on missing anxiety, but less on the relationship between missing anxiety and exogenous factors such as the interpersonal factors and intergroup factors. Interpersonal technology interference refers to the interference caused by the intrusion of electronic technology products in the process of interpersonal communication and other daily interpersonal interaction. As an important interpersonal factor, interpersonal technology interference should have an impact on the individual problematic use of social networks, but this research has not been carried out. In order to explore and compare the influence of the emotional dependence on social media as an endogenous factor

and the interpersonal technology interference as an exogenous factor on missing anxiety and problematic use of social networks, 500 Chinese college students are selected as the research objects in this study to investigate the correlation of problematic use of social networks with the emotional dependence of social media and the interpersonal technology interference, as well as the mediating role of missing anxiety and loneliness. The research methodology of this study includes the scale of the emotional dependence on social media, the self-designed scale of the interpersonal technology interference of college students, the missing anxiety scale, the loneliness scale, and the scale of problematic use of social networks. Descriptive statistics, Pearson correlation coefficient, and bootstrap method are used for data analysis. The results show that: (1) There is a significant gender difference in missing anxiety among college students. Female students have higher missing anxiety and are more susceptible to interpersonal technology interference. (2) The emotional dependence on social media is significantly positively correlated with missing anxiety, loneliness, and problematic use of social networks. Interpersonal technology interference is significantly positively correlated with missing anxiety and problematic use of social networks, but it is not significantly correlated with loneliness. (3) The emotional dependence on social media can affect the problematic use of social networks through missing anxiety, and it can also affect the problematic use of social networks through missing anxiety-loneliness chain intermediary. Interpersonal technology interference of college students can affect problematic use of social networks through missing anxiety. In conclusion, endogenous individual factors and exogenous interpersonal factors can jointly predict the problematic use of social networks, and missing anxiety can play a mediating role in both ways.

Keywords: Emotional dependence on social media, Interpersonal technology interference, Missing anxiety, Loneliness, Problematic use of social networks

(4) “网络心理学专业委员会” 口头报告分场 4

社交网站使用强度与网络利他行为的关系： 网络社会支持的中介作用和隐性自恋与性别的共同调节作用

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摘 要 截止 2020 年 1 月, 社交媒介的全球普及率达到 49%, 社交网站用户数量达到 36 亿, 约占世界人口的一半。人们在网络上进行各种活动, 网络使人们的利他行为从现实生活延伸至网络空间。网络利他行为的发生能在网络环境中营造积极向上、互助互利的空间氛围, 构建和谐的网络环境并使网络的积极作用得到充分发挥。回顾已有研究发现, 目前大多数研究关注的是网络交往对网络利他行为的影响, 尚未有研究关注社交网站使用强度如何影响网络利他行为, 尤其是社交网站使用强度如何影响(中介作用)以及在何种条件下(调节作用)影响网络利他行为。为明确社交网站使用强度对个体网络利他行为的影响及作用机制, 本研究构建了一个共同调节的中介模型, 考察了网络社会支持在二者关系中的中介作用以及隐性自恋和性别的共同调节作用。本研究对 726 名大学生的社交网站使用强度、网络社会支持、隐性自恋及网络利他行为进行问卷调查。结果显示: (1)社交网站使用强度越高, 个体表现的网络利他行为越多; (2)网络社会支持在社交网站使用强度与网络利他行为的关系中起中介作用; (3)到隐性自恋和性别的共同调节社交网站使用强度和网络社会支持的关系。高隐性自恋女性的社交网站使用强度对网络社会支持的预测作用与低隐性自恋女性没有显著差异; 高隐性自恋男性的社交网站使用强度对网络社会支持的预测作用较低隐性自恋男性更小。本研究对探究关于社交网站使用强度与网络利他行为的关系的认识具有重要的理论意义; 本研究结果对引导个体, 尤其是隐性自恋水平较高的男性, 合理理性地使用社交网站进行人际交往, 克服性格弱点, 从而在网络交往中获得更多的网络社会支持, 进而表现出更多的网络利他行为、营造和谐的网络环境具有一定的启示意义。

关键词 社交网络使用强度, 网络利他行为, 网络社会支持, 隐性自恋, 性别

Relationship between Social Network Sites Intensity and Internet altruistic behavior: Mediating Role of Online Social Support and Joint Moderating Role of covert narcissism and Gender

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Abstract: As of January 2020, the global penetration rate of social media has reached 49%, and the number of social network users has reached 3.6 billion, approximately half of the world's population. People carry out various activities on the Internet, and the Internet extends people's altruistic behaviors from real life to cyberspace. The occurrence of internet altruistic behavior can create a positive and mutually beneficial space atmosphere in the network environment, construct a harmonious network environment and give full play to the positive role of the internet. Reviewing existing studies, most of the current studies focus on the impact of online communication on internet altruistic behavior, no studies have focused on how the social network sites intensity affects internet altruistic behavior, especially how the social network sites intensity affects (mediating effect) and under what conditions (moderating effect) it affects internet altruistic behavior. In order to clarify the influence of social network sites intensity on internet altruistic behavior and its mechanism, this study constructed a co-moderating mediation model to examine the mediating role of online social support in the relationship between social network sites intensity and internet altruistic behavior, and the jointly moderating role of covert narcissism and gender. In this study, 726 college students were surveyed on the intensity of social network sites intensity, online social support, covert narcissism and internet altruistic behavior. The results showed that : (1) the higher the social network sites intensity, the more internet altruistic behaviors individuals exhibited; (2) Online social support played a mediating role in the relationship between the social network sites intensity and internet altruistic behavior; (3) Covert narcissism and gender moderated the relationship between social network sites intensity and online social support. There was no significant difference in the predictive effect of social network sites intensity on online social support between the women with high covert narcissism and the women with low covert narcissism. In men with high covert narcissism, the intensity of social network sites intensity had a lower predictive effect on online social support than in men with low covert narcissism. This study has important theoretical significance for exploring the understanding of the relationship between the social network sites intensity and internet altruistic behavior. This research results to guide the individual, especially men with higher levels of covert narcissistic, reasonable rationally using social networking sites for interpersonal communication, overcome weaknesses personality, thus to gain more online social support in network communication, and then show more altruistic behavior, create a harmonious network environment has the certain enlightenment significance.

Keywords: Social network sites intensity, Internet altruistic behavior, Online social support, Covert narcissism, Gender

社交媒体自我控制失败对用户幸福感的预测： 日常挫折和主观活力感的中介作用

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摘要 社交媒体自我控制失败（Social media self-control failure）指使用社交媒体与其他目标（如学习、工作）发生冲突时无法控制使用的现象。移动互联网环境下，“无时无刻、无处不在”地使用社交媒体使得自我控制失败的几率增加，并被感知为一种日常挫折（Daily hassle）。本研究旨在探索社交媒体自我控制失败及感知到的日常挫折通过降低主观活力感对用户幸福感（积极情绪、消极情绪）的预测。采用网络调查问卷，本研究对 490 名 16 至 54 岁（ $M = 24.2$, $SD = 8.3$ ）的社交媒体用户（其中女性占 72.4%）进行了在线调查。

结果发现：（1）社交媒体自我控制失败对积极情绪和消极情绪的直接效应显著；（2）社交媒体自我控制失败对积极情绪的预测被日常挫折和主观活力感完全中介；（3）社交媒体自我控制失败对消极情绪的预测被日常挫折和主观活力感完全中介；（4）主观活力感完全中介了日常挫折对积极情绪的预测，部分中介了日常挫折对消极情绪的预测。结果表明，社交媒体自我控制失败越频繁的用户，其日常挫折感越强，主观活力感越低。降低的主观活力感预测了他们更低的积极情绪和更高的消极情绪。本研究探索了社交媒体自我控制失败对用户幸福感的预测路径，有助于进一步丰富移动互联网环境对个体心理影响的研究。

关键词 社交媒体，自我控制，主观活力感，幸福感，中介作用

The prediction of social media self-control failure on well-being: the mediating role of daily hassle and subjective vitality

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Abstract: Social media self-control Failure refers to the failure in controlling social media use when it conflicts with other goals (e.g., study, work). Being “permanently online, permanently connected” in a media-saturated environment increases the risk of self-control failure, which is perceived as a daily hassle. The aim of this study was to explore the prediction of social media self-control failure and perceived daily hassle on users’ well-being (i.e., positive and negative emotions) by reducing subjective vitality. Using an online questionnaire, 490 social media users (72.4% female) aged between 16 and 54 ($M = 24.2$, $SD = 8.3$) were surveyed online. The results showed that: (1) Social media self-control failure had a significant direct effect on positive and negative emotions; (2) The prediction of social media self-control failure on positive emotions was completely mediated by daily hassle and subjective vitality; (3) The prediction of social media self-control failure on negative emotions was fully mediated by daily hassle and subjective vitality; (4) The subjective vitality fully mediated the prediction of daily hassle on positive emotions, and partially mediated the prediction of daily hassle on negative emotions. The results showed that users with more frequent social media self-control failures experienced greater daily hassle and lower subjective vitality. Reduced subjective vitality predicted lower positive emotions and higher negative emotions. This study explores the predictive path of social media self-control failure on users’ well-being, which helps to enrich the research on the impact of mobile Internet environment on psychological health.

Keywords: Social media, Self-control, Daily hassle, Well-being, Mediation effect

儿童期心理虐待与网络欺负的关系：一个有调节的中介模型

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摘要 随着互联网和移动通讯工具的快速发展，欺负行为的发生场所逐渐扩宽至网络空间，并随之产生一种新的欺负形式——网络欺负。网络欺负有别于传统欺负，已在大学生群体中逐渐发展成重要的欺负形式。本研究基于一般压力理论与心理分析理论构建了一个有调节的中介模型，探讨大学生儿童期心理虐待与网络欺负的关系，并进一步探讨消极情绪的中介作用和生命意义感的调节作用。采用儿童期心理虐待量表、网络欺负量表、消极情绪量表以及生命意义感量表对河南省 667 名大学生进行调查，结果发现：（1）儿童期心理虐待、消极情绪和网络欺负两两之间呈显著正相关，生命意义感与儿童期心理虐待、消极情绪和网络欺负呈显著负相关；（2）儿童期心理虐待既可以直接预测网络欺负，还能通过消极情绪的中介作用间接预测网络欺负；（3）生命意义感调节儿童期心理虐待对网络欺负的直接效应和中介效应的后半段。具体来说，与低生命意义感的个体相比，高生命意义感个体的儿童期心理虐待经历和因此而产生的消极情绪均更不容易导致网络欺负行为。生命意义感作为缓冲机制，可以缓解儿童期心理虐待和消极情绪对网络欺负行为的影响，通过增

加大学生的生命意义感,可以减少网络欺负行为。本研究不仅解释了网络欺负是如何产生的,以及在什么条件下影响更大,也为减少网络欺负的发生提供了重要依据。

关键词 儿童期心理虐待,网络欺负,生命意义感,消极情绪

The Relationship between Childhood Psychological Abuse and Cyberbullying: A Moderated Mediated Model

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Abstract: With the rapid development of the Internet and mobile communication tools, the place of bullying has gradually expanded to cyberspace, and a new form of bullying-Cyberbullying has emerged. Unlike to traditional bullying, cyberbullying has gradually developed into another main form of bullying amidst college students. Based on the General Stress Theory and Psychoanalysis Theory, the study constructed a moderated mediation model to explore the inner relationship between childhood psychological abuse and cyberbullying among college students, and further explored the mediating role of negative emotions and the moderating role of the meaning in life. The Childhood Psychological Abuse Scale, Cyberbullying Inventory, Positive and Negative Affect Scale as well as the Meaning in Life Questionnaire to survey 667 college students in Henan Province, the results showed that: (1) Childhood psychological abuse, negative emotions and cyberbullying has significant positive correlation between two, the meaning in life and childhood psychological abuse, negative emotions and cyberbullying has significant negative correlation; (2) Childhood psychological abuse can not only directly predict cyberbullying, but also indirectly forecast cyberbullying through the mediating effect of negative emotions. (3) The meaning in life both moderates the direct effect and the second half of the mediating effect of childhood psychological abuse on cyberbullying. Specifically, individuals with a high meaning in life who had experienced childhood psychological abuse and the negative emotions associated with it were less likely to cause cyberbullying than individuals with a low meaning in life. As a buffer mechanism, the meaning in life can alleviate the impact of childhood psychological abuse and negative emotions on cyberbullying. By increasing the meaning in life, cyberbullying is able to be reduced effectively. This study not only explains how cyberbullying occurs and under what conditions the effect is greater, but also provides an important basis for reducing the occurrence of cyberbullying.

Keywords: Childhood Psychological Abuse, Cyberbullying, the Meaning in Life, Negative Emotions

物质主义与青少年问题性社交网站使用：自尊和错失恐惧的中介作用

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摘要 目的：随着互联网技术的成熟和智能手机的普及，微信朋友圈、微博与QQ空间等社交网站已成为青少年人际交往的重要工具。然而，社交网站带来便利的同时也不可避免地引发了相应的心理社会问题，即对社交网站的过度精神依赖所产生的系列心理困扰和身体不适。近年来，越来越多的研究者开始致力于探索影响问题性社交网站使用的保护性和风险性因素，但鲜有研究涉及物质主义与问题性社交网站使用之间的关系及其潜在的作用机制。尤其当前我国经济社会处于快速发展时期，青少年的物质生活水平获得了大幅提升，使其心理与行为问题日益凸显。因此，本研究基于个体-情感-认知-执行相互作用框架，旨在考察青少年物质主义与问题性社交网站使用的关系，并进一步探讨自尊和错失恐惧在其中的作用。**方法：**采用物质主义价值观量表、自尊量表、错失恐惧量表及Facebook侵扰问卷对550名高中生（54%女生； $M_{\text{年龄}} = 16.29$ 岁； $SD_{\text{年龄}} = 0.99$ ）进行调查。**结果：**（1）物质主义与自尊显著负相关，与错失恐惧、问题性社交网站使用显著正相关；自尊与错失恐惧、问题性社交网站使用显著负相关；错失恐惧与问题性社交网站使用显著正相关；（2）在控制

了性别与年龄后,物质主义能够显著正向预测青少年的问题性社交网站使用;(3)物质主义通过自尊和错失恐惧的中介作用对问题性社交网站使用产生影响,且该中介作用包含了两条路径:一是错失恐惧的单独中介作用;二是自尊-错失恐惧的链式中介作用。**结论:**强烈物质追求的青少年往往具有消极的自我评价,进而会增加错失恐惧这一消极体验,并最终通过对社交网络的过度使用来加以缓解。这些发现为青少年价值观的培养,以及问题性社交网站使用的预防和干预提供了新的视角。

关键词 物质主义, 问题性社交网站使用, 自尊, 错失恐惧, 青少年

Materialism and Problematic Social Network Sites Use among Chinese Adolescents: The Mediating Roles of Self-esteem and Fear of Missing Out

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Abstract: Objective: With the maturity of Internet technology and the popularity of smartphones, social networking sites (SNS) such as WeChat moments, Weibo and Qzone have become important tools for teenagers to communicate in everyday life. Despite great convenience has brought, spending too much time on SNS is supposed to be detrimental and defined as problematic SNS use, which refers to a psychosocial phenomenon, involving an inordinate mental dependence on the use of SNS and in turn triggering psychological distress and physical discomfort. In recent years, more and more researchers have begun to focus on the protective and risk factors of problematic SNS use. Although existing research has ascertained some critical factors of problematic SNS use; however, little is known about the link between materialism and problematic SNS use, and the possible mediating mechanisms underlying this relation. Especially, in the period of rapid economic and social development in China, the material living standards of teenagers have been greatly improved, which making their psychological and behavioral problems increasingly prominent. **Method:** Based on the Interaction of Person-Affect-Cognition-Execution (I-PACE) model, a sample of 550 senior high school students (54% girls; $M_{age} = 16.29$; $SD_{age} = 0.99$) was recruited to complete a survey including demographics, the Materialism Value Scale, the Rosenberg Self-esteem Scale, Fear of Missing Out (FoMO) Scale, and the Facebook Intrusion Questionnaire. The present study examined whether materialism would be positively correlated with adolescents' problematic SNS use, as well as whether self-esteem and FoMO would mediate this association. **Results:** (1) Materialism was negatively correlated with self-esteem, and positively related to FoMO and problematic SNS use; self-esteem was negatively associated with FoMO and problematic SNS use; FoMO was positively associated with problematic SNS use. (2) After controlling for gender and age, materialism can significantly positively predict adolescents' problematic SNS use. (3) Materialism can influence problematic SNS use through the mediating effect of self-esteem and FoMO, and this mediating effect includes two paths: one is the separate mediating role of FoMO; the second is the chain-mediated role of both self-esteem and FoMO. **Conclusion:** Adolescents with strong material aspirations tend to have negative self-evaluations, which in turn increase the negative experience of FoMO, and eventually alleviated it through excessive use of SNS. These findings provide a new perspective for the cultivation of adolescents' values, as well as and the prevention and intervention of problematic SNS use.

Keywords: Materialism, Problematic social networking sites use, Self-esteem, Fear of Missing Out, Adolescents

正念与网络成瘾：自尊和自控的序列中介作用

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摘要 前人研究表明正念是防止网络成瘾的一项保护性因素, 正念水平高的个体网络成瘾水平更低。这可能是由于正念减少了个体自动化的行为反应, 同时减少了个体负性情绪。本研究旨在探讨自尊和自控在正念

水平与网络成瘾间的中介作用,为进一步干预大学生网络成瘾提供有效依据。我们假设正念和自尊是正念和网络成瘾之间的中介变量。此外,自尊可以显著的预测自控,也就是说自尊和自控的中介关系是一前一后的。综上,本研究假设:自尊和自控在正念与网络成瘾之间起序列中介作用。本研究采用简易版五因素正念量表、Rosenberg 自尊量表、自我控制量表和社交网站成瘾倾向量表在西北地区两所大学抽取 438 名大学生进行施测,被试的平均年龄为 18.56 ± 0.88 岁。结果发现:①正念和网络成瘾呈显著负相关,和自尊、自控呈显著正相关;自尊和自控呈显著正相关,和网络成瘾呈显著负相关;自控和网络成瘾呈显著负相关;②正念对网络成瘾预测作用显著;③正念和自尊在正念和网络成瘾之间存在单独的中介作用;④正念→自尊→自控→网络成瘾路径显著。这些结果表明,正念不仅直接影响网络成瘾,还存在三条间接路径:自尊的单独中介作用、自控的单独中介作用、自尊和自控的链式中介作用。进一步揭示了正念对网络成瘾的作用机制,同时也为提升正念和自尊水平干预网络成瘾提供了依据。

关键词 正念,网络成瘾,自尊,自控

Mindfulness and Internet Addiction among Chinese College Students: Mediating Effects of Self-esteem and Self-control

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Abstract: Previous studies have shown that mindfulness is a protective factor against Internet addiction. Individuals with higher levels of mindfulness prone to have lower levels of Internet addiction, which may be due to the fact that mindfulness reduces individuals' automatic behavioral responses and negative emotions. To explore the mediating effect of self-esteem and self-control between mindfulness and Internet addiction, and to provide basis for further intervention in college students' online addiction. Thus, we hypothesize that self-esteem and self-control would mediate the link between mindfulness and Internet addiction. In addition, self-esteem can predict self-control significantly. We further hypothesize that self-esteem and self-control sequentially mediate the effect of mindfulness and Internet addiction. A sample of 438 college students was surveyed with Short-Form Five Facet Mindfulness Questionnaire Instrument, Rosenberg Self-esteem Scale, Self-control Scale and Chinese Internet Addiction Scale-Revised. The subjects ($Mean\ age=18.56, SD=.88$) were recruited from two universities in Xi'an to take part in this study, and 2.42% of them were excluded because they failed to finish the questionnaires. Results showed that: ① Mindfulness was negatively correlated with Internet addiction, and was positively correlated with self-esteem and self-control; Internet addiction was negatively correlated with self-esteem and self-control, self-esteem was positively correlated self-control; ②mindfulness predict Internet addiction significantly; ③self-esteem and self-control would mediate the link between mindfulness and Internet addiction significantly; ④ self-esteem and self-control sequentially mediate the effect of mindfulness and Internet addiction. We can conclude that self-esteem and self-control clarity exert a serial mediating effect on the relationship between mindfulness and Internet addiction. This study further revealed the mechanism of the effect of mindfulness and Internet addiction, and provides empirical evidence to decrease Internet addiction by increasing the levels of mindfulness and self-esteem.

Keywords: Mindfulness, Internet addiction, Self-esteem, Self-control

4.24 情绪与健康心理学专业委员会

(1) “情绪与健康心理学专业委员会” 口头报告分场 1

认知策略调节社会排斥对疼痛共情的影响：一项 ERP 研究

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摘要 疼痛共情是指个体对他人疼痛的感知、判断和情绪反应, 会受到多种生理、心理和社会因素的影响。我们之前的研究发现, 社会排斥会削弱个体对他人疼痛共情的晚期加工。以往研究发现低水平的共情水平与攻击行为联系密切, 且社会排斥也会导致攻击行为。因此寻找方法在一定程度上削弱社会排斥对疼痛共情的影响对于减少社会排斥给被排斥者带来的负面影响可能具有一定的实践意义。尚未有研究探讨过怎样调节社会排斥对共情的影响。本研究使用时间分辨率较好的 ERP 技术, 研究不同的认知策略对社会排斥影响疼痛共情的调节效果差异。实验采用 2 (组别: 认知重评组和分心组) × 2 (图片类型: 疼痛图片和中性图片) 混合设计。首先采用网络抛球游戏诱发被试的被社会排斥感, 然后将被试随机分为两组, 要求一组被试接受认知重评任务, 另一组接受分心任务, 最后所有被试均完成疼痛图片判断任务。我们招募了 43 名大学生, 认知重评组 21 人, 分心组 22 人, 组内性别平衡。结果发现: (1) 操作检验结果验证了认知策略的有效性, 且只有认知重评可以显著改善被排斥个体的社会拒绝感、需求水平受损和提升正性情绪。(2) 两组被试观看疼痛图片相比中性图片诱发了更低的额区 N2 (240-270ms) 波幅和顶区 P3 (340-400ms) 波幅, 但是认知重评组观看两类图片时诱发的顶区和中央区 P3 波幅均边缘显著高于分心组; LPP (400-700ms) 成分上, 相比中性图片, 两组被试在观看疼痛图片时都表现出显著更高的中央区和顶区 LPP 波幅, 但是认知重评组观看疼痛图片的顶区 LPP 波幅显著高于分心组, 这也泛化到了中性图片上。上述结果表明认知策略的调节作用主要是在晚期有意识的控制加工阶段, 认知重评的干预效果好于分心。在控制加工的早期阶段 (340-400ms), 两个认知策略组均未出现共情反应, 但是认知重评组观看疼痛图片诱发的 P3 波幅更大说明相比分心组对他人疼痛投入了更多注意力资源; 在晚期阶段 (400-700ms), 两组均出现了共情反应, 但是相对分心组, 认知重评组观看疼痛图片诱发的 LPP 波幅更大说明其对他人的疼痛投入了更多的认知努力, 对他人生理性疼痛的敏感度与情绪反应更强。我们的研究为如何减少社会排斥对可能给个体带来的负面作用提供了一定的理论依据, 也为认知行为疗法调节个体消极情绪的有效性提供了一定的实证支持。

关键词: 社会排斥, 疼痛共情, 认知策略, ERP

The effect of social exclusion on empathy for pain: the moderation of cognitive strategy: an ERP study

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Abstract: Empathy for pain implies perception, judgement and affective response of another person's pain. It's influenced by many physiological, psychological and sociological factors. One of our previous studies has demonstrated that social exclusion weakens pain empathy towards strangers. Studies also suggest that low level of empathy are highly related to aggressive behaviors and social exclusion causes aggressive behaviors. Therefore, finding ways of diminishing the influence of social exclusion on empathy for pain may have some practical significance for weakening the negative impacts of social pain. The current study adopted the high time-resolution event-related potentials (ERPs) to compare the regulating effect of different cognitive strategies on the influence of

social exclusion on empathy for pain. We used a 2 (group: cognitive reappraisal group and distraction group) $\times$ 2 (type of picture: neutral pictures and painful pictures) mixed experimental design. First, cyberball was used to induce participants' feelings of being socially excluded and then participants were randomly assigned to two groups. Participants randomly assigned to the cognitive reappraisal group received a cognitive reappraisal task and those randomly assigned to distraction group received a distraction task. Finally all subjects completed the same empathy for pain task. The subjects were 43 college students including 21 students for cognitive reappraisal group and 22 for distraction group and the amounts of the male and female are almost the same in each group. The results were as follows: (1) We successfully manipulated different cognitive strategies and cognitive reappraisal groups can significantly reduce sense of social rejection and improve impaired levels of fundamental needs and positive affect of excluded individuals. (2) For early frontal N2 (240–270ms) component and late parietal P3 (340–400ms) component, relative to the neutral pictures, painful pictures elicited a positive shift of the ERPs in these time windows. But cognitive reappraisal group showed marginally significantly larger P3 amplitudes at central-parietal site than distraction group did while watching both painful and neutral pictures. As for late central-parietal LPP component (400–700ms), both groups showed significantly larger LPP amplitudes while watching the painful pictures than neutral pictures but cognitive reappraisal group showed significantly larger LPP amplitudes at parietal site than distraction group did while watching painful pictures, which also generalized to the neutral pictures. The results indicate that the regulating effect of cognitive strategy is mainly in the late conscious controlled processing stage, and the intervention effect of the cognitive reappraisal is better than that of distraction. In the early stage of controlled processing (340–400ms), there was no empathic response in both groups, but the result that cognitive reappraisal group showed larger P3 amplitudes for painful pictures than distraction group did indicates that the cognitive reappraisal group invests more attention resources on others' pain than the distraction group; in the late stage (400–700ms), both groups presents empathic response, but the result that cognitive reappraisal group showed larger LPP amplitudes for painful pictures than distraction group did indicates that the cognitive reappraisal group puts more cognitive efforts on others' pain and increases the sensitivity to painful pictures. Our study provides some theoretical basis for how to reduce the negative effects of social exclusion and also provides some empirical support for the validity of cognitive behavioral therapy to regulate negative emotions.

Keywords: social exclusion, empathy for pain, cognitive strategy, ERP

父母认知情绪调节方式对子女焦虑和抑郁的影响： 教养方式的中介作用

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摘要 目的：调查父母认知情绪调节方式、教养方式和子女焦虑抑郁的现状，探讨父母认知情绪调节方式、教养方式和子女焦虑、抑郁之间的关系及其内在作用机制。**方法：**采用方便抽样的方法，选取内蒙古乌兰察布市、鄂尔多斯市和山东省德州市某五所中学的初中和高二年级共 414 对学生及其家长进行问卷调查。采用认知情绪调节方式量表（CERQ）、父母教养方式评价量表（EMBU）、儿童焦虑性障碍筛查量表（SCARED）和儿童抑郁障碍量表（CDI）进行两次施测。第一次测量学生家长的认知情绪调节方式；间隔 3 个月后进行第二次测量，包括对其父母教养方式的评价和焦虑、抑郁的水平。**结果：**①女生焦虑分数和抑郁分数均显著高于男生。②父母教养方式在各维度上均有显著差异，在情感温暖和理解、过分干涉和过分保护、拒绝和否认、偏爱被试 4 个方面母亲显著高于父亲，在惩罚和严厉方面父亲明显高于母亲。③认知情绪调节方式中父亲的责备他人与教养方式中母亲的情感温暖呈显著负相关，与父亲的拒绝否认、惩罚严厉均呈显著正相关。认知情绪调节方式中母亲的沉思与教养方式中母亲的过分干涉、父亲的过度保护均呈显著正相关。④教养方式中母亲的情感温暖与子女抑郁呈显著负相关，父亲的拒绝否认、惩罚严厉与子女抑郁呈显著正相关。母亲的过分干涉和父亲的过度保护与子女焦虑、抑郁均呈显著正相关。⑤认知情绪调节方式中父亲的责备他人与子女抑郁呈显著正相关。母亲的沉思与子女焦虑和抑郁均呈显著正相关。⑥母亲情感温暖在父亲责备他人和子女

抑郁之间起部分中介作用。父亲拒绝否认在父亲责备他人和子女抑郁之间起完全中介作用。父亲惩罚严厉在父亲责备他人和子女抑郁之间起完全中介作用。父亲过度保护在母亲沉思和子女焦虑或抑郁之间均起部分中介作用。母亲过分干涉在母亲沉思和子女焦虑之间起部分中介作用，在母亲沉思和子女抑郁之间起完全中介作用。**结论：**父母的认知情绪调节方式是影响子女焦虑和抑郁的重要因素，并通过教养方式的中介作用间接影响子女的焦虑和抑郁水平。

关键词 认知情绪调节方式，父母教养方式，焦虑，抑郁，青少年

Cognitive emotion regulation strategy of parents influence on anxiety and depression of children: parenting styles play mediating role

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Abstract: Objective: To investigate the status quo of parents' cognitive emotion regulation strategy, parenting styles and children's anxiety and depression, then to discuss the relationship and the internal mechanism between parents' cognitive emotion regulation strategy, parenting styles, children's anxiety and depression. Methods: Using the method of convenience sampling, a total of 414 pairs of students and their parents were selected from five middle schools in Ulanqab City, Ordos City of Inner Mongolia and Dezhou City of Shandong Province. Cognitive Emotion Regulation Questionnaire(CERQ), Egna Minnen av Barndoms Uppfostran(EMBU), The Screen for Child Anxiety Related Emotional Disorders(SCARED) and Children's Depression Inventory(CDI) were used for two tests. For the first time, parents' cognitive emotion regulation strategy was measured; The children were measured three months later, including assessments of their parenting styles and levels of anxiety and depression. Results: ① The anxiety and depression scores of girls are significantly higher than boys. ② There are significant differences in parenting styles in all dimensions. Mothers were significantly higher than fathers in emotional warmth and understanding, over-interference and over-protection, refusal and denial, and preference. Fathers were significantly higher than mothers in punishment and severity. ③ The fathers' blaming others of cognitive emotion regulation strategy was negatively correlated with the mothers' warmth & understanding of parenting styles, it were positively correlated with the fathers' refusal & denial, and punishment & severity of parenting styles. The mothers' rumination of cognitive emotion regulation strategy were positively correlated with the fathers' over protection, and mothers' over-interference of parenting styles. ④ The mothers' warmth & understanding of parenting styles was negatively correlated with the children's depression. The fathers' refusal & denial, and punishment & severity of parenting styles were positively correlated with children's depression. The mothers' over-interference and fathers' over protection of parenting styles were positively correlated with the children's anxiety and depression. ⑤ The fathers' blaming others of cognitive emotion regulation strategy was positively correlated with children's depression. The mothers' rumination of cognitive emotion regulation strategy were positively correlated with children's anxiety and depression. ⑥ The mother's warmth and understanding plays a partial mediation between the father's blaming others and the children's depression. The father's refusal and denial plays a total mediation between the father's blaming others and the children's depression. The father's punishment and severity plays a total mediation between the father's blaming others and the children's depression. The father's over protection plays partial mediations between mother's rumination and children's anxiety or depression. The over-interference of mother plays a partial mediation between the mother's rumination and the children's anxiety; It plays a total mediation between mother's rumination and children's depression. Conclusion: Parents' cognitive emotion regulation strategy is an important factor affecting children's anxiety and depression, and indirectly affects the level of anxiety and depression through the mediating role of parenting styles.

Keywords: Cognitive emotion regulation strategy, parenting styles, anxiety, depression, adolescent

使用表达抑制策略进行自动情绪调节的神经机制

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摘要 目的: 自动情绪调节是情绪调节中的重要部分, 并且是日常生活中最常用的一种情绪调节。自动情绪调节, 是指个体不需要注意到情绪调节的过程, 不需要做任何有意识的决定, 也不需要有意地对情绪进行控制, 但是个体情绪的某些方面(如体验等)在目标驱动下发生了改变。近年来, 人们开始意识到自动情绪调节的重要意义, 但是其神经机制至今仍然不清楚。本研究通过事件相关电位(event-related potential, ERP)的技术和自我报告相结合的方法探讨了表达抑制策略自动情绪调节的时间进程。方法: 本研究共招募了 51 名(其中女生 29 名)北京师范大学在校生自愿者, 并随机分配到表达组、抑制组、无关组, 每组 17 人。采用表达抑制的情绪调节的策略, 使用含有情绪调节目标(表达、抑制或者无关)启动词的句子整理任务(Sentence Unscrambling Task, SUT)来启动自动情绪调节, 并记录被试在完成 SUT 任务前后的进行 1-back 任务时观看威胁性图片(张大嘴的蛇、熊等动物)时恐惧情绪的评分, 在 $P_{z3/4}$ 、 $CP_{z3/4}$ 电极点记录的 P2 (200-280ms) 和 LPP (300-500ms), 在 $F_{z3/4}$ 、 $C_{z3/4}$ 电极点记录的 N2 (200-280 ms) 和 N400 (300 - 500ms)。

结果: 发现了相对于完成 SUT 前, 在表达的条件下, 被试完成 SUT 后观看恐惧图片时体验到较高的恐惧情绪, 并且诱发一个较大的 P2 成分; 在抑制的条件下, 被试完成 SUT 后观看恐惧图片时体验到较低的恐惧情绪, 并且诱发了较小的 P2 和 (late positive potential, LPP) 以及较大的 N2 和 N400, 在无关的条件下, 被试完成 SUT 前后体验到的恐惧情绪和 ERP 成分(除了 N400)差异不显著。结论: 这些结果说明了, P2、N2、LPP 和 N400 可以作为检验自动情绪调节的有效的 ERP 指标(ERP marks), 被试在完成 SUT 时自动激活了情绪调节的目标(表达、抑制或者保持), 并且进一步改变被试再次看恐惧图片时的情绪体验以及诱发的 ERP 成分。

关键词: 情绪, 自动情绪调节, 表达抑制, 句子启动任务, 事件相关电位

The neural mechanism Automatic emotion regulation of the fearful images by the usage of expressive suppression strategy

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Abstract: So far, studies on emotion regulation have focused on intentional emotion regulation, while we know little about automatic emotion regulation. Automatic emotion regulation refers to the change of any aspect of one's emotions (like experience) driven by goals, but without paying attention to the process of regulating, without making any conscious decision, and without engaging in deliberate control. Since automatic emotion regulation plays an important role in the construct of "emotion regulation" and is one of the most common kinds of emotion regulation in daily life, people start to realize the significant of automatic emotion regulation, but its neural mechanism is unclear. The present studies examined the time cause and the neural response of automatic emotion regulation by the usage of expressive suppression strategy, using the methods of self-report and ERP. Fifty-one subjects (29 females) were recruited from either the South China Normal University or Beijing Normal University of China. In this study, the adapted Sentence Unscrambling Task (SUT), which embraced emotion expression terms, emotion suppression terms or non-emotion terms, was used to imitate the automatic emotion regulation strategy of expressive suppression. Self-reported ratings of the fearness and event-related potential (ERP) were recorded when subjects viewed fearful during the 1-back task before and after the SUT. The ERP marks in the present study are P2 (200 ~280ms) and LPP (300 ~500ms) at $P_{z3/4}$, $CP_{z3/4}$ electrodes, and N2 (200 ~280ms) and N400 (300 ~500ms) at $F_{z3/4}$, $C_{z3/4}$ electrodes. The results shown that in the emotion expression condition, the participants felt higher fearful experience and enhanced P2 when viewing fearful images after SUT compared to before SUT; in the emotion suppression

condition, the participants felt lower fearful experience and attenuated P2 when viewing fearful images after SUT compared to before SUT; there is no significant difference (except the result of N400) between viewing fearful images before SUT and after SUT in non-emotion condition.

Keywords: emotion, emotion regulation, automatic emotion regulation, expressive suppression, sentence unscrambling task, ERP

述情障碍特质影响高孤独症特质大学生情绪表达能力： 表达抑制的中介作用

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摘 要 情绪表达是个体内在反应倾向和向外表达情感的能力，作为情绪智力的重要成分，情绪表达能力对于情绪智力及其发展具有重要意义。与临床 ASD 患者类似，普通群体中的高孤独症特质个体可能同样会出现情绪表达问题。本研究基于“述情障碍假设”，试图探讨述情障碍特质对高孤独症特质大学生情绪表达能力的影响，并进一步验证情绪调节策略在高孤独症特质大学生的述情障碍特质与情绪表达能力之间的中介作用。通过孤独症谱系问卷对 419 名大学生中的高孤独症特质个体以及低孤独症特质个体进行筛选。然后采用多伦多述情障碍量表，情绪调节量表以及情绪表达量表分别对两组被试进行测查。结果发现高孤独症特质组大学生的情绪表达的情绪抑制维度得分显著大于低孤独症特质组。述情障碍特质能显著正向预测高孤独症特质大学生的情绪抑制，但孤独症特质对高孤独症特质大学生情绪表达能力的情绪抑制及情绪表达都没有显著影响。并且，在高孤独症特质大学生组中，述情障碍特质可以通过表达抑制策略间接影响情绪抑制。本研究支持了述情障碍假设在高孤独症特质大学生的情绪表达能力上同样适用。为日后对高孤独症特质个体情绪表达的干预提供了新的目标以及思路。

关键词 孤独症特质，述情障碍特质，情绪调节，情绪表达

Alexithymia Traits Influence Emotion Expression Ability of High Autistic Traits College Students': The Mediating Role of Expressive Suppression

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Abstract: Emotional expression is an individual's internal reaction tendency and the ability to express emotions outwards. As an important component of emotional intelligence, emotional expression ability has great significance to emotional intelligence and its development. Similar to clinical ASD patients, individuals with high autistic traits in the general population may also have emotional expression problems. Based on the "Alexithymia hypothesis", this study attempts to explore the influence of alexithymia traits on the emotional expression ability of college students with high autistic traits, and to further examine that emotion regulation strategies has mediating effects between alexithymia traits and emotional expression ability of college students with high autistic traits. Through the autism spectrum questionnaire(AQ), 66 college students with high autistic traits and 74 individuals with low autistic traits were recruited. Then the Toronto Alexithymia Scale, Emotion Regulation Scale and Emotion Expression Scale were used to invest of two groups of subjects. The results showed that the scores of emotional inhibition dimension of emotional expression of college students in the high autism trait group were significantly higher than those in the low autism trait group. The alexithymia trait can positively predict the emotional suppression of college students with high autistic traits, but the autistic trait has no significant effect neither on emotional suppression dimension nor

emotional expression dimension of college students with high autistic traits. Moreover, in the group of college students with high autistic traits, alexithymia traits can indirectly affect emotional suppression through expression suppression strategies. This research supports the alexithymia hypothesis that is equally applicable to the emotional expression ability of college students with high autistic traits. It provides new goals and ideas for the future intervention of the emotional expression of individuals with high autistic traits.

Keywords: Autistic traits, Alexithymia traits, Emotion Regulation, Emotion Expression

自闭特质对社交焦虑症状的预测作用：情绪调节的中介作用

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摘要 社交焦虑障碍是全世界范围内最普遍的精神障碍之一。国内最新的研究表明，大学生的社交焦虑水平显著高于常模平均分数，中度和重度社交焦虑个体的检出率分别为 68.3% 和 20.0%。因此，对社交焦虑影响因素的探究具有重要的理论与实践价值。以往研究发现，自闭特质和社交焦虑的共发性在达到与未达到临床诊断的群体中广泛存在。有研究者甚至认为，情绪调节障碍是连接两者的关键因素，并且实证证据已初步证明自闭症患者一系列的非适应性的认知加工方式和神经生理反应导致了其情绪调节方面的困难，而情绪调节障碍则可能是社交焦虑形成的重要原因，因此成为连接两者的桥梁，但该理论模型尚未得到实证研究的证实。基于此，本研究采用纵向追踪的实验设计，分别于 2020 年 11 月（T1）和 2021 年 5 月份（T2）对 451 名大学生的自闭特质、社交焦虑严重程度以及认知重评、表达抑制和沉思三种情绪调节策略的使用频率进行测量。结果表明：（1）除 T1 的认知重评与两个时间点的表达抑制以及 T2 的认知重评与 T2 的表达抑制和沉思相关不显著外，其他变量均存在两两相关关系；（2）T1 和 T2 的认知重评和表达抑制的即时中介作用均不显著，但沉思的中介作用在两波数据中均显著；（3）表达抑制的纵向中介作用和沉思的纵向中介作用均显著，其他的纵向中介作用均不显著。以上结果表明，非适应性情绪调节策略（尤其是沉思）的使用在自闭特质对社交焦虑症状的预测作用中起到了即时和纵向的中介作用，这意味着高自闭特质的个体由于其固有的认知和行为模式，导致其更多地使用沉思这种非适应性的情绪调节策略（而非更少地使用适应性的调节策略），进而导致了其社交焦虑水平较高。

关键词 自闭特质，社交焦虑，认知重评，表达抑制，沉思

The predictive effect of autistic traits on social anxiety symptoms: The mediating role of emotion regulation

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Abstract: Social anxiety disorder is one of the most common mental disorders in the world. The latest research showed that the severity of social anxiety of college students is significantly higher than the average score of the norm. The prevalence of moderate and severe anxiety in China was 68.3% and 20.0%, respectively. Therefore, it has important theoretical and practical value to explore the influencing factors of social anxiety. Previous studies have found that the comorbidity of autistic traits and social anxiety exists widely in the groups with or without clinical diagnosis. Some researchers even proposed that emotional regulation is the key factor to connect them, and empirical evidence has preliminarily proved that a series of non-adaptive cognitive processing and neurophysiological reactions of individuals with high autistic traits led to their emotional regulation difficulties, and further lead to social anxiety. However, the theoretical model has not been confirmed by empirical research. Based on this, the study used longitudinal experimental design to measure autistic traits, social anxiety symptoms, cognitive reappraisal, expression inhibition and rumination of 451 college students in November 2020 (T1) and May 2021 (T2). The results showed that: (1) there was significant correlation among all variables except between cognitive reappraisal at T1 and

expression inhibition at two time points, and between cognitive reappraisal at T2 and expression inhibition and rumination at T2; (2) For T1 and T2, the immediate mediating effects of cognitive reappraisal and expression inhibition were not significant, while the mediating effects of meditation were significant in two time points (T1: 0.03 [0.02, 0.04]; T2: 0.04 [0.02, 0.06]); (3) The longitudinal mediating effects of expression inhibition (0.01 [0.00, 0.03]) and rumination were significant (0.05 [0.03, 0.07]), while other longitudinal mediating effects were not significant. The above results indicates that the use of non-adaptive emotion regulation strategies (especially rumination) plays an immediate and longitudinal mediating role in the relationship between autistic traits and social anxiety. In other words, due to their inherent cognitive and behavioral patterns, individuals with high autistic traits use more non-adaptive emotion regulation strategies (rather than less adaptive emotion regulation strategies), which leads to a higher level of social anxiety.

Keywords: autistic traits, social anxiety, cognitive reappraisal, expression inhibition, rumination

(2) “情绪与健康心理学专业委员会”口头报告分场 2

青少年的乐观人格、情绪调节与心理适应的关系： 基于个体中心和变量中心的视角

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摘 要 乐观人格对青少年的适应和发展具有重要保护作用, 尤其是在面对如当前新型冠状病毒肺炎全球爆发这种重大灾难, 以及不确定性的情境, 乐观更是个体保持积极情绪、维持身心健康和主观幸福感、从灾难和不确定性中获得意义感和价值感的重要心理资本。这可能源于不同乐观类型的青少年情绪调节特点有所不同。本研究基于人格、应对与情绪的自上而下模型 (top-down model of personality, coping, and emotion), 结合个体中心和变量中心的方法, 采用问卷法调查了 7-10 年級的 2012 名中学生 (男生占 57.30%): 的乐观人格 (生活定向测验中学生修订版)、情绪调节策略 (情绪调节问卷、接纳与行动问卷) 和心理适应状况 (流调中心用抑郁量表、自陈焦虑量表、生活满意度量表), 探讨青少年的乐观人格、情绪调节特点及其与心理适应的关系。结果: (1) 个体中心的分析发现, 基于乐观人格的乐观-悲观二因子结构进行潜变量剖面分析, 可将青少年分为乐观型 (47.27%)、理性型 (41.45%) 和悲观型 (11.28%); (2) 不同乐观类型的青少年在情绪调节策略的使用、心理适应各指标中均两两差异显著, 表现为乐观型青少年, 会更多地使用积极认知重评、更少有经验性回避, 更低的抑郁、焦虑水平和更高的生活满意度; (3) 变量中心的分析发现, 青少年的乐观人格可以显著预测其心理适应, 情绪调节策略在乐观人格与青少年心理适应关系中起中介作用。研究结果揭示了青少年的乐观类型及人数比例, 以及不同乐观类型青少年的情绪调节与心理适应特点, 并进一步检验了情绪调节在青少年乐观人格与心理适应间的中介作用, 支持了人格、应对与情绪的自上而下模型, 也为对悲观型青少年从情绪调节角度实施针对性干预提供依据。

关键词 乐观, 情绪调节, 心理适应, 个体中心, 变量中心

Adolescents' Optimistic Personality and Relations to Emotion Regulation and Well-being: Based on Variable- and Person-Centered Approaches

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Abstract: Optimistic personality plays an important role in the protection of adolescents' positive adaptation and development. Especially in the uncertain situations or major disasters such as the current global outbreak of COVID-19, optimism is an important psychological capital for individuals to maintain positive emotions, physical and mental health and subjective well-being, as well as to obtain a sense of meaning and value from disasters and uncertainties. This may be due to the different characteristics of emotional regulation in adolescents with different levels of optimism-pessimism. This study is based on the top-down model of personality, coping, and emotion. Integrating the approaches of person- and variable-centered, we investigated the optimistic personality (measured by the Life Orientation Test-Revised version), emotion regulation strategy (measured by the Emotion Regulation Questionnaire, the Acceptance and Action Questionnaire--2nd Edition) and psychological adaptation (the Chinese version of Center for Epidemiologic Studies Depression Scale, Self-reported Anxiety Scale, Life Satisfaction Scale) of 2012 middle school students (boys accounted for 57.30%) in grade 7-10 to explore the relationship between optimistic personality, emotional regulation and psychological adaptation of adolescents. Results: (1) Person-centered analysis found that adolescents could be divided into optimistic (47.27%), rational (41.45%) and pessimistic (11.28%) based on the latent profile analysis of optimistic personality; (2) There were significant differences in the use of emotion regulation strategies and psychological adaptation among different types of adolescents. Optimistic adolescents tend to use more positive cognitive reappraisal, less experience avoidance, lower levels of depression and anxiety and higher life satisfaction; (3) Variable-centered analysis found that adolescents' optimism significantly predicted their psychological adaptation, and emotion regulation strategies played a mediating role in the relationship between optimism and adolescents' psychological adaptation. These results revealed the optimistic types and the corresponding proportion of adolescents, as well as the characteristics of emotion regulation and psychological adaptation of adolescents with different optimistic types. This study further tested the mediating role of emotion regulation between optimism and psychological adaptation of adolescents, which supports the top-down model of personality, coping and emotion, and also provides basis for pessimistic adolescents on targeted intervention from the perspective of emotional regulation.

Keywords: optimism, emotion regulation, well-being, person-centered, variable-centered

正念冥想训练对不安全依恋大学生的干预效果

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摘 要 考察正念冥想训练对于不安全依恋大学生的干预效果。选取当前恋爱时间六个月以上且成人依恋类型为不安全型依恋的大学生 78 人作为研究对象, 采用实验组、对照组前后测的实验设计, 在匹配被试年龄性别后随机分入实验组 (n=39 人) 和对照组 (n=39 人), 实验组接受八周正念冥想训练 (MBSR), 对照组处于无干预的自然学习、生活状态。在干预前后两组被试均完成正念五因素量表 (FFMQ)、亲密关系经历量表 (ECR)、关系问卷 (RQ) 和情绪调节自我效能感量表 (SRESE)。实验结果表明: (1) 正念水平与成人依恋

焦虑和依恋回避水平呈显著负相关,与情绪调节自我效能感呈显著正相关;(2)八周正念冥想训练对改善不安全依恋大学生群体的亲密关系质量效果显著,不安全依恋大学生的依恋焦虑和依恋回避两个维度在实验干预后下降显著,情绪调节自我效能感中的管理消极情绪自我效能感水平干预后显著提升。

关键词 正念冥想训练 不安全依恋 大学生 干预

Intervention effect of mindfulness training on college students of insecure attachment

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Abstract: To investigate the intervention effect of mindfulness meditation training on college students of insecure attachment. 78 college students who have been in love for more than six months and whose adult attachment type is unsafe attachment are selected as the subjects. After matching the age and sex of the subjects, they were randomly divided into experimental group ($n = 39$) and control group ($n = 39$). The experimental group received eight weeks of mindfulness training (MBSR), and the control group was in a state of natural learning and life without intervention. Before and after the intervention, the subjects in both groups completed the FFMQ, ECR。RQ and SRESE. The results show that: (1) mindfulness is negatively correlated with adult attachment anxiety and attachment avoidance, and positively correlated with emotional regulation self-efficacy. (2) Eight weeks mindfulness training has a significant effect on improving the intimate relationship quality of college students with unsafe attachment. The two dimensions of attachment anxiety and attachment avoidance have been significantly descended after the experimental intervention., and the level of management negative emotional self-efficacy in emotional regulation self-efficacy of college students of insecure attachment have been significantly improved after the experimental intervention.

Keywords: mindfulness training, insecure attachment, college students, intervention

抑郁的代际传递：青少年自尊与感知社会支持的作用

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摘要 抑郁是一种常见的情绪障碍,通常伴随着情绪低落,对事物失去兴趣等表现,其在青少年中发病率较高,且对个体的身心健康发展具有持续的消极影响。已有研究表明,抑郁具有代际传递性,即父母抑郁会增加子女罹患抑郁的风险,但其中的作用机制还有待进一步澄清。抑郁代际传递整合模型(The Integrative Model for the Transmission of Risk to Children of Depressed Parents)指出,除遗传等生理因素外,抑郁父母往往对子女表现出较多的批评和敌意,青少年会内化父母对自己的消极评价产生低自尊,进而增加了罹患抑郁的风险。此外,已有理论表明社会支持会影响环境对个体的消极作用,且存在两种可能的作用机制:其一,社会支持能够缓解父母抑郁对青少年自尊和抑郁产生的消极影响(压力缓冲模型;The Stress-Buffering Model);其二,当父母抑郁的消极作用较高时,社会支持可能无法为青少年提供有效的帮助,从而加重父母抑郁对青少年自尊和抑郁的消极影响(反压力缓冲模型;The Reverse Stress-Buffering Model)。基于此,本研究在探究父母抑郁对青少年抑郁影响的基础上,重点考察青少年自尊的中介和社会支持的调节作用。本研究以陕西省904名初中生(57%男生; $M_{age} = 12.73$, $SD = 0.43$)及其父母(62%母亲; $M_{age} = 40.14$, $SD = 5.36$)为研究对象,通过问卷法进行为期3年的3次追踪调查。结构方程模型结果发现:(1)T1父母抑郁对T3青少年抑郁

的直接预测作用不显著，但可通过 T2 青少年自尊间接预测 T3 抑郁。（2）教师情感支持可以显著调节 T1 父母抑郁对 T3 青少年抑郁影响的前半路径，即当教师支持水平较高时，T1 父母抑郁能显著降低 T2 青少年自尊，进而增加 T3 抑郁，而当教师支持较低时，此预测关系不显著。说明高教师支持不但没有起到缓冲作用，反而加重了父母抑郁的消极影响，支持了反压力缓冲模型。（3）父母支持和同伴支持的调节作用均不显著。本研究结果表明，青少年自尊是父母抑郁影响青少年抑郁的一个重要内在机制，且该机制受到青少年感知到教师支持的影响，这为科学认识和有效干预父母抑郁对青少年适应问题的影响提供了理论依据。

关键词 抑郁，代际传递，自尊，教师支持，青少年

The Inter-generational Transmission of Depression: The Roles of Adolescents' Self-Esteem and Perceived Social Support

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Abstract: Depression is a common affective disorder characterized with low mood and loss of interest, which has a higher incidence in adolescence, and exerts detrimental effects on their physical and psychological health. Furthermore, depression has documented to possess a nature of inter-generational transmission that parental depression would elevate adolescents' risk of developing depression, yet the underlying mechanisms remain unclear. The Integrative Model for the Transmission of Risk to Children of Depressed Parents postulates that depressed parents tend to be more critical and hostile to their children, and adolescents will internalize their parents' negative evaluation of them, resulting in low self-esteem, which increases their risk of depression. Additionally, recent theories suggest that social support can moderate the negative effects of environment on individuals, and there are two potential contrary mechanisms: social support, on the one hand, may alleviate the negative effects of parental depression on adolescents' self-esteem and depression (The Stress-Buffering Model); on the other hand, when parental detrimental influence is high, social support may not provide effective help for adolescents, thus exacerbating the negative impact of parental depression on adolescent self-esteem and depression (The Reverse Stress-Buffering Model). Based on this, this study explored the influence of parental depression on adolescent depression, and focused on the mediating effect of adolescent self-esteem and perceived social support. A total of 904 junior high school students (57% male; Mage = 12.73, SD = 0.43) and their parents (62% of mothers; Mage = 40.14, SD = 5.36) completed questionnaires at three-time points, one year apart. The results of structural equation model indicated that: (1) Though T1 parental depression was not significantly predictive of T3 adolescent depression, it was significant through T2 self-esteem. (2) Teacher support moderated the direct effect of T1 parental depression on T3 adolescent depression via self-esteem, that is, when teacher support was higher, T1 parent depression could significantly decrease T2 adolescent self-esteem and then increase T3 adolescent depression, while when teacher support was lower, this predicted relationship was no longer significant. It suggests that teacher support does not play a buffer role, but aggravates the negative effects of parental depression, which supports The Reverse Stress-Buffering Model. (3) The moderating effect of parental support or peer support was not significant. These findings indicate that parental depression can elevate adolescent depression by affecting adolescents' self-esteem, and this mechanism is also affected by adolescents' perceived teacher support, which provides a theoretical basis for scientific understanding and effective intervention of the influence of parental depression on adolescent adjustment problems.

Keywords: depression, inter-generational transmission, self-esteem, teacher support, Chinese adolescents

消极完美主义对青少年自伤行为的影响：一个有调节的中介模型

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摘要 自我伤害行为(简称自伤)是指在没有自杀意图的前提下，个体以不被社会文化认可的方式对自己的身体或身体组织进行故意的、直接地伤害。自伤通常开始发生于12至14岁，在青少年时期最常见。一项元分析研究显示，自伤在青少年群体中的发生率为17.2%，而在青年人群体中的发生率为13.4%，在成年人群中仅为5.5%。自伤与很多心理和行为问题有关，包括抑郁、焦虑、边缘型人格障碍和自杀等。鉴于青少年是自伤行为的高发人群，以及自伤带来的严重危害，有必要对自伤行为的影响因素及其作用机制进行深入探讨。本研究采用Frost多维完美主义量表、焦虑抑郁压力量表、正念注意知觉量表和青少年自伤行为问卷对841名青少年进行测试，探讨消极完美主义对青少年自伤行为的影响及作用机制。结果表明：（1）消极完美主义可以显著正向预测青少年的自伤行为，心理困扰在二者的关系中起中介作用；（2）正念调节了心理困扰在消极完美主义和自伤之间的中介效应，且调节作用在中介效应的前后半段路径均有发生，即正念水平较高时，消极完美主义对心理困扰的正向预测作用以及心理困扰对青少年自伤行为的正向预测作用均有所减弱。因此，消极完美主义和青少年自伤行为之间存在有调节的中介效应。本研究的结果为青少年自伤行为的预防和干预提供了一些有价值的启示。首先，要正确引导青少年完美主义的发展方向。在青少年日常的学习及生活中，老师及家长要有意识地培养青少年合理制定个人目标以及正确对待成长道路上遇到的成功以及挫折的能力。其次，对心理困扰等负面情绪要用正确的途径加以疏导，避免其通过自伤这一极端的方式进行情绪宣泄。最后，本研究证实了正念对于负性情绪调节和自伤行为干预的重要作用。因此，可以尝试在课堂教学中加入正念训练课程(例如，正念认知疗法，MBCT)，或者给青少年布置相关的正念练习，提升其情绪调节的自我效能感，减少自伤行为的发生。

关键词 消极完美主义，自伤行为，心理困扰，正念

Maladaptive perfectionism and adolescent NSSI: A moderated mediation model

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Abstract: Non-suicidal self-injury (NSSI) is defined as the deliberate, direct, and socially unacceptable destruction of one's own body tissue without conscious suicidal intent. NSSI usually begins between 12 and 14 years of age, and is most common in adolescence. A meta-analysis study demonstrates that the lifetime prevalence of NSSI was 17.2% among adolescents, 13.4% among young adults, and 5.5% among adults. More importantly, NSSI is associated with a variety of psychiatric disorders, such as depression, anxiety, and borderline personality disorder, and acts as a robust risk factor for future suicidal behaviors. Given the high prevalence of NSSI in adolescents and its clinical significance, identifying risk factors for NSSI is important to effectively prevent such behavior. In the present study, 841 adolescents anonymously completed questionnaires regarding maladaptive perfectionism, psychological distress, mindfulness, and NSSI. The results revealed that maladaptive perfectionism was positively associated with adolescent NSSI, and this association was mediated by psychological distress. Mindfulness weakened the association between maladaptive perfectionism and psychological distress, as well as the association between psychological distress and NSSI. The results from our study provide evidence to explain how psychological distress mediates the relationship between maladaptive perfectionism and NSSI, and when this mediation is most apparent. These findings have at least three implications for the prevention and treatment of adolescent NSSI. First, we should correctly guide the development direction of adolescent perfectionism. In the daily life, parents and teachers should consciously cultivate adolescents to establish reasonable personal goals and their ability to give right attitude towards success and

setbacks on the road they grow. Second, our findings suggest that psychological distress plays an important role in transmitting the effect of negative perfectionism on adolescent NSSI. It may be useful to support interventions focused on teaching effective emotion regulation skills to adolescents. Finally, our findings suggest that mindfulness significantly weakened the association between negative perfectionism and psychological distress, as well as the association between psychological distress and NSSI. Thus, educators should add some mindfulness training courses (e.g., MBCT) in classroom teaching, or assign relevant mindfulness exercises to adolescents to improve their self-efficacy in emotional regulation and reduce the engagement of NSSI.

Keywords: maladaptive perfectionism, non-suicidal self-injury, psychological distress, mindfulness

情绪信念与主观幸福感的关系：一项交叉滞后研究

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摘要 情绪信念是指个体形成的一组关于情绪可变性的信念。以往横断研究表明, 情绪信念与主观幸福感的某些维度, 例如积极情绪和消极情绪等存在显著的相关。然而, 目前尚缺乏对情绪信念与主观幸福感在因果层面的系统研究。基于幸福感的动力模型(engine model of well-being)、自我决定理论以及扩展建构理论, 本文运用交叉滞后模型, 尝试性地探索了情绪信念与主观幸福感之间的因果关系。采用情绪信念量表, 生活满意度量表(SWLS)以及积极与消极情绪量表(SPANE), 以2个月为时间间隔, 在两个时间点测查了499名成年人。采用SPSS22.0进行基本数据处理及相关分析, 并使用Mplus8.0软件建立并检验了情绪信念与主观幸福感的交叉滞后路径分析的结构方程模型。结果表明, T1时间点的情绪信念水平显著预测T2时间点的主观幸福感水平, 模型拟合程度良好($\chi^2 = 2010.583$, $df=782$, $p < .001$, $RMSEA = 0.056$, $SRMR = 0.092$, $CFI = 0.907$, $TFI = 0.897$)。此外, T2时间点的主观幸福感水平无法反向预测T1时间点的情绪信念水平。结果表明情绪信念可以单向预测主观幸福感, 这支持了幸福感的动力模型以及自我决定论的相关观点。综上, 本研究通过交叉滞后模型, 初步发现了情绪信念对于主观幸福感的预测作用, 为情绪信念与主观幸福感之间的因果关系提供了初步证据, 揭示了情绪信念在促进个体提升幸福感水平中的作用和地位。

关键词 情绪信念, 情绪内隐理论, 主观幸福感, 纵向研究, 交叉滞后模型

Relation of beliefs about emotion to subjective well-being: a two-wave longitudinal study

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Abstract: Prior research has shown emotion malleability beliefs are positively related to subjective well-being, but less is known about the causal relation between both variables. Based on engine model of well-being, self-determination theory and the broaden-and-build theory, the present study used a two-wave longitudinal design to examine the causal relation between emotion malleability beliefs and subjective well-being in a total of 499 Chinese adults. Using cross-lagged models, we found that emotion malleability beliefs positively predicted all three dimensions of subjective well-being two months later and the model showed a good fit: $\chi^2 = 2010.583$, $df=782$, $p < .001$, $RMSEA = 0.056$, $SRMR = 0.092$, $CFI = 0.907$, $TFI = 0.897$. Moreover, we did not detect any reverse or reciprocal effect between emotion malleability beliefs and subjective well-being. In all, our study provided primary evidence for the predictive causal link between beliefs about emotion and subjective well-being.

Keywords: Beliefs about emotion, Subjective well-being, Longitudinal study, cross-lagged model

基于数字游戏的心理障碍干预效果的元分析研究

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摘要 随着严肃游戏的发展, 基于数字游戏的精神障碍干预在临床心理学实践中涌现出许多新的尝试。由于采用数字游戏进行心理障碍干预是一个相对较新的研究领域, 因此有必要确定其对精神障碍干预的有效性。虽然越来越多的人研究了基于数字游戏的干预对精神障碍的治疗效果, 但研究结果并不一致。一些研究证实了游戏化干预对心理障碍的积极作用, 而一些研究的结论并未发现显著的改善效果, 甚至出现了冲突的结论。因此, 目前仍缺乏有力的证据来支持数字游戏在临床心理学实践中的应用。本研究将数字游戏对精神障碍干预有效性的相关研究进行了全面地系统性综述。采用三水平元分析的方法, 通过系统地文献检索, 共纳入 37 篇原始文献, 包含 225 个效应量和 1782 名参与者 (精神障碍患者), 分别考察了对照实验和前后测实验条件下, 数字游戏对精神障碍的干预效果。采用随机效应模型, 首先考察了前后测实验条件下 (10 篇初始文献, 47 个效应量, 139 名患者) 的总效应。元分析结果发现, 相较于干预前, 数字游戏化干预后, 心理障碍的改善呈现中等大小的正效应 ($g = 0.33, 95\% CI [0.20, 0.45]$)。其次考察了对照实验条件下 (27 篇初始研究, 178 个效应量, 1631 名患者), 数字游戏对精神障碍的干预效果。结果发现, 相比于对照组, 基于数字游戏干预组对心理障碍的干预起到了显著的改善作用 ($g = 0.43, 95\% CI [0.25, 0.61]$)。此外, 由于各初始研究间呈现出显著的异质性, 进一步调节效应分析的结果表明, 患者的年龄和干预持续的时间对基于数字游戏的干预效果均起到显著的调节作用。研究发现数字游戏干预持续时间越长, 对心理障碍的干预效果越好。并且数字游戏化干预的方式对老年人心理障碍的改善效果更好。未来需要更多的研究进一步揭示基于数字游戏干预的机制, 并确定其改善精神障碍症状的关键组成部分。

关键词 数字游戏, 精神障碍, 干预, 三水平元分析

Effects of Digital Game-based Intervention for Mental Disorders: A Meta-Analytic Review

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Abstract: A lot of attention has been paid to the digital game-based interventions for mental disorders. Many new attempts have been conducted to intervene mental disorders using digital games. Since the application of digital game-based interventions for mental disorders is a relatively new research field, it is necessary to figure out its effectiveness. Although more and more studies were conducted to investigate the effects of digital game-based interventions for mental disorders, the results were not consistent. Some studies have confirmed the positive effects of digital game-based intervention for mental disorders, while some studies have not found a statistically significant improvement effect, and even conflicting conclusions have appeared. Therefore, there is still a lack of strong evidence to support the application of digital games in clinical psychology practice. This study conducted a comprehensive three-level meta-analysis on the effectiveness of digital gaming interventions for mental disorders to figure out the effectiveness and the importance factors that may play moderate role on the effectiveness of digital game-based intervention. A total of 37 studies were included with 225 effect sizes reported from 1782 participants (all are patients). Dividing all included articles into two conditions, 10 only reporting pre-post test data of experimental group (139 patients, 47 effect sizes), 27 reporting pre-post test data of experimental group and control group (among 1643 patients 861 in the digital game interventions conditions, 178 effect sizes). Using a random-effects model in a three-level meta-analysis, a small-to-medium effect size of digital games interventions on mental disorders ($g = 0.43, 95\% CI: [0.25, 0.61]$) was revealed. In addition, a statistically significant positive averaged effect was also found among 10 pre-post experimental studies ($g = 0.33, 95\% CI: [0.20, 0.45]$). In addition, due to the significant heterogeneity of the primary studies, the follow-up moderation analyses identified that

participants' age, the length of intervention duration play a moderating role on the effect of game-based intervention on mental disorders. The longer the duration of digital game intervention, the better the effect of intervention on mental disorders. Moreover, digital game-based intervention has a better effect on the improvement of mental disorders in the elderly. Future studies need to explore the mechanism of digital game-based interventions and identify the key components that improve mental disorders symptoms.

Keywords: digital game, mental disorder, intervention, three-level meta-analysis

(3) “情绪与健康心理学专业委员会”口头报告分场 3

今天的你还是昨天的你吗？ 高低频生活事件的时间比较对自我连续性的影响

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摘要 自我连续性是自体心理学的重要概念, 但个体对自我连续性判断的依据是什么还未有清晰的解释。文章基于前人研究, 设计了两个研究来探讨时间比较、时间聚焦观与自我连续性之间的关系, 并在此基础上进一步探究了个体主观幸福感的时间存续性问题。研究 1 以聚焦时间段与个体经历的生活事件的频率为自变量, 时间比较为因变量, 采用 2×2 的混合设计探讨了聚焦时间段与生活事件频率对时间比较值的影响; 研究 2 在研究 1 时间比较的基础上额外进行自我连续性的测量, 研究时间比较、生活事件频率与自我连续性之间的关系。两个研究的实验结果为: 聚焦时间段与生活事件频率的主效应显著且二者之间产生了交互作用, 共同影响时间比较: 高频生活事件的时间比较中存在聚焦主义而低频生活事件的时间比较中聚焦主义不明显; 时间比较的绝对值越大, 自我连续性的差值就越大。结论为时间比较中存在聚焦主义且聚焦主义产生的偏差主要体现在高频生活事件上; 时间比较的变化在一定程度上能够预测自我连续性的值。研究 3 在此基础上, 探究了个体的主观幸福感是受个体经历的“小确幸”事件影响而处于断续的离散状态还是受个体经历的重要生活事件(他人)的影响而处于连续的稳定状态, 结果发现个体经历的高频且重要的生活事件通过自我连续性的中介正向影响了主观幸福感的时间存续性。这一研究丰富了自我连续性的内涵, 拓展了它对心理健康教育的启示。

关键词 时间比较, 生活事件频率, 时间聚焦观, 自我连续性, 主观幸福感的时间存续性

Are You the Same Today Like You Were Yesterday? The Effects of Time Comparison of High or Low Frequency Events on Self-Continuity

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Abstract: Self-continuity is an important concept in self psychology. However, there is no clear explanation about the basis of self-continuity judgment. Based on previous studies, this paper designs two studies to explore the relationship among time comparison, temporal focalism and self-continuity, and further explores the temporal persistence of individual subjective well-being. In Study 1, a survey experiment was adopted within which the focused time and life event frequency were taken as independent variables and the values of time comparison were taken as dependent variables. The mixed design of 2×2 was adopted to discuss the influence of focused time and life event frequency on time comparison. In Study 2, a questionnaire survey was used to measure the same subjects' self-continuity as in study 1, and the relationship between time comparison and self-continuity was discussed. The results of the two studies are as follows: the main effects of focused time and life event frequency are significant, and

the focused time and life event frequency have an interactive effect and jointly affect the time comparison. There is focalism in the time comparison of high frequency life events, while there is no focalism in the time comparison of low frequency life events. The greater the absolute value of the time comparison, the greater the difference of self-continuity. The conclusion is that there is focalism in time comparison and the deviation caused by it is mainly reflected in high frequency life events. The change of time comparison can predict the value of self-continuity to some extent. On this basis, Study 3 further explored whether the subjective well-being of individuals is in intermittent discrete state affected by the "small but happy" life events, or is in a continuous and stable state under the influence of important life events (some significant others) of individual experience. The results show that the high-frequency important life events positively affect the temporal persistence of subjective well-being through the mediating effect of self-continuity. This study enriches the connotation of self-continuity and expands its enlightenment on mental health education.

Keywords: temporal comparison, frequency of life events, temporal focalism, self-continuity, temporal persistence of subjective well-being

电子屏幕化的特里尔社会应激测验能够有效诱发急性压力反应

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摘要 背景: 特里尔社会应激测验(Trier Social Stress Test, TSST)能够有效诱发急性社会心理的压力反应。然而, 受到高成本和施测情景不一致性的限制, TSST 局限于小样本研究且缺乏可靠性。因此, 本研究提出一种高通量、标准化的替代范式, 即电子屏幕化的特里尔社会应激测验(Trier Social Stress Test - Electronic Screen, TSST-ES), 以诱导稳健的急性压力反应。**方法:** 97 名健康成人受试者(男性 13 名, 女性 84 名; Mage = 19.50 ± 0.18)参与了研究。每组 2~6 人同时参与实验, 每名参与者各自在提前录制的伴有中性反馈的“观众”(通过笔记本电脑播放)面前进行演讲和心算任务。采用压力感知量表(Perceived Stress Scale, PSS)、状态-特质焦虑量表(State-trait Anxiety, STAI)和演讲者自信心评定量表(Personal Report of Confidence as a Speaker, PRCS)对被试的心理特征进行评估。正式实验持续 60 分钟, 在 6 个时间点重复采集受试者收缩压(SBP)、舒张压(DBP)、脉搏(Pulse)和主观视觉模拟评分(VAS, 包括压力感、威胁感、挑战感三个条目, 0~10 计分)数据。通过曲线下面积(Area under the curve with respect to ground, AUC_G)衡量实验中受试者的整体的压力释放量。采用 k-means 方法对四个曲线下面积变量进行聚类分析, 以确定高、低压力反应模式。此外, 受试者报告了对实验场景真实性的主观感受(0~10 计分)。**结果:** 单因素重复测量方差分析显示, TSST-ES 能够有效诱发急性压力反应(SBP: $F(4.51, 452.70) = 4.30, p = .001$; DBP: $F(4.44, 421.79) = 2.57, p = .032$; Pulse: $F(4.53, 430.55) = 3.54, p = .005$; VAS: $F(3.19, 306.29) = 106.10, p < .001$)。而且, 两组压力反应者(高反应者: $N = 61$; 低反应者: $N = 35$; SSb/SS_t = 29.5%)在重复测量的压力指标上存在显著的组间差异(SBP: $F(1, 94) = 62.60, p < .001$; DBP: $F(1, 94) = 39.21, p < .001$; Pulse: $F(1, 94) = 0.01, p = .918$; VAS: $F(1, 95) = 29.11, p < .001$)。AUC_GSBP 与 AUC_GDBP 存在显著相关($p = 0.716, p < .001$)。AUC_GVAS 与 AUC_GSBP、AUC_GDBP 的相关性呈边缘显著($p = -0.238, p = .019$; $p = 0.203, p = .046$)。两独立样本 T 检验发现, 聚类分组不受心理评估状态的影响。此外, 被试报告了中等程度的场景真实性感受($4.20 \pm 0.27, p < .001$)。**结论:** TSST-ES 能有效地诱发受试者生理和心理的应激反应, 并且区分出高、低压力响应者。生理、心理应激指标之间存在高一致性。此外, 受试者在该范式中体验到了中等程度的真实性。综上, TSST-ES 有助于开展快速、大量、可靠的急性压力研究。

关键词 特里尔社会应激测验, 压力, 电子屏幕

The Trier Social Stress Test-Electronic Screen (TSST-ES) Induces Acute Stress Responses Efficiently

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Abstract: Background: The Trier Social Stress Test (TSST) could effectively induce acute socio-psychological stress responses. However, TSST studies were limited to small samples and lacked reliability, because of high costs and inconsistent situations. Hence, we propose a high-throughput and standardized alternative, i.e., the electronic screen-based Trier Social Stress Test (TSST-ES), to induce robust acute stress responses. **Methods:** Ninety-seven healthy adults (13 males and 84 females; Mage = 19.50 ± 0.18) participated in this study. Multi-subjects (2 to 6 in each group) will participate in the experiment simultaneously. Each subject will take the public speaking task and mental arithmetic task in front of pre-recorded audiences with neutral feedback played through the laptops independently. Subjects' psychological characteristics were assessed by questionnaires, i.e., Perceived Stress Scale (PSS), State-trait Anxiety Inventory (STAI), and Personal Report of Confidence as a Speaker (PRCS). Subjects' systolic blood pressure (SBP), diastolic blood pressure (DBP), Pulse, and subjective Visual Analogue Scale (VAS, including stress, challenge and threaten items, from 0-10) were repetitively collected at 6 time-points during the 60-min formal experiment. The area under the curve with respect to ground (AUC_G) was used to quantify the overall stress release of the subjects. Cluster analysis of four AUC_G variables was performed with k-means to define high/low-stress pressure response patterns. Also, subjects' perception of the reality of the experiment scene was evaluated (from 0-10). **Results:** One-way repeated measures ANOVA showed that the TSST-ES effectively evoked acute stress responses (SBP: $F(4.51, 452.70) = 4.30, p = .001$; DBP: $F(4.44, 421.79) = 2.57, p = .032$; Pulse: $F(4.53, 430.55) = 3.54, p = .005$; VAS: $F(3.19, 306.29) = 106.10, p < .001$). Two stress responder groups (high responder: $N = 61$; low responder: $N = 35$; SSb/SSt = 29.5%) showed significant differences in repeated measured indicators (SBP: $F(1, 94) = 62.60, p < .001$; DBP: $F(1, 94) = 39.21, p < .001$; Pulse: $F(1, 94) = 0.01, p = .918$; VAS: $F(1, 95) = 29.11, p < .001$). AUC_GSBP had significant correlations with AUC_GDBP ($\rho = 0.716, p < .001$). AUC_GVAS had borderline correlations with AUC_GSBP and AUC_GPulse ($\rho = -0.238, p = .019$; $\rho = 0.203, p = .046$). Two independent sample t-tests found cluster groups did not influenced by the status of psychological assessments. Furthermore, subjects reported a moderate feeling of authenticity ($4.20 \pm 0.27, p < .001$) after being exposed to this scenario. **Conclusions:** TSST-ES could effectively elicit both physiological and psychological acute stress responses, and differentiate high/low-stress responders. There are high consistencies among these physiological and psychological stress indicators. Also, the subjects have a moderate sense of authenticity in this paradigm. To sum up, TSST-ES will contribute to the quick, massive, and reliable acute stress studies.

Keywords: Trier Social Stress Test, Stress, Electronic Screen

催产素对微表情识别的影响

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摘要 催产素是下丘脑分泌的一种神经多肽。研究表明, 催产素能促进个体对于宏表情 (即普通表情) 的识别。然而, 除宏表情外, 人类还存在一种非常快速 (持续时间小于 1/2 秒) 的微表情, 它表达了人们被压抑的真实情感, 是谎言识别的有效线索, 在安全、司法、临床、教育等众多领域有着极高的应用价值。考虑人们在微表情识别上存在的巨大困难和微表情识别的重大应用价值, 对其加工过程进行研究十分必要。而催产素系统作为一个能促进人类对于微妙社会线索检测的重要系统, 它在微表情识别过程中又扮演了怎样的角

色? 对这一问题的回答, 将加深我们对微表情识别过程的理解, 为设计有效的微表情识别辅助工具提供科学基础。本研究通过 40 IU 单剂量鼻内催产素给药、安慰剂对照混合实验的方式研究了催产素对微表情识别的影响。其中, 实验一 ($n = 72$) 和实验二 ($n = 75$) 采用了经典的 JACBART 范式分别考察了在三种微表情持续时间 (50 ms、150 ms、333 ms) 条件下催产素对高表情动作强度 (100%) 和低表情动作强度 (25%) 的愤怒、恐惧、快乐、惊讶、悲伤、厌恶的六种标准化微表情的识别过程的影响。而实验三 ($n = 126$) 和实验四 ($n = 72$) 则进一步采用来自于真实社会情境中的自然微表情材料, 考察了催产素对自然微表情识别的准确率、反应时和眼动过程的影响。实验一和二的结果显示, 催产素显著延长了对 150 ms 的惊讶微表情的识别反应时, 降低了对 150ms 和 333 ms 的标准化厌恶微表情的识别准确率。实验三和四结果也显示, 催产素降低了对厌恶和惊讶的自然微表情的识别准确率, 且这一效应是由于催产素给药会增加对厌恶和惊讶面孔的眉眼区域的首次进入时间所致。这些研究结果说明, 催产素系统参与了微表情识别的加工过程, 特别是对惊讶和厌恶的微表情的识别起到了抑制作用。本研究结果提示微表情识别与宏表情识别在神经生理机制上就存在着显著差异, 而这可能是导致人们很难识别微表情的根本原因。除此外, 考虑催产素在促进人际信任与依恋中的重要作用, 本研究结果还提示, 对微表情的识别可能是人类进行欺骗检测的适配器。

关键词 微表情, 微表情识别, 催产素, 情绪知觉

Effects of Oxytocin on Micro-expression Recognition

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Abstract: The neuropeptide oxytocin is essential for bonding and attachment in mammals and has also been associated with human social behaviors. Considering that the ability to decode another's facial expression is a pre-requisite for social interaction, it is not surprising that oxytocin was found to improve the recognition of emotional expressions for human subjects. These studies mainly focused the recognition of macro-expressions which are direct expressions of ones' true emotion. However, in real life situations, sometimes people need to hide and inhibit their true emotions to manipulate and deceive others. Despite our efforts to hide, the true emotions may still leak, and these leaked emotions are usually displayed in the form of micro-expressions. Micro-expressions are fleeting facial expressions which lasts no longer than 0.5 s. It usually occurs in the high-stake situations and it is an essential clue for lie and dangerous demeanor detection. However, it is difficult for us to detect micro-expressions. What role does the oxytocin system play in the recognition process of micro-expressions? Answers to this question will deepen our understanding of the micro-expression recognition process, and it can help us to design better micro-expression recognition tools. In the present study, we utilized a double-blind, placebo-controlled, mixed-model experimental design to investigate the effects of oxytocin on the recognition of micro-expressions. Participants were asked to perform a standardized micro-expression recognition task (presented by employing the classic JACBART paradigm) after self-administration of a single dose of intranasal oxytocin (40 IU) or placebo (containing all ingredients except for the neuropeptide). Specifically, in Experiment 1 ($n = 72$) & 2 ($n = 75$), participants were asked recognize six categories of intense or subtle micro-expressions (happiness, disgust, fear, angry, surprise, and sadness) under three kinds of duration conditions (50, 150, 333 ms). The data of recognition accuracy and reaction time were recorded for these tasks. In Experiment 3 ($n = 126$) & 4 ($n = 72$), we further examined the effects of oxytocin on the recognition of natural micro-expressions. The results of Experiment 1 showed that, a single dose of intranasal oxytocin did not affect the recognition accuracy for intense micro-expressions, but it significantly increased the reaction time for the recognition of intense micro-expressions of surprise. The results of Experiment 2 showed that, oxytocin significantly decreased the recognition accuracy for subtle micro-expressions of disgust under duration conditions of 150 ms and 333 ms, but it did not affect the recognition accuracy and reaction time for other categories

of subtle micro-expressions. The results of Experiment 3 & 4 replicated the results of Experiment 1 & 2 by showing that oxytocin significantly reduced the recognition accuracy for natural micro-expressions of disgust and surprise. Eye-movement results of Experiment 4 further revealed that this phenomenon was caused by the prolonging effect of oxytocin on the first entering time in the eye brow and eye regions of natural micro-expressions of disgust and surprise. These results showed that the oxytocin system participates in the recognition of micro-expressions, but contrary to its facilitation role in the recognition of macro-expressions, the oxytocin mainly plays an inhibiting role in the recognition of micro-expressions. Consistent with previous studies, these results suggest that there are fundamental differences in the neurophysiological mechanisms for the recognition of macro and micro-expressions, and the recognition of micro-expressions may be an adaptation to cheating detection problems. The present study is the first to investigate the effect of oxytocin on micro-expression recognition and it provides a theoretical basis for understanding the effect of oxytocin on micro-expression recognition.

Keywords: micro-expression, micro-expression recognition, oxytocin, emotion perception

虚拟现实环境中个体情绪与存在感的关系：一项元分析

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摘要 心理学领域中的虚拟现实（VR）技术主要用于提高实验的生态效度或作为情绪唤醒工具。整理文献发现，与指向系统技术层面的沉浸感不同，个体在虚拟环境中的存在感主要指感觉到与虚拟刺激或环境相关或参与的程度，是一种主观意识状态，也是衡量 VR 技术有效性的关键指标。已有研究指出 VR 环境中个体的情绪状态与其感受到的存在感密切联系，但是结论存在争议。本文归纳整合了 VR 中情绪与存在感关系相关研究，使用元分析的方法对二者相关性进行探究，通过文献检索，纳入符合要求文献 27 篇，共 36 个效应值。同质性检验结果表明，纳入研究的异质性较高，故进一步以二维情绪理论和情绪动机模型为基础，探究二者关系在不同情绪维度上的差异，并考察了以往实验研究中 VR 场景的空间导航性及存在感的测量工具对情绪与存在感关系的影响。结果显示：虚拟现实环境中情绪与存在感中等程度正相关($r=0.304$)；情绪效价、动机强度的调节效应显著，唤醒度的作用不显著；空间导航性的调节作用显著，测量工具的作用不显著。未来研究可丰富对情绪类型的考察，检验各情绪维度的调节效应；同时在测量工具上开发虚拟现实环境中更适合的存在感客观、实时测量指标；在实验过程中关注场景的空间导航性，优化应用中虚拟场景设计。

关键词 虚拟现实，存在感，情绪，元分析

The influence of individual emotional state on the sense of presence in the virtual reality environment: A meta-analysis

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Abstract: Virtual reality (VR) technology in the field of psychology is mainly used to improve the ecological validity of experiments or as a tool for emotional arousal. According to the literature, it is different from the immersion that points to the technical level of the system. The presence of an individual in the virtual environment mainly refers to the degree to which the individual feels related to or participates in the virtual stimulus or the environment. It is a state of subjective consciousness and a measure of the effectiveness of VR technology. The key indicators are proposed. Studies have pointed out that the emotional state of individuals in the VR environment is closely related to the sense of presence they feel, but the conclusion is controversial. This paper summarizes and integrates the research on the relationship between emotion and presence in VR, and uses meta-analysis to explore the correlation between the two. Through literature search, 27 documents that meet the requirements are included, with a total of 36 effect values. The homogeneity test results show that the included studies are highly heterogeneous, so based on the

two-dimensional emotional theory and emotional motivation model, the relationship between the two in different emotional dimensions is explored, and the VR in previous experimental studies The influence of the spatial navigation of the scene and the presence measurement tools on the relationship between emotion and presence. The results show that emotion and presence in virtual reality are positively correlated to a moderate degree ($r=0.304$); emotional valence and motivation intensity have a significant regulating effect, while arousal is not significant; spatial navigation has a significant regulating effect, and the role of measurement tools not obvious. Future research can enrich the investigation of emotion types and test the adjustment effects of various emotional dimensions; at the same time, develop objective and real-time measurement indicators for the sense of existence that are more suitable in the virtual reality environment on the measurement tools; pay attention to the spatial navigation of the scene during the experiment, Optimize the virtual scene design in the application.

Keywords: Virtual Reality, presence, emotion, meta-analysis

惊讶情绪对创造性问题解决的影响

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摘要 以往多数研究探讨了情绪对人的认知加工过程比如记忆、问题解决等的影响, 但是作为基本情绪之一的惊讶情绪是否影响问题解决却并不清楚。惊讶情绪在研究早期被定义为引起吃惊、错愕的中性体验, 但在新近的研究中发现, 惊讶情绪的内容也存在着效价的不确定性。出现惊讶体验的情境以及惊讶体验的内容会赋予惊讶情绪不同的效价, 正性的惊讶被定义为惊喜, 负性的惊讶被定义为惊吓。本研究旨在探讨不同效价的惊讶情绪是怎样影响创造性问题解决。研究采用经典的情绪诱发范式, 以汉字组块破解作为创造性问题解决的实验材料。实验一的情绪诱发方式为效果最可观的观看视频, 探索中性情绪与惊讶情绪下的汉字组块破解任务的成绩差异。实验二使用表情模仿的方式以诱发不同效价的具身惊讶情绪, 探索中性情绪与正性惊讶、负性惊讶情绪下的汉字组块破解成绩差异。结果显示: (1) 惊讶情绪对于创造性问题解决的反应时具有显著影响, 较之于负性惊讶, 正性惊讶条件下的被试反应时更短。(2) 惊讶情绪条件下的创造性问题解决任务的解答率高于中性情绪条件, 但差异并不显著。上述发现表明惊讶情绪对于创造性问题解决具有正性作用, 可以使人更快地产出创造性问题的解决方案。惊讶情绪具有正负二重效价性, 正性的惊讶情绪对于创造性问题解决具有更大程度的促进作用。

关键词 创造性问题解决, 惊讶情绪, 具身情绪, 表情模仿, 组块破解

Effects of surprise emotion on creative problem solving

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Abstract: Most previous research has explored emotional states play an important role in human cognitive processing, such as memory and problem solving. As one of the basic emotions, surprise, however, is not clear whether affect problem solving. Surprise emotion was defined as a neutral experience that caused surprise and shock. However, surprise has recently been found to have dual dimensions of valence in composition, positive and negative, and plays different roles in different situations. The purpose of this study was to investigate whether surprise emotion affect on creative problem solving. In this study, the classical emotional elicitation paradigm was used and Chinese character chunk decomposition was used as the experimental material for creative problem solving. In the first study, the emotion eliciting mode was watching video. Its purpose was to explore the difference in the performance of Chinese character chunk decomposition task under neutral emotion and surprise emotion. In the second study, emotion eliciting mode was facial expression imitation to explore the difference of Chinese character block decoding performance under neutral emotion, positive surprise and negative surprise. The results showed that: (1) The main effect were significant for emotions on the response time of creative thinking, positive surprise make solving creative problem more quickly

than negative surprise.(2) The response rate of creative problem solving task in the surprise emotion condition was higher than that in the neutral emotion condition, but the difference was not significant. These findings indicated that surprise has a positive effect on creative thinking and make people produce creative problem solutions more quickly. Surprise emotion has its dual valence of positive and negative, and positive surprise emotion can promote creative thinking to a greater extent.

Keywords: Creative Problem Solving, Surprise, Embodying Emotion, Facial Expression Imitation, Chunk Decomposition

(4) “情绪与健康心理学专业委员会”口头报告分场 4

共情对重大事件中居民替代性创伤的影响： 认知偏向和应对方式的作用

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摘要 人类心理常受到来自外界刺激带来的直接或间接的心理体验，如：创伤后应激障碍（PTSD）或替代性创伤（VT），2020 年新年伊始，人们通过媒体紧密跟踪着疫情信息。绝大多数人从未到过疫情严重的地区或接触过感染者，但是，当看到新闻里每日上涨的数据、等待就诊的市民、忙碌的一线医护人员，很多人因此陷入了不安和抑郁，这种因为体验到他人所经历的灾难后，间接导致自己的身心出现困扰，乃至精神崩溃的现象被称为“替代性创伤”。然而，影响替代性创伤的因素仍然知之甚少。证据表明，共情（理解或他人的情感体验产生共鸣的能力）是影响替代性创伤的关键因素之一。尽管有证据表明共情与替代性创伤有关，但大多数研究表明共情作为替代性创伤的影响因素仅仅是从情绪情感中来衡量的，它与认知资源和积极心理是否有关？研究以 16-51 岁的 661 名手机用户为被试，在新型冠状病毒于全国爆发 25-35 天时，采用人际指针量表测查被试的共情能力，同时采用应对方式问卷（TCSQ）、认知偏向问卷和事件影响量表测查被试的应对方式、认知偏向和替代性创伤，从负性事件视角考察重大事件中共情能力对居民替代性创伤的影响，并探讨认知偏向和应对方式在其中的作用。结果显示，共情可直接正向预测替代性创伤；共情对替代性创伤的预测可分别通过认知偏向和应对方式的中介进行；这一发现提示，未来的负性生活事件后心理辅导工作除更加关注情绪的变化外，还应从个体认知资源和积极心理层面开展。研究提出一些平衡共情和替代性创伤之间关系的建议，如认知训练和自我关怀等，并对后续研究提出了建议，如评估替代性创伤的类型和程度，预防、应对和干预替代性创伤的策略。

关键词 共情，替代性创伤，认知偏向，应对方式

The impact of empathy on residents' vicarious traumatization in major events: the role of cognitive bias and coping style

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Abstract: Human is often subjected to direct or indirect psychological experiences from external stimuli, such as post-traumatic stress disorder (PTSD) or vicarious traumatization (VT). At the beginning of 2020, people closely follow the COVID-19 through the media. The vast majority of people have never been to a severely affected area or have been in contact with an infected person. However, when seeing the daily rising data in the news, the citizens waiting for treatment, and the busy frontline medical staff, many people fell into anxiety and depression. After experiencing the disaster experienced by others, this phenomenon indirectly leads to physical and mental distress, and

even mental breakdown, is called "vicarious traumatization ". However, the factors affecting vicarious traumatization are still poorly understood. Evidence shows that empathy (the ability to understand or resonate with the emotional experience of others) is one of the key factors affecting vicarious traumatization. Although there is evidence that empathy is related to vicarious traumatization, most studies show that empathy as an influencing factor of vicarious traumatization is only measured from emotions. Is it related to cognitive resources and positive psychology? The study used 661 mobile phone users aged 16-51 as subjects. When the COVID-19 broke out in the country for 25-35 days, the interpersonal indicator scale was used to measure the empathy ability of the subjects, and the coping style questionnaire (TCSQ), The Cognitive Bias Questionnaire and the Event Impact Scale measure participants' coping styles, cognitive biases, and vicarious traumatization. From the perspective of negative events, it examines the impact of empathy on residents' vicarious traumatization in major incidents, and explores cognitive bias and The role of coping styles. The results show that empathy can directly and positively predict vicarious traumatization; empathy can predict vicarious traumatization through the mediation of cognitive bias and coping style respectively; this finding suggests that future psychological counseling work after negative life events In addition to paying more attention to emotional changes, it should also be carried out from the individual cognitive resources and positive psychological levels. The research puts forward some suggestions to balance the relationship between empathy and vicarious traumatization, such as cognitive training and self-care, and makes recommendations for follow-up research, such as assessing the type and extent of vicarious traumatization, preventing, coping and intervening vicarious traumatization strategy.

Keywords: Empathy, vicarious traumatization, cognitive bias, coping style

新冠疫情下室内绿植对个体心理压力的影响

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摘 要 目的: 本研究以新冠疫情为背景, 考察生活办公空间中摆放绿植对个体的心理压力的影响。方法: 预实验通过线上问卷调查中国受访者在新冠疫情期间(2020年2至5月)的压力水平及其疫情期间所在城市等信息, 并将其所在城市与2020年5月期间各省市累计确诊病例数配对, 用以确定疫情严重程度对心理压力的影响。实验1通过线上问卷了解中国受访者在疫情期间的生活中是否有绿植和绿植的生长状态, 以及受访者在疫情期间的感知压力, 以探究室内绿植对感知压力的应对效果。实验2在实验1的基础上增加积极情感消极情感量表进一步验证积极情绪的中介作用。实验3通过现场实验检验绿植数量对绿植效应的影响, 以确定边界条件。通过在疫情复工后某公司的三个不同办公空间中摆放不同数量的绿植(无绿植; 中等数量绿植; 较多数量绿植)来操纵自变量。三个办公空间的员工在不同数量绿植的环境中办公20天后接受问卷调查, 汇报这20天内的感知压力水平。结果: 预实验结果显示, 新冠疫情的严重程度显著增加个体的感知压力水平。实验1结果证实, 生活环境中有绿植能有效减少个体在疫情期间的感知压力。绿植的生长状态也显著影响个体的感知压力, 绿植生长状态越好, 个体的感知压力越小。实验2结果显示积极情绪完全中介绿植与感知压力之间的关系。实验3显示, 办公空间中无绿植的员工和较多数量绿植组员工的感知压力均显著高于中等数量绿植组的员工。有较多数量绿植组的员工感知压力和无绿植的员工几乎相同。即, 绿植数量显著影响绿植效应的强度, 合理数量的绿植能有效降低个体的感知压力。一种可能的解释是, 较多绿植会造成空间拥挤感知, 从而导致个体的感知压力升高。结论: 本研究将丰富自然环境与人类福祉联系的相关研究。其结果对维持人们心理健康具有积极的实践意义。另外, 本研究的结果具有较大的社会意义, 受疫情影响, 各类隔离措施限制了以往人们赖以缓解压力的社交活动以及外出活动, 而本研究建议的方法易实施、限制少且成本低。

关键词 绿植, 感知压力, 积极情绪, 空间拥挤, 新冠疫情

The Plants effect on mental stress during the COVID-19 period

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Abstract: Objects: This study takes the new crown epidemic as the background to investigate the impact of green plants in the living office space on the psychological pressure of individuals. Method: In the pretest, we conducted an online questionnaire to investigate the stress level of Chinese respondents during the new crown epidemic (February to May 2020) and their city during the epidemic, and compare their city to the provinces and cities in May 2020. The cumulative number of confirmed cases is matched to determine the impact of the severity of the epidemic on psychological stress. Using online questionnaires, Study 1 find out whether there are green plants and the growth status of green plants in the living environment of Chinese respondents during the epidemic, as well as the respondents' perceived pressure during the epidemic, to explore the response of indoor green plants to perceived pressure effect. Study 2 added the Positive Affects and Negative Affects Scale based on Study 1 to further verify the mediating role of positive emotions. Study 3 tested the influence of the number of green plants on the effect of green plants through a field study to determine the boundary conditions. The independent variables were manipulated by placing different numbers of green plants (no green plants; the medium number of green plants; the large number of green plants) in three different office spaces of a company after the epidemic resumed work. Employees in the three office spaces took a questionnaire survey after working in a different number of green plants for 20 days and reported their perceived stress levels during the 20 days. Results: The results of pretest show that the severity of the new crown epidemic significantly increases the individual's perceived stress level. The results of Study 1 confirmed that green plants in the living environment can effectively reduce the perceived pressure of individuals during the epidemic. The growth status of green plants also significantly affects the individual's perceived pressure. The better the growth status of green plants, the lower the individual's perceived pressure. The results of Study 2 show that positive emotions completely mediate the relationship between green plants and perceived stress. Study 3 shows that the perceived pressure of employees without green plants and the large number of green plants in the office space is significantly higher than that of employees in the medium green group. Employees with the large number of green plants perceive the pressure as almost the same as those without green plants. That is, the number of green plants significantly affects the intensity of the green plant effect, and a reasonable number of green plants can effectively reduce the perceived pressure of individuals. One possible explanation is that more green plants will cause the perception of spatial crowding, which will lead to an increase in the perceived pressure of the individual. Conclusion: Our research enriched the related research on the connection between the natural environment and human well-being. The findings have positive practical significance for maintaining people's mental health. In addition, the results of this study have greater social significance. Affected by the epidemic, various isolation measures have restricted social activities and outing activities that people used to relieve stress. The methods suggested in this study are easy to implement, less restrictive, and low cost.

Keywords: Plants, Stress, Positive affects, Spatial crowding, COVID-19

自然环境干预提高中国新冠肺炎疫情一线人员复工后主观幸福感

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摘要 新冠肺炎疫情期间我国一线工作人员(警察与医护群体)作出巨大奉献,但疫情结束复工后他们的心理健康缺少关注。本研究目的是为其主观幸福感的维护与提高提供一种基于自然环境的干预方法。共90名参与当地一线抗疫的工作人员自愿参与本研究,并在5天干预研究中被随机分为两组,一组接受自然环境相

关刺激的干预，另一组则接受城市环境相关刺激作为对照组。干预研究开始前获取参与者知情同意和人口统计学信息，后者在后续分析作为协变量。整体干预效果和每日干预即时效果均得到评估，涉及主观幸福感的多个方面，即正负性情绪、生活满意度、压力和焦虑体验以及职业倦怠感。结果表明，自然环境干预能有效处理负面情绪，提升积极情绪并累积产生整体效果，即在高压力的工作环境中维持对生活满意度的评价，表现出自然环境干预的临床应用价值。对日常即时效果的纵向数据分析表明，接触自然环境具有修复性功能，包括即刻压力降低和负面情绪减少，因此可作为日常情绪管理的应对策略。自然环境干预符合一线工作人员对情绪健康管理的实际需要，并提供一种易得、轻松且高效的外部资源来保障其主观幸福感。我们认为基于自然环境的干预可为更广泛人群的心理健康提供积极帮助，并提出未来研究的建议以进一步探索。

关键词 自然环境干预，主观幸福感，自然修复效应，一线工作者，新冠肺炎疫情

A nature-based intervention benefits the subjective well-being of Chinese essential workers in post-COVID-19 epidemic time

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Abstract: The goal of the present study was to provide a nature-based intervention for essential workers (i.e., policer-officers and medical health workers) subjective well-being who sacrificed themselves during the COVID-19 epidemic. Ninety participants were randomly assigned to two groups in our 5-day intervention program, one group viewing natural stimuli while the other urban stimuli as a controlled group. Participant consents and demographic information were obtained prior to the study, which worked as covariates in the analysis. Both the intervention effectiveness and daily instant benefits were measured by various dimensions of subjective well-being (i.e., positive and negative affect, life satisfaction, stress, anxiety and job burnout). Results indicated natural stimuli intervention had clinically potential to address negative affect, increase positive affect, and accumulate to sustain the satisfaction with life despite their stressful working characteristics. Additional evidence was found by nested longitudinal analysis that natural stimuli worked well as a daily coping strategy to facilitate instant restorative benefits, including immediate stress reduction and negative affect decline. The designed study intervention perfectly matches the real need of those essential workers and provides an easy-to-access, effortless but high-effective resources supporting their well-being. We foresee a nature-based intervention might achieve population health benefits, hopefully lightened by future studies.

Keywords: nature-based intervention, subjective well-being, natural restorative effect, essential workers, COVID-19

网络受欺凌个体的情绪注意偏向及注意偏向训练的干预研究

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摘要 随机选取 84 名大学生为研究对象采用《大学生遭受网络欺凌行为量表》筛选出 42 名网络受欺凌个体，并以 42 名未受欺凌个体为对照组进行实验。研究网络受欺凌个体的情绪注意偏向。在此基础上结合眼动技术，探究注意偏向训练对网络受欺凌个体产生的干预作用。研究分为两个实验：实验一采用点探测范式，采用 2（被试分组：网络受欺凌组、对照组）× 2（情绪面孔：正性-中性、负性-中性）× 2（一致性条件：一致、不一致）的混合实验设计。被试间变量是被试分组，被试内变量是情绪面孔和一致性条件，探索网络受欺凌个体的情绪注意偏向。实验结果如下：（1）在一致条件下，网络受欺凌个体对于负性情绪面孔的反应比正性情绪面孔的反应更快，差异显著（ $p < 0.05$ ）。（2）在一致条件下，网络受欺凌组和对照组被试对负性情

绪面孔的反应时差异显著 ($p < 0.05$)，即网络受欺凌被试对负性情绪面孔注意偏向的程度显著高于对照组。实验二在实验一的基础上结合眼动技术，采用点探测范式，以 2 (实验分组：实验组、控制组) $\times$ 2 (情绪面孔：正性、负性) $\times$ 2 (测量阶段：前测、后测) 的混合实验设计，用注意偏向训练任务重点对实验组进行了为期四周，共八次的正性情绪注意偏向训练，探究其对网络受欺凌个体的注意偏向产生的干预作用。实验结果如下：(1) 网络受欺凌被试通过注意偏向训练任务，实验组在前测和后测中对不同情绪面孔的注意偏向值差异显著 ($p < 0.05$)；控制组在前测和后测中对不同情绪面孔的注意偏向值差异不显著。(2) 网络受欺凌被试在不同实验分组条件下，被试的眼动指标首视点潜伏期在前测和后测差异显著 ($p < 0.05$)；在后测实验中，实验组和控制组的眼动指标首视点潜伏期差异显著 ($p < 0.05$)，实验组对于正性情绪面孔表现更多的注意偏向。研究结论如下：(1) 网络受欺凌个体对负性情绪面孔存在注意偏向。(2) 注意训练任务对于网络受欺凌个体能够起到积极干预作用，增强了网络受欺凌个体对于正性情绪面孔的注意偏向。

关键词 网络受欺凌，情绪注意偏向，注意偏向训练，点探测范式

Emotional attentional bias of Internet bullied individuals and the intervention of attentional bias training

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Abstract: A total of 84 college students were randomly selected as the research objects. 42 Internet bullied individuals were selected by using the Internet bullying behavior scale for college students, and 42 non bullied individuals were selected as the control group. Objective to study the emotional attention bias of Internet bullied individuals. On this basis, combined with eye movement technology, to explore the intervention effect of attentional bias training on Internet bullied individuals. The study was divided into two experiments. In Experiment 1, point detection paradigm was used, and 2 (subjects were divided into network bullying group and control group) $\times$ 2 (emotional faces: positive neutral, negative neutral) $\times$ 2 (consistency condition: consistent, inconsistent). The inter subject variable is the grouping of subjects, and the intra subject variable is the emotional face and consistency condition. The results are as follows: (1) under the same conditions, the response of Internet bullied individuals to negative emotional faces is faster than that to positive emotional faces, and the difference is significant ($p < 0.05$). (2) Under the same conditions, there was a significant difference in the reaction time of negative emotional faces between the Internet bullying group and the control group ($p < 0.05$), that is, the degree of attention bias of Internet bullying subjects to negative emotional faces was significantly higher than that of the control group. In Experiment 2, based on Experiment 1, eye movement technique was used, and point detection paradigm was used $\times$ 2 (emotional faces: positive and negative) $\times$ 2 (measurement stage: pre-test, post test) mixed experimental design, using attention bias training task focus on the experimental group for four weeks, a total of eight times of positive emotional attention bias training, to explore its intervention effect on the attention bias of Internet bullied individuals. The results are as follows: (1) through the attentional bias training task, the attentional bias values of different emotional faces in the experimental group were significantly different in the pre-test and post test ($p < 0.05$); In the control group, there was no significant difference in the attentional bias of different emotional faces in the pretest and posttest. (2) There was a significant difference in the first view latency between pre-test and post-test ($p < 0.05$); In the post test experiment, there was a significant difference in the first view latency between the experimental group and the control group ($p < 0.05$). The conclusions are as follows: (1) Internet bullied individuals tend to pay attention to negative emotional faces. (2) Attention training task can play a positive intervention role for Internet bullied individuals, and enhance the attention bias of Internet bullied individuals to positive emotional faces.

Keywords: cyberbullying, attentional bias attentional, bias training point, point detection paradigm

童年创伤经历、反刍思维及同伴依恋与大学生心理困扰的关系： 有调节的中介效应分析

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摘要 心理健康问题在国内外大学生群体中具有较高的检出率(40%-56%), 且随着社会经济的高速发展, 大学生面临的各种压力不断增多, 心理健康问题呈逐年增长的趋势。它不仅会诱发大学生休学、退学等学业适应不良问题, 而且会对大学生的身心健康发展造成威胁, 甚至导致大学生犯罪、自杀等社会问题。因此, 大学生心理问题的形成机制得到了诸多研究者的关注, 并取得了一系列成果。近年来, 不良环境特征与个体特征作为大学生心理问题产生和发展的潜在风险因素日益为研究者所重视。研究者分别从不同的视角对不良环境特征(如父母婚姻冲突、心理虐待与忽视、师生关系、同伴关系不良等)和个体特征(如性别、年龄、人格特质等)导致大学生心理问题的作用机制进行了探讨。但随着研究的深入, 研究者认为有必要从多因素整合的视角, 同时探讨环境特征和个体特征因素对大学生心理困扰的影响, 以进一步提高模型的解释力。基于此, 本研究构建了一个有调节的中介模型, 重点考察了个体早期环境特征(童年创伤经历)与大学生心理困扰的关系以及个体特征(反刍思维)的中介作用和当前环境特征(同伴依恋)的调节作用。本研究以1000名大学生为被试($M=19.50$ 岁, $SD=1.21$), 采用问卷法对其童年创伤经历、心理困扰、反刍思维以及同伴依恋进行调查。结果表明: (1)童年创伤经历、反刍思维、心理困扰两两之间均显著正相关, 童年创伤经历、心理困扰与同伴依恋之间均显著负相关; (2)童年创伤经历不仅能够显著直接预测心理困扰, 而且能够通过反刍思维的中介作用对心理困扰产生间接的预测作用, 且童年创伤经历对心理困扰的直接预测效应以及反刍思维的中介效应均会受到同伴依恋的调节, 即童年创伤经历的直接效应以及反刍思维的中介效应在低同伴依恋群体中更加显著。研究结果有助于揭示童年创伤经历对大学生心理困扰的影响及其作用机制, 对维护与促进个体良好的心理健康发展有一定启示意义。

关键词: 童年创伤经历, 反刍思维, 同伴依恋, 心理困扰

Childhood Maltreatment Experiences, Rumination, Peer Attachment and Psychological Distress in university students: Moderated Mediation Analysis

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Abstract: Along with the rapid growth of the social economy, the different kinds of pressure that university students need to face as well as the mental health problems among them are in a growing tendency in recent years. Therefore, scholars have started investigating the formation mechanism of psychological distress among university students. Among many factors influencing psychological distress of university students, The features of adverse environmental and individual characteristics have increasingly received attention of both practitioners and researchers over the past few years. There is substantial literature documenting that adverse environmental features (such as inter-parental conflict, psychological abuse and neglect, teacher-student relationship, unfavorable peer attachment, etc.) and individual characteristics (such as gender, age, personality traits, etc.) have an important influence on university students' psychological distress, few studies have investigated the mutual relationship among university students' psychological distress concerns with individual characteristics and early environment as well as the current environment in environment features. The present study attempts to bridge this gap by constructing a moderated mediation model to examine the effect of early environment features (childhood maltreatment experiences), current environment features (peer attachment), and individual characteristics (rumination) on university students' psychological distress and the underlying mechanisms. Specifically, this study will explore the relation between

childhood maltreatment experiences and psychological distress among university students, and analyzes the mediating role of rumination as well as the moderating role of peer attachment in this link. A total of 1000 university students (mean age = 19.5 years, SD = 1.21) participated in this study. Childhood maltreatment experiences were assessed with the CTQ-SF scale. The short form of ruminative responses scale was used to assess rumination traits. Psychological distress was assessed with Depression Anxiety Stress Scales. Peer attachment was measured by the modified version of The Inventory of Parent and Peer Attachment scale. All the measures have good reliability and validity. Results indicated that: (1) Childhood maltreatment experiences, rumination, and psychological distress were significantly positively correlated with each other; Childhood maltreatment experiences, psychological distress, and peer attachment were significantly negatively correlated with each other. (2) Childhood maltreatment experiences can not only affect psychological distress directly but also indirectly through the mediation of rumination, the association between childhood maltreatment experiences and psychological distress as well as the mediating role of rumination were moderated by peer attachment. Specifically, the direct effect of childhood maltreatment experiences and the mediating role of rumination were more significant for people with lower peer attachment. These findings contribute to our understanding of how and when childhood maltreatment experiences impact university students' psychological distress from the attachment theory of peers and the response styles theory of rumination. On the one hand, the experiences of childhood maltreatment as well as the rumination induced by childhood maltreatment may serve as a more important role on the emergence and development of university students' psychological distress. On the other hand, educators should pay more attention to the university students with lower levels of peer attachment (especially reduce the bad influence of childhood maltreatment experiences) and university students with higher levels of childhood maltreatment experiences (especially enhance their peer attachment). Last but not the least, educators should pay attention to not only the effect of early environment features (especially childhood maltreatment experiences) and current environment features (peer attachment) as well as individual characteristics (especially negative personality traits, such as rumination), but also the combined influence of those factors to realize the prevention and interventions for university students' psychological distress.

Keywords: childhood maltreatment experiences, psychological distress, peer attachment, rumination

4.25 心理学脑成像专业委员会

(1) “心理学脑成像专业委员会”口头报告分场 1

睡眠剥夺影响工作记忆子过程的认知神经机制

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摘要 工作记忆涉及几乎所有的认知任务，在人类复杂的认知过程中起着至关重要的作用。工作记忆可以区分为维持（maintenance）和操作（manipulation）两个子过程，维持过程对信息进行储存、监控和匹配，操作过程则负责对信息进行排序和更新。许多研究报告了与睡眠缺失相关的工作记忆受损，但这种表现下降的机制仍需要讨论。本研究采用功能性磁共振成像技术，探究睡眠剥夺对工作记忆中维持与操作两个子过程的影响及其不同的认知神经基础。对 14 名健康男性被试（ 25 ± 2.01 岁）进行了 36 小时睡眠剥夺，剥夺前后分别在磁共振扫描下完成三个条件的 n-back 任务，即 0-、1-和 2-back，1-和 0-back 的差异反映了信息的临时储存（维持过程），而 2-和 1-back 的差异代表信息的在线处理（操作过程）。行为指标结果显示，睡眠剥夺后 0-、1-、2-back 反应正确率均有显著下降（ $p < 0.001$ ）。fMRI 结果显示，与基线条件相比，睡眠剥夺后维持过程募集了更广泛脑区的参与，主要包括双侧楔前叶、锯状皮层、扣带回、上内侧回、右侧缘上回及右侧辅助运动区；操作过程则更多地激活了左侧额上回、额下回（布鲁卡区）、顶下小叶等脑区。结果表明，睡眠缺失对

工作记忆不同子过程的损害机制不同, 疲劳状态下大脑对于认知任务的不同要求做出了不同策略的回应。睡眠剥夺后语音工作记忆任务中语言相关各脑区激活水平发生了变化, 除此之外维持过程和操作过程的能力下降还可能与广泛的功能网络连接改变有关, 需要进一步探究。

关键词 睡眠剥夺, 工作记忆, fMRI

Cognitive neural mechanisms of sleep deprivation affecting working memory sub-processes

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Abstract: Working memory is involved in almost all cognitive tasks and plays a crucial role in human complex cognitive processes. Working memory can be divided into two sub-processes: maintenance and operation. The maintenance process stores, monitors, and matches information, while operation is responsible for sorting and updating information. Many studies have reported impaired working memory associated with sleep loss, but the mechanisms underlying this deterioration need to be discussed. In this study, functional magnetic resonance imaging was used to investigate the effects of sleep deprivation on two sub-processes of working memory, maintenance and manipulation, and their different cognitive neural bases. Fourteen healthy male subjects (25 ± 2.01 years old) were subjected to 36 hours of sleep deprivation. They completed the n-back task under three conditions, namely 0-, 1- and 2-back. The difference of 1- and 0-back reflected the temporary storage of information (maintenance). The difference between 2-back and 1-back represents the online processing of information (manipulation). The results of behavioral indexes showed that the accuracy of 0-, 1- and 2-back response was significantly decreased after sleep deprivation ($p < 0.001$). fMRI results showed that, compared with the baseline condition, maintenance after sleep deprivation involved a wider range of brain regions, including bilateral precuneus, calcarine gyrus, cingulate gyrus, superior medial gyrus, right superior marginal gyrus, and right supplementary motor area. The left superior frontal gyrus, inferior frontal gyrus (Broca's area) and inferior parietal lobule were more activated during the manipulation. The results show that the mechanisms of sleep loss damage different sub-processes of working memory, and the brain responds to different demands of cognitive tasks with different strategies under fatigue state. In addition to the changes in the activation levels of language-related brain areas in verbal working memory tasks, the decreased ability to maintain and manipulation processes may also be related to the changes in extensive functional network connections, which need further investigation.

Keywords: Sleep deprivation, working memory, fMRI

基于独立成分分析探讨自闭特质个体反应抑制能力的大脑功能网络连接

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摘要 自闭特质个体通常被认为在抑制控制能力方面存在缺陷, 这与自闭症谱系障碍(ASD)类似。许多研究利用功能磁共振成像技术(Functional Magnetic Resonance Imaging, fMRI)探讨临床 ASD 病人的抑制控制能力, 但很少有研究利用基于任务态的功能磁共振成像技术探讨 ASD 阈下水平的抑制控制能力, 特别是在青年群体中的探讨。本研究中, 我们收集了具有不同程度自闭特征的中国人被试, 目的是通过功能磁共振成像的停止信号任务来探讨自闭特质个体抑制控制能力较差的神经关联。结果表明, 自闭特质得分越高的个体, 其抑制控制能力越差。功能连接分析结果显示, 显著性网络(SN)与左侧边缘上回(SMG)的功能连接显著下降; 背侧注意网络(dorsal attention network, DAN)与左舌回(left lingual gyrus, LG)的功能连接显著降低; 额顶网络(FPN)

与左中央后回(PCG) 功能连接显著增高;LN(语言网络)与蚓部 4 5 的功能连接显著增加,与左侧颞下回(ITG)的功能连接显著减少。为了从更确切更具体的角度来探讨自闭特质的抑制反应能力的神经基础,进行 ROI-to-ROI 分析,结果发现,SMG、PCG、LG 和颞叶这些脑区同样出现在 take network as seed to voxel 的分析结果中。此外,我们还发现 AQ 及其子维度也与我们前面提到的这四个脑区存在显著的相关性。这一研究在一定程度上说明自闭特质个体在执行反应抑制任务时,其受到其他功能区的干扰,而其不能很好的避免这种干扰。这也从另一个侧面验证了上述四个脑区在自闭特质的执行功能中的特异性作用,在一定程度上说明这些脑区在其中起到的生物标记作用,其可能是反应抑制的基本神经基础。

关键词 自闭特质, 反应抑制, 独立主成分分析, 功能磁共振

Group-ICA with functional connectivity during response inhibition in young adults with autistic-like traits: a fMRI study of Stop Signal Task

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Abstract: Individuals with autistic-like traits are often thought to have deficit in inhibitory control ability, which is similar to ASD (autism spectrum disorder). Many studies explored inhibition control using fMRI (Functional Magnetic Resonance Imaging) measures in clinical level of ASD, rarely have studies explored it in subliminal level using a task-based fMRI, especially in young adults. Here, we focused on young adults with different levels of autistic-like traits, and aim to identify the neural correlate of this deficit using stop-signal task of fMRI. The results showed that young adults with autistic-like traits, whose have poor ability of inhibition control in task performance. The results of functional connectivity (FC) analysis showed the SN (salience network) has a significant decreased FC with left supramarginal gyrus (SMG); the DAN (dorsal attention network) has a significant decreased FC with left lingual gyrus (LG); the (frontoparietal network) FPN has a significant increased FC with left postcentral gyrus (PCG); the LN (language network) have significant increased FC with vermis 4 5 and decreased FC with left inferior temporal gyrus (ITG). Also, the SMG, PCG, LG and temporal gyrus are shown in the results of region of interests (ROI)-to-ROI analysis. Additionally, we also found AQ and its sub-dimensions also have significant correlations with these four brain regions that we aforementioned. Thus, young adults with autistic-like traits might have non-traditional neuro development of the response cognitive ability associated with these SMG, PCG, LG and temporal gyrus, which may be the basic neuro foundation of response inhibition.

Keywords: autistic-like traits, response inhibition, Group-ICA, fMRI

抑郁症青少年和成人亚属前扣带皮层和杏仁核之间的静息态功能连接

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摘要 重度抑郁症的神经病理是神经影像学研究中的重要问题之一。其中, 亚属前扣带皮层和杏仁核作为在抑郁症中被广泛研究的两个区域, 二者之间的功能连接也受到关注, 但目前结果存在争议。因此, 本研究拟基于两个公开数据库 (CMI-HBN, Child Mind Institute Healthy Brain Network dataset; REST-meta-MDD), 检验并厘清亚属前扣带皮层和杏仁核之间的功能连接。本研究共对 39 名青少年抑郁症患者和 29 名青少年健康被试的静息态功能核磁共振扫描进行了基于种子区的全脑体素分析和感兴趣区 (ROI) 相关分析, 同时对包含 848 名成年抑郁患者和 794 名健康成人被试的数据集也进行了感兴趣区相关性分析。结果表明, 青少年的亚

属前扣带皮层-杏仁核功能连通性之间无显著组间差异；与成人健康对照组相比，成人抑郁症组表现出亚属前扣带皮层-杏仁核功能连通性的显著降低。进一步分析发现，相对于健康对照组和首次患病且未接受过药物治疗的抑郁成年人，复发性抑郁症成年人功能连通性显著降低。然而，健康对照组与首次患病且未接受过药物治疗的抑郁成年人之前组间差异不显著。本研究结果进一步厘清了以往研究中亚属前扣带皮层-杏仁核功能连通性损伤的争论：抑郁症网络亚区间功能连通性具有细微性和复杂性，青少年和成人重度抑郁症患者可能存在不同的功能异常倾向，即青少年更容易出现躯体症状（如，食欲不振，失眠），而成年人更易出现情感症状（如，无望感，情绪低落）。值得注意的是，本研究是使用了最新开放数据集探究和验证抑郁症网络亚区域功能连通性的争议性问题的研究。由于神经影像学研究结果的可重复性较低，对以往研究重要发现的验证具有重要意义。

关键词 重度抑郁症，静息态核磁共振，功能连通性，亚属前扣带皮层，杏仁核

Revisited Resting-State Functional Connectivity between Amygdala and Subgenual Anterior Cingulate Cortex in Depressive Adolescents and Adults

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Abstract: Background: Currently, a vast majority of literature on neuroimaging is devoted to understanding the dysfunction of neural pathophysiology in Major Depressive Disorder (MDD). In this study, we employed two open neuroimaging datasets with MDD adolescents and adults to retest and verify the functional connectivity (FC) between two core subregions of MDD-related brain network: subgenual anterior cingulate cortex (sgACC) and amygdala.

Methods: This study analyzed resting-state FC between sgACC and amygdala. Specifically, seed-based voxel-wise analysis and ROIs correlation analysis was conducted on 39 MDD adolescents and 29 health control (HC) adolescents from the Child Mind Institute Healthy Brain Network dataset (CMI-HBN), and ROIs correlation analysis was performed on 848 MDD adults and 794 HC adults from REST-meta-MDD consortium. We also conducted exploratory analyses on subgroups (e.g., MDD with a single episode, recurrent episode, or medication).

Results: No significant sgACC-amygdala FC group differences between MDD and HC were found in adolescents. However, compared to HC, MDD adults displayed significantly decreased sgACC-amygdala FC. Meanwhile, recurrent MDD adults had significantly reduced FC relative to both HC and first-episode drug-naïve MDD adults, whereas there was no significant sgACC-amygdala FC difference between HC and first-episode drug-naïve MDD adults. **Conclusion:** Our results resonate with previous mixed findings of sgACC-amygdala FC in MDD, underscoring the nuanced and complex nature of brain connectivity in psychiatric disorders. Our work used the latest open datasets to verify the debatable findings of sgACC-amygdala FC. Due to the low repeatability of neuroimaging results, it is of significance for the verification of important findings in previous studies.

Keywords: major depressive disorder, resting-state, functional connectivity, subgenual anterior cingulate cortex, amygdala

右侧鼻周皮质对个体积极情绪的预测作用

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摘要 海马体不仅在记忆中扮演着重要角色，而且在积极情绪体验中有着重要作用。大量研究显示，个体早期经历特别是创伤性经历会通过影响海马结构和功能进而调节个体的压力应对和反应。动物和脑影像证据

同样揭示,海马参与情绪调节。考虑到海马体是由多个亚区构成,这些不同亚区如何参与积极情绪过程仍然不清楚。本研究采用 3T Prisma 磁共振扫描仪和高清海马 T2 成像序列在大样本数据集考察海马亚区与正负性情绪体验的关联($n=209$)。正性负性情绪量表(PANAS)用于测量个体的最近一段时间正负性情绪主观体验。同时,采用海马自动分割软件(ASHS)对高清海马 T2(分辨率为 $0.2\text{mm}\times 0.2\text{mm}\times 1.5\text{mm}$)和结构像 T1 进行海马体亚区分割,特别是将海马分割为七个亚区(包括 CA1, DG, CA2+3, PHC, PRC, SUB, ERC),进而测量海马体和亚区的灰质体积。为了构建海马体亚区体积与正负性情绪体验的关联,我们采用线性回归统计方法,同时对海马及亚区体积的计算进行两种方式校正,分别为基于颅内体积校正法(校正体积 = 海马亚区原始体积 - b (颅内体积-平均颅内体积), b 是海马亚区原始体积对颅内体积的回归系数)和基于海马总体积校正法(例如,每个亚区体积除以对应侧海马总体积)。同时,将被试的性别、年龄、父母的受教育程度作为协变量,对校正过后的 14 个海马体子区体积和个体的积极情绪与消极情绪得分做多重线性回归。结果发现,个体的积极情绪与右侧海马中鼻周皮质(PRC)区域体积(基于全脑体积校正法)呈线性相关($\beta=0.0031, p=0.0011$, Bonferroni 校正 $p=0.05/28=0.0017$)。同样,我们在基于海马体积校正法中,个体积极情绪依然与右侧海马鼻周皮质体积显著相关($\beta=46.53, p=0.00021$, Bonferroni 校正 $p=0.05/28=0.0017$)。然而,在其他 13 个亚区中并没有发现和积极情绪有显著相关。另外,我们也未曾发现消极情绪与海马子区体积的关联性。本研究的结果说明,海马特别是其中的右侧鼻周皮质,参与积极情绪体验,可能与鼻周皮质负责应激反应时的调节功能有关。未来需要进一步考察鼻周皮质的功能激活和功能连接如何参与积极情绪体验过程。

关键词 海马体积, 积极情绪, 鼻周皮质, 海马分割

The prediction of the right hippocampal subfield's PRC volume on individual's positive emotions

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Abstract: The hippocampus not only plays an important role in memory, but also engages in positive emotional experiences. A large number of studies have shown that individuals' early experiences, especially traumatic experiences, can regulate the individuals' stress responses via influencing hippocampal structure and function. Animal and brain imaging evidence also reveals that the hippocampus is involved in emotion regulation. Considering the fact that the hippocampus is composed of multiple subfields, it is still unclear how these different subfields involve the emotional experiences. To answer this question, this study used the 3T Prisma MRI scanner and high-definition hippocampal T2 imaging sequence (i.e., a resolution of $0.2\text{mm}\times 0.2\text{mm}\times 1.5\text{mm}$) to explore the associations between hippocampal subfields and positive/negative emotional experience in a relatively large sample data set ($n=209$). The Positive and Negative Affect Schedule (PANAS) is high-efficiency tool to measure the individual's subjective experiences of positive and negative emotions in the most recent period of time. The hippocampus automatic segmentation software (Automatic Segmentation of Hippocampal Subfields: ASHS) is used to segment the hippocampus into seven subfields, including CA1, DG, CA2+3, PHC, PRC, SUB, ERC. Then, a linear regression model was employed to uncover the correlations between hippocampal subfields' volumes and the positive and negative emotional experience with two distinct strategies of hippocampal volume corrections, such as the intracranial volume correction method (adjusted volume = raw volume - b (ICV - mean ICV), b is the coefficient of regression of the region volume on ICV) and the total hippocampal volume correction method (for example, the volume of each subregion divided by the total volume of the corresponding side of the hippocampus). In this model, 14 hippocampal subregions' corrected volumes were independent variables, whereas individual's positive and negative emotion experiences were considered as dependent variables, and selecting the subjects' gender, age, and parents' education as covariates. The findings showed that the individual's positive emotion experiences were linearly correlated with the volume of the Perirhinal cortex (PRC) in the right hippocampus (based on the whole brain volume correction method) ($\beta=0.0031, p=0.0011$, Bonferroni correction $p=0.05/28=0.0017$). Similarly, in our hippocampal volume correction method also observed same positive associations ($\beta=46.53, p=0.00021$, Bonferroni

correction $p = 0.05/28 = 0.0017$). However, similar pattern did not been found in the remaining 13 subfields. In addition, we did not detect the correlations between negative emotion experiences and hippocampal subfields' volume. Our findings suggest that the hippocampus, especially the right Perirhinal cortex, is involved in positive emotional experience, which may depend the modulation of the Perirhinal cortex in stress responses. In future, it is necessary to further investigate how the Perirhinal cortex' activation and functional connectivity with other regions support positive emotional experience.

Keywords: hippocampal volume, positive emotion experience, perirhinal cortex, hippocampal segmentation

(2) “心理学脑成像专业委员会”口头报告分场 2

辨别真假记忆的神经机制及其年龄差异：来自多变量模式分类的证据

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摘 要 个体在学习一系列语义相关词(如:做梦、叫醒、床铺等)之后,对于已学词(如:做梦)的准确再认被称为真实记忆;而再认出一些没学过但语义相关的诱饵词(如:睡觉)被称为错误记忆;但却极少再认出一些没学过且语义无关的无关词(如:钢笔)。以往研究表明,中老年人比年轻人更难辨别真假记忆。以往脑成像研究主要采用单变量分析方法,考察记忆老化的神经加工过程。但还不清楚在记忆提取阶段的辨别真假记忆的神经表征模式差异,也不了解老化对它的影响。因此,当前研究采用功能磁共振脑成像技术和多变量的模式分类分析方法,用于检验记忆老化的神经表征去分化假说。研究采用 3T 西门子磁共振扫描仪,对 19 名中老年人(54-74 岁)和 19 名年轻人(19-25 岁)完成词语错误记忆测验的过程进行了脑扫描。在记忆编码阶段,被试学习 9 组词(每组 8 个词)。在记忆提取阶段(脑扫描阶段),被试完成再认测验(判断 108 个已学词、诱饵词、无关词是否学过)。在验证以往行为研究结果(中老年人辨别真假记忆能力下降)的基础上,当前研究针对记忆提取阶段的脑成像数据,采用多变量的模式分类分析方法,探索哪些脑区的神经激活模式能辨别已学词、诱饵词和无关词。在项目类型上建立了“已学词 vs. 无关词”和“已学词 vs. 诱饵词”两个二元分类器。首先对两类分类器分别进行全脑搜索分析,然后对两类分类器的结果进行联合分析。多变量模式分类结果表明:在大脑初级视觉皮层(右侧舌回)和顶叶内侧(右侧楔前叶),中老年人在“已学词 vs. 无关词”和“已学词 vs. 诱饵词”两个分类器上的准确率均低于年轻人。此外,在记忆提取阶段,个体在大脑感知觉皮层上的信息表征精度与其辨别真假记忆能力有关。个体在右侧舌回和右侧楔前叶脑区对“已学词 vs. 诱饵词”的神经模式分辨准确率越高,个体辨别真假记忆能力越强。它表明中老年人在记忆提取阶段的感知觉信息神经表征精度下降,导致了其辨别真假记忆能力的降低。

关键词 功能磁共振成像, 多变量模式分类, 学习与记忆, 年龄差异

Age-related differences in the neural basis of discrimination of true and false memories:

Evidence from multivoxel pattern classification

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Abstract: After learning a list of semantic-related words (e.g., dream, awake, bed, etc.), the recognition of the studied words (e.g., dream) is called true memory, and recognition of unstudied but semantically related lures (e.g., sleep) is called false memory; however, non-related unstudied words (e.g., pen) are rarely recognized. Previous behavioral

studies have shown that it is more difficult for older adults to distinguish true from false memories than younger adults. Previous neuroimaging studies mainly used univariate analysis methods to investigate the neural processing of memory aging. However, it is still unclear about the age-related differences in the neural representation underlying true and false memories during memory retrieval. The current study used the functional magnetic resonance imaging (fMRI) and multivariate pattern classification analysis methods to test the neural dedifferentiation hypothesis of memory aging. Nineteen older adults (age: 54-74) and 19 younger adults (age: 19-25) completed the semantic false memory task. During encoding, subjects studied 9 lists of word, each consisting of 8 words. During retrieval, subjects were asked to make judgements about whether they had just learned the 108 words (including targets, lures, and foils) in a 3T MRI scanner. After verifying the behavioral result that the ability to distinguish true from false memories declines with age, the current study used multivariate pattern classification analysis methods to analyze neuroimaging data during memory retrieval, to explore which brain regions can distinguish targets from lures and foils. Two binary classifications of "Targets vs. Foils" and "Targets vs. Lures" were set up to perform the whole-brain searchlight analyses and then a joint analysis for the results of these two classifications. Results showed that, compared with younger adults, the accuracy of both classifications in older adults was lower in the right lingual gyrus and the right precuneus. In addition, the higher the accuracy of the classification of "Targets vs. Lures" in the right lingual gyrus and right precuneus, the better the ability to distinguish true from false memories. They suggest that older adults have reduced accuracy in the neural representation of sensory information during memory retrieval, which leads to a reduction in their ability to discriminate between true and false memories.

Keywords: fMRI, multivoxel pattern classification, learning and memory, age-related differences

内容预测对话轮转换加工的影响——基于近红外成像的研究

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摘要 在话轮转换的过程中, 听者通过某种方法预测说者即将到来的话语内容, 且预测内容可以帮助预测说者发言何时结束, 从而使听者能更好的准备自己的回应。前人对于听者进行预测的认知过程, 提出了早期计划和延迟计划两种假说。早期计划假说认为, 听者会尽早准备一个回应, 并在该轮次结束时说出自己所准备的内容; 而延迟计划假说认为, 当听者相信自己很快就会有参与对话的时候, 他们才会开始准备清楚表达他们的回应。本研究旨在考察内容预测对话轮转换加工过程的影响及其神经机制, 并对该过程的早期计划假说和延迟计划假说进行探讨。使用行为实验和近红外光谱成像技术相结合的方法, 以内容是否可预测为自变量, 反应时、氧合血红蛋白浓度变化量为因变量。将前人研究中所使用的句子进行本土化并进行重评, 选择了适合母语为中文的被试的中文陈述句作为实验材料, 并将其转化为录音, 以录音材料模拟说者所说的内容, 观测听者的反应。结果表明可预测条件下听者的预测反应时显著快于不可预测条件下反应时间 (研究一: $t(54) = 5.43, p < 0.001$; 研究二: $t(22) = 8.92, p < 0.001$), 主要激活额极、背外侧前额叶、颞上回等脑区 (p 均小于 0.05)。将内容可预测性和实验时程进行 2×2 重复测量分析, 内容可预测性的主效应显著 ($F(1, 1) = 3371.86, p < 0.001$), 时程的主效应显著 ($F(1, 1) = 146.92, p < 0.001$), 内容可预测性和时程的交互作用显著 ($F(1, 1) = 2631.59, p < 0.001$)。本研究证明说者所说内容的可预测性对听者的话轮转换的预测过程具有显著影响, 此现象在中文语境下具有跨文化的一致性; 无论可预测条件还是不可预测条件, 均在前额叶及右侧颞叶的部分脑区有所激活, 不可预测条件比可预测条件需要更多的认知资源, 激活程度在背外侧前额叶存在显著差异, 背外侧前额叶与语义理解及预测存在密切关系; 听者话轮转换过程中既会采取早期计划假说, 也会采取延迟计划假说, 当听者越确定话轮转换点何时到来时, 越容易采用早期计划假说。

关键词 内容预测, 话轮转换, 功能性近红外光谱成像技术, 早期计划假说, 延迟计划假说

The Effect of Content Prediction on the Turn-taking Process: A fNIRS Study

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Abstract: In the process of turn-taking, the listener can predict the upcoming content of the speaker in some way, and the predicted content can help to predict when the speaker will finish speaking, so that the listener can better prepare their response. Two hypotheses, early planning and late planning, have been proposed for the cognitive process of listeners' prediction. The early planning hypothesis states that the listener prepares a response as early as possible and delivers what he or she has prepared by the end of the round; the late planning hypothesis suggests that listeners will only begin to prepare their responses clearly when they believe they will have an opportunity to participate in the conversation soon. In order to investigate the neural mechanism of content-predictive conversational turn-taking process, and to explore the contradiction between the early planning hypothesis and the late planning hypothesis, we used behavioral experiment and fNIRS experiment in this study. The predictability of the content was taken as the independent variable, and the variation of the reaction time and oxyhemoglobin concentration was taken as the dependent variable. The sentences used in previous studies were localized and reevaluated. Chinese declarative sentences suitable for native Chinese speakers were selected as experimental materials, and they were converted into recordings. The speaker was simulated with the recording material to observe the response of the listeners. The results showed that the predictive reaction time of the listener in the predictable condition was significantly faster than that in the unpredictable condition (Study1: $t(54) = 5.43, p < 0.001$; Study2: $t(22) = 8.92, p < 0.001$), mainly activating the frontopolar area, dorsolateral prefrontal cortex, superior temporal gyrus and other brain regions (all $p < 0.05$). The predictability of the content and the experimental time series were analyzed by 2×2 repeated measurements. The results showed that the main effect of content predictability was significant ($F(1, 1) = 3371.86, p < 0.001$), and the main effect of time history was significant ($F(1, 1) = 146.92, p < 0.001$). The interaction between content predictability and time history was significant ($F(1, 1) = 2631.59, p < 0.001$). This study demonstrates that the predictability of the speaker's speech has a significant impact on the prediction process of the listener's turn of speech, which is consistent across cultures in the Chinese context. In both predictable and unpredictable conditions, there was activation in the prefrontal and part of the right temporal lobe. The unpredictable condition required more cognitive resources than the predictable condition, and the degree of activation was significantly different in the dorsolateral prefrontal cortex, which was closely related to semantic understanding and prediction. What's more, the listeners adopted both early planning hypothesis and delayed planning hypothesis. The more certain the listeners were about when the speaker would end their speech, the more likely they were to adopt early planning hypothesis.

Keywords: content prediction, turn-taking, fNIRS, early planning hypothesis, late planning hypothesis

人类腹内侧前额叶皮层三功能图谱

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摘要 介绍:腹内侧前额叶皮层 (vmPFC) 涉及众多的功能, 大量的文献表明这些功能主要与社会, 价值和情绪相关。然而, 这些功能在 vmPFC 的分布依然不够清楚。另外, 之前的研究都是使用直接推理的方式去探索 vmPFC 的功能, 而这种方法经常受到大量的噪音和混淆变量的影响, 反向推理方法可以减少直接推理所带来的偏差。因此在这个研究当中, 我们使用一个大规模神经影像数据库-Neurosynth 去进行反向推理元分析来确定 vmPFC 的功能分布。方法: 首先, 我们使用反向推理后验概率排名的方法对 vmPFC 的功能进行提取。我们使用共激活元分析的方法对 vmPFC 进行分割,随后我们对分割的亚区再次进行反向推理排名, 用来确定各个亚区的主要功能。最后我们对提取的 vmPFC 功能进行解码, 用来验证这些功能术语更有可能来自于哪个

亚区。结果：在前 100 个术语当中，排除结构和意义不明的术语之后，总共有 18 个功能术语被保留，我们将这些功能术语进行分类，最终组成社会，价值和情绪三类功能主题。共激活元分析对 vmPFC 的分割表明 3 个亚区是最优的分割方式，三个亚区呈现从前往后的模式。每个分区反向推理功能术语排名结果显示位于前面的亚区 1 包含更多的社会相关的功能术语，价值相关的术语在位于中间的亚区 2 占主要优势，而情绪相关术语都只在位于后面的亚区 3 当中出现。18 个功能术语在这三个亚区当中的解码结果表明所有社会相关的术语更大可能来自于亚区 1，所有的情绪相关术语都最可能出现在亚区 3，而价值术语出现在三个亚区当中，但是在所有术语当中，只有术语“value”出现在了亚区 2。结论：这项研究当中我们使用大规模数据库反向推理的方法验证了 vmPFC 主要包括社会，价值和情绪三种功能，并且确立了 vmPFC 内的三功能图谱，这个图谱依照社会，价值和情绪呈现从前往后的分布模式。

关键词 腹内侧前额叶皮层，社会，价值，情绪

Three functional subregions in human ventromedial prefrontal cortex

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Abstract: Introduction: the ventromedial prefrontal cortex (vmPFC) involves diverse functions, a lot of literature show that these functions are mainly related to social, value and emotion. However, distribution of these functions in vmPFC still unclear. In addition, previous studies use forward reference to explore function of vmPFC, which often are affected by several noise and confound, reverse reference can reduce bias from forward inference. In the study, we use Neurosynth, a large-scale neuroimaging database to perform reverse inference meta-analysis to determine the function distribution of vmPFC. Methods: Firstly, we perform function extraction of vmPFC using reverse inference posterior probability. We use the Meta-Analytic Co-Activation parcellation method to parcel vmPFC and perform reverse inference ranking for each parceled subregion to identify their function. Finally, we decode extracted functional items from vmPFC to identify which subregion these functional terms most likely to come from. Results: 18 functional terms were maintained after excluding structure and meaningless terms in top 100 terms, then categorizing these terms and generate three functional topics: Social, Value and Emotion. vmPFC is parceled to three subregions by Meta-Analytic Co-Activation and three subregions are the optimal results, and the three subregions show a from anterior to posterior pattern. The results from reverse inference ranking for each parceled subregion indicate that social-related functional terms dominate in subregion 1 (anterior), while emotion-related terms are all located in subregion 3 (posterior), value-related terms are in subregion 2 (middle). The decode results for 18 functional terms show that all social-related terms are more probability come from subregion 1, all emotion-related terms are more probability appear in subregion 3, and value-related terms appear in all three subregions, but among all terms, only term "value" appears in subregion 2. Conclusion: The study results identify that function of vmPFC mainly involves three functions including social, value and emotion and generate three functional subregions which present anterior-to-posterior functional distribution according to social, value and emotion in vmPFC by reverse inference meta-analysis from a large-scale neuroimaging dataset.

Keywords: Ventromedial prefrontal cortex, Social, Value, Emotion

4.26 音乐心理学专业委员会

(1) “音乐心理学专业委员会”口头报告分场一

静态与动态个体特征对音乐感知情感的预测作用

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摘要 作为音乐的灵魂, 音乐情感信息被广泛应用在音乐检索和推荐系统中, 因为追求情感体验是人们听音乐的主要动机之一。为了获取海量音乐的情感信息, 计算机科学家通过提取音乐特征来自动识别音乐情感, 但这种方法忽视了个体差异。大量音乐心理学研究显示个体对音乐感知情感的判断会受到年龄、性别、音乐教育程度、移情、性格等各种因素的影响。对个体音乐感知情感进行自动识别时, 我们也应该考虑个体特征。因此, 本研究通过计算建模的方式, 探索个体特征、音乐特征和音乐感知情感间的关系。并在传统音乐情感识别模型中加入个体特征, 尝试优化模型识别效果。研究结果显示, 动态个体特征(包括对目标音乐的偏好和熟悉程度、被音乐唤起的情感、情感唤起机制和生理状态)能显著提升模型预测效果, 而稳定个体特征(例如性别、性格、音乐经历等)对模型效果无明显作用。随后, 我们通过特征重要性分析对预测模型进行解释。结果显示音乐特征在音乐感知情感识别中占据主导地位, 而其它个体特征对音乐情感的感知存在不同程度的影响。综上, 本研究通过机器学习方法探索了变量间的关系, 同时构筑和优化了个性化音乐情感识别模型, 从而能为人们提供更精准的音乐情感信息。本研究也为未来构筑个性化的音乐检索和推荐系统提供了重要参考。

关键词 音乐情感识别, 感知情感, 个性化, 机器学习

Predictive effect of stable and dynamic individual features on perceived emotion of music

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Abstract: As the soul of music, emotion information has been widely used in music retrieval and recommendation systems, because the pursuit of emotional experience is the main motivation for music listening. To obtain the emotion information of massive music, computer scientists extract musical features to identify musical emotions, but this method ignores listeners' individual differences. Music psychology researches have shown that the individual's judgment of perception of music emotion would be affected by various factors, such as age, gender, music education, empathy, personality, etc. When automatically recognizing an individual's perception of music emotion, we should consider individual features. Therefore, this study investigated the relationship among individual features, music features and music emotion in a computational modeling way. By adding individual features into the traditional music emotion recognition models, we also attempted to improve the model effect. The results show that dynamic individual features (including preference for target music, felt emotion of music, mechanism indices, and physiological features) can significantly improve the model's effect, and stable individual features (e.g., sex, personality, and music experience) have no effect. We then conducted model interpretation by analyzing feature importance. The results show that music features occupied a dominant position in music emotion recognition, while other individual features had varying degrees of influence. This study investigated the relationship between variables, and constructed and optimized personalized music emotion recognition models to provide people with more accurate music emotion information. This study can also provide a reference for the creation of personalized music retrieval and recommendation systems.

Keywords: Music emotion recognition, perceived emotion, personalization, machine learning

皮下核团对音乐声音的编码可塑性及强度与音乐旋律中的音高分辨能力独立相关

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摘要 皮下听觉核团对音高感知有贡献, 但大脑对声音的皮下神经编码如何与音乐音高处理产生联系仍不清楚。传统观点认为, 皮下声音编码活动的增强是更优的音高分辨的基础。然而, 也有文献报导了皮下声音编码的情境相关可塑性与更优的听觉感知有关。本研究通过分析大脑皮下核团对在可预测情境和随机情境中呈现的音乐声音的频率跟随响应(frequency-following response, FFR)来探索音乐音高感知的皮下神经相关物。我们发现 FFR 的试次间锁相(inter-trial phase-locking, ITPL)与音乐旋律中音高分辨的行为表现呈显著负相关。我们引入了可塑性指数用以测量 FFR 所表征的皮下听觉核团对呈现于两种情境的相同声音的差异化编码, 其与 FFR 试次间锁相呈高度负相关, 而与音高分辨能力呈显著正相关。这说明音乐音高感知与皮下听觉核团的情境相关可塑性正相关。此外, 虽然 FFR 频谱强度与音高分辨能力没有显著相关性, 但是一旦通过偏相关方法将 FFR 试次间锁相控制, 则 FFR 频谱强度与行为表现之间呈显著正相关, 这表明皮下核团对声音编码的神经活动强度也是音乐音高感知的基础之一。通过偏相关方法将 FFR 频谱强度控制, FFR 试次间锁相与行为表现之间的显著负相关关系仍保持。我们进一步发现, FFR 试次间锁相、可塑性指数、FFR 频谱强度均与音乐音高分辨能力显著相关, 而与音乐节奏分辨能力相关性很弱。这些发现表明: 皮下核团对音乐声音的编码的情境相关可塑性与神经活动强度独立地、特异地与音乐旋律的音高感知有关。

关键词 音乐音高感知, 可塑性, 皮下核团神经编码, 频率跟随响应, 试次间锁相

Context-dependent plasticity and strength of subcortical encoding of musical sounds independently underlie pitch discrimination for music melodies

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Abstract: Subcortical auditory nuclei contribute to pitch perception, but how subcortical sound encoding is related to pitch processing for music perception remains unclear. Conventionally, enhanced subcortical sound encoding is considered underlying superior pitch discrimination. However, associations between superior auditory perception and the context-dependent plasticity of subcortical sound encoding are also documented. Here, we explored the subcortical neural correlates to music pitch perception by analyzing frequency-following responses (FFRs) to musical sounds presented in a predictable context and a random context. We found that the FFR inter-trial phase-locking (ITPL) was negatively correlated with behavioral performances of discrimination of pitches in music melodies. It was also negatively correlated with the plasticity indices measuring the variability of FFRs to physically identical sounds between the two contexts. The plasticity indices were consistently positively correlated with pitch discrimination performances, suggesting the subcortical context-dependent plasticity underlying music pitch perception. Moreover, the raw FFR spectral strength was not significantly correlated with pitch discrimination performances. However, it was positively correlated with behavioral performances when the FFR ITPL was controlled by partial correlations, suggesting that the strength of subcortical sound encoding underlies music pitch perception. When the spectral strength was controlled by partial correlations, the negative ITPL-behavioral correlations were maintained.

Furthermore, the FFR ITPL, the plasticity indices, and the FFR spectral strength were more correlated with pitch than with rhythm discrimination performances. These findings suggest that the context-dependent plasticity and the strength of subcortical encoding of musical sounds are independently and perhaps specifically associated with pitch perception for music melodies.

Keywords: music pitch perception, plasticity, subcortical encoding, frequency-following response, inter-trial phase-locking

治疗性歌曲写作对乳房切除后的女性乳腺癌患者自我概念与抑郁症状的影响

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摘要 根据世界卫生组织国际癌症研究机构发布的 2020 年全球最新数据显示, 乳腺癌已取代肺癌成为全球第一大癌症。随着个体自我防御意识的增强、医疗水平以及疾病筛查技术的发展, 乳腺癌的死亡率呈下降趋势。乳房根治术作为目前常用的治疗方式之一, 当患者生理层面疾病逐渐得到治疗或康复, 其造成的心理疾病也随之而来。与传统的癌症患者心理干预方式相比, 音乐心理治疗更能激发患者的语言表达以及减轻消极情绪体验, 对悲伤、丧失主题的应对能力有调节和改善作用, 并能够为较好的生活质量提供动力和支持。治疗性歌曲写作通常以热身活动开始, 旨在唤起无意识的感觉或记忆, 将隐藏的精神物质带到表面, 激发个人思考, 从情感层面入手, 将精神物质通过歌曲写作转化为具体想法。接下来的歌曲创作紧接着情感体验的部分, 通过歌词填空、歌曲模仿、策略性写作, 让即使是没有音乐训练背景的患者, 也可以完成歌曲写作, 将内心的体验转化成有意义的音乐作品。本研究针对乳切除后的女性乳腺癌患者的自我概念与抑郁症状, 采用小样本多基线设计, 以 3 名女性乳腺癌患者 (42~45 岁) 作为被试, 使用治疗性歌曲写作作为核心技术的个体音乐心理治疗干预。测量工具采用抑郁自评表及田纳西自我概念量表。被试所写歌曲的旋律大多明朗、流畅, 以四四拍、四三拍居多, 速度在小广板与小行板之间, 风格以流行为主, 旋律流畅、明朗, 没有复杂的配器, 都是以吉他的拨弦、扫弦为主的伴奏肢体。在歌词写作过程中, 当被试描述了过往经历, 抒发了哀伤、愤怒, 宣泄了绝大部分的消极情感体验后, 更多的是对未来生活的期待和规划。研究结果显示, 3 名被试经干预在自我概念和抑郁症状水平都有明确的改善。治疗性歌曲写作作为女性乳腺癌患者的心理照护提供了新的视角和途径。

关键词 治疗性歌曲写作, 乳房切除, 女性乳腺癌, 自我概念, 抑郁症状

绝对音乐影响道德判断的大脑信息处理网络

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摘要 音乐是否可以影响道德判断是音乐社会功能研究领域的重要议题。古今中外学者对于音乐与道德的关系有丰富的论述, 然而已有论述也存在较多的争议。解决争论的关键在于以“绝对音乐”作为诱发材料考察音乐影响道德判断的脑机制。在这项研究中, 我们采用中国情绪音乐材料库 (CAMS) 中选取绝对音乐作为诱发材料, 在聆听音乐之后让被试完成最后通牒任务, 以此验证音乐是否具备影响道德判断的功能。研究结果表明, 相比无声音组合, 快乐音乐组对较不公平的分配方案的接受率显著降低, 白噪声组的接受率没有显著变化。然后, 我们利用大尺度时变网络分析揭示了不同实验组之间多样化的网络模式, 发现不同的网络模式可以解释不同组的接受率差异。大尺度时变网络分析结果表明, 在中等不公平方案中, 快乐音乐组相较于无声音组呈现更强的自上而下的网络, 而无声音组相较于快乐音乐组呈现更强的自下而上的网络。源定位分析表明, 快乐音乐组相较于无声音组呈现更强的奖赏系统激活。我们推测, 音乐诱发的快乐情绪作为决策时

的偶然情绪,激活了被试的奖赏系统,进而代偿了被试在决策任务中选择接受分配方案获得自我利益的奖励,以一种不同于其他情绪的方式与自上而下的大脑网络模式共同解释了为何在听了快乐音乐后,被试对于不公平分配方案的接受率显著下降。

关键词 绝对音乐,道德判断,最后通牒任务,时变网络分析

工尺谱韵唱中的内隐学习研究——以安次东张务音乐会为例

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摘要 工尺谱是中国传统音乐使用最广泛的记谱法,自明清盛行以来,许多民间乐种依然保留着工尺谱的记载和传承。韵唱即指念唱乐谱,是润腔形式的一种,在中国传统器乐传承过程中,乐师们真正拿乐器之前都会有“念谱”这一环节。在河北音乐会中,乐师通过韵唱将工尺谱本和口头旋律结合在一起,共同构成我国传统器乐传承中“口传心授”的主要方式和内容。笔者为探讨工尺谱的谱面记载和阿口韵唱之间的关系,通过梳理工尺谱的相关研究,发现工尺谱的韵唱学习是一个内隐学习的过程。大多数学者在研究中认为,“阿口”根据工尺字的组合排列以及板眼的不同,在韵唱上有其规律可循。通过对民间乐师的访谈,发现他们虽然在学习过程中并没有意识到工尺谱的学习有内在规律所遵循,但大部分人却已经熟练掌握该规则,并自动运用到韵唱和乐器的演奏中。本文从工尺谱的韵唱过程出发,以韵唱中的规律为依据,探索该学习中的内隐学习过程。通过对这一过程的研究,为工尺谱的学习寻找更行之有效的教学方法。研究采用实验法,以安次东张务音乐会的乐师为研究对象,结合现存的工尺谱例和实际的乐器演奏,对东张务音乐会乐师们的工尺谱学习过程和学习结果进行实验研究,结果发现学习过程中韵唱规律的学习是无意识、自动学习的过程。乐师虽然不知道韵唱规律,也没意识到规律的存在,但是在实际使用中却已经掌握了该规律,并可以区分各乐社韵唱规律的不同。通过这一研究,讨论在工尺谱的韵唱教学中,是否可以形成一套科学、严密的音乐教学体系,为工尺谱的韵唱学习提供便利,使历史中失去了活态传承的乐曲重新焕发光彩,并为传统音乐进课堂提供较大的可能性和可操作性。

关键词 工尺谱韵唱,河北音乐会,内隐学习

Research on implicit learning in Gongche notation rhyme singing -- Taking Anci District Dongzhangwu Village in Hebei Province Ritual Associations as an example

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Abstract: The Gongche notation is one of the most popular notation in Chinese traditional music. During Ming and Qing dynasties, Gongche notation was widely used in many folk music genres. Rhyme singing refers to reading and singing music score, which is a form of moistening cavity. In the process of inheriting Chinese traditional instrumental music, musicians will have the link of "reading music score" before they really take the instrument. In Hebei Province Ritual Associations, musicians combine Gongche notation book and oral melody through rhyme singing, which together constitute the main way and content of "Oral teaching and feeling with heart" in the inheritance of traditional instrumental music in China. In order to explore the relationship between the Gongche notation recording and akou rhyme singing, through combing the relevant research of Gongche notation, the author finds that the rhyme singing learning of Gongche notation is an implicit learning process. Most scholars believe that "a Kou" has its own rules to follow in rhyme singing according to the combination and arrangement of gongche words and "ban yan" different inflexibility. Through the interview with folk musicians, it is found that although they do not realize that there are internal rules to follow in the study of Gongche notation, most people have mastered the rules and automatically applied them to rhyme singing and musical instrument performance. Starting from the rhyme

singing process of Gongche notation and based on the law of rhyme singing, this paper explores the implicit learning process in this learning. Through the study of this process, we can find a more effective teaching method for the study of Gongche notation. Using the experimental method, taking the musicians of Anci District Dongzhangwu Village in Hebei Province Ritual Associations as the research object, combining with the existing Gongche notation examples and actual musical instrument performance, this paper makes an experimental study on the learning process and learning results of Gongche notation of Dongzhangwu Village in Hebei Province Ritual Associations musicians. The results show that the learning of rhyme and singing law in the learning process is an unconscious and automatic learning process. Although musicians do not know the rhyme singing law and are not aware of the existence of the law, they have mastered the law in practical use and can distinguish the different rhyme singing laws of various music clubs. Through this research, the paper discusses whether a scientific and rigorous music teaching system can be formed in the rhyme singing learning of Gongche notation, which not only provides convenience for the popularization and learning of Gongche notation, so as to facilitate the of Gongche notation, make the music that has lost its living inheritance in history glow again, but also provides greater possibility and operability for traditional music into the classroom.

Keywords: Gongche notation rhyme singing, Hebei Province Ritual Associations, implicit learning

4.27 眼动心理研究专业委员会

(1) “眼动心理研究专业委员会”口头报告分场 1

“2+1”式三字词的汉字位置加工：基于眼动实验的证据

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摘 要 阅读过程中需要对文本内部词汇进行识别, 而词汇识别需要对字符位置信息进行编码, 即位置加工。转置效应, 即转置字母非词 (spack) 比替换字母非词 (spuok) 更能促进原词 (speak) 的激活, 表明字母位置编码比较灵活。关于复合词词素边界对字母位置编码的影响, 已有的研究观点不一, 同时, 关于汉字位置加工问题的研究仍有待拓展。汉字的位置加工是否灵活, 是否会受到词边界的影响? 本研究以 31 名汉语母语者为被试, 利用眼动追踪技术和边界范式, 通过操纵“2+1”式三字词的后两个字 (相同条件: 预视刺激和目标刺激相同, 如品德课-品德课; 转置条件: 预视刺激为三字词后两个字进行调换的非词, 如品课德-品德课; 替换条件: 预视刺激为三字词后两个字被其他字代替后的非词, 如品织满-品德课) 来探讨这些问题。研究结果显示, 在首次注视时间、总注视时间和凝视时间上, 相同条件与转置条件没有显著差异, 替换条件显著长于相同条件和转置条件, 转置效应存在。研究结果表明, 三字词直接以整词形式进行加工, 不支持词汇等级加工模型; 三字词的位置加工比较灵活, 词边界不会影响汉字位置加工。该研究从三字词的角度加深了对汉字位置编码认知机制的理解, 对汉字位置加工模型的建立具有重要启示, 也为词汇识别与词切分模型的修正提供了依据。

关键词 位置加工, 转置效应, “2+1”式三字词, 词边界

Character Position Processing of "2+1" Three-character Chinese Words: Evidence from Eye Movement

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Abstract: We need to recognize words in the text when we are reading, and word recognition needs to encode the character position (i.e., position processing). The transposition effect, which means that a transposed letter nonword (e.g., spaek) can activate its base word (e.g., speak) to a greater degree than a substituted letter nonword (e.g., spuok), indicates that letter position coding is flexible. However, according to the existed studies, it remains unclear whether letter position coding is influenced by morpheme boundaries of compound words. Furthermore, the researches of Chinese character position processing require to be expanded. Is the position processing of Chinese characters flexible, and will it be affected by word boundaries? In this study, 31 native Chinese speakers participated in the experiment, using eye-tracking and boundary paradigm to manipulate the last two characters of the "2+1" three-character word (identity condition: the preview was identical to the target word (e.g., "pindeke" as the preview of "pindeke"); transposed-character condition: the preview was a nonword that was a transposition of the last two characters of the target word (e.g., "pinkede" as the preview of "pindeke"); substituted-character condition: the preview was a nonword that the last two characters of the target word were replaced by other two characters (e.g., "pinzhiman" as the preview of "pindeke") to explore these issues. The results showed that in the first fixation duration, total fixation duration and gaze duration: there was no significant difference between the identity condition and the transposed-character condition; the substituted-character condition was significantly longer than the identity condition and the transposed-character condition, indicating that the transposition effect existed. These results suggest that three-character words are processed as the whole words, which is not supported by the hierarchical model. What's more, the position processing of three-character words is flexible, and not affected by the word boundaries. This research has deepened the understanding of the cognitive mechanism of Chinese character position encoding from the perspective of three-character words and has important implication for the establishment of Chinese character position processing models. It also provides a basis for the revision of word recognition and word segmentation models.

Keywords: position processing, transposition effect, "2+1" three-character words, word boundaries

反义形容词的预期性对不同阅读风格大学生预视加工的影响

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摘要 预期性与预视加工作为影响阅读效率的重要因素贯穿阅读的整个过程。在中文表达中, 形容词修饰名词且置于名词前时会对其后的名词进行限定, 限定的程度反映出形容词预期性的高低。当注视点移动到形容词位置时, 读者能否注意到形容词之后的内容, 这属于预视加工研究的内容。形容词预期性的高低是否影响读者预视加工, 并且意义相反的形容词以及读者的阅读风格是否对两者的关系产生影响是本研究探讨的问题。本研究通过眼动仪记录读者阅读时的眼动规律, 运用边界范式探讨反义形容词的预期性是否影响不同阅读风格大学生的预视加工。实验1采用3(形容词预期性: 高、低、无)×2(预视类型: 一致、不一致)的被试内设计, 分析了形容词N和名词N+1两个区域的眼动指标, 探讨形容词的局部预期性是否存在, 若存在, 不同预期性是否对预视加工产生影响。结果表明在词N+1区域, 形容词的局部预期性和预视类型的主效应均显著, 且二者交互作用显著, 形容词高预期更能促进预视加工。实验2采用3(阅读风格: 形容词倾向型、名词倾向型、无差异型)×2(形容词词性: 积极、消极)×2(形容词预期性: 高、低)×2(预视类型: 一致、

不一致)的混合设计,探讨形容词词性、大学生阅读风格对预期性与预视加工交互作用的影响。结果发现,在部分眼动指标上,与消极形容词相比,积极形容词更能促进预视加工,但会削弱预期性对预视加工的影响。与其他阅读风格被试相比,在形容词倾向被试的阅读中,高预期形容词对预视加工的促进作用更小;当目标名词被消极形容词修饰时,与形容词倾向的被试相比,名词倾向的被试在阅读时,高预期条件更能促进预视加工。因此,本研究结论如下:(1)中文阅读中,形容词的局部预期效应存在。(2)形容词的局部预期性影响预视加工,符合平行加工模型,且存在副中央凹-中央凹效应。(3)相反意义的形容词以及大学生的阅读风格均会影响预期性与预视加工的交互作用。

关键词 反义形容词,局部预期性,阅读风格,预视加工

The Effect of Antonymous Adjectives' Predictability on the Preview Processing of College Students with Different Reading Styles

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Abstract: Predictability and preview processing are important factors that affect reading efficiency throughout the entire reading process. In Chinese expression, when an adjective modifies a noun and is placed in front of a noun, it will restrict the nouns after it. The degree of this restriction reflects the level of predictability of the adjective. When the fixation point moves to the adjective position, whether the reader can notice the content after the adjective, this is the content of the preview processing research. And whether the level of adjective predictability affects the reader's preview processing, and whether adjectives with opposite meanings and the reader's reading style affect the relationship between the two are the questions discussed in this study. This study used an eye tracker to record the reader's eye movement patterns during reading, and used the boundary paradigm to explore whether the predictability of antonym adjectives affects the preview processing of college students with different reading styles. Experiment 1 used 3 (Adjective predictability: high, low, none) $\times$ 2 (Preview type: consistent, inconsistent) within the subject design, and analyzed adjective N and noun N+1 eye movement indicators in two regions, to explore whether the local predictability effects of adjectives exists, and if so, whether different predictability has an impact on preview processing. The results showed that in the N+1 region, the main effects of local predictability of adjectives and preview types were significant, and the interaction between them was significant. High predictability condition could promote preview processing better. Experiment 2 adopted 3 (Reading style: adjective tendency type, noun tendency type, undifferentiated type) $\times$ 2 (Adjective part of speech: positive, negative) $\times$ 2 (Adjective predictability: high, low) $\times$ 2 (Preview type: consistent, inconsistent) mixed design to explore the effects of adjective part of speech and reading style on the interaction between adjective predictability and preview processing. It was found that in some eye movement indicators, compared with negative adjectives, positive adjectives could promote preview processing more, but weaken the effect of predictability on preview processing. Compared with other reading style subjects, the high predictability of adjectives had less effect on preview processing in the reading of subjects with adjective tendency; when the target noun was modified by a negative adjective, compared with the adjective tendency subjects, the high predictability adjectives could promote the preview processing of the noun tendency subjects. Therefore, the conclusions of this study are as follows: (1) In Chinese reading, the local predictability effect of adjectives exists. (2) The local predictability of adjectives affects preview processing, conforms to the parallel processing model and has a parafoveal-on-foveal effect. (3) Adjectives with opposite meanings and the reading style of college students all affect the interaction between predictability and preview processing.

Keywords: antonymous adjectives, local predictability effect, reading style, preview processing

时间压力下应急标识的搜索绩效:显著性和线索类型的调节作用

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摘要 应急标识是应急管理的支撑结构, 能够指示逃生信息, 引导疏散, 在防范及化解安全风险方面起到了重大作用。时间压力、视觉显著性和线索是影响个体搜索应急标识的主要因素。然而, 我国目前对于应急标识的研究忽视了以人为本的设计理念, 缺乏个体对于应急标识搜索中心理过程的研究。因此, 本研究采用视觉搜索范式, 借助眼动追踪技术, 以真实商场图片为材料, 探讨时间压力、视觉显著性和线索类型对应急标识视觉搜索绩效的影响。实验一考察时间压力对应急标识视觉搜索绩效的影响; 实验二在时间压力条件下, 考察个体的认知功能受损时, 视觉显著性和线索能否影响及调节应急标识视觉搜索的绩效; 实验三在实验二的基础上, 考察时间压力条件下语词线索类型对应标识搜索的调节作用。结果表明: (1) 时间压力会降低应急标识的搜索绩效, 影响个体视觉注意过程。(2) 在时间压力条件下, 高视觉显著性应急标识调节搜索应急标识的绩效。同时, 高视觉显著性应急标识在注意资源有限的情况下能够获得较深的加工。此外, 与普通标识相比, 个体对应急标识的搜索动机更加强烈, 易出现注意窄化现象。(3) 在时间压力条件下, 直接语词线索调节搜索应急标识的绩效。也就是说, 线索提示具有注意引导作用, 线索提示越具体, 引导效应就越强。(4) 语词线索类型对于搜索反应时的影响只体现在高视觉显著性应急标识中。

关键字 应急标识, 视觉搜索, 时间压力, 视觉显著性, 语词线索

Search performance of emergency signs under time pressure: moderation of saliency and clue type

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Abstract: Emergency signs are the supporting structure of emergency management, which can indicate escape information, guide evacuation, and play a major role in preventing and resolving safety risks. Time pressure, visual saliency and cues are the main factors that affect individuals' search for emergency signs. However, the current research on emergency signs in our country ignores the human-oriented design concept, and lacks individual research on the psychological process of emergency signs search. Therefore, this study adopts the visual search paradigm, with the help of eye tracking technology, and uses real market pictures as materials to explore the influence of time pressure, visual saliency, and cue types on the visual search performance of emergency signs. Experiment 1 examines the influence of time pressure on the visual search performance of emergency signs; Experiment 2 examines whether visual saliency and cues can affect and regulate the performance of visual search of emergency signs under time pressure conditions when the individual's cognitive function is impaired; Third, on the basis of Experiment 2, the moderating effect of word clue type corresponding to logo search under time pressure is investigated. The results show that: (1) Time pressure will reduce the search performance of emergency signs and affect the process of individual visual attention. (2) Under time pressure conditions, high-visually significant emergency signs regulate the performance of searching emergency signs. At the same time, emergency signs with high visual saliency can be deeply processed when attention resources are limited. In addition, compared with ordinary signs, individuals have stronger search motives for emergency signs and tend to narrow attention. (3) Under time pressure, direct verbal clues adjust the performance of searching for emergency signs. In other words, the clue reminder has an attention guiding effect, and the more specific the clue reminder, the stronger the guiding effect. (4) The impact of word clue types on search response time is only reflected in the high visual saliency emergency signs.

Keywords: Emergency signs, Visual search, Time pressure, Visual Saliency, Word clues

词素位置概率在中文阅读中的作用：来自行为和眼动的证据

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摘要 中文词切分的认知机制一直是心理学关注的热点问题之一。拼音文字有空格为读者提供词边界信息, 汉语无外显的词间空格且中文组词的模糊性也加大了词切分难度, 但中文读者并未遭遇特殊阅读困难, 研究发现中文读者能寻找到词与词之间隐含的边界, 其可使用词素位置概率等语言线索帮助词切分。词素位置概率是指汉字出现在词首或词尾时双字词的出现次数占该汉字组成的所有双字词(无论出现在首字还是尾字)的比重。例如, “消”可以组成 39 个双字词, 其出现在词首可组成 33 个词, 如“消息”“消炎”“消失”等, 为此, 其词首词素位置概率为 0.85。可见, “消”常居于双字词的词首位置, 这为读者提供了较为清晰的词边界信息。若当前汉字的实际位置信息与固有位置信息相匹配, 则激活水平较高, 进而有可能被优先识别与切分, 反之亦然。然而, 词首与词尾词素位置概率的作用以往研究的观点并不一致, 有研究指出在词汇切分与识别过程中词尾词素位置概率的作用甚于词首, 另有研究认为词首与词尾的词素位置概率同等重要。为进一步推动上述争议的解决, 本研究通过行为和眼动追踪实验, 操纵双字词词首与词尾的词素位置概率, 考察词素位置概率线索在中文词汇切分与识别中的作用。实验 1 采用词判断任务, 采用 2 (词首词素位置概率: 高、低) × 2 (词尾词素位置概率: 高、低) 的两因素被试内实验设计。结果发现, 在正确率和反应时指标上, 词首的词素位置概率效应显著, 词尾词素位置概率效应不显著。实验 2 采用句子阅读任务, 考察在自然阅读情境中被试对词素位置概率的运用情况。结果发现, 在凝视时间、回视路径时间和总注视时间指标上, 词首的词素位置概率效应显著, 词尾词素位置概率效应不显著。行为和眼动证据共同表明, 词素位置概率信息是中文读者重要的语言词切分线索, 且与词尾词素位置概率相比, 词首词素位置概率在词汇切分与识别过程中发挥的作用更大。

关键词 词素位置概率, 词切分, 眼动, 中文阅读

The role of character positional frequency in Chinese reading: evidence from behavioral and eye movement

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Abstract: The cognitive mechanism of Chinese word segmentation has been one of the hot issues in psychology. Alphabetic characters have spaces to provide readers with information about word boundaries, there are no explicit spaces between words in Chinese and the fuzziness of Chinese phrases also increases the difficulty of word segmentation, but Chinese readers do not encounter any special reading difficulties, it is found that Chinese readers can find the hidden boundary between words, and they can use such language clues as character positional frequency to help word segmentation. The character positional frequency refers to the proportion of the number of double-character words in all double-character words (whether appearing in the first or last word) when Chinese characters appear at the beginning or end of a word. For example, “xiao” can be composed of 39 double-word words, its appearance at the beginning of the word can be composed of 33 words, such as “Message” “Anti-inflammatory” “Disappear” and so on, for this reason, the character positional frequency of its initial morpheme is 0.85. It can be seen that “xiao” usually occupies the first position of two-character words, which provides readers with clear information about word boundary. If the actual position information of the current Chinese character matches with the inherent position information, the activation level is higher, and then may be identified and segmented first, and vice versa. However, previous studies on the role of the character positional frequency of the initial and the final in words are not consistent. Some studies have pointed out that the character positional frequency of the the final in the process of segmentation and recognition is more important than that of the final, other studies suggest that the

character positional frequency of the initial and final of a word is equally important. To further promote the resolution of the above-mentioned disputes, the present study manipulated the character positional frequency of the initial and the final of two-character words by behavioral and eye-tracking experiments to investigate the role of the the initial and the final cues in Chinese word segmentation and recognition. In Experiment 1, the lexical decision task was performed using a 2×2 (the positional frequency of the initial: high and low) $\times 2$ (the positional frequency of the final: high and low) experimental design. The results show that the character positional frequency of the initial is significant, but not the character positional frequency of the final. In Experiment 2, sentence reading task was used to investigate the character positional frequency in the natural reading situation. The results showed that the character positional frequency of the initial is significant, but not the character positional frequency of the final. Behavioral and eye movement evidence show that the character positional frequency of the final is an important language segmentation cue for Chinese readers, and compared with the character positional frequency of the final, the character positional frequency of the initial plays a more important role in the process of word segmentation and recognition.

Keywords: positional character frequency, word segmentation, eye movement, Chinese reading

情绪共情对食物注意偏向的影响：来自眼动的证据

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摘 要 肉悖论一直是饮食研究中的重要问题, 已有研究表明情绪共情是引发个体产生肉悖论的重要影响因素。然而, 尽管有研究发现情绪共情会使得个体降低肉食意愿, 但是尚不清楚情绪共情是如何影响个体的认知加工过程的。本研究拟采用眼动追踪技术, 通过两个实验来分别探讨情绪共情对不同类型食物注意偏向的影响。实验 1 采用 2 (情绪共情: 高, 低水平) $\times 2$ (食物类型: 肉类, 蔬菜) 的混合实验设计, 结合自由观看范式进行考察, 共招募了 79 名被试。实验 2 同实验 1, 采用 2 (情绪共情: 高, 低水平) $\times 2$ (食物类型: 红肉, 白肉) 的混合实验设计, 结合自由观看范式进行考察, 共招募了 82 名被试。实验 1 的结果发现, 情绪共情与食物类型的交互效应显著 ($F(1,77) = 7.01, p < 0.01$), 事后检验表明高情绪共情水平组的被试对于蔬菜的首次注视到达时间要显著快于肉类 ($t(77) = 2.63, p < 0.05$), 其余结果无显著差异。实验 2 的结果发现, 情绪共情与食物类型的交互效应显著, 分别体现在首次注视到达时间 ($F(1,80) = 6.16, p < 0.05$)、注视次数 ($F(1,80) = 4.88, p < 0.05$) 和停留时间 ($F(1,80) = 4.05, p < 0.05$) 上, 事后检验表明低情绪共情组的被试对于红肉的首次注视到达时间要显著快于白肉 ($t(80) = -2.07, p < 0.05$), 对于白肉的注视次数更多 ($t(80) = -3.04, p < 0.05$) 和停留时间更长 ($t(80) = -2.85, p < 0.05$)。这些结果表明, 情绪共情会影响个体对于食物的注意加工过程, 情绪共情越高对于蔬菜有着更强的注意偏好, 情绪共情越低则对红肉有着更强的注意偏好。今后的研究可以进一步探讨和关注如何通过改变个体对于食物的注意从而促进健康饮食习惯的养成。

关键词 情绪共情, 注意偏向, 眼动, 自由观看, 肉悖论

The effect of affective empathy on food attentional bias: Evidence from eye movements

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Abstract: The meat paradox has always been an important issue in diet research. Previous studies link affective empathy as the trigger for meat paradox. Although some studies have found that affective empathy reduces the

willingness to eat meat, the cognitive processing is still not clear. Thus, we present two experiments that investigated the effect of affective empathy on attentional bias of different types of food. The experiment1 was a 2(empathy: high, low)×2(food types: meat, vegetables) mixed design and combined with the free viewing paradigm, 79 participants were recruited. Similarly, in experiment 2, 82 participants were recruited in a 2 (empathy: high, low) ×2 (food type: white meat, red meat) mixed design combined with the free-viewing paradigm. The results of experiment 1 showed that the interaction between affective empathy and food types was significant ($F(1,77) = 7.01, p < 0.01$). The post-hoc pairwise comparisons of these interaction showed that the time to first fixation for vegetables in the higher affective empathy group was faster than that for meat ($t(77) = 2.63, p < 0.05$). The results of experiment 2 showed that affective empathy had a significant interaction with food types, time to first fixation ($F(1,80) = 6.16, p < 0.05$), fixation counts ($F(1,80) = 4.88, p < 0.05$) and dwell time ($F(1,80) = 4.05, p < 0.05$), respectively. The post-hoc pairwise comparisons showed that the time to first fixation for red meat was significantly faster than that for white meat in the lower affective empathy group ($t(80) = -2.07, p < 0.05$). The lower empathy group also had more fixation counts ($t(80) = -3.04, p < 0.05$) and longer fixation time ($t(80) = -2.85, p < 0.05$) on white meat than that for red meat. These results suggest that affective empathy affects the attention processing of food. Individuals with higher affective empathy have a stronger attentional bias for vegetables, and those with lower affective empathy have a stronger attentional bias for red meat. Future research could explore the ways to promote healthy eating habits by changing individuals' attention to food.

Keywords: affective empathy, attentional bias, eye movements, free viewing, meat paradox

萌对不同类型道德困境信息加工的影响——来自眼动的证据

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摘 要 萌是对一系列由视觉感知的婴儿外貌或行为特征的概括性描述。已有研究发现萌可以扩大道德圈，促使人们给予更多的道德关怀。然而现有研究鲜有探讨萌对道德困境信息的加工可能产生的影响。本研究围绕两个问题：（1）个体受到萌的影响后，是否会倾向于做出某种特定类型的决策？（2）萌对道德困境的影响发生在信息加工的哪个阶段？在研究中将大学生被试（ $N=63$ ）随机分为萌组和控制组，参考经典道德困境任务范式，比较大学生受到萌的影响后，对于道德困境信息的眼动加工和道德决策倾向有何差异。研究分为两个阶段。在启动阶段，萌组的被试首先会看到故事主角的娃娃脸面孔，并观看小猫视频；控制组的被试看到故事主角的成熟脸面孔，并观看中性视频。随后进入针对故事短文的加工与决策阶段。每个被试阅读随机呈现的2种类型的8个有关道德困境的故事短文（个人困境、非个人困境），以短文的第一句和与生死信息有关的句子等五个区域为兴趣区。故事短文的正下方呈现主角面孔，面孔的下方呈现决策问题和选项，要求被试针对故事内容做出道德决策（道义论决策：拒绝打破道德规范；功利主义决策：伤害他人以避免更大损失）。道德决策的主要结果显示：个体受到萌的影响后，道义论决策比例显著高于控制组，这说明个体受到萌的影响后会做出相对较多的道义论决策。实时阅读的眼动结果显示：萌组与控制组在晚期指标（回视时间、注视次数）、决策阶段指标（决策兴趣区总注视时间）上差异显著，在某些兴趣区的早期指标（首次注视时间、凝视时间）上差异显著。这说明，在道德困境信息的实时加工中，萌的影响部分发生在早期的情绪激活部分，也发生在基于对萌的感知，在冲突中建构道德意义的晚期阶段，也发生在做出决策的整合阶段。本研究对于探查人们如何在受到萌的影响后进行道德信息加工和决策具有一定的理论意义，为在社会情境下诱发人们表现出更多的道义论行为提供了理论依据。同时，这一研究也有助于启发萌对日常道德冲突的影响，推动后续道德干预相关研究进程。

关键词 萌，道德困境，道德决策，非个人困境，个人困境

The effects of cuteness on the processing of different types of moral dilemmas —— An eye-tracking study

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Abstract: Cuteness is usually defined descriptively as a range of visually perceived physical and behavioral infantile features. It has been found that cuteness can enlarge the moral circle and prompt people to give more moral care. However, little research has been done on the effect of cuteness on the real-time processing of moral dilemma information. This study focuses on two questions: (1) does an individual tend to make a particular type of decision when he or she is influenced by cuteness? (2) at which stage of information processing does the influence of cuteness on moral conflict occur? In the study, college students ($N = 63$) were randomly divided into two groups: the cute group and the control group. Referring to the Classic Moral Dilemma Task Paradigm, to compare the differences of eye-movement processing and moral decision-making tendency of them under the influence of cuteness. The study was divided into two stages. In the priming phase, subjects in the cute group saw the baby face of the main character and watched a cat video, while those in the control group saw the mature face of the main character and watched a neutral video. Then it enters the stage of processing and decision-making for the short story. Each participant read eight randomly presented short stories of two types (personal dilemma, impersonal dilemma) about moral dilemmas, with the first sentence of the short story and interest area related to life and death information. The main character's face is presented directly below the story, and the decision questions and options are presented below the face, which require participants to make moral decisions about the story (deontological decision: refuse to break moral rules; utilitarianism decision: harm others to avoid greater loss). The main results were as follows: the proportion of deontological decision-making in both personal and impersonal dilemmas was significantly higher than that in control group, this shows that individuals will make relatively more deontological decisions under the influence of cuteness. There were significant differences between the cute group and the control group in terms of late-stage indexes (recall time, gaze times), decision-making stage indexes (total fixation time in the decision-making interest area), and early indexes (first fixation time, gaze time) in some areas of interest. This suggests that in the real-time processing of moral conflict information, the effect of cuteness partly occurs in the early emotional activation stage, but also occurs in the perception of cuteness, the late stage of constructing moral meaning in conflict, also occurs in the integration stage of decision making. This study is of theoretical significance to explore how people process moral information and make decisions after the influence of cuteness, and provides theoretical basis for inducing more deontological behavior in social situations. At the same time, this study is also helpful to inspire the influence of cuteness on daily moral conflict and promote the following research process of moral intervention.

Keywords: Cuteness, Moral dilemma, Moral decision-making, Personal dilemma, Impersonal dilemma

4.28 心理学质性研究专业委员会

(1) “心理学质性研究专业委员会” 口头报告

专家信任的影响因素：一项基于扎根理论的研究

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摘要 公众对专家的信任程度直接影响着科学知识的普及与推广。在“新冠”疫情等重大公共危机事件面前，专家观点的公信力对于政府应急机制的实施和社会舆情的稳定具有至关重要的作用。但是，已有研究表明，新媒体的飞速发展降低了信息传播门槛，在人人皆媒体的“后真相”时代，公众对专家的信任度不断下滑，直

接制约了理性观点采择和行为决策。本研究旨在通过心理学质性研究手段,深入探索影响专家信任的因素及其作用机制,为提升专家公信力提供理论和实证依据。研究采用半结构化访谈方式,根据年龄、受教育水平等人口学变量进行理论抽样,以近年来国内外社会热点问题为背景内容,探索个体对专家观点的认知。访谈录音经过文本转录后使用 NVivo 进行开放性编码、主轴编码和选择性编码三级编码。根据扎根理论研究思路,数据收集与编码分析循环进行,并在编码实现理论饱和后停止,最终被访者人数为 29 人。研究表明,个体对领域知识本质特征的理解直接影响关于专家观点可信度和权威性的认知,而科研胜任力、研究方法、利益冲突等因素是个体对专家观点可信度的最主要评价标准。研究还发现,将知识视作固定事实的个体通常以研究动机和科研胜任力作为评价专家可信度的核心指标,而认为知识具有相对性的个体则更多强调对于专家的信任程度应当取决于话题内容、问题情境等外部因素。在此基础上,本研究构建了专家信任的影响因素模型,深入挖掘与阐释认知、情感等个体内部因素以及学科领域、话题内容、社会文化等外部因素之间的相互作用。在“新冠”疫情防控的常态化工作中,理解公众对专家观点的认知对于科普宣传与社会稳定发展意义重大。本研究发挥质性研究的优势深入探索专家信任的心理机制,对提升公众科学素养和专家公信力具有重要的现实意义。

关键词 专家信任, 影响因素, 扎根理论

The Influential Factors of Trust in Experts: A Grounded Theory Study

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Abstract: The degree of public trust in experts directly affects the popularization and promotion of scientific knowledge. In the face of the COVID-19 pandemic and other major public crisis events alike, the credibility of expert opinions plays an important role in the implementation of government emergency mechanism and the stability of social sentiment. However, studies have shown that the rapid development of new media has lowered the threshold of information dissemination. In the "post truth" era where everyone is media, the public's trust in experts has been declining, which directly restricts individuals' rational opinion taking and decision making. The purpose of this study was to explore the factors influencing expert trust and its mechanism through qualitative psychological research methods to provide theoretical and empirical basis for improving the credibility of experts. Based on demographic variables such as age and education level, this study conducted semi-structured interviews through theoretical sampling to explore individuals' views of expert opinions regarding heated social issues in recent years. The interview recordings were transcribed and analyzed through open coding, axial coding and selective coding using NVivo. Based on the grounded theory method, data collection and coding took place iteratively until theoretical saturation was reached. The final number of interviewees was 29. Results showed that individuals' understanding of the nature of knowledge directly affected their understandings about the credibility and authority of expert opinions, and factors such as scientific research competence, research methods and conflict of interests were the main evaluation criteria for the credibility of expert opinions. It was also found that individuals who viewed knowledge as fixed facts tended to attribute research motivation and scientific research competence as the core indicators of expert credibility, while individuals who believed in the relativity of knowledge emphasized that the degree of expert trust should depend on external factors such as topics of interest and problem situation. Finally, a theoretical model was constructed which demonstrated in-depth the influential factors of expert trust and their relationships, considering both internal factors such as cognition and emotion, and external factors such as disciplinary fields, topic content as well as social and cultural issues. As the prevention and control of the COVID-19 pandemic becomes normalized, it is of great significance to understand the public's understanding and attitudes toward experts' opinions to promote science popularization as well as social stability and development. This study extended the benefits of qualitative research to reveal the psychological mechanism of expert trust, which provided important practical implications for enhancing the public's scientific literacy and expert credibility.

Keywords: expert credibility, influential factors, grounded theory

自杀意念者与自杀尝试者的自杀相关动机过程之差异

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摘要 研究者以大学生为研究对象，通过一项质性研究考察自杀意念者与自杀尝试者在广义自杀意念的内容或成分上的差异。在对两者自杀意念的比较中，不仅关注狭义自杀意念的产生，还包括对自杀相关动机过程的了解；既包括言语性内容，又涉及自杀意念中的心理意象及情感成分等。在此基础上，探索什么样的自杀意念具有更高的行动风险。从某市某综合医院精神科选取过去一年内仅有自杀意念（13人）或曾有自杀尝试（13人）的住院大学生，通过半结构式访谈收集26名被试从产生自杀意念到采取/放弃自杀行动这一过程中的近端认知情感过程，采用共识性质性研究方法（CQR）对访谈材料进行深入分析。结果发现，从自杀想法产生到个体最终采取或放弃自杀行动，影响其最终行为的因素可划分为5个方面：自杀意念产生（我想死），自杀结果权衡（要不要自杀），自杀过程预期（如何实施自杀），自杀/死亡相关信念与态度，自杀意念调控，这五个方面组成一个有机整体，可以从近端因素的角度大致描述自杀行为的发生过程。自杀意念者与自杀尝试者在自杀意念的产生上无明显差异，但在自杀意念产生后的自杀相关动机过程上存在差异，主要表现为：

（1）个体在自杀意念产生后会对自杀结果利弊及生活、现实、未来等作进一步的思考与权衡，而自杀意念者与自杀尝试者表现出不同的自杀结果预期思考内容及模式；（2）不论是自杀意念者还是自杀尝试者均会对自杀行动进行相关思考，但两者对自杀过程的预期和想象不同，自杀尝试者比自杀意念者有更多关于自杀实施过程的心理意象，并伴随更多的积极情绪；（3）自杀意念者与自杀尝试者在自杀/死亡相关信念与态度上也存在差异，其在个体的自杀意念中以潜移默化的方式起作用；（4）与自杀尝试者相比，自杀意念者更多地对自己的自杀想法存在元认知觉察及自我抑制，且在相当一部分自杀意念者中，存在自杀想法的情绪调节现象。

关键词 自杀意念者，自杀尝试者，质性研究

A Study on the Differences in Suicide-Related Motivational Process between Suicide Ideators and Suicide Attempters

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Abstract: This study aims to explore the differences in the content or composition of suicidal ideation among college students with suicidal ideation or suicidal attempts. While comparing different aspects of suicidal ideation, we not only pay attention to the formation of suicidal ideation, but also explore the suicide-related motivational process after having suicidal ideation. We focus on verbal components of suicidal ideation, as well as suicidal imagery and emotional components in their ideation. In order to identify which kind of suicide ideators have the highest risk to commit suicide. The subjects were from a psychiatric department in a general hospital in Wuhan. 13 students who had suicidal ideation along with another 13 students who had suicidal attempts in the past year were selected. Using semi-structure interviews, we collected the proximal cognitive emotional states in the process from generating suicide thoughts to taking or abandoning suicide action. Then, investigators conducted an in-depth analysis for the interview materials using Consensus Qualitative Research (CQR). The qualitative analysis found that, from the occurrence of suicide trigger events (or non-existence) to the individual's final behavior (take or abandon suicide), the factors

affecting their final action can be divided into five aspects: formation of suicide ideation (I want to die), evaluations of suicide outcomes (whether I should commit suicide or not), expectations on suicide process (how to commit suicide), suicide/death related beliefs and attitude, and suicidal ideation adjustment. These five aspects together can describe the development of suicide behavior from the perspective of proximal factors. By comparing the differences between suicide ideators and suicide attempters in these five aspects, it is found that suicide ideators and suicide attempters do not differ in the formation of suicidal ideation, but they do have differences in suicide-related motivational process after forming suicidal ideation. The biggest differences are from evaluations of suicide outcomes and expectations on suicide process. Also suicide ideators and suicide attempters tend to have different suicide/death related beliefs and attitude. Compared with suicide attempters, suicide ideators are more likely to be aware of their suicidal thoughts and try to suppress them.

Keywords: Suicide Ideators, Suicide Attempters, Qualitative Research

增强现实（AR）学习环境下小学低年级学生的高效率学习研究： 一项 NVIVO 的质性分析

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摘要 为了解小学低年级学生通过使用增强现实（AR）学习技术如何影响其高效率学习。AR 技术是把现实环境中的真实场景同计算机中输出的文字和图形等进行组合拼接，通过影响使用者的视觉和听觉等系统来发挥作用。基于扎根理论，采用访谈的研究方法，进行基于 NVIVO 的质性分析。本研究选取河北省两所学校的 41 名三年级小学生进行半结构化的深入访谈，根据学习方式将样本分为 AR 组和文本组，其中 AR 组 21 人，文本组 20 人。将被试叙述的文本进行三级编码，其中核心编码为 AR 学习中促进小学生高效率学习的影响因素，将主轴编码分为内部因素和外部因素，内部因素分为学业情绪因素、学业认知因素、兴趣因素、学习适应性。其中学业情绪因素包括积极高情绪、积极低情绪、消极高情绪和消极低情绪，大部分的学生在学习中属于积极高情绪，学业认知因素包括学业归因、学业成就目标定向。外部因素包括学习环境、同伴关系、父母支持。外部因素参考点共 32 个，内部因素参考点共 176 个。整体来看，AR 学习中促进学习高效率学习的影响因素是多方面的，在综合因素作用下对学生的高效率学习产生影响的。研究结果表明，采用 AR 技术学习以及有相关学习经历的学生都认为，AR 学习会提升他们的学习效率，并且通过内外部因素共同影响学生的高效率学习，此研究的意义在于建立 AR 学习中学生高效率学习影响因素的结构模型，为促进学生高效率学习提供理论依据。

关键词 增强现实学习，高效率学习，小学低年级学生

Efficient learning of lower grade students in an augmented reality (AR) learning environment: a qualitative analysis of NVIVO

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Abstract: In order to understand how the low-grade primary school students use augmented reality (AR) learning technology to influence their efficient learning. AR technology combines the real scene in the real environment with the text and graphics output from the computer, and plays a role by influencing the visual and auditory systems of users. Based on the grounded theory, the qualitative analysis based on NVIVO is carried out by using the interview research method. In this study, 41 third-grade pupils from two schools in Hebei Province were selected for semi-structured in-depth interviews, and the samples were divided into AR group and text group according to their learning styles, including 21 in AR group and 20 in text group. The texts narrated by the subjects are coded at three levels, in which the core coding is the influencing factors that promote pupils' efficient learning in AR learning, and the main axis coding is divided into internal factors and external factors, while the internal factors are divided into

academic emotion factors, academic cognition factors, interest factors and learning adaptability. Among them, academic emotion factors include positive high emotion, positive low emotion, negative high emotion and negative low emotion, and most students belong to positive high emotion in their study, while academic cognitive factors include academic attribution and academic achievement goal orientation. External factors include learning environment, peer relationship and parental support. There are 32 reference points for external factors and 176 reference points for internal factors. On the whole, there are many influencing factors to promote high-efficiency learning in AR learning, and the comprehensive factors have an impact on students' high-efficiency learning. The results show that students who use AR technology to study and have relevant learning experience think that AR learning will improve their learning efficiency, and both internal and external factors will affect students' efficient learning. The significance of this study is to establish a structural model of influencing factors of students' efficient learning in AR learning, and provide theoretical basis for promoting students' efficient learning.

Keywords: Augmented reality learning, Efficient learning, Lower grades students

4.29 脑电相关技术专业委员会

(1) “脑电相关技术专业委员会”口头报告分场 1

阈下和阈上奖赏影响创造性问题解决的时变脑网络

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摘要 以往研究发现阈下奖赏更能促进创造性问题解决, 且阈下和阈上奖赏影响创造性问题解决的过程中诱发了不同的 P200-600 波幅。然而, 个体在进行创造性任务时, 大脑中多个相关脑区的协作是有效完成任务的基础, 研究不同条件下的动态网络模式, 有助于阐明脑内信息加工机制。本研究采用电生理(EEG)技术研究了阈下和阈上金钱奖赏对汉字复合远距离联想问题(CRA)解决的影响, 基于自适应定向传递函数(Adaptive directed transfer function, ADTF), 从时变脑网络(time-varying networks)角度揭示了阈下和阈上奖赏条件下个体解决 CRA 问题的动态网络模式。实验结果显示, 奖赏呈现后问题解决各个阶段的大脑网络模式存在差异。另外, 两种奖赏条件下呈现出不同的问题解决的时变网络模式。本研究将相应的大脑网络状态分为两个阶段, 早期阶段(100-200 ms)和问题解决阶段(200-600 ms)。阈上奖赏条件下, 左侧前额区为早期阶段的核心源, 左前额和顶枕区的信息交互为主要的大脑活动。信息流从左侧前额区流向顶叶区域, 这可能反映了对刺激呈现的视觉加工以及对奖赏干扰的抑制。在问题解决阶段, 顶枕区尤其是顶叶区域成为新的核心源节点, 这反映了问题成功解决早期新颖联想的形成。而在阈下奖赏条件下, 被试在早期阶段主要有左侧前额和顶枕区两个区域内部的连接, 并无两区域的信息交互。这说明与阈上奖赏相比, 阈下奖赏受到的干扰较低, 不太需要消耗认知资源对其进行抑制, 也就无需激活左前额到顶叶区域的信息交互。在问题解决阶段, 阈下奖赏条件下的核心区域也同样转移到顶枕区, 但其大脑网络边比阈上奖赏条件更多。这反映了更强的大脑响应, 说明阈下奖赏条件下个体对当前任务投入资源更多, 大脑激活更强, 从而更能促进新颖联想的形成。本研究从时变脑网络角度拓展了先前研究, 结果表明, 与阈上奖赏相比, 阈下奖赏条件下的干扰更小, 对创造性任务的注意资源投入更多, 因而有更好的任务表现。

关键词 创造性问题解决, 奖赏, 时变脑网络, EEG

The time-varying networks of the effects of subliminal and supraliminal rewards on creative problem solving

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Abstract: Previous studies have suggested that subliminal reward can facilitate creative problem solving, and subliminal and supraliminal rewards induce different P200-600 amplitude. However, the interactions between various brain regions are the basis for the effective completion of task. The present study investigated the impact of subliminal and supraliminal rewards on Chinese verbal compound remote-associated (CRA) problem solving using electrophysiological techniques, and utilized the time-varying network analysis to reveal the dynamic network structures based on the adaptive directed transfer function (ADTF). The results showed differences in the patterns of brain networks at different stages of problem solving after the rewards were presented. In addition, the two reward conditions induced different time-varying network patterns of creative problem solving. In this study, the brain network states were divided into two phases, the early phase (100-200 ms) and the problem-solving phase (200-600 ms). In the supraliminal reward condition, the left prefrontal region was the control source of the early stage, with a much stronger information flow from the left prefrontal region to the parieto-occipital regions. This result may reflect the visual processing of stimulus presentation and the suppression of reward distraction. In the problem-solving phase, parietal lobe becomes the new control source node, which may reflect the formation of novel associations in the early stage of successful problem solving. However, in the subliminal reward condition, there was no information exchange between the left prefrontal and parietal occipital regions in the early phase. This suggests that compared with supraliminal reward, subliminal reward is less disturbed and requires less cognitive resources to suppress distraction, thus it does not need to activate information interaction between the left prefrontal and parietal lobe region. During the problem-solving phase, subliminal rewards' control source also shifted to the parietal-occipital region, but more parietal-occipital activation was found. This reflects a stronger brain response, indicating that participants employ more resources to the creative task, and the brain is more activated, which can better promote the formation of novel associations. These results extend prior research by mining time-varying network and suggest that compared with supraliminal reward, subliminal reward has less distraction, more attention resources are employed in current creative task, and thus better performance.

Keywords: creative problem solving, reward, time-varying networks, EEG

趋近和回避动机影响创造性思维的认知机制

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摘要 拥有创造性思维是在个人学习和社会生活中获得进步和成功的基础。为探究趋近和回避动机与创造性思维之间的关系, 采用事件相关电位(ERP)技术对30名大学生(男生10名、女生20名)在趋近和回避动机的诱发以及远距离联想任务中的问题解决过程进行了研究。将被试随机分为趋近动机组和回避动机组, 以趋-避动机(趋近动机、回避动机)为自变量, 被试远距离联想能力的正确率、反应时以及N400波幅及其潜伏期为因变量。结果表明远距离联想题目诱发的N400波幅及其正确率在趋-避动机上的主效应显著($p<0.01$)。趋近动机组的远距离联想能力测验正确率得分高于回避动机组的个体, 且这种差异没有受到实验操作本身引起的任务喜爱度和疲倦程度的影响, 说明趋近动机对远距离联想过程有促进作用; 趋近动机条件下远距离联想测验诱发的N400波幅显著高于回避动机条件, 说明趋近动机条件下个体在语义网络中拥有较强的信息检索能力, 并能够较长时间保持注意的稳定性, 因而促进了新颖性连接的形成, 使远距离联想的问题更容易得到解决。趋避动机与创造性思维的研究丰富了创造力和动机的研究理论, 对创造性思维的培养和提升提供了理论依据。

关键词: 趋近动机, 回避动机, 远距离联想能力, 创造性思维

The Effects and Mechanisms of Approach and Avoidance Motivation on Creative Thinking

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Abstract: Having creative thinking is the basis for progress and success in personal learning and social life. In order to explore the relationship between approach and avoidance motivation and creative thinking, event-related potential (ERP) technology was used to induce approach and avoidance motivation and remote associates task for 30 undergraduates (10 males and 20 females). The problem-solving process in the paper was studied. The subjects were randomly divided into an approaching motivation group and an avoiding motivation group. The approaching-avoidance (approaching motivation, avoiding motivation) are independent variable, the ACC and RT of the remote associates test amplitude and the latency of the N400 evoked by the Remote Associates Test are the dependent variables. The results show that the main effect of the N400 evoked by the remote associates test and its accuracy under the approaching-avoidance motivation is significant ($p < 0.01$). The correct rate of the remote associates test of the approaching motivation group is higher than that of the avoiding motivation group, and this difference is not affected by the degree of task love and fatigue caused by the experimental operation itself, indicating that the approaching motivation have a huge positive impact on the process of the remote association. The N400 evoked by the remote associates test under the condition of approaching motivation is significantly higher than that of the condition of avoiding motivation, indicating that the individual has strong information retrieval ability in the semantic network under the condition of approaching motivation and can maintain attention for a long time. The stability of the system promotes the formation of novel connections, making it easier to solve the problem of remote associates. The research on the approaching-avoidance motivation and creative thinking not only enrich the theory research, but also have important implications for creativity cultivation and promotion.

Keywords: Approaching Motivation, Avoidance Motivation, Remote Associates Task, Creative thinking

刺激不确定性对类别特异注意定向的影响

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摘要 刺激不确定性是指与心理运算量大小有关的感觉信息的特征, 主要包括认知负载和预期有效性, 两者在类别特异注意定向中有重要作用。为了考察刺激不确定性对类别特异注意加工的影响, 从而进一步探究类别特异注意定向的神经机制, 研究采用事件相关电位技术 (ERPs), 在视觉搜索任务中, 将目标定义为形状类别 (“X”或“O”形), 通过改变分心物的同质性来控制认知负载水平, 通过改变声音线索与目标反应的有效性来控制预期有效性。实验记录了被试的反应时、正确率及 N2pc 成分。行为结果发现, 认知负载和预期有效性均会影响注意定向的加工水平, 且存在交互作用: 高负载时, 预期有效性作用较大; 低负载时, 预期有效性作用较小。说明两者的作用既存在一定的独立性, 也涉及了共同的加工过程。ERP 结果发现, 低负载时, 相比有效预期, 无效预期时的目标诱发了更大的 N2pc; 高负载时, 有效与无效预期条件下诱发的 N2pc 无明显差异。说明在低负载条件下可以根据预期有效性对目标进行注意定向, 但在高负载时则更加依赖即时信息。总的来说, 研究不仅考察了类别特异注意定向的时间进程, 探讨了类别注意定向的加工机制, 还为应对现实世界中复杂的不确定性事件提供了依据和指导。

关键词 类别注意, 视觉定向, 认知负载, 预期有效性, 刺激不确定性

The effect of stimulus uncertainty on category-specific attention orientation

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Abstract: Stimulus uncertainty refers to the characteristics of sensory information related to the amount of mental calculation, including cognitive load and predicted validity, which play an important role in category-specific attention orientation. In order, the present study used ERPs technology and employed visual search paradigm to investigate the neural mechanism of category-specific attention orientation, and the effect of uncertainty on it. Target was defined by shape category ('X' or 'O'), cognitive load was manipulated by the homogeneity of distractors, and predicted validity was manipulated by the validity between sound cue and target response. Reaction time, accuracy and N2pc component were recorded. Behavioral results showed the cognitive load and predicted validity both affect the processing of attention orientation, and the interaction between them showed that the effect of validity is higher in the high-load condition than that in the low-load condition, indicating that two factors can operate independently, also interfere with same processing of attention. ERP results found that in the low-load condition, a higher N2pc was elicited in the invalid condition, rather than in valid condition; in the high-load condition, no significant N2pc difference was found. The results indicate that in the low-load condition, attention orientation was depended on the validity, but in the high-load condition, such orientation was determined by the instant information. In general, these results not only investigate the time course of category-specific attention orientation and probe the process mechanism of attention orientation, but also provide guidance for coping complex uncertain events in real world.

Keywords: category-specific attention, visual orientation, cognitive load, predicated validity, stimulus uncertainty

(2) “脑电相关技术专业委员会”口头报告分场二

面孔熟悉感形成的动态时间进程： 基于周期性快速刺激呈现的 EEG 范式

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摘要 我们对熟悉面孔的短暂一瞥，就会唤起一种“温暖、轻松、满足”的感觉，即熟悉感。然而，大脑形成面孔熟悉感的时间进程仍不清楚。本研究采用了基于频率标记的 EEG 范式快速呈现面孔刺激，并操纵了刺激呈现异步性（SOA），以研究大脑在感知面孔熟悉度时的“阈值”。在本研究中，自然场景下的面孔刺激以每秒 8、12、16 或 20 张的速度周期性呈现（基线刺激频率），即，每张面孔的呈现时间为 125 ms、83.33 ms、62.50 ms 或 50 ms。在该刺激序列中，熟悉面孔以每秒 2 张的速度呈现（奇异刺激频率：2 Hz），每两张熟悉面孔中穿插多张陌生面孔。基于该范式，奇异刺激频率上观察到的脑电信号反映了大脑从陌生面孔中辨别出熟悉面孔的加工过程。此外，本研究不要求被试对面孔刺激进行反应，因此测量了大脑内隐的面孔加工。对频率域的脑电信号分析后发现，四种基线刺激频率下均存在显著的对熟悉面孔的偏好反应，该反应在 P8 和 PO8 等电极最为强烈，并表现出右侧偏侧化效应。时间域的分析结果显示，存在两个波幅显著不同于基线的时间窗：N170 和 P300。其中，所有条件均观察到显著的 N170 成分，而且其波幅随着 SOA 时间增加呈现出线性趋势；而 P300 成分只出现在 SOA 较大的两个条件中（12 和 8 Hz），其波幅随着 SOA 时间增加呈现出

非线性趋势。据此,本研究认为,熟悉面孔加工包含两个加工阶段,早期阶段反应自动化的前馈过程(以 N170 为神经标志),而当 SOA 超过一个特定"阈值"之后,则进入晚期加工过程(以 P300 为神经标志),此时熟悉感才真正形成。

关键词 EEG, 熟悉面孔, 周期性快速刺激呈现, 频率标记

How the percept of familiarity from faces unfolds over time

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Abstract: A brief glance of familiar faces arouses a feeling of “warmth, ease, and contentment”, referred to as percept of familiarity. How the percept of familiarity from faces unfolds over time remains unclear. The current study adopted a sensitive EEG paradigm based on frequency tagging and investigated the “threshold” SOA in perceiving familiarity, using briefly presented and masked faces with systematically varied SOAs. In our study, natural images of faces were periodically presented at a fast speed (base frequency: 8, 12, 16, or 20 Hz; corresponding to 125 ms, 83.33 ms, 62.50 ms, or 50 ms SOA). Among the streams, personally familiar faces were presented at a fixed rate (i.e., oddball frequency, 2 Hz). This paradigm directly measures discrimination between familiar and unfamiliar faces, as the EEG responses at the oddball frequency reflect differential responses (i.e., familiar-face-selective) from the responses evoked at the base frequency. To ensure an implicit face processing, the stimuli were viewed passively by participants without any behavioral response. We found significant responses at the oddball frequencies in all speed conditions, peaking around occipitotemporal areas (P8 and PO8), showing a lateralization effect to the right hemisphere. Regarding the temporal dynamics of the familiarity-selective response in the occipitotemporal areas, we observed two ERP components, N170 and P300. The N170 was significant in all conditions, even when each face was presented for only 50 ms, and its amplitudes increased progressively with the presentation times. In contrast, the P300 component was observed when the SOA was larger than approximately 80 ms. We believed that two stages are involved in familiar face processing, with the early stage reflecting a feedforward process, followed by the later stage after a consciousness threshold SOA is exceeded.

Keywords: EEG, familiar face, Fast Periodic Visual Stimulation, frequency tagging

羽毛球专项大学生应对心理不应期的神经机制研究

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摘要 目的: 随着羽毛球运动的不断发展, 运动员在比赛中的竞争日益激烈, 运动员在时间压力较大的情况下能够快速而准确地进行预判变得越来越重要。由于心理不应期现象的存在, 一旦预判错误, 运动员在短时间内快速纠正错误就变得困难。本研究借助事件相关电位技术, 探讨在应对心理不应期时, 羽毛球专项大学生的行为优势及神经机制特点, 旨在为高校羽毛球教学与运动员科学选材提供参考依据。方法: 本研究采用标准实验变换信号任务范式 (change-signal task, CST), 将经典素材替换为羽毛球专项素材, 通过模拟专项运动情境来设置专项实验情境; 采用专家—新手研究范式 (羽毛球专项大学生 14 名, 羽毛球选修大学生 14 名), 运用 ERP 脑电数据采集技术, 通过对比不同水平羽毛球大学生在应对心理不应期现象时的行为反应及脑神经活动水平, 揭示羽毛球专项大学生可能存在的行为优势及神经活动特点。结果: 行为方面, 专家组的专项 go 反应时、change 反应时、心理不应期时间显著快于新手组 ($P<0.05$), 专家组准确率显著高于新手组 ($P<0.05$); ERP 方面, 突发后场球视频诱发的脑电成分上, 专家组的 N1、N2 波幅显著小于新手组 ($P<0.05$), 专家组的 P3、PSW 波幅显著大于新手组 ($P<0.05$), 在发网前球视频诱发的脑电成分上, 专家组的 N1 波幅显著大于新手组 ($P<0.05$), 专家组的 P2、N2、P3 波幅显著小于新手组 ($P<0.05$)。结论: (1) 运动水平越高, 在应对心理不应期过程中越具有行为反应优势, 其行为偏向于执行快速转换策略, 即提高转换速度的同时保持反应速度不下降, 从而能够快速、准确地应对心理不应期; (2) 运动水平越高, 在应对心理不应期

过程中，对刺激任务的感知阶段投入的认知资源越少，对刺激的辨别、加工、整合、反应阶段投入更合理、更大量的认知资源，信息加工方式越具有优势，心理运算资源利用越具有节省化优势，任务难度越大，这种优势越明显。

关键词 羽毛球专项大学生，心理不应期，行为优势，神经机制

Study on Neural Mechanism of College Badminton Majors During Coping with Their Psychological Refractory Period

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Abstract: Purposes: With the continuous development of badminton, the competition of athletes in the competition is becoming more and more fierce, and it is more and more important for athletes to be able to predict quickly and accurately under the condition of great time pressure. Because of the phenomenon of psychological refractory period, it is difficult for athletes to correct mistakes quickly in a short period of time once the prediction is wrong. With the help of event-related potential technique, this study explores the behavioral advantage and neural mechanism of badminton college students in dealing with psychological refractory period. It can provide reference for college badminton teaching and athletes scientific selection. Methods: In this study, specific situation experiment have been applied; The standard paradigm of experimental signal-transforming task (“Change”-signal task, CST) has been adopted, and the classic materials have been replaced with materials related to badminton events, In order to simulate special sports situations. the paradigm of expert—novice has been adopted (14 badminton majors and 14 students of optional badminton courses); Application of ERP EEG Data Acquisition Technology. By comparing the behavior response and brain activity level of different badminton college students in dealing with psychological refractory period, the possible behavioral advantages and neural activity characteristics of the expert group were revealed. Findings: Behavioral findings, The “Go” response time, the “Change” response time and the psychological refractory period of the expert group are significantly shorter than those of the novice group ($P<0.05$), and the accuracy of the expert group is significantly higher than that of the novice group ($P<0.05$). ERP findings, Among the EEG components induced by the videos of flash backcourt ball, the N1, N2 amplitudes of the expert group are significantly smaller than those of the novice group ($P<0.05$), and the P3, PSW amplitudes of the expert group are significantly larger than those of the novice group ($P<0.05$). Moreover, among the EEG components induced by before-serving videos, the N1 amplitude of the expert group is significantly larger than that of the novice group ($P<0.05$), and the P2, N2, P3 amplitudes of the expert group are significantly smaller than those of the novice group ($P<0.05$). Conclusions: (1) The higher sports level the players are in, the more behavioral response advantages they have in the process of dealing with the phenomenon of psychological refractory period. Their behaviors are inclined to carry out the strategy of fast conversion, that is, increasing the conversion speed while keeping the reaction speed, so that the deviation of the prediction can be adjusted immediately and accurately; (2) The higher sports level the players are in, the less cognitive resources they invest in the perceptual stage of the stimulation task in the process of dealing with the phenomenon of psychological refractory period. They can invest more reasonable and larger amount of cognitive resources in the stimulation on the stages of identification, processing, integration and response, and have more advantages on the way of information processing; and the utilization of their brain resources is more economical. The more difficult the tasks are, the more obvious advantages the experts have.

Keywords: Badminton majors, Psychological refractory period, Behavioral advantage, Neural mechanism

4.30 心理学与社会治理专业委员会

(1) “心理学与社会治理专业委员会”口头报告分场 1

无功不受禄：高估他人对非应得好处的积极评价

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摘要 为取悦他人，人们有时会给予他人理所不应得的好处，例如，营销人员为消费者提供预期之外的免费升舱、意料之外的酒店房间升级等。然而在得到这些莫名其妙的好处后，接收者是否真如分配者预想的那样满意？本研究（ $N = 1069$ ）提出并揭示了关于莫名其妙给好处的预测偏差，即分配者高估了接收者对莫名其妙的好处感到满意的程度。研究一和二旨在揭示分配者的预测偏差。在研究一中，分配者想象自己给接收者分配了超出其工作量的奖金或与工作量相对应的奖金，并预测接收者的满意程度；接收者想象自己被分配了超出自己工作量的奖金或与工作量相对应的奖金，并评价自己的满意程度。结果显示，当奖金高于接收者的付出时，分配者高估了接收者的满意程度；而当奖金等于接收者的付出时，分配者能准确估计接收者的满意程度。研究二恒定收入，改变付出，复制了分配者的预测偏差。当分配者分配给接收者的工作量少于其理应付出时，分配者高估了接收者的满意程度；当分配给接收者的工作量等于其理应付出时，分配者能作出准确估计。研究三和四旨在探讨上述预测偏差的机制。本研究提出，得到非应得的好处会让接收者感到焦虑不安，但是分配者较难预料到接收者的焦虑不安。研究三和四通过操纵得到的好处是否可归因来改变接收者的焦虑不安程度。研究三中，在接收者提出请求后分配者给予其好处；研究四中，分配者因回报接收者先前给予自己的恩惠而为接收者提供好处。由于接收者知道分配者为何给自己好处，因而不会感到焦虑不安。结果显示，分配者能准确预测接收者得到好处后的满意程度，由此支持了本研究提出的机制。研究五旨在排除不公平的竞争假设，设置了多给好处（分配者分配给接收者的奖金多于其付出）和少给好处（少于接收者的付出）两种不公平方案。结果显示，分配者的预测偏差只出现在多给好处组，由此排除了上述竞争假设。本研究揭示了一种新的预测偏差，即分配者高估了接收者得到莫名其妙的好处的满意程度，丰富了预测偏差的研究，该效应启示营销人员在给予消费者好处时要提供原因，从而减少消费者的不安焦虑，提升其满意度。

关键词 预测偏差，莫名其妙的好处，焦虑

Givers' overestimation about satisfaction experienced by recipients who receive unearned benefits

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Abstract: People sometimes offer unearned benefits to others in order to please others. For example, marketers provide an unexpected free upgrade of flights or hotel rooms to consumers. However, will recipients who receive unearned benefits feel satisfied as givers predict? Our study ($N = 1,069$) reveals a misprediction made by givers that givers overestimate how much recipients feel satisfied with unearned benefits. Studies 1 and 2 showed the misprediction made by givers. In Study 1, givers imagined that they allocated more pay to recipients than recipients' contribution or exact the pay corresponds to recipients' contribution, and then predicted recipients' satisfaction. Recipients imagined that they got more pay than their contribution or exact the pay corresponds to their contribution, and then rated their satisfaction. The result showed that givers overestimated recipients' satisfaction with unearned benefits, yet accurately predicted recipients' satisfaction with earned benefits. Study 2, where recipients' payoff was manipulated while their income was fixed, replicated the misprediction made by givers. Givers overestimated recipients' satisfaction after allocating less workload to recipients than supposed, yet accurately predicted recipients'

satisfaction after allocating supposed workload to recipients. Studies 3 and 4 tested the mechanism of the misprediction made by givers. We propose that recipients feel anxious about unearned benefits, however, givers underestimate recipients' anxiety. Studies 3 and 4 manipulated recipients' anxiety by offering the reason for unearned benefits. In Study 3, givers gave the recipients unearned benefits after recipients requested; in Study 4, givers gave unearned benefits to recipients to reciprocate the recipients' favor. Knowing the reason for unearned benefits, the recipients did not feel anxious. The results showed that givers accurately predicted recipients' satisfaction, thus supported our mechanism. Study 5 ruled out the alternative explanation of unfairness by setting two unfair distributions: unearned benefits (more pay than contribution) and fewer benefits (less pay than contribution). The result showed that the misprediction made by givers was specific to unearned benefits. Therefore, the alternative explanation of unfairness was ruled out. Our study reveals a novel misprediction and carries practical implications for marketers. When giving undeserved benefits to consumers, marketers should provide reasons for unearned benefits to reduce consumers' anxiety and improve consumers' satisfaction.

Keywords: misprediction, unearned benefits, anxiety

人与机器人互动中机器人的预期社会治理问题

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摘要 智能服务机器人被《国家十三五规划纲要》和《国家中长期科技发展规划纲要（2006-2020年）》列为重要发展战略和先进制造的前沿技术。越来越多的智能服务机器人开始进入家庭承担扫地等生活事务、执行陪学早教或娱乐游戏等功能。用于老年人照看陪护、健康管理或疾病康复的智能服务机器人也开始大量使用。餐饮、酒店、零售、接待/旅行、机场、银行等场所也开始部署智能服务机器人。突发疫情促进了用于非接触式医疗服务（如送药）的医用智能服务机器人的快速发展。在广泛多样的服务场景中，智能服务机器人与人类的互动引发了如何对机器人进行预期社会治理（Anticipatory Governance）的问题。人机互动中机器人的社交性是引发机器人预期社会治理议题的根本前提，它包括三个层面的意蕴。其一为机器人自身的社交特征，如人形外观、面部表情或体态动作等。其二为人类是否愿意接受与机器人互动，即人类何时及在何种条件下接受与何种机器人互动（许丽颖，喻丰，2019）。其三为人机互动中人类预设的机器人似人还是像机器的人性假设。人机互动中的社交性又可进一步衍生出机器人预期社会治理中的五个议题，它们分别是人机信任、人机同理、机器人责任、机器人虐待和人机互动伦理，其中人机信任是机器人预期社会治理的重要基础、人机同理是机器人预期社会治理的主要手段、机器人责任是机器人预期社会治理的最佳保障、机器人虐待是机器人预期社会治理的法制内涵、人机互动伦理是机器人预期社会治理的基本底线。

关键词 机器人，人与机器人，人与机器人互动，社会治理，预期社会治理

Research on the Issues of Robots Anticipatory Governance in Human-Robot Interaction (HRI)

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Abstract: Smart service robots have been listed as an important development strategy and frontier technology of advanced manufacturing by the Outline of the National Thirteenth Five-Year Plan and the Outline of the National Medium and Long-Term Science and Technology Development Plan (2006-2020). More and more smart service robots are beginning to enter the family to undertake sweeping and other living affairs, the implementation of accompanying schooling early education or entertainment games and other functions. Intelligent service robots used for elderly care, health management or disease rehabilitation are also beginning to be used in a large scale. Smart service robots are also being deployed in restaurants, hotels, retail, hospitality/travel, airports and banks. Outbreaks of epidemics have contributed to the rapid development of medical robots for non-contact medical services (e.g.

medicine delivery). The Human Robot Interaction (HRI) in a wide variety of service scenarios raises the question of Robots Anticipatory Governance (RAG). The social nature of robots in HRI is the fundamental premise that raises the issue of RAG, which has three levels of implications. One is the appearance characteristics of the robot itself, such as its humanoid appearance, facial expressions, or body movements. The second is whether humans are willing to accept interaction with robots, i.e., when and under what conditions they accept to interact with which robots (Xu Liying, Yu Feng, 2019). The third is the human-being assumption of whether humans presuppose that robots are human-like or machine-like in HRI. The sociality in HRI can further be derived from five issues in RAG, which are human-robot trust, human-robot empathy, robot responsibility, robot abuse, and human-robot interaction ethics, where human-robot trust is an important foundation of RAG, human-robot empathy is the main means of RAG, robot responsibility is the best guarantee of RAG, and the Robot abuse is the legal connotation of RAG and the ethics of human-robot interaction is the basic baseline of RAG.

Keywords: robots, human-robot, human-robot interaction, social governance, anticipatory governance

危机历史与应对策略对慈善组织意外型危机信任修复的影响

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摘要 情境危机传播理论(Situational Crisis Communication Theory, SCCT)针对不同的危机类型提供了不同的危机应对策略。其中代表组织无意行为的意外型危机是组织高发危机,且在意外型危机中组织危机应对更为复杂。SCCT理论认为,当组织面对意外型危机时,若其不存在危机历史,则需采取弱化策略;若其存在危机历史,则需采取重建策略。但后续部分研究者的研究显示意外型危机下非营利组织采取弱化策略和重建策略的修复效果不存在显著差异。此外,尚未有实证研究探讨有危机历史的慈善组织在面对意外型危机时,是否适用SCCT所提供的相应危机应对策略。因此,本研究将基于SCCT理论,探究在意外型危机下,危机历史及危机应对策略对慈善组织信任修复效果的影响。研究采用2(危机历史:有危机历史 vs 无危机历史)*2(危机应对策略:弱化策略 vs 重建策略)的被试间实验设计。重复测量方差分析结果表明,危机历史的主效应显著,危机历史、危机应对策略与时间因素的三重交互作用显著。进一步分析发现,在无危机历史的情况下,弱化策略可有效修复信任。在有危机历史的情况下,重建策略可显著修复信任。因此,本研究得出以下结论:面对意外型危机时,无危机历史的慈善组织采取弱化策略可有效修复信任,有危机历史的慈善组织采取重建策略可有效修复信任。研究结果支持了SCCT理论的假设。

关键词 情境危机传播理论, 危机历史, 危机应对策略, 信任修复

The impact of crisis history and crisis response strategies on trust restoration of charitable organizations in the accidental crisis

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Abstract: Situational Crisis Communication Theory (SCCT) provides guidelines for matching crisis response strategies to crisis types. Among them, the accidental crisis which represents the unintentional behavior of the organization is the high occurrence of the organization crisis, and the organizational crisis response is more complicated in the accidental crisis. According to the SCCT, when an organization is faced with an accidental crisis, if it does not have a crisis history, it needs to adopt a diminish strategy. If it has a history of the crisis, it needs to adopt a rebuild strategy. However, subsequent studies by some researchers show that there is no significant difference in the repair effect between the diminish strategy and the rebuild strategy adopted by the organization under the accidental crisis. In addition, no empirical research has been conducted to explore whether charitable organizations with a history of crisis can apply the corresponding crisis response strategies provided by SCCT in the face of accidental crises. Therefore, based on the SCCT, this study will explore the impact of crisis history and crisis

response strategies on the trust restoration effect of charitable organizations in accidental crises. The study adopted an inter-subject design of 2 (crisis history: with history of crisis vs. with no history of crisis) * 2 (crisis response strategy: the diminish strategy vs. the rebuild strategy). The results of repeated measure ANOVA show that the main effect of crisis history is significant, and the triple interaction of crisis history, crisis response strategy, and time factor is significant. Further analysis shows that under the condition of no crisis history, the weakening strategy can effectively restore trust. In situations with a history of the crisis, reconstruction strategies can significantly restore trust. Therefore, the following conclusions are drawn: in the face of unexpected crises, charitable organizations with no crisis history can effectively restore trust by adopting weakening strategies, while charitable organizations with crisis history can effectively restore trust by adopting reconstruction strategies. The results support the hypothesis of the SCCT theory.

Keywords: Situational Crisis Communication Theory, history of crisis; crisis response strategy, trust repair

不同类型新冠肺炎疫情媒体信息与死亡焦虑的关系： 正负性情绪的中介作用

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摘要 在疫情隔离期间人们主要通过媒体获取有关疫情的信息，而对此类媒体内容的过度关注可能会影响个体的心理健康。因此，本研究的目的是探究疫情爆发初期个体浏览媒体内容与死亡焦虑的关系。研究采用网络问卷形式调查了全国范围内 917 名被试的媒体使用行为与心理健康状况，问卷内容包括《正负性情绪量表（PANSA）》以及自编的疫情背景下的《媒体使用行为问卷》和《死亡焦虑问卷》。利用 Mplus 8.0 软件探索了以 6 种媒体内容（疫情爆发严重程度、疾病相关知识、专家解读、来自熟人有关疫情的信息（通过朋友圈、微博等）、医院相关报道和英雄事迹）为自变量，个体正性情绪和负性情绪为中介变量，个体死亡焦虑为因变量，年龄为控制变量的中介模型。结果发现：（1）正性情绪在 3 种媒体内容专家解读（间接效应 $\beta=-0.020^*$ ）、医院相关报道（间接效应 $\beta=-0.015^*$ ）和英雄事迹（间接效应 $\beta=-0.022^*$ ）与死亡焦虑的关系中起到了部分中介作用（3 种内容均正向预测正性情绪 $\beta \in [0.136, 0.262]$ ，进而负向预测死亡焦虑 $\beta \in [-0.084, -0.077]$ ），其它 3 种媒体内容为自变量的中介效应模型不成立。（2）负性情绪在 6 种媒体内容疫情爆发严重程度（间接效应 $\beta=0.094^{***}$ ）、疾病相关知识（间接效应 $\beta=0.072^{***}$ ）、专家解读（间接效应 $\beta=0.098^{***}$ ）、来自熟人有关疫情的信息（间接效应 $\beta=0.087^{***}$ ）、医院相关报道（间接效应 $\beta=0.105^{***}$ ）和英雄事迹（间接效应 $\beta=0.080^{***}$ ）与死亡焦虑的关系中均起到了部分中介作用（6 种媒体内容均正向预测负性情绪 $\beta \in [0.151, 0.232]$ ，进而正向预测死亡焦虑 $\beta \in [0.453, 0.476]$ ）。研究结果表明不同媒体内容与正负性情绪的关系不同，进而有区别地预测死亡焦虑水平。由此得出专家解读、医院相关报道和英雄事迹的媒体内容对民众的心理健康既产生了消极影响也产生了积极影响，而疫情爆发严重程度、疾病相关知识、来自熟人的信息的媒体内容只对民众的心理健康带来了消极影响。这提醒研究者应关注疫情期间相关的媒体内容对民众心理的影响以及背后的机制，以及媒体工作者应通过合理呈现媒体内容来使媒体在此类公共卫生事件中发挥更多的积极作用。

关键词 死亡焦虑，媒体内容，灾难，新型冠状病毒肺炎疫情

COVID-19-related media content and death anxiety: The mediating roles of positive and negative affect

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Abstract: In the time of COVID-19, people obtained the disease-related information mainly from media, but paying too much attention to COVID-19-related media content might have impacts on individuals' mental health. Therefore, the aim of this study was to examine the relationships between COVID-19-related media content and death anxiety during the initial phase of the outbreak. In the current study, an online survey was conducted to investigate individuals' COVID-19-related media use behaviors and psychological outcomes. There were 917 Chinese adults completed our questionnaires which was composed of Positive and Negative Affect Scale (PANAS) and two adapted pandemic-related questionnaires (Media Use Questionnaire and Death Anxiety Questionnaire). Mplus 8.0 was utilized to examine mediation models with six kinds of media contents (severity of the outbreak, knowledge of disease, speeches from experts, information from acquaintances online, reports from hospitals and people being heroic) as independent variables (one at a time), positive affect and negative affect as the mediating variables (one at a time), death anxiety as the dependent variable, and age as the control variable. The results showed that positive affect partially mediated the relationships between three kinds of media contents: speeches from experts(indirect effect $\beta=-0.020^*$), reports from hospitals(indirect effect $\beta=-0.015^*$) and people being heroic(indirect effect $\beta=-0.022^*$) and death anxiety (all three kinds of media contents positively predicted positive affect, $\beta \in [0.136, 0.262]$ and then negatively predicted death anxiety $\beta \in [-0.084, -0.077]$), the mediating effects of the other 3 kinds of media content as independent variables were not significant; negative affect played a partial mediating role in the relationships between all kinds of media contents: severity of the outbreak(indirect effect $\beta=0.094^{***}$), knowledge of disease(indirect effect $\beta=0.072^{***}$), speeches from experts(indirect effect $\beta=0.098^{***}$), information from acquaintances online(indirect effect $\beta=0.087^{***}$), reports from hospitals(indirect effect $\beta=0.105^{***}$) and people being heroic(indirect effect $\beta=0.080^{***}$) and death anxiety (six kinds of media contents all positively predicted negative affect $\beta \in [0.151, 0.232]$, and then positively predicted death anxiety $\beta \in [0.453, 0.476]$). The results indicated that different kinds of media contents have different relationships with positive and negative affect, which predicted death anxiety differentially. It can be concluded that the media content of speeches from experts, reports from hospitals and people being heroic had both negative and positive effects on people's mental health, while the media content of the severity of the outbreak, knowledge of disease, speeches from experts information from acquaintances online, reports from hospitals and people being heroic had only negative effects on people's mental health. This reminds researchers to pay attention to the impact of media contents on individuals' mental health during the pandemic and the mechanism of this impact. And media workers should make media play a positive role by presenting media content properly.

Keywords: death anxiety, media content, disaster, COVID-19

强制戒毒人员社会支持与吸毒心瘾的关系： 自尊和心理弹性的链式中介作用

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摘要 当今世界, 毒品问题愈发严峻, 《2020 年中国毒品形势报告》中显示, 截至 2020 年底, 全国现有吸毒人员 180.1 万名; 2020 年共查处吸毒人员 42.7 万人次, 其中超半数均为复吸人员。毒品不仅损害人们的身心健康, 还给家庭带来经济负担, 影响社会秩序。毒品依赖包括躯体依赖和心理依赖, 心理依赖是指吸毒者对过去体验过的精神活性物质效应的一种难以克制的渴望, 亦称为心瘾。以往研究表明心瘾越强的吸毒者在未来的生活中复吸的可能性越大。社会支持作为吸毒心瘾的重要影响因素, 能有效地抑制复吸。对于吸毒者而言, 较低的社会支持水平往往对应着更大程度的吸毒心瘾, 但关于社会支持是如何对吸毒心瘾产生影响的机制尚不明确, 需要进一步探索。本研究的目的是探究社会支持通过何种机制作用于吸毒心瘾, 这将有利于在将来的戒毒工作中更有针对性地对吸毒者进行干预从而降低其吸毒心瘾, 进而减少其在未来复吸的可能性。本研究采用自编毒品成瘾心理因素评估量表对 316 名戒毒人员(男 130 名, 女 186 名)进行施测, 调查社会支持与吸毒心瘾间的关系, 并进一步探讨自尊和心理弹性在其中担任的角色。研究发现: (1) 相关分析结果显示, 吸毒心瘾、社会支持、自尊、心理弹性两两变量得分间均呈显著正相关关系。(2) 中介模型检验结果显示, 模型拟合指标为 $\chi^2/df=1.684$, CFI=0.979, TLI=0.967, RMSEA=0.048, SRMR=0.036, 模型拟合良好。自尊和心理弹性在社会支持与吸毒心瘾的关系间起部分中介作用。具体来看, 社会支持可通过心理弹性间接作用于吸毒心瘾(95%置信区间为[0.050, 0.170]), 亦可通过由自尊、心理弹性组成的链式中介间接作用于吸毒心瘾(95%置信区间为[0.014, 0.234])。本研究表明戒毒人员的社会支持、自尊、心理弹性与其吸毒心瘾存在紧密的联系。为戒毒人员提供更高水平的社会支持可能会有助于戒毒工作的推进。在此过程中, 戒毒人员自身的心理特质亦会发挥重要作用, 戒毒工作者应给予低自尊、心理弹性较差的戒毒人员更多的关注, 并帮助他们有效提高自尊水平和心理弹性。

关键词 吸毒心瘾, 社会支持, 自尊, 心理弹性

Relationship between Social Support and Drug Craving in Drug Addicts: The Chain Mediating Role of Self-esteem and Resilience

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Abstract: Nowadays, the drug problem is becoming more and more serious. According to the 2020 China Drug Situation Report, by the end of 2020, there were 1,801,000 drug addicts in China. In 2020, a total of 427,000 drug users were investigated and punished, more than half of whom were relapse addicts. Drugs not only harm people's physical and mental health, but also impose economic burdens on families and affect social order. Drug dependence includes physical dependence and psychological dependence. Psychological dependence refers to the addict's uncontrollable desire for the effects of psychoactive substances they experienced in the past, which is also called craving. Previous studies have shown that drug addicts with stronger craving were more likely to relapse later in life. As an important influencing factor of craving, social support can effectively inhibit relapse. However, the internal

psychological mechanism of social support's influence on drug craving remains unclear. The purpose of this study was to explore how social support influences drug craving, which will be conducive to more targeted intervention on drug addicts to reduce their drug craving, and future reduce the possibility of relapse. 316 drug addicts (130 males, 186 females) were selected to investigate the relationship between social support and drug craving, and to further explore the roles of self-esteem and resilience by using self-design psychological factors assessment scale for drug addiction. The results showed that : (1) The scores of drug craving, social support, self-esteem and resilience were significantly positively correlated with each other. (2) The chain mediation modeling analysis showed that model fit indexes were $\chi^2/df=1.684$, CFI=0.979, TLI=0.967, RMSEA=0.048, SRMR=0.036. Self-esteem and resilience played a partial mediating role in the relationship between social support and drug craving. Social support played an indirect role in drug craving through resilience (95% CI [0.050, 0.170]), and also played an indirect role through the chain intermediary composed of self-esteem and mental resilience (95% CI [0.014, 0.234]). This study shows that social support, self-esteem, and resilience of drug addicts are closely related to drug craving. It may be helpful for the promotion of drug rehabilitation to provide higher level of social support for drug addicts, and in this process, the psychological characteristics of drug addicts may also play an important role. Rehabilitation workers should pay more attention to drug addicts with lower self-esteem and resilience, and help them effectively improve their self-esteem and mental resilience.

Keywords: drug craving, social support, self-esteem, resilience

当记忆足够强大：中期测试对错误信息的影响

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摘要 当今社会高速发展，信息交流的方式也愈加多样，网络等非正式渠道所产生的信息在日常生活中占有越来越大的比重，错误信息也越来越多地出现在人们的生活中。错误信息是指客观上不准确的信息，与谣言不同，错误信息并非以欺骗为目的，但其泛滥依然给个人的利益与社会的发展带来了极大的危害。为了减轻相关的负面影响，研究者们对错误信息的产生、发展与变化作了诸多探索，并形成了经典的错误信息范式。在此基础上，有研究者受到测试效果的启发，在经典范式中引入了中期测试，试图以此减少错误信息的暗示性。但据以往研究来看，中期测试的存在表现出两种截然不同的效果：它有时减少了错误信息的负面影响，有时却又增强了错误信息的暗示性。本研究由此出发，旨在探究两种现象发生的内在机制。研究表明，对原始信息拥有强大的记忆可以减轻错误信息的影响，但仅以中期测试是否正确来衡量“强大”与否所得出的研究结果并不稳定。因此，本研究分别从被试记忆的客观强度（中期测试正确率）和主观强度（反馈结果）入手，试图进一步拓展已有研究的成果。研究一考察中期测试正确率对最终测试的影响；研究二在中期测试阶段加入了反馈，以提供被试对自己记忆是否正确的元认知知识。结果发现，中期测试的正确率及反馈结果影响了被试对错误信息的注意力和最终测试的正确率。当被试对原始信息记忆强度较好时，更容易注意到错误信息，且当给予“正确”反馈时，更不容易受到错误信息的影响；而当被试对原始信息的记忆较差时，对测试后所有信息的注意无显著差异，但阅读时间比无中期测试的被试更长，更易受到错误信息的暗示。

关键词 错误信息，中期测试，记忆强度，反馈

When memory is strong enough: the impact of interim test on misinformation

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Abstract: With the rapid development of today's society, the ways of information exchange are becoming more and more diverse. The information generated by informal channels such as the network occupies an increasing proportion in daily life, and more and more misinformation appears in people's life. Misinformation is factually inaccurate

information. Different from rumors, misinformation is not for the purpose of deceiving, but it still brings great harm to personal interests and social development. In order to reduce the related negative effects, researchers have made a lot of explorations on the generation, development and change of misinformation, and formed the classic misinformation paradigm. On this basis, inspired by the testing effect, some researchers introduced the interim test into the classical paradigm, trying to reduce the suggestibility of misinformation. However, according to previous studies, the existence of interim test shows two distinct effects: it sometimes reduces the negative impact of misinformation, and sometimes enhances the suggestibility of misinformation. This study aims to explore the internal mechanism of the two phenomena. Studies have shown that having a strong memory of the original information can reduce the impact of misinformation, but the results are not stable only based on whether the interim test is correct. Therefore, this study attempts to further expand the existing research results by starting with the objective strength (accuracy rate of interim test) and subjective strength (feedback result) of memory. Study 1 examined the effect of the accuracy of the interim test on the final test; In Study 2, feedback was added to the interim test to provide the subjects with metacognitive knowledge about whether their memory was correct or not. The results show that the accuracy of the interim test and the feedback results affect the subjects' attention to the misinformation and the accuracy of the final test. When the subjects have better memory of the original information, they are more likely to notice the misinformation, and when they get "correct" feedback, they are less likely to be affected by the misinformation; However, when their memory of the original information was poor, there was no significant difference in the attention to all the information after the test, but the reading time was longer than that of the subjects without the interim test, and they were more likely to be hinted by false information.

Keywords: Misinformation, interim test, memory strength, feedback

4.31 文化心理学专业委员会

(1) “文化心理学专业委员会”口头报告分场 1

文化依恋的理论建构与问卷编制

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摘 要 在跨文化心理学的新近研究中, 关注个体进入新文化的情感过程成为当前跨文化心理学研究的一个重点转向。已有学者在研究跨文化适应的过程中, 提出了一种新的理论框架——文化依恋理论, 来阐述个体与不同文化及文化群体形成的情感联结作用。文化依恋理论认为, 文化依恋的产生过程类似于婴儿对其主要抚养者产生依恋的过程, 并遵循与传统依恋相似的原则。由于文化依恋作为一个全新的研究领域, 在我国理论界还是一个较陌生的术语, 现有为数不多的文化依恋研究也多直接采用国外研究的模型、方法和工具, 缺乏对文化依恋的概念体系、结构特征和测量工具编制的系统分析和研究。要系统的探索我国多元文化背景下的文化依恋, 首先需要明确文化依恋的理论结构, 编制符合测量学要求的工具。为此, 本研究根据我国社会、文化、历史的特点, 以依恋的原始模型, 以及依恋扩展领域的相关模型为依据, 从“文化”和“依恋”两个概念的特征出发, 编制普适性的文化依恋问卷并检验其信效度。首先结合前期的文献分析、开放式问卷调查和个别访谈, 构建了文化依恋的理论维度并编制了初始问卷。然后, 以 392 名大学生为被试, 对初始问卷进行项目分析和探索性因素分析; 选取另外 679 名大学生进行正式测试, 对所得数据进行验证性因素分析和信效度检验。结果表明: 文化依恋问卷共有 16 个项目, 包括文化-自我关联度、文化情感联结和文化亲近行为 3 个因子, 累计方差贡献率为 71.23%; 验证性因素分析表明 3 因子模型拟合良好; 问卷信效度指标符合心理测量学要求, 能够作为测量个体文化依恋的有效工具。

关键词 文化依恋, 理论建构, 问卷编制, 信效度

Theoretical construction and questionnaire compilation of cultural attachment

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Abstract: In the recent research of cross-cultural psychology, paying attention to the emotional process of individuals entering the new culture had become a focus of cross-cultural psychology. In the process of studying cross-cultural adaptation, Hong et al. put forward a new theoretical framework-cultural attachment theory, to elaborate the emotional connection between individuals and different cultures and cultural groups. According to the theory of cultural attachment, the process of cultural attachment was similar to that of infants' attachment to their main caregivers, and follow the principle similar to traditional attachment. As a new research field, cultural attachment was still a relatively unfamiliar term in China's theoretical circle. Currently, a few studies on cultural attachment were mostly based on foreign research models, methods and tools, lacking systematic analysis and research on the conceptual system, structural features and measurement tools of cultural attachment, moreover, there was no theoretical system and paradigm of localization in China. Therefore, this study attempted to explore and construct the theoretical and empirical research system of cultural attachment in the context of multiculturalism, to enrich the theoretical content of cultural attachment research in China, promote the localization of cultural attachment research, and expand the field of cultural psychology and attachment research. In order to systematically explore the cultural attachment under the multicultural background in China, it is necessary to clarify the theoretical structure of cultural attachment and develop the tools that meet the requirements of surveying. To develop and validate the Scale of Cultural attachment that measures one's experience of Cultural attachment. The theoretical dimension was constructed and the preliminary questionnaire was compiled based on the characteristics of China's society, culture and history, prototypical model of Cultural attachment and extensional model, combined with the results of previous literature review, open questionnaire survey, individual interview. Then, items analysis and exploratory factors analysis was conducted in the first sample (n=392), and confirmatory factor analysis, reliability analysis and validity analysis were performed in the second sample (n= 679) to form the final scale. 16 items were selected and seven factors were extracted by exploratory factor analysis, including Cultural-self relevance, cultural emotional connection and cultural intimacy. The cumulative variance contribution rate was 71.23%. Confirmatory factorial analysis confirmed that the three-dimensional model fitted well. The results of reliability analysis, content validity, construct validity and criterion validity showed the Scale of Cultural attachment of College Students reached the psychometric standard and can be a valid tool to measure one's experience of Cultural attachment.

Keywords: cultural attachment, theoretical construction, development of questionnaire, reliability and validity

文化依恋对文化适应压力的影响：文化适应策略的调节作用

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摘 要 文化依恋是个体与特定文化之间形成的一种具有积极认知性和情感性的心理联结, 并由此导致的对该文化的热爱、接近及依赖倾向。“心理联结”表现为个体对该文化的信赖感和归属感, 以及个体从该文化中获得的安全感和支持感。本研究根据该内涵构建了文化依恋的理论结构, 即包括文化-自我关联度、文化情感

联结和文化亲近行为 3 个因子,在此基础上编制了具有较高信效度,符合心理测量学要求的文化依恋量表,并运用该量表采用问卷调查法,使用文化适应策略量表和文化适应压力量表,以内蒙古自治区、江苏、重庆、四川等地区的 828 名大学生作为调查样本,考察了文化依恋、文化适应压力、文化适应策略类型(整合、同化、分离、边缘化)三者的关系。结果发现:(1)文化依恋与文化适应压力呈显著的负相关,并且文化依恋对文化适应压力有显著的负向预测作用。(2)不同文化依恋的个体,在文化适应过程中,采取的文化适应策略不同。对本民族文化的文化依恋程度越高的个体,倾向于采取整合策略,对文化依恋程度最低的个体,倾向于采取边缘化策略。(3)文化适应策略可以调节文化依恋对文化适应压力的影响。在整合策略下,文化依恋对文化适应压力有较好的预测性。

关键词 文化依恋,文化适应策略,文化适应压力,调节

The influence of cultural attachment on cultural adaptation pressure: the moderating effect of cultural adaptation strategies

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Abstract: Cultural attachment is a positive cognitive and emotional psychological connection between an individual and a specific culture, which leads to the tendency of loving, approaching and depending on the culture. "Psychological connection" refers to the sense of trust and belonging to the culture, as well as the sense of security and support from the culture. According to this connotation, this study constructs the theoretical structure of cultural attachment, which includes three factors: cultural-self correlation, cultural emotional connection and cultural closeness behavior. On this basis, a cultural attachment scale with high reliability and validity and in line with psychometric requirements is developed. The scale is used to conduct questionnaire survey, cultural adaptation pressure scale and cultural adaptation strategies scale, 828 college students from Inner Mongolia Autonomous Region, Jiangsu, Chongqing and Sichuan provinces were selected as research samples to investigate the relationship among cultural attachment, cultural adaptation pressure and types of cultural adaptation strategies (integration, assimilation, separation and marginalization). The results show that: the interdependent (1) There is a significant negative correlation between cultural attachment and acculturation stress, and cultural attachment has a significant negative predictive effect on acculturation stress. (2) Individuals with different cultural attachment adopt different cultural adaptation strategies in the process of cultural adaptation. Individuals with higher degree of cultural attachment to their own culture tend to adopt integration strategies, while those with the lowest degree of cultural attachment tend to adopt marginalization strategies. (3) Acculturation strategies can regulate the influence of cultural attachment on acculturation pressure. Under the integration strategy, cultural attachment can predict the pressure of cultural adaptation.

Keywords: cultural attachment, cultural adaptation strategies, cultural adaptation pressure, moderation

在韩国留学生学业文化适应性研究

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摘 要 随着中韩建交后两国交流的日益增强、地域的临近性,以及“韩流”的影响,越来越多的中国学生前往韩国留学。虽然多数中国留学生都能很好地适应韩国的学业与生活,但仍然有人因为各种原因经历着身心和学业上的困扰。特别是那些受到学业警告的学生,他们背后都有自己的个人原因,甚至是难言之隐。因此,本研究旨在了解和发现在韩中国留学生的学业文化适应问题,发掘学生取得学业警告的原因,并结合质性研

究, 根据每个学生不同的特点, 将其深层的原因挖出。在通过面谈形式与各个留学生深入接触后, 深入了解和发现中国留学生的内心世界、在韩生活情况, 以及文化适应等多个方面的问题。为此, 在遵循伦理原则的基础上, 本研究对位于首尔的 S 大学校内 8 名在校中国留学本科生进行了半结构式深度访谈。在征得受试者同意的前提下, 研究人员对每次访谈内容进行了录音, 并记录下可被观察到的表情、身体动作和语调。访谈结束后, 对访谈录音及时整理, 并在此基础上, 加以编码、归档, 构建扎根理论。分析结果最终可归类为“两国间的教育文化差异”、“语言屏障”、“心理因素”、“人际因素”四大主题。本研究对于了解中韩教育的差异性和留学生在文化适应过程中的深层因素提供了可靠的依据, 并为今后留学生更好地适应韩国的留学生活, 以及制定和研发相关的对策方案提供了有力的参考。

关键词 中国留学生, 韩国, 学业文化适应

Study on the Academic Acculturation of Overseas Chinese Students in South Korea

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Abstract: With an increasing exchanges between China and Korea, a rising number of Chinese students choose to study in Korea because of territorial proximity and the influence of "South Korean Fad". Although most students can well adapt to their study and life in Korea, a few of them still feel frustrated and suffer from their academic problems. Especially those under academic probation, they all face their unique troubles, or even predicaments. Therefore, this study is purposed to understand the academic acculturation of Chinese students studying in Korea. With an exploration on the factors leading to their academic probation, the paper conducted a qualitative study to dig deeper based on individual characteristics. And though in-depth interviews with each interviewee, it leads to a deeper understanding on their interiors, life in Korea, acculturation, etc. Therefore, based on ethical principles, this study conducted semi-structured interviews with eight Chinese undergraduates studying in S University in Seoul. With prior consent of interviewees, the researcher recorded the talks of each interview, including observable expressions, body movements and tone of voice. Such recordings were timely sorted out after the interviews, and then they were was coded and archived to construct the grounded theory. At last, The results of the analysis were clarified into four major themes, i.e., "educational and cultural differences", "language barrier", "psychological factors" and "interpersonal factors". The research provides a reliable frame for understanding the differences between Chinese and Korean education, as well as the fundamentals for overseas students' adaptation to a foreign culture and academic life. Besides, it provides a basic reference for developing relevant countermeasures and programs to help future overseas students in their adaptation in Korea.

Keywords: overseas Chinese students, South Korea, academic acculturation

中国人恐惧管理中的远端防御： 死亡焦虑的中介作用及联系性思维的调节作用

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摘要 恐惧管理理论(TMT)的跨文化研究表明, 中国人在死亡提醒后表现出的远端防御策略与西方人不同, 甚至不会表现出文化世界观防御。有研究表明, 恐惧管理中的效应大小和防御机制差异是由于忽略了诸多调节因素, 例如跨文化研究主要对恐惧管理过程中的情绪、行为倾向差异进行比较, 而对文化内容和建构本身, 以及认知特性影响机制的研究甚少。全球新冠大流行的背景对大众心理产生广泛的死亡威胁, 因而在此背景下的 TMT 研究十分必要。为了解决过往研究中所遗留的问题和矛盾, 本研究以转世信念和认命倾向这两种死亡应对态度作为中国文化下的远端防御策略, 通过线上实验 ($N=143$) 检验阈上死亡提醒后, 中国人在远端防御上的效应和反应倾向, 并在此过程中验证联系性思维对死亡焦虑缓冲的调节作用和死亡焦虑的中介作用。

研究表明：(1)死亡提醒能提高个体的转世信念，然而对认命倾向的影响并不显著。(2)联系性思维调节了死亡提醒后中国被试的死亡焦虑程度：当联系性思维水平较低时，死亡提醒会使个体产生更高的死亡焦虑；当联系性思维水平较高时，死亡提醒对死亡焦虑没有显著影响。也就是说，仅仅认知特性上趋近于母文化系统就能帮助个体更好地缓冲死亡焦虑。(3)死亡焦虑只中介了死亡提醒和转世信念之间的关系，而对认命倾向的中介作用不显著。本研究对所得结果与先前相关研究结果的差异进行了讨论。此外，本研究还探讨了中国传统宗教文化中对死亡的“理智化”认知和民众朴素观念之间的关系，并对研究结果进行了解释。最后，本研究讨论了局限和未来的研究方向，以及 TMT 研究中的实践意义。

关键词 恐惧管理，死亡提醒，文化心理，思维方式

Distal defenses in Chinese terror management: The mediating role of death anxiety and the moderating role of relation thinking

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Abstract: Cross-cultural studies of Terror Management Theory (TMT) suggest that Chinese exhibit distal defenses strategies following mortality salience differently, even do not exhibit cultural worldview defenses. It has been suggested that controversies in effect sizes and defense mechanisms are due to the neglect of some moderating factors, e.g., cross-cultural studies have mainly contrasted differences in emotional and behavioral dispositions in terror management process, while little research has been conducted on the influence of cultural content and constructs themselves, also cognitive characteristics. The global context of the COVID-19 pandemic produces widespread death threats to the mass psyche, and thus relevant TMT study seems necessary. To address the issues and contradictions left, this study ($N=143$) examined the effects and response tendencies on distal defenses after supraliminal mortality salience, using two death coping attitudes, belief in reincarnation and resignation to fate, as distal defenses in Chinese culture. Moreover, this study verified the moderating role of relation thinking on death anxiety buffering and the mediating role of death anxiety in Chinese. The results showed that: (1) Mortality salience increased individuals' belief about reincarnation, however, the effect on resignation belief was not significant. (2) Relation thinking moderated the level of death anxiety in Chinese after reminders of death: When the level of relation thinking was low, mortality salience caused higher death anxiety; when the level of relation thinking was high, mortality salience had no significant effect on death anxiety. That is, mere convergence to the maternal culture system in cognitive characteristics can help individuals to better buffer death anxiety. (3) Death anxiety mediated the relationship between mortality salience and reincarnation, but no mediating effect on resignation to fate. The study discussed the differences between the results obtained and the findings of past research. In addition, the relationship between the "rationalization" of death in traditional Chinese religious culture and people's naive concept has been discussed, to explain the findings. Finally, present study explored the limitations and future directions, as well as practical implications in TMT cross-cultural research.

Keywords: terror management theory, mortality salience, cultural psychology, thinking style

4.32 经济心理学专业委员会

(1) “经济心理学专业委员会”口头报告分场 1

焦虑情绪对自我提升消费意愿的影响 ——控制感的中介和内隐人格观的调节作用

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摘要 焦虑情绪是人们在面对不确定的危险或威胁时产生的一种不安、担心、紧张、烦恼等不愉悦的复杂情绪,然而消费领域对于如焦虑这样的具体情绪的影响研究却不多。本研究基于自我差异理论和补偿性消费行为模型探究了焦虑对个体的自我提升消费意愿的影响,并旨在厘清该影响背后的心理机制。研究一以 164 名大学生为被试,通过回忆操纵范式激发其焦虑情绪后发现,焦虑情绪下的被试具有更强烈的自我提升消费意愿,且控制感起到部分中介作用。研究二以 174 名大学生为被试,通过心理社会压力暴露的方式唤起其焦虑情绪,并测量其自我提升消费意愿、内隐人格观和控制感,结果验证了一个有调节的中介模型。当个体感到焦虑时,个体的自我提升消费意愿更高,控制感在其中起到了部分中介的作用。内隐人格观调节了控制感对自我提升消费意愿的影响,当个体持有渐进论的人格观点时,焦虑情绪所导致的低控制感会使其更倾向于进行自我提升消费,进而提升自我能力;而当个体持有实体论的人格观点时,焦虑情绪并不会影响其控制感以及后续的自我提升消费意愿。总之,本研究验证了焦虑情绪对自我提升消费意愿的积极促进作用,并验证了控制感的部分中介作用以及内隐人格观的调节作用。本研究不仅在理论上探究了某一具体情绪对消费行为的影响,同时为焦虑情绪突出的社会背景下如何利用该情绪产生积极作用,帮助自身成长、促进有益消费等提供了有价值的参考建议。

关键词 焦虑,自我提升消费,控制感,内隐人格观

The Effect of Anxiety on Self-improvement Consumption ——Perceived Control as a mediator and Implicit Theory of Personality as a moderator

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Abstract: The emotion of anxiety is a feeling occurs when people face uncertain danger or threat and is a mixed emotion that integrates restlessness, worry, tension, and annoyance. Somehow, studies about the effect of a specific emotion, such as anxiety, on consumption behaviors did not receive much attention from researchers in consumption areas. Basing on the self-discrepancy theory and the compensatory consumer behavior model, this study aims to explore the effect of anxiety on self-improvement consumption and the psychological mechanism underlying this effect. One hundred and sixty-four university students participate in study 1 and those in the experiment group are asked to recall a recent experience in which they feel anxious. Results of study 1 show that individuals have greater self-improvement consumption preferences after feeling anxious, and perceived control partially mediates the relationship between anxiety and self-improvement consumption. Study 2 uses 174 university students as a sample, elicits participants' anxious feeling by social stress manipulation, and assesses participants' self-improvement consumption preferences, perceived control and implicit theory of personality. The results of study 2 prove a moderated mediation model. When people feel anxious, their self-improvement consumption preferences would be increased, and perceived control partially mediates this effect. Also, implicit theory of personality moderates the

mediating effect. Incremental theorists would feel lower perceived control after feeling anxious and would increase their preferences for self-improvement consumption, whereas entity theorists wouldn't change their perceived control and consequent self-improvement consumption preferences. In conclusion, a moderated mediation model has been proved, in which feeling anxious would significantly increase self-improvement consumption with perceived control partially mediating and implicit theory of personality moderating this relationship. Not only does this study focus on the effect of a specific emotion on consumption behaviors, but it also provides individuals and marketers with valuable advises on how to utilize such a negative emotion to create beneficial influences on personal and marketing growth.

Keywords: anxiety, self-improvement consumption, perceived control, implicit theory of personality

时间和金钱哪个更重要？来自注意偏向的证据

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摘要 时间和金钱是稀缺而宝贵的资源, 人们不仅会经历时间不足的压力, 也会担心钱不够用。以往研究者们将时间和金钱作为两个维度考查人们行为差异已做了大量研究, 如道德、社会联系、消费决策等。但对个体信息加工前时间和金钱的注意情况却很少有研究涉及。基于稀缺是“所拥有的”总是少于“所需要的”, 稀缺会俘获大脑, 使得个体注意到稀缺事物, 从而需要投入更多的注意去解决稀缺。因此, 本研究采用 2 (稀缺类型: 时间稀缺、金钱稀缺) × 2 (探测位置: 一致、不一致) × 3 (词语类型: 时间—中性词、金钱—中性、中性—中性词语) 三因素混合实验设计, 通过点探测实验范式, 操作稀缺情境对 60 名大学生被试的注意行为进行研究, 探讨在金钱和时间稀缺的情况下, 大学生对金钱和时间相关信息的注意偏向情况。结果显示: 在金钱稀缺情况下, 会同时引发被试对金钱和时间相关词语刺激的关注; 以中性条件为基线, 被试对金钱和时间的反应时都显著小于中性词语, 但对金钱和时间词语差异不显著; 进一步分析被试的注意偏向成分发现在两种稀缺情境下被试对金钱都存在注意定向加速, 而对时间存在注意脱离困难。结论: 金钱和时间稀缺会引发个体对金钱和时间相关信息的注意偏向。与时间信息相比个体对金钱相关信息更加敏感。

关键词 稀缺; 时间; 金钱; 点探测范式; 注意偏向

Which is more important, time or money?

Evidence from attentional bias

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Abstract: Scarcity theory points out that scarcity can capture individual attention, and will cause people to follow with interest in the scarce things. Time and money are both precious and limited resources. Many people feel temporally and financially constrained in their day-to-day lives. Prior time and money literature have linked behavior, decision-making, and happiness to support time and money scarcity. However, whether this indispensable attention discrepancies to time or money remains equivocal. A sample of 60 college students completed the visual dot-probe paradigm under priming of the scarcity to investigate attentional bias about the information of money or time. The results revealed that participants in the condition of scarcity of money showed stronger attention to the stimulus of money-and-time-related words. When contrasted of reaction with neutral words, the participants' responded to words related to money and time are significantly less than those of them. Critically, there was no significant difference in the reaction to the words between money and time. The attentional components thorough analysis and comparison, the attention-oriented acceleration for money words but had difficulty in attention-disengagement from time words in the two scarce conditions. Thus, the process of information shows significant differences in two priming types. It is plausible that money scarcity attracts individuals' attention to money-and-time-related information and have a faster reaction to money words. Compared with time information, individuals pay more attention to information about

money. The results of this research not only enrich and expand the previous consequences of congener studies but also deepen the content and detail of it, which may motivate further meaningful inspirations to explain the distinct behaviors of individuals in the face of time and money scarcity.

Keywords: Scarcity, Time, Money, Visual dot-probe paradigm, Attentional bias

5G 背景下消费者在直播购物中的感知体验对冲动性购买行为的影响 研究：一个有调节的中介模型

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摘要 伴随着数字化、信息化的持续发展和智能手机的普及, 电子商务发展进入全民移动客户时代, 网络购物成为消费者新的行为习惯。由于网络购物相比传统购物方式具有更大的便利性和偶然性, 使得在线购物的消费者更容易产生冲动购买行为。随着直播的日益普及, 社交商务平台上的许多商家都将直播作为提升中国销售业绩的工具, 这导致了一种新的社会商业形式的出现, 即直播购物。而 5G 技术的出现, 从营造购物环境角度看, 使得网店商家有能力为网上顾客提供远超从前的新颖体验, 这对消费者的购物体验感及决策行为都产生了极大的影响。本研究基于非计划购买模型, 旨在探讨消费者体验对消费者冲动性购买行为的影响及作用机制, 并进一步探究直播购物中主播口碑认同和网络质量变化如何发挥其影响作用。本研究采用冲动消费量表、网络质量量表、消费感知体验量表、口碑认同量表, 对 893 名直播消费用户进行问卷测量。结果显示, (1) 消费者直播购物个体体验和群体体验对消费者冲动性购买行为有显著正向预测作用, 其中个体体验主要包含互动性、关系导向、心流体验, 群体体验主要包含参与度、认知交流和共振蔓延; (2) 主播口碑认同在消费者体验和购买行为之间起中介作用; (3) 网络质量在消费者体验和主播口碑认同之间起到调节作用, 即 4G 网络下, 消费者体验对主播口碑认同影响较为显著, 5G 网络背景下, 消费者体验对主播口碑认同的影响较小, 网络沉浸感和感知安全性较高。研究结果揭示了直播经济和 5G 背景下, 消费者冲动性购买行为的影响机制, 有利于解释消费者在购物决策行为选择的内在心理机制, 深入解释不同的体验以及口碑、网络质量对消费者偏好形成的内在逻辑, 丰富和发展现有的网络经济心理学理论, 对企业营销实践提供一定的理论指导和建议。

关键词 直播经济, 5G 网络, 冲动性购买行为, 消费者购物体验, 口碑认同

The impact of the consumer perceived experience in live-stream shopping on their impulsive purchasing behavior under the 5G background: a moderated mediation model

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Abstract: Today, with digitalization, informatization, and the popularity of smartphones growing in leaps and bounds, the e-commerce era to the era of national mobile customer, and online shopping have become the new behavioral habit of the consumers. Compared to the traditional shopping methods, online shopping is ostensibly more convenient and more accidental, it became easier for the online shoppers to purchase on impulse. With the increasing popularity of live streaming, online shopping has been used by many merchants as a tool to improve sales performance in China on social business platforms, which leads to the emergence of live shopping, a new social business culture. From the perspective of creating a unique shopping environment, the emergence of the 5G technology enables online shop merchants to provide online customers with a novel experience far beyond the earlier ones, with tremendous impact

on the shopping experience and decision-making behaviors of the consumers. Based on the non-purchase model, this study endeavors to explore the impact of consumer experiences on the impulsive buying by the consumers and the mechanism it follows. Moreover, this study shall explore how the word-of-mouth recognition and network quality change of live streamers play a role in live commerce. 893 netizens who engaged in live commerce purchases were surveyed through a questionnaire, including Impulse Consumption Scale, Network Quality Scale, Consumer Perception Experience Scale, and Word-of-Mouth Identity Scale. The results indicated that (1) The individual experience and the group experience of consumers in live commerce had a significant positive predictive effect on the impulsive buying by the consumers. Amongst them, the individual experience mainly included interaction, relationship orientation, and flow experience, while the group experience mainly involved participation, cognitive communion and resonant contagion. (2) The word-of-mouth recognition of live streamers plays an intermediary role between the consumer experience and the purchase behavior. (3) The network quality also has a moderating role between the consumer experience and the word-of-mouth recognition of the live streamers. Under the 4G network, consumer experience has a significant impact on the word-of-mouth recognition of the live streamers, while this influence tends to be very small under the 5G network, with high network immersion and perceived security being very high. The research results revealed the influence mechanism of the impulsive buying behavior of the consumers under the background of live commerce and the 5G network, which turned out to be beneficial in explaining the internal psychological mechanism of the choice of shopping decision behavior of the consumers, determining the internal logic of the various experiences and the formation of the preferences of the consumers by the word-of-mouth publicity and the network quality, enriching and developing the existing psychological theory of network economy, and providing certain theoretical guidance and suggestions for the marketing practice by the enterprises.

Keywords: live streaming economy, 5G network, impulsive purchasing behavior, consumer shopping experience, word-of-mouth recognition

4.33 积极心理学专业委员会

(1) “积极心理学专业委员会”口头报告分场 1

正念特质与感知压力的关系：有调节的中介模型

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摘要 目的：青少年的压力水平与其感知到的心理压力息息相关。正念压力缓冲假说强调正念在压力过程中的功能，但正念特质与感知压力之间的潜在机制仍不清楚。因此，本研究将在中国青少年样本中，考察问题解决在正念特质与感知压力之间的中介作用及压力源在其中的调节作用。**方法：**3,287 名中国青少年（ $M_{age}=15.63$ 岁，52.2%为男性）参加了研究。通过青少年生活事件自评表（ASLEC）、中国儿童和青少年正念测量（C-AMM）、中学生应对方式量表（CSSMSS）和感知压力量表（PSS）收集自我报告数据进行中介与调节分析。**结果：**结果显示，正念特质和感知压力之间存在着明显的负相关关系。问题解决在正念特质（即接受非监测）和感知压力之间的关系中起到了中介作用。压力源在正念特质（接纳）与感知压力之间的直接路径以及问题解决中介效应的路径中起调节作用。**结论：**正念特质（接纳）能够通过问题解决影响青少年的感知压力，且这一关系受到压力源水平的调节。

关键词 正念特质，感知压力，压力源，问题解决，青少年

The Relationship Between Trait Mindfulness and Perceived Stress: A Moderated Mediation Analysis

Abstract: Objectives: Adolescents' stress levels are closely related to their perceived psychological stress. Although the *mindfulness stress-buffering hypothesis* emphasized that the functions of mindfulness in the stress transactional process, it is still unclear about the potential mechanism between trait mindfulness and perceived stress. Thus, this study would examine the mediation role of problem-solving and the moderating role of stressors in the relationship between trait mindfulness and perceived stress among a sample of Chinese adolescents. **Methods:** 3,287 Chinese adolescents (*Age* = 15.63 years, 52.2% male) participated in the study. Self-reported data were collected by the Adolescent Self-Rating Life Events Checklist (ASLEC), the Chinese Child and Adolescent Mindfulness Measure (C-CAMM), the Coping Style Scale for Middle School Students (CSSMSS), and the Perceived Stress Scale (PSS). The mediation and path analysis would be conducted in this study. **Results:** The results revealed that there were significant negative correlations between trait mindfulness and perceived stress. Problem-solving played a mediating role in the relationship between virtuous trait mindfulness (i.e., acceptance) and perceived stress. Specific, stressors play a moderating role in the direct pathway between trait mindfulness (i.e., acceptance) and perceived stress and in the pathway of the mediating effect of problem-solving. **Conclusions:** These findings suggested the mechanism of the links between trait mindfulness and perceived stress. Trait mindfulness (acceptance) impacts adolescents' perceived stress through problem-solving, and this relationship is moderated by the level of the stressors.

Keywords: trait mindfulness, perceived stress, stressors, problem-solving, adolescents

感恩的认知-情感双维结构及其与主观幸福感的关系

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摘要 感恩是个体意识到施恩者给予自己的恩惠或帮助后产生的一种感激并且力图做出回馈的一种情感特质。根据情绪的 ABC 理论, 个体会对诱发事件进行评价、解释, 进而产生情绪和行为反应。感恩作为一种积极的情感特质, 也存在类似的过程。当得到帮助或馈赠时, 个体会对这些行为进行分析并做出利益评价。然后, 对帮助和恩惠的积极评价会诱发感恩情绪。因此, 感恩实际上包含了对施恩者和相关事件的认知过程以及由此引发的情感过程。然而, 已有的研究较少对感恩的认知与情感维度进行区分。因此, 本研究通过两个纵向研究对感恩的双维结构进行检验, 并探讨了认知感恩和情感感恩对主观幸福感的预测作用。研究 1 采用感恩问卷和感恩形容词评定量表分别作为认知感恩与情感感恩的测量工具, 生活满意度量表、积极与消极体验量表作为主观幸福感的测量工具, 对 482 名大学生进行了间隔 7 个月的追踪调查。结果发现: (1) 验证性因素分析的结果表明, 与单维结构相比, 感恩的双维结构拟合良好 ($\chi^2/df = 3.055$, RMSEA = 0.065, CFI = 0.948, TLI = 0.931); (2) 回归分析结果表明, 在控制了幸福感的自回归路径后, 认知感恩只能预测积极情感 ($\beta = 0.225$, $p < .001$), 而情感感恩可以预测生活满意度 ($\beta = 0.151$, $p = .011$) 和积极情感 ($\beta = 0.165$, $p = .016$)。为了检验研究结果的稳定性, 研究 2 ($N = 460$) 以高中生为研究对象, 采用相同的量表和研究方法, 进行了间隔 3 个月的追踪调查。最终, 研究 2 重复了研究 1 的结果。因此, 本研究揭示了感恩的双维结构, 以及这两个维度对主观幸福感不同的预测作用。这在一定程度上拓展了对感恩本质的认识, 并启示未来感恩的研究应充分考虑感恩的双维结构。

关键词 认知感恩, 情感感恩, 主观幸福感, 纵向研究

The cognitive-affective two-dimensional structure of gratitude and its relationships with subjective well-being

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Abstract: Gratitude is a kind of emotional trait that an individual feels grateful to the benefactor for the favor or help

they have received and tries to give back. According to the ABC theory of emotion, the individual evaluates and interprets the induced events, and then generates emotional and behavioral responses. Gratitude, as a positive emotional trait, goes through a similar process. When receiving help or gifts, individuals would analyze these behaviors and make a benefit appraisal. Then, positive appraisals of help and favors induce feelings of gratitude. Therefore, gratitude actually involves the cognitive process of the giver and related events, as well as the emotional processes that result from it. However, there were few studies to distinguish the cognitive and affective dimensions of gratitude. Thus, the present study examined the two-dimensional structure of gratitude through two longitudinal studies, and explored the predictive effects of cognitive gratitude and affective gratitude on subjective well-being. Study 1 used the Gratitude Questionnaire and the Gratitude Adjective Checklist as the measurement tools of cognitive gratitude and affective gratitude respectively, and the Life Satisfaction Scale and the Positive and Negative Experience Scale as the measurement tools of subjective well-being. A sample of 482 college students was surveyed twice at an interval of 7 months. The results showed that: (1) Confirmatory factor analysis indicated that compared with the one-dimensional structure, the two-dimensional structure of gratitude fitted well ($\chi^2/df = 3.055$, RMSEA = 0.065, CFI = 0.948, TLI = 0.931); (2) The results of regression analysis showed that after controlling the autoregressive paths of well-being, cognitive gratitude could only predict positive affect ($\beta = 0.225$, $p < .001$), while emotional gratitude could predict life satisfaction ($\beta = 0.151$, $p = .011$) and positive affect ($\beta = 0.165$, $p = .016$). In order to test the stability of the study results, study 2 ($N = 460$) utilized the same research methods and recruited high school students who completed the same questionnaires twice at an interval of 3 months. Finally, study 2 replicated the findings of study 1. Therefore, this study revealed the two-dimensional structure of gratitude and the different predictive effects of these two dimensions on subjective well-being. To some extent, it broadens the understanding of the nature of gratitude and suggests that the two-dimensional structure of gratitude should be fully considered in future studies of gratitude.

Keywords: Cognitive gratitude, Affective gratitude, Subjective well-being, Longitudinal study

中小学教师领悟社会支持对工作绩效、工作满意度及睡眠质量的影响： 自我效能感和希望的链式中介效应

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摘要 中小学教师的心理健康状况不仅关系到自身的工作效能和生活质量，而且深刻影响学生的学习发展与身心成长。本研究结合职业健康心理学“工作要求—控制—支持”理论模型和积极心理学相关理论，探讨领悟社会支持、自我效能感、希望对中小学教师工作行为结果及生理心理健康状态的影响。研究共向 243 名中小学教师发放了问卷，采用社会支持评定量表（SSRS）、一般自我效能感量表（GSES）、成人特质希望量表（ADHS）、明尼苏达工作满意度问卷短式版（MSQ）、教师工作绩效量表及匹兹堡睡眠质量指数量表（PSQI）6 个量表。结果显示，女性教师的领悟社会支持度高于男性教师；年龄越大、教龄越长、学历越高、职称越高，教师的自我效能感、希望、工作绩效和工作满意度越高；领悟社会支持可正向预测中小学教师的工作绩效、工作满意度和睡眠质量，自我效能感和希望在这其中起着链式中介作用。本研究结果表明，领悟社会支持可以通过自我效能感和希望的链式中介效应对中小学教师的工作绩效、工作满意度和睡眠质量产生影响。采取一定措施提升中小学教师的社会支持、自我效能感和希望感，将有助于这一群体的身心健康和有效工作行为。

关键词 领悟社会支持，自我效能感，希望，工作绩效，工作满意度

The Effects of Primary and Secondary School Teachers' Perceived Social Support on Job Performance, Job Satisfaction and Sleep Quality: the Chain mediating Roles of Self-efficacy and Hope

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Abstract: The quality of primary and secondary school teachers' mental health is not only related to their own job performance and well-being, but also affects the learning development and mental health of students. This study combined the "job demand-control-support" model in occupational health psychology with positive psychology theories to explore the effects of perceived social support, self-efficacy, and hope on the job performance, job satisfaction and sleep quality of primary and secondary school teachers. 243 primary and secondary school teachers were tested with Social Support Rating Scale (SSRS), General Self-Efficacy Scale (GSES), Adult Hope Scale (ADHS), Minnesota Satisfaction Questionnaire (MSQ), Teacher Job Performance Scale and the Pittsburgh Sleep Quality Index Scale (PSQI). The results showed that female teachers had higher level of perceived social support than male teachers; Teachers who with higher age, longer teaching experience, higher educational background and higher professional title, had higher score of self-efficacy, hope, job performance and job satisfaction. Perceived social support can positively predict job performance, job satisfaction and sleep quality of primary and secondary school teachers, self-efficacy and hope play a chain mediating roles in this process. The results of this study indicate that perceived social support can influence the job performance, job satisfaction and sleep quality of primary and secondary school teachers through the chain mediating effects of self-efficacy and hope. Taking some measures to improve the social support, self-efficacy and hope of primary and secondary school teachers will contribute to their physical and mental health as well as their job performance.

Keywords: Perceived social support, Self-efficacy, Hope, Job performance, Job satisfaction

医护人员积极心理健康的网络分析

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摘要 提升积极心理健康对个体实现自我价值、有效应对日常压力、保持高效工作水准并为社会做出贡献具有重要意义。然而，积极心理健康是一个复杂的心理学概念。想要更有效的提升积极心理健康仍需对其有更深入的理解。本研究以医护人员为样本，使用网络分析法来探究其积极心理健康的网络结构及其核心项目，以期进一步理解医护人员积极心理健康并为其积极心理健康的提升提供重要的干预靶点。本研究对 420 名医护人员的沃里克-爱丁堡积极心理健康量表中文版项目进行正则化偏相关网络分析，尤其关注网络中各项目的预期影响和可预测性。使用软件 R 对网络进行统计分析和可视化。结果表明在积极心理健康网络中，项目“面对未来我很乐观”和“我感觉自己很有用”之间、“我能很好地处理问题”和“我的头脑一直都很清醒”之间以及“我一直都自我感觉良好”和“我一直都很自信”之间存在最强关联，其正则化偏相关系数分别为 0.41、0.39 和 0.39。项目“我感觉很愉快”的中心性程度最高，其预期影响为 1.62（z 分数）。项目预期影响的相关稳定性系数为 0.67，表明其具有足够的稳定性。本研究首次运用网络分析法分析医护人员积极心理健康的网络结构，结果表明积极情绪（愉快）是其积极心理健康的核心项目。以积极情绪（愉快）为优先的干预措施可能会更大程度地提升医护人员整体积极心理健康水平。

关键词 医护人员，积极心理健康，网络分析

Network analysis of positive mental health in healthcare workers

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Abstract: Improving positive mental health is of great significance for individuals to realize their abilities, cope with the normal stresses of life effectively, work productively and fruitfully, and make contributions to their community. However, positive mental health is a complex psychological construct. A better understanding of positive mental health is needed to effectively promote it. The present study aims to explore the network structure of positive mental health in healthcare workers and identify the core items to provide targets for related intervention. We used network analysis to explore the relations among items of Warwick-Edinburgh Mental Well-being Scale (Chinese version) in 440 healthcare workers. Specifically, we computed the expected influence and predictability for each item. Software R was used for statistical analysis and visualization. In the positive mental health network, we found three strongest edges were between “I have been feeling optimistic about the future” and “I have been feeling useful” (regularized partial correlation = 0.41), between “I have been dealing with problems well” and “I have been thinking clearly” (regularized partial correlation = 0.39), and between “I have been feeling good about myself” and “I have been feeling confident” (regularized partial correlation = 0.39). In addition, item “I have been feeling cheerful” had the highest expected influence in the network (z-scored = 1.62). The stability of node expected influence was adequately stable (correlation stability coefficient = 0.67). The present study is the first to investigate the relations among items of positive mental health in healthcare workers. Our findings indicate that “I have been feeling cheerful” had the highest expected in the network. Targeting “I have been feeling cheerful” may maximum the overall level of positive mental health in healthcare workers.

Keywords: Healthcare workers, Positive mental health, Network analysis

心理弹性和家庭关怀对绝经转变期女性心理困扰的影响： 基于多项式回归与响应面分析的探索

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摘要 背景 绝经转变期是女性经历生殖功能的衰退进而走向衰老的过程，在这期间女性心理困扰的发生率较高。心理弹性和家庭关怀可以分别从内外部角度影响绝经转变期女性的心理困扰程度，但二者是如何相互协调共同发挥作用，尚不明确。基于此，本研究旨在探讨心理弹性与家庭关怀如何相互作用，影响绝经转变期女性的心理困扰。**方法** 利用方便抽样法在山东省某地级市选取了 858 名正处于绝经转变期的中年女性进行问卷调查。调查工具包括一般资料调查表、弹性量表简化版(Connor-Davidson Resilience Scale, CD-RISC)、家庭关怀度指数量表(Family Care Degree Questionnaire, APGAR)和 Kessler 心理困扰量表(Kessler Psychological Distress Scale, K10)。采用 SPSS25.0 版本进行数据录入和分析，运用 RSA.3.0.30 插件进行多项式回归和响应面分析。**结果** 在“心理弹性-家庭关怀”匹配情形下，二者的联合效应与绝经转变期女性的心理困扰呈负向曲线关系（倒 U 形），“高-高”组合的绝经转变期女性的心理困扰程度不一定降低，反之亦然。在“心理弹性-家庭关怀”不匹配情况下，二者的联合效应与绝经转变期女性的心理困扰呈负向曲线关系（倒 U 形），随着“高-低”、“低-高”组合的内部差异加大，绝经转变期女性的心理困扰程度逐渐减小。**结论** 在未来针对绝经转变期女性的干预研究中，要实时关注个体心理弹性和家庭关怀的交互协调作用，灵活调整干预手段以达到资源利用最优化，从而更好地提升绝经转变期女性的心理健康水平。

关键词 心理弹性，家庭关怀，心理困扰，多项式回归，响应面分析

The Effect of Resilience and Family Care Match on Psychological Distress among Women in Menopausal Transition: An Investigation based on Polynomial Regression and Response Surface Analysis

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Abstract: **Background** Menopausal transition was a natural process from reproductive decline to aging for women. During this period, women presented a higher prevalence of psychological distress. Resilience and family care could affect psychological distress of women in the menopausal transition from internal and external perspectives, respectively. But it is unclear how they might be coordinated to exert the effect. Based on this, the goal of the present study was to investigate how resilience and family care interact with each other to influence psychological distress of women in the menopausal transition. **Methods** Convenience sampling method was used to select 858 women during the menopausal transition from a prefecture-level city in Shandong Province. All the participants completed questionnaires for socio-demographic information, 10-item Connor-Davidson Resilience Scale (CD-RISC), family care degree questionnaire (APGAR) and Kessler Psychological Distress Scale (K10). Data were entered and analyzed by using SPSS version-25. RSA was used for polynomial regression and response surface analysis. **Results** In the case of agreement between resilience and family care, the joint effect was a negative curve (inverted u-shaped) related to the psychological distress of women in the menopausal transition. In the cases of congruence, elevated level of psychological distress did not necessarily when resilience and family care were both high, and vice versa. In the case of disagreement between resilience and family care, the joint effect was a negative curve (inverted u-shaped) related to the psychological distress of women during the menopausal transition. In the cases of incongruence, with the increased of internal differences, the psychological distress among women in the menopausal transition gradually decreased. **Conclusion** Future intervention studies targeting women in menopausal transition should consider the coordinated actions of resilience and family care. And adjusting interventions flexibly to optimize the utilization of resources, so as to better improve the mental health of women in the menopausal transition.

Keywords: Resilience, Family care, Psychological distress, Polynomial regression, Response surface analysis

追求快乐还是追求意义：幸福动机和幸福感的交叉滞后分析

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摘要 追求幸福是人类行为的根本动机。幸福动机包括两种取向, 一种是享乐论动机, 追求当下的一种愉悦和享受; 一种是实现论动机, 追求个人能力的发展和人生的完满。以往研究发现, 幸福动机与幸福感存在显著相关, 但是缺乏二者因果性的证据。一方面, 幸福感的引擎模型认为, 输入成分(如特质)会通过过程成分(影响个体进行选择的内状态)对结果成分(幸福感结果)产生影响。而动机作为影响个体选择的内状态, 可能会对幸福感结果产生影响。从自我决定理论出发, 个体有内在的成长倾向以及基本的心理需求, 而实现论动机相比于享乐论动机, 更可能促使个体去满足心理需求, 进而提升幸福感。另一方面, 自我效能感理论提出, 人们相信自己有能力完成目标, 这决定了他们的动机和行为, 而这种能力又会受到成败经验的影响。因此, 过去的幸福感作为一种积极的体验, 可能会通过影响个体的信念从而对幸福动机产生影响。为了检验以上假设, 本研究使用问卷调查法, 以486名大学生为对象, 采用5个月的纵向设计, 考察幸福动机与幸福感的纵向因果关系。交叉滞后模型分析发现, 在控制了自回归路径后, 实现论动机对随后的幸福感预测作用显著($\beta_{\text{享乐论幸福感}} = -0.132, p < 0.05, \beta_{\text{实现论幸福感}} = 0.198, p < 0.01, \beta_{\text{社会幸福感}} = 0.219, p < 0.001$), 但享乐论动机对随后的幸福感预测作用以及幸福感对随后的两种幸福动机的预测作用均不显著($ps > 0.05$)。此外, 在控制了性别、年龄、主观社会地位之后, 结果无显著变化。本研究结果为幸福感的引擎模型以及自我决定理论提供了证据, 强调了实现论动机在幸福感中的重要作用, 这对幸福感的提升具有一定的启示。

关键词 幸福动机, 幸福感, 交叉滞后

Pursuing Pleasure or Meaning: A Cross-lagged Analysis of Happiness Motives and Well-Being

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Abstract: The pursuit of well-being is the fundamental motive of human behavior. There are two types of happiness motives, hedonic motives and eudaimonic motives. Hedonic motives refer to seeking pleasure and enjoyment, while eudaimonic motives are defined as seeking to try their best to use and develop themselves. Previous studies have found a significant correlation between happiness motives and well-being, but lack causal evidence. On the one hand, the engine model of well-being suggests that the input elements (e.g., traits) could affect the outcomes (i.e., well-being outcomes) through the process variables (i.e., internal states that influence individuals' choices). Motives, as an internal state that affects choices, may influence the well-being outcomes. From the perspective of self-determine theory, people have an internal trend to grow, and have inherent psychological needs. Eudaimonic motives, rather than hedonic motives, are more likely to promote individuals to meet psychology needs, and enhance well-being. On the other hand, according to self-efficacy theory, people believe that they are capable of certain tasks, which determines how they motivate themselves and behave. And this kind of belief could be influenced by their past experiences of success and failure. Well-being in past time, as an experience of positive outcomes, may affect people's belief and thus influence their happiness motives. To test the above hypotheses, this study used a questionnaire survey to investigate the longitudinal causal relationship between happiness motivation and well-being among 486 college students. The cross-lagged model analysis showed that after controlling the autoregressive path, the eudaimonic motives could significantly predict the subsequent well-being ($\beta_{\text{hedonic well-being}} = 0.132, p < 0.05$, $\beta_{\text{eudaimonic well-being}} = 0.198, p < 0.01$, $\beta_{\text{social well-being}} = 0.219, p < 0.001$), but the hedonic motives could not significantly predict the subsequent well-being, and the well-being could not significantly predict the subsequent two kinds of happiness motives ($ps > 0.05$). After controlling gender, age, and subjective social status, there were no significant differences. These results provide evidence for the engine model of well-being and self-determine theory, and emphasize the important role of eudaimonic motives in well-being, which has enlightenment for the improvement of well-being.

Keywords: Hedonic and eudaimonic motives, Well-being, Cross-lagged

4.34 康复心理学专业委员会

(1) “康复心理学专业委员会”口头报告分场 1

正念干预对残疾人康复的效果及其影响因素：系统综述和 meta 分析

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摘要 目的: 康复是残疾人实现权利的基本条件和首要前提, 大量临床研究证实了正念对残疾人的身心康复效果。但是, 目前正念干预对于残疾人康复的效果大小尚无定论, 其次, 迄今为止, 正念干预在东西方文化背景下对于残疾人的效果是否相同也不明确。因此, 本研究参考 Meta 分析研究优先报告项目-方案, 将东西方国家在残疾人正念干预领域的研究均纳入分析, 系统考察正念干预对残疾人的干预效果, 并探讨潜在调节因素及其作用程度。方法: 检索英文数据库(Web of Science、EBSCO、APA PsycInfo、Psychology and Behavioral Sciences Collection、MEDLINE), 与中文数据库(中国知网 CNKI 数据库、万方数据知识服务平台), 获取经过评审的相关论文全文。文献时间跨度设定为 2010 年 1 月 1 日至 2020 年 11 月 30 日, 检索时间为 2020

年12月10日。由2名研究者独立筛选文献、提取资料并评价纳入研究的质量,文献质量评估采用Jadad量表。采用Review Manager 5.3软件进行Meta分析,使用标准化均数差Cohen's d作为实验组(正念组)与对照组(非正念组)的效果量。采用漏斗图法、Egger线性回归法和Begg秩相关法进行发表偏倚检验。基于循证医学理念,从被试特征、干预特征和研究特征这三个方面关注可能存在的调节变量。结果:最终纳入东西方国家实证研究共15项(1065名被试)。64项结局指标评价了正念干预对残疾人康复的影响,其合并结果间统计学异质性高($p<0.00001$; $I^2=73\%$)。效果量评价结果显示,正念干预对残疾人康复的整体效果量显著 $d=0.51$, 95% CI [0.38, 0.63], $p<0.00001$ 。漏斗图显示研究多集中在顶部,且左右顶部对称性良好;Egger线性回归检验结果显示,截距为0.79($p=0.151>0.5$),95% CI [-0.30, 1.88]包含0;Begg秩相关检验结果显示, $Z=1.88<1.96(p=0.060>0.5)$,显示研究不存在发表偏倚。亚组分析结果显示干预周期($p=0.03$, $I^2=79\%$)和家庭练习($p=0.03$, $I^2=78\%$)显著调节残疾人的康复效果。结论:正念干预对残疾人的康复具有中等效果;康复效果受干预周期和家庭练习的影响。

关键词 正念干预, 残疾人, 康复, 影响因素; 系统综述

Effectiveness of mindfulness training on rehabilitation for people with disabilities: a systematic review and meta-analysis

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Abstract: Objective: Rehabilitation is the basic condition and primary prerequisite for the disabled to realize their rights. A large number of clinical studies have confirmed the effect of mindfulness on the physical and psychological rehabilitation of the disabled. However, at present, the effect of mindfulness training is still inconclusive. Secondly, it is not clear whether mindfulness training has the same effect in the context of Eastern and Western cultures. Therefore, this study aims to systematically review the effect size of mindfulness training on people with disabilities' rehabilitation. **Methods:** Web of Science, EBSCO, APA PsycInfo, Psychology and Behavioral Sciences Collection, MEDLINE, CNKI, and Wanfang were electronically searched to collect studies on the current status of people with disabilities' rehabilitation from January 1st, 2010 to November 31th, 2020. Two reviewers independently screened literature, extracted data and assessed the qualities of included studies. Then, meta-analysis was performed by using Review Manager 5.3 software. The funnel plot method, Egger linear regression method and Begg rank correlation method were used for publication bias test. Based on the concept of evidence-based medicine, it pays attention to the possible moderating variables from three aspects: participant characteristics, intervention characteristics and research characteristics. **Results:** Fifteen researches were revealed in our analyses from both Eastern and Western countries ($k=64$ samples, $n=1065$ participants). The results of meta-analysis showed that mindfulness training for people with disabilities' rehabilitation was shown to be significant efficacious ($d=0.51$, 95% CI [0.38, 0.63], $p<0.00001$). The funnel plot showed that the researches were mostly concentrated at the top, and the left and right tops were symmetrical; Egger linear regression test results showed that the intercept was 0.79 ($p=0.151>0.5$), 95% CI [-0.30, 1.88] contained 0; Begg rank correlation test result showed that $Z=1.88<1.96(p=0.060>0.5)$. Subgroup analysis showed that training time ($p=0.03$, $I^2=79\%$) and home practice ($p=0.03$, $I^2=78\%$) significantly moderated the effect of mindfulness training. **Conclusion:** Mindfulness training for people with disabilities' rehabilitation is efficacious with a medium effect, which is influenced by training time and home practice.

Keywords: mindfulness training, people with disabilities, rehabilitation, influencing factors, systematic review

4.35 校园欺凌与暴力防治专业委员会

(1) “校园欺凌与暴力防治专业委员会”口头报告分场 1

学校氛围调节马基雅维利主义人格与欺负行为的关系： 认知机制与情绪机制

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摘 要 马基雅维利主义是一种以操纵他人為自己谋利的人格倾向。马基雅维利主义人格与欺负行为间存在显著正向关联。然而, 鲜有研究考察马基雅维利主义人格影响欺负行为的作用机制。积极的学校氛围下, 师生关系和生生关系融洽、学生对学校有强烈的归属感, 学校对不接纳的行为有清晰公平的规则。这些特征可能会促使马基雅维利主义者认识到欺负事件的严重性, 产生对受欺凌者的同情, 进而减少其欺负行为。本研究以 1366 名 5~8 年级儿童青少年 (平均年龄 13.10 ± 1.26 岁, 女生 48.6%) 为研究对象, 考察学校氛围如何以及为何调节马基雅维利主义人格与欺负行为间的关系。采用自我报告方法对马基雅维利主义人格、学校氛围、感知到的欺负事件的严重性、对受欺负者的同情和欺负行为进行测量。结果发现, 学校氛围能够缓冲马基雅维利主义人格与欺负行为间的关系。在积极的学校氛围中, 马基雅维利主义者更少表现出的欺负行为。积极的学校氛围会通过增加马基雅维利主义者对受欺负者的同情, 进而减少其欺负行为, 但个体对欺负事件的严重性的认知的中介作用不显著。这些研究结果表明, 在校园欺凌预防与干预项目中, 要关注具有马基雅维利主义人格的学生, 同时注重改善学校氛围, 训练和提升学生对受欺负者的同情能力。

关键词 马基雅维利主义, 欺负行为, 学校氛围, 认知机制, 情绪机制

School climates moderated the association between Machiavellianism and bullying in preadolescence:

The cognitive and emotional mechanisms

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Abstract: Machiavellianism is a personality characterized by the practice of manipulating others for self-interest. Studies have demonstrated that Machiavellianism was positively associated with bullying behavior. However, less is known about potential mechanisms accounting for the Machiavellianism-bullying association. Positive school climates include high quality and supportive interpersonal relationships, a strong sense of belonging to school, and clear and fair school rules for unacceptable behavior. Such features might make Machiavellians realize the seriousness of bullying behavior and feel sympathetic toward victims, there reducing bullying behavior of Machiavellians. The current study aims to investigate how and why school climates moderated the association between Machiavellianism and bullying behavior, and examine the its cognitive mechanism (perceived seriousness of bullying behavior) and emotional mechanism (sympathy toward victims). Participants were 1366 students from grade 5 to grade 8 ($M_{age} = 13.10 \pm 1.26$ years, 48.6% girls). Machiavellianism, bullying behavior, school climate, sympathy toward victims and perceived seriousness of bullying was assessed via self-report. Results from mediated moderating model revealed that school climates moderated the positive association between Machiavellianism and bullying behavior. Specifically, Machiavellians were less likely to engage in bullying behavior in schools with positive school

climates. Positive school climates could mitigate the level of Machiavellians' bullying behavior through enhancing their sympathy toward victims, but not through increasing their perceived seriousness of bullying incidents. The findings suggest that antibullying program should pay more attention to students with Machiavellianism personality trait, creating positive school climates, and to enhance students' sympathy toward victims.

Keywords: Machiavellianism, bullying behavior; school climate, cognitive mechanism, emotional mechanism

受欺凌对主动性、反应性攻击的影响：敌意归因和愤怒冗思的作用

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摘要 欺凌现象在青少年中普遍存在, 受欺凌者会产生一系列心理社会适应问题。根据一般压力理论, 攻击行为是个体由受欺凌经历所引起的不良应对策略。已有研究揭示了青少年受欺凌与攻击行为间的关系, 但鲜有研究考察二者关系的作用机制。此外, 社会信息加工模型强调了敌意归因对攻击行为的预测作用。而综合认知模型强调了敌意归因和愤怒冗思对攻击的预测, 且敌意归因先于愤怒冗思。因此, 敌意归因和愤怒冗思可能在受欺凌与攻击行为间存在链式中介作用。此外, 攻击行为可分为主动性攻击和反应性攻击, 受欺凌对不同类型的攻击行为的影响及其潜在认知机制可能存在差异。本研究以 494 名七年级学生 (平均年龄 13.38 ± 0.50 岁, 男生 247 人) 为研究对象进行为期 1 年的追踪研究, 考察了受欺凌与青少年主动性、反应性攻击间的关系, 以及敌意归因和愤怒冗思在其中的链式中介作用。受欺凌、敌意归因、愤怒冗思及主动性反应性攻击行为均采用自我报告。结果发现: (1) 受欺凌显著正向预测随后的反应性攻击, 不能显著预测随后的主动性攻击; (2) 敌意归因在受欺凌与主动性/反应性攻击间存在中介作用, 愤怒冗思在受欺凌与主动性/反应性攻击间存在中介作用; (3) 敌意归因和愤怒冗思在受欺凌与主动性/反应性攻击间起链式中介作用。结果表明, 青少年的受欺凌经历可能会对其认知过程产生一定的影响进而使其产生攻击行为, 因此要注重对受欺凌青少年的认知干预, 对于防止其从受侵害者变为侵害者具有重要启示。

关键词 受欺凌, 敌意归因, 愤怒冗思, 主动性攻击, 反应性攻击

The Association between Bullying Victimization and Proactive/Reactive Aggression in Adolescence: The Role of Hostile Intent of Attribution and Angry Rumination

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Abstract: Bullying is a common phenomenon among adolescents, and the victims of bullying have a series of adverse psychosocial adjustment problems. According to the general stress theory, aggressive behavior was an individual's maladaptation coping strategy evoked by the bullying experience. Existing research has found links between bullying victimization and aggressive behavior among adolescents, but few research has examined the mechanisms. The social information processing theory emphasized that hostile intent of attribution predicted aggressive behavior, and the integrative cognitive model emphasized that hostile intent of attribution and angry rumination predicted aggressive behavior, and hostile intent of attribution preceded angry rumination. Therefore, hostile intent of attribution and angry rumination may have a chain mediating effect between bullying victimization and aggression. In addition, aggression was divided into proactive aggression and reactive aggression. The effects of bullying victimization on different types of aggressive behavior and underlying cognitive mechanisms may be different. The current study was to explore the association between bullying victimization and proactive/reactive aggression, and the mediating role of hostile intent of attribution and angry rumination. 494 teenagers of Grade 7 ($M_{age} = 13.38 \pm 0.50$ years; 247 boys) were investigated

for a one-year longitudinal study. The results showed that: (1) Bullying victimization was positively predicted subsequent reactive aggression but not proactive aggression; (2) Hostile intent of attribution mediated between bullying victimization and proactive/reactive aggression, and angry rumination mediated between bullying victimization and proactive/reactive aggression; (3) Hostile intent of attribution and angry rumination played a chain of mediating roles between bullying victimization and proactive/reactive aggression. The results showed that adolescents' experience of being bullied may influence their cognitive process, which leads to aggressive behaviors. Therefore, it is important to pay attention to the cognitive intervention of adolescents who are bullied, which has important implications for preventing them from victim to victimizer.

Keywords: bullying victimization, hostile intent of attribution, angry rumination, proactive aggression, reactive aggression

教师干预欺负的意愿：个体因素与情境因素的作用

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摘要 教师是欺负预防与干预工作的主要实施者。教师积极干预欺负事件的意愿能显著降低欺负、受欺负的发生率。以往研究大多仅关注教师干预欺负的意愿对学生欺负、受欺负的影响，较少有研究探讨影响教师干预欺负的意愿的个体和情境因素及其作用机制。根据社会生态模型和旁观者干预模型的观点，学校氛围和教师对欺凌的归因方式，可能通过影响教师干预欺凌的效能感，进而影响其干预欺凌的意愿。因此，本研究构建一个有调节的中介模型，检验教师干预欺负的效能感在教师的归因方式（对欺负事件的内部归因和外部归因）和干预欺负的意愿间的中介作用，及学校氛围的调节作用。本研究选取了全国7个省市的36所中小学，总计929名教师进行调查（平均年龄 37.8 ± 8.8 岁，教龄 14.6 ± 9.8 年，女教师80.1%）。结果表明：（1）在控制了性别、受教育水平、教龄后，教师的内部归因能够负向预测教师的干预意愿，外部归因正向预测干预意愿；（2）教师干预欺负的效能感在教师的内、外归因方式和干预意愿间均起中介作用；（3）教师感知到的学校氛围调节了“内部归因—效能感”的关系，即教师感知到积极的学校氛围能够削弱内部归因对干预意愿的阻碍作用；此外，教师感知到的学校氛围还调节了“效能感—干预意愿”间的关系，即当教师感知到的积极学校氛围水平较低时，效能感对干预意愿的促进作用增强。这些研究结果表明，校园欺凌预防与干预项目中，要注重营造良好的学校氛围，引导教师形成恰当的归因方式，帮助其建立干预欺凌效能感。

关键词 内部归因，外部归因，自我效能感，干预欺负的意愿，学校氛围

Teachers' willingness to intervene bullying situation: The role of the individual characteristic and contextual factors

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Abstract: Teachers are one of the main implementer of bullying prevention and intervention work in schools, whose positive willingness to intervene bullying can significantly decrease the prevalence of bullying perpetration and victimization among students. The majority of previous studies have focused on the impact of teachers' willingness to intervene bullying on bullying perpetration and victimization, however, fewer studies have looked at how individual and contextual characteristics of teachers relate to their willingness to intervene bullying, as well as the mediating and moderating mechanisms underlying this relation. With reference to social ecology model and bystander intervention model, teachers' perceived school climate, as well as their attribution (internal or external attribution) of bullying episode may be associated with their willingness to intervene via teachers' self-efficacy. Therefore, the present study

constructed a moderated mediation model to examine whether teachers' attribution (internal or external) of bullying episode is indirectly related to teachers' willingness to intervene through self-efficacy, as well as the moderating role of teachers' perceived school climate on these paths. A total of 929 teachers from six provinces across China (mean age= 37.8±8.8, teaching age= 14.6±9.8, 80.1% female teachers) participated in this study. Using structural equation model to control the nested effect of school level factors, the results showed that: (1) After controlling for gender, educated level and teaching age, internal attribution had a negative impact on willingness to intervene, and external attribution had a positive impact on willingness to intervene. (2) Both impact of internal and external attribution on willingness to intervene were mediated by teachers' self-efficacy. (3) Teachers' perceived school climate moderated the relation between internal attribution and self-efficacy, specifically, the negative effect of internal attribution on self-efficacy was attenuated by the positive perception of school climate. In addition, teachers perceived school climate moderated the relationship between self-efficacy and willingness to intervene, specifically, the positive effect of self-efficacy on willingness to intervene was stronger for teachers with less perception of positive school climate. As for school-based prevention and intervention programs, these results underscored the importance of creating positive school climate, leading teachers to attribute bullying episode appropriately and helping them enhance self-efficacy to intervene bullying.

Keywords: internal attribution, external attribution, self-efficacy, willingness to intervene, school climate

班级师生关系调节学生反欺负态度与欺负行为的关系： 一项多水平分析

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摘要 个体反欺负态度是影响欺负行为的重要社会认知因素之一。然而，已有研究发现，一些具有较强反欺负态度的儿童也可能欺负他人。根据计划行为理论，个体态度与行为的关系会受到其所处情境的影响。教师是影响学生心理社会发展的重要情境因素。当拥有较强反欺负态度的学生与教师建立温暖、信任的师生关系时，会对其行为产生更强的控制感，减少自身欺负行为。但目前尚未有研究考察师生关系对学生反欺负态度与欺负行为关系的影响。此外，已有关于师生关系与欺负行为关系的研究对个体感知的师生关系和班级整体水平的师生关系未加区分，这不仅会导致统计推断的偏差，还会导致理论建构方面的问题。因此，本研究采用多水平模型考察学生反欺负态度对个体欺负行为的影响，以及个体感知和班级水平的师生关系在其中的调节作用。本研究被试来自46个班级的1725名5~8年级学生（男生940人，女生785人，平均年龄12.78±1.14岁），结果发现：（1）学生反欺负态度能显著负向预测学生的欺负行为；（2）个体感知的师生关系能显著负向预测学生的欺负行为；（3）班级水平师生关系在学生反欺负态度与欺负行为之间起调节作用，在学生与教师间具有温暖、信任的情感联结的班级中，学生反欺负态度与欺负行为间存在的负向关联，而在师生关系较差的班级中反欺负态度与欺负行为无显著关联。这一结果表明，校园欺负的有效防治不仅需促进学生的反欺负态度，而且需注重与学生建立温暖、信任的关系。

关键词 反欺负态度，欺负行为，师生关系

Teacher-student Relationship on Class Level Moderated the Relation Between Students' Anti-bullying Attitudes and Bullying Behavior: A Multilevel Analysis

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Abstract: It is well recognized that student's anti-bullying attitude is one of the detrimental social cognitive factors associated with individual bullying. However, previous studies have demonstrated that some children with strong anti-bullying attitude are still bullying others. According to planned behavior theory, the connection between individual attitude and behavior could be affected by context they are in. Teachers are essential contextual factors associated with students' psychosocial development. Students with strong anti-bullying attitude will have a greater sense of control, which in turn reduce their bullying, when they build a warm and trust relationship with their teacher. Little research has investigated the moderating role of teacher-student relationship between students anti-bullying attitude and bullying behavior. Further, existing studies regarding the connection between teacher-student relationship and bullying behavior didn't distinguish between individual perceived teacher-student relationship and the overall teacher-student relationship of class, which could not only generate statistical inference bias, but also resulted in the issue of theoretical construction. Therefore, the present study investigated the effect of student's anti-bullying attitude on individual bullying behavior, as well as the possible moderation effect of the teacher-student relationship (both on individual and class level) between students' attitude and bullying behavior. A total of 1725 students from fifth and eighth grade (940 boys and 785 girls, mean age= 12.78± 1.14) were investigated in this study. Using multilevel model, the results showed that : (1) Student's anti-bullying attitude were negatively associated with peer-reported bullying behavior. (2) Students were less likely to bully when they perceived a positive teacher-student relationship. (3) Teacher-student relationship at the class level moderated the association between anti-bullying attitude and individual bullying behavior. Specifically, students' anti-bullying attitude were negatively associated with individual bullying in classroom where students had a warm and trust emotional connection with teachers, while this relation was not significant in classroom with negative teacher-student relationship. The results of this study indicated that the effectiveness of school bullying prevention and intervention should not only help students to promote anti-bullying attitude, but also set up a warm and trust teacher-student relationship.

Keywords: anti-bullying attitude, bullying behavior, teacher-student relationship

中国初中生受欺凌状况及学校背景因素的城乡差异

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摘要 中国校园欺凌状况及其影响因素存在一定的城乡差异, 明确不同区域受欺凌的特点, 并进一步探明其影响因素, 对于学校的反欺凌计划实施和政策制定具有重要意义。本研究考察了中国学生受欺凌状况的城乡差异, 并基于生态系统理论探究学校背景因素(微观水平变量: 教师保护、班级环境; 中层水平变量: 家校沟通; 外层水平变量: 学校管理、学校德育资源)对于受欺凌的影响。分析包括 868 所中学的 13046 名八年级学生和 6196 名班主任及各学校的校长。描述统计结果显示, 农村学生的受欺凌水平比城市学生高, 除学校管理外, 不同水平的学校背景因素均存在显著城乡差异。多层次分析的结果表明, 微观水平变量(教师保护、班级环境)、中层水平变量(家校沟通)均显著预测个体受欺凌水平, 且存在城乡一致性, 而外层水平各变量(学校管理、学校德育资源)影响不同。在农村学校中, 学校管理显著预测受欺凌水平; 学校德育资源对受欺凌水平预测作用在城市学校和农村学校中均不显著。结果表明不同层次对学校背景因素对个体受欺凌水平影响不同, 且部分变量存在城乡差异, 在进行校园欺凌相关政策制定和计划实施时需考虑其地域差异。

关键词 校园欺凌, 初中生, 城乡差异

The Association of School Contextual Variables with Bullying Victimization: Comparison between Urban and Rural

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Abstract: There are some urban-rural differences in the characteristics and factors of campus bullying in China. Clarifying the characteristics of bullying victimization in different regions and examining its related factors are of great significance for anti-bullying plans and policy-making. This study investigated the urban-rural differences of bullying victimization among Chinese students and the relationship of school contextual factors (micro-level factors: teacher protection, class environment; meso-level factor: home school communication; exo-level factors: school management, school moral education resources) with bullying victimization based on ecosystem theory. The sample included 13046 eighth grade students, 6196 head teachers and principals of 868 middle schools. Descriptive statistics show that the bullying victimization level of rural students is higher than that of urban students. Except for school management, there are significant urban-rural differences in school contextual factors at different levels. The results of multi-level analysis show that micro-level factors (teacher protection, class environment) and meso-level factor (home school communication) significantly predict the level of individual bullying victimization, and there is consistency between urban and rural areas, while the effects of exo-level factors (school management and school moral education resources) are different. In rural schools, school management significantly predicts the level of bullying victimization. The predictive effect of school moral education resources is not significant in urban schools and rural schools. The results show that school contextual factors at different levels have different effects on bullying victimization, and some factors have urban-rural differences. Regional differences should be considered when making policies and implementing plans related to campus bullying.

Keywords: Campus bullying, Junior middle school students, Urban-rural differences

(2) “校园欺凌与暴力防治专业委员会”口头报告分场 2

儿童到青少年早期网络欺负和被欺负的类别与转换： 风险和保护因素的作用

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摘要 随着科技的发展, 儿童有着越来越多的机会接触网络。有学者指出, 年龄较小的儿童并不能避免卷入网络欺负和被欺负, 也不能免受网络欺负和被欺负的不良影响。此外, 童年到青春期的转换期可能是网络欺负和被欺负发展的一个关键易感期。然而, 过往对网络欺负和被欺负的研究主要集中在青少年群体, 尚缺乏对儿童群体中网络欺负的关注。因此, 本研究计划使用 4 波段纵向测量, 以 6 个月为时间间隔, 探究从儿童到早期青少年网络欺负和被欺负的异质性亚组, 及亚组间的转换模式。共 4326 名中国儿童 (44.6%是女生, $M_{age}=9.94$) 完成了自我报告的问卷调查。本研究目的包括: (1) 使用潜在剖面分析探究各个波段儿童和早期青少年网络欺负和被欺负的亚组; (2) 使用潜在转换分析探究不同网络欺负亚组间随时间的转换模式; (3) 探究网络欺负亚组和转换中的多系统风险和保护因素, 具体包括: 自我控制, 感知父母情感温暖、感知教师

支持、同伴友谊质量、抑郁症状、家庭虐待、同伴攻击和受害、教师心理虐待。研究发现,在每个波段都识别出3个网络欺负亚组:无卷入者、网络被欺负者、网络欺负-被欺负者。网络欺负和被欺负者的流行率从童年中期到童年晚期下降,但在童年晚期到青少年早期有略微上升。总体而言,儿童中的网络欺负并不稳定,但是从童年到青春早期,网络被欺负者和网络欺负-被欺负者的稳定性一直在上升。同伴攻击、自我控制、家庭虐待是网络欺负-被欺负组的稳定预测因素,同时,友谊质量、教师心理虐待对网络欺负-被欺负组的预测作用也有发现但并不稳定。同伴受害、家庭虐待和抑郁症状是网络被欺负者的稳定预测因素,同时,同伴攻击和友谊质量的预测作用也有发现但并不稳定。此外,研究还发现了一些对网络欺负亚组间转换的显著预测作用。

关键词 网络欺负, 风险因素, 保护因素, 儿童与早期青少年, 潜在转换分析

Profiles and Transitions of Cyberbullying Perpetration and Victimization from Childhood to Early Adolescence: Risk and Protective Factors

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Abstract: Children are having more access to the Internet these days. While studies on cyberbullying mainly focused on adolescents, young children are not immune from cyberbullying. Moreover, the childhood to adolescence transition might be a potential vulnerable period for cyberbullying development. The current longitudinal study explored the profiles and transitions of cyberbullying involvement from childhood to adolescence, along with its multisystemic risk and protective factors. A total of 4326 Chinese children (44.6% female, $M_{age} = 9.94$) participated in self-report assessments at four time points with six-month intervals. Cyberbullying profiles were identified using latent profile analysis and its transitions were examined using latent transition analysis. Multisystemic predictors were tested, including self-control, perceived parental warmth, perceived teacher support, friendship quality, depressive symptoms, family abuse, peer victimization, peer aggression, and, psychological maltreatment by teacher. At all four time points, three cyberbullying profiles were identified: cyberbully-victims, cybervictims and non-involved children. The prevalence rate of cyberbullying decreased from middle to late childhood and then increased at the transition to early adolescence. While cyberbullying involvement seemed unstable during this period, the stability of cyberbullying involved children kept increased. Peer aggression, self-control, and, family abuse were stable predictors for cyberbully-victims, while the significant predictive effects of friendship quality and psychological maltreatment by teacher were only observed at the first two time points. Peer victimization, family abuse and depressive symptoms were stable predictors for cybervictims, while several unstable predictive effects of peer aggression and friendship quality were also observed. Meanwhile, several predictive effects in cyberbullying transitions were found.

Keywords: Cyberbullying, Risk factors, Protective factors, Children and Early adolescents, Latent transition analysis

童年中期到青少年早期教师心理虐待和同伴侵害的关系: 抑郁和同伴攻击的中介作用

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摘要 教师心理虐待和同伴侵害是广泛影响中国及世界其他地区严重的全球性公共卫生问题,但是针对教

师心理虐待与同伴侵害之间关系的研究较少。因此本研究旨在探讨童年中期到青少年早期教师心理虐待与同伴侵害之间的交叉滞后关系，以及抑郁和同伴攻击在二者之间的中介作用。本研究采用整群抽样法抽取 4945 名小学生为被试（平均年龄 9.92 ± 0.73 岁，男生 2621 人）自 3 年级追踪至 6 年级，通过纵向交叉滞后模型和随机截距交叉滞后模型，考察了教师心理虐待与同伴侵害间的双向关系以及抑郁和同伴攻击在二者之间的中介作用。结果发现，（1）在交叉滞后模型中，教师心理虐待和同伴侵害均可相互预测；但在随机截距交叉滞后模型中仅同伴侵害可以预测教师心理虐待。（2）在交叉滞后模型中，抑郁在教师心理虐待和同伴侵害之间起中介作用；而在随机截距交叉滞后模型中，仅同伴侵害可以通过抑郁影响教师心理虐待。（3）无论是交叉滞后模型还是随机截距交叉滞后模型，同伴攻击在教师心理虐待和同伴侵害关系之间起中介作用。这些结果表明，童年中期至青少年早期教师心理虐待与同伴侵害之间符合同伴驱动模型，即同伴侵害对随后的教师心理虐待具有更明显预测作用。此外，同伴侵害会通过抑郁增加教师心理虐待的风险。该结果说明需关注儿童青少年的教师心理虐待与同伴侵害经历，以及在此过程中其心理健康问题（如抑郁），并及时采取干预措施避免儿童青少年陷入同伴侵害与教师心理虐待的暴力循环之中。

关键词 教师心理虐待，同伴侵害，抑郁，同伴攻击，纵向关系

Transactional Associations Between Psychological Maltreatment by Teachers and Peer Victimization from Middle Childhood to Early Adolescence: Depressive Symptoms and Peer Aggression as Mediators

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Abstract: This study examined the transactional associations between psychological maltreatment by teachers (PMT) and peer victimization, and the mediating roles of depressive symptoms and peer aggression from middle childhood to early adolescence, using a five-wave longitudinal design. A total of 4945 Chinese students from Grades 3 and 4 (Mage = 9.92 years, 53% boys) completed a packet of measures on 5 occasions at 6-month intervals. After controlling the students' gender, cross lagged panel models (CLPMs) and random-intercept cross-lagged panel models (RI-CLPMs) indicated that: (a) CLPMs showed bidirectional associations between PMT and peer victimization. However, RI-CLPMs only provided support for the negative effect of PMT on peer victimization; (b) PMT indirectly predicted peer victimization via depressive symptoms and vice versa in CLPMs. However, only peer victimization indirectly predicted PMT via depressive symptoms in RI-CLPMs; (c) both in CLPMs and RI-CLPMs, peer aggression had no mediating effect between PMT and peer victimization. These findings highlight the peer driven path (i.e., peer victimization affects PMT via depressive symptoms) of negative teacher-student interpersonal interaction in the school environment, and that it is beneficial to distinguish between between-person and within-person effects in research informing the development of prevention and intervention programs.

Keywords: Psychological maltreatment by teachers, Peer victimization, Depressive symptoms, Peer aggression, Longitudinal associations

社会排斥对合作行为的影响：内外群体身份的调节作用以及年龄差异

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摘要 社会排斥是指个体被他人或群体拒绝，从而使归属需求等受到阻碍的现象。社会排斥影响个体的合作行为，且其作用方向尚未获得一致性研究结论。社会排斥通常会使被排斥者产生敌意，从而降低其合作行为；截然相反的结果显示，社会排斥能够激发被排斥者获得归属感的动机，进而增加其合作行为。合作对象的内外群体身份可能是缓和这一矛盾性结果的重要因素。遭到内群体还是外群体成员排斥所引发的结果可能

不同,被排斥后与内、外群体成员的合作行为动机强度也可能存在差异。鉴于此,本研究旨在探究内外群体身份在社会排斥影响合作行为中的调节作用,并进一步探究儿童和成人的年龄段差异。本研究采用颜色方块估计任务分组,采用线上抛球游戏(Cyberball)操纵社会排斥,共分为三个子研究。子研究一以61名小学生和69名大学生为被试,采用2(排斥条件:排斥组、对照组) $\times$ 2(年龄:儿童、成人) $\times$ 3(合作对象:内群体、外群体、未知群体)混合实验设计,考察社会排斥对合作行为的影响以及合作对象内外群体身份的调节作用和年龄差异。子研究二和三各自以129名(65名小学生;64名大学生)和146名(67名小学生;79名大学生)学生为被试,分别考察内群体和外群体互动条件下,社会排斥对合作行为的影响。结果显示,1.不区分内外群体时,被排斥儿童的合作行为显著低于对照组,成人的合作行为与对照组无显著差异;2.区分内外群体时,被排斥者与外群体、未知身份成员的合作行为显著更低,但与内群体成员的合作行为无显著差异;3.个体被外群体成员排斥时,被排斥成人与外群体成员的合作行为显著降低,与内群体成员的合作行为显著增加;被排斥儿童与内、外群体成员的合作水平均显著降低;4.个体被内群体成员排斥时,被排斥成人与外群体成员的合作行为显著增加,与内群体成员的合作行为无显著变化;被排斥儿童与内、外群体成员的合作行为均显著降低。内外群体身份、年龄在社会排斥与合作行为关系上的调节作用有助于深入了解合作行为的发生发展机制。

关键词 社会排斥,合作行为,内外群体,儿童,大学生

The Age Differences of the Moderation Effect of Group Identity between Social Exclusion and Cooperative Behavior

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Abstract: Social exclusion refers to the phenomenon and process in which belonging and social relationship are threaten due to being excluded or rejected by a group or others. Social exclusion affects people's cooperative behavior, but the direction of its influence has not been confirmed. On the one hand, social exclusion can make the excluded people hostile and reduce their cooperative behavior. On the other hand, the opposite research results show that social exclusion can stimulate the motivation of the excluded people to obtain a sense of belonging and then increase their cooperative behavior. The internal and external group identity of the partners may be an important factor to mitigate the contradictory results. The results of being excluded by in-group members or out-group members may be different, and the motivation intensity of cooperative behavior with in-group members and out-group members after being excluded may also be different. In view of this, this study aims to explore the moderating role of group identity in the effect of social exclusion on cooperative behavior, and to further explore the age difference between children and adults. This study was divided into three studies. Participants were divided into groups by color square estimation task, and then manipulated the sense of exclusion by using Cyberball paradigm to investigate the differences of individuals' cooperative behaviors in public goods games under different conditions. In the first study, 61 primary school students and 69 college students participated in the experiment. To investigate the effect of social exclusion on individual cooperative behavior and the moderating role of partner group identity and age differences, the 2 (exclusion condition: exclusion group, control group) $\times$ 2 (age: children, adult) $\times$ 3 (partner group identity: in-group, out-group, unknown group) mixed experimental design was used. Studies II and III were selected with 129 (65 primary school students; 64 college students) and 146 (67 primary school students; 79 college students) students to investigate the effect of social exclusion on cooperative behavior under in-group and out-group interaction conditions. The results showed that: 1. When the group identity of the partner is unknown, the cooperative behavior of excluded children was significantly lower than that of the control group, while the cooperative behavior of adults was not significantly different from that of the control group. 2. When the partner is divided into in-group members and out-group members, the cooperative behavior of excluded individuals with out-group and unknown members is significantly lower, but there is no significant difference with in-group members' cooperative behavior; 3. When an individual is excluded by an out-group member, the cooperative behavior of the excluded adult with the out-group

member is significantly decreased, and the cooperative behavior with the in-group member is significantly increased; The cooperative behavior of excluded children with in-group and out-group members was significantly reduced. 4. When an individual is excluded by an in-group member, the cooperative behavior between the excluded adult and the out-group member increases significantly, but has no significant difference with the in-group member; The cooperative behavior of excluded children with in-group and out-group members was significantly reduced. The moderating effects of internal and external group identity and age on the relationship between social exclusion and cooperative behavior are helpful to further understand the occurrence and development mechanism of cooperative behavior.

Keywords: Social exclusion, Cooperative behavior, In-group/Out-group, Child, Undergraduate

暴力电子游戏接触与早期青少年的欺凌变化： 特质攻击和道德认同的纵向调节作用

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摘要 已有的理论（例如，一般攻击模型）和实证研究表明，媒体暴力与攻击、欺凌行为存在显著正相关。特别地，对于儿童和青少年的研究发现，暴力电子游戏接触可能增强儿童和青少年的攻击和欺凌行为。早期青少年（初中生）由儿童晚期过渡而来，是电子游戏成瘾易感和校园欺凌发生率较大的时期。因此本研究聚焦于早期青少年，采用纵向研究考察暴力电子游戏接触对其欺凌行为变化趋势的影响。基于一般攻击模型（Anderson & Bushman, 2002, 2018），本研究将采用个体内和个体间视角考察暴力电子游戏是否会随时间变化预测欺凌行为，并且特质攻击和道德认同存在调节作用。样本包含 5 所初中一年级学生 774 名（61.8% 的男生，年龄在 12-15 岁）。采用暴力电子游戏接触问卷、欺凌行为量表、特质攻击和道德认同量表对选取的初中生进行一学期间隔的三次测量。研究结果显示：（1）暴力电子游戏接触纵向预测欺凌行为的变化，即暴力电子游戏对欺凌行为的预测存在个体内效应（即给定一个青少年，其暴力电子游戏的变化会导致欺凌行为的变化）。（2）暴力电子游戏接触对欺凌行为的预测存在个体间效应（即对于高暴力电子游戏接触的群体而言，其欺凌行为要比低暴力电子游戏接触的群体发生频率要低）。（3）攻击特质在个体间及跨层次（cross-level）调节了暴力电子游戏对欺凌行为的预测，对于高特质攻击的个体而言，暴力电子游戏接触与欺凌行为的纵向关系很强，但是对于低特质攻击的个体而言，暴力电子游戏接触与欺凌行为的纵向关系较弱。（4）道德认同仅仅调节了个体间暴力电子游戏接触与欺凌行为的关系，即对于高道德认同的青少年群体而言，暴力电子游戏接触与欺凌行为的相关较弱，但是对于低道德认同的青少年群体而言，暴力电子游戏接触与欺凌行为的关系较强。本研究结果揭示了特质攻击作为暴力电子游戏接触与欺凌行为之间的风险因素，验证和扩展了一般攻击模型关于情景变量和个体变量交互作用对攻击行为的影响。本研究结果强调降低特质攻击和增强道德认同可以作为预防校园欺凌，降低媒体暴力对欺凌行为预测的重要策略。

关键词 暴力电子游戏接触，欺凌行为，特质攻击，道德认同，早期青少年

Violent Video Game Exposure and Bullying in Early Adolescence: A Longitudinal Study Examining Moderation of Trait Aggressiveness and Moral Identity

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Abstract: Existing theories (e.g., General Aggression Model) and empirical studies have suggested a positive linkage between media violence exposure and aggressive behaviors, including bullying. However, we still do not know if violent video game exposure has a longitudinal association with the development of daily bullying perpetration behaviors. This study examined whether bullying perpetration is associated with violent video game exposure at both within- and between-individual levels among 774 Chinese early adolescents (61.8% boys, aged 12-15 years) over one

year. We also examined whether trait aggressiveness and moral identity moderate the longitudinal link between violent video game exposure and bullying perpetration. Results showed that violent video game exposure was positively associated with bullying perpetration (i.e., within-individual effect), and trait aggressiveness moderated this relationship at both the between-individual and cross-levels. Adolescents with a higher level of trait aggressiveness showed a stronger link between violent video game exposure and bullying perpetration. Moral identity moderated this relationship between violent video game exposure and bullying perpetrators but only at the between-person level (i.e., not cross-level). This result suggests that adolescents with a high moral identity score have a weaker association between violent video game exposure and bullying perpetration at the between-individual level. The findings indicate the added risk of trait aggressiveness to the longitudinal effect of violent video game exposure on bullying perpetration between individuals. The findings also highlight the importance of develop strategies to reduce trait aggressiveness and promote positive moral development among early adolescents in bullying prevention and intervention efforts.

Keywords: Violent video game exposure, bullying perpetration, trait aggressiveness, moral identity, early adolescents

儿童受欺凌与情绪问题的关系：希望与宽恕的调节作用

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摘要 受欺凌是指个体遭受力量较强同伴故意伤害且无法有效保护自己的经历，也即校园欺凌事件中受害者的经历。近年来，严重校园欺凌事件频发并引发了政府、学界和社会公众的广泛关注，如何有效保护受欺凌者成为当下亟需尽快解决的热点问题。情绪问题是儿童遭受欺凌后出现的不良影响之一，并在儿童学业失败、同伴关系恶化以及自伤自杀等不良后果中发挥重要中介作用。及时阻断受欺凌对情绪问题（如抑郁、焦虑）的不良影响，是有效帮助受欺凌者的一种可能策略。个体的积极心理品质是外界危险因素（如受欺凌）的有效缓冲因素，如希望（个体想要达成目标的积极期望）、宽恕（受害者消除了对攻击者持有的负面认知、情绪和行为反应）。鉴于此，本研究尝试探究儿童的希望、宽恕特征在阻断受欺凌与情绪问题关系中的作用效果。本研究以山东省某小学 708 名小学生（平均年龄=9.67 岁，50%的被试为男性）为被试进行问卷调查。结果发现：1.儿童受欺凌与情绪问题存在显著正相关，儿童受欺凌程度越高，出现焦虑、抑郁的风险均越大；2.希望和宽恕均在儿童受欺凌与各个情绪问题的关系中发挥调节作用，随着儿童希望或宽恕水平的升高，受欺凌对焦虑、抑郁的预测作用均会显著降低；3.儿童的希望与宽恕对情绪问题的保护作用符合“独立模式”，即二者单独发挥对焦虑、抑郁的调节作用。本研究证实了希望和宽恕这两个积极心理品质能够有效调节受欺凌对情绪问题的不利影响，并对小学生校园欺凌防治与心理健康教育实践具有重要启示。

关键词 受欺凌，希望，宽恕，焦虑，抑郁

The Relationship Between Bullying Victimization and Emotional Problems in Children:

The Moderating Effects of Hope and Forgiveness

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Abstract: Bullying victimization refers to the experience of an individual being deliberately hurt by a powerful peer and unable to effectively protect himself or herself, which is also the experience of the victim in school bullying. In recent years, the frequent occurrence of serious school bullying incidents have aroused widespread concern from the government, academia and the public. How to effectively protect the victim has become a hot issue that needs to be solved as soon as possible. Emotional problems are one of the negative effects of bullying victimization, and play an important mediating role in children's academic failure, peer relationship deterioration and self-injury suicide. Blocking the negative effects of bullying on emotional problems (such as depression and anxiety) in time is a

possible strategy to effectively help the bullied. An individual's positive psychological qualities are effective buffering factors for external risk factors (e.g., bullying victimization). Such as hope (the positive expectation that the individual wants to achieve a goal) and forgiveness (the victim removes negative cognitive, emotional and behavioral responses to the attacker). In view of this, this study attempted to explore the effect of children's hope and forgiveness characteristics on blocking the relationship between bullying victimization and emotional problems. In this study, 708 primary school students (average age =9.67 years old, 50% of the subjects were male) were investigated by questionnaire from a primary school in Shandong Province. The results showed that: 1. There was a significant positive correlation between bullying victimization and emotional problems. The higher the level of bullying victimization, anxiety and depression also have greater risk; 2. Both hope and forgiveness played a moderating role in the relationship between bullying victimization and emotional problems in children. With the increase of hope or forgiveness level, the predictive effects of bullying victimization on anxiety and depression were significantly reduced. 3. The protective effect of hope and forgiveness on emotional problems in children conforms to the "independent mode", that is, both of them play a separate regulatory role on anxiety and depression. This study confirms that hope and forgiveness, two positive psychological qualities, can effectively regulate the negative impact of bullying victimization on emotional problems, and has important implications for the prevention and treatment of bullying and mental health education of primary school students.

Keywords: bullying victimization, forgiveness, hope, anxiety, depression

4.36 行为与健康心理学专业委员会

(2) “行为与健康心理学专业委员会”口头报告分场 2

炎症性肠病患者病耻感与疾病获益感的关系： 自我表露和家庭功能的链式中介作用

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摘要 目的 基于压力应对理论探究炎症性肠病患者自我表露和家庭功能在病耻感与疾病获益感之间的中介作用。**方法** 采用横断面研究, 以便利抽样的方式选取于 2020 年 10 月至 2021 年 6 月在南京市某三级甲等医院就诊的 246 例炎症性肠病患者为研究对象。使用一般资料调查表、慢性病病耻感量表、伯克利情绪表达量表、家庭亲密性与适应性量表和疾病获益感量表进行调查。采用 AMOS 26.0 软件建立结构方程模型, 并采用偏差校正百分位 Bootstrap 法检验中介效应模型。**结果** 相关分析显示, 病耻感、自我表露、家庭功能、疾病获益感得分两两之间均相关($r=-0.366\sim-0.620$, $P<0.01$); 中介效应模型检验表明: 病耻感通过自我表露($\beta=-0.192$, $P<0.001$)、家庭功能($\beta=-0.109$, $P=0.002$)的单独中介及自我表露-家庭功能的链式中介($\beta=-0.067$, $P<0.001$)三条中介路径间接对疾病获益感产生影响, 总中介效应为 $-0.368(P<0.001)$ 。**结论** 炎症性肠病患者病耻感可通过自我表露和家庭功能的中介作用影响疾病获益感, 应鼓励存在病耻感的患者表达疾病相关感受, 并注重提高患者家庭的亲密关系和适应能力, 以提升疾病获益感。

关键词 炎症性肠病, 病耻感, 疾病获益感, 自我表露, 家庭功能

Relationship between stigma and benefit finding in patients with inflammatory bowel diseases: Chain Mediating effect of self-disclosure and family function

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Abstract: Objective To explore the mediating effect of self-disclosure and family function between stigma and benefit finding in patients with inflammatory bowel diseases (IBD) based on stress and coping model. **Methods** 226 patients with IBD were selected in a tertiary hospital in Nanjing by convenient sampling method from October 2020 to June 2021. General information questionnaire, stigma scale for chronic illness, Berkeley expressivity questionnaire, cohesion and adaptability scale and benefit finding scale were used to conduct the investigation. We established structural equation model by AMOS 26.0 and test the intermediary effect model by deviation correction percentile Bootstrap method. **Results** Correlation analysis showed that stigma, self-disclosure, family function and benefit finding were correlated with each other ($r=-0.366\sim-0.620$, $P<0.01$). Mediation modeling analysis showed that stigma indirectly affected benefit finding through three mediating paths: the separate mediation role of self-disclosure ($\beta=-0.192$, $P<0.001$) and family function ($\beta=-0.109$, $P=0.002$), and the chain mediating role of self-disclosure and family function ($\beta=-0.067$, $P<0.001$). The total mediating effect was -0.368 ($P<0.001$). **Conclusion** The stigma can affect perceived benefit finding through the intermediary role of self-disclosure and family function in patients with IBD. To enhance benefit finding of patients, medical staff should encourage patients with a sense of stigma to express their disease-related feelings and pay attention to improve their family relationship and adaptability.

Keyword: inflammatory bowel diseases; stigma; benefit finding; self-disclosure; family function

童年期情感虐待与重复心理社会应激心血管反应适应性： 母子依恋的调节作用

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摘要 童年期虐待作为一种早期生活压力会导致心血管应激反应失调, 表现为较大或钝化的应激反应性。然而以往研究没有区分不同类型虐待的影响, 尤其是特定类型童年期虐待对反复应激暴露下生理反应适应性的影响还缺乏深入探讨。本研究采用重复应激暴露实验范式, 探讨童年期情感虐待与重复心理社会应激(演讲任务)心血管反应适应性的关系, 并考察母子依恋质量作为环境保护因素在两者关系中的调节作用。102 名大学生参加了本研究, 在实验开始前完成中文版儿童创伤问卷(CTQ)情感虐待分量表和中文版青少年依恋问卷(IPPA)母子依恋分量表, 随后在实验室完成重复心理社会应激任务(公共演讲任务), 采用无创血压测量仪在实验的四个阶段(基线, 应激暴露 1, 任务间休息, 应激暴露 2)持续地采集生理数据(心率, 血压, 心输出量, 总外周阻力)。研究结果发现: (1)童年期情感虐待与第一次应激暴露中钝化的心率反应性、收缩压反应性、心输出量反应性有关, 与重复应激暴露过程中减弱的心率反应适应性、心输出量反应适应性有关; (2)母子依恋质量调节童年期情感虐待与重复应激心输出量反应适应性、总外周阻力反应适应性的关系, 即在低母子依恋条件下, 情感虐待与重复应激心输出量反应适应性、总外周阻力反应适应性显著负相关, 而在高母子依恋条件下不存在这一联系。这些研究结果表明, 早期较高的情感虐待经历可能会破坏重复应激情境下的心血管反应适应性, 而高质量的母子依恋可以缓冲情感虐待对重复应激心血管反应适应性的不利影响。

关键词 童年期情感虐待, 重复心理社会应激暴露, 心血管反应适应性, 母子依恋

Childhood Emotional Abuse and Cardiovascular Response Adaptation to Repeated Psychosocial Stress: Moderating Role of Maternal Attachment

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Abstract: Childhood maltreatment as an early-life stress leads to cardiovascular stress response dysregulation manifested by either exaggerated or blunted stress responses. However, the effects of different subtypes of childhood maltreatment have not been well distinguished in previous studies, especially the effect of specific childhood maltreatment on adaptation to repeated stress exposures which remains to be further discussed. The present study used repeated stress exposure paradigm to examine the relationship between childhood emotional abuse and cardiovascular response adaptation to repeated psychosocial stress (speech task), as well as the moderating effect of maternal attachment on this relationship. Scales of Childhood Emotional Abuse (subscale of Childhood Trauma Questionnaire, CTQ) and Parental Attachment (subscale of Inventory of Parent and Peer Attachment, IPPA) were administered to 102 undergraduate students who underwent continuous cardiovascular monitoring [heart rate (HR), blood pressure (BP), cardiac output (CO) and total peripheral resistance (TPR)] while facing two consecutive psychosocial stress exposures (public speaking tasks). Results showed that: (1) Childhood emotional abuse was associated with reduced HR, SBP, CO reactivity to the first stress exposure, and attenuated HR, CO response adaptation to repeated stress. (2) Childhood emotional abuse and maternal attachment interactively affect CO and TPR response adaptation to repeated stress. Specifically, Childhood emotional abuse negatively predicted CO and TPR response adaptation to repeated stress among individuals with low maternal attachment, but not among those with high maternal attachment. These findings suggest that greater early emotional abusive experiences disrupt cardiovascular response adaptation to repeated stress, while high-quality maternal attachment might buffer this negative effect.

Keywords: childhood emotional abuse, repeated psychosocial stress exposure, cardiovascular response adaptation, maternal attachment

婚姻满意度与留守妻子心理控制的关系：有调节的中介模型

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摘要 当前,越来越多的学者已经开始关注留守儿童的心理发展与适应问题,但仅有较少研究关注留守妻子这一特殊群体,且没有研究对留守妻子自身发展如何影响其对子女的教养问题进行系统探究。留守妻子是指丈夫外出流动后作为妻子留守在户籍所在地的女性,相应的,由留守妻子监护的儿童则属于单亲监护型留守儿童。作为子女的主要抚养人,留守妻子的生存与发展状况对单亲监护型留守儿童的发展与适应具有不可替代的深远影响。鉴于此,本研究基于家庭系统理论与自我决定理论,以380个亲子对(留守妻子及其子女)为研究对象,在中国文化背景下综合考察了家庭因素(婚姻满意度)和个体因素(错失焦虑、领悟社会支持)对留守妻子教养行为(心理控制)的影响及作用机制,并构建了一个有调节的中介模型,结果表明:(1)在控制了社会经济地位、留守妻子年龄等因素后,婚姻满意度对留守妻子心理控制具有显著的负向预测作用。(2)中介效应检验表明,留守妻子错失焦虑在婚姻满意度与心理控制间具有部分中介作用。(3)有调节的中介效应检验表明,留守妻子对社会支持的领悟调节了错失焦虑对心理控制的影响强度。即对社会支持的较高领悟可以缓解留守妻子的错失焦虑感,进而减轻其对子女的心理控制。

关键词 留守妻子, 婚姻满意度, 错失焦虑, 心理控制, 领悟社会支持

Marital satisfaction and psychological control of left-behind wives in China: a moderated mediating model

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Abstract: Currently, a growing body of research has focused on left-behind children, little is known about left-behind wives and how the development of left-behind wives affects their children through parenting behaviors. Left-behind wives refer to women staying at the place of household registration alone after their husbands getting out to make a living. Correspondingly, the children under the supervision of left-behind wives are single-parent left-behind children. As the main supporter of the children, the survival and development of left-behind wives has an irreplaceable and profound influence on the development and adaptation of single-parent left-behind children. Given that, guided by family system theory and self-determination theory, the current study aims to exploring the effect of family factor (marital satisfaction) and individual factors (fear of missing out, perceived social support) on parenting behaviors (psychological control) among left-behind wives through constructing a moderated mediation model. The results showed that: (1) After controlling for socioeconomic status, mother's age and other factors, marriage satisfaction has a significant negative predictive effect on the psychological control of left-behind wives. (2) The intermediary effect test showed that the fear of missing out of left-behind wives has a partial mediation effect between marriage satisfaction and psychological control. (3) The intermediary effect test with regulation showed that the perceived social support of left-behind wives regulates the intensity of fear of missing out on psychological control, which indicates that a higher perceived of social support can relieve the sense of fear of missing out of left-behind wives, and thereby reducing their psychological control of their children.

Keywords: left-behind wives, marital satisfaction, fear of missing out, psychological control, perceived social support

粗暴养育与中小学生智能手机成瘾的关系：一个多重中介模型

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摘要 据中国互联网络信息中心的最新调查报告显示，我国手机网民中青少年的比例高达 17.5%。随着智能手机越来越普遍，中小学生对智能手机产生了强烈的依赖性，甚至达到成瘾水平。因此，青少年的智能手机成瘾问题也引起研究者的广泛关注。智能手机成瘾导致许多消极后果的产生，如心理健康、情绪问题、睡眠和学业问题。本研究聚焦于中小学生智能手机成瘾的影响因素及机制，选取 727 名中小学生，使用粗暴养育、智能手机成瘾、抑郁和社会疼痛量表，基于家庭系统理论和补偿性互联网使用理论，探讨父母粗暴养育与中小学生智能手机成瘾的关系，并进一步探究抑郁和社会疼痛的在粗暴养育和智能手机成瘾关系中的中介作用。结果显示，（1）智能手机成瘾与粗暴养育、抑郁和社会疼痛之间存在显著正相关关系，粗暴养育与抑郁和社会疼痛之间显著正相关关系，抑郁与社会疼痛之间存在显著正相关关系；（2）粗暴养育对抑郁、社会疼痛和智能手机成瘾有显著正向影响。抑郁和社会疼痛对智能手机成瘾有显著正向影响。抑郁和社会疼痛在粗暴养育和智能手机成瘾的关系中起到部分中介作用，并且，抑郁在粗暴养育和智能手机成瘾的关系中起到更大的中介作用；（3）抑郁和社会疼痛在父亲粗暴养育和智能手机成瘾的关系中起到部分中介作用，并且，抑郁在父亲粗暴养育和智能手机成瘾的关系中起到更大的中介作用，而抑郁和社会疼痛在母亲粗暴养育和智能手机成瘾的关系中起到完全中介作用，并且，抑郁在母亲粗暴养育和智能手机成瘾的关系中起到更大的中介作用。本研究为干预中小学生智能手机成瘾提供了直接路径（改善家庭教养方式）和间接路径（降低抑郁和社会疼痛水平），为改善中小学生的智能手机成瘾状况提供了实证依据和理论依据。

关键词 粗暴养育，智能手机成瘾，中小学生，多重中介模型

The relationship between harsh parenting and smartphone addiction among primary and secondary school students: a multiple mediating model

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Abstract: According to the latest survey by the China Internet Network Information Center, adolescents accounted for 17.5% of mobile phones users in China. With the increasing popularity of smartphones, primary and secondary school students had a strong dependence on smartphones, and even reached the level of addiction. Therefore, the adolescents' smartphone addiction also attracted extensive attention of researchers. Smartphone addiction was found to be related to a lot of adverse influences, such as physical health problems, emotional problems, sleep disturbances, and academic failures. This study that focused on the antecedents and mechanism of smartphone addiction among primary and secondary school students, selecting 727 primary and secondary school students, using the harsh parenting, smartphone addiction, depression and social pain scale, based on the family system theory and the compensatory Internet use theory, explored the relationship between parents harsh parenting and primary and middle school students' smart phone addiction, and further explored the mediating role of depression and social pain in the relationship between harsh parenting and smart phone addiction. The results showed that: (1) There was a significant positive correlation between smart phone addiction and harsh parenting, depression and social pain, and a significant positive correlation between harsh parenting and depression and social pain, there was a significant positive correlation between depression and social pain. (2) Harsh parenting had significant positive effects on depression, social pain and smart phone addiction. Depression and social pain had significant positive effects on smart phone addiction. Depression and social pain played a partial mediating role in the relationship between harsh parenting and smart phone addiction, and depression played a greater mediating role in the relationship between harsh parenting and smart phone addiction. (3) Depression and social pain played a partial mediating role in the relationship between father harsh parenting and smart phone addiction, and depression played a greater mediating role in the relationship between father harsh parenting and smart phone addiction, depression and social pain played a complete mediating role in the relationship between maternal harsh parenting and smart phone addiction, and depression played a greater mediating role in the relationship between maternal harsh parenting and smart phone addiction. This study provided direct (to improve parenting style) and indirect pathways (to decrease depression and social pain levels) for intervention in primary and secondary school students' smart phone addiction. The present study also provided the empirical basis and theoretical basis for decreasing the mobile phone addiction of primary and middle school students.

Keywords: harsh parenting, smart phone addiction, adolescents, multiple mediation model

短期戒断对冰毒依赖者执行功能的影响

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摘要 《2019 年中国毒品形势报告》指出, 截止到 2019 年底, 中国现有吸毒人员 214.8 万人, 其中冰毒作为丙胺类兴奋剂在我国使用最多, 高达 118.6 万人。吸食毒品会导致个体的执行功能受损, 而执行功能在抵制吸毒冲动、抑制毒品相关刺激所引起的行为激活中起着重要作用, 所以在戒断期间的个体容易产生复吸行为, 已有研究发现通过长期戒断(戒断时间 ≥ 6 个月)的个体的执行功能可以得到显著恢复, 而短期戒断(戒断时间 < 6 个月)对执行功能的恢复目前尚无研究。根据 Miyake 对执行功能划分的划分, 本研究采用纵向追踪设计的研究方法, 分别使用 n-back 任务、Stroop 任务和数字转换任务考察冰毒依赖者执行功能的三个子成分, 工作记忆刷新功能、认知抑制功能和工作记忆转换功能随戒断时间的恢复情况。结果发现, 随着戒断时间的增加, 冰

毒依赖者的执行功能可以得到一定的恢复，具体表现为：(1)冰毒依赖者在 n-back 任务中的反应时逐渐缩短，反应正确率逐渐提高，表明戒断者的工作记忆刷新功能可以得到一定恢复；(2)在 Stroop 任务中，冰毒依赖者的冲突反应时逐渐缩短，反应时干扰分数逐渐降低，正确率干扰分数逐渐增高，表明戒断者的认知抑制功能在逐渐恢复；(3)在数字转换任务中，冰毒依赖者戒断三个月时的转换成本显著低于戒断两个月和一个月的转换成本，表明戒断者的工作记忆转换功能可以得到一定恢复。

关键词 短期戒断，冰毒依赖者，工作记忆刷新功能，认知抑制功能，工作记忆转换功能

The effect of short-term abstinence on the executive function of methamphetamine-addicted people

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Abstract: The "Report on China's Drug Situation in 2019" pointed out that as of the end of 2019, there were 2.148 million drug users in China, of which methamphetamine was used the most as propylamine stimulant in my country, reaching 1.186 million. Taking drugs can damage the executive function of the individual, and executive function plays an important role in resisting the impulse to take drugs and inhibiting the activation of behavior caused by drug-related stimuli. Therefore, individuals during the withdrawal period are prone to relapse behavior. Studies have been conducted It was found that individuals with long-term withdrawal (withdrawal time ≥ 6 months) can achieve significant recovery of executive function, while short-term withdrawal (withdrawal time < 6 months) has no research on the recovery of executive function. According to Miyake's division of executive functions, this study employed a longitudinal tracking design to investigate the recovery of updating, inhibition and shifting function in methamphetamine-addicted people during abstinence by using the n-back task, the Stroop task and the more-odd shifting task, respectively. The results showed that executive function in methamphetamine-addicted people can be recovered to a certain extent over the course of abstinence. The specific findings were as follows: (1) The reaction time of methamphetamine-addicted people in the n-back task gradually shortens during abstinence, and their response accuracy rate gradually increases, indicating that their updating function can be recovered to a certain extent; (2) In the Stroop task, the conflict reaction time of methamphetamine-addicted people gradually shortens during abstinence, the interference score during reaction gradually decreases, and the correct interference score gradually increases, indicating that inhibitory function gradually recovers during methamphetamine abstinence; (3) In the more-odd shifting task, the conversion cost in methamphetamine-dependent patients was significantly lower at three months of abstinence than at two months or one month of abstinence, indicating that their shifting function can be recovered to a certain extent.

Keywords: short-term abstinence, methamphetamine dependence, updating function, inhibitory function, shifting function

4.37 时间心理学专业委员会

(1) “行为与健康心理学专业委员会”口头报告分场 1

新冠疫情爆发初期媒体内容对个体心理健康的影响：一项纵向研究

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摘 要 多项调查和研究表明, 新型冠状病毒肺炎病毒的爆发严重威胁着人们的身心健康。因此为了进一步防止或减轻疫情期间心理创伤可能带来的潜在负面影响, 研究疫情期间大众心理健康状况的影响因素以及其背后的影响机制十分必要。不同于以往的流行病, 在疫情初期, 全国各地均采取了严格的居家隔离措施以防止病毒的进一步扩散, 媒体也因此成为了大众获取外界信息的主要途径; 同时在公共卫生事件发生时, 媒体也承担着向大众传递事件相关讯息的社会责任。多项研究结果发现有关疫情的媒体报道会影响大众的心理状况。在已有的相关研究中, 可以发现前人研究关注的变量大多集中于社交媒体这一媒体类型而非关注媒体报道内容, 且大多进行的是横断研究。但横断研究不利于探究变量之间的因果关系。因此本研究采用纵向研究, 探究在疫情爆发期间大众浏览的媒体内容对心理健康的长期影响。研究采用线上问卷调查的方式从 2019 年 1 月 28 日开始, 对来自全国范围内的 132 名被试进行了为期三周的追踪调查, 通过建立交叉滞后模型探究疫情爆发期间个体浏览有关疫情的媒体内容类型与抑郁情绪的关系, 研究采用自编的疫情背景下的《媒体使用行为问卷》测量被试的媒体使用行为以及中文版本的《抑郁-焦虑-压力 量表》测量被试的心理健康状况, 信效度分析结果良好, 三个维度分量表的内部一致性均在 0.76~0.79 之间, 且总量表的内部一致性为 0.89。数据分析使用 Mplus 8.0 软件检验了以各媒体内容类型作为自变量、民众抑郁情绪作为因变量的交叉滞后模型。结果发现 T1 和 T2 时被试浏览“来自熟人的信息”即“从亲戚朋友、微信群聊以及朋友圈分享中获得的关于疫情的相关信息”这一媒体内容的时间可以显著正向预测被试在 T2 和 T3 时的抑郁水平 ($\beta_1=0.223, p<0.05; \beta_2=0.193, p<0.01$) 且模型拟合指数良好 ($\chi^2/df=10.353, RMSEA=0.000, TLI=1.001, CFI=1.000, SRMR=0.046$)。总的而言, 纵向研究的结果说明, 相对于焦虑和压力而言, 疫情媒体信息对人们的抑郁有明显的影 响, 而这其中又特别需要关注非官方信息, 如熟人、亲戚朋友等所带来的负向影响。

关键词 COVID-19, 媒体使用, 抑郁, 交叉滞后模型, 纵向研究

The influence of media contents on individual mental health in the early stage of the COVID-19 outbreak: a longitudinal study

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Abstract: A number of investigations and studies had shown that the outbreak of the COVID-19 became a serious threat to people's physical and mental health. Therefore, in order to further prevent or reduce the potential negative effects of psychological trauma after the outbreak, it is necessary to study the factors affecting the public's mental health during the epidemic and the mechanism behind it. This outbreak was different from previous epidemic

outbreaks, home quarantine measures had been taken across the country to prevent further spread of the virus, therefore the media has become the main way for the public to obtain information. At the same time, when public health crises occur, the media also bear the social responsibility of transmitting the event-related information to the public. Multiple studies have found that media coverage of an outbreak can affect the mental health of the population. In the related previous studies, it can be found that they mostly focused on social media rather than media report coverage, and most of them are cross-sectional studies. However, cross-sectional studies are not conducive to exploring the causal relationship between variables. From January 28, 2019, an online questionnaire was used to conduct a follow-up survey on 132 participants from across the country for three weeks. We used cross-lagged regression analyses to explore the relationship between the types of media content individuals viewing and depression. In this study, the self-edited Media Use Questionnaire under the background of epidemic was used to measure the media use behavior of the participants, and the Chinese version of DASS-21 Scale was used to measure the participants' mental health status. The reliability and validity analysis results were good, specifically, the internal consistency of the three dimension subscales was between 0.76 and 0.79, and the internal consistency of the total scale was 0.89. We used Mplus 8.0 software to test the cross-lagged panel models with each media content type as the independent variable and depression as the dependent variable. The results showed that the time of participants viewing the media content of "information from acquaintances", i.e. "Information about the surrounding disease infection and the severity of infection obtained through the circle of friends, Weibo, friends and family." at T1 and T2 could significantly positively predict the level of depression at T2 and T3 ($\beta_1=0.223$, $p<0.05$; $\beta_2=0.193$, $p<0.01$) and the model fitting index was good ($\chi^2/df=10.353$, $RMSEA=0.000$, $TLI=1.001$, $CFI=1.000$, $SRMR=0.046$). Overall, the results of longitudinal studies suggest that, compared with anxiety and stress, media information about the epidemic has a significant impact on people's depression, and there is a particular need to pay attention to the negative impact of unofficial information, such as acquaintances, relatives and friends.

Keywords: COVID-19, media use, depression, cross-lagged model, longitudinal studies

社交媒体使用与安全行为的关系：心理资本和工作投入的中介作用

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摘 要 安全生产对于企业至关重要, 安全生产的一个重要保障就是员工执行安全行为。因此, 企业必须高度重视员工的安全问题, 采取必要措施提高员工的安全行为。在当今社会逐渐进入 5G 时代的背景下, 各种社交媒体层出不穷, 社交软件种类繁多, 对安全行为也必然产生了一定的影响, 因此社交媒体使用与安全行为之间的关系引起了我们的关注。在现有的社交媒体使用的研究当中, 关于社交媒体使用对员工行为的影响观点不一, 到目前为止, 还没有研究具体指出社交媒体使用与安全行为(安全遵守和安全参与)之间的关系以及它们的内在机制。因此, 本研究基于 JD-R 模型与自我决定理论, 探讨社交媒体使用与安全遵守和安全参与之间的关系, 并进一步探讨心理资本与工作投入的链式中介作用。本研究共两个研究, 研究一选取建筑行业 and 邮政行业 780 名员工为被试, 对社交媒体使用量表进行修订, 研究二采用社交媒体使用量表、心理资本量表、工作投入量表和安全行为量表为测量工具对随机抽选的建筑行业 623 名员工进行问卷调查, 采用 SPSS19.0 和 Mplus7.0 对数据进行分析。结果发现: (1) 社交媒体使用与安全遵守、安全参与存在正相关; 社交媒体使用与心理资本、工作投入呈显著正相关; 心理资本与工作投入、安全遵守、安全参与呈显著正相关; 工作投入与安全遵守、安全参与呈显著正相关; (2) 心理资本与工作投入在社交媒体使用与安全遵守、安全参与之间起中介作用; (3) 心理资本和工作投入在社交媒体使用与安全遵守、安全参与之间起链式中介作用。

关键词 社交媒体使用, 安全遵守, 安全参与, 心理资本, 工作投入

The relationship between the social media use and safety behavior : the mediating role of psychological capital and work engagement

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Abstract: Safety production is very important for enterprises, and an important guarantee of safety production is the safety behavior of employees. Therefore, enterprises must pay great attention to the safety of employees and take necessary measures to improve the safety behavior of employees. In the context of the 5G era, various social media emerge in endlessly, and the variety of social software is complex, which inevitably has a certain impact on safety behavior. Therefore, the relationship between the social media use and safety behavior has attracted our attention. Among the existing researches on the use of social media, opinions differ on the influence of social media use on employee behavior. So far, no research has specifically pointed out the relationship between social media use and safe behavior (safety compliance and safety participation) and their internal mechanism. Therefore, based on JD-R model and self-determination theory, this study explored the relationship between social media use and safety compliance and safety participation, and further explored the chain mediating role of psychological capital and work engagement. This study consists of two studies. In study one, 780 employees from the construction industry and the postal industry were selected as participants to revise the social media usage scale, The second study used social media use scale, psychological capital scale, work engagement scale and safe behavior scale as measuring tools to conduct a questionnaire survey on 623 randomly selected employees in the construction industry, and the data were analyzed using SPSS 19.0 and Mplus 7.0. The results showed that: (1) Social media use is positively correlated with safety compliance and safety participation; Social media use is significantly positively correlated with psychological capital and work engagement; Psychological capital was significantly positively correlated with work engagement, safety compliance, and safety participation; There was a significant positive correlation between work engagement and safety compliance and safety participation. (2) Psychological capital and work engagement mediate the relationship between social media use and safety compliance, and between the use of social media and safety participation. (3) Psychological capital and work engagement play a chain intermediary role between social media use and safety compliance, and between the social media use and safety participation.

Keywords: social media use, safety compliance, safety participation, psychological capital, work engagement

行为决策理论在健康行为中的应用

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摘要 健康行为关系着个体和国民的健康和福祉, 决策在个体的在行为改变过程及健康行为的选择与维持中发挥着重要作用。健康行为包括体育锻炼、营养饮食、参与体检、播种疫苗等。只有深入探索健康行为的产生机制和影响健康行为的关键因素, 才能提出针对性的干预措施。本文梳理了心理学中行为决策的理论在健康领域的应用和研究成果, 从决策理论中的古典决策理论到启发式决策理论, 如决策偏差在健康行为中的表现, 还有决策双系统模型和模糊痕迹在健康行为中的应用。因为很多健康行为需要个体现在付出一些时间、金钱和享受上的成本来获得未来的健康收益, 所以跨期决策理论在健康领域中也应用广泛; 风险决策理论在吸烟、酗酒等一些健康风险行为中有所应用。同时, 决策理论中的框架效应也存在于健康领域, 信息描述的不同框架会影响人们进行行为决策。另外, 本文还总结了影响个体进行健康行为相关决策的影响因素, 其中主观因素有认知风格、风险感知、时间观、情绪情感、主观幸福感等, 客观因素有健康信息呈现、社会支持等。最后, 本文从决策模型的验证和整合、研究方式的改进和加强健康行为干预措施的角度对未来相关研究提出建议。希望心理学领域的决策理论能更多的应用于健康领域, 促进人们的健康行为, 改善人们的健康水

平。

关键词 健康行为, 决策理论, 健康管理

Application of Behavior Decision Theory in Health Behavior

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Abstract: Healthy behavior is related to the health and well-being of individuals and nationals, and decision-making plays an important role in the process of individual behavior change and the choice and maintenance of healthy behavior. Health behaviors include physical exercise, nutritious diet, physical examination, vaccination, etc. Only by deeply exploring the mechanism of health behavior and the key factors affecting health behavior, can targeted intervention measures be put forward. This paper reviews the application and research results of behavioral decision-making theory in psychology in health field, from classical decision-making theory to heuristic decision-making theory, such as the performance of decision-making bias in health behavior, and the application of decision-making dual-system model and fuzzy trace in health behavior. Because many health behaviors require individuals to pay some time, money and enjoyment costs to obtain future health benefits, intertemporal decision-making theory is also widely used in the health field; Risk decision theory has been applied to some health risk behaviors such as smoking and alcoholism. At the same time, the frame effect in decision theory also exists in the field of health, and different frames of information description will affect people's behavior decision. In addition, this paper also summarizes the influencing factors that affect individuals' decision-making on health behavior, among which subjective factors include cognitive style, risk perception, time view, emotion and subjective well-being, while objective factors include health information presentation and social support. Finally, this paper puts forward suggestions for future related research from the perspectives of verification and integration of decision-making models, improvement of research methods and strengthening of health behavior intervention measures. It is hoped that the decision-making theory in the field of psychology can be more applied to the field of health, promote people's healthy behavior and improve people's health level.

Keywords: Health behavior, decision theory, health management

工作意义感对员工精神健康的作用机制与影响效应研究

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摘要 **研究目的:** 本文采用元分析技术探讨工作意义感与精神健康消极指标的关系, 期望可以解决员工负面的精神健康问题。**研究假设:** H1: 工作意义感对总体精神健康消极指标有显著的负向影响。H1a: 工作意义感对抑郁有显著负向影响。H1b: 工作意义感对焦虑有显著负向影响。H1c: 工作意义感对压力有显著负向影响。H1d: 工作意义感对倦怠有显著负向影响。H2: 工作意义感与不同的精神健康指标的相关存在显著差异。H3: 不同的测量工具会影响工作意义感与精神健康的相关性。**数据来源:** 符合纳入排除标准的 32 篇文章的工作意义感与精神健康及其消极指标的相关性系数。**研究方法:** 用检索式在中外文数据库检索关于工作意义感与精神健康的横断面研究, 纳入文献共有 32 篇, 有 37 个独立样本符合元分析标准 (N=17957), 运用 CMA 2.0 软件进行效应分析, 根据异质性检验结果, 采用随机效应模型进行元分析。**研究结果:** (1) 工作意义感与总体精神健康消极指标显著负相关; (2) 工作意义感与抑郁、压力和倦怠显著负相关; (3) 工作意义感与不同的精神健康指标的相关存在显著差异。(4) 不同的测量工具会影响工作意义感与精神健康的相关性。**研究结论:** 工作意义感与精神健康消极指标呈负相关关系, 但其因果关系和其他调节变量, 值得未来进一步深入研究。

关键词 工作意义感, 精神健康, Meta 分析, 调节效应

Meta-analysis of the effect of perceived work meaning on mental health of employees

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Abstract: **Aim:** To explore the relationship between work meaning and negative mental health indicators by using meta-analysis technique in order to solve the negative mental health problems of employees. **Methods:** Cross-sectional studies on the relationship between sense of work meaning and mental health were retrieved from Chinese and foreign databases using the retrieval method. A total of 29 literatures were included, and 34 independent samples met the meta-analysis criteria (N= 15667). Effect analysis was conducted using CMA 2.0 software, and meta-analysis was conducted using random effects model according to the heterogeneity test results. **Results:** (1) There was a significant negative correlation between work meaning and overall mental health negative indicators; (2) work meaning was negatively correlated with depression, stress and burnout; (3) There were significant differences between perceived work meaning and different mental health indicators. (4) Different measurement tools affect the correlation between perceived work meaning and mental health. **Conclusion:** Work meaning is negatively correlated with negative mental health indicators, but its causality and other moderating variables are worthy of further study.

Keywords: Work meaning; Mental health; META analysis; Moderating effect

新冠疫苗讨论对疫苗接种意向的影响：客观风险的调节作用

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摘要 新冠肺炎疫情爆发至今，世界各国纷纷推进新冠疫苗接种计划以期达到群体免疫的目标。在此背景下，研究者们观察到各国广泛存在新冠疫苗犹豫的现象，影响民众们的接种意愿。其中，中国由于疫情控制良好，民众对新冠疫情风险感知不强，出现了“搭便车”的心理，同样导致国内新冠疫苗接种计划推进受阻，直到2021年5月广东、安徽各地陆续出现了小范围的本土疫情病例，为人们敲响了风险的警钟，民众们才转变态度积极接种疫苗。这一特殊的现象为研究者们提供了一个机会以尝试厘清影响民众的新冠疫苗接种意向的关键因素。风险感知态度框架（risk perception attitude framework）认为个体采取健康行为的意图由风险感知与风险效能两个因素决定，且两个因素之间存在交互作用。立足于这一经典理论，本研究首先提出“新冠疫苗讨论”作为有效增强个体感知到的新冠疫苗的风险效能的一种途径，能够显著增加民众的新冠疫苗接种意愿（H1）。即民众与身边的家人、朋友针对新冠疫苗的接种发起的讨论越频繁，越有助于增加民众对疫苗有效性的了解，从而增加接种意愿。其次，本研究将民众与本土疫情爆发地的地理距离作为客观风险的指标，尝试探究客观风险是否能够调节新冠疫苗讨论与疫苗接种意愿的关系（H2）。为验证上述假设，在广州荔湾区于2021年5月21日爆发疫情之际，通过在线问卷调查的方法，收集了广东省共245名被试的数据，包括了自我报告的新冠疫苗讨论频率、新冠疫苗接种意愿、所在地区以及人口统计学变量。回归分析结果显示：（1）新冠疫苗讨论有效促进民众的疫苗接种意向：讨论越频繁，接种意向越高；（2）客观风险调节了新冠疫苗讨论与疫苗接种意向的关系：当客观风险越低，即民众所在地与疫情爆发地距离越远时，新冠疫苗讨论对于疫苗接种意向的正向影响越强；若客观风险较高，即距离较近时，新冠疫苗讨论对疫苗接种意向无显著影响。总而言之，本研究验证了“新冠疫苗讨论”增强疫苗接种意愿的效果以及边界作用，为政府推进疫苗接种计划提供了全新的理论依据。

关键词 新冠疫苗讨论，新冠疫苗接种意向，客观风险，风险感知态度

The influence of covid-19 vaccine talk on vaccine intention: the moderating role of objective risk

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Abstract: Since the outbreak of the COVID-19, countries around the world have promoted mass vaccination campaigns in order to achieve herd immunity. Under such context, researchers have observed the existence of widespread COVID-19 vaccine hesitancy in various countries, which affected citizen's COVID-19 vaccine intention. Among these countries, due to the good control of the epidemic, the Chinese public has a lower perception of the COVID-19 risk, and the "free rider" also hindered the promotion of the government's COVID-19 vaccination plan. The phenomenon continued until May 2021, when a few areas in China such as Guangdong and Anhui Provinces have reported a local outbreak of COVID-19. The new outbreak of local cases of the epidemic has sounded a warning bell for citizens, and the people have changed their minds and actively got vaccinated. This unique phenomenon provided researchers with a good opportunity to clarify the key factors that affected people's COVID-19 vaccine hesitancy. The risk perception attitude framework proposed that an individual's intention to adopt a healthy behavior is determined by two factors, risk perception, and risk efficacy, and there is an interaction between the two factors. Based on this classic theory, the current research first proposed the "COVID-19 vaccine talk" as a way to effectively enhance individuals' perceived risk efficacy of the COVID-19 vaccine, and thus significantly increased the public's vaccine intention (H1). That is to say, the more frequent discussions between individuals and their family members and friends about the COVID-19 vaccine, the more helpful it is to increase the public's understanding of the effectiveness of the vaccine, thereby increasing their vaccine intention. Secondly, the current study used the geographic distance between individuals and the pandemic outbreak center as an indicator of objective risk, and tried to explore whether the objective risk can moderate the relationship between the COVID-19 vaccine talk and COVID-19 vaccine intention (H2). In order to verify the above hypotheses, during the outbreak of the COVID-19 epidemic in Liwan District of Guangzhou on May 21, 2021, we collected online questionnaire data from a total of 245 subjects from Guangdong Province, including their self-reported COVID-19 vaccine talk, COVID-19 vaccine intention, current location, and demographic variables. The regression analysis showed: (1) The COVID-19 vaccine talk effectively promoted COVID-19 vaccine intention: the more frequent the talk of COVID-19 vaccine, the higher the intention of vaccination; (2) the objective risk moderated the relationship between COVID-19 vaccine talk and COVID-19 vaccine intention: when the objective risk was lower, that is, the farther the individuals were from the outbreak center, the stronger the positive impact of COVID-19 vaccine talk on COVID-19 vaccine intention; when the objective risk was higher, that is, the individuals were from the outbreak center, COVID-19 vaccine talk has no significant impact on COVID-19 vaccine intention. In short, this study verifies the promoting effect of COVID-19 vaccine talk on COVID-19 vaccine intention and its border effects, and thus provides a new theoretical perception for the government to promote COVID-19 vaccination plans.

Keywords: COVID-19 vaccine talk, COVID-19 vaccine talk intention, objective risk, risk perception attitude

艾滋病阳性男男性行为者多重少数身份的交叉污名及其在死亡信念与心理症状关系中的中介作用：一项纵向研究

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摘要 多重交叉污名的研究框架的应用增加了我们对拥有多重少数身份的个体, 如艾滋病阳性男男性行为者与污名相关的经历的理解。然而, 现有的研究对交叉污名相互作用的机制及其对个体心理适应的影响仍然

知之甚少。本研究旨在探讨与艾滋病相关的污名与男男性行为者身份相关的污名之间的交叉关系，并进一步检验污名在死亡信念与心理症状之间的中介作用。共计 111 名近三个月内新确诊的艾滋病阳性男男性行为者参与了此项纵向研究，参与者分别完成了基线以及六个月后的随访问卷调查。问卷测量了基线的与 HIV 疾病状态相关以及男男性行为者身份相关的交叉污名，包括负面自我形象、家庭污名和告知担忧这三个维度，同时被试报告了基线和六个月后的死亡信念，以及包括创伤后应激反应、抑郁和焦虑的心理症状。针对交叉污名的网络分析结果显示，与艾滋病状态相关的以及男男性行为者身份相关的负面自我形象、家庭污名和告知担忧六者之间存在密切联系，其中家庭污名起到核心作用。行动者对象中介模型检验的结果进一步支持了艾滋病状态相关的家庭污名和男男性行为者身份相关的家庭污名，作为交叉污名的重要维度，在负面自我形象和告知担忧之间的中介作用。此外，结构方程模型结果表明，在控制基线的心理症状后，基线的交叉污名在死亡信念与六个月后的心理症状之间存在显著的中介效应。我们的研究结果揭示了家庭污名在多重少数身份相关的污名的强关联中的中心地位，以及交叉污名的各维度之间相互依赖的效应，这为多重少数身份群体的交叉污名相互作用机制提供了新的证据。研究结果还为研究人员和医疗服务人员制定针对减少艾滋病阳性男男性行为者污名的干预项目提供了新的视角与思路，希冀以此提高新确诊的艾滋病阳性男男性行为者心理适应情况。

关键词 交叉污名，艾滋病，男男性行为者，少数身份，心理症状

Intersectional stigma related to minority identities of Chinese HIV positive men who have sex with men and its mediating role in the effect of death-related belief on psychological symptoms

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Abstract: Intersectional stigma framework expands the understanding of stigmatized experience of people with multiple minority identities, such as men who have sex with men (MSM) living with HIV. Yet the mechanism of intersectional stigma and its effect on psychological adjustment remains poorly understood. The current study aimed to investigate the interdependence among dimensions of intersectional stigma related to HIV status and MSM identity, and further examined the mediation effect of intersectional stigma in the association between death-related belief and psychological symptoms. A total of 111 Chinese HIV+ MSM who were newly diagnosed within three months participated in this longitudinal study. In addition to completing baseline measures on intersectional stigma related to HIV status and MSM identity respectively with three dimensions of negative self-image, family stigma and disclosure concern, participants provided information on death-related belief of “better off dead”, and psychological symptoms including PTSD, depression and anxiety at baseline and follow-up (six months later). The network analysis results on intersectional stigma related to HIV status and homosexuality showed that negative self-image, family stigma, and disclosure concern were closely associated with each other, with family stigma playing a central role. The APIMeM test further supported the mediation role of family stigma, a key dimension of intersectional stigma both related to HIV status and MSM identity, in the association between negative self-image and disclosure concern. Furthermore, the SEM results showed that baseline intersectional stigma mediated the effect of baseline “better off dead” belief on psychological symptoms six months later after controlling for the baseline psychological symptoms. Our results highlight the central role of family stigma in the midst of strong associations and interdependent nature of intersectional stigma dimensions, which provides new evidence to elucidate the mechanism of the intersection of multiple identities. The findings also have strong implications for researchers and healthcare providers to develop intersectional stigma-focused reduction intervention programs in the purpose to facilitate the psychological adaptation of HIV+ MSM following their HIV diagnosis.

Keywords: intersectional stigma, HIV, MSM, minority identity, psychological symptoms

(2) “时间心理学专业委员会”口头报告分场 2

视角采择对时间——空间关系的影响

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摘 要 时间的表征具有空间性, 左侧空间对过去词、短时距、早的时间概念反应更快, 右侧空间对将来词、长时距、晚的时间概念反应更快, 该现象被称为空间—时间联合编码效应(spatial—temporal association of response codes effect, STEARC)。在不同空间方向、实验材料、文化背景、运动方式上都发现了 STEARC 效应的普遍性, 但它也受到阅读、书写习惯、训练、参照框架、工作记忆等因素的影响。人类在成长过程中, 逐步掌握从他人的角度看待事物的能力, 这种能力被称为视角采择, 不同视角下被试表现出阅读方向的差异。本研究首次从视角采择的角度, 探索空间和时间表征关系的可变性。实验一考察不同视角的影响, 时间词出现在屏幕中央位置。采用 2 (视角: 自我、他人) × 2 (时间词: 过去、未来) × 2 (反应按钮: 左、右) 混合实验设计。他人组需要完成视角转换练习, 自我组直接进入正式试验。视角转换训练中, 被试需正确识别具有两种视角的数字或者字母, 如: 6 和 9、W 和 M 等。实验阶段, 两组被试分别想象处于自己和他人的视角, 设置了两处互动环节, 分别需要被试在额头上比划出视角方向的直线以及选择出正确视角阅读方向。实验程序采用时间词分类任务, 当时间词出现在屏幕中央, 要求被试对刺激的时间属性作出表示过去或者未来的按键反应。结果发现, 视角、时间词主效应显著, 视角与时间词交互作用显著, 视角、时间词、反应按钮三重交互作用显著, $F(1,58)=7.26$, $p<0.05$, 简单效应分析, 他人组中, 呈现过去词语时, 用右手按键反应时快于用左手按键(1159.14±39.24 ms vs. 1220.37±34.24 ms), 自我组中, 呈现过去词语时, 用左手按键反应时快于用右手按键(1050.46±34.24 ms vs. 1099.82±39.24 ms)。表明在他人组中, 出现“右-过去”STEARC 效应, 自我组中, 出现“左-过去”STEARC 效应。实验二考察视角与空间位置的交互影响, 时间词出现在屏幕左右两边, 采用 2 (不同视角: 自我、他人) × 2 (空间位置: 左侧、右侧) × 2 (时间词: 过去、未来) × 2 (反应按钮: 左、右) 的混合实验设计。结果发现, 视角、空间位置、时间词主效应显著, 视角、空间位置、反应按钮三重交互作用显著, 但四重交互作用不显著, 自我和他人组均未出现 STEARC 效应。研究表明, 自我和他人视角影响时间和空间的关系表征, 这种影响与空间位置有关, STEARC 效应表现出可变性, 支持了多元表征理论。

关键词 STEARC 效应, 视角采择, 空间位置

The Influence of Perspective-taking on Time-Space Relationship

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Abstract: Time is spatial-temporal. The spatial temporal association of Response Codes effect (STEARC) on the left side is temporal more quickly on the past words, short distance and early time concepts, while the right side is temporal on the future words, long distance and late time concepts. The universality of STEARC effect was found in different spatial directions, experimental materials, cultural background and movement modes, but it was also affected by reading, writing habits, training, frame of reference, working memory and other factors. As human beings grow up, they gradually acquire the ability to see things from the perspective of others. This ability is called perspective-taking, in which people show different reading directions from different perspectives. This study is the first to explore the variability of spatial and temporal representation from the perspective of perspective selection. Experiment 1 examines the effects of different perspectives, with time words appearing in the center of the screen. 2 (perspective: self, others) × 2 (time word: past, future) × 2 (reaction button: left, right) was adopted for mixed experimental design. The others were required to complete the perspective-shifting exercise, and the self group went directly into the formal experiment. In the perspective conversion training, the subjects should correctly identify the

Numbers or letters with two perspectives, such as 6 and 9, W and M. In the experiment, two groups of subjects imagined themselves and others' perspectives. Two interactive sessions were set up, in which subjects were required to draw a straight line of Angle of view on their foreheads and choose the correct Angle of view to read. The program USES the time word classification task. When the time word appears in the center of the screen, the subjects are required to make a button response representing the past or future of the time attribute of the stimulus. Results found that Angle of view, the word denoting time main effect significantly, interaction perspective with word denoting time significantly, Angle of view, word denoting time, triple interaction significant response buttons, $F, 58(1) = 7.26, p < 0.05$, the simple effect analysis, others in the group, present words in the past, when the button with the right hand faster than with his left hand button (1159.14 ± 39.24 ms vs. 1220.37 ± 34.24 ms), self in the group, present words in the past, The reaction time was faster when pressing left hand keys than when pressing right hand keys (1050.46 ± 34.24 ms vs. 1099.82 ± 39.24 ms). The results showed that there was a right-past STEARC in the other group and a left-past STEARC in the self group. Experiment 2 investigates the interaction between perspectives and spatial positions. Time words appear on both sides of the screen, and adopts a mixed experimental design of 2 (different perspectives: self and others) $\times$ 2 (spatial positions: left and right) $\times$ 2 (time words: past and future) $\times$ 2 (response buttons: left and right). The results showed that the main effect of visual Angle, spatial position and time word was significant, and the interaction of visual Angle, spatial position and reaction key was significant, but the quadruple interaction was not significant, and STEARC did not appear in the self group and the others group. Studies have shown that the perspectives of self and others affect the representation of the relationship between time and space, which is related to spatial location. STERAC shows variability, which supports the theory of multiple representations.

Keywords: STEARC, perspective-taking, spatial location

未来导向与幸福感的非单调关系：中谷效应

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摘要 在快节奏的生活中, 个体和社会都十分重视未来导向的作用, “未雨绸缪”被视为优秀的标签。近年来, 研究者一直采用单调假设来探究未来导向的作用。理性经济人假说将未来导向视为理性行为, 是效用最大化的体现; 心理学家则将现在导向视为自我控制失败或冲动性的体现。研究也证实了未来导向与各领域积极结果有正向线性关系(如学业成就、工作满意度、健康行为等), 而现在导向则与许多消极结果有正向线性关系(如拖延、成瘾等)。那么, 这单调假设真的对吗? 换言之, 随着未来导向程度的上升, 个体的幸福感真的会持续上升吗? 有研究发现未来导向程度的上升并不一定能带来幸福感的上升, 甚至会因过度未来导向而削弱其积极作用。同时, 正念理论和现在导向研究揭示了被忽视的现在导向同样能够促进幸福感的提升。据此, 本研究认为应选取非单调的视角来探讨未来导向和幸福感的关系。本研究选取 2018 年欧洲社会调查数据, 包含来自 29 个国家的 47688 名被试。研究将基于个体嵌套国家的多层模型, 采用多项式回归挑选出最符合未来导向和主观幸福感的模型。结果发现, 在控制性别、年龄等与幸福感相关的变量后, 未来导向的四次方程是预测主观幸福感的最优模型。整体来看, 随着未来导向程度的上升, 个体主观幸福感先上升再下降, 在未来导向中等程度时下降至曲线极点后再上升。不同国家曲线有所差异, 分为正 U 型, N 型(与整体水平相似)和 M 型(两端出现略微下降)。其中, 3 种曲线均在未来程度中点时出现幸福感极低点, 本研究将其称为“中谷效应”。该效应说明相较在某一导向上有所坚持的个体, 在现在和未来导向相对中立的个体较不幸福。据此, 当个体期望通过提升未来导向来改善幸福感时, 应在明确某一主导导向的基础上, 在适应范围内有所提升, 而非盲目提升或摒弃其余导向。总之, 本研究首次揭示了未来导向与主观幸福感存在非线性非单调的关系且存在“中谷效应”, 打破了原有线性单调的认知, 对于干预未来导向来改善幸福感的手段具有指导意义。

关键词 未来导向, 幸福感, 非单调, 非线性模型

A nonmonotonic relationship between future orientation and well-being: the middle valley effect

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Abstract: Nowadays, no matter the family, school or society would flaunt the future orientation as a shortcut to obtain happy life, while taking "preparing for a rainy day" as an essential capability for outstanding individuals. Researchers have adopted a monotonic assumption to understand the functions of future orientation in adaptiveness for decades. Economists regard future orientation as rational behavior, which reflects the rationality of utility maximization in economics. On the other hand, behaviorists treat the tendency to prefer present-oriented behaviors to future-oriented ones as self-control failure or impulsivity. In line with these views, several studies have supported that future orientation has a positive linear relationship with positive outcomes in various domains (such as academic achievement, job satisfaction, health behavior, etc.). Meanwhile, evidence has suggested that present orientation is linearly positive associated with multiple negative outcomes like procrastination, substance use, and risky driving behaviors. Nevertheless, what if the monotonic assumption is invalid? In other words, is it true that individuals could be constantly better when they are more future-oriented? Some studies suggest the increase of future orientation might not necessarily lead to the rise of well-being, and even weaken the positive role due to excessive future orientation. Furthermore, Mindfulness Theory and studies on present orientation have revealed that neglected present orientation could also promote well-being. Therefore, we suppose that a non-monotonic perspective should be selected to explore the relationship between future orientation and subjective well-being (SWB). The present study adopted an open dataset from European Social Survey, including 47,688 participants from twenty-nine countries. We adopted polynomial regression to select the optimal model for the relationship between future orientation and SWB, based on multilevel model of individuals nested within countries. The results showed that after controlling covariates like gender and age, we ultimately selected the quartic model of future orientation as the optimal model. At the individual level, participants' ratings of SWB increased and reached a peak at the first inflection point, and decreased until the second inflection point (at the midpoint of the scale). After that, their ratings continued to increase. At the country level, different European countries had different curve patterns, including positive U-shaped, N-shaped (similar to the individual level) and M-shaped (with a slight decline at both ends). The same pattern of three shapes was the lowest SWB at the midpoint of degree in the future orientation, defining it as the "Middle Valley Effect". This effect suggested that individuals who were relatively neutral in their present and future orientation were less happy than those who adhered to a certain orientation. Therefore, when individuals expect to improve their SWB by improving future orientation, they should improve within the adaptive range on the basis of clarifying a certain dominant orientation, rather than blindly improving or abandoning other orientations. In conclusion, this study firstly reveals a non-linear and non-monotonic relationship between future orientation and SWB, which breaks the original linear monotonous cognition and provides a guideline for intervening the means of future orientation to improve SWB.

Keywords: future orientation, well-being, non-monotonic, nonlinear model

符号性连续数量对时距知觉的影响——汉字语义的数量效应

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摘要 人们倾向于将具有较大亮度、响度、质量、大小等属性的刺激物对应于更长的时距, 这种数量效应被视为是数量理论 (ATOM) 的有效外延, 即在个体的认知系统中, 时间、空间和量由一个普遍性数量系统共同表征, 大脑在加工量的信息时会对时间知觉产生影响。从数量认知视角对刺激物的属性进行符号性—连

续性的二维分类，可以推断该类效应（即 ATOM 中的“量”）亦存在相应的二维结构分类。本研究尝试以具有数量含义的汉字为载体，运用恒定刺激法，通过两个平行实验来探究汉字语义的数量效应，以期将符号性连续数量纳入 ATOM，扩大该理论中“量”的外延。实验 1 采用 4（比较刺激类型：大数量、小数量、非数量、无汉字） $\times$ 7（比较刺激呈现时长：1200, 1300, 1400, 1500, 1600, 1700, 1800 ms）的被试内设计，探究符号性连续数量对秒上水平时距知觉的影响。其中无汉字组呈现与恒定刺激相同的黑色实心圆，后者固定呈现 1500 ms。将实验参与者的反应通过 logistic 回归拟合计算主观相等点（PSE）和韦伯比率（WR）。结果表明，不同汉字类型间 PSE 差异显著，且小数量型汉字组的 PSE 显著大于大数量、非数量和无汉字组，表现出明显的时距压缩效应；其他组别的差异均未达到显著水平。而不同汉字类型间 WR 差异不显著，即汉字的语义不影响人们时距知觉的敏感性。鉴于不同时间量级（秒上、秒下）的时距知觉或存在机制差异，实验 2 将实验 1 中所有刺激缩短 1000 ms，探究符号性连续数量的秒下级效应。结果表明，不同刺激类型的 PSE 和 WR 均无显著效应，表明符号性连续数量对于秒下刺激的 PSE 和 WR 影响较小。为全面评价研究结果，以时间量级作为组间变量，汉字类型为组内变量，对实验 1、2 的 PSE 数据进行两因素重复测量 ANOVA 综合分析。结果表明，时间量级的主效应显著，实验参与者所知觉的秒上刺激的主观时距显著高于秒下刺激；汉字类型的主效应显著，且小数量型汉字组的 PSE 显著大于大数量、非数量和无汉字组，表现出明显的时距压缩效应；其他组别的差异均未达到显著水平。时间量级和汉字类型的交互作用边缘显著，且汉字的不同类型在秒上时间级对 PSE 有显著影响，在秒下差异未达到显著水平。对 WR 的分析未发现显著效应，表明时距知觉的敏感性不受汉字语义和时间量级的影响。整项研究结果表明，汉字语义的数量信息对于时距知觉存在数量效应，尤其表现为小数量型汉字对主观时距的压缩；且可能是由于不同的认知神经机制，符号性连续数量在不同时间级的效应亦不相同。本研究对于将以汉字为载体的符号性连续数量纳入 ATOM 模型提供了初步的支持性证据，即 ATOM 中的“量”或可以延伸至符号性连续数量的范畴。

关键词 符号性连续数量，时距知觉，数量效应，数量理论，数量认知

From Non-Symbolic Number to Symbolic Magnitude: Chinese Characters of Semantically Small Magnitudes Lead to Duration Underestimation

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Abstract: Generally, our subjective duration of a given interval positively correlates with the magnitude (e.g. luminance, loudness, weight, size, etc.) of the stimulus. Such effect is often explained by the A Theory of Magnitude (ATOM) model, which suggests an existence of a common “magnitude system” where time, space, and quantity have shared neural representations. Due to the unified metric, the measurement of duration can be thus influenced by that of quantity. From the perspective of numerical cognition, we found out that the previous work on the magnitude effects (or quantity in ATOM) mostly fell into the taxonomy of non-symbolic number, non-symbolic magnitude, and symbolic number. And we hypothesize that the category of symbolic magnitude will bring about a similar effect. By virtue of Chinese characters of semantically different magnitudes, two psychophysical (method of constant stimuli, to be specific) experiments were conducted to investigate the influence of symbolic magnitude on duration perception. Experiment 1 adopted a 4(type of comparison stimuli: Chinese characters of semantically great magnitude, small magnitude, or non-magnitude vs. no characters) $\times$ 7(duration of comparison stimuli: 1200, 1300, 1400, 1500, 1600, 1700, 1800 ms) within-subject design to figure out the magnitude effect of symbolic magnitude on duration perception on a supra-second time scale. In no character conditions, a black disc same as the constant stimuli shows, the latter of which appears for constantly 1500 ms. The point of subjective equality (PSE) and the Weber ratio (WR) were obtained through logistic regressions of the responses by participants. A repeated-measures ANOVA on PSE revealed a significant effect of stimuli type. Post hoc comparisons showed that Chinese characters of semantically small magnitude led to significantly greater PSE than any other condition, suggesting a compression of subjective

duration. No other significant effects were found. A repeated-measures ANOVA on WR revealed no significant effects either, which indicated little influence of the semantics on the sensitivity of duration perception. Given the possible distinctions of the underpinning mechanisms between different time scales (supra- vs. sub- second) in duration perception, Experiment 2 (4×7 within-subject design) shortened all the stimuli by 1000 ms as compared to those in Experiment 1 to investigate the magnitude effect on a sub-second time scale. No significant effects were found by repeated-measures ANOVAs either on PSE or on WR, indicating little implication of symbolic magnitude on the sub-second time scale. To synthesize the findings of our current study, we used a mixed effects ANOVA (between-subject factor, time scale; within-subject factor, stimuli type) on PSE and revealed significant main effects of the two factors. Post hoc tests showed that Chinese characters of semantically small magnitude led to significantly greater PSE than any other condition, suggesting a compression of perceived duration. The interaction was marginally significant, whose simple effects test revealed a significant magnitude effect of character type on PSE on supra-second timescale; on sub-second timescale the effect was found non-significant. We also ran an ANOVA on WR where no significant effects were obtained. Taken together, the present study suggests an influence of symbolic magnitude on duration perception with semantic representation of Chinese characters, especially evidenced by the duration compression effect triggered by the characters with smaller magnitudes. Besides, the symbolic magnitude effects turned out different on sub- and supra-second scales, possibly owing to their dissociable neuroanatomical substrates. The results preliminarily support the integration of symbolic magnitude (of semantically heterogeneous Chinese characters) into the ATOM model; or in essence, the “quantity” construct in ATOM may well constitute symbolic magnitude as well.

Keywords: symbolic magnitude, duration perception, magnitude effect, A Theory of Magnitude (ATOM), numerical cognition

时间范围选择对时间知觉和估计研究的影响

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摘要 时间是生命的基本维度。尽管人类没有专门的时间感受器, 却有知觉时间的能力。这是人们理解生活中时间进程的智力结构的一部分, 是心理学重要的研究对象之一。根据现象学和实验数据, 将人们对时间的加工分为时间知觉 (perception of time) 和时间估计 (estimation of time/duration)。时间知觉平均为 2-3 秒, 不超过 5 秒, 涉及当前的心理体验; 超过这个范围的时间加工为时间估计, 需要记忆参与。时间知觉和估计的研究方法主要基于两种范式: 回溯性和前瞻性研究范式。由于这两种研究范式的时间范围选用均比较广, 从亚秒到超秒至分钟甚至更长, 也有同时包括亚秒、超秒和分钟的研究, 这导致部分研究存在对时间范围界定不清的问题, 体现在相同的非时间影响因素可能得出不一致的结论。部分研究得出比较可靠的结果, 但如果不对时间范围进行区分, 只用“时间知觉”得出结论会引起混淆。本文将对在年龄、性别、任务性质三个方面可能由于时间范围的选择混淆或影响研究结果的文章进行综述。尽管有相当一部分研究表明, 时间范围不影响时间估计的准确性和精确度, 但对时间范围界定不清很难对潜在的加工机制进行分离, 得出更为清晰、一致、可靠的结论。认知神经科学研究发现, 在微秒范围, 时间加工主要依靠小脑, 在几秒到几分钟的范围内, 时间加工涉及到形成丘脑-皮质-纹状体回路的大脑区域网络激活, 特别是基底神经节、辅助运动区、前额皮层和后顶叶皮层。因此, 对时间知觉和估计研究的时间范围的明确选择是十分必要的。在今后的研究中, 一方面需要对任务的时间范围进行区分, 另一方面可以将不同的时间范围结合时间知觉和估计的非时间影响因素进行对比研究, 有利于进一步整合研究结果, 更有针对性的对时间知觉和估计的研究进行深层次的探讨。

关键词 时间知觉, 时间估计, 时间范围, 加工机制

The influence of time range selection on the study of time perception and estimation

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Abstract: Time is a fundamental dimension of life. Human beings have the ability to perceive time, even though there is no specialized time receptor. The ability is a part of the intellectual structure which helps people understand the course of time in life and also an important research object in psychology. The processing of time is divided to the perception of time and estimation of duration according to phenomenological and experimental data. The average duration of time perception which refers to the current psychological experience is 2-3 seconds, but no more than 5 seconds; beyond that range is the so-called estimation of time which requires involvement of memory. Methods applied to time perception and estimation are based on two paradigms: retrospective and prospective paradigm. The time range of researches based on the above paradigms is mostly wide which can range from sub-seconds to supra-seconds to minutes to even longer. Some of them mixed sub-seconds and supra-seconds or minutes together. This may lead to some problems that some studies nowadays are not clear enough to express the range of time applied in their studies so that inconsistent conclusions come from the same non-temporal factors. Some studies draw reliable results to some degree, however, if no explicit distinction is made between time range may make a confusion conclusion on time perception. The present article will review some essays based on retrospective and prospective paradigms on age, gender and the character of the task which may confuse time range and influence research results. Although quite a number of studies have shown that time range selection does not affect the accuracy and precision of time perception or estimation, blurring the time range may cause the difficulties to isolate the underlying processing mechanisms and obtain more clear, consistent, and reliable conclusions. Researchers have found that the processing of time for millisecond range relies on the cerebellum. The time encoding in the seconds-to-minutes range involves the activation of a network of brain areas that form part of the thalamo-cortico-striatal circuits, especially the basal ganglia, the supplementary motor area, the prefrontal cortex, and the posterior parietal cortex. Above all, it is necessary to distinguish time perception and estimation through the correct selection of the time range. Future studies should pay more attention to the range selection of time, and different time ranges can be combined with non-temporal factors for comparative study. So that it is beneficial to integrate the result of researches and to do an in-depth discussion on the knowledge of time perception and estimation purposefully.

Keywords: time perception, time estimation, time range, processing mechanism

影响运动时距估计的因素及研究进展

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摘要 “没时间”是人们不进行运动锻炼的最主要原因, 然而每次运动需达到一定的时间才能产生更好的效果, 如何度过这段时间可能影响人们对运动时距的判断。本文从性别、年龄、运动任务性质、情绪和注意这几个方面对运动锻炼领域时距估计的研究进行综述。首先, 从性别因素来看, 在估计 60 秒的运动时, 女性比男性有更高的时距估计。但这不等于运动时间的流逝感存在性别差异, 只有当时距大于 2 分钟时, 时距估计才与时间流逝感相关。第二, 从年龄因素来看, 从儿童到成年, 人们对时距判断的敏感性有所提高, 成年后不存在年龄差异。在长时距估计的研究中发现, 老年人比年轻人感觉时间过得更快, 对时距低估。年龄会导致相同运动体验上的差异, 可能间接影响运动时距判断。第三, 运动性质包括难度、强度、熟悉程度等, 这些性质很难进行独立的划分, 运动强度增加会伴随着难度增大或熟悉度降低。在回溯时间范式的研究中, 参与者对短时距范围的熟悉运动时距低估; 在长时距范围, 当运动强度增大时, 熟悉的运动时距被低估, 不熟悉的被高估, 运动强度和熟悉度交互起作用。在预期时间范式的研究中, 研究参与者的运动自感用力程度越高, 时距估计扭曲的程度越大。这可能与自感用力程度升高时, 人们运动的愉悦感降低并期待更快结束运动

有关。第四，情绪对时距估计的影响大多集中在负性情绪的研究上，例如，恐怖等消极情绪会引起时距的高估。人们对运动的态度和体验可能会影响运动的情绪，进而影响时距判断。第五，注意对时距估计的影响体现在：分配给时间相关信息的注意越多，时距估计越长；对非时间信息注意的越多，时距估计越短；若刺激本身为时间判断的关注点，会导致对刺激时距的高估。因此，在估计运动时距时，如果改变人们对运动的注意，就可能对该运动的时距估计产生影响。总结而言，目前运动领域时距估计的研究主要是围绕预期时间范式的短时距刺激反应速度和准确性开展的，长时距范围基于回溯范式对运动时距的估计还需在今后的研究中进行探索。

关键词 时距估计，运动时距，预期范式，回溯范式

Factors influencing physical activity duration estimation and research progress

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Abstract: "Lack of time" is the top reason why people do not do physical activity. However, exercise requires a certain amount of time to achieve better results each time. And how to spend that time may affect how you feel the elapse of time. This paper reviews the research on duration estimation in physical activity from gender, age, nature of physical activity task, emotion, and attention. First, in terms of gender, women had a higher time estimate than men when estimating running exercise in the 60s. However, this does not mean there is a gender difference in the perceived lapse of time. Only if the time distance is greater than 2 minutes, the duration estimation is related to the perceived lapse of time. Second, from the age perspective, people's sensitivity to time increases from children to adults, and there is no age difference after adulthood. In studies of long-duration estimation, older people perceive time to pass faster than younger people and underestimate time. Age may lead to different experiences of the same exercise, which may affect the judgment of physical activity duration indirectly. Third, sport task properties include difficulty, intensity, and familiarity, which are difficult to be divided. Increasing task intensity is always accompanied by increasing the level of difficulty or decreasing the familiarity degree. In the study of retrospective time paradigm, participants underestimated the familiar task's time distance of short-distance range; In the long time range, when the intensity of exercise increased, the common task's duration is underestimated, whereas the unfamiliar task's duration is overrated. Physical activity intensity and familiarity work interact. Under the study of the perspective time paradigm, the higher the rate of perceived exertion during physical activity, the higher distortion of the time judgment people made. This phenomenon may have to do with the decreased enjoyment of a task and the expectation of a quicker completion of the task as self-perceived exertion increases. Fourth, the impact of emotion on time estimation mainly focuses on negative emotions, such as fear and other passive emotions that will cause the overestimation of time. People's attitude and experience of physical activity may affect their feelings when doing sports, so that it may affect the judgment of time duration. Fifth, attention impacts time estimation as following: the more attention allocated to time-related information, the longer time duration is estimated; The more focus distributed to non-temporal related things, the shorter time duration estimation is. If the stimulus is the focus of time judgment, the duration of which will overestimate. Based on previous research and model, it is possible to impact the time estimation of exercise if people change the way or direction of attention to physical activity. In summary, current research on time estimation in physical activity focuses on the reaction time and accuracy of short duration range of time stimuli based on the perspective time paradigm. The judgment of the physical activity duration based on the retrospective time paradigm needs to carry out in future studies.

Keywords: time estimation, physical activity duration, retrospective time paradigm, perspective time paradigm

5.分组展贴报告

5.1“教育心理专业委员会”分组展贴报告

父母感恩教养行为对青少年感恩行为的影响： 父母共同教养的中介作用

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摘 要 感恩是指受惠者在意识到受到外界的恩惠后,在内心产生认可、并意欲回报的一种积极的情绪特质,这种积极的情绪特质能促使个体做出回报外界的行为。根据生态系统理论,微系统中的家庭和父母因素对青少年的心理与行为发展有着重要影响,从父母那里得到更多感恩社会化教育的孩子更善于感恩。随着协作性共同养育的兴起,父母共同教养成为了新兴的研究领域,根据家庭系统论的观点,共同教养作为家庭环境中独特的一个子系统对孩子的发展具有重要作用,父母对子女的教养行为通过合作、支持型的共同教养环境将有助于孩子安全感的获得以及积极社会行为的发展。基于此,本研究选取广州市普通小学及初中各一所,分层抽样选取四年级至初三共计 13 个班 1132 名青少年的父母为问卷调查对象,旨在考察父母感恩教养行为与青少年感恩行为的关系,以及父母共同教养在两者间的中介作用。结果发现:(1)父母日常感恩教养行为、父母共同教养和父母报告的青少年日常感恩行为总体处于中上水平;(2)父母感恩教养行为与父母共同教养($r=0.365, p<0.001$)、父母报告孩子的日常感恩行为($r=0.512, p<0.001$)呈显著正相关,父母共同教养与父母报告孩子的日常感恩行为呈显著正相关($r=0.265, p<0.001$);(3)父母日常感恩教养行为能正向预测孩子的日常感恩行为($B=0.514, p<0.001$),父母日常感恩教养行为能正向预测父母共同教养($B=0.237, p<0.001$),父母共同教养能正向预测孩子的日常感恩行为($B=0.140, p<0.01$),进一步中介分析显示,父母共同教养在父母感恩教养行为与父母报告孩子的日常感恩行为之间起部分中介作用(effect = 0.033)。研究表明,父母感恩教养行为会通过父母共同教养最终影响孩子的感恩行为,因此,父母双方应注重日常对子女的感恩教育,努力形成合作型的教养氛围,从而促进子女感恩情感和行为的获得。

关键词 青少年,父母感恩教养行为,父母共同教养,青少年感恩行为

The influence of parents' gratitude behavior on teenagers' gratitude behavior: the mediating role of co-parenting

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Abstract: Gratitude refers to a kind of positive emotional quality that the beneficiaries will recognize and intend to return after they realize the kindness from the outside world, and such positive emotional quality will motivate individuals to reciprocate the outside world. According to the theory of ecological system, the system of family and parents elements have important effect on the psychological and behavioral development of teenagers, Children who received more socialization education in gratitude from their parents were more grateful. In recent years, With the rise of collaborative co-parenting, parental co-parenting has become an emerging field of research. According to the viewpoint of family system theory, co-parenting, as a unique subsystem in the family environment, plays an important role in children's development. Through cooperative and supportive co-parenting environment, parents will contribute to children's security and development of positive social behaviors.. Based on this, this study selected one ordinary primary school and one junior middle school in Guangzhou, stratified sampling of 1132 teenagers' parents

from 13 classes from grade 4 to grade 9 as questionnaire respondents, aiming to investigate the relationship between parents' gratitude and teenagers' gratitude behavior, and the mediating effect of parents' co-parenting. The results showed that : (1) the parent's daily gratitude behavior, the parents' co-parenting and the parents-report of child's daily gratitude behavior were in the above average level. (2) there was a significant positive correlation between parents' gratitude behavior and parents' co-parenting ($r = 0.365, p < 0.001$), parents' report of child's daily gratitude behavior ($r = 0.512, p < 0.001$), and parents' co-parenting and parents' report of children's daily gratitude behavior have a significant positive correlation ($r = 0.265, p < 0.001$). (3) parents' daily gratitude behaviors can positively predict parent-report daily gratitude behavior of the children ($B = 0.514, p < 0.001$), parents' daily gratitude behavior can positively predict co-parenting ($B = 0.237, p < 0.001$), co-parenting can positively predict parent-report daily gratitude behavior of the children ($B = 0.140, p < 0.01$), and mediation analysis showed that the co-parenting of parents plays a part in mediating the relationship between parents' daily gratitude behaviors and parent-report daily gratitude behavior of the children(effect =0.033). Research showed that parents' gratitude behavior will eventually affect their children's gratitude behavior through co-parenting. Therefore, both parents should pay attention to the daily gratitude education of their children and try to form a cooperative parenting atmosphere, so as to promote the acquisition of their children's gratitude emotion and behavior.

Keywords: Teenagers, parents' gratitude behavior, co-parenting, teenagers' gratitude behavior

父母调节焦点与高中生生涯适应力的关系： 一个跨层级的调节中介模型

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摘 要 生涯适应力是个体对可预测的生涯任务与生涯角色的准备状态，以及应对不可预测的生涯转换引发的问题的自我调整能力，被视为个体在快速变化的现代社会中获得生涯成功的关键能力，是国内外近年来生涯教育领域中一个新的理论生长点。处于高中阶段的青少年面临着择校、选专业等重要的生涯任务，是习得并巩固生涯适应力的关键时期。考察高中生生涯适应力的影响因素和边界条件可以为提升其生涯适应力提供可操作的干预策略。以往研究表明，父母的调节焦点是高中生生涯适应力重要影响因素，并且，友谊质量可能在两者中发挥桥梁作用。同时，教师在高中生群体中扮演着重要角色，其自主支持可以调控父母调节焦点对个体友谊质量的影响，进而提升其生涯适应力。鉴于此，本研究旨在考察友谊质量在父母调节焦点与高中生生涯适应力之间的中介作用以及教师自主支持在其中的跨层级调节作用。采用感知父母调节焦点量表、友谊质量量表、学习气氛量表以及高中生生涯适应力问卷对 30 个班级的 974 名高中生进行调查。结果表明：（1）生涯适应力与父母促进焦点、友谊质量以及教师自主支持呈显著正相关，与父母防御焦点呈显著负相关；（2）父母促进焦点显著正向预测高中生的生涯适应力，父母防御焦点对高中生生涯适应力的预测作用不显著；（3）友谊质量在父母促进焦点与高中生生涯适应力之间起部分中介作用、在父母防御焦点与高中生生涯适应力之间起部分中介作用；（4）教师自主支持在父母防御焦点→友谊质量→生涯适应力的前半段起跨层级调节作用，并且，随着教师自主支持水平的提升，父母防御焦点对友谊质量的作用方向由负变为正。这表明父母调节焦点不仅可以直接作用于高中生的生涯适应力，还能够通过友谊质量对其产生影响，并且，教师自主支持能够缓解父母防御焦点对友谊质量的负向影响，进而提升个体的生涯适应力。

关键词 父母调节焦点，生涯适应力，友谊质量，教师自主支持

The relationship between parent regulatory focus and high school students' career adaptability:

A cross-level moderated mediation model

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Abstract: Career adaptability is an individual's preparation for predictable career tasks and career roles, as well as the self-adjustment ability to cope with the problems caused by unpredictable career transition. It is regarded as the key ability for an individual to achieve career success in a rapidly changing modern society, and it is a new theoretical growth point in the field of career education at home and abroad in recent years. Teenagers in high school are faced with important career tasks such as choosing schools and majors, which is a key period to acquire and consolidate their career adaptability. Investigating the influencing factors and boundary conditions of high school students' career adaptability may provide an operational intervention strategy to improve their career adaptability. Previous studies have shown that the parent regulatory focus is an important factor in the high school students' career adaptability. Moreover, the friendship quality might play a bridge role between them. At the same time, teacher played an important role in high school students, and their autonomy support can regulate the influence of parent regulatory focus on the friendship quality, thus improving their career adaptability. In view of this, this study aims to examine the mediation role of friendship quality between parent regulatory focus and high school students' career adaptability, and the cross-level moderation role of teacher autonomy support. This study used the perceived parent regulatory focus scale, the friendship quality scale, the learning atmosphere scale, and the high school students' career adaptability questionnaire to conduct 974 high school students in 30 classes. The results showed that: (1) high school students' career adaptability were positively correlated with parent promotion focus, friendship quality and teacher autonomy support, and negatively correlated with parent prevention focus. (2) The parent promotion focus significantly positively predict the career adaptability among high school students, and the parent prevention focus cannot predict the career adaptability of them. (3) The friendship quality played a partly mediation role between parent regulatory focus and the career adaptability among high school students. (4) The teacher autonomy support played a cross-level moderated role in the first half of the "parent prevention focus→ friendship quality→ career adaptability". The results of this study showed that parent regulatory focus can not only directly affect career adaptability among high school students, but also influence them through friendship quality. Moreover, teacher autonomy support can alleviate the negative influence of parent regulatory focus on friendship quality among high school students, and then enhance their career adaptability.

Keywords: parent regulatory focus, career adaptability, friendship quality, teacher autonomy support

从实验室到课堂：超扫描技术在教学评价中的运用

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摘要 教学评价是以教学为评价对象的一种教育评价。教学评价是依据一定的教学目标和标准, 采用定量与定性相结合的方法, 对教与学的效果进行的价值判断。教学评价是教学的重要环节, 是对教学效果的基本判定。它可以促进教学方法、内容的改革, 并提高教学质量和水平, 为教学活动更有效地开展提供基本的依据。然而, 已有的教学评价方法存在“主观性”、“片面性”与“静态化”等问题。超扫描技术是一种能实时记录两名或多名被试在同一个认知任务中大脑神经活动从而考察社会互动脑机制的脑成像技术。自 Holper 等人于 2013 年发表第一篇超扫描技术运用于教学互动领域以来, 这一技术开始受到了教育领域研究者的广泛关注。为了推动教育评价的改革, 促进超扫描技术在教育评价领域的进一步发展, 本文旨在对超扫描技术在教学评价中的应用做一综述性总结。本文首先简要介绍了超扫描技术的概念、超扫描研究的国内外研究现状。紧接

着,本文重点总结了超扫描技术运用于教学过程、教学效果、教学方法评价中的实证研究成果。最后,阐述了超扫描技术在教学评价中运用的局限性及其研究前景。未来研究者们可以在完善现有研究的基础上,从以下几个方面进行思考和探究:“构建多模态、多学科融合的教学评价方式”、“增加研究情境的学生人数,拓宽研究对象的学段范围”等。

关键词 教学评价,超扫描技术,大脑间神经活动同步,师生互动

From the Laboratory to the Classroom: The Application of Hyperscanning in Teaching Evaluation

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Abstract: Teaching evaluation is an educational evaluation with teaching as the evaluation object. Teaching evaluation is based on certain teaching goals and standards, using a combination of quantitative and qualitative methods to evaluate the value of teaching and learning. Teaching evaluation is an important part of teaching and a basic judgment of teaching effect. It can promote the reform of teaching methods and content, and improve the quality and level of teaching, and provide a basic basis for more effective teaching activities. However, the existing teaching evaluation methods have problems such as "subjectivity", "one-sidedness" and "staticization". Hyperscanning technology is a brain imaging technology that can record the neural activity of two or more subjects in the same cognitive task in real time to investigate the social interaction brain mechanism. Since Holper et al. 2013 published the first hyperscanning technology to be used in the field of teaching interaction, this technology has begun to attract widespread attention from researchers in the education field. In order to promote the reform of educational evaluation and promote the further development of super-scan technology in the field of educational evaluation, this article aims to make a summary of the application of super-scan technology in teaching evaluation. This article first briefly introduces the concept of hyperscanning technology and the current status of hyperscanning research at home and abroad. Next, this article focuses on the empirical research results of the application of super-scan technology in the teaching process, teaching effect, and teaching method evaluation. Finally, the limitations and research prospects of the application of super-scan technology in teaching evaluation are expounded. In future research, researchers can conduct research from "building a multimodal and multidisciplinary teaching evaluation method", "increasing the number of students in the research situation, and broadening the scope of the study object".

Keywords: teaching evaluation, hyperscanning technology, brain-to-brain synchrony, teacher-student interaction

积极还是消极?焦虑对大学生拖延行为的影响

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摘要 人的天性是懒散松垮的,如果没有外界的强制约束,很容易养成“今日事,明日毕”的习惯,能拖则拖。如疫情期大学生缺少了学校和老师的监督,越来越多的人进入了“蜗牛”状态,居家生活伴随着各种拖延和低效行为。拖延行为是指个体有意或无意的推迟完成任务的表现。焦虑作为一种消极情绪,虽

然会起到一定的副作用,但在一定程度上可以成为推动人前进的动力。本研究采用问卷法和实验法相结合的方式探究焦虑对大学生拖延行为的影响。(1)研究一采用 STAI 中的特质焦虑分量表和一般拖延量表对 400 名大学生进行调查。结果表明大学生的特质焦虑水平与特质拖延水平均高于平均水平,特质焦虑与特质拖延在年级、性别和专业上的差异并不显著;特质焦虑与特质拖延呈显著正相关,特质焦虑能正向预测特质拖延。(2)研究二采用焦虑诱发任务和参照练习-测验范式设计拖延任务实验。第一部分为检验焦虑诱发任务有效性的预实验,第二部分为正式实验,采用 2(特质焦虑:高/低)×2(特质拖延:高/低)×2(状态焦虑:实验组/控制组)被试间设计。将研究一中的被试根据特质焦虑和特质拖延的得分分成四组,再根据诱发焦虑

与否进一步分配被试,一共得到八组被试。焦虑诱发组被试需要完成焦虑诱发和拖延任务,控制组被试则只需完成拖延任务。结果表明焦虑诱发任务前后被试状态焦虑分数差异显著,其焦虑分数明显较高;特质焦虑、状态焦虑以及特质拖延各自的主效应和交互效应均显著,即各组被试的拖延行为存在显著差异,但当焦虑达到一定程度时,个体会因为高焦虑状态而减少或终止拖延行为。因此,既要看到焦虑的消极面,也要充分利用焦虑的积极面,从而进一步减少大学生自身的拖延行为。

关键词 状态焦虑, 特质焦虑, 特质拖延, 拖延行为

Positive or Negative? The Influence of Anxiety on Procrastination Behavior of College Students

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Abstract: Human nature is lazy and flabby. If there is no external constraint, it is easy to form the habit of "doing things today, finishing tomorrow", if you can, you can procrastinate. For example, during the epidemic period, college students lack the supervision of their schools and teachers, and more and more people fall into the "snail" state. Living at home is accompanied by all kinds of procrastination and inefficient behaviors. Procrastination refers to the behavior that an individual intentionally or unintentionally delays the completion of a task. Anxiety, as a negative emotion, can have certain side effects, but to a certain extent, it can become a driving force for people to move forward. In this study, the influence of anxiety on college students' procrastination behavior was explored by combining questionnaire method and experimental method. (1) In the first study, 400 college students were investigated using the trait anxiety subscale and the general procrastination scale in STAI. The results show that the trait anxiety level and trait procrastination level of college students are both higher than the average level, and the differences between them in grade, gender and major are not significant; trait anxiety is positively correlated with trait procrastination, and trait anxiety can positively predict trait procrastination. (2) In the second study, anxiety-induced task and exercise-test paradigm were used to design procrastination task experiments. The first part is a preliminary experiment to test the effectiveness of the anxiety-induced task. The second part is a formal experiment, designed between 2 (trait anxiety: high/low) $\times$ 2 (trait procrastination: high/low) $\times$ 2 (state anxiety: experimental group/control group) subjects. The subjects in study 1 were divided into four groups according to their trait anxiety and trait procrastination scores, and then further assigned to them according to whether they induced anxiety or not. A total of eight groups of subjects were obtained. Subjects in the anxiety-inducing group were required to complete anxiety-inducing and procrastination tasks, while subjects in the control group were required to complete procrastination tasks. The results showed that the scores of state anxiety were significantly different before and after the anxiety-induced task, and the scores of state anxiety were significantly higher; the main effect and interaction effect of trait anxiety, state anxiety and trait procrastination are significant, that is, there are significant differences in the procrastination behaviors of each group. However, when the anxiety reaches a certain level, the individuals will reduce or stop the procrastination behaviors due to the high anxiety state. Therefore, we should not only see the negative side of anxiety, but also make full use of the positive side of anxiety, so as to further reduce the procrastination behavior of college students.

Keywords: State anxiety, Trait anxiety, Trait procrastination, Procrastination behavior

不同效价元刻板印象对农村留守儿童群际关系的影响

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摘要 元刻板印象是指个体关于外群体成员对其所属群体所持刻板印象的信念或看法, 其效价可以是消极

的、中性的或积极的,但以往研究较多集中于考察消极元刻板印象对群际关系的影响,关于积极元刻板印象的研究较为缺乏。本研究以 196 名农村留守儿童为被试,采用指导语操控的方式随机分为积极元刻板印象激活组(积极组)、消极元刻板印象激活组(消极组)和元刻板印象未激活组(控制组),考察不同效价元刻板印象对农村留守儿童群际关系的影响。结果发现:(1)积极组群际关系水平(50.15 ± 6.86)显著高于消极组(43.42 ± 6.00)和控制组(46.92 ± 8.09),控制组显著高于消极组, $p < 0.01$;消极组群际焦虑水平(35.30 ± 9.18)显著高于积极组(28.29 ± 12.56)和控制组(29.50 ± 10.86), $p < 0.01$,积极组和控制组差异不显著, $p > 0.05$;(2)积极元刻板印象正向预测群际关系($\beta = 0.43$, $SE = 0.18$, $p < 0.05$),消极元刻板印象负向预测群际关系($\beta = -0.47$, $SE = 0.17$, $p < 0.01$);(3)群际焦虑在消极元刻板印象和农村留守儿童群际关系之间起完全中介作用($\beta = -0.17$, $SE = 0.06$, $p < 0.01$),在积极元刻板印象中不起中介作用($p > 0.05$)。因此农村留守儿童积极元刻板印象激活后出现促进效应。

关键词 农村留守儿童,元刻板印象,群际关系,群际焦虑,中介作用

The Influence of Different Valance Metastereotypes on the Intergroup Relations of Left-Behind Children

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Abstract: Metastereotype refers to a person's beliefs regarding the stereotype that out-group members hold about their own group, their valance can be negative, neutral, or positive, most of the previous studies focused on the impact of negative metastereotype on intergroup relations, while the research on positive metastereotype was relatively lacking. The study aimed to explore the effects of different valance metastereotypes on intergroup relations of left-behind children. A sample of 196 left-behind children from the primary schools in Jiangsu province participated in the present study. Participants were randomly assigned to the negative metastereotype activation, positive metastereotype activation or the control condition according to different instructions. Then all participants completed the Intergroup Anxiety and Intergroup Relation scale. Results were as follows: (1) The intergroup relation under the positive metastereotype activation condition (50.15 ± 6.86) was higher than the case of the negative metastereotype (43.42 ± 6.00) and control condition (46.92 ± 8.09), and there was significant difference between negative metastereotype activation and the control condition, $p < 0.01$; The intergroup anxiety under the negative metastereotype activation condition (35.30 ± 9.18) was higher than the case of the positive metastereotype (28.29 ± 12.56) and control condition (29.50 ± 10.86), $p < 0.01$, but there was no significant difference between positive metastereotype activation and the control condition, $p > 0.05$. (2) Positive metastereotype could positively impact intergroup relations ($\beta = 0.43$, $SE = 0.18$, $p < 0.05$), while negative metastereotype could negatively impact intergroup relations ($\beta = -0.47$, $SE = 0.17$, $p < 0.01$). (3) Intergroup anxiety is a significant completely mediator between the negative metastereotype and intergroup relations ($\beta = -0.17$, $SE = 0.06$, $p < 0.01$), but not in positive metastereotype, $p > 0.05$. In conclusion, activating the negative metastereotype of left-behind children could produce threat effect, while activating positive metastereotype could have the promotion effect.

Keywords: Left-behind children, Metastereotype, Intergroup relation, Intergroup anxiety, Mediation

情绪效价和情感亲密度对大学生道德判断的影响：行为与 ERP 研究

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摘要 近年来,解释水平理论为道德判断的深层机制提供了一个新颖的构思,除了个体本身产生的情绪外,个体与他人之间不同的情感联结程度也可能产生解释水平上的差异,从而影响道德判断的结果。当个体与

道德行为对象的情感亲密度较强时，其道德判断能力会有所下降。研究道德判断的时称加工特点能够帮助我们进一步理解其背后的心理机制。本文以大学生日常行为作为实验语料素材，编制和评定当代大学生日常行为中的道德和不道德事件，同时采用阈下启动范式，通过 ERPs 技术，试图从内隐的维度研究和探讨道德判断的时程加工机制。其主要目的为探究情绪效价和情感亲密度对大学生道德判断的作用。全文包括两个实验：实验一从行为层面考察情绪效价和情感亲密度对大学生日常道德判断的影响。采用阈下启动范式探究正性、负性、中性三种情绪效价与熟人、陌生人两种情感亲密度对大学生日常道德行为和道德行为两种判断的影响及其交互作用。实验结果表明（1）情绪效价与情感亲密度的交互作用显著。相比于中性情绪，大学生个体在正性、负性情绪下对熟人判断的正确率低于陌生人，且在正性情绪下的差异显著性更大。（2）情绪效价与行为类别的交互作用显著。相比于中性情绪，大学生个体在正性、负性情绪下对道德行为判断的正确率低于不道德行为。为进一步研究正性情绪下道德判断的加工机制，实验二从电生理层面进行考察。实验结果表明在脑电指标上，在正性情绪下，大学生个体对熟人比对陌生人做出的行为道德判断所诱发的 N400 和 LPP 波幅更大。而在中性情绪下，大学生对熟人和对陌生人作出的行为道德判断所诱发的 N400 和 LPP 波幅无显著差异。总而言之，本研究围绕“情”的角度，从道德判断的行为反应和电生理反应指标上表明，大学生个体的情绪与情感亲密度，在无意识状态下会影响日常生活行为的道德判断，这对高校大学生的道德教育与培养提供了一定理论依据和实证支持。

关键词 大学生，道德判断，情绪，情感亲密度，ERP

The Influence of Emotional Valence and Affective Closeness on Undergraduates' Moral Judgment: A Behavioral and ERP Study

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Abstract: In recent years, the theory of explanatory level has provided a new perspective for the deep mechanism of moral judgments. In addition to the emotions generated by individuals themselves, the degree of emotional connection between individuals may also affect the results of moral judgments. When the emotional intimacy between the individual and the object of moral behavior is weak, the individual's moral judgment ability is lower, that is, the correct rate of judgment is lower. In order to understand the psychological mechanism of moral judgment clearly, it is necessary to explore the time processing characteristics of moral judgment. In this study, we collect and compile the daily behaviors of college students as the experimental corpus material and evaluate the moral events in the daily behavior of these university students. At the same time, the subthreshold priming paradigm is adopted and the ERP technology is used to try to study and explore the time-history processing mechanism of moral judgments from the implicit dimension. The target of our two experiments was to investigate the effects of emotional valence and emotional closeness on college students' moral judgments. This paper includes two studies: In Experiment One, the purpose of experiment examined the effects of emotional valence and emotional intimacy on college students' daily moral judgments from the behavioral level. Subthreshold priming paradigm was used to explore the effects of three different emotional valences and two kinds of emotional closeness on college students' daily moral behavior judgments and their interaction. The results show that, (1) The significant interaction between emotion valence and behavior category shows, compared with neutral emotions, the correct judgment rate of moral behavior in positive and negative emotions is lower than that of unethical behavior. (2) The interaction between emotional valence and emotional intimacy was significant. Compared with neutral emotions, the accuracy of college students' judgment of acquaintances in positive and negative emotions is lower than that of strangers, and the difference is more significant in positive emotions. Therefore, in order to further study the processing mechanism of moral judgment under positive emotions, Experiment Two examined the effects of behavioral objects with different emotional closeness on moral judgment of college students under positive and neutral emotions during subthreshold priming from the

electrophysiological level. In Experiment Two, the results showed that under positive emotions, the amplitude of N400 and LPP induced by college students' behavioral moral judgments about acquaintances rather than strangers is larger. However, we didn't see the discrepancy in the amplitude of N400 and LPP induced by the moral judgments of acquaintances and strangers in neutral emotions. To sum up, this study around the angle of "emotion", from the behavior of moral judgment and electrophysiological reaction on indicators show that college students' individual emotions and emotional intimacy, in unconscious state will affect daily life behavior of moral judgment, which provides some academic basis and empirical support for moral education and training of the college students.

Keywords: college students, moral judgment, emotion, affective intimacy, ERP

新手—熟手—专家型教师对课堂教学情绪加工的比较 ——基于生理多导的研究

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摘要 课堂教学情绪指的是教师在课堂教学过程中对人际关系、教学内容、教学进程、教学方式、教学效果等因素的态度体验。教师对课堂教学情绪的加工不仅影响教师自身的心理健康, 还影响情感教学效果, 进而影响课堂教学质量。为考察不同类型教师对课堂教学情绪加工的差异, 从而为培养教师情绪情感能力提供一定的依据, 研究采用新手-熟手-专家型教师范式, 选取 20 名新手教师、25 名熟手教师和 15 名专家教师, 以常见的课堂教学情绪文字材料为研究材料并利用 Spirit-32 生物反馈仪记录被试的生理反应。结果发现教师类型和效价的交互效应在皮电和脉搏血容上的差异显著, 表现为新手教师在负性课堂教学情绪上的皮电显著高于熟手和专家教师、新手教师在课堂教学情绪上的脉搏血容显著高于熟手教师, 但其他类型教师之间的差异不显著。可见, 不同经验影响教师对课堂教学情绪的加工, 新手教师在加工课堂教学情绪过程中生理唤醒最为明显。

关键词 新手-熟手-专家型教师, 课堂教学情绪, 生理多导

The Comparison among Novice, Proficient and Expert Teachers in Processing Classroom Teaching Emotion: A Polygraph Study

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Abstract: Classroom teaching emotion refers to the teacher's attitude experience to the interpersonal relationship, teaching content, teaching process, teaching method, teaching effect and other factors in the classroom teaching process. Teachers' processing of classroom teaching emotions not only affects teachers' mental health, but also affects the effect of emotional teaching, which in turn affects the quality of classroom teaching. In order to compared the differences in the processing of classroom teaching emotion among different types of teachers, so as to provide a certain basis for training teachers' emotional abilities. The "novice-proficient-expert" paradigm was adopted and 20 of the novice teachers, 25 proficient teachers and 15 expert teachers were recruited. They were asked to process the common classroom emotional text materials as research materials, and the Spirit-32 biofeedback device recorded the physiological response of the subjects. The results showed that the interaction effect of teacher type and conflict type was significantly in the GSR/SC and BVP, which was manifested as that novice teachers' GSR/SC in negative classroom teaching emotion was significantly higher than that of proficient and expert teachers. The BVP of novice teachers was significantly higher than that of proficient teachers, but the difference between other types of teachers was not significant. It can be seen that different experiences affect teachers' processing of classroom teaching emotion. Novice teachers have the most obvious physiological responses in the process of processing classroom teaching

emotion.

Keywords: novice-skilled-expert teacher, Classroom Teaching Emotion, polygraph

新手—熟手—专家型教师对课堂突发事件加工的比较 ——基于生理多导的研究

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摘 要 课堂突发事件是在课堂教学过程中由教师、学生或环境等因素引发, 对教师教学和学生课堂学习产生一定影响, 出乎教师意料之外的事件, 具有不确定性、复杂性和突发性的特点。妥善应对课堂突发事件是教师专业标准中专业能力的重要体现, 对于教师的专业发展, 尤其是新手教师的专业发展具有重要意义。为了解新手-熟手-专家型教师对不同课堂突发事件加工的差异, 从而为新手教师妥善应对课堂突发事件提供一定借鉴, 研究采用新手-熟手-专家型教师范式, 选取 20 名新手教师、25 名熟手教师和 15 名专家教师, 以课堂突发情景文字描述为材料并利用 Spirit-32 生物反馈仪记录被试的生理反应。结果发现: 教师类型和冲突事件类型的交互效应在皮电和脉搏血容上的差异显著, 具体表现为新手教师在四种冲突类型上的皮电和脉搏血容上显著高于熟手教师, 但其他类型教师之间的差异不显著。可见, 不同经验影响教师对课堂突发事件的加工, 突发事件对新手教师的生理唤醒最为明显。

关键词 新手-熟手-专家型教师, 课堂突发事件, 生理多导

The Comparison among Novice, Proficient and Expert Teachers in Processing Classroom Emergency Emotional Scenes: A Polygraph Study

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Abstract: Classroom emergency was caused by the teacher, student, or environmental factors in the process of teaching, there was a certain influence on teachers' teaching and students' classroom learning, even surprised teachers, it is uncertainty, complexity and sudden. Master the countermeasures to deal with emergencies was very important for teachers, especially to the novice teachers, which was an important embodiment of teachers' professional competence. To examine the processing strategy differences on the classroom emergency emotional scenes among novice, proficient and expert teachers, the "novice-proficient-expert" paradigm was adopted and 20 of the novice teachers, 25 proficient teachers and 15 expert teachers were recruited. They were asked to process the emergency scene in class as the research material, and the Spirit-32 biofeedback device recorded the physiological response of the subjects. The results showed that the interaction effect of teacher type and conflict type was significantly in the GSR/SC and BVP. The GSR/SC and BVP of novice teachers were significantly higher than proficient teachers. It can be concluded that the experiences have an important impact on teachers' response to classroom emergencies, and emergencies have the most obvious physiological impact on novice teachers.

Keywords: novice-proficient-expert teachers, classroom emergencies, polygraph

重大疫情下学生适应能力对学习投入的影响：一个有调节的中介模型

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摘要 目的: 探讨重大疫情下“停课不停学”过程中学生的适应能力、消极学业情绪、领悟社会支持与学习投入的关系及其内在作用机制。**方法:** 采用适应力量表、学业情绪量表、领悟社会支持量表与学习投入量表对全国 4226 名学生进行实测。采用 SPSS 进行描述统计和相关分析, Hayes 的 SPSS 宏程序 PROCESS 组件进行模型检验和 Bootstrap 分析。**结果:** ①适应能力与消极学业情绪呈显著负相关, 与学习投入呈显著正相关; 消极学业情绪与学习投入呈显著负相关; ②适应能力不仅能够直接预测学习投入, 还能够通过消极学业情绪的中介作用对学习投入产生影响; ③适应能力对学习投入的直接效应以及消极学业情绪的中介效应均受到领悟社会支持的调节, 对于高领悟社会支持的学生, 适应能力对消极学业情绪及学习投入的预测作用更加显著。**结论:** 消极学业情绪在适应能力对学习投入的影响中起部分中介作用, 且这一中介作用受到领悟社会支持的调节。本研究结果进一步解释了疫情背景下学生适应能力与学习投入程度的内部机制, 并提示我们, 对于适应能力较弱的学生, 给予更多的关怀以及降低他们的消极情绪可能更有助于提高学生的学习投入水平。本研究在一定程度上对突发公共卫生事件下学生适应能力和学习投入之间的关系这一重要理论问题进行了补充, 研究结果显示增加针对学生适应能力的训练有一定的必要性, 同时为领悟社会支持能有效影响学生的学习投入提供了实证支持。

关键词 适应能力, 学习投入, 消极学业情绪, 领悟社会支持, 有调节的中介模型

Effects of Adaptability on Learning Engagement under COVID-19: A Moderated Mediating Model

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Abstract: Objective: This study examined the relationship between students' adaptability and learning engagement under the coronavirus disease 2019 (COVID -19) epidemic, the mediating role of negative academic emotion, and further explored whether perceived social support played a moderating role in the relationship between adaptability and engagement and the relationship between adaptability and negative academic emotion. **Methods:** Using the Questionnaire of adaptability scale, academic emotion scale, perceived social support scale(PSSS), and learning engagement scale, a sample of 4426 students from all over country attended in the survey. SPSS was used for descriptive statistics and correlations analysis. Hayes' PROCESS macro for SPSS was adopted to estimate the model and Bootstrap analysis. **Results:** Adaptability was negatively correlated with negative academic emotion, but positively correlated with engagement. Negative academic emotion was negatively correlated with engagement. Adaptability not only directly predicted the engagement of the students, but also affected engagement through the mediating role of negative academic emotion. The effect of adaptability on negative academic emotion and engagement was moderated by perceived social support. **Conclusion:** Negative academic emotion partially mediates the relationship between adaptability and engagement. This indirect effect is more significant for students studying during the coronavirus outbreak with higher perceived social support. The results of this study further explained the internal mechanism of the influence of adaptability on learning engagement in students, and suggested that, giving more care and reducing their negative emotions may more help to improve students' learning engagement level for students with low level of adaptability. This study focus the important issue about the relationship between adaptability and study engagement under public health emergencies. This study not only show that it is necessary to increase the training for students' adaptability, but also provide an evidence that perceived social support can effectively influence learning engagement.

Keywords: adaptability; learning engagement; negative academic emotion; perceived social support; a moderated

不同类型认知好奇心对创造性科学问题提出能力的影响

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摘要 好奇心是人们探求新知识、自身学习和发展的内在动力。认知好奇心包括感知好奇和认识性好奇心,气氛被好奇心将成为创造力的重要影响因素。但好奇心与创造力的关系还未得到重视。本研究将整合好奇与创造力相关研究,结合多种方法,探索好奇心与创造性科学问题提出能力(CSPF)的关系。实验一采用2(认知好奇心:感知好奇、认识性好奇)*2(CSPF形式:开放、封闭)的被试间实验设计。感知好奇组呈现新奇物品,而认识性好奇组则通过操纵认知缺口来诱发好奇心,随后完成《创造性科学问题提出能力》测验。预期结果:1.两组均显著诱发相应好奇心;2.认识性好奇组被试的表现显著优于感知好奇组。实验二采用2(认知好奇诱发方法:间接、直接)*2(CSPF形式:开放、封闭)的被试间实验设计。在实验一的基础上,进一步操纵诱发认识性好奇心的方法,分别采用间接诱发与直接诱发的方法诱发被试的好奇心。预期结果:1.直接诱发比间接诱发更能诱发被试的认识性好奇心;2.直接诱发组被试在CSPF上的表现显著优于间接诱发组,这种优势表现在独特性与灵活性上。本研究在以往好奇心研究的基础上,从创造性问题提出的角度出发进一步探讨了好奇心与创造力的关系,好奇能够激励人们去学习自身感兴趣的知识,通过关注新的和具有挑战性的信息,来拓展自身的知识面,提高个体的技能,并学习用心的方式思考与探索,跳出思维定势,提出更具创造力的问题。本研究以小学生为被试,为小学一线科学课程教学提供意见与建议,将研究结论更好的应用于科学课堂。

关键词 感知好奇心,认识好奇心,创造性科学问题提出能力

The influence of different types of cognitive curiosity on Creative Scientific Problem Finding Ability

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Abstract: Curiosity is the internal driving force for people to explore new knowledge, learn and develop themselves. Cognitive curiosity includes perceptual curiosity and cognitive curiosity. Atmosphere curiosity will become an important factor of creativity. However, the relationship between curiosity and creativity has not been paid attention to. This study will integrate the research on curiosity and creativity, and explore the relationship between curiosity and Creative Scientific Problem Finding Ability (CSPF). Experiment 1 was an inter subject experimental design of 2 (cognitive curiosity: sensory curiosity, cognitive curiosity) * 2 (CSPF form: open and closed). The perceptual curiosity group presented novel items, while the cognitive curiosity group induced curiosity by manipulating the cognitive gap, and then completed the test of creative scientific problem-raising ability. Expected results: 1. Both groups significantly induced corresponding curiosity; 2. The performance of cognitive curiosity group was significantly better than that of perceptual curiosity group. Experiment 2 was an inter subject experimental design of 2 (cognitive curiosity inducing method: indirect and direct) * 2 (CSPF form: open and closed). On the basis of Experiment 1, the methods of inducing cognitive curiosity were further manipulated, and the subjects' curiosity was induced by indirect and direct methods respectively. The expected results are as follows: 1. The cognitive curiosity of subjects can be induced more directly than indirectly; 2. The performance of subjects in the direct induction group is significantly better than that in the indirect induction group, which is manifested in uniqueness and flexibility. On the basis of previous studies on curiosity, this study further discusses the relationship between curiosity and creativity from the perspective of creative problems finding. Curiosity can encourage people to learn the knowledge they are interested in, expand their knowledge, improve individual skills, and learn to think and explore in a attentive way by paying attention to new and challenging information, Jump out of the mindset and ask more creative problems. This study takes primary school students as subjects to provide opinions and suggestions for the first-line science

curriculum teaching in primary school, and better apply the research conclusions to the science classroom.

Keywords: perceived curiosity, Cognitive curiosity, creative scientific problem finding ability

家庭功能与初中生感恩：亲子沟通的中介作用和共情的调节作用

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摘要 感恩作为个体的一种积极人格特质或者生活取向, 对于增进初中生幸福感和提高生命意义感具有重要意义。已有研究发现高水平的家庭功能对初中生感恩培养具有重要作用, 但家庭功能对感恩的作用机制及作用条件还有待探讨。本研究采用整群抽样的方法, 以家庭亲密度和适应性量表、初中生感戴量表、人际反应指针量表和青少年亲子沟通量表为研究工具, 对陕西省、江西省 4 所中学共 1124 名初中生进行问卷调查, 探究了家庭功能与感恩的关系, 并进一步考察了亲子沟通在家庭功能与感恩间的中介作用以及共情对此过程的调节作用。结果发现: (1) 家庭功能、感恩、亲子沟通、共情之间两两显著正相关; (2) 在控制了生源、年级后, 家庭功能正向预测初中生的感恩; (3) 亲子沟通在家庭功能与初中生感恩之间起部分中介作用; (4) 共情正向调节了“家庭功能→亲子沟通→感恩”的前半段, 即当初中生的共情能力更高时, 家庭功能对亲子沟通的促进作用更强。结果表明, 家庭功能不仅直接影响初中生的感恩, 而且通过亲子沟通间接影响初中生的感恩; 并且, 良好的共情能力会促进家庭功能对亲子沟通的正向作用。本研究从个体层面和家庭环境层面进一步厘清了家庭功能和初中生感恩之间的作用机制和作用条件, 为初中生感恩的培养和发展提供了一定参考。

关键词 初中生, 家庭功能, 感恩, 亲子沟通, 共情

Family Functioning and Gratitude of Junior High School Students: The Mediating Role of Parent-Child Communication and the Moderating Role of Empathy

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Abstract: Gratitude, as an individual positive personality trait and life orientation, is of great significance for improving the sense of happiness and promoting the sense of life meaning of junior high school students. High level family functioning has been found to have an important impact on junior high school students' gratitude, but the mechanism and conditions of family functioning on gratitude remain to be explored. Therefore, this study intends to explore the relationship between family functioning and gratitude, and to further investigate the mediating role of parent-child communication and the moderating role of empathy. Using cluster sampling method, a total of 1124 junior high school students from four middle schools in Shaanxi and Jiangxi Province were surveyed with Family Adaptability and Cohesion Evaluation Scales-II, Gratitude of Junior High School Students Scale, Interpersonal Response Index Scale and Parent-Child Communication Scale. The results showed that: (a) there was a significant positive correlation between family functioning, gratitude, parent-child communication and empathy; (b) family functioning positively predicted junior high school students' gratitude after controlling for factors such as the origins of student and grade; (c) parent-child communication played a part of mediating role between family functioning and junior high school students' gratitude; (d) empathy had a positive moderating role in the first half of "family functioning → parent-child communication → gratitude", that is, when the ability of empathy of junior high school student was improved, family functioning had a stronger promoting effect on parent-child communication. The

findings suggested that family functioning not only directly affected the gratitude of junior high school students, but also indirectly affected the gratitude of junior high school students through parent-child communication. Moreover, stronger empathy ability enhanced the role of family functioning on parent-child communication. This study further clarified the mechanism and conditions between family functioning and gratitude of junior high school students from the individual level and the family environment level, which can provide meaningful insights for the cultivation and development of middle school students' gratitude.

Keywords: Junior high school students, Family functioning, Gratitude, Parent-child communication, Empathy

留守/非留守儿童领悟社会支持与希望的关系： 一个有调节的中介模型

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摘要 希望感是积极心理学的核心概念之一，自提出后逐渐成为心理学研究的一个热点。已有研究发现领悟社会支持有助于提升留守儿童的希望水平，但其作用机制和作用条件还有待探讨。因此，本研究基于 Snyder 的希望理论，探讨留守/非留守儿童领悟社会支持对希望的影响以及自尊的中介作用和社交焦虑的调节作用。本研究采用整群抽样的方法，以领悟社会支持量表、儿童希望感量表、自尊量表与社交焦虑量表为研究工具，对陕西省某小学共 492 名儿童（留守儿童 314 名）进行调查。结果发现：（1）留守儿童和非留守儿童领悟社会支持、希望、自尊和社交焦虑均无显著性差异，留守/非留守儿童希望与领悟社会支持、自尊显著正相关；（2）在控制了年级、性别、家庭收入后，留守和非留守儿童领悟社会支持均正向预测希望，且非留守儿童的领悟社会支持对希望的预测作用显著大于留守儿童；（3）有调节的中介效应检验表明，当留守/非留守儿童的社交焦虑处于平均值或低于平均值一个标准差的水平时，自尊在领悟社会支持和希望之间的中介效应显著，且在留守儿童群体中自尊的中介效应量更大；当留守/非留守儿童的社交焦虑处于高于平均值一个标准差的水平时，该中介效应不显著。结果表明，领悟社会支持不仅直接影响留守/非留守儿童的希望，也通过自尊间接影响留守/非留守儿童的希望，且对于留守儿童而言，领悟社会支持对希望的促进作用低于非留守儿童，即不仅可以通过提高社会支持来提升留守儿童的希望水平，也可以考虑培养留守儿童自身积极特质，如自尊，来提升儿童希望水平。本研究关于领悟社会支持对希望的作用机制和作用条件的研究结果，对于儿童、尤其留守儿童的希望感培养提供了一定的参考。

关键词 留守儿童，领悟社会支持，希望，自尊，社交焦虑

The Relationship between Perceived Social Support and Hope of Left-behind/Non-left-behind Children: A Moderate Mediation Model

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Abstract: Hope, as one of the core concepts of positive psychology, has become a hot topic in psychology research since it was proposed. Perceived social support has been found to have a positive impact on left-behind children's hope, but the mechanism and conditions of perceived social support on hope remain to be explored. Therefore, based on Snyder's theory of hope, this study intends to explore the relationship between left-behind/non-left-behind children's perceived social support and hope, and to further investigate the mediating role of self-esteem and the moderating role of social anxiety. Using cluster sampling method, a total of 492 children (314 left-behind children) from a primary school in Shaanxi Province were surveyed with Perceived Social Support Scale, Children's Hope Scale, the Self-Esteem Scale and Social Anxiety Subscale of the Self-Consciousness Scale. The results showed that: (a) there was no significant difference between left-behind children and non-left-behind children in terms of perceived social

support, hope, self-esteem and social anxiety, and the hope of left-behind/non-left-behind children was positively correlated with perceived social support and self-esteem; (b) after controlling for factors such as grade, sex and family income, the perceived social support of left-behind children and non-left-behind children positively predicted hope, and this predictive effect in non-left-behind children was significantly greater than that in left-behind children; (c) the testing of moderated mediation effect further indicated that, when the social anxiety of left-behind/non-left-behind children was at the average or one standard deviation below the average level, self-esteem had a significant mediating effect between perceived social support and hope, and the mediating effect of self-esteem is greater in left-behind children; and when the social anxiety of left-behind/non-left-behind children was at a level one standard deviation higher than the average, the mediating effect was not significant. The findings suggested that perceived social support not only affected hope of left-behind/non-left-behind children, but also indirectly affected their hope through self-esteem. For left-behind children, perceived social support played a lower role in promoting hope than that of non-left-behind children, that is, left-behind children's hope can be improved by improving social support and more importantly by cultivating their own positive traits such as self-esteem. This study clarified the mechanism and conditions between perceived social support and hope, which can provide meaningful insights for children, especially left-behind children, to cultivate their hope.

Keywords: Left-behind children, Perceived social support, Hope, Self-esteem, Social anxiety

感知教师情感支持与留守儿童学校适应： 教师情绪劳动的跨层调节作用

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摘要 留守儿童普遍存在亲情缺位，家庭教育缺失的问题，学校教育的适当补位非常重要。而学校想要充分发挥其教育功能，改善留守儿童学校适应是首要前提。在学校教育环境中，教师是对留守儿童最具影响力的成年人，教师提供的情感支持是预测其学校适应的最佳变量之一。相比于实际支持，对教师情感支持的感知对留守儿童的影响更强烈。这就要求教师需要努力控制自己的情绪表达，展现出有利于师生沟通与信任的情绪状态，这种努力即为教师情绪劳动。感知教师情感支持能否对留守儿童学校适应起促进作用，教师情绪劳动可能是关键因素。为探讨感知教师情感支持与留守儿童学校适应的关系以及教师情绪劳动对两者关系的调节作用，研究采用教师情绪问卷调查了 38 名教师，采用感知教师情感支持问卷和学校适应问卷调查了 969 名留守儿童，并使用多层线性模型分析教师与学生的层级嵌套模型数据。结果发现：（1）感知教师情感支持显著正向预测留守儿童学校适应（ $\beta = 0.27, p < 0.001$ ）；（2）教师情绪劳动与留守儿童感知教师情感支持的交互作用显著预测留守儿童学校适应（ $\gamma = 0.009, p < 0.001$ ）。简单效应分析表明，留守儿童学校适应随感知教师情感支持水平升高而升高，且教师高情绪劳动的留守儿童学校适应预测线斜率显著高于教师低情绪劳动的预测线斜率。本研究揭示了感知教师情感支持与留守儿童学校适应的关系以及这一关系何时更强或更弱，这对学校教育相关人员如何改善留守儿童学校适应具有一定的指导意义。

关键词 学校适应，感知教师情感支持，教师情绪劳动，留守儿童

Perceived Teacher's Emotional Support and School Adjustment in Left-behind Children: the Moderating Role of Teacher's Emotional Labor

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Abstract: Left-behind children generally have the problem of lack of family affection and lack of family education. It is very important to properly supplement school education. The primary prerequisite for schools to give full play to their educational functions is to improve the school adjustment of left-behind children. In the school education

environment, teachers are the adults who have the most influence on left-behind children, and their provided emotional support is one of the best variables to predict left-behind children's school adjustment. Compared with actual support, the perception of teacher emotional support has a stronger impact on left-behind children. This requires teachers to work hard to control their emotional expression and show an emotional state that is conducive to teacher-student communication and trust. This kind of effort is teacher emotional labor. Perceive whether teacher emotional support can promote the school adjustment of left-behind children, teacher emotional labor may be a key factor. To explore the relationship between perceived teachers' emotional support and left-behind children's school adaptation and the moderating effect of teachers' emotional labor on the relationship, the study used teacher emotional labor questionnaire to survey 38 teachers, using perceived teacher emotional support questionnaire and school adjustment questionnaire to survey 969 left-behind children. The hierarchical structure data was analyzed by HLM. The results show that: (1) Perceived teacher emotional support significantly positively predicts left-behind children's school adjustment ($\beta = 0.27$, $p < 0.001$); (2) The interaction of perceived teacher emotional support and emotional labor predicted left-behind children's school adjustment significantly. The simple effect analysis showed: the left-behind children's school adjustment increased with the rise of perceived teacher emotional support, and the predicted line slope value of high emotional labor was significantly less than the predicted line slope of low emotional labor. This study reveals the relationship between perceived teacher emotional support and school adjustment of left-behind children and when this relationship is stronger or weaker. This has certain guiding significance for school education personnel on how to improve left-behind children's school adjustment.

Keywords: School Adjustment, Perceived Teacher's Emotional Support, Teacher's Emotional Labor, Left-behind children

新冠病毒疫情下大学生信息焦虑对手机成瘾的影响

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摘要 为探索新冠病毒疫情下大学生信息焦虑对手机成瘾的影响以及负性信息注意偏向和反刍思维的影响作用, 本研究以辽宁某大学 595 名在校生为研究对象, 采用信息焦虑量表 (IAS)、手机成瘾指数量表 (MPAI)、负性注意偏向量表 (ANI)、反刍思维量表 (RRS) 为研究工具, 通过网上问卷的方式进行调查。采用 SPSS 22.0 软件对数据进行整理和录入、分析, 采用 Hayes 编制的 Process 插件来分析有中介的调节效应。结果表明: (1) 信息焦虑对手机成瘾有直接预测作用。大学生关注死亡病例、网络谣言等负性信息, 引发一定程度的信息焦虑; 居家隔离带来的活动空间限制和活动内容单一带来的无聊感, 加深大学生的焦虑状态; 大学生选择通过手机游戏或社交软件排解焦虑情绪, 在线教学和疫情信息日报工作也增加学生手机的使用时间和使用频率, 从而潜在影响手机过度使用而导致的手机成瘾。(2) 负性信息注意偏向起到调节作用。负性信息注意偏向是一种认知倾向, 个体会偏向于注意负性信息并放大负性信息的影响或抑制其他信息的作用。大学生的负性信息注意偏向水平越高, 个体越倾向于主动搜寻信息来验证负性信息的真伪、对自己的影响多少, 会加剧信息焦虑对手机使用的影响。(3) 反刍思维起到部分中介作用。反刍思维是个体面对问题时消极、反复思考, 并负性认知放大潜在影响的心理特质。个体对新冠病毒疫情的信息焦虑, 会让个体反复思考分析已经获得的信息, 并不断怀疑否定积极的想法, 让自己陷入消极反刍的状态, 引发进一步搜索相关信息来消除担心, 从而产生更多的信息焦虑和手机使用。(4) 人口统计学变量存在差异。男大学生信息焦虑水平显著高于女大学生, 女大学生反刍思维水平显著高于男大学生; 文科生的反刍思维显著高于理科生; 疫情影响严重大学生的信息焦虑、负性注意偏向、反刍思维和手机成瘾均显著高于疫情影响一般大学生。综上所述, 本研究认为新冠病毒疫情下大学生信息焦虑对手机成瘾具有直接影响, 负性信息注意偏向起到调节作用, 反刍思维起到中介作用。

关键词 信息焦虑, 手机成瘾, 负性信息注意偏向, 反刍思维

The Effect of Information Anxiety on Mobile Phone Addiction of College Students Under the New Coronavirus Epidemic Situation

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Abstract: In order to explore the influence of information anxiety on mobile phone addiction of college students under the coronavirus epidemic and the effect of negative information attention bias and ruminant thinking. In this study, 595 undergraduates in a university in Liaoning province were selected as research objects. Information Anxiety Scale (IAS), Mobile Phone Addiction Index (MPAI), Attention to Negative Information (ANI) and Ruminant Scale (RRS) were used as research tools to conduct the survey through online questionnaire. SPSS 22.0 software was used to sort out, input and analyze the data, and the Process plug-in compiled by Hayes was used to analyze the moderating effect with mediation. The results show that: (1) information anxiety has a direct predictive effect on mobile phone addiction. College students pay attention to negative information such as death cases and Internet words, which causes information anxiety to a certain extent. College students choose to relieve their anxiety through mobile games or social software. Online teaching and epidemic information daily work also increase students' use time and frequency of mobile phones, thus potentially affecting mobile phone addiction caused by excessive use of mobile phones. (2) The attention bias of negative information plays a moderating role. The attention bias of negative information is a cognitive tendency. Individuals tend to pay attention to negative information and amplify the influence of negative information or inhibit the effect of other information. The higher the level of negative information attention bias of college students, the more likely they are to actively search for information to verify the authenticity of negative information and how much it affects them, which will aggravate the influence of information anxiety on mobile phone use. (3) Ruminant thinking plays a partial mediating role. Ruminant thinking is a psychological trait of the individual in the face of problems, which is negative, repetitive and negative. The anxiety of the novel Coronavirus epidemic will cause the individual to think and analyze the information obtained repeatedly, and constantly doubt and deny the positive thoughts, so that the individual will fall into the state of negative rumination. Trigger further searches for relevant information to allay concerns. This leads to more information anxiety and more cell phone use. (4) There are differences in demographic variables. The information anxiety level of male college students is significantly higher than that of female college students, and the ruminant thinking level of female college students is significantly higher than that of male college students. The ruminant thinking of liberal arts students is significantly higher than that of science students. Information anxiety, negative attention bias, ruminant thinking and mobile phone addiction were significantly higher than those of college students with severe epidemic situation.

To sum up, this study believes that novel Coronavirus epidemic has a direct impact on the information anxiety of college students on mobile phone addiction, while negative information attention bias plays a regulating role and ruminant thinking plays an intermediary role.

Keywords: Information anxiety; mobile phone addiction; negative information attention bias; ruminant thinking

自我控制对高中生抑郁的影响：学业拖延与反刍思维的链式中介作用

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摘要 抑郁是青少年面临的主要情绪问题之一，在应对各种生活事件时由于解决问题的经验不足和情绪敏感性较高，长期经历负性事件和消极情绪的青少年更容易抑郁。前人研究表明，自我控制与青少年抑郁呈负相关，自我控制失败导致的放纵行为虽然会带来一时的满足，但随后会产生抑郁等消极情绪。学业拖延是青少年中普遍存在的问题，同时也是一种典型的由自我控制失败导致的行为，而抑郁则是长期拖延造成的众多负性情绪之一。反刍思维是指个体反复思考负性事件和消极情绪，这种自发的思考行为非但不能解决问题，

而且还会使个体在“咀嚼”负性情绪时越陷越深,进而引发抑郁。目标进程理论认为,个体没有达到预期目标时会产生反刍思维,试图通过反刍思维从心理上降低现状与目标间的差距。学业拖延程度较高的个体往往会由于自我控制力不足,而常常处于多个学业任务目标无法按时完成的境地,按照目标进程理论,更容易产生反刍思维,继而产生抑郁情绪。青少年群体中,高中生与初中和小学生相比,面临压力更大,也更有产生抑郁的风险,且以往研究并未过多探究自我控制对青少年抑郁的影响机制和具体路径。综上,本研究欲探讨自我控制对高中生抑郁的预测作用以及学业拖延和反刍思维在其间的中介作用。使用中学生自我控制量表、中学生学业拖延问卷、反刍思维量表和流调中心抑郁量表,采用方便取样对 436 名高中生进行调查,结果发现:(1)自我控制分别与抑郁、学业拖延呈显著负相关。学业拖延、抑郁、反刍思维之间存在显著正相关。(2)自我控制除了可以负向预测高中生抑郁外,还存在两条间接路径:自我控制通过学业拖延和反刍思维的链式中介作用影响高中生抑郁,自我控制通过学业拖延影响高中生抑郁。本研究探讨了自我控制对于高中生抑郁的一种影响机制,为青少年抑郁的干预提供了思路,未来研究可着眼于由自我控制失败引发的其他负性事件或消极情绪对青少年抑郁的影响。

关键词 自我控制, 学业拖延, 反刍思维, 抑郁

The Influence of Self-control on Depression in High School Students: the Chain Mediating Role of Academic Procrastination and Rumination

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Abstract: Depression is one of the main emotional problems faced by adolescents. Adolescents who have experienced negative events and negative emotions for a long time are more prone to depression due to their insufficient experience in solving problems and high emotional sensitivity when dealing with various life events. Previous studies have shown that self-control is negatively related to depression in adolescents. Although the indulgence caused by failure of self-control will bring temporary satisfaction, it will subsequently produce depression and other negative emotions. Academic procrastination is a common problem among teenagers, and it is also a typical behavior caused by failure of self-control. Depression is one of many negative emotions caused by long-term procrastination. Ruminating thinking refers to the individual's repeated thinking about negative events and negative emotions. This spontaneous thinking behavior not only fails to solve the problem, but also makes the individual "chewing" negative emotions deeper and deeper, which will lead to depression. The goal progress theory believes that when an individual fails to reach the expected goal, he will produce ruminating thinking, and try to reduce the gap between the status quo and the goal psychologically through ruminating thinking. Individuals with a high degree of academic procrastination tend to be in a situation where multiple academic tasks cannot be completed on time due to insufficient self-control. According to the goal progress theory, they are more likely to produce ruminating thoughts and then depression. Among adolescents, high school students are more stressed than junior middle school and elementary school students, so they are more at risk of depression, and previous studies have not explored the mechanism and specific pathways of self-control on adolescent depression. In summary, this study intended to explore the predictive effect of self-control on depression in high school students and the mediating effect of academic procrastination and ruminating thinking. Using the Self-Control Scale for Middle School Students, Academic Delay Questionnaire for Middle School Students, Rumination Thinking Scale and CES-D, a convenient sampling was adopted to survey 436 high school students. The results showed that: (1) Self-control was significantly negatively correlated with depression and academic procrastination. Academic procrastination, depression, and ruminating thinking was significantly positively correlated. (2) In addition to self-control which could negatively predict depression in high school students, there were two indirect paths: self-control affected high school students' depression through academic procrastination and rumination, and self-control affected high school students' depression through academic

procrastination. This study explored an influence mechanism of self-control on depression in high school students, and provided an idea for the intervention of depression in adolescents. Future research may focus on the influence of other negative events or negative emotions caused by failure of self-control on depression in adolescents.

Keywords: self-control, academic procrastination, rumination, depression

测验和反馈在分段视频学习中的作用

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摘要 分段原则是多媒体学习中一个有效的学习促进原则, 被很多实证研究所证实其有效性(Mayer, 2021)。分段通过在连续动画或视频中添加停顿的方式将学习材料分为几个小单元, 为学习者提供时间来加工前一单元的信息, 从而降低学习者在视频学习过程中额外的认知负荷, 减少学习者不断处理新信息的需要。以往的积极分段研究采用了回忆、总结、解释等任务, 本研究扩展不同的学习任务, 使用测验对分段进行积极干预。实验1选取42名大学生为被试, 对比了观看分段视频和在分段暂停中进行测验两种情况下的学习效果, 发现了测验在简单材料中的积极效应, 结果表明: 1)学习者在分段中进行测验后保持测验和迁移测验的成绩更好; 2)在分段暂停中进行测验的学习者在学习后一周的回忆测验中表现比观看分段视频的学习者更好。实验2提高了材料的难度, 对比了观看分段视频、在分段中进行测验和在分段中进行测验并且阅读形成性反馈三种情景下学习者的学习表现。结果发现: 1)在分段中进行测验的学习者最终的保持测验、迁移测验和延迟测验成绩都和观看分段视频的学习者没有显著差异; 2)在测验后接受反馈的学习者在保持测验和延迟保持测验上的学习表现都好于其他两组; 3)接受额外反馈的学习者在迁移测验和延迟迁移测验上的学习表现与其他两组学习者没有显著差异。结果表明测验本身在困难材料中并没有产生积极作用, 但如果向学习者呈现形成性反馈, 便能够重新观察到测验的积极效应。本研究发现了在分段视频中测验和反馈的积极效应, 扩展了积极分段的相关研究, 丰富了对多媒体学习和线上学习的理解。

关键词 分段原则, 自我测验, 反馈

Incorporated Self-test and Feedback Enhances Learners' Learning Outcomes during the Learning with Segmentation

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Abstract: The segmentation principle is an effective learning facilitation principle in multimedia learning, which has been proved by many empirical studies (Mayer, 2021). Segmentation divides the animation into several small units by adding pauses in the continuous animation, so as to provide learners with additional time to process the information of the previous unit, thus reducing cognitive load of learners. Active segmentation further adds learning activities to the traditional form of segmentation, and enhances learners' cognitive processing of the previous information through various learning tasks, so that segmentation can be more meaningful. Previous studies on active segmentation used tasks such as recall, summary, explanation and etc. In this study, different learning tasks were extended and self-test strategy was used to actively intervene in segmentation. In Experiment 1, we recruited 42 undergraduates and compared learning outcomes of watching segmented videos group and receiving self-test in segmented pauses group. Positive effects of testing were observed. The results showed that: 1) learners performed better in retention test and transfer test after receiving self-test between segments; 2) learners who were tested in segment pauses outperformed on a recall test a week later than those who just watched segmented videos. Experiment 2 increased the difficulty of learning material and compared the learning performance of learners in three conditions: watching segmented videos, taking tests between segments, and receiving formative feedback after testing. The results showed that: 1) The final scores of retention test, transfer test and delayed test were not significantly different from those of learners who watched the segmented video; 2) learners who received feedback after the test performed

better on retention test and delayed retention test than the other two groups; 3) learners who received additional feedback had no significant difference in learning performance on transfer test and delayed transfer test compared with the other two groups. The results indicated that self-test does not have a positive effect on the difficult material, but when learners are given formative feedback, the positive effect of self-test can be re-observed. This study found the positive effects of self-test and feedback in segmented videos, expanded the relevant research on active segmenting, and enriched the understanding of multimedia and online learning.

Keywords: segmentation principle, self-test, feedback

青少年心理素质在学习压力与自杀意念关系中的调节作用

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摘 要 探讨不同心理素质水平下青少年学习压力、正负情绪及自杀意念之间的内在心理作用机制, 为中小学开展心理健康教育和预防自杀工作提供实证支持和指导。采用简单分层抽样, 在 7~12 年级中按照年级分层, 对 1841 名中学生进行学习压力量表、正负情绪量表、心理素质量表和青少年自杀意念量表测量。结果发现:

(1) 学业压力既能直接影响自杀意念, 也能通过减少(增加)正(负)情绪间接影响自杀意念, 正负情绪均在学习压力与自杀意念之间起部分中介作用。(2) 心理素质只调节负性情绪对自杀意念的影响, 具体而言, 相比于心理素质高的个体, 心理素质低的个体的负性情绪对自杀意念的预测作用更大。研究结果启示, 当青少年面对学习压力时, 积极情绪会降低自杀意念, 消极情绪则会增加自杀意念。无论个体心理素质水平的高低, 心理健康教育应该对青少年无差别实施, 学习压力会对他们产生同样的痛苦。

关键词 青少年, 学习压力, 正负情绪, 心理素质, 自杀意念

Moderating effect of psychological Sushi on relationship between study stress and suicidal ideation in adolescents

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Abstract: To examine the relationship among study stress, positive and negative affect and adolescents' suicidal ideation at different levels of Psychological Suzhi, and to provide reference for preventing suicide and promoting mental health of adolescents. A total of 1841 middle school students were investigated. The Study Stress Questionnaire for Middle School, Positive and Negative Affect Scale, Adolescent's Psychological Suzhi Questionnaire (simplified version) and Positive and Negative Suicide Ideation Scale was used to assess study stress, affect state, psychological sushi, and suicide ideation respectively. Results: (1) the study stress not only directly predicted adolescents' suicidal ideation, but also indirectly through positive and negative affect. Positive and negative affect played partial mediating effect between study stress and suicidal ideation. (2) Psychological sushi played a moderating role in the relationship between negative affect and suicidal ideation. Specifically, it had stronger predictive effects for students who had lower level of psychological sushi than those who had higher psychological sushi. Conclusion: when adolescents suffer study stress, positive affect can reduce suicidal ideation, while negative affect can increase suicidal ideation. Regardless of the level of psychological sushi, mental health education should be carried out for adolescents without any difference, because study stress might produce the same pain to them.

Keywords: adolescents; study stress; positive and negative affect; psychological sushi; suicidal ideation

父母情感温暖对儿童青少年学校投入的影响：有调节的中介模型

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摘 要 大量研究指出学校投入对儿童青少年的发展起着至关重要的作用, 它不仅能对儿童青少年的问题行

为起到预防作用，还可以为儿童青少年积极发展提供许多机会。以往研究发现，积极的父母教养方式能影响儿童青少年的学校投入水平，但是两者之间具体的影响机制有待进一步探究。因此，本研究探索了儿童青少年自我管理能力和父母情感温暖与学校投入的中介作用，以及学校氛围对上述中介效应的调节作用。采用父母情感温暖量表、青少年自我管理量表、学校氛围量表和学校投入量表对广州市五所中小学校的 1033 名学生进行测试。结果表明：（1）在控制了性别、年龄后父母情感温暖可以正向预测学校投入；（2）自我管理在其中起中介作用，即父母情感温暖可以通过自我管理间接影响学校投入；（3）父母情感温暖影响学校投入的有调节的中介模型成立，学校氛围在调节中介模型的前半段（父母情感温暖→自我管理）中，感知更优的学校氛围可以强化父母情感温暖对自我管理能力的促进作用，而在不良学校氛围感知中，父母情感温暖对自我管理能力的相对影响较小。学校氛围在调节中介模型的后半段（自我管理→学校投入）中，相对于学校氛围水平较高的青少年，自我管理对于学校投入水平较低的青少年更显著。研究揭示了父母情感温暖影响青少年学校投入的机制，这对改善父母教养方式、增强儿童青少年学校投入的实践工作具有一定的参考价值。因此，父母在面对儿童青少年学业发展问题时，除了给予物质的支持以外，应更多给予温暖、鼓励等心理层面的支持，促进儿童青少年形成自主定向。学校和教育工作者应当在明确孩子自我管理和学校氛围水平后，更多关注和改善低自我管理个体的学校氛围状况，更多提升和促进自我管理低个体的学校氛围水平。

关键词 父母情感温暖，自我管理，学校氛围，学校投入，儿童青少年

The Effects of Parental Emotional Warmth on School Engagement of Children and Adolescents: A Moderated Mediation Model

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Abstract: A large number of studies have pointed out that school engagement plays a vital role in the development of children and adolescents. It can not only prevent the problem behaviors of children and adolescents, but also provide many opportunities for the positive development of children and adolescents. Previous studies have found that positive parenting styles can affect the level of school engagement of children and adolescents, but the specific influencing mechanism between the two needs to be further explored. Therefore, this study explored the mediating effect of children and adolescents' self-management ability on parental emotional warmth and school engagement, and the moderating effect of school climate on the above mediating effect. The parents' emotional warmth scale, adolescent self-management scale, school climate scale and school engagement scale were used to measure 1033 students from primary and middle schools in Guangzhou. The results showed that : (1) parental emotional warmth positively predicted school engagement after controlling for gender and age; (2) Self-management plays a mediating role, that is, parental emotional warmth can indirectly affect school engagement through self-management; (3) The moderated mediating model of parental emotional warmth affecting school engagement was established. In the first half of the mediating model (parental emotional warmth → self-management), the better perceived school climate can strengthen the promoting effect of parental emotional warmth on self-management ability, while in the negative school climate perception, the influence of parental emotional warmth on self-management ability is relatively small. In the second half of the mediating model (self-management → school engagement), self-management was more significant for adolescents with low school engagement than for adolescents with high school climate. The study reveals the mechanism of how parents' emotional warmth affects teenagers' school engagement, which has certain reference value for improving parents' parenting style and enhancing teenagers' school engagement. Therefore, parents should provide psychological support such as warmth and encouragement in addition to material support when facing the problems of children and adolescent academic development, so as to promote the formation of independent orientation of children and adolescents. Schools and educators should pay more attention to and improve the school climate of individuals with low self-management, and promote the school atmosphere level of individuals with low self-management ability after clarifying the level of children's self-management and school climate.

Keywords: parental emotional warmth; self-management; school climate; school engagement; children and adolescents

青少年退避行为和学习焦虑的关系：链式中介效应及性别差异

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摘要 退避行为是一种消极的心理防御机制，其实质是习得性无助的表现，常伴有自卑、焦虑、敏感等个性特征，退避行为也是心理倦怠的一种表现，并且退避行为还预示着消极的应对方式。青少年的退避行为常表现为适应不良和社交障碍等，但在青少年群体中退避行为和其学业情绪的关系尚不明确。基于学业情绪的控制-价值理论和性别动机理论，本研究考察了客观支持和情绪管理在青少年退避行为对学习焦虑影响中的链式中介作用及性别差异。本研究采用应对方式量表、青少年学业情绪量表、社会支持量表和情绪管理量表对洛阳市的一所公立学校的 1022 名中学生进行调查。结果发现：（1）退避行为与青少年学习焦虑呈显著正相关，退避行为对青少年学习焦虑有显著的正向预测作用，退避行为对青少年学习焦虑的直接效应无性别差异；（2）在客观支持的单独中介作用中存在性别差异，男生群体的中介效应显著，女生群体的中介效应不显著；（3）在情绪管理的单独中介作用中存在性别差异，男生群体的中介效应不显著，女生群体的中介效应显著；（4）在客观支持和情绪管理的链式中介作用中不存在性别差异，在男生群体和女生群体中的中介效应皆显著。本研究结果显示了客观支持和情绪管理可以减少有退避行为青少年学习焦虑的产生和发展，有助于揭示退避行为对不同性别青少年学习焦虑的影响及其作用机制，对有退避行为青少年的学习焦虑的预防和干预提供了参考意见并具有一定的指导意义。

关键词 青少年，退避行为，学习焦虑，客观支持，情绪管理

The Relationship between Adolescents' Avoidance and Learning Anxiety: A Serial Mediation Model and Gender Differences

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Abstract: Avoidance is a kind of negative psychological defense mechanism. It's the manifestation of learned helplessness, which is often accompanied by inferiority, anxiety, sensitivity and other personality characteristics. Avoidance is also a manifestation of mental burnout, and it also indicates negative coping style. However, the relationship between adolescents' avoidance and learning anxiety is not clear. Based on the control-value theory of academic emotions and gender motivation theory, the current study aims to explore the role of objective support and emotion management in the association between avoidance and learning anxiety among adolescents and whether there are gender differences in the mediating effects. Adolescents ($N=1022$, 525 boys and 497 girls) were selected from a middle school in the city of Luoyang. Participants completed the Coping Style Questionnaire, Social Support Questionnaire, Emotional Management Scale and Academic Emotions Questionnaire. All the measures showed good reliability and validity in the present study. Data was analyzed using SPSS 21.0 and MPLUS 7.1. The analysis of structural equation model found that (1) Avoidance was positively correlated with learning anxiety significantly and had a significant positive predictive effect on learning anxiety. There was no gender difference in the direct effect of avoidance on learning anxiety. (2) There was a gender difference in the separate mediating effects of objective support. The mediating effect was significant in the boy group but not in the girl group. (3) There was a gender difference in the separate mediating effects of emotion management. The mediating effect was significant in the girl group but not in the boy group. (4) No gender difference in the serial mediating effect of objective support and emotion management was found. The mediating effect was significant in both the boy group and girl group. The results are helpful to reveal the relationship and mechanism of avoidance on learning anxiety among adolescents of

different genders. The implications of our findings for the prevention and intervention of adolescents' learning anxiety are also discussed.

Keywords: Adolescents, Avoidance, Learning anxiety, Objective support, Emotion management

中学生积极/消极情感对学校适应的影响：亲子亲合调节的性别差异

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摘要 对于中学生而言, 能否良好适应学校环境是评价其心理健康发展水平的指标之一。社会、学校和家长也一直致力于帮助中学生提升其学校适应水平。基于已有研究可知情绪会对个体适应能力产生影响, 拓展-构建理论也为此提供了理论依据, 因此本研究关注积极/消极情感对中学生适应的影响。家庭是中学生除学校以外的重要成长环境, 根据家庭系统理论和依恋理论可知良好的家庭模式有利于提升个体适应水平。亲子关系是众多家庭关系中的重要一环, 而亲子亲合是亲子关系中的积极方面, 那么亲子亲合能否调节不同情绪对中学生学校适应的影响呢? 这有待考证。此外, 多项研究表明亲子关系会因孩子性别不同而存在差异, 性别也可能会影响到亲子亲合的调节作用。综上, 本研究构建一个双调节模型, 以贵州省 1100 名中学生为调查对象, 以积极/消极情感量表、学校适应量表、亲子亲合量表作为测量工具, 运用 SPSS26.0 和 Mplus7.4 进行数据分析。结果发现: (1) 积极情感与学校适应正相关 ($r=0.46, p<0.001$), 消极情感与学校适应负相关 ($r=-0.34, p<0.001$); (2) 亲子亲合调节积极情感与学校适应之间的关系, 高低亲子亲合水平下均显著; (3) 亲子亲合对消极情感与学校适应的调节作用存在显著的性别差异, 各水平下均显著。结论: 社会、学校和家长应及时关注中学生情绪问题对其学校适应的影响, 不同亲子亲合水平的男女中学生应得到不同的关注度, 进而更有效地帮助中学生提升学校适应水平。

关键词 积极/消极情感, 学校适应, 亲子亲合, 中学生

Influence of Middle School Students' Positive/Negative Affect on School Adjustment: Moderating Effect of Parent-Child Cohesion and Its Gender Difference

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Abstract: For middle school students, whether they can adapt to the school environment is one of the indicators to evaluate their mental health development level. Society, schools and parents have also been working to help middle school students improve their school adjustment. Based on existing studies, it can be known that emotions will have an impact on individual adaptive ability, and the Broaden-and-Build Theory also provides a theoretical basis for this. Therefore, this study focuses on the impact of positive/negative affect on the adaptation of middle school students. Family is an important growing environment for middle school students besides school. According to Family System Theory and Attachment Theory, a good family pattern is conducive to improving the level of individual adaptation. Parent-child relationship is an important part of many family relationships, and parent-child cohesion is a positive aspect of parent-child relationship. Then, can parent-child cohesion moderate the influence of different emotions on school adjustment of middle school students? That remains to be seen. In addition, a number of studies have shown that parent-child relationship is different depending on the gender of the child, and gender may also affect the moderating effect of parent-child cohesion. To sum up, this study constructed a dual-moderation model, taking 1100 middle school students in Guizhou province as survey objects, using positive/negative affect scale, school adjustment scale and parent-child cohesion scale as measurement tools, and using SPSS26.0 and Mplus7.4 for data analysis. The results showed that : (1) positive correlation between positive affect and school adjustment ($r=0.46, p<0.001$); Negative affect were negatively correlated with school adjustment ($r=-0.34, p<0.001$); (2) Parent-child cohesion moderates the relationship between positive affect and school adjustment, which is significant at both high and low

parent-child bonding levels; (3) There is a significant gender difference in the moderating effect of parent-child cohesion on negative affect and school adjustment, which is significant at all levels. Conclusion: The society, schools and parents should pay close attention to the influence of emotional problems of middle school students on their school adjustment. Male and female middle school students with different parent-child cohesion levels should get different attention, so as to help middle school students improve their school adjustment level more effectively.

Keywords: positive/negative affect, school adjustment, Parent-child cohesion, middle school students

MAOA 基因 rs6323 多态性与同伴侵害对青少年自伤行为的影响

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摘 要 自伤行为是一种在青少年群体中广泛存在的复杂且危险的心理病理行为, 严重影响着青少年的身心健康水平, 甚至导致自杀等后果。从基因和环境交互作用的视角探讨 MAOA 基因 rs6323 多态性与同伴侵害对青少年自伤行为的作用模式, 对于深入揭示青少年自伤行为的产生机制, 尤其是基因和环境在这一过程中的联合作用方式具有重要意义。

本研究结合基因检测技术与问卷调查, 主要探讨了 MAOA 基因 rs6323 多态性与同伴侵害(关系侵害、身体侵害)对青少年自伤行为的影响及其性别差异。结果发现: (1) 控制年龄和抑郁水平后, 同伴侵害对男生自伤行为的主效应显著, MAOA 基因 rs6323 多态性对女生的主效应显著; (2) MAOA 基因 rs6323 多态性和同伴侵害对男女生的交互作用均显著, 但这一交互作用模式存在显著的性别差异: 在男生群体中, 同伴侵害主要对携带 G 等位基因的男生具有显著的预测作用, 对携带 T 等位基因者的预测作用不显著; 而在女生群体中, 同伴侵害主要对携带 T 等位基因的女生有显著的预测作用, 而对携带 G 等位基因者无显著预测作用。本研究结果启示, 同伴侵害对青少年自伤行为的影响会受到 MAOA 基因 rs6323 多态性和性别的调节作用, 不同性别的 MAOA 基因 rs6323 多态性等位基因携带者, 其对同伴侵害消极影响的敏感程度存在显著差异, 这为青少年自伤行为的预防和干预提供了重要科学借鉴。

关键词 自伤行为, MAOA 基因 rs6323 多态性, 同伴侵害, 青少年

The Influence of MAOA Gene Rs6323 Polymorphism and Peer Victimization on Adolescents' Non-suicidal Self-injury

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Abstract: Non-suicidal self-injury is a complex and dangerous psychopathological behavior widely existing in adolescents, which seriously affects the physical and mental health of adolescents, and even leads to suicide and other consequences. Discussing the mode of action of rs6323 polymorphism of MAOA gene and peer victimization on adolescent non-suicidal self-injury from the perspective of gene-environment interaction is of great significance to reveal the mechanism of generation of adolescent non-suicidal self-injury, especially the joint action mode of gene and environment in this process.

In this study, combined with gene detection technology and questionnaires, the effects of MAOA gene rs6323 polymorphism and peer victimization on non-suicidal self-injury of adolescents and their gender differences were investigated. The results showed that: (1) After controlling for age and depression level, the main effect of peer victimization on boys' non-suicidal self-injury was significant, and the main effect of the MAOA gene rs6323 polymorphism on girls was significant; (2) The interaction between the polymorphism of MAOA gene rs6323 and peer victimization on adolescents' non-suicidal self-injury was significant, and there was a significant gender difference in this interaction pattern. Specifically, in the male group, peer victimization could positively predict the G allele carriers' non-suicidal self-injury, while it couldn't predict T allele carriers' non-suicidal self-injury. In contrast, in the female group, peer victimization could positively predict T allele carriers' non-suicidal self-injury, while it

couldn't predict the G allele carriers' non-suicidal self-injury. The results of this study indicate that the influence of peer victimization on adolescents' non-suicidal self-injury behavior is moderated by MAOA gene rs6323 polymorphism and gender. The sensitivity of MAOA gene rs6323 polymorphism allele carriers to the negative effects of peer victimization is significantly different, which provides an important scientific reference for the prevention and intervention of adolescent non-suicidal self-injury.

Keywords: Non-suicidal self-injury, MAOA gene rs6323 polymorphism, Peer victimization, Adolescents

羞怯与学业倦怠的关系：一个有调节的中介模型

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摘 要 高中生正面临人生的重大考验——高考，繁重的课业和频繁的考试使高中生不同程度地出现学习倦怠现象。所谓学习倦怠是指学生因长期的学业负荷而产生的精力耗竭、对学校课业及活动的热忱消失、对同学态度冷漠和疏离的行为及成绩未如预期而对学校课业产生的一种消极态度。学习倦怠不仅直接影响学生的学业，还会引发心情抑郁烦闷，甚至出现社交回避、睡眠障碍等更严重的心理问题。相关研究表明，学业倦怠与个体因素和外部环境因素密切相关，本研究拟从个体角度出发，选取羞怯这一重要的人格特质变量，探讨其与高中生学业倦怠的关系及学业焦虑的中介机制；同时，基于努力——恢复模型所指出的恢复体验对个体焦虑等状态具有重要的缓冲作用，本研究选取恢复体验这一积极变量，探讨其对学业焦虑的中介效应是否具有缓冲作用，从而为高中生学业倦怠的辅导干预提供一些指导借鉴。采用方便取样，从山东省济南市的两所高中抽取 585 名高中生作为被试，以羞怯量表、学业焦虑量表、恢复体验量表、学业倦怠量表为测量工具对被试进行问卷调查，探讨羞怯与学业倦怠的关系及学业焦虑的中介作用和恢复体验的调节作用。主要研究结果如下：（1）高中生学业倦怠程度总体偏高。高中生的学业倦怠程度在年级上存在显著差异，高二学生的学业倦怠程度显著高于高一学生。（2）高中生羞怯、学业焦虑与学业倦怠之间两两正相关。（3）学业焦虑在高中生羞怯与学业倦怠之间起部分中介作用，羞怯不仅能够直接正向预测高中生的学业倦怠程度，还通过学业焦虑间接预测学业倦怠。（4）恢复体验在羞怯与学业焦虑起到调节作用，与低恢复体验相比，高恢复体验条件下，羞怯对学业焦虑的正向预测作用更大，整体上高恢复体验的个体学业焦虑始终低于低恢复体验的个体。这一结果启示我们要高度关注高中阶段学生的学业倦怠情况，特别是具有羞怯特质的学生群体，为其创造良好的学习环境，使其形成高恢复体验，最大限度地降低学业焦虑情绪，从而降低学业倦怠程度。

关键词 学业倦怠，羞怯，学业焦虑，恢复体验，高中生

The Relationship between High School Students' Shyness and Academic Burnout: A Moderated Mediation Model

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Abstract: High school students are facing a great test of life - The university entrance examination, heavy schoolwork and frequent examinations make high school students appear learning burnout in different degrees. The so-called learning burnout is a kind of passive attitude to the school work, which is caused by the students' exhaustion of energy, the loss of enthusiasm to the school work and activities, the behavior of indifference and estrangement to the classmates, and the scholastic attainment fell short of expectations duing to long-term academic load. Learning burnout not only directly affects students' academic performance, but also leads to depression, even social avoidance, sleep disorders and other more serious psychological problems. Research on academic burnout shows that academic burnout is closely related to individual factors and external environmental factors. This study intends to select the important personality traits of shyness from an individual perspective, and explore its relationship with academic burnout of high school students and academic anxiety in the intermediary mechanism; at the same time, based on the

effort-recovery model, the recovery experience has an important buffer effect on individual anxiety and other states. This study selected the positive variable of recovery experience to explore whether its mediating effect on academic anxiety has a buffer Function, so as to provide some guidance for intervention of academic burnout of high school students. Using convenient sampling methods, 585 high school students were selected from two high schools in jinan in Shandong Province as subjects. The shyness scale, academic anxiety scale, recovery experience scale and academic burnout scale were used as the measurement tool, conducted a questionnaire survey on the subjects to explore the relationship between shyness and academic burnout, as well as the mediating role of academic anxiety and the regulatory role of recovery experience. The main findings are as follows: (1) The academic burnout of high school students is generally high. There is a significant difference in grades of academic burnout among senior high school students. The degree of academic burnout of the students in grade two is significantly higher than that of the students in grade one. (2) There are two positive correlations among shyness, academic anxiety and academic burnout of high school students. (3) Academic anxiety plays a partial intermediary role between high school students' shyness and academic burnout. Shyness can not only directly predict the degree of academic burnout of high school students, but also indirectly predict academic burnout through academic anxiety. (4) Restorative Experience Moderates Shyness and academic anxiety, compared with the low recovery experience, shyness has a greater positive predictive effect on academic anxiety under the high recovery experience, On the whole, the academic anxiety of individuals with high recovery experience was always lower than that of individuals with low recovery experience. This result suggests that we should pay close attention to the high school students' academic burnout, especially the group of students characterized by shyness, and create a good learning environment for them to form a high recovery experience, reduce the academic anxiety to the greatest extent, thus reducing the degree of academic burnout.

Keywords: Academic burnout, shyness, academic anxiety, recovery experience, high school students

在职母亲工作家庭平衡对青少年情绪调节自我效能感的影响： 基于亲子配对数据分析

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摘 要 根据溢出交叉理论和家庭系统理论, 个体在工作与家庭领域的平衡体验会溢出到亲子系统。同时, 中国在职母亲作为孩子的主要抚养人, 其工作家庭平衡带来的后效影响对其子女的心理健康发展与内外化适应问题更为显著。以往研究表明, 随着时间的推移母亲的工作家庭冲突体验与儿童内化问题显著正相关, 有鉴于此, 本研究基于亲子匹配数据, 从中国在职母亲的工作家庭平衡视角入手来探讨青少年情绪调节自我效能感的影响因素及其形成机制, 并且考察母亲感知家庭功能与青少年感知家庭功能在其中的链式中介作用。采用工作家庭平衡量表、总体家庭功能问卷和青少年情绪调节自我效能感问卷对 560 名青少年及其在职母亲进行调查研究, 运用 SPSS24.0 和 PROCESS 宏插件对数据进行统计分析。结果发现: (1) 除在职母亲的工作家庭平衡与青少年感知家庭功能未呈现显著相关外, 在职母亲工作家庭平衡、母亲感知家庭功能与青少年情绪调节自我效能感均两两之间呈现显著正相关($r=0.61, p<0.00$; $r=0.13, p<0.05$; $r=0.13, p<0.05$); (2) 在职母亲工作家庭平衡对青少年情绪调节自我效能感具有显著的直接预测作用($\beta=0.35, p<0.05$); (3) 母亲感知家庭功能和青少年感知家庭功能在在职母亲的工作家庭平衡与青少年情绪调节自我效能感之间起链式中介作用(95%CI=0.15~0.45)。结论: 本研究从亲子匹配数据入手, 分析在职母亲工作家庭平衡如何跨越亲子系统对青少年的情绪调节自我效能感产生影响, 揭示了亲子分别感知到的家庭功能在其中的链式中介作用, 为家庭和社会思考如何有效改善青少年情绪调节自我效能感, 增强积极情绪表达能力和调节消极情绪提供了理论支撑与实证数据。

关键词 工作家庭平衡, 家庭功能, 青少年情绪调节自我效能感, 在职母亲

The Effect of Working Mothers' Work Family Balance on The Self-Efficacy of Adolescents' Emotional Regulation: Analysis Based on Parent-Child Dyadic Data

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Abstract: According to the theory of spillover and crossover and the theory of family system, the balance experience of individuals in the field of work and family will overflow to the parent system. At the same time, working mothers in China are the main supporters of their adolescent, and the after-effects of their work family balance have more significant problems with their children's mental health development and internal and external problems. Previous studies have shown that mothers' experience of work-family conflict is significantly positively correlated with children's internalization problems over time. In view of this, this study is based on parent-child dyadic data to explore adolescents' emotional regulation from the perspective of work-family balance of working mothers in China. The influencing factors of self-efficacy and its formation mechanism, and the intermediary effect of mothers' perception of family function and teenagers' perception of family function in it. The Work Family Balance Scale, the Overall Family Functioning Questionnaire and the Adolescent Emotion Regulation Self-Efficacy Questionnaire were used to investigate and research 560 adolescents and their working mothers. The data were statistically analyzed using SPSS24.0 and the PROCESS. The results found that: (1) Except for the work family balance of working mothers and adolescents' perceived family functioning, there is no significant correlation, while working mothers' work family balance, mothers' perceived family functioning and adolescents' emotional regulation self-efficacy are all positively correlated. ($r=0.61, p<0.00$; $r=0.13, p<0.05$; $r=0.13, p<0.05$); (2) Working mothers' work family balance has a significant direct predictive effect on the self-efficacy of adolescents' emotion regulation ($\beta=0.35, p<0.05$); (3) The mother's perceived family function and the adolescent's perceived family function play a chain mediating role between the working mother's work family balance and the self-efficacy of adolescent emotion regulation ($95\%CI=0.15 \sim 0.45$). Conclusion: Starting from the data of parent-child dyad, this study analyzes how working mothers' work family balance has an impact on adolescents' emotional regulation self-efficacy across the parental system, revealing the chain mediating role of family functions perceived by parents and children. It provides theoretical support and empirical data on how to effectively improve the self-efficacy of adolescents' emotional regulation, enhance their ability to express positive emotions and regulate negative emotions.

Keywords: work family balance, family function, self-efficacy of adolescent emotion regulation, working mother

亲子亲合对高中生自杀意念的影响： 领悟社会支持和抑郁-焦虑-压力的链式中介作用

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摘要 自杀意念作为自杀行为的关键预测因素，是指个体在思想或认知层面上产生想要结束自己生命的想法。因此，探究自杀意念的影响因素对高中生心理健康发展具有重要意义。前人研究发现，亲子亲合体现在亲子间积极的行为互动和心理的亲密感受之中，可作为保护性因素以降低高中生自杀意念。此外，亲子亲合还可能通过使个体感受到来自父母的支持，从而降低抑郁-焦虑-压力水平，最终减少自杀意念。鉴于此，本研究拟探讨亲子亲合对自杀意念的影响以及领悟社会支持和抑郁-焦虑-压力在其中的链式中介作用。采用家庭适应与亲合评价量表II、领悟社会支持量表、简版抑郁-焦虑-压力量表、青少年自杀意念量表，采取方便抽样法通过实地发放问卷的方式，在高中生群体中收集 2413 份有效问卷。采用 SPSS25.0 及 PROCESS 插件对数据

进行统计分析。结果发现：（1）亲子亲合与领悟社会支持呈显著正相关（ $r=0.43, p<0.001$ ），与抑郁-焦虑-压力和自杀意念呈显著负相关（ $r=-0.30, p<0.001$ ； $r=-0.35, p<0.001$ ）；领悟社会支持与抑郁-焦虑-压力和自杀意念呈显著负相关（ $r=-0.31, p<0.001$ ； $r=-0.45, p<0.001$ ）；抑郁-焦虑-压力和自杀意念呈显著正相关（ $r=0.55, p<0.001$ ）；（2）亲子亲合对高中生自杀意念具有显著负向预测作用（ $\beta=-0.11, p<0.001$ ）；（3）领悟社会支持和抑郁-焦虑-压力在亲子亲合与自杀意念之间起链式中介作用（95%CI=-0.06~-0.04）。结论：本研究分析了亲子亲合如何对高中生自杀意念产生影响，揭示了领悟社会支持和抑郁-焦虑-压力在其中的链式中介作用，为学校思考如何有效降低高中生自杀意念水平，增强积极情绪体验和提升心理健康水平提供了实证依据。

关键词 亲子亲合，自杀意念，领悟社会支持，抑郁-焦虑-压力

The Effect of Parent-Child Cohesion on Suicidal Ideation in High School Students: The Chain Intermediary Role of Perceived Social Support and Depression-Anxiety-Stress

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Abstract: Suicidal ideation, a key predictor of suicidal behavior, refers to an individual's thoughts at the ideological or cognitive level of wanting to end his or her life. Therefore, it is important to explore the factors influencing suicidal ideation for the development of mental health of high school students. Previous research has found that parent-child cohesion, which is embodied in positive behavioral interactions and psychological intimacy between parents and children, can serve as a protective factor to reduce suicidal ideation in high school students. Further, parent-child cohesion may also allow individuals to feel supported by their parents. This may decrease the individual's depression-anxiety-stress levels and ultimately reduces their suicidal ideation. In view of this, the present study was designed to investigate the effect of parent-child cohesion on suicidal ideation and the chain mediating role of perceived social support and depression-anxiety-stress in it. The Positive and Negative Suicide Ideation (PANSI), The Depression Anxiety Stress Scales (DASS-21), Perceived Social Support Scale (PSSS), Family Adaptability and Cohesion Evaluation Scale (FACES-II) was used to collect 2413 valid questionnaires from high school students through field distribution using a convenience sampling method. SPSS25.0 and PROCESS plug-in were used for statistical analysis of the data. The results revealed that (1) parent-child cohesion was significantly and positively correlated with perceived social support ($r=0.43, p<0.001$), and it negatively correlated with depression-anxiety-stress and suicidal ideation ($r=-0.30, p<0.001$; $r=-0.35, p<0.001$); perceived social support was significantly and negatively correlated with depression-anxiety-stress and suicidal ideation ($r=-0.31, p<0.001$; $r=-0.45, p<0.001$); depression-anxiety-stress and suicidal ideation were significantly positively correlated ($r=0.55, p<0.001$); (2) parent-child cohesion was a significant negative predictor of suicidal ideation among high school students ($\beta=-0.11, p<0.001$); (3) Parent-child cohesion indirectly influences suicidal ideation through a chain mediating effect of perceived social support and depression-anxiety-stress (95% CI=-0.06~-0.04). This study analyzed how parent-child cohesion affects suicidal ideation in high school students and revealed the chain mediating role of perceived social support and depression-anxiety-stress in it. This provided an empirical basis for schools to consider how to effectively reduce the level of suicidal ideation, and enhance positive emotional experiences and improve psychological well-being in high school students.

Keywords: suicidal ideation, parent-child cohesion, depression-anxiety-stress, perceived social support

互联网使用对高中生求知欲的影响： 自我控制和儒家传统价值观的双重中介作用

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摘要 随着互联网的迅猛发展, 信息量爆炸性增长, 高中生想要从庞大信息量中获取有用的知识并进行深入探究, 求知欲在其中发挥着极其重要的作用。求知欲是高中生进行创新活动的开端, 是创新型人才的基本特质, 它强调即使知识的实用价值并不直接显现出来, 也能对知识产生好奇和热衷, 并进一步尝试去学习和理解。对于互联网使用, 前人研究主要集中在其消极方面, 例如病理性网络使用、网络成瘾等。本文从积极的角度出发, 拟探讨互联网使用对求知欲的影响以及自我控制与儒家传统价值观在二者之间的中介作用。采用互联网使用偏好量表、自我控制量表、儒家传统价值观量表、求知欲量表对贵州省某中学的 1798 名高中生进行了调查。对各个量表进行相关分析发现: 互联网使用与自我控制、儒家传统价值观和求知欲均存在显著的正相关关系 ($r=0.04, p<0.05$; $r=0.08, p<0.01$; $r=0.19, p<0.01$); 自我控制与儒家传统价值观和求知欲存在显著的正相关关系 ($r=0.11, p<0.01$; $r=0.20, p<0.01$); 儒家传统价值观和求知欲有显著的正相关 ($r=0.20, p<0.01$)。模型的各项拟合指标为: ($\chi^2=430.23, df=60, CFI=0.92, TLI=0.90, SRMR=0.05, RMSEA=0.06$ (90%CI[0.05, 0.06])。均达到可接受标准, 拟合度良好, 双重中介模型成立。其中互联网使用对儒家传统价值观具有显著正向预测作用 ($\beta=0.23, p<0.001$), 儒家传统价值观对求知欲具有显著正向预测作用 ($\beta=0.49, p<0.001$), 互联网使用对自我控制具有显著正向预测作用 ($\beta=0.46, p<0.001$), 自我控制对求知欲具有显著正向预测作用 ($\beta=0.19, p<0.01$), 互联网使用对求知欲具有显著正向预测作用 ($\beta=0.77, p<0.001$)。结果表明: (1) 互联网使用、自我控制、儒家传统价值观与求知欲之间呈显著正相关; (2) 互联网使用通过自我控制和儒家传统价值观的双重中介作用影响求知欲。这表明互联网使用不仅能直接影响求知欲, 也能间接地通过自我控制和儒家传统价值观对其产生影响。

关键词 互联网使用, 求知欲, 自我控制, 儒家传统价值观

The Effect of Internet Use on Inquisitiveness among High School Students: The Dual Mediating Role of Self-Control and Traditional Confucian Values

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Abstract: With the rapid development of the Internet and the explosive growth of the amount of information, high school students want to obtain useful knowledge from the huge amount of information and conduct in-depth exploration, and the thirst for knowledge plays an extremely important role. The thirst for knowledge is the beginning of high school students' innovative activities. It is the basic characteristic of innovative talents. It emphasizes that even if the practical value of knowledge is not directly manifested, it can still be curious and enthusiastic about knowledge, and further try to learn and understand. For Internet use, previous studies mainly focused on its negative aspects, such as pathological Internet use and Internet addiction. From a positive perspective, this article intends to explore the influence of Internet use on intellectual inquisitiveness and the mediating role of self-control and traditional Confucian values. Using the Internet Preference Scale, Self-Control Scale, Confucian Traditional Value Scale, and Inquisitiveness Scale, 1798 high school students in a middle school in Guizhou Province were surveyed. Correlation analysis of the various scales found that: Internet use and self-control, Confucian traditional values and inquisitiveness are all significantly positively correlated ($r=0.04, p<0.05$; $r=0.08, p<0.01$; $r=0.19, p<0.01$); there is a significant positive correlation between self-control and traditional Confucian values and thirst for knowledge ($r=0.11, p<0.01$; $r=0.20, p<0.01$); traditional Confucian values and thirst for knowledge have a significant positive correlation

($r = 0.20, p < 0.01$). The fitting indicators of the model are: ($\chi^2 = 430.23, df = 60, CFI = 0.92, TLI = 0.90, SRMR = 0.05, RMSEA = 0.06$ (90%CI[0.05, 0.06])). All meet the acceptable standards, The fit is good, and the dual mediation model is established. Among them, Internet use has a significant positive predictive effect on Confucian traditional values ($\beta = 0.23, p < 0.001$), and Confucian traditional values have a significant positive predictive effect on inquisitiveness ($\beta = 0.49, p < 0.001$), Internet use has a significant positive predictive effect on self-control ($\beta = 0.46, p < 0.001$), self-control has a significant positive predictive effect on inquisitiveness ($\beta = 0.19, p < 0.01$), Internet use The desire to know has a significant positive predictive effect ($\beta = 0.77, p < 0.001$). The results show that: (1) Internet use, self-control, traditional Confucian values, and inquisitiveness are significantly positively correlated; (2) Internet use through self The dual mediating effects of control and traditional Confucian values affect inquisitiveness. This shows that Internet use can not only directly affect inquisitiveness, but also indirectly affect it through self-control and traditional Confucian values.

Keywords: internet use, inquisitiveness, self-control, traditional confucian values

父母特定生涯行为与高一学生职业成熟度的关系及干预

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摘要 高中阶段是青少年职业发展的重要阶段。研究表明, 在高一阶段对学生进行生涯相关的干预效果更好, 可以提高其职业成熟度。职业成熟度是指在一定的职业决策知识和态度的基础上做出适宜的职业决策的准备程度。以往针对在生涯教育领域的父母行为研究大多集中在父母教养方式上。然而, 父母教养方式在不同教育情境下有不同体现。探讨父母在青少年职业生涯中的教养行为, 即父母特定生涯行为更具有针对性和说服力。因此, 采用两项研究分别探讨父母特定生涯行为与高一学生职业成熟度的关系以及生涯课程对职业成熟度的影响。研究一采用中学生职业成熟度量表、父母特定生涯行为量表和职业决策自我效能量表对 430 名高一学生进行了调查。结果发现: 父母生涯支持对职业成熟度有正向预测作用, 且职业决策自我效能在其中起完全中介作用; 父母生涯缺失对职业成熟度有负向预测作用, 且职业决策自我效能在其中起部分中介作用; 父母生涯干预对职业成熟度没有显著的预测作用。在此基础上, 研究二结合不同父母特定生涯行为为学生生涯发展情况, 采用 3 课程分组(补充课程、自主课程、传统课程) $\times$ 2 前后测(前测、后测) $\times$ 3 被试类型(干预型、缺失型、支持型)的混合实验设计, 选取了 238 名被试, 进行为期八周, 每周一次的课程干预, 拟比较不同课程的干预效果。结果发现: (1)在职业决策自我效能上, 补充课程和自主课程自我评价分维度后测得分显著高于前测; 补充课程收集信息分维度后测得分均显著高于前测; 传统课程组学生职业决策自我效能感的两个分维度前后测差异不显著。(2)在职业成熟度上, 补充课程组后测得分显著高于前测。(3)经自主课程干预后, 父母生涯干预型学生的独立性得分有显著提升。由此可见, 补充课程对三类学生均有促进作用。自主课程适用于父母生涯干预型学生, 有助于提升独立性, 缓解亲子沟通问题。

关键词 父母特定生涯行为, 职业成熟度, 职业决策自我效能, 课程干预

The Relationship and Curricular Intervention between Career-specific Parental Behaviors and Vocational Maturity of High School Students

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Abstract: High school is an important stage of teenagers' career development. Researchs have shown that the effect of career-related intervention is better for senior one high school students, which can improve their career maturity. Career maturity refers to the degree of preparation for making appropriate career decisions based on certain career decision-making knowledge and attitude. The studies about parents' behavior in the field of career education focused on the parental rearing style. However, parental rearing style are different in different educational situations, the term "Career-specific Parental Behaviors" is more targeted and persuasive. Therefore, we examined the relationship

between parents' specific career behaviors and senior one high school students' vocational maturity and the effect of career curriculum on career maturity by two studies. In study 1, 430 senior one high school students were investigated by using vocational maturity scale, parent specific career behavior scale and career decision-making self-efficacy. The results shows that: (1) Parental career support positively associated with career maturity, and career decision-making self-efficacy plays a completely mediating role; lacking of engagement negatively associated with career maturity, and career decision-making self-efficacy plays a part of mediating role; Interference had no significant predictive effect on career maturity. Then on the base of study 1, study 2 combined with different parents specific career behavior of students career development, to compare the effects of intervening, we adopt 3×2×3 mixed experimental design, 238 subjects were selected for different courses intervention last for 8 weeks, once a week. The results shows that: (1) In terms of career decision-making self-efficacy, the score of supplementary courses and independent courses in the sub-dimensions of self-evaluation in the post-test was significantly higher than the pre-test; The scores of the information collected in the supplementary course were significantly higher in the post-test than the pre-test; There was no significant difference in the two dimensions of self-efficacy in the traditional course group. (2) In terms of vocational maturity, the post-test score of the supplementary course group was significantly higher than the pre-test. (3) After the intervention of independent curriculum, the independence scores of parents' career intervention students were significantly improved. In conclusion, supplementary courses have a promoting effect on all the three types of students. Autonomous courses are suitable for students with parental career intervention, which is conducive to improve their independence and alleviate parent-child communication problems.

Keywords: Career-specific parental behaviors, Career maturity, Career decision-making self-efficacy, Course intervention

父母工作家庭冲突对儿童问题行为的影响： 负性情绪的中介和父母养育内疚感的调节

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摘 要 问题行为的存在不仅会阻碍幼儿生理和心理的发展, 严重地还会危害到其以后的学习、生活及未来的社会化发展, 甚至能够延续到青春期乃至更长时间。溢出理论指出, 工作角色和生活角色之间是彼此依赖并相互影响的, 个体在工作中的情绪、态度和行为很容易延伸到家庭领域, 或将家庭中的情绪、态度和行为带进工作领域。研究发现父亲或母亲报告的工作家庭冲突越多, 自身的负性情绪越多, 其孩子的负面情绪和消极行为结果也越多。另外, 父母养育内疚感作为一把“双刃剑”不仅会给儿童的问题行为带来积极影响, 也会带来一定消极影响。鉴于此, 本研究从“溢出理论”和“内疚感是把双刃剑”的观点出发, 考察父母工作家庭冲突对儿童问题行为的影响机制。采用工作家庭冲突量表、长处与困难问卷、抑郁-焦虑-压力量表和父母养育内疚感量表调查了 896 名 3-6 岁幼儿的父母。结果显示: (1)工作家庭冲突、父母养育内疚感、负性情绪及问题行为两两之间均呈显著正相关($r=0.12-0.37$, $P<0.001$); (2)父母的负性情绪部分中介了父母工作家庭冲突和儿童问题行为的关系(95%CI: [0.06-0.11]), 中介效应占总效应的 23%; (3)父母养育内疚感调节了该中介模型的直接路径和中介效应后半段, 即①与低父母养育内疚感相比, 高父母养育内疚感可以减弱工作家庭冲突对儿童问题行为的预测作用(由 $\beta=0.36$, $P<0.001$ 减弱为 $\beta=0.20$, $P<0.001$); ②与低父母养育内疚感相比, 高父母养育内疚感会增强负性情绪对儿童问题行为的预测作用(由 $\beta=0.11$, $P<0.05$ 增强为 $\beta=0.28$, $P<0.001$)。本研究不仅丰富了溢出理论, 还为预防和干预儿童问题行为提供理论指导和实证依据。

关键词 工作家庭冲突, 儿童问题行为, 负性情绪, 父母养育内疚感

The Effect of Parents' Work Family Conflict on Children's Problem behavior: The mediating Role of Negative Emotions and the Moderating Role of Parenting Guilt

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Abstract: The existence of problem behaviors not only hinder the physical and psychological development of children, but also seriously endanger their future study, life and future social development, and even extend to puberty and even longer time. The spillover theory points out that the work role and life role are interdependent and influence each other, and the individual's emotions, attitudes and behaviors at work can easily be extended to the family field, or the family's emotions, attitudes and behaviors can be brought to the work field. The study found that the more work-family conflict a father or mother reported, they will have the more negative emotions, and their children will also have the more negative emotional and behavioral outcomes. In addition, parenting guilt as a "double-edged sword" will not only bring positive influence to children's problem behavior, but also bring some negative influence. Therefore, this study explores the influence mechanism of parents' work-family conflict on children's problem behaviors from the perspective of "spillover theory" and "guilt is a double-edged sword". The Work Family Conflict Scale, the Strengths and Difficulties Questionnaire, the Depression Anxiety Stress Scale-21 and the Guilt about Parenting Scale were used to investigate 869 toddler parents of 3-6 year olds. The results indicate the following: (1) Work-family conflict, parenting guilt, negative emotions and problem behavior were significantly positively correlated($r=0.12-0.37$, $P<0.001$); (2) Negative emotions played a partial mediating role between parents' work family conflict and children's problem behavior(95%CI: [0.06-0.11]), mediating effect is the total effect 23%; (3) Parenting guilt moderated the direct path of the mediation model and the mediating effect in the second half: ① Compared with low parental guilt, high parental guilt can weaken the predictive effect of work-family conflict on children's problem behavior (decreased from $\beta=0.36$, $P < 0.001$ to $\beta=0.20$, $P < 0.001$); ② Compared with low parental guilt, high parental guilt increased the predictive effect of negative emotions on children's problem behavior (enhanced from $\beta=0.11$, $P < 0.05$ to $\beta=0.28$, $P < 0.001$). This research not only enriches spillover-crossover theory, but also provides theoretical guidance and empirical evidence for preventing and intervening in children's problem behaviors.

Keywords: work family conflict, children's problem behavior, negative emotions, parenting guilt

负性情绪刺激加工对自伤青少年抑制控制的影响

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摘要 非自杀性自伤 (Non-Suicidal Self-Injury, NSSI,以下简称自伤) 是指在没有明确自杀意图的情况下, 个体故意、重复地改变或伤害自己身体组织的行为, 这种行为不被社会认可、且不具有致死性或致死性较低。青少年时期是自伤行为的高发期, 研究发现自伤青少年不仅具有更高的行为冲动性, 而且在情绪感受方面表现出更多的脆弱性 (情绪易唤起、强度高、难平复)。当前, 尽管青少年情绪加工的相关研究已受到广泛关注, 但关于自伤青少年情绪加工过程中的知觉特点尚不清楚。另外, 已有研究发现自伤青少年普遍存在情绪加工异常模式, 这种异常加工是否会进一步影响其行为控制过程, 还需要进一步探讨和关注。

本研究共包含两个实验, 其中实验一采用情绪图片感知范式, 检验对照组和自伤组在三类情绪图片 (中性、正性、负性) 的效价和唤醒度上的评分差异, 结果表明自伤组 and 对照组仅在负性情绪图片的效价评分中存在显著差异, 表现为自伤组对负性情绪图片的评分更低。实验二采用改进的双选 Oddball 范式, 首先检验自伤青少年的抑制控制能力是否受损, 并进一步考察三类情绪刺激对自伤青少年抑制控制能力的影响。结果发现: (1) 不论是在标准刺激还是在偏差刺激中, 自伤组和对照组的正确率均不存在显著差异; (2) 在偏差

刺激中, 自伤组的反应时显著大于对照组, 表现为自伤组在负性情绪和中性情绪条件下的反应时均显著高于对照组。研究结果提示, 自伤青少年对负性情绪图片的加工存在一定的认知偏差, 且这种偏差的情绪认知加工模式进一步影响了其抑制控制能力, 使得自伤青少年表现出较高的冲动性。

关键词 自伤行为, 情绪加工, 抑制控制, 双选 Oddball

Negative emotion disturbed inhibitory control in non-suicidal self-injury adolescence

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Abstract: Nonsuicidal self-injury (NSSI) is defined as the deliberate, self-inflicted damage to one's body tissue without suicidal intent and for purposes that are not socially or culturally sanctioned. Adolescence is a period of the high incidence of NSSI. Research has found that adolescents with NSSI not only have higher behavioral impulsivity, but also show more vulnerability in emotional feelings (emotions are easy to arouse, high intensity, and difficult to calm). Although the related research on the emotional processing of adolescents has received extensive attention, it is still unclear about the perception of the emotional processing among NSSI adolescents. In addition, existing studies have found that adolescents with NSSI generally have abnormal pattern of emotional processing. Whether this abnormal processing will further affect their behavioral control process requires discussion and attention.

This study consists of two experiments. Experiment 1 used the emotional picture perception task to test the difference in the valence and arousal of the three types of emotional pictures (neutral, positive, and negative) between the control group and the NSSI group. The results showed that the NSSI group and the control group only had significant differences in the valence scores of negative emotion pictures, and the NSSI group had a significantly lower scores for negative emotion pictures. Experiment 2 adopted the improved two-choice Oddball task examined whether the self-injured youth's inhibition and control ability is impaired, and further explored the influence of the three types of emotional processing on the youth's behavioral inhibitory control. The results showed that: (1) There was no significant difference in the correct response rate between the self-injury group and the control group in either the standard stimulus or the deviation stimulus; (2) In the deviation stimulus, the NSSI group had significantly greater response time than the control group, and showed that the reaction time of the NSSI group under negative emotion and neutral emotion conditions was significantly higher than that of the control group. The results suggest that adolescence with NSSI have certain cognitive biases in processing negative emotion pictures, and this biased emotional cognitive processing pattern further affects their inhibitory control, making them showing higher impulsivity.

Keywords: Non-Suicidal Self-Injury, Emotional process, Behavioral inhibitory control, two-choice Oddball task

工作心理脱离与生活满意度的关系：一个有调节的中介模型

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摘 要 近年来, 随着教育的改革和发展, 中小学教师工作量普遍超负荷, 导致其个体资源在工作领域的过度消耗, 而忽视了对生活领域的资源投入。根据努力-恢复模型, 工作心理脱离是实现工作和生活领域资源平衡的有效途径。这种工作心理脱离能够使得个体资源得以恢复, 促进其生活满意度的提升。前人研究已经证实了工作心理脱离与生活满意度呈显著正相关, 但现有的研究很少深入探讨二者之间的内在作用机制。因此, 本研究从工作心理脱离这一重要方面着手, 考察工作心理脱离对生活满意度的影响以及工作家庭平衡的中介作用和性别的调节作用, 以期提升中小学教师的幸福感水平和促进教育事业的发展提供理论依据和实践指导。本研究采用工作心理脱离量表、生活满意度量表和工作家庭平衡量表对贵州省遵义市 1250 名中小学教师进行调查, 运用 SPSS24.0 和 Mplus7.4 对数据进行统计分析。研究结果发现: (1) 工作心理脱离对生活满意

度起正向预测作用；（2）工作家庭平衡在工作心理脱离与生活满意度之间起到完全中介作用；（3）性别调节工作心理脱离与工作家庭平衡之间的关系，具体而言，相比于女教师，男教师的工作心理脱离通过工作家庭平衡的中介作用而带来的生活满意度的提升效应更强($\beta_{\text{女性}}=0.40, P<0.001, \beta_{\text{男性}}=0.60, P<0.001$)。结论：工作心理脱离作为中小学教师的一种重要恢复资源，它对生活满意度的积极影响是一个有调节的中介过程。

关键词 中小学教师，工作心理脱离，生活满意度，工作家庭平衡

Psychology Detachment and life Satisfaction:

A Moderated Mediation Model

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Abstract: In recent years, with the reform and development of education, primary and secondary school teachers work overload, lead to the individual resource excessive consumption in the field of work, and neglect of resources in the field of life. According to efforts - recovery model, psychology detachment is to realize the effective way of working and living area resource balance. This kind of psychology detachment allows individual resource was restored, promote the life satisfaction of ascension. Psychology detachment from previous studies have confirmed that the work and life satisfaction have significant positive correlation, but the existing research rarely delve into the internal mechanism between them. Therefore, this research from psychology from the important aspects, makes a research on the psychology detachment work from the influence of life satisfaction and work family balance of intermediary role and the adjustment of gender role, in order to improve the well-being of primary and secondary school teachers and promote the development of education undertakings provide theoretical basis and practical guidance. This research adopts the psychology detachment scale, life satisfaction scale and work family balance scale to investigate 1250 primary and secondary school teachers in Zunyi, Guizhou, using SPSS24.0 and Mplus7.4 data for statistical analysis. The results showed that: (1)psychology detachment work from the plays a role of positively predicted life satisfaction.(2) the work family balance between psychology detachment and life satisfaction have complete mediation effect;(3) gender balancing work psychology from work and family, the relationship between the specifically, compared to women teachers, male teachers of psychology detachment through the role of the mediation work family balance the effect of life satisfaction of ascension is stronger ($\beta_{\text{women}} = 0.40, P < 0.001, \beta_{\text{males}} = 0.60, P < 0.001$).Conclusion: psychology detachment as a kind of important resources recovery of primary and secondary school teachers, it is the positive influence to the life satisfaction on a mediation process.

Keywords: Primary and secondary school teachers, psychology detachment, life satisfaction, work family balance

学校氛围影响青少年抑郁：有调节的中介模型

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摘要 学校氛围与青少年心理健康发展息息相关，本研究采用纵向研究设计，T1 使用学校氛围问卷、生命意义感量表，T2 使用自我控制能力问卷，T3 使用抑郁量表，对 630 名青少年进行问卷测量，旨在考察自我控制的中介作用和生命意义的调节作用。结果显示：（1）在控制了性别、年龄后，学校氛围、生命意义感、自我控制、抑郁两两显著相关，抑郁与学校氛围、生命意义感、自我控制呈显著负相关；（2）自我控制在学校氛围和抑郁的关系之间起显著中介作用，消极的学校氛围能通过较低的青少年自我控制预测更高的抑郁程度；（3）生命意义感在学校氛围和自我控制之间起调节作用，生命意义感水平较低的青少年，学校氛围对自我控制具有更强的负向预测作用（ $\text{simple slope} = -0.08, t = -8.81, p < 0.001$ ）；而生命意义感较高的青少年，学校氛围虽然也会对自己控制产生负向预测作用，但其预测作用较小（ $\text{simple slope} = -0.38, t = -6.25, p < 0.001$ ）。结论：积极的学校氛围能够有效防止青少年抑郁，也能通过提升青少年的自我控制减少抑郁的情况，而生命意义感能够调节学校氛围和自我控制之间的关系，说明生命意义感可以作为保护性因子，在青少年面

对消极的学校氛围时,可以通过生命教育提升青少年生命意义感,避免自我控制能力的下降,减少抑郁的发生。

关键词 青少年,学校氛围,生命意义感,自我控制,抑郁

School Climate and Depression Among Adolescents: A Moderated Mediation Model

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Abstract: School climate is closely related to the mental health development of adolescents. In this study, 630 adolescents were measured using the School Climate Questionnaire, the Sense of Meaning in Life Scale at T1, using the Self-Control Scale at T2 and the Depression Scale at T3, to find out the moderate effect of self-control and the mediate effect of the meaning of life. Results : (1) After controlling for gender and age, school climate, sense of meaning of life, self-control and depression were significantly correlated. Depression was negatively correlated with school atmosphere, sense of meaning of life and self-control. (2) Self-control played a significant mediating role in the relationship between school climate and depression. Negative school climate predicted higher levels of depression through lower adolescents' self-control. (3) the meaning of life played a moderating role in the relationship between school climate and self-control, and the school climate had a significant negative predictive effect on self-control in the teenagers with low sense of meaning of life (simple slope = -0.08, $t = -8.81$, $p < 0.001$); For adolescents with high sense of life meaning, school climate also had a negative predictive effect on self-control, but its predictive effect was small (simple slope = -0.38, $t = -6.25$, $p < 0.001$). Conclusion: Positive school atmosphere can effectively prevent adolescent depression, also can reduce depression through ascending teenagers self-control, and sense of life meaning can adjust the school atmosphere and self control, the relationship between the meaning of life can be used as a protective factor, when teenagers face negative school climate, we can protect self-control by the life education, to avoid the decline of self-control and reduce the occurrence of depression.

Keywords: Adolescent, School Climate, Life Meaning, Self-Control, Depression

兴趣特长潜能对初中生身心发展水平的影响：基于潜在剖面分析

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摘 要 青少年时期是个体身心发展的关键期,青少年身心发展存在着一般性的发展规律,也存在着个体差异。个体的主观能动性是身心发展的内在动力,而主观能动性可以通过个体的活动表现出来,在青少年中,主要表现为兴趣特长等。但是,目前尚未有研究探讨青少年的兴趣特长潜能与身心发展水平之间的关系。本研究拟采用潜在剖面分析法,探究初中生身心发展水平的异质性特征,并考察兴趣特长潜能与身心发展水平之间的关系。本研究使用了2018年广州市中小学教育质量阳光评价项目的6654名初三学生的身心发展水平测验(包含身体健康、心理健康、自我管理3个维度)和兴趣特长潜能测验(包含审美修养、爱好特长、实践能力、创新意识4个维度)的数据,采用潜在剖面分析法探究初三学生身心发展水平的异质性。结果发现:(1)根据身心发展水平,初三学生可以分为3个类别:发展水平优异组(占39.48%);发展水平一般组(占47.52%);发展水平欠佳组(占13.00%)。(2)除在身体健康维度发展水平优异组与发展水平一般组表现相似外,其他各维度发展水平优异组得分高于发展水平一般组,高于发展水平欠佳组。(3)在发展水平优异组中,心理健康得分最高;在发展水平优异组和发展水平一般组中,身体健康得分最高。后续采用多元logistic回归考察兴趣特长潜能对身心发展水平的影响。结果发现:与发展水平优异组相比,审美修养、爱好特长、实践能力和创新意识均可以负向预测发展水平一般组和发展水平欠佳组;与发展水平欠佳组相比,审美修养、爱好特长、实践能力和创新意识均可以正向预测发展水平优异组和发展水平一般组。本研究结果启示,教育

工作者们和家长们可以从培养兴趣爱好, 审美素养, 创新能力等着手来提升青少年的身心发展水平。

关键词 初中生, 身心发展, 兴趣特长, 潜在剖面分析

Effects of Interest on Physical and Mental Development of Junior School Students: A Latent Profile Analysis

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Abstract: Adolescence is a critical period for individual physical and mental development. There are general development laws as well as individual differences in the physical and mental development of adolescents. The individual's subjective initiative is the internal driving force of physical and mental development, and the subjective initiative can be expressed through individual activities, in teenagers, it mainly shows interest and specialty. However, there is no research on the relationship between interest and physical and mental development of adolescents. This study intends to use the latent profile analysis to explore the heterogeneous characteristics of the physical and mental development of junior school students, and to investigate the relationship between their interest and physical and mental development.

This study used the data from the physical and mental development level questionnaire (including three dimensions of physical health, mental health, and self-management) and the interest questionnaire (including four dimensions of aesthetic accomplishment, hobbies and specialties, practical ability, innovative consciousness) of 6654 junior school students in the Guangzhou Sunshine Education Quality Monitoring Evaluation Project in 2018, and used latent profile analysis to explore the heterogeneity of the physical and mental development level of junior school students. The results showed that, (1) According to the physical and mental development level, junior three students can be divided into three categories: excellent development level group (accounting for 39.48%); general development level group (accounting for 47.52%); poor development level group (accounting for 13.00%). (2) Except in terms of physical health, the performance of the excellent development level group and the general development level group is similar, the scores of the excellent development level group in other dimensions are higher than the general development level group and higher than the poor development level group. (3) In the excellent development level group, the mental health score is the highest; in the excellent development level group and the general development level group, the physical health score is the highest. Then a multivariate logistic regression model was used to investigate the influence of interest on physical and mental development. The results showed that, compared with the excellent developmental level group, aesthetic accomplishment, hobbies and specialties, practical ability and innovative consciousness can negatively predict the general developmental level and the poor development level group; compared with the poor development level group, four dimensions of interest can positively predict the excellent development level group and the general development level group. The results of this study suggest that educators and parents can improve the level of physical and mental development of teenagers from the cultivation of hobbies, aesthetic qualities, and innovative abilities.

Keywords: junior school students, physical and mental development, interest, latent profile analysis

大学生羞怯与拖延行为的关系：元认知和负性情绪的多重中介作用

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摘 要 拖延行为已经成为影响大学生身心发展和学习生活的一大难题, 会带来一系列负面影响, 如降低个体学业成绩、使人产生情绪问题, 影响人们的心理健康。Chu 和 Choi (2005) 认为存在一种拖延能够给人带

来短期利益,是个体刻意做出拖延的决定,利用时间压力,在任务期限之内完成任务并取得令人满意的结果,并将其称之为主动拖延,将传统意义上的拖延称为被动拖延。拖延行为的产生是由个体的消极评估致使个体感到焦虑,从而产生回避行为。羞怯作为一种人格特质,具有负性认知评估,易于焦虑、抑郁,以及回避退缩的行为方式,羞怯能否显著预测拖延行为值得探讨。本研究采用方便取样的方法从山东省两所大学共抽取834人为被试,以大学生羞怯量表、元认知问卷(MCQ-30)、抑郁-焦虑-压力量表、一般拖延量表和主动拖延问卷进行调查,以探索大学生羞怯对拖延行为的影响机制。结果表明:(1)羞怯和元认知、负性情绪均与被动拖延显著正相关,与主动拖延显著负相关;羞怯和元认知、负性情绪之间呈两两正相关。(2)羞怯可以直接影响被动拖延,也可以通过两条路径的中介作用影响:一是羞怯-元认知-负性情绪-被动拖延;二是羞怯-负性情绪-被动拖延。羞怯可以直接影响主动拖延,也可以通过元认知的中介作用间接影响主动拖延。本研究结果揭示出羞怯者的拖延特点及其独特机制。羞怯大学生拥有更消极元认知和更多的负性情绪,更容易采取拖延行为,因此可以针对性矫正其不合理认知,正确面对和处理负性情绪,增强自身的感知能力与自我控制能力,以克服拖延困扰。

关键词 羞怯,拖延行为,元认知,负性情绪

The Relationship between College Students' Shyness and Procrastination: The Multiple Mediating Effect of Metacognition and Negative Emotions

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Abstract: Procrastination behavior has become a problem that affects the physical and mental health and study life of college students. It brings a series of negative effects, such as reducing individual academic performance, causing emotional problems, and affecting people's mental health. Chu and Choi (2005) believe that there is a delay that can bring short-term benefits to people. It is an individual who deliberately makes a delay decision, using time pressure to meet the deadline complete the task and achieve satisfactory results. Call it proactive procrastination, and procrastination in the traditional sense as passive procrastination. The procrastination behavior is caused by the individual's negative evaluation, which causes the individual to feel anxious, which leads to avoidance behavior. As a personality trait, shyness has negative cognitive assessment, prone to anxiety, depression, and avoidance and withdrawal behaviors. It is worth exploring whether shyness can significantly predict procrastination. In this study, a total of 834 people were selected from two universities in Shandong Province using a convenient sampling method. The College Students' Shyness Scale, the Metacognitive Questionnaire (MCQ-30), the Depression-Anxiety-Stress Scale, the General Procrastination Scale and the Proactive Probability Questionnaire were used as survey tools to investigate the impact of college students' shyness on procrastination. The results show that: (1) Shyness, metacognition, and negative emotions are significantly positively correlated with passive procrastination, and significantly negatively correlated with active procrastination; There is a pairwise positive correlation between shyness and metacognition and negative emotion. Shyness can directly affect passive procrastination, or it can be influenced by two mediating effects: one is shyness-metacognition-negative emotion-passive procrastination; the other is shyness-negative emotion-passive procrastination. Shyness can directly affect procrastination, and it can also affect procrastination through the mediating role of metacognition. The results of this study reveal the procrastination characteristics and unique mechanisms of shy people. Shy people have more negative metacognition and more negative emotions, and are more likely to adopt procrastinating behaviors. Therefore, they can correct their unreasonable cognitions, correctly face and deal with negative emotions, and enhance their own perception and self-control ability to overcome procrastination.

Keywords: Shyness, Procrastination, Metacognition, Negative emotions

小学生网络学习活动的现状：对互动的分析

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摘要 互联网技术和设备的发展与革新给教育信息化提供了支持与便利, 网络学习已经逐渐深入人们的生活。受新冠肺炎的影响, “停课不停课”, 全国的学校都进行了网络授课。与中学生和大学生相比, 小学生的自主学习能力弱, 获取良好的学习效果需要家长、教师、学生三方合作。对小学网络学习活动情况进行调查, 了解小学生网络学习现状, 探究小学生网络学习活动中这三方该如何进行互动, 具有很强的现实意义。本研究采用了自编的小学生网络学习情况问卷(家长版/教师版), 调查小学家长和教师对网络课堂执行情况、效果、互动、建议等方面的看法, 并在调查的基础上采用分段随机抽取的方式对家长、教师、学生分别进行访谈, 每年级 12 人(家长、教师、学生各 4 名), 共 72 人。采用扎根理论的方法, 以活动理论为分析框架, 对访谈资料进行分析。结果发现: (1) 在学习效果方面, 家长和教师普遍认为网络学习效果不佳, 但学生认为网络学习效果很好; (2) 在教学模式上, 三方均普遍认为由学生线下任课教师进行的直播课堂优于其他直播或录播课堂; (3) 与传统教学相比, 网络教学中教师与学生互动主要通过作业、提问、讨论进行, 但是教师与小学生的互动性更差, 互动频率更低; (4) 由于小学生普遍缺乏网络学习经验, 自主学习能力一般, 小学网络学习活动中主要依赖家长对学生监管, 教师对学生的监管性更差, 家长与小学生的互动增多, 对学生的成绩影响更大, 但对家长如何监管与承担何种工作方面, 三方持不同意见; (5) 与传统教学相比, 小学生在进行网络学习期间会通过家长与教师互动, 形成一个由家长中介的学生-教师互动形式, 其次网课期间, 家长与小学生的互动显著多于在校上课期间, 家长-学生互动对学生学习效果影响变大。

关键词 网络学习, 小学生, 互动, 学习效果

The Current Situation of Primary School Students' Network Learning Activities: The Analysis about Interaction

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Abstract: The development and innovation of Internet technology and equipment provide support and convenience for education informatization, and network learning has gradually penetrated into people's lives. As affected by COVID-19, and in response to the call for "no suspension of school attendance", schools across the country have conducted online teaching. Compared with middle school students and college students, the process of primary school students' online learning is not only teachers and students participating in learning activities, but also parents, teachers and students. Therefore, it is necessary to study the network learning activities of primary school students and explore the interaction process. This study adopted the self-made a survey to investigate the opinions of primary school parents and teachers on the implementation, effect, interaction and suggestions of online classroom. On the basis of the survey, parents, teachers and students were interviewed in a piecemeal and random way. There were 12 students (4 parents, 4 teachers and 4 students each year), a total of 72 people. The method of grounded theory and activity theory are adopted to analyze the interview data. The results show that: (1) in terms of learning effect, parents and teachers generally think that online learning effect is not good, but students think that online learning effect is very good; (2) in the teaching mode, the three parties generally think that the live classroom conducted by students and teachers is better than other live or recorded class; (3) compared with traditional teaching, the interaction between teachers and students in online teaching is mainly through homework. However, the interaction between teachers and students is worse, and the interaction frequency is lower; (4) due to the lack of online learning experience of primary

school students and the general ability of autonomous learning, primary school online learning activities mainly rely on parents to supervise students, teachers' supervision of students is weak, the interaction between parents and students becomes more, which has a greater impact on students' performance. The three parties hold different opinions on how parents supervise and undertake what kind of work; (5) compared with traditional teaching, primary school students will form a form of student teacher interaction mediated by parents through the interaction between parents and teachers during online learning. Secondly, the interaction between parents and students during online class is significantly more than that during school. The effect of action on students' learning becomes greater.

Keywords: Network learning, primary school students, interaction, learning effect

短视频过度使用对初中生抑郁的影响：一个有调节的中介模型

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摘要 抑郁是初中生情绪健康的重要测量指标。抑郁不仅会降低大学生的生活满意度，也会对其心理及行为适应产生严重的不良影响。研究表明，短视频过度使用与初中生的上行社会比较有密切的关系，短视频过度使用及其短视频中的内容会使中学生产生更多的上行社会比较，从而更易产生抑郁的可能性。因此，本研究旨在探讨上行社会比较是否在初中生短视频过度使用和抑郁之间起中介作用。此外，由于初中生在核心自我评价的四个方面的人格特质：自尊、一般自我效能感、神经质和控制源方面均存在差异，本研究将进一步探讨核心自我评价是否调节了该中介模型。本研究探讨短视频使用强度对初中生抑郁的影响，以及上行社会比较的中介作用和核心自我评价的调节作用。方法：采用短视频使用强度量表、上行社会比较量表、核心自我评价问卷及流调中心抑郁量表对 336 名初中生进行调查。结果：①短视频使用强度显著正向预测抑郁。②上行社会比较在短视频使用强度影响抑郁中起部分中介作用。③核心自我评价调节了短视频使用强度通过上行社会比较影响抑郁的中介作用前半路径，相对于高核心自我评价的大学生，短视频使用强度更容易在低自我评价的个体进行上行社会比较时发生抑郁。

关键词 短视频使用强度，上行社会比较，核心自我评价，抑郁，初中生

The Effect of Short Video Overuse on Junior High School Students' Depression: A Moderated Mediation Model

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Abstract: Purpose: Depression is an important measure of the emotional health of junior high school students. Depression not only reduces the life satisfaction of college students, but also has serious adverse effects on their psychological and behavioral adaptation. Studies have shown that the excessive use of short videos is closely related to the upward society of junior high school students. The excessive use of short videos and the content in the short videos will make middle school students have more upward social comparisons, which is more likely to produce depression. Therefore, this study aims to explore whether the upward social comparison plays a mediating role between the overuse of short videos and depression in junior high school students. In addition, due to differences in the personality traits of junior high school students in the four aspects of core self-evaluation: self-esteem, general self-efficacy, neuroticism, and source of control, this study will further explore whether core self-evaluation regulates the mediation model. This study explores the influence of short video use intensity on junior high school students' depression, as well as the mediating role of upward social comparison and the moderating role of core self-evaluation. Methods: A survey of 336 junior high school students was conducted using the Short Video Use Intensity Scale, the Uplink Social Comparison Scale, the Core Self-evaluation Questionnaire, and the Flow Regulation Center Depression Scale. Results: ① The intensity of short video use significantly positively predicts depression. ② Upward social comparison plays a partly mediating role in the influence of the intensity of short video use on depression. ③ The

core self-evaluation adjusts the intensity of short video use to influence the first half of the mediating effect of depression through upward social comparison. Compared with college students with high core self-evaluation, short video use intensity is more likely to occur when individuals with low self-core evaluation perform upward social comparison. Depression.

Keywords: Short video usage intensity, upward social comparison, core self-evaluation, depression, junior high school students

重大疫情下学生适应能力对学习投入的影响：学业情绪的中介效应

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摘要 已有的研究表明, 青少年由于缺乏应对新冠肺炎疫情等重大突发公共事件的适应能力, 会更容易对他们的情绪产生影响并对其学业造成巨大挑战, 而以往针对学生适应能力、学业情绪和学习投入的研究, 都是基于传统面对面教学展开的, 不足以解释疫情背景下在线学习中存在的问题。本文探讨重大疫情背景下学生的适应能力、学业情绪与学习投入的关系及其内在作用机制。使用适应力量表、学业情绪量表与学习投入量表对全国 4226 名学生进行实测, 并采用 SPSS 进行描述统计和相关分析, Hayes 的 SPSS 宏程序 PROCESS 组件进行模型检验和 Bootstrap 分析。结果显示: ①适应能力与消极学业情绪呈显著负相关, 与积极学业情绪及学习投入呈显著正相关; ②适应能力可以直接正向影响学习投入, 积极学业情绪和消极学业情绪分别在该过程中起到部分中介作用。结论: 个体适应能力的提高, 能够提升学生积极学业情绪水平, 降低消极学业情绪水平, 从而增加学习投入程度。本研究结果启示教育研究者和各级教学单位应该注重锻炼学生的适应能力, 尤其是对于适应能力较弱的学生, 应给予更多的关怀以及降低他们的消极情绪, 以便更好地适应学习环境变化, 从而让青少年以更加积极的心态适应如新冠肺炎疫情等重大突发事件的影响, 更加坚定地应对学业挑战。

关键词 适应能力, 学习投入, 学业情绪, 中介效应

Effects of Adaptability on Student Engagement under COVID-19: Mediating Roles of Academic Emotion

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Abstract: Studies indicated that students are more likely to have an impact on their emotions and study than other groups, due to a lack of adaptability to adjust major public events like the coronavirus disease 2019 (COVID -19) pandemic. However, the main objectives of the previous studies were to examine associations of students' adaptability, academic emotion, and student engagement based on the traditional face-to-face learning, instead of the online learning. This study examined the relationship between students' adaptability and student engagement under the coronavirus disease 2019 (COVID -19) pandemic, and the mediating role of academic emotion of online learning. By using the adaptability scale, academic emotion scale, and student engagement scale, a sample of 4,426 students from all over China attended in the survey. SPSS was used for descriptive statistics and correlation analysis, and Hayes' SPSS macro program Process component was used for model test and Bootstrap analysis. The results showed that student adaptability (the ability to respond to changes) and student engagement are significantly positively correlated with positive academic emotion and negatively correlated with negative academic emotion. Furthermore, adaptability not only directly predicts student engagement, but also affects student engagement through the mediation

of positive academic emotion and negative academic emotion. This study may provide references for educational researchers and schools in dampening the negative effects of COVID-19 on students' learning by improving their adaptability and developing positive academic emotions.

Keywords: adaptability, student engagement, academic emotion, mediating role

发展性阅读障碍：记忆系统的缺陷还是认知策略的匮乏？

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摘要 发展性阅读障碍（developmental dyslexia, 简称 DD）是一种比较常见的学习障碍，发展性阅读障碍者往往没有明显的神经或器质性损伤，但阅读水平却显著落后于其相应智力水平或生理年龄的儿童。根据之前的研究报告，我国 DD 的发病率约在 5%到 15%这个区间内。但是随着数字时代的到来，电子设备取代了纸质课本，拼音输入法将音素和英文字母与字符联系起来，当儿童输入字母时，他们的拼写不再依赖于再现汉字的视觉图形属性，而这却是中文阅读所必需的一步，种种原因使得阅读障碍的发生率在我国有进一步增长的趋势。发展性阅读障碍会持续影响患者的阅读功能和学习能力，并将进一步损害他们的认知功能和社会性的发展，还会引发自效能感低、厌学、焦虑等一系列的学业倦怠问题。在许多研究中都发现这些儿童在记忆任务上表现得较差，因此国内外学者用记忆的“无效策略”和“功能缺陷”两种假说对这一现象进行了解释，其中前者认为发展性阅读障碍儿童存在认知策略相关功能如执行能力和元认知的缺陷，后者则认为发展性阅读障碍儿童存在记忆系统功能上的缺陷。本文以发展性阅读障碍儿童的记忆缺陷为立足点，对有关“无效策略”和“功能缺陷”两种假说的相关支持文献进行梳理并深入讨论。在综述基础上提出研究展望，未来可以尝试采用纵向与横向结合的研究方式，并结合认知神经科学技术进一步加深对汉语发展性阅读障碍儿童元认知功能、认知策略特点及其他记忆领域（如：内隐序列记忆、前瞻性记忆、回溯性记忆、遗忘等）的研究，明确阅读障碍者的缺陷特征并为后期的干预指导提供帮助。

关键词 发展性阅读障碍，记忆，认知策略，执行功能，元认知

Developmental dyslexia: defects in memory system or deficiencies in cognitive strategies?

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Abstract: Developmental dyslexia is a kind of common learning disability. People with developmental dyslexia often have no obvious neurological or organic impairment, but the reading level is significantly behind of children with corresponding intelligence level or biological age. According to previous research, the incidence of DD in China is in the range of 5% to 15%. With the advent of the digital era, electronic equipment to replace the paper textbooks, bopomofo input method link phonemes and letters and characters. When children enter letters, their spelling no longer depends on reproducing the visual graphical properties of Chinese characters, and this is a necessary step of Chinese reading, the incidence of a variety of reasons make reading disorder in our country has a tendency to grow further. Developmental dyslexia will continue to affect the reading function and learning ability of patients and further damage their cognitive function and social development. What's more, it may cause a series of academic burnout problems such as low sense of self-efficacy, weariness, anxiety and so on. In many studies, these children have been found to perform worse on memory tasks. Therefore scholars both at home and abroad proposed "invalid strategies" and "deficient memory function" two hypotheses to explain this phenomenon, of which the former think children with developmental dyslexia have defects in cognitive strategy-related functions such as executive ability and metacognition, the latter says children with developmental dyslexia have defects in memory system function. Based on the memory deficits of children with developmental dyslexia, this paper reviews and discusses the supporting literature on the two hypotheses of "invalid strategies" and "deficient memory function". Based on the

review, the research prospect is put forward. In the future, a combination of vertical and horizontal research methods can be tried, and combined with cognitive neuroscience techniques to deepen the research on metacognitive function, cognitive strategy characteristics and other memory areas (such as implicit sequence memory, prospective memory, retrospective memory, forgetting, etc.) of Chinese developmental dyslexia children. This will identify the characteristics of dyslexia and provide help for later intervention guidance.

Keywords: developmental dyslexia, memory, cognitive strategies, executive function, metacognition

呈现载体与文本体裁对儿童元理解监测精确性的影响

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摘要 已有研究表明成人进行屏幕阅读时的元理解监测精确性较低, 存在“屏幕劣势”。当代儿童在幼年时期就接触电子产品, 进行较为频繁的屏幕阅读, 这使得他们的阅读习惯和媒介偏好与成人有较大的差异。目前仅有少量研究探讨了呈现载体对儿童元理解监测绝对精确性的影响, 结果发现没有显著差异。现有研究没有考虑文本体裁对儿童的影响。当代儿童较早地在屏幕上阅读绘本故事, 更加熟悉记叙文的文本结构; 而说明文内部连贯性较低, 使其比记叙文更难理解。且当前研究多以绝对精确性来测量儿童的元理解监测精确性, 而相对精确性是元理解的主要测量方式, 其反映的是个体对不同项目进行区分或辨别的能力。因此, 我们假设: 儿童进行屏幕阅读时的元理解监测精确性较低; 针对记叙文, 纸质阅读和屏幕阅读的元理解监测精确性无显著差异; 针对说明文, 屏幕阅读的元理解监测精确性低于纸质阅读。研究采用 2 (呈现载体: 纸质阅读和屏幕阅读) × 2 (文本体裁: 记叙文和说明文) 的完全被试内实验设计, 因变量为元理解监测绝对精确性、相对精确性以及阅读成绩。66 名五年级学生分别在不同的呈现载体上阅读记叙文和说明文, 然后完成元理解任务。结果显示: 在绝对精确性方面, 呈现载体主效应显著, 纸质阅读的绝对精确性显著高于屏幕阅读。呈现载体与文本体裁的交互作用边缘显著: 记叙文条件下, 纸质阅读和屏幕阅读的绝对精确性无显著差异; 说明文条件下, 纸质阅读的绝对精确性高于屏幕阅读。在相对精确性方面, 呈现载体主效应显著, 纸质阅读的相对精确性高于屏幕阅读。在阅读理解成绩方面, 呈现载体主效应显著, 纸质阅读的阅读成绩优于屏幕阅读。文本体裁主效应显著, 记叙文的阅读成绩优于说明文。两者交互作用显著: 记叙文条件下, 纸质阅读和屏幕阅读的阅读成绩无显著差异; 说明文条件下, 纸质阅读的阅读成绩优于屏幕阅读。研究结果表明, 五年级学生存在“屏幕劣势”, 且在屏幕上阅读说明文时的元理解监测精确性和阅读成绩低于纸质阅读。

关键词 元理解监测精确性, 阅读理解, 呈现载体, 文本体裁

The effect of text presentation carrier and text genre on children's metacomprehension monitoring accuracy

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Abstract: Previous researches have shown that adults' metacomprehension monitoring accuracy is low when they are reading on screen, and there is a “screen inferiority”. Contemporary children have been exposed to electronic products at an early age, and they read on the screen more frequently, which makes their reading habits and media preferences quite different from adults. Only a few studies have examined the effect of presentation carrier on the absolute accuracy of metacomprehension monitoring in children and found no significant differences. Existing studies have not involved the effects of text genre on children. Contemporary children read picture books early on the screen and are more familiar with the text structure of narrative. But the internal coherence of the expository text is

low, making it more difficult to understand. And most current studies measure children's metacomprehension monitoring accuracy with absolute accuracy. Relative accuracy is the main measurement of metacomprehension, reflecting the ability of individuals to distinguish or distinguish between different items. Therefore, we hypothesized that: the metacomprehension monitoring accuracy in children's screen reading is low. For narrative text, the metacomprehension monitoring accuracy of paper reading and screen reading has no significant difference. For expository text, the metacomprehension monitoring accuracy of screen reading is lower than that of paper reading.

A complete in-subject design of 2 (presentation carrier: paper reading and screen reading) $\times$ 2 (text genre: narrative and expository) was adopted. The dependent variables were the absolute accuracy, relative accuracy and reading performance. Sixty-six fifth-graders read narratives and expository texts on different presentation carriers and then completed the metacomprehension tasks. The results show that: firstly, the main effect of presentation carrier is significant, and the absolute accuracy of paper reading is significantly higher than screen reading. The interaction between the presentation carrier and the text genre has a marginal significant. There was no significant difference in absolute accuracy between paper reading and screen reading under narrative condition. The absolute accuracy of paper reading is higher than screen reading under expository conditions. Secondly, the main effect of presentation carrier is also significant, and the relative accuracy of paper reading is higher than screen reading. Finally, the main effect of the presentation carrier is significant, and the reading performance of paper reading is better than screen reading. The main effect of text genre is significant, and the reading performance of narrative text is better than expository text. The interaction between the presentation carrier and text genre is significant. There was no significant difference in reading performance between paper reading and screen reading under narrative condition. The reading performance of paper reading is higher than screen reading under expository conditions.

The results show that, fifth-graders have “screen inferiority”, and the metacomprehension monitoring accuracy and reading performance of expository text on screen reading are lower than those of paper reading.

Keywords: metacomprehension monitoring accuracy, reading performance, presentation carriers, text genre

大学生羞怯与心理幸福感及社会幸福感的关系:有调节的中介模型

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摘 要 幸福是人生追求的终极目标之一。近年来, 积极心理学强调提升人的幸福感, 学者们对幸福感的研究也越来越关注。2019 年全球幸福指数报告显示, 中国的幸福指数在 200 多个国家和地区中排名仅第 93 位, 这表明虽然我国物质生活水平得到了极大的提高, 但也由此引发了诸多的社会心理问题。大学生即将步入社会, 处于从以学习为主向以工作和建立社交网络为主的过渡和准备时期, 他们的幸福感状况不仅会影响自身社会适应状况, 更对未来社会的和谐具有举足轻重的意义。此外, 已有研究主要关注个体的主观幸福感, 较少考察个体的社会幸福感状况, 且对影响幸福感的人格因素关注不够。因此, 本研究拟引入羞怯这一人格变量, 考察其对大学生心理幸福感和社会幸福感的影响, 并进一步考察个人成长主动性的中介作用及个人公正世界信念的调节作用, 以期丰富有关幸福感的研究, 并为羞怯大学生幸福感的提高提供理论依据和指导。采用方便取样的方法, 以羞怯量表、心理幸福感量表、社会幸福感量表、个人成长主动性量表和个人公正世界信念量表为研究工具对山东省济南市和青岛市 2 所高校的 701 名大学生进行问卷调查。结果显示: (1) 大学生羞怯处于中等偏下水平, 心理幸福感和社会幸福感处于偏上水平; (2) 羞怯显著负向预测大学生心理幸福感和社会幸福感; (3) 个人成长主动性在羞怯与心理幸福感和社会幸福感之间起中介作用; (4) 在羞怯与心理幸福感的关系中, 个人公正世界信念调节中介模型的全部路径; 在羞怯与社会幸福感的关系中, 个人公正世界信念调节中介模型的前半路径和直接路径。这一结果提示教育者应高度关注羞怯大学生的心理幸福感和社会幸福感状况, 提高他们的个人成长主动性及个人公正世界信念, 以促进其身心健康发展。

关键词 羞怯, 个人成长主动性, 个人公正世界信念, 心理幸福感, 社会幸福感

The Relationship among Shyness, Psychological Well-being, and Social Well-being of College Students: A Moderated Mediation Model

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Abstract: Happiness is one of the ultimate goals pursued in life. In recent years, positive psychology has emphasized the improvement of people's happiness, and scholars have paid more and more attention to happiness research. The 2019 Global Happiness Index report showed that Chinese happiness index ranks only 93 among more than 200 countries and regions. It shows that although Chinese material standard of living has been greatly improved, it has also triggered a lot of social psychology problems. College students are about to enter the society and in the transition and preparation period from learning to work and social networking. Their well-being will not only affect their own social adaptation but also play a decisive role in the harmony of the future society. In addition, previous studies mainly focus on the individual's subjective well-being, and seldom examine the individual's social well-being, moreover pay insufficient attention to personality factors that affect well-being. Therefore, the present study aimed to introduce shyness as a personality variable to examine its impact on college students' psychological well-being and social well-being, and to further examine the mediating role of personal growth initiative and the moderating role of individual justice world belief, in order to enrich the research on happiness and provide theoretical basis and guidance for the improvement of shy college students' happiness. A questionnaire survey was conducted among 701 college students from Jinan and Qingdao in Shandong province using The Shyness Scale, Psychological Well-being Scale, Social Well-being Scale, Personal Growth Initiative Scale and Personal Justice World belief Scale. The results showed that: (1) College students' shyness was below the average level, and their psychological well-being and social well-being were above the average level; (2) College students' shyness significantly negatively predicted the psychological well-being and social well-being; (3) Personal growth initiative played the mediating role between shyness and psychological well-being, social well-being; (4) In the relationship between shyness and psychological well-being, individual justice world belief moderated the full paths of the mediation model; In the relationship between shyness and social well-being, individual justice world belief moderated the first half path and the direct path of the mediating model. These findings suggest that educators should pay close attention to the psychological well-being and social well-being of shy college students, improve their personal growth initiative and individual justice world belief, and promote their physical and mental health development.

Keywords: shyness, personal growth initiative, individual justice world belief, psychological well-being, social well-being

大学生羞怯与创业意向的关系： 生涯阻碍知觉和生涯适应力的中介作用

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摘要 就业难成为困扰当今大学生的一大难题，不仅会给大学生个体造成极大的心理压力，也容易导致某些社会问题。十九分組议指出，当今我国发展现代化经济的强有力支撑就是创业。大学生有着灵活的头脑和先进的知识，他们有思想、有魄力，创业不仅可以将个人的潜力发挥出来，实现个人的价值，更可以为社会注入新鲜的动力，促进社会经济的进一步发展。但根据已有研究，大学生有创业意向的并不太多。所谓创业意向是指个体在未来时间里进行创业活动的倾向性。究竟哪些因素困扰大学生的创业意向呢？根据 Bird 提出的创业意向模型，个体的人格对其创业意向有着重要作用。羞怯是一种比较常见的人格特质，具体表现为人际情境下的不舒适和/或抑制，这种不舒适和/或抑制会进一步阻碍个体对人际目标和职业目标的追求。鉴于羞

怯可能阻碍“职业目标的追求”，本研究欲考察羞怯对创业意向的影响，并进一步探究生涯阻碍知觉和生涯适应力在其中的中介机制。研究采用方便抽样的方法，抽取山东省三所大学共计 1617 名学生作为被试，使用大学生羞怯量表、生涯阻碍知觉量表、生涯适应力量表和创业意向问卷进行调查。结果显示：（1）大学生创业意向总体处于中等水平，但在性别和年级上存在显著差异，男生创业意向水平显著高于女生，大一学生创业意向水平高于其他三个年级；（2）羞怯与创业意向、生涯适应力之间显著负相关，与生涯阻碍知觉显著正相关；生涯阻碍知觉与创业意向及生涯适应力之间均呈显著负相关；生涯适应力与创业意向显著正相关；（3）羞怯可以直接影响创业意向，也可以通过三条中介路径影响创业意向，按中介效应值大小分别为：羞怯→生涯阻碍知觉→创业意向；羞怯→生涯阻碍知觉→生涯适应力→创业意向；羞怯→生涯适应力→创业意向。本研究在某种程度上揭示了羞怯对创业意向的影响机制，可为今后的相关研究及创业教育等提供一定的参考与依据。

关键词 羞怯，创业意向，生涯阻碍知觉，生涯适应力

The Relationship between College Students' Shyness and Entrepreneurial Intention: The Mediating Effect of Perception of Career Barriers and Career Adaptability

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Abstract: Difficulty in obtaining employment has become a major problem that plagues college students today. It is not only cause great psychological pressure on individual college students, but also easily lead to certain social problems. The 19th National Congress of the Communist Party of China pointed out that the strong support for the development of modern economy in China today is entrepreneurship. College students have flexible minds and advanced knowledge. They are thoughtful and courageous. Entrepreneurship can not only realize personal potential and realize personal value, but also inject fresh impetus into society and promote the further development of social economy. However, according to existing research, not many college students have entrepreneurial intentions. Entrepreneurial intention refers to the tendency of individuals to carry out entrepreneurial activities in the future. What factors trouble the entrepreneurial intention of college students? According to the entrepreneurial intention model proposed by Bird, individual's personality plays an important role in his entrepreneurial intention. Shyness is a relatively common personality trait, which is manifested as discomfort and/or inhibition in interpersonal situations. This discomfort and/or inhibition could further hinder the individual's pursuit of interpersonal and professional goals. In view of the fact that shyness may hinder the pursuit of "career goals", this study intended to investigate the influence of shyness on entrepreneurial intentions, and further explore the mediating roles of the perception of career barriers and career adaptability. This study adopted conveniently sampling, and selected a total of 1,617 participants from three universities in Shandong Province, and used the College Student Shyness Scale, Career Barriers Perception Scale, Career Adaptability Scale, and Entrepreneurship Intention Questionnaire to investigate. The results showed: (1) Entrepreneurial intention of college students was generally at a medium level, but there are significant differences in gender and grade. The level of entrepreneurial intention of boys is significantly higher than that of girls, and the level of entrepreneurial intention of freshman students is higher than that of the other three grades; (2) Shyness was significantly negatively correlated with entrepreneurial intention and career adaptability, and was significantly positively correlated with career hindrance perception. The perception of career barriers was significantly negatively correlated with entrepreneurial intention and career adaptability. Career adaptability and entrepreneurial intention were significantly positive correlation; (3) Shyness can directly affect entrepreneurial intention, and also indirectly affect entrepreneurial intention through three mediated paths. According to the size of the mediated effect, they are: shyness → perception of career barriers→ entrepreneurial intention; Shyness→ perception of career barriers→ career adaptability→ entrepreneurial intention; Shyness→ career adaptability→

entrepreneurial intention. To some extent, this study reveals the mechanism of shyness on entrepreneurial intention, which can provide a certain reference and basis for future related research and entrepreneurial education.

Keywords: shyness, entrepreneurial intention, perception of career barriers, career adaptability

视觉空间工作记忆研究综述

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摘 要 工作记忆(Working memory, WM)是一种对信息进行暂时性加工和存储的能量有限的记忆系统, 自从工作记忆模型被提出以后, 研究者围绕着它的子成分进行了大量的研究, 如今大多数概念化的定义是工作记忆存在言语工作记忆和视觉空间工作记忆两种形态。其中视觉空间工作记忆还存在着分离现象, 即人类的视觉空间工作记忆存在着不同的子系统或者子成分: 分别为不同维度特征的视觉信息组合而成的客体工作记忆和对空间信息暂时保存的空间工作记忆。使用双任务范式心理学家的研究结果支持了空间和客体工作记忆的分离。早期关于工作记忆的研究主要集中于言语工作记忆, 而近年来随着神经影像学的发展, 视觉空间工作记忆领域被逐渐深入。本文主要就视觉空间工作记忆进行概述, 基于视觉空间记忆的经典研究范式, 梳理视觉空间工作记忆的生理机制, 探讨性别, 情绪, 病理因素如孤独症谱系障碍, 注意缺陷多动障碍及阅读障碍对其的影响。但是已有的很多研究结果仍存在争议, 尚无确切定论, 同时缺乏现代科学技术记忆研究范式的迭代且研究方向有待进一步拓展。目前的研究采用的方法大多综合了各种途径的训练, 缺少单一途径训练之间或单一途径与多途径训练之间的效果比对, 因此难以判断哪种途径的工作记忆训练对于干预不同病症下的认知功能更为有效。未来的研究可对多形态工作记忆训练的机制、训练强度及效果进行展开探讨, 为临床干预提供有力证据, 以及在“五育”并举的教育体系背景下为更好促进学生体育和劳育发展提供有效指导。

关键词 视觉空间工作记忆 研究范式 生理机制 影响因素

Abstract: Working memory (WM) is a memory system with limited energy for temporary processing and storage of information. Since the working memory model was proposed, researchers have done a lot of research around its sub-components. Nowadays, the definition of most conceptualization is that there are two forms of working memory: verbal working memory and visual spatial working memory. There are different subsystems or sub-components in human visual spatial working memory: the object working memory which is composed of visual information with different dimensional characteristics and the spatial working memory which is temporarily preserved. The research results of psychologists using dual-task paradigm support this point. The early research on working memory mainly focused on verbal working memory, but in recent years, with the development of neuroimaging, the field of visual spatial working memory has been gradually deepened. This paper mainly summarizes visual spatial working memory, based on the classical research paradigm of visual spatial working memory, combs the physiological mechanism of visual spatial working memory, and discusses the effects of gender, emotion and pathological factors such as Autism Spectrum Disorder, Attention Deficit Hyperactivity Disorder and Dyslexia on it. However, many research results are still controversial and inconclusive, lack of iteration of modern scientific and technological memory research paradigm, and the research direction needs to be expanded. Most of the working memory training used in the current research integrates various ways of training, and there is a lack of comparison between single-way training or single-way training and multi-way training. Therefore, it is difficult to judge which way of working memory training is more effective in interfering with cognitive function under different diseases. The future research progress can explore and compare the mechanism, training intensity and effect of polymorphous working memory training, and provide strong evidence for clinical intervention. Under the background of the education system of "five educations", it can also provide effective guidance for promoting the development of students' physical education and labor education.

Keywords: Visual spatial working memory; Research paradigm; Physiological mechanism; Influencing factors

附加维度的相关性和数量对直接的与间接的非监控类别学习的影响

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摘 要 真实世界中的每一物体都存在着大量维度, 早期使用的实验材料维度数量较少, 大多在家族相似性结构下进行, 而类别结构会受到附加维度数量和相关性的影响。以往大多数关于类别学习的研究都是在监控模式下进行的, 这种模式不符合真实学习情境, 直接的与间接的非监控学习更广泛地存在于真实的学习情境中, 且二者可能存在不同的认知加工过程, 表现为不同的分类策略和类别表征。因此, 本研究采用 2(附加维度的相关性: 相关、无关)×3(附加维度数量: 4、8、12)被试间设计, 探讨附加维度的相关性和数量对直接的与间接的非监控类别学习的影响, 比较直接的与间接的非监控类别学习在学习效果和类别表征上的差异。研究结果显示: (1) 附加维度与类别归属相关的类别的学习效果要好于附加维度与类别归属无关的类别。学习者在附加维度与类别归属相关的类别中能够形成相似性表征, 在附加维度与类别归属无关的类别中不会形成相似性表征。(2) 随附加维度数量增加, 倾向规则表征的人数更少, 直接的非监控类别学习部分学习者由规则表征转向相似性表征, 间接的非监控类别学习相似性表征学习者人数无显著变化, 表明附加维度数量损害规则表征的学习, 不影响相似性表征的学习。(3) 直接的非监控类别学习的学习效果要好于间接的非监控类别学习。直接的非监控类别学习学习者倾向规则表征; 间接的非监控类别学习学习者既倾向规则表征, 也倾向相似性表征, 无明显分类策略倾向。本研究更加深入地了解真实情境下人类类别学习的认知过程, 丰富类别学习理论模型。

关键词 类别学习, 附加维度, 表征

Correlation and Number of Additional Dimensions Impact on Direct and Incidental Unsupervised Category learning

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Abstract: Each object in the real world has a large number of dimensions, and the early experimental materials had a few dimensions, mostly under the family similarity structure, while the category structure is affected by the number and relevance of additional dimensions. Most of the previous studies on category learning were carried out under the supervised mode, which did not conform to the real learning environment. Direct and incidental unsupervised learning is more widely existing in the real learning situation, and the two may have different cognitive processes, which are manifested by different classification strategies and category representations. Therefore, the present study adopt 2 (relevance of additional dimensions: relevant, irrelevant) × 3 (number of additional dimensions: 4, 8, 12) between-subjects design to explore the effects of the relevance and number of additional dimensions on direct versus incidental unsupervised mode and to compare the differences in learning effects and category representations between direct and incidental unsupervised category learning. The results show that: (1) The learning effect of the category with additional dimension related to category attribution is better than that of the category with additional dimension unrelated to category attribution. Learners can form similarity-based representations in categories with additional dimensions related to category attribution, but not in categories with additional dimensions unrelated to category attribution. (2) With the increase of the number of additional dimensions, fewer learners tend to rule-based representation, and some learners on direct unsupervised category learning turn from rule-based representation to similarity-based representation, while the number of similarity-based representation learners on incidental unsupervised category learning has no significant change. It indicates that the number of additional dimensions damages the learning of rule-based representation and does not affect the learning of similarity-based representation. (3) The learning effect of direct unsupervised category learning is better than that of incidental unsupervised category

learning. Direct unsupervised category learning learners tend to rule-based representation; incidental unsupervised category learning learners tend to both rule-based representation and similarity-based representation, without obvious classification tendency. This study provides a deeper understanding of the cognitive process of human category learning in real situations and enriches the theoretical model of category learning.

Keywords: category learning, additional dimensions, representation

正念对青少年心理幸福感的影响： 情绪调节的中介作用及班级角色差异

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摘要 现代教育者认为提高青少年的心理幸福感水平，减少青少年情绪障碍对学习和生活造成的不良影响，让青少年更加健康有活力，更好的获得自我实现是现代教育应关注的焦点问题。研究目的：探究正念水平、青少年心理幸福感、情绪调节三者之间关系及心理作用机制。方法：采用儿童青少年正念量表（CAMS）、情绪调节量表、心理幸福感量表对山西某几个高中随机选择的1325名普通班学生进行问卷调查研究。结果表明：（1）正念水平能够显著正向预测青少年的心理幸福感；（2）正念水平通过情绪调节的中介作用预测心理幸福感；（3）班级角色调节该中介模型的前半路径和直接路径。具体来说，相对于未担任班级干部的同学，担任班干部的同学的正念水平对情绪调节和心理幸福感的预测作用均更大。本研究结果能够为后续的心理幸福感的相关研究提供有价值的理论基础，以及对高校的心理健康教育发展提供一定的理论依据。

关键词 正念，心理幸福感，情绪调节，班级角色，青少年

Effect of Mindfulness on Teenagers' Psychological well-being: Mediating Effect of Emotion Regulation and Class role Difference

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Abstract: Modern educators believe that improving the level of psychological well-being of teenagers, reducing the negative impact of emotional disorders on learning and life, and making adolescents more healthy and energetic, better self-realization is the focus of modern education. Objective: to explore the relationship among mindfulness level, adolescent psychological well-being, emotion regulation and the mechanism of psychological action. Methods: A total of 1325 ordinary students randomly selected from several high schools in Shanxi Province were investigated with CAMS, Mood Regulation Scale and Psychological well-being Scale. The results were as follows: (1) the level of mindfulness significantly predicted the psychological well-being of adolescents; (2) the level of mindfulness predicted the psychological well-being through the mediation of emotion regulation; (3) the class role regulates the first half path and the direct path of the mediation model. Specifically, compared with the students who did not serve as class leaders, the students who served as class leaders' level of mindfulness had a greater predictive effect on emotional regulation and psychological well-being. The results of this study can provide a valuable theoretical basis for the follow-up research on psychological well-being and the development of mental health education in colleges and universities.

Keyword: mindfulness, emotional regulation, psychological well-being, teenagers

少数民族青少年心理健康的变迁(1978~2020): 一项横断历史研究

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摘要 目前, 有关青少年心理健康的研究多以汉族为主, 而我国作为一个多民族国家, 少数民族青少年的心理健康状况同样重要。那么, 这么多年以来少数民族青少年的心理状况发生了怎样的变化呢? 为探究我国少数民族青少年心理健康的变化趋势, 采用“横断历史研究”方法对 1978~2020 年发表的 53 篇采用 90 项症状自评量表 (SCL-90) 的研究文献进行分析。结果显示: (1) 年份显著正向预测 SCL-90 中 5 个因子 (躯体化、强迫症状、抑郁、敌对、偏执) 得分, 且年份可解释 1978~2020 年以来少数民族青少年 9 个因子 1.44%~13.4% 的变化, 除了躯体化和精神病性外其余 7 个因子增加 0.09~0.27 分, 说明少数民族青少年心理健康水平整体呈下降趋势; (2) 东部地区的少数民族青少年心理健康水平比西部地区下降趋势更大; (3) 男生在躯体化、人际敏感、抑郁、焦虑、恐怖、偏执、精神病性这 7 个因子得分有所下降, 而女生在强迫症状、抑郁、焦虑、敌对、恐怖这 5 个因子得分有所上升, 显然, 男生的心理健康水平呈上升趋势, 而女生的心理健康水平逐渐恶化, 整体来说, 男生的心理健康水平优于女生; (4) 少数民族青少年 SCL-90 得分与社会威胁、教育状况、经济状况等方面的 4 项社会指标呈显著相关, 25 年来中国社会的变迁进程解释了少数民族青少年心理健康水平的下降, 且少数民族青少年心理健康水平的下降也能预测教育经费和居民消费水平和粗离婚率。最后针对结论从社会、学校、家庭、个人层面提出建议。

关键词 少数民族青少年, 心理健康, SCL-90, 横断历史研究

Changes in the Mental Health of Ethnic Minority Adolescents(1978~2020): A Cross-sectional Historical Study

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Abstract: At present, the research on the mental health of adolescents is mostly Han nationality. As a multi-ethnic country, the mental health of minority adolescents is equally important. So, what changes have taken place in the psychological conditions of ethnic minority youths over the years? In order to explore the changing trend of the mental health of ethnic minority adolescents in my country, the method of "cross-sectional historical research" was used to analyze 53 research documents published from 1978 to 2020 that used the 90-item self-rating symptom scale (SCL-90). The results showed that: (1) The year significantly positively predicted the scores of 5 factors (somatization, obsessive-compulsive symptoms, depression, hostility, and paranoia) in SCL-90, and the year can explain the 9 factors of minority adolescents from 1978 to 2020 A change of 1.44%~13.4%. Except for somatization and psychosis, the other 7 factors increased by 0.09~0.27 points, indicating that the mental health of ethnic minority adolescents is on an overall downward trend; (2) The mental health of ethnic minority adolescents in the eastern region is lower than that in the western region The trend is even greater; (3) Boys have decreased scores on the 7 factors of somatization, interpersonal sensitivity, depression, anxiety, horror, paranoia, and psychosis, while girls have scores on the 4 factors of somatization, interpersonal sensitivity, paranoia, and psychosis. It has declined. Obviously, the mental health of boys is on the rise, while the mental health of girls is gradually deteriorating. On the whole, the mental health of boys is better than that of girls; (4) SCL-90 scores of ethnic minority teenagers and social threats The four social indicators in terms of education, education, and economic conditions are significantly correlated. The process of social changes in China over the past 25 years has explained the decline in the mental health of ethnic minority adolescents, and the decline in the mental health of ethnic minority adolescents can also predict education funding and Resident consumption level and crude divorce rate. In the end, suggestions are made from the social, school, family, and individual levels to the conclusion.

Keywords: Adolescents, Mental health, SCL-90, Cross-sectional historical research

教师支持、失败恐惧与学生生活满意度的关系：基于 PISA2015 与 PISA2018 的中介作用分析

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摘要 教师支持, 是教师倾听、鼓励和尊重学生程度的重要表现, 认知支持、能力支持、情感支持是教师支持的三个维度, 其中, 认知支持和情感支持是经济合作与发展组织 (OECD) 对教育的重点考察内容。在中国对中学生心理健康愈加重视的大背景下, 本研究依据 OECD 公开的 PISA2015 和 PISA2018 大型教育数据集, 分析探索中国四省市教师支持对中学生生活满意度的影响机制, 基于结构方程模型 (SEM) 分析失败恐惧 (在 PISA2015 中表述为失败考试焦虑) 在两者间的中介模型, 纵向对比该作用机制随着时间的变化, 以及探究该结论在跨文化环境中的有效性。结果发现, 结果发现, (1) 在 PISA2015 的学生群体中 ($N = 9841$), 中介模型拟合良好 ($\chi^2 = 227.194$, $df = 23$, $CFI = 0.991$, $TLI = 0.985$, $RMSEA = 0.030$, $SRMR = 0.023$), 考试焦虑仅在教师认知支持与学生生活满意度之间有显著中介作用, 效应量为 4.32%; (2) 在 PISA2018 的学生群体中 ($N = 12058$), 中介模型进一步得到了验证 ($\chi^2 = 2436.955$, $df = 23$, $CFI = 0.991$, $TLI = 0.986$, $RMSEA = 0.039$, $SRMR = 0.019$)。相比较 PISA2015 的分析结果, 该模型在 2018 年数据中的适用性更好, 失败恐惧在教师情感支持、认知支持两个因子与学生生活满意度之间的中介作用均显著, 效应量分别为 6.83% 和 3.42%。(3) 除纵向研究之外, 该中介模型在跨文化环境也得到了验证 (以同期美国学生测评数据进行同样的分析), 即教师支持对学生的生活满意度有显著正向预测作用, 可以通过降低学生的失败恐惧来实现这一提升。无论是教师提供给学生的学习建议、指导、评价等认知支持, 还是积极关注、鼓励、关爱等情感支持, 都可以降低学生的失败恐惧, 然后提升学生的生活满意度。基于上述结果, 建议一线教学岗位的老师可以给学生提供更多的支持和帮助, 这种支持会让学生以更积极的态度面对生活和学习中的失败, 进而对生活更加满意, 有更加健康的心理状态。同时, 学校可以设置教育环节让学生有面对失败的正确态度, 这也会增加学生的生活满意度, 更加积极地面对生活。

关键词 PISA 测试, 教师支持, 失败恐惧, 生活满意度

How Teacher Support Influences Students' Life Satisfaction: the Mediating Analysis Based on PISA2015 and PISA2018

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Abstract: Teacher support is an important manifestation of teachers' listening, encouraging and respecting students. Cognitive support, ability support and emotional support are the three dimensions of teacher support. Among them, cognitive support and emotional support are the key investigation contents of education by the Organization for Economic Cooperation and Development (OECD). Under the background that China pays more attention to the mental health of middle school students, this study analyzes and explores the impact mechanism of teacher support on middle school students' life satisfaction in four provinces of China, and analyzes the mediating model of fear of failure (expressed as test anxiety in PISA2015) based on structural equation model (SEM), and explore the effectiveness of the conclusion in the cross-cultural environment and different time. The result of the SEM indicated that (1) the mediating model fits well with PISA2015 data ($\chi^2 = 227.194$, $df = 23$, $CFI = 0.991$, $TLI = 0.985$, $RMSEA = 0.030$, $SRMR = 0.023$), nevertheless, test anxiety only played a mediating effect between teachers' cognitive support and students' life satisfaction (effect size = 4.32%); (2) the mediating model is further validated with PISA2018 data ($\chi^2 = 2436.955$, $df = 23$, $CFI = 0.991$, $TLI = 0.986$, $RMSEA = 0.039$, $SRMR = 0.019$). Compared with the analysis results of PISA2015, the applicability of the model in 2018 is better. Fear of failure played the mediating effects between teachers' emotional support and students' life satisfaction (effect size = 6.83%), and

teachers' cognitive support and students' life satisfaction (effect size = 4.32%); (3) in addition to longitudinal studies, the hypothesis has also been tested in cross-cultural context with analyzing American student assessment data for the same period. In other words, teacher support shows a significant positive predictive effect on students' life satisfaction, which can be achieved by reducing students' fear of failure (or test anxiety). Whether teachers provide students with cognitive support such as learning suggestions, guidance and evaluation, or emotional support such as active attention, encouragement, and care, they can reduce students' fear of failure and improve students' life satisfaction. Based on the above results, it is suggested that teachers in front-line teaching work can provide more support and help to students. This support will enable students to face failures in life and learning with a more positive attitude, to be more satisfied with life and have a healthier psychological state. At the same time, schools can set up educational links to let students have a correct attitude towards failure, which will also increase students' life satisfaction and face life more actively.

Keywords: PISA test, teacher support, fear of failure, life satisfaction

音乐情感认知对青少年情绪调节的影响：行为及 ERP 研究

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摘要 音乐情感认知是对音乐信息的收集与感知并在大脑中综合作用的结果, 是将音乐信息获取、加工、转化、存储的过程。音乐情感认知是音乐教育的本质性特征, 旨在培养学生的感受力, 正确调控情绪。为证明音乐情感认知是否对青少年的情绪调节产生促进作用, 本研究选取了 30 名未接受过任何音乐学习的青少年进行了两个实验, 借助脑成像技术 ERP, 同时记录被试的行为数据, 实验一, 选用听觉属性相对简单的民族乐器琵琶的文曲武曲各十首音乐片段, 音乐家以两种不同的呈现方式 (有感情、无感情) 演奏, 提取音乐高潮部分 30s, 30 名青少年对音乐情感的唤醒度和效价评分。实验二, 高低情感认知能力个体的情绪调节差异。为揭示音乐情感认知的整个情感变化过程, 实验记录听音乐 (前、中、后) 的脑电活动的情感差异。基于情绪调节策略, 采用 2 (情感认知能力: 高, 低) × 2 (音乐情绪类型: 正性, 中性, 负性) × 2 (实验组, 对照组) 混合设计。研究结果发现, 在行为方面, 音乐呈现方式中有感情演奏情感唤醒显著高于无感情演奏。在脑电方面, FCZ、FZ 在 N1P2 有情感认知差异。相比于中性情绪音乐, 正负性音乐更强的激活颞上回。相比于低音乐情感认知能力的被试, 高情感认知能力容易诱发更多的情感调节策略。本研究假设: (1) 音乐家自身的音乐表现方式的差异会产生被试不同的情感认知体验。(2) 音乐情感认知会促进青少年情绪的自动化评估以及调节。

关键词 音乐; 情感认知; 情绪唤醒; 情绪调节

The Influence of Music Affective Cognition on Adolescent Emotion Regulation: A Behavioral and ERP Study

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Abstract: Music emotion cognition is the result of the collection and perception of music information and the comprehensive effect in the brain. It is a process of acquiring, processing, transforming and storing music information. Music emotion cognition is the essential feature of music education, which aims at cultivating students' sensibility and regulating emotions correctly. To prove whether music emotion cognition on adolescents' emotion regulation, this study selected 30 do not accept any music study teenagers carried out two experiments, using brain imaging technology of ERP, record the behavior of the participants data at the same time, the experimental one, selects the acoustic properties of relatively simple folk instrument Pi-pa represents every ten first music clips, The musicians played in two different ways (emotional and non-emotional), and 30 teenagers rated the emotional arousal and

valence of the music for 30s from the climax of the music. Experiment 2: The differences of emotion regulation among individuals with high and low affective cognitive abilities. In order to reveal the whole emotional change process of music emotional cognition, the experiment recorded the emotional difference of brain electrical activity before, during and after listening to music. Based on the emotion regulation strategy, a mixed design of 2 (emotion cognitive ability: high, low) $\times$ 2 (music emotion type: positive, neutral, negative) $\times$ 2 (experimental group and control group) was adopted. The results showed that emotional arousal was significantly higher in music presentation than in non-emotional performance. In terms of EEG, FCZ and FZ showed differences in emotional cognition in N1P2. Compared with neutral emotional music, positive and negative music activated the superior temporal gyrus more strongly. Compared with the subjects with low musical affective cognitive ability, high affective cognitive ability was more likely to induce more affective regulation strategies. The hypotheses of this study are as follows: (1) The differences of musicians' musical expression styles will lead to different affective cognitive experience of the subjects. (2) Music emotional cognition can promote the automatic assessment and regulation of adolescents' emotions.

Keywords: Music, Affective cognition, Emotional arousal, Emotion regulation

不同公益感大学生公益行为后的道德许可效应

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摘要 公益感是指乐于参与爱护公物、保护环境、节约资源等公众利益活动的情感。道德许可效应是指个体过去做了道德行为, 会允许自己在未来减少做道德行为, 或者出现做不道德行为的现象。以往对于公益感的研究, 往往以公益广告为出发点, 以促进公益行为作为目的, 然而在这一过程中就忽视了道德许可效应的存在。即使公益广告促进了个体之后的公益行为, 但是如果个体因为道德许可在公益行为后放松了对道德自我的监控, 做出了非公益的行为甚至是不道德行为, 从整体而言, 他们的行为并不能算是公益。本研究旨在探讨大学生公益行为中存在的道德许可效应与公益感之间的关系, 为未来大学生公益教育以及公益事业发展的提供依据。实验一采用 2(被试类型: 高公益感、低公益感) $\times$ 2(活动情景: 进行环保活动、不进行环保活动)的两因素组间设计, 以环保活动为例, 探索不同公益感大学生在公益行为后的不同的道德许可效应。实验二将个体动机加入自变量, 采用 2(公益感: 高、低) $\times$ 3(参与环保活动动机: 外部动机、内部动机、不参与)的组间实验设计, 探究不同公益感大学生出于不同动机做出公益行为后的不同的道德许可效应。实验三采用 2(公益感水平: 高、低) $\times$ 2(产品类型: 绿色-中性、非绿色-中性) $\times$ 2(探测点位置: 同位、异位)的三因素混合实验设计, 探究公益行为后, 不同公益感大学生面对不同类型产品时的脑电特点。研究结果表明: (1)公益感水平较低的大学生在公益行为后出现了明显的道德许可效应, 在环保活动后更倾向于做出非绿色消费; 公益感水平较高的大学生无论是否参与了公益行为, 都倾向于做出绿色消费。(2)低公益感大学生, 出于内在动机参与环保活动会促进绿色消费; 高公益感大学生, 无论出于何种动机参与环保活动都会促进绿色消费。(3)低公益感大学生在公益行为后, 非绿色产品诱发了更大的 N1, P3 以及 LPP 成分波; 高公益感大学生在公益行为后, 绿色产品诱发了更大的 P3 以及 LPP 成分波。本研究结果表明公益感对于公益行为后道德许可效应的抑制作用, 并且同时表明了不同公益感大学生在公益行为后对不同产品的注意偏好和情感偏好不同, 其认知加工顺序为注意偏向阶段, 决策选择阶段和情感偏好阶段。

关键词 大学生, 公益感, 道德许可效应

The moral licensing effect after the public welfare behavior of college students with different emotion of public welfare

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Abstract: Emotion of public welfare refers to the feeling of being willing to participate in public interest activities such as protecting public property, protecting environment and saving resources. Moral permission effect refers to the

phenomenon that an individual who has done moral behavior in the past will allow himself to do less moral behavior or immoral behavior in the future. In the past, the research on the emotion of public welfare often starts from the public service advertisement and aims at promoting the public service behavior. However, in this process, the existence of moral permission effect is ignored. Even if public service ads promote the public welfare behavior of individuals, if individuals relax the monitoring of moral self after public welfare behavior because of moral permission, and make non-public welfare behavior or even immoral behavior, their behavior can not be regarded as public welfare. The purpose of this study is to explore the relationship between the moral permission effect and the emotion of public welfare in college students' public welfare behavior, so as to provide the basis for the future development of College Students' public welfare education and public welfare undertakings. In the first study, a two-factor design of 2(subjects' type: high emotion of public welfare, low emotion of public welfare) $\times$ 2(activity scenario: environmental protection activities, no environmental protection activities) was used to explore the different moral licensing effects of college students with different emotion of public welfare after public welfare behavior. In the second study, individual motivation was added into the independent variable, and an inter-group experiment design of 2(emotion of charity: high, low) $\times$ 3(motivation to participate in environmental protection activities: external motivation, internal motivation, and no participation) was adopted to explore the different moral permission effects of students with different emotion of charity acting out of different motivations for public welfare. In the third study, a three-factor mixed experimental design of 2(high and low level of emotion of charity) $\times$ 2(product type: green-neutral, non-green-neutral) $\times$ 2(location of detection points: isostatic and ectopic) was adopted to explore the EEG characteristics of college students with different emotion of charity when faced with different types of products after public welfare behavior. The results show that : (1) College students with a low emotion of public welfare have a significant moral license effect after public welfare behavior, and are more inclined to make non-green consumption after environmental protection activities; Students with a higher emotion of public welfare tend to make green consumption regardless of whether they participate in public welfare activities. (2) College students with a low emotion of public welfare have intrinsic motivation to participate in environmental protection activities, which will promote green consumption; Students with a high emotion of public welfare will promote green consumption regardless of their motivation to participate in environmental protection activities. (3) Non-green products induced greater N1, P3 and LPP component waves after the public welfare behavior of students with low emotion of public welfare; The green products induced greater P3 and LPP component waves in the students with high emotion of public welfare. The results of this study show that the emotion of public welfare can inhibit the moral permission effect after public welfare behavior. At the same time, it shows that the attention preference and emotional preference of college students with different emotion of public welfare to different products are different after public welfare behavior. The cognitive processing order is attention bias stage, decision-making stage and emotional preference stage.

Keywords: College students; emotion of public welfare; moral licensing effect

母亲教养压力与儿童抑制控制的关系：身体攻击教养行为的中介效应

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摘 要 学前阶段是儿童抑制控制发展的关键阶段。母亲的教养压力与幼儿抑制控制能力呈负相关。根据溢出假说理论, 如果母亲的教养压力得不到有效的缓解, 会将由压力引发的负面情绪转移到其教养行为中。身体攻击教养行为是中国文化背景下发生率较高的一种父母严厉管教行为。因此, 本研究拟通过建构中介模型, 探究母亲教养压力、身体攻击教养行为及儿童抑制控制的关系。

采用延迟满足任务考察 200 名儿童 ($M_{age}=4.63$ 岁, $SD=0.30$; 108 名男孩, 92 名女孩) 的抑制控制水平。儿童的母亲 ($M_{age}=36.43$ 岁, $SD=3.63$) 完成教养压力(Crnic & Booth, 1991)和身体攻击教养行为(Robinson 等, 2001) 问卷。采用 SPSS 23 Process 对母亲教养压力、身体攻击教养行为和儿童抑制控制之间进行分析处理。

结果显示：（1）母亲教养压力与儿童抑制控制呈显著负相关；（2）母亲教养压力与身体攻击教养行为呈显著正相关；（3）日常育儿压力通过身体攻击教养行为负向预测儿童抑制控制，身体攻击教养行为在预测中起完全中介作用， $R^2=0.01, F(1,198)=11.81, p<0.001, 95\%CI[-0.029,-0.004]$ ；育儿困难压力通过身体攻击教养行为负向预测儿童抑制控制，身体攻击教养行为在预测中起完全中介作用， $R^2=0.13, F(1,198)=29.74, p<0.001, 95\%CI[-0.025,-0.002]$ 。本研究的结果为缓解母亲教养压力，减少身体攻击教养行为，促进儿童抑制控制发展提供针对性的科学依据。今后应更加关注母亲教养压力对儿童抑制控制发展的影响，通过各种方式缓解母亲的教养压力和提高教养的幸福感，为儿童创造良好的家庭环境。

关键词 教养压力，身体攻击教养行为，抑制控制，学前儿童

Maternal Parenting Style in Relation to Parenting Stress and Preschoolers' Inhibitory Control

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Abstract: The preschool phase is the key stage of the development of inhibitory control. Maternal parenting pressure is negatively correlated with children's inhibitory control. According to the theory of spillover hypothesis, if the mother's parenting stress is not alleviated effectively, the negative emotion caused by the stress can be transferred to parenting behavior. Physical aggressive parenting is a kind of parental harsh discipline with a high incidence in Chinese culture. Therefore, this study aimed to explore the association between maternal parenting pressure, physical aggressive parenting, and children's inhibitory control.

A total of 200 urban mothers ($M_{age}=36.4, SD=3.63$) with preschoolers ($M_{age}=4.63, D=0.30$, 92girls and 108 boys) filled out questionnaires on their parenting stress and physical aggressive parenting. Delay of gratification task was used to test children's inhibitory control. SPSS 23 process was used to analyze the associations between maternal parenting stress, physical aggression and child inhibitory control.

The results showed that: (1) maternal parenting stress was negatively correlated with child inhibitory control. (2) Maternal parenting stress was positively correlated with physical aggression. (3) Physical aggressive parenting played a mediating role in the association between daily parenting stress and child inhibitory control, $R^2=0.01, F(1,198)=11.81, p<0.001, 95\%CI[-0.029,-0.004]$. and physical aggressive parenting also plays a mediating role in the association between parenting difficulty stress and child inhibitory control, $R^2=0.13, F(1,198)=29.74, p<0.001, 95\%CI[-0.025,-0.002]$. The results of this study provided a scientific basis for promoting the development of child inhibitory control through reducing maternal parenting stress and physical aggression. In the future, more attention should be paid to various ways to relieve the mother's parenting stress, improve the parenting happiness, and create a good family environment for children.

Keywords: Maternal parenting stress, physical aggressive parenting, inhibitory control, preschoolers

颜色熟悉性影响转换代价的不对称性：ERP 研究

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摘要 当在难度不等的任务之间进行转换时，简单的任务转换成本往往比困难任务的转换成本大，这一现象被命名为转换代价的不对称效应（Asymmetrical switch cost）。研究发现，物体颜色信息输入的颜色与形状联结一致时，有助于视觉系统快速、有效地辨别物体。本研究以高颜色诊断性物体的图片为材料 2（任务材料：颜色一致、不一致）×2（任务类型：简单任务、复杂任务）×2（任务序列：重复、转换）记录并分析了 18 位正常被试在上述两种任务间进行转换时的行为数据和 EEG 数据。行为实验结果显示：1.复杂任务的时长显著长于简单任务；转换任务时长显著长于重复任务。2.在复杂任务条件下，不熟悉物体颜色材料的反应时长于熟悉的物体颜色反应时长。说明任务难度会影响熟悉性的加工，在较难任务条件下需要更大的认知资源，

相比简单条件无法更好的抑制不熟悉物体颜色冲突。3.任务序列和任务类型只在刺激材料为在不熟悉的物体颜色的条件下显著,说明转换代价的不对称效应会受到熟悉性的调节,简单任务的转换代价较大,复杂的转换代价较小。脑电结果显示:在复杂任务条件下,在枕叶诱发了P1波幅,而相同时间窗口内简单任务诱发了负向的N1波幅,这说明了简单任务的抑制更强,而对复杂任务的积极反应更强。从困难的任务转换到容易的任务,需要抵消对复杂的任务的强烈正向引诱和对相关任务的强烈负向引诱,而反方向的转换则需要抵消较弱的引诱效应,从而使简单任务的转换成本更大。

关键词 事件相关电位,任务转换,转换代价不对称性,颜色熟悉性

Color Familiarity Affects the Asymmetry of Conversion Cost: An ERP study

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Abstract: When switching between tasks of unequal difficulty, the switching cost for simple tasks tends to be larger than that for difficult tasks, a phenomenon named the asymmetrical switch cost effect (Asymmetrical switch cost). It was found that when the color of object color information input is consistent with the shape association, it helps the visual system to discriminate objects quickly and efficiently. In this study, the behavioral data and EEG data of 18 normal subjects were recorded and analyzed when switching between the above two tasks using pictures of highly color diagnostic objects as materials² (task materials: divided into color-consistent and inconsistent pictures) $\times$ 2 (task type: simple task, complex task) $\times$ 2 (task sequence: repetition, switching). The results of the behavioral experiment showed that: 1. the duration of the complex task was significantly longer than that of the simple task; the duration of the switching task was significantly longer than that of the repetition task. 2. the duration of the response to unfamiliar object color material was longer than that of the familiar object color response in the complex task condition. This indicates that task difficulty affects familiarity processing, requiring greater cognitive resources in the harder task condition and failing to better suppress unfamiliar object color conflict compared to the simple condition. 3. Task sequences and task types were significant only in the condition where stimulus material was in unfamiliar object color, with greater switching costs for the simple task and smaller switching costs for the complex. In the familiarity condition, the difference in conversion cost across task types was not significant. This suggests that the asymmetric effect of conversion cost is moderated by familiarity. EEG results showed that in the complex task condition, a P1 wave amplitude was evoked in the occipital lobe, whereas the simple task evoked a negative N1 wave amplitude in the same time window, indicating a stronger inhibition to the simple task and a stronger positive response to the complex task. Switching from difficult to easy tasks requires offsetting strong positive priming for complex tasks and strong negative priming for related tasks, whereas switching in the opposite direction requires offsetting weaker priming effects, resulting in greater switching costs for simple tasks.

Keywords: Event-related potentials, task transformation, transformation cost asymmetry, color familiarity

学前儿童执行功能与情绪调节关系的交叉滞后研究

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摘要 执行功能和情绪调节是儿童自我调节发展的重要组成部分。执行功能上的缺陷可能导致儿童产生社会情感能力发展的一系列问题,而执行功能影响儿童情绪调节的发展。执行功能与情绪调节的纵向关联尚不明确,因此,本研究通过交叉滞后设计探究学前儿童执行功能与情绪调节的双向关系。

本研究采用实验法,选取北京市166名幼儿($M_{age} = 3.91$, $SD = 0.3$, 98 boys and 68 girls)作为研究对象,分别在小班和中班测量其执行功能和情绪调节。采用白天黑夜、礼物延迟、图片指认以及卡片维度任务分别

对幼儿冷抑制控制、热抑制控制、工作记忆以及认知灵活性进行测量，使用失望礼物任务对情绪调节进行测量。

结果发现：（1）幼儿执行功能中的冷抑制控制、工作记忆、认知灵活性从小班到中班阶段均呈现出显著增强的趋势，热抑制控制无增长变化但存在显著的性别差异，女童的热抑制控制能力显著高于男童。（2）幼儿情绪调节能力中综合情绪反应强度得分从小班到中班显著增强，不同性别儿童的情绪调节能力之间不存在显著差异，且这种差异不随时间而发生变化。（3）通过交叉滞后回归分析发现，执行功能中冷抑制控制、热抑制控制与情绪调节存在预测作用，冷抑制控制能正向预测控制情绪的努力程度，控制情绪的努力程度对冷抑制控制的预测作用不显著；综合情绪的反应强度能负向预测冷抑制控制，冷抑制控制对综合情绪的反应强度的预测作用不显著；控制情绪的努力程度能正向预测热抑制控制，热抑制控制对控制情绪的努力程度的预测作用不显著；认知灵活性和工作记忆则未发现与情绪调节存在预测关系。

本研究采用纵向研究考察学前儿童执行功能、情绪调节之间的关联性，了解幼儿在消极情境下情绪调节水平，以便帮助幼儿园教师发现幼儿的不良情绪、不良行为，通过合理引导提升幼儿的人际交往能力，这对于促进幼儿身心发展具有重要的意义。

关键词 学前儿童，执行功能，情绪调节，预测作用

A longitudinal study on the association between executive function and emotional regulation in preschool children

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Abstract: Executive function and emotional regulation are important components of children's self-regulation development. Defects in executive function may lead to a series of problems in the development of children's socioemotional ability, and executive function affects the development of children's emotional regulation. The longitudinal association between executive function and emotional regulation is not clear. Therefore, this study explores the bidirectional relationship between executive function and emotional regulation of preschool children through cross-lag design.

In this study, 166 children in Beijing ($M_{age} = 3.91$, $SD = 0.3$, 98 boys and 68 girls) were selected to participate using experimental methods, and their executive functions and emotional regulation were measured in small classes and middle classes. The tasks of day and night, gift delay, card sorting, and card dimension were used to measure children's cold inhibitory control, hot inhibitory control, working memory, and cognitive flexibility, and the disappointment gift task was used to measure emotional regulation.

The results showed that: (1) Cold inhibitory control, working memory and cognitive flexibility of children's executive function showed a significant increasing trend from small class to middle class. There was no increase in hot inhibitory control, but suggested significant gender differences where girls scored higher than boys. (2) The scores of comprehensive emotional response intensity in children's emotion regulation ability increased significantly from small class to middle class. There was no significant gender difference in emotion regulation ability, which did not change with time. (3) Through the cross-lag regression analysis, cold inhibitory control, hot inhibitory control and emotion regulation in executive function was suggested to have predictive effects. Cold inhibitory control positively predicted the degree of emotional control effort, but the degree of emotional control effort had no effect on cold inhibitory control. Comprehensive emotional reaction intensity negatively predicted cold inhibitory control, but cold inhibitory control did not predict comprehensive emotional reaction intensity. The effort of emotional control positively predicted the degree of hot inhibitory control, but the predictive effect of hot inhibitory control on the effort of emotional control was not significant. Cognitive flexibility and working memory had no predictive relationship with emotion regulation.

Through cross-lag design, the present study investigated the associations between preschool children's executive function and emotional regulation. The findings can help better understand emotional regulation of preschool children

in negative situations, and guide kindergarten teachers to facilitate children's development of inhibitory control and emotional regulation.

Keywords: Preschool children, executive function, emotion regulation, predictive effect

我国学生批判性思维水平变迁的横断历史研究

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摘要 学生的批判性思维水平直接关系着我国的创新水平。然而, 以往研究者对于我国学生批判性思维的变迁状况争论不休。有的认为在逐年提高, 有的认为在逐年下降, 有的则认为没啥变化。那么, 我国学生批判性思维倾向到底是如何变化的呢? 该文采用横断历史研究方法对 2005 年至 2019 年 170 篇使用批判性思维倾向量表的研究进行了元分析, 涉及学生群体共 74923 人。结果显示: (1) 批判性思维倾向与年代呈正相关关系, 但相关关系不显著; 其中, 思想开放性维度与年代呈现显著正相关 ($p=0.025$); 寻求真相与年代之间呈现负相关关系, 分析能力、系统性、自信心、求知欲和认知成熟度与年代呈现正相关关系, 但其相关关系都不显著。这说明 15 年来我国学生群体批判性思维倾向总体变化趋势不明显。(2) 批判性思维倾向得分的地区差异显著 ($Q_{\text{between}}=31.584, p<0.001$), 表现为华南<东北<西南<西北<华东<华北<华中。(3) 批判性思维倾向得分的年级差异显著 ($Q_{\text{between}}=11.658, p<0.05$), 表现为高中生<大学生<研究生<初中生<小学生。(4) 高一至高三年级学生的批判性思维倾向差异不显著 ($Q_{\text{between}}=1.388, p<0.001$); 大学一年级至大学五年级学生的批判性思维倾向差异不显著 ($Q_{\text{between}}=4.066$); 研一至研三年级学生的批判性思维倾向差异不显著 ($Q_{\text{between}}=5.011$)。 (5) 批判性思维倾向得分的学生群体类型差异显著 ($Q_{\text{between}}=27.905, p<0.001$), 表现为工科<医学<文科<理科。(6) 批判性思维倾向得分的学校类型差异显著 ($Q_{\text{between}}=5.473, p<0.05$), 表现为普通高校<重点高校。(7) 批判性思维倾向得分的性别差异不显著 ($Q_{\text{between}}=0.005$)。 (8) 批判性思维倾向得分的城市、农村差异不显著 ($Q_{\text{between}}=0.071$)。 (9) 批判性思维各维度与经济社会指标的相关均不显著。该文还讨论了批判性思维变化的原因, 并提出了将来研究的方向。

关键词 批判性思维, CTDI-CV, 学生, 横断历史研究, 元分析

A Cross-Temporal Meta-Analysis of Changes in Chinese Students' Critical Thinking Level

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Abstract: The level of critical thinking of students is directly related to the level of innovation in our country. However, in the past, researchers have been arguing about the changes in critical thinking among Chinese students. Some think it is increasing year by year, some think it is decreasing year by year, and some think there is no change. So, how does the critical thinking tendency of our students change?

This article uses the cross-temporal meta-analysis to analyze 170 studies using the Critical Thinking Tendency Scale from 2005 to 2019, involving a total of 74,923 students. The results show that: (1) Critical thinking tendency is positively correlated with the age, but the correlation is not significant; among them, the open-mindedness dimension is significantly positively correlated with the age ($p=0.025$); the truth-seeking is negatively correlated with the age, Analytical ability, systemicity, self-confidence, thirst for knowledge, and cognitive maturity show a positive correlation with age, but their correlations are not significant. This shows that the overall trend of critical thinking tendencies of our student groups in the past 15 years has not been obvious. (2) There are significant regional differences in critical thinking tendency scores ($Q_{\text{between}}=31.584, p<0.001$), which is expressed as South China < Northeast < Southwest < Northwest < East China < North China < Central China. (3) The grade difference of critical

thinking tendency score is significant ($Q_{\text{between}}=11.658, p<0.05$), which is expressed as high school students < college students < graduate students < junior high school students < primary school students. (4) There is no significant difference in the critical thinking tendency of the first to third grade students ($Q_{\text{between}}=1.388, p<0.001$); the critical thinking tendency of the first to fifth grade students is not significantly different ($Q_{\text{between}}=4.066$); There was no significant difference in the critical thinking tendency of the third grade students ($Q_{\text{between}}=5.011$). (5) There is a significant difference in the types of students with critical thinking tendency scores ($Q_{\text{between}}=27.905, p<0.001$), which is expressed as engineering < medicine < liberal arts < science. (6) There is a significant difference in the types of schools with critical thinking tendency scores ($Q_{\text{between}}=5.473, p<0.05$), which is expressed as ordinary colleges < key colleges. (7) The gender difference in critical thinking tendency score is not significant ($Q_{\text{between}}=0.005$). (8) There is no significant difference between urban and rural areas for critical thinking tendency scores ($Q_{\text{between}}=0.071$). (9) The correlation between all dimensions of critical thinking and economic and social indicators is not significant. The article also discusses the reasons for the change in critical thinking and suggests the direction of future research.

Keywords: Critical thinking, CTDI-CV, student, cross-temporal meta-analysis, meta-analysis

中小学教师心理健康素质量表编制及发展特征研究

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摘 要 为了对中小学教师心理健康素质进行深入分析和探讨, 本研究首先编制了测量中小学教师心理健康素质的量表, 接着用此量表进行施测以了解中小学教师心理健康素质的发展特征。研究方法: 在量表理论结构假设的过程中采用文献法、开放式问卷调查法和访谈法, 在理论假设的基础上对开放式调查和访谈结果进行分类处理, 确定中小学教师心理健康素质的基本假设结构。在理论假设结构的基础上初次编写了 88 个项目, 形成预测问卷。将预测问卷对 240 名中小学教师进行施测, 对有效数据进行项目分析和探索性因素分析, 剔除不合格的项目后最后确定 53 个项目, 将剩余题目重新编号形成正式量表。发放 450 份正式问卷, 收回有效问卷 386 份, 进行信效度检验。采用自编中小学教师心理健康素质正式量表对中小学教师心理健康素质发展特征进行研究。共发放问卷 550 份, 有效问卷 507 份。数据回收整理后, 对中小学教师心理健康素质在性别、民族、地区、学校所在地、所教学校类型、所教年级、是否骨干教师、教龄、职称等方面进行差异分析。研究结果: 中小学教师心理健康素质量表分为一般心理健康素质分量和职业心理健康素质分量。一般心理健康素质包括认知特性、情绪协调、意志品质、行为适应四个维度; 职业心理健康素质包括职业认同、职业能力、职业品质三个维度, 共 53 个项目。中小学教师心理健康素质量表的信效度良好。验证性因素分析各拟合指标均达到测量学标准, 各维度与总分呈中高程度相关, 各维度之间呈中低程度相关, 有良好的结构效度; 该量表与自尊量表的相关性为 0.461, 与职业倦怠量表的低成就感分量表相关性为-0.777, 都达到了中高程度的相关, 效标效度良好; 重测信度为 0.816, 内部一致性系数处于 0.804~0.970 之间, 信度优良。中小学教师心理健康素质在性别、民族、地区、学校所在地、所教学校类型、所教年级上整体不存在差异, 而受职称、是否为骨干教师、教龄的影响较明显。

关键词 中小学, 教师, 心理健康素质, 量表编制, 发展特征研究

Study on Scale Establishment and Development Characteristics of Psychological Health-Diathesis about Primary and Secondary School Teachers

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Abstract: In order to conduct an in-depth analysis and discussion on the mental health of primary and secondary school teachers, this study first compiled a scale to measure the mental health of primary and secondary school teachers, and then used this scale to conduct tests to understand the development characteristics of the mental health of primary and secondary school teachers. Research method: The literature method, open questionnaire survey method and interview method are used in the process of the theoretical structure of the scale. The open survey and interview results are classified and processed on the basis of theoretical assumptions to determine the mental health quality of primary and secondary school teachers. Basic hypothetical structure. Based on the theoretical hypothetical structure, 88 items were compiled for the first time to form a prediction questionnaire. The prediction questionnaire was tested on 240 elementary and middle school teachers, and the effective data was analyzed by item analysis and exploratory factor analysis. After excluding unqualified items, 53 items were finally determined, and the remaining items were renumbered to form a formal scale. 450 formal questionnaires were issued, and 386 valid questionnaires were retrieved for reliability and validity testing. A self-compiled official scale of primary and secondary school teachers' mental health quality was used to study the development characteristics of primary and secondary school teachers' mental health quality. A total of 550 questionnaires were distributed and 507 valid questionnaires were issued. After the data is collected and sorted out, differences in the mental health of primary and secondary school teachers in terms of gender, ethnicity, region, school location, type of school taught, grade of teaching, whether or not they are key teachers, teaching age, professional title, etc., are analyzed. The results show that the mental health quality scale of primary and secondary schoolteachers can be divided into general mental health quality subscale and occupational mental health quality subscale. General mental health quality includes four dimensions: cognitive characteristics, emotional coordination, will power quality and behavioral adaptation. Occupational mental health quality includes three dimensions: professional identity professional ability and professional quality, totaling 53 items. The reliability and validity of the Mental Health Quality Scale for Primary and Secondary School Teachers are good. Confirmative factor analysis showed that all the fitted indicators met the measurement standard, and the dimensions were moderately and highly correlated with the total score, and the dimensions were moderately and moderately correlated with each other, with good structural validity. The correlation between the scale and the self-esteem scale was 0.461 and the correlation between the scale and the low achievement subscale of the occupational burnout scale was 0.777, which reached a moderate and high degree of correlation, and the calibration validity was good. The reliability is 0.816, the internal consistency coefficient is between 0.804 and 0.970, and the reliability is excellent. The mental health quality of primary and secondary schoolteachers does not differ in gender, nationality, region, school location, type of school taught, grade taught, but the influence of professional title, whether they are backbone teachers and teaching age is more obvious.

Keyword: Primary and secondary schools, Teachers, Psychological Health-Diathesis, Scale establishment, Feature analysis

初中生亲子三角关系与网络欺凌的关系研究：自我分化与抑郁症状的链式中介效应分析

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摘要 近年来，随着智能手机和网络的普及，网络欺凌作为一种新的欺凌行为日渐增多，综合世界各国调查情况来看，网络欺凌现象在各国出现情况较为普遍。相关研究表明，青少年是卷入网络欺凌的主要人群，而且还会由于个体接触网络年龄的不断下降，致使更多处于青春期早期的初中生涉足网络欺凌行为中，尤其是具有不良亲子关系的青少年，更易实施网络欺凌行为。为减少青少年网络欺凌行为，提高青少年心理健康水平，本研究基于家庭系统理论及压力的相互作用模型，揭示亲子三角关系对网络欺凌的影响机制，以期为青少年网络欺凌问题提供理论依据。本研究采用亲子三角关系量表，流调中心用抑郁量表，自我分化量表和中学生网络欺凌问卷对 1301 名初中生进行调查。采用 SPSS 24.0 和 Amos24.0 对研究数据进行分析与处理并建立结构模型，探讨亲子三角关系与网络欺凌的关系以及自我分化与抑郁症状的链式中介效应。研究结果表明：（1）亲子三角关系对青少年网络欺凌行为具有正向预测作用，即子女卷入三角关系的程度越深，产生网络欺凌行为的可能性越大。（2）自我分化在亲子三角关系与网络欺凌间起中介作用，卷入亲子三角关系程度越深，自我分化水平越低，越容易产生网络欺凌行为。（3）抑郁症状在亲子三角关系与网络欺凌间起中介作用，即亲子三角关系通过影响青少年抑郁水平进而导致青少年网络欺凌行为的产生。（4）自我分化和抑郁症状在亲子三角关系与网络欺凌间起链式中介作用，卷入亲子三角关系的青少年自我分化水平较低，易产生抑郁情绪进而产生网络欺凌行为。研究结果揭示了亲子三角关系对青少年网络欺凌行为的消极影响，提示我们要重视家庭关系对青少年线上问题行为的影响，必要时还应介入心理干预手段事前防范青少年网络欺凌的发生。

关键词 亲子三角关系，网络欺凌，抑郁症状，自我分化

The influence of Parent Child Triangle Relationship on Cyberbullying of Junior Middle School Students: Chain Mediating Effect of Self-differentiation and Depression Symptoms

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Abstract: In recent years, with the popularity of smart phones and the Internet, cyberbullying, as a new bullying behavior, is increasing day by day. According to the survey of countries around the world, cyberbullying is more common in various countries. Relevant research shows that teenagers are the main group involved in cyberbullying, and because of the declining age of individual contact with the Internet, more junior high school students in early adolescence are involved in cyberbullying, especially teenagers with bad parent-child relationship, who are more likely to implement cyberbullying. In order to reduce teenagers' cyberbullying behavior and improve teenagers' mental health level, this study reveals the influence mechanism of parent-child triangle on cyberbullying based on family system theory and stress interaction model, in order to provide theoretical basis for teenagers' cyberbullying problem. In this study, 1301 junior high school students were investigated with the Parent-child Triangle Relationship Scale, Depression Scale, Self-Differentiation Scale and Middle School Students Cyber Bullying Questionnaire. SPSS 24.0 and Amos24.0 were used to analyze and process the research data and build a structural model to explore the relationship between parent-child triangle and cyberbullying, and the chain mediating effect between self-differentiation and depressive symptoms. The results show that: (1) Parent-child triangular relationship has a positive predictive effect on teenagers' cyberbullying behavior, that is, the deeper children are involved in triangular relationship, the greater the possibility of cyberbullying behavior. (2) Self-differentiation plays an intermediary role between parent-child triangle and cyberbullying. The deeper the involvement in parent-child triangle, the lower the

level of self-differentiation, and the easier it is to produce cyberbullying. (3) Depression plays an intermediary role between parent-child triangular relationship and cyberbullying, that is, parent-child triangular relationship leads to adolescent cyberbullying behavior by influencing adolescent depression level. (4) Self-differentiation and depressive symptoms play a chain mediating role between parent-child triangle and cyberbullying. Adolescents involved in parent-child triangle have a low level of self-differentiation, and are prone to depression and then cyberbullying. The results reveal the negative influence of parent-child triangle on teenagers' cyberbullying behavior, and suggest that we should pay attention to the influence of family relationship on teenagers' online problem behavior, and intervene in psychological intervention to prevent teenagers from cyberbullying if necessary.

Keywords: Parent child triangle relationship, Cyberbullying, Depression symptoms, Self differentiation

初中生社会支持、道德脱离、自我效能感和校园欺凌中旁观者行为的关系研究

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摘要 校园欺凌是一种普遍的现象，以往研究注重校园欺凌的欺凌者和被欺凌者，而忽视了同一情境中人数最多且影响着欺凌事件发展过程和方向的旁观者，所以对校园欺凌中旁观者行为进行研究具有重要的意义，根据作用机制将旁观者行为分为保护者行为、强化者行为和局外人行为。目前，关于校园欺凌中旁观者的研究还处于起步阶段，以往的研究表明：社会支持、道德脱离和自我效能感对校园欺凌中旁观者行为具有重要影响，但缺乏对其行为机制的探讨。本研究旨在考察初中生社会支持与校园欺凌中旁观者行为的关系，以及道德脱离和自我效能感在两者中是否存在中介作用。研究选取赣州市两所中学初一至初三共 550 名的学生作为被试，采用《参与者角色问卷》、《社会支持量表》、《道德脱离量表》、《一般自我效能感量表》作为研究工具，使用 SPSS、PROCESS 等软件进行统计分析。结果显示：（1）学生在校园欺凌中扮演的旁观者角色行为有强化者行为，保护者行为与局外人行为，而其中占比最高的是保护者行为，同时存在性别和年级的差异。（2）社会支持与强化者行为之间存在负相关，与保护者行为之间存在正相关，与局外人行为之间存在负相关。（3）道德脱离、自我效能感在社会支持与强化者行为、保护者行为和局外人行为之间存在中介效应。

关键词 社会支持，道德脱离，自我效能感，旁观者行为，关系研究

The Relationship between Social Support, Moral Disengagement, Self-efficacy and Bystander Behavior in School Bullying in Junior High School Students

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Abstract: School bullying is a common phenomenon. Previous studies focused on the bullies and the bullied, while ignoring the largest number of bystanders in the same situation who affect the development process and direction of bullying incidents. Therefore, it is of great significance to study the behavior of bystanders in school bullying. According to the mechanism of action, bystander behavior is divided into protector behavior, reinforcer behavior and outsider behavior. At present, the research on bystanders in school bullying is still in its infancy. Previous studies have shown that social support, moral disengagement and self-efficacy have important effects on bystanders' behavior in school bullying, but there is a lack of discussion on the mechanism of bystanders' behavior. The purpose of this study was to investigate the relationship between social support and bystander behavior in school bullying in junior high school students, and whether moral disengagement and self-efficacy mediate the two. In this study, a total of 550 students from the first to the third grade of two middle schools in Ganzhou city were selected as subjects.

Participants' Role Questionnaire, Social Support Scale, Moral Disengagement Scale and General Self-efficacy Scale were used as research tools. SPSS, PROCESS and other software were used for statistical analysis. The results show that : (1) the bystander behavior of students in school bullying includes reinforcer behavior, protector behavior and outsider behavior, among which protector behavior accounts for the highest proportion, and there are gender and grade differences. (2) There is a negative correlation between social support and reinforcer behavior, a positive correlation between social support and protector behavior, and a negative correlation between social support and outsider behavior. (3) Moral disengagement and self-efficacy had a mediating effect between social support and reinforcer's behavior, protector's behavior and outsider's behavior.

Keywords: social support, moral disengagement, self-efficacy, bystander behavior, relationship research

父母自主支持对初中生数学学业表现的影响：数学焦虑和学业投入的序列中介作用

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摘要 自主支持(autonomy support)是一种积极的教养行为, 指处于权威地位的人(如父母)采纳他人(如子女)的观点, 接受他人的感受, 为他人提供选择机会, 并且减少对他人的控制, 鼓励他人自主解决问题和自我决策的行为。自我决定理论认为自主支持作为环境中的一种心理变量, 在提升学生的学习动机与学业投入, 进而提升其学业成就方面起着重要作用。然而, 父母自主支持对于青少年时期个体数学学业表现的作用机制目前尚不明晰。为深入探究中学阶段父母自主支持、数学学习投入、数学焦虑对于学生数学学业表现的具体影响, 本研究使用由学生自我报告的数学焦虑量表、父母自主支持量表、中学生数学学习投入量表对 514 名七、八年级初中生被试进行调查。研究结果表明, (1)在控制性别、智力因素后父母自主支持与学生数学学业表现呈显著正相关($r = 0.108, p < 0.05$), 与数学焦虑呈显著负相关($r = -0.217, p < 0.05$)、学业投入呈显著正相关($r = 0.361, p < 0.05$), 学业表现与数学焦虑呈显著负相关($r = -0.414, p < 0.05$)、学业投入呈显著正相关($r = 0.349, p < 0.05$); (2)父母自主支持可通过学业投入和数学焦虑的链式中介作用对数学学业表现产生影响($\beta = 0.2265, \text{BootLLCI} = 0.733, \text{BootULCI} = 0.3947$), 父母自主支持也可通过学业投入对学业表现产生影响($\beta = 0.2681, \text{BootLLCI} = 0.1635, \text{BootULCI} = 0.3894$)。上述发现意味着今后在家庭教育中, 父母应注意给予子女更多的自主支持, 以提高学业投入, 降低他们对数学的焦虑水平, 从而达到提升数学学业成就的目的。

关键词 中学生, 数学焦虑, 父母自主支持, 学习投入

How Parents Autonomy Support Impact Academic Performance in Mathematics in Secondary School Pupils? The Serial Mediating Roles of Math Anxiety and Academic Engagement

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Abstract: Autonomy support is a kind of positive parenting behavior, which refers to the behavior that people in a position of authority (ei. parents) adopt the opinions of individuals (ei. children), accept the feelings of individuals, provide choices for individuals, reduce their control over individuals, and encourage individuals to solve problems and make decisions independently. Self-determination theory holds that autonomous support, as a psychological variable in the environment, plays an important role in improving students' learning motivation and academic engagement, thereby enhancing their academic achievement. However, the mechanism of parent autonomy support on adolescent individuals' math academic performance is not clear. To delve into parent autonomy support, mathematics learning in mathematics, mathematics anxiety for secondary school pupils academic performance of the specific impact, the study used the self-reported Mathematics Anxiety Scale for Children, Parent Autonomous Support Scale, and Math Academic Engagement Scale to investigate 514 students in seventh and eighth grade.

Research indicates: (1) parent autonomy support was significantly positively correlated with mathematics students' academic performance after controlling for gender and intelligence factors ($r = 0.108, p < 0.05$), which was significantly negatively correlated with math anxiety ($r = -0.217, p < 0.05$), and significantly positively correlated with academic engagement ($r = 0.361, p < 0.05$). There was a significant negative correlation between academic performance and math anxiety ($r = -0.414, p < 0.05$), and a significant positive correlation between academic engagement and math anxiety ($r = 0.349, p < 0.05$). (2) Parent autonomy support had an impact on math academic performance through the chain mediating effect of math engagement and math anxiety ($\beta = 0.2265$, BootLLCI = 0.733, BootULCI = 0.3947). Parent autonomy support can also affect academic performance through academic involvement ($\beta = 0.2681$, BootLLCI = 0.1635, BootULCI = 0.3894). The above findings suggest that in the future, parents should pay more attention to giving their children more autonomy support in future family education to increase children's academic engagement, reduce their level of math anxiety, so as to achieve the purpose of improving academic achievement in mathematics.

Keywords: Secondary school pupils, Math anxiety, Autonomy support, Academic engagement

父母行为控制与青少年主观幸福感的纵向研究：未来规划的作用

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摘要 主观幸福感是青少年生活质量和身心健康的有效指标。随着积极心理学研究的深入, 如何提升青少年的主观幸福感成为研究者关注的重要主题。长期以来, 父母行为控制被认为是促进青少年积极发展的重要保护因素。但是, 对于自主性开始发展的早期青少年群体而言, 父母行为控制是否可以提升其主观幸福感尚未可知。同时, 青少年期是未来规划快速发展、分化和拓展的重要时期。根据目标理论的观点, 目标取向决定着个体的主观幸福感, 青少年进行未来规划就是确定自己发展目标的过程, 因此青少年自己进行未来规划并达成目标时, 其主观幸福感也会提高。此外, 根据社会控制理论的观点, 父母的行为控制会通过给予青少年行为上的指导和建议对青少年的未来规划提供方向和规范。但是, 父母行为控制能否通过青少年的未来规划而对其主观幸福感产生作用呢? 这有待于实证研究的支持。因此, 本研究以青少年早期个体作为研究对象, 考察父母行为控制、未来规划这两个保护因素对其主观幸福感的预测作用, 并检验未来规划在父母行为控制与青少年主观幸福感之间的中介作用及其性别差异。

基于追踪研究设计, 对 834 名 6、7、8 年级学生进行每隔半年的三次测查, 在 T1、T2 和 T3 分别测量青少年的父母行为控制、未来规划和主观幸福感。结果表明: (1) 父亲行为控制和母亲行为控制均可以显著正向预测青少年的主观幸福感; (2) 未来规划中的教育投入和职业投入均可以显著正向预测青少年的主观幸福感; (3) 青少年的教育投入在母亲行为控制与主观幸福感之间起中介作用, 这对于男生和女生均是如此; (4) 青少年的职业投入在母亲行为控制与主观幸福感之间起中介作用, 但是该中介作用仅存在于女生之中。这表明, 在自主性开始发展的青少年早期, 父母行为控制仍然可以提升青少年的主观幸福感, 母亲行为控制则可以通过提升青少年的教育和职业投入来增强其主观幸福感。

关键词 父母行为控制, 主观幸福感, 未来规划

A Longitudinal Study on Parental Behavior Control and Adolescents' Subjective Well-being: The Role of Future Planning

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Abstract: Subjective well-being is an effective indicator of adolescents' quality of life and physical and mental health. With the further development of positive psychology, how to improve adolescents' subjective well-being has become a major concern of researchers. For a long time, parental behavior control has been regarded as an important protective factor promoting the positive development of adolescents. Yet, for the early group of adolescents whose

autonomy has started to develop, whether parental behavior control can improve their subjective well-being still remains unclear. At the same time, adolescence is an important period for the rapid development, differentiation and expansion of future planning. According to the goal theory, goal orientation determines adolescents' subjective well-being. For adolescents, making future planning is exactly a process of determining their development goals. Thus, when adolescents plan for their future and achieve their goals, their subjective well-being will also be improved. In addition, according to the social control theory, parental behavior control will provide direction and norms for adolescents' future planning by giving them guidance and suggestions in behavior. However, can parental behavior control affect adolescents' subjective well-being through their future planning? It remains to be proved by the empirical researches. For this reason, the present study, in a sample of individuals in early adolescence, investigated the effects of parental behavior control and future planning on subjective well-being, and the mediating effect of future planning on the relationship between parental behavior control and subjective well-being and its gender differences.

Based on longitudinal design, a total of 834 adolescents in grades 6, 7, and 8 were measured three times at intervals of 6 months. Adolescents' parental behavior control, future planning, and subjective well-being were measured at T1, T2, and T3 respectively. Results showed that: (1) Paternal behavior control and maternal behavior control both positively predicted adolescents' subjective well-being; (2) Both educational commitment and occupational commitment in future planning positively predicted adolescents' subjective well-being. (3) Adolescents' educational commitment played a mediating role between maternal behavior control and subjective well-being, which was true for both boys and girls; (4) Adolescents' occupational commitment played a mediating role between maternal behavior control and subjective well-being, but this effect existed only among girls. This indicated that during early adolescence when autonomy has started to develop, parental behavior control can still improve adolescents' subjective well-being. What's more, maternal behavior control can also improve adolescents' subjective well-being through improving their educational and occupational commitment.

Keywords: parental behavior control, subjective well-being, future planning

我国中小学生学习家庭作业时间变迁的横断历史研究

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摘 要 家庭作业时间是一个标志性变量。在过去几十年里, 教育行政部门一直在严控作业时间。然而, 近年来有关家庭作业时间的变化趋势却争论不休。有研究认为我国学生的家庭作业时间在不断增加; 有研究认为没有变化; 也有研究认为在减少。那么, 我国中小学生的家庭作业时间是怎么变化的呢? 为回答该问题, 该研究采用横断历史研究对发表于 2003 至 2019 年间的 177 篇研究报告进行了元分析, 涉及中小学生学习 123311 人。结果表明: (1) 年代效应不显著。家庭作业时间与年代呈负相关关系, 但相关关系不显著, 说明随着年代变化, 家庭作业时间没有显著变化。(2) 地区效应显著。初中生作业时间的地区差异极其显著 ($p=0.000$), 具体为华北地区>西南地区>中南地区>华东地区>西北地区。(3) 年级效应显著。初中>高中>小学 ($p=0.001$)。小学 ($p=0.000$) 和高中 ($p=0.006$) 学生的学术性科目之间的作业时间差异显著, 初中学生的学术性科目之间的作业时间差异不显著 ($p=0.973$)。(4) 性别效应不显著。性别的作业时间差异不显著 ($p=0.853$)。(5) 科目效应显著。高中学生的语文、数学、英语三科的作业时间总体上随年代呈现上升趋势 ($r=0.548$, $p=0.001$)。 (5) 经济社会指标中的教育投入、GDP 与学生家庭作业时间相关显著。

总体上看, 我国中小学生的家庭作业时间总体上没有变化, 但高中学生的语文、数学、外语方面的作业时间反而在增加。该文还讨论了将来研究需要注意的地方。

关键词 家庭作业时间, 中小学生学习, 横断历史研究, 元分析

A Cross-temporal Meta-analysis of Changes in Primary and Middle School Students' Homework Time in China

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Abstract: Homework time is a hallmark variable. In the past few decades, the education administration has been strictly controlling the homework time. However, in recent years, the trend of changes in homework time has been controversial. Some studies believe that the homework time of Chinese students is increasing; some studies believe that there is no change; some studies believe that it is decreasing. How does the homework time of primary and middle school students in China change? To answer this question, the study used the cross-temporal meta-analysis to analyze 177 research reports published between 2003 and 2019, involving 123,311 primary and middle school students. The results show: (1) The age effect is not significant. There is a negative correlation between the time of homework and the age, but the correlation is not significant, indicating that the time of homework has not changed significantly with the change of age. (2) The regional effect is significant. The regional differences in homework time of junior high school students are extremely significant ($p=0.000$), specifically: North China>Southwest China>Central South>East China>Northwest China. (3) The grade effect is significant. Junior high school>High school>Primary school ($p=0.001$). Primary school ($p=0.000$) and high school ($p=0.006$) students have significant differences in homework time between academic subjects, and junior high school students have no significant differences in homework time between academic subjects ($p=0.973$). (3) The gender effect is not significant. There was no significant difference in work time between genders ($p=0.853$). (4) The subject effect is significant. The homework time about Chinese, mathematics, and English of senior high school students showed an upward trend over the years ($r=0.548$, $p=0.001$). (5) Educational investment and GDP in economic and social indicators are significantly correlated with students' homework time.

Overall, the homework time of primary and middle school students in China has not changed, but the homework time of high school students in Chinese, mathematics, and English is increasing. The article also discusses areas that need attention in future research.

Keywords: homework time, elementary and middle school students, cross-temporal meta-analysis, meta-analysis

空间关系表征的大脑偏侧化与高中生学业成绩

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摘要 视觉认知加工需要建立视觉元素间的空间关系，一般认为视觉系统存在类别和坐标两种空间关系表征，前者表示空间结构上通用的属性，后者则负责更为精确的空间关系。利用单侧视野速示技术，以往研究发现左半球相较于右半球，更擅长类别空间关系表征，而右半球则是在加工坐标空间关系表征时表现得比左半球更好。语言认知中有大量类别表征，也具有明显的左半球优势，这一点与类别表征的左半球优势类似。因此，类别空间关系表征的左半球优势是否与青少年语言相关的学科学习能力有关？也就是说，类别空间关系表征中左半球偏侧化程度较高的个体是否可能具有更好的语文和英语成绩？另一方面，坐标表征的右半球优势表明右半球更擅长加工需要精确度量的空间关系，而在数学学习中无论是代数还是几何都需要精确的信息表征，这意味着数学是否可能与坐标空间关系表征的关系更紧密，相较于语文和英语，数学成绩更有可能与坐标表征中右半球偏侧化程度相关？为了探究这些问题，本研究以在校高中生为被试，首先在表象生成任务中验证这两种空间关系表征的大脑半球偏侧化，并尝试建立偏侧化与各学科成绩之间的关系。结果发现：

（1）任务类型和左右视野的交互作用显著，存在两种空间关系表征在左右半球加工效率上的分离；（2）类别任务中左半球偏侧化较大的人群拥有更高的语文成绩；（3）坐标任务中右半球偏侧化较大的人群拥有更高的数学成绩。通过探究不同学科学习成绩对左右半球的不同依赖程度，本研究为理解大脑偏侧化和不同学科

学习提供新的视角,提示对于偏科的学生,类别训练或强调精确度量表述的学习方式或许有助于提高相应的学科成绩。

关键词 偏侧化,空间关系表征,学业成绩,高中生

Hemispheric lateralization in spatial relations representations and academic achievements of high school students

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Abstract: Visual cognition often requires establishing spatial relations among visual elements. There are two types of spatial relations: categorical representations capture general and abstract properties of the spatial structures, while coordinate representations are responsible for processing precise spatial locations or distances. Using a hemifield visual presentation paradigm, previous studies have found that the left hemisphere is better than the right hemisphere at categorical spatial relations representations, and the right hemisphere performs better when processing coordinate spatial relations compared to the left hemisphere. A large number of categorical representations exist in language cognition, as well as a significant left hemispheric lateralization, which is similar to the left hemispheric dominance of categorical representations. Therefore, it is hypothesized that the left hemispheric dominance in categorical tasks may be reflected in the learning of language-related subjects to some extent. In other words, individuals with higher left hemispheric lateralization in categorical tasks are likely to have higher Chinese and English grades. On the other hand, the right hemispheric dominance of coordinate representations indicates that the right hemisphere is better at processing spatial relations that need precise measurement. Since in mathematics learning, both algebra and geometry require accurate information representation, mathematics may be more closely related to coordinate representations, and compared to Chinese and English, mathematical grades might be more likely to be predicted by the degree of right hemispheric lateralization in coordinate representations. In the present study, high school students were recruited as participants in order to test hemispheric lateralization in these two spatial representations in imagery generation tasks, and to establish the relationship between lateralization and academic achievements. The results showed that: (1) the interaction effect between task types and visual hemifields was significant, suggesting the separation of two types of spatial relations representations in the processing efficiency of the left and right hemispheres; (2) people with a greater left hemispheric lateralization in categorical tasks had higher Chinese grades; (3) people with a greater right hemispheric lateralization in coordinate tasks had higher mathematical grades. By exploring the different degrees of dependence of academic achievements on the left and right hemispheres, this study provides a new perspective for understanding hemispheric lateralization and different subjects learning. For those students with biases in subject scores, categorical training or the learning methods emphasizing precise specification may be helpful to improve the corresponding academic achievements.

Keywords: Hemispheric lateralization, spatial relations representations, academic achievements, high school students

5.2“发展心理专业委员会”分组展贴报告

初中生核心自我评价与主观幸福感的关系：链式中介效应分析

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摘要 核心自我评价是个体对自身是否有能力完成任务或事业的一种信念。研究发现核心自我评价能够预

测个体的主观幸福感,但缺乏在初中生群体中的研究。本研究以贵州省初中生为研究对象,探讨核心自我评价、自尊、生命意义和主观幸福感两两之间的相关关系,以及自尊和生命意义在核心自我评价和主观幸福感之间的链式中介作用。研究工具包括核心自我评价量表(CSES)、Rosenberg自尊量表(RSES)、生命意义问卷修订版(MLQR)、幸福感指数量表(IWC)。研究结果表明:(1)独立样本 t 检验表明,男女初中生在主观幸福感上差异不显著,但在核心自我评价上有显著差异。(2)核心自我评价与主观幸福感、自尊、生命意义均呈显著正相关;自尊与生命意义、主观幸福感均呈显著正相关;生命意义和主观幸福感呈显著正相关;(3)核心自我评价可以直接影响青少年主观幸福感($\beta=0.24, p<0.001$),还可以通过自尊和生命意义的单独中介作用这两条路径对主观幸福感产生影响($\beta=0.16, 0.06$; 均 $p<0.05$),且核心自我评价还可通过第三条路径即自尊和生命意义的链式中介作用对主观幸福感产生影响。结论:(1)男生核心自我评价水平显著高于女生;(2)核心自我评价显著正向预测主观幸福感、自尊、生命意义;(3)自尊、生命意义在核心自我评价与主观幸福感之间起单独中介作用,核心自我评价通过主自尊和生命意义的链式中介作用对主观幸福感产生间接预测作用。

关键词 核心自我评价,自尊,生命意义,主观幸福感

The relationship between the core self-evaluation and subjective well-being: chain mediating effect analysis

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Abstract: Core self-evaluation is an individual's belief in whether he/she has the ability to complete a task or career. Research has found that core self-evaluation can predict individual subjective well-being, studies in the adolescent population are limited. This study took Guizhou students as the research object to explore the correlation between core self-evaluation, self-esteem, meaning of life and subjective well-being, and the chain of self-esteem and life meaning between core self-evaluation and subjective well-being mediating role. Instruments includes Core Self-Evaluation Scale (CSES), Rosenberg Self-Esteem Scale (RSES), Meaning in Life Questionnaire Revision (MLQR), Index of Well-being Scale (IWC). The results show that: (1) The independent samples t -test showed that there is no significant difference in subjective well-being between boys and girls, but there is a significant difference in core self-evaluation. (2) core self-evaluation were significantly positively correlated with subjective well-being, self-esteem, and meaning in life; self-esteem were significantly positively correlated with meaning in life and subjective well-being; the meaning in life and subjective well-being are significantly positively correlated; (3) core self-evaluation positively predicts adolescents' subjective well-being ($\beta=0.24, p<0.001$), the two paths of self-esteem and the meaning in life can also affect subjective well-being ($\beta=0.16, 0.06, p<0.05$), and core self-evaluation can also be through the third path, namely, the chain mediation of self-esteem and meaning of life has an impact on subjective well-being. In conclusion: (1) The core self-evaluation level of boys is significantly higher than that of girls; (2) The core self-evaluation significantly positively predicts subjective well-being, self-esteem, and meaning in life; (3) Self-esteem and meaning in life are in core self-evaluation and subjective happiness senses play a separate mediating role, and core self-evaluation can indirectly predict subjective well-being through the chain mediation of main self-esteem and meaning in life.

Keywords: core self-evaluation, self-esteem, meaning in life, subjective well-being

儿童拒绝敏感性与社会情绪适应之间的纵向关联： 情绪调节的调节作用

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摘要 作为将个体拒绝经历与适应问题相联系的重要机制之一, 拒绝敏感性指一种对暗示或公开的拒绝线索持有焦虑或愤怒地期待、感知和/或反应过度的认知-情感倾向。本研究采用多数据源主体评估方法(自我报告、同伴提名), 对 590 名中小學生进行了为期一年的追踪数据收集, 以考察拒绝敏感性与社会情绪适应之间的纵向关联并探讨情绪调节在其中的调节作用。其中, 社会适应包括个体的同伴拒绝和同伴侵害, 情绪适应包含个体的抑郁感、孤独感、社交焦虑、自我价值感。结果表明: (1) 男生的同伴拒绝与同伴侵害水平均显著高于女生; 中学儿童的抑郁感、孤独感和社交焦虑水平均高于小学儿童, 而自我价值感则低于小学儿童。(2) 在控制性别和年级的影响后, 第一年的拒绝敏感性水平能够显著正向预测第二年的情绪适应问题水平, 但不能显著预测同伴问题水平; 第一年的情绪调节能力能够显著负向预测第二年的情绪适应问题及同伴问题水平。(3) 在控制性别、年级和拒绝敏感性的影响后, 情绪调节在第一年拒绝敏感性预测第二年情绪适应问题以及同伴问题的关系中均起调节作用, 具体而言, 低情绪调节个体的拒绝敏感性水平能够显著正向预测情绪适应问题及同伴问题, 但在高情绪调节的个体中该预测关系则不显著。因此, 本研究在中国文化下探讨了拒绝敏感性的独特含义, 尽管拒绝敏感性会随着时间推移而带来发展风险, 但情绪调节可能是中国青少年的一大保护因素, 这为儿童社会性发展及适应问题的研究提供了新的启示。

关键词 拒绝敏感性, 情绪适应问题, 同伴问题, 情绪调节

Longitudinal Relations between Rejection Sensitivity and Socio-Emotional Adjustment in Chinese Children: Moderating Effect of Emotion Regulation

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Abstract: As one of the important mechanisms that link individual rejection experiences to maladjustment in various domains, rejection sensitivity (RS) is referred to a cognitive-affective disposition to expect, perceive, and/or overreact to the implied or overt rejection cues anxiously or angrily. The present study collected one-year longitudinal data from 590 children's rejection sensitivity and socio-emotional functioning through multi-source assessment (i.e., self-reports and peer nominations) to examine the longitudinal relationships between rejection sensitivity and emotional and social difficulties, and explore the moderation effect of emotion regulation. Social problems include peer rejection and peer victimization, and emotional problems include depression, loneliness, social anxiety, and general self-worth. The results indicated that: (1) Boys had significantly higher scores on peer rejection and peer victimization than girls. Children in middle school had significantly higher scores on depression, loneliness, and social anxiety than children in elementary school, and lower scores on general self-worth than children in elementary school. (2) After controlling for the effects of gender and grade, rejection sensitivity at Time 1 significantly predicted higher levels of emotional problems at Time 2, but did not significantly predict peer problems at Time 2; emotion regulation at Time 1 negatively and significantly predicted emotional and peer problems at Time 2. (3) After controlling for the effects of gender, grade, and rejection sensitivity, the relationships between rejection sensitivity and emotional and peer problems were moderated by emotion regulation. The follow-up simple effects analyses indicated that for children with low emotion regulation, rejection sensitivity at Time 1 positively predicted emotional

problems at Time 2 ($\beta = .21, p < .01$) and peer problems at Time 2 ($\beta = .12, p < .01$). However, for children with high emotion regulation, these effects were attenuated. This study discusses the unique meaning of rejection sensitivity in Chinese culture, and these findings suggest that rejection sensitivity can be regarded as distinct vulnerabilities for risk in maladjustment, even in socio-emotional problems. Also, although rejection sensitivity poses developmental risk over time, emotion regulation may serve as a protective factor and have a buffering effect for Chinese youth, which provides new enlightenment for future related researches on children's social development and adjustment problems.

Keywords: rejection sensitivity, emotional problems, peer problems, emotion regulation

青少年延迟折扣能力与执行功能发展的关系

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摘要 目的: 在延迟折扣任务中, 青少年比成人表现出更加冲动, 即更加偏爱即时奖赏, 而这种冲动往往与青少年执行功能不成熟有关, 具体是哪些成分还不得而知。工作记忆和抑制是执行功能两个重要的成分, 这些能力可能都与个体延迟折扣任务中的表现有关, 本研究旨在探讨青少年偏爱即时奖赏与哪种执行功能成分的发展不成熟有关。**方法:** 实验对象包括青少年中期个体和成年大学生, 青少年个体主要为 15-16 岁中学生, 42 人, 其中男生 23 人, 女生 19 人; 成年个体为 22 岁左右大学生, 70 人, 其中男女各半。采用延迟折扣任务和两者执行功能任务, 其中延迟折扣任务要求被试在即时小奖赏和未来大奖赏之间进行选择, 执行功能任务采用测量工作记忆和抑制的任务, 工作记忆采用 2-back 任务, 2-back 任务要求被试从第三个数字开始判断, 当前数字与倒数第二个数字是否相同, 主要考察被试的工作记忆能力。抑制任务采用数字 stroop 任务, 该任务要求被试对两个一位数的数字数值大小进行判断, 而忽视数字字号的大小, 任务中, 数值字号大小会对被试的数值大小判断形成干扰, 从而出现 stroop 效应, 该任务可以考察被试的抑制能力。**结果:** 研究发现, 青少年个体比成人更多选择即时奖赏, 2-back 正确率更低, 数字 stroop 中易化效应更高, 干扰效应更大但没有达到统计显著水平。从相关分析可见, 对于成人组, 与延迟折扣选择即时奖赏比例显著相关的有工作记忆任务 2-back 和抑制任务数字 stroop。而对于青少年而言, 与延迟折扣选择即时奖赏比例显著相关的仅工作记忆任务 2-back。**结论:** 对成人而言, 执行功能的工作记忆和抑制成分都与个体的延迟折扣情况有关, 对于青少年而言, 执行功能的工作记忆成分与他们的延迟折扣情况有关, 且工作记忆能力比成人更差, 而抑制成分与他们的延迟折扣选择无关, 且抑制中抗干扰能力与成人差异不显著。研究说明青少年偏爱即时奖赏很可能与工作记忆这种执行功能成分发展不成熟有关。

关键词 青少年, 延迟折扣, 执行功能, 工作记忆, 抑制

Relationship between delay discounting ability and development of executive function in adolescents

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Abstract: Objective: Adolescents show more impulsiveness than adults in delay discounting tasks, i.e. a preference for immediate rewards. This impulsiveness is often associated with immature executive function in adolescents. The exact components of this executive function are unknown. Working memory and inhibition are two important components of executive function, which may be related to individual performance in delay discounting task. This

study was conducted to investigate which components of executive function are associated with adolescents' preference for immediate rewards. **Methods:** The subjects included middle adolescent individuals and adult college students. Forty-two teenagers were mainly middle school students aged 15-16, including 23 boys and 19 girls. Adults were about 22 years old college students. There were 70 adult participants and half of them were males. There were 3 tasks used: delay discounting task, 2-back task and digital stroop task. The delay-discounting task required participants to choose between a small immediate reward and a large future reward. In the 2-back task, the participants were asked to judge whether the current number was the same as the penultimate number from the third digit. In the 2-back task, the working memory ability of the participants was mainly examined. Digital stroop task was used for testing suppression, which required the subjects to judge the size of two one-digit numeric values while ignoring the size of the numeric size. In the task, the size of the numeric size would interfere with the judgment of the subjects' numeric size, resulting in the Stroop effect. This task could be used to investigate the inhibition ability of the subjects. **Results:** The study found that compared with adults the adolescents chose the immediate rewards more, their accuracy of 2-back was lower, the facilitation effect of the adolescents was higher in the digital stroop, and the interference effect of them was larger but not to the level of statistical significance. Correlation analysis showed that for adults, the proportion of immediate rewards was significantly correlated with working memory task, 2-back and inhibition task, digital stroop. For adolescents, only working memory task, 2-back was significantly correlated with the proportion of immediate rewards. **Conclusion:** for adults, working memory and inhibition were related to individuals' delay discounting ability, for teenagers, only working memory component was related to their discount ability, and their working memory capacity was less than adults, and inhibition has nothing to do with their delay discounting choice, and their inhibition of anti-interference ability was not significantly different from adults. The study suggests that adolescents' preference for immediate rewards may be related to the immature development of working memory, an executive function component.

Keywords: teenagers, delay discounting, executive function, working memory, inhibition

青少年暴力电子游戏接触与攻击行为的关系： 道德敏感性和父亲在位的作用

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摘 要 本研究使用游戏使用问卷、攻击行为问卷、道德敏感性问卷和父亲在位量表，对 3094 名 12-19 岁的中学生（其中男生 1533 名，女生 1561 名）的暴力电子游戏接触与攻击行为的关系进行了调查，并且分性别对道德敏感性和父亲在位在二者间的作用进行了探讨。研究结果发现：（1）暴力电子游戏接触和道德性、父亲在位在性别上具有显著差异，男生显著高于女生；（2）暴力电子游戏接触、道德敏感性、父亲在位与攻击行为两两显著相关；（3）暴力电子游戏接触能够正向预测攻击行为；（4）道德敏感性在青少年暴力电子游戏接触和攻击行为的关系中起部分中介作用，父亲在位在此中介关系中起调节作用。具体而言，随着父亲在位程度的减少，暴力电子游戏接触更有可能通过降低道德敏感性水平来诱发攻击行为；（5）父亲在位的调节效应存在性别差异，男生组父亲在位对暴力电子游戏接触与道德敏感性的调节显著，女生组不显著；而女生组父亲在位对道德敏感性与攻击行为的调节显著，男生组则不显著。总的来说，本研究得到了高水平的道德敏感性、高水平的父亲在位是导致青少年在暴力电子游戏接触后降低攻击性的重要保护因素。因此，在学校的德育教育中，要为中学生树立良好的道德规范，加大对中学生道德判断的教育，以提高其道德敏感性水平，进而有效预防不道德行为的发生。在家庭的父亲教育中，也要维持良好的父子关系，建立良好的代际关系作为榜样，促进青少年的道德发展，减少攻击行为的发生。

关键词 暴力电子游戏接触,攻击行为,道德敏感性,父亲在位,性别

Exposure to violent video games and aggression in adolescents: The roles of moral sensitivity and father presence

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Abstract: This study using Video Game Questionnaire, Buss-Perry Aggression Questionnaire, Moral Sensitivity Questionnaire and Father Presence Questionnaire explored the relationship between exposure to violent video games and aggression in adolescents (males=1533, females=1561), taking into account the effects of moral disengagement and parental rearing patterns (N=3094, 12-19 years old). The results showed that (1) Violent video game exposure (VVGE), moral sensitivity and father presence was significantly different between the gender, and male students are significantly higher than female students. (2) VVGE, moral sensitivity, father presence and aggression were significantly correlated; (3) VVGE could positively predict aggression; (4) Moral sensitivity played a partial mediating role between VVGE and aggression, and father presence moderated the mediation effect. Specifically, with the decreasing father presence, VVGE is more possibly to induce aggression by decreasing the level of moral sensitivity. (5) There was a significant gender difference in the moderating effect. Thus, high level of moral sensitivity, high level of father presence are protective factors for promoting aggression after exposure to violent video games among adolescents. Therefore, in the school moral education, we should establish a good moral standard for students and increase the education of moral judgment, in order to improve their moral sensitivity level, and then effectively prevent the occurrence of immoral behavior. In the family father education, it is also necessary to maintain a good father-son relationship, establish a good intergenerational relationship as an example to promote the moral development of adolescents, and reduce the occurrence of aggressive behavior.

Keywords: violent video game exposure, aggression, moral sensitivity, father presence, gender

母亲消极教养行为与青少年攻击、违纪的关系：观点采择的中介作用与多巴胺系统多基因的调节作用

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摘要 反社会行为根据其攻击性分为攻击和违纪, 两者在影响因素和发生机制上均存在明显的差异。反社会行为受到遗传、环境和认知因素等多水平因素的影响, 多水平因素对攻击和违纪的影响及其作用机制亦可能存在不同, 但目前对此的研究十分匮乏。研究显示, 母亲消极教养行为能够增加儿童青少年参与反社会行为的风险, 但是母亲消极教养行为对青少年攻击和违纪的影响程度不同, 且其中介机制存在差异。根据社会化理论, 观点采择是母亲消极教养行为影响反社会行为的中介机制之一, 且其对攻击和违纪的作用存在差异。此外, 研究显示消极教养行为经由观点采择影响反社会行为的中介路径受到个体多巴胺系统基因的调节。但是, 当前分子遗传学研究主要采用单基因研究范式, 忽略了多基因间的联合效应, 因而其研究的可靠性和解释率受到限制。基于此, 本研究采用多基因累加得分范式, 以 1053 名汉族青少年为被试 (初次测评时 $M_{age} = 13.32 \pm 0.49$, 50.1%女生) 进行为期 3 年的追踪研究, 构建有调节的中介模型, 重点考察了观点采择在母亲消极教养行为与攻击、违纪间的中介作用以及多巴胺系统多基因累加得分对该中介机制的调节作用。研究采用 *DAT1* 基因 rs27072 多态性、*COMT* 基因 rs6267 多态性和 *DRD2* 基因 rs6275 多态性等三个基因位点作为多巴胺系统多基因指标, 分别采用母亲报告、自我报告与教师报告测评消极教养行为、观点采择和攻击、违纪行为。结果发现: (1) 控制性别和早期攻击 (或违纪) 后, 母亲消极教养行为能够显著正向预测青少年的攻击与违纪; (2) 观点采择在母亲消极教养行为与青少年攻击间起中介作用, 但在母亲消极教养行为与青少年违纪间的中介作用不显著; (3) 多巴胺系统多基因累加得分能够调节“母亲消极教养—观点采择—攻击”的前半路径和直接路径。具体表现为, 与多基因累加得分较高的青少年相比, 母亲消极教养行为显著降低了低多基因累加得分青少年的观点采择能力, 进而增加了其攻击行为的风险。本研究结果显示攻击和违纪行为具有不同的影响因素和发生机制。为反社会行为的异质性与反社会行为的多基因遗传基础提供了证据。

关键词 攻击, 违纪, 消极教养行为, 观点采择, 多巴胺系统基因×环境

Maternal Negative Parenting and Adolescent Aggression and Rule Breaking: The Mediating Role of Perspective Taking and the Moderating Role of Dopaminergic Multilocus Genetic Variants

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Abstract: Antisocial behaviors consist of behaviors and attitudes that violate societal norms, including aggression and rule breaking. Antisocial behaviors are common problem among adolescents, which increases risk for academic failure, psychopathology problems, as well as criminal activity during adulthood. Evidence suggested multiple factors, such as environmental, genetic, and cognitive factors, jointly contributes to the emergence and maintenance of antisocial behavior. More importantly, theoretical and empirical findings have suggested that there are differences in predictors and mechanisms between aggression and rule breaking. However, few studies have explored whether these environmental, genetic, and cognitive factors operate differently across these two distinct subtypes of antisocial behavior. It is well established that maternal negative parenting plays an important role but to a different degree in predicting aggression and rule breaking. Furthermore, existing studies have suggested that maternal negative parenting increases risk of aggression and rule breaking by impairing adolescents' perspective taking. Moreover, molecular genetics studies also shown that genetic factors would moderate the effect of maternal negative parenting on antisocial behavior and perspective taking. However, the majority of studies have commonly examined the moderating role of single loci in candidate genes, ignoring the polygenic traits of antisocial behavior. Therefore, the present study aimed to examine the relationship between negative parenting and aggression and rule breaking, the mediating role of perspective taking, and the moderating role of dopaminergic multilocus genetic variants by adopting the approach of multilocus genetic profile score (MGPS). Participants were 1053 adolescents (mean age 13.32 ± 0.49 years old at the first time point, 50.1% females) recruited from the community. Using a 3-year longitudinal data, mother-reported maternal parenting and teacher-reported aggressive behavior and rule breaking were collected at Time 1 and Time 3. At Time 2, saliva samples of adolescents and self-reported perspective taking were collected. All measures showed good reliability. The MGPS was created by *DAT1* rs27072 polymorphisms, *COMT* rs6267 polymorphism and *DRD2* rs6275 polymorphisms. Genotyping in three dopaminergic genes were performed for each participant in real time with MassARRAY RT software version 3.0.0.4 and analyzed using the MassARRAY Typer software version 3.4 (Sequenom). Bootstrapping procedures were used to test moderated mediation. The results found that after gender and previous aggressive behavior (or rule breaking) were controlled for, negative parenting is positively related to adolescent aggressive behavior and rule breaking. The effect of negative parenting on aggressive behavior was mediated by perspective taking, while the mediating effect did not hold for rule breaking model. The mediating effect of perspective taking was moderated by MGPS. Specifically, the indirect effect of negative parenting on aggressive behavior via perspective taking were significant only among adolescents with lower MGPS. Besides, compares to adolescents with higher MGPS, adolescents with lower MGPS exhibited more aggressive behavior when experiencing negative parenting. These findings suggest that there are differences in the mechanism of negative parenting on subtypes of antisocial behavior. This study provides new evidence for the heterogeneity of antisocial behavior and the polygenic underpinnings of antisocial behavior subtypes.

Keywords: aggression, rule breaking, maternal negative parenting, perspective taking, dopaminergic genetic variants-environment interaction

抑郁倾向青少年自我评价的消极偏向源于其母亲？

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摘要 抑郁认知理论认为，抑郁个体具有自我评价的消极偏向，这种评价是在第一视角下进行，而个体通过他人视角对自己的评价则是在第三视角下进行。然而，目前鲜有研究对自我评价的第一、第三视角进行探讨。此外，以往研究表明，中国青少年将母亲表征为自我的一部分，但抑郁个体在母亲视角下的自我评价还有待进一步探索。因此，本研究通过两个实验探讨抑郁倾向青少年的自我评价在第一、第三视角下是否具有 consistency。实验1招募60名被试（抑郁倾向组29人，控制组31人），实验2招募77名被试（抑郁倾向组36人，控制组41人）。通过 Remember/Know 自我评价范式考察抑郁倾向个体在第一、第三视角下是否均会产生消极偏向（实验1），以及第三视角下的自我评价是否会因不同他人视角产生分离（实验2）。实验1结果发现，在 Remember/Know 任务中无论是抑郁倾向组还是控制组，自我评价（第一视角）的积极词汇再认率都高于消极词汇。相反，抑郁倾向组的母亲反思自我评价（母亲第三视角）则表现为消极词汇再认率高于积极词汇。实验2结果发现，相较于朋友和同学反思自我评价而言，母亲反思自我评价的消极词汇再认率高于积极词汇。本研究结果表明，无论是抑郁倾向个体还是非抑郁倾向个体，均存在积极的自我认知偏向，而抑郁倾向个体的消极自我认知偏向可能源于个体在母亲视角下的反思自我评价。因此，在中国抑郁倾向青少年的早期心理干预中，应当重视母亲角色的重要作用。

关键词 自我认知，反思自我评价，母亲视角，抑郁倾向，中国青少年

Is the Negative Bias in Self-appraisal of Adolescents with Mild Depression Derived from their Mother?

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Abstract: BACKGROUND: According to Becks' cognitive theory of depression, individuals with depression exhibit negative bias in self-appraisals under the first-person perspective. However, comparative research between the self-appraisals in the first-person and third-person perspectives (e.g., mother's perspective) is rare. Moreover, the mother is represented as a part of self among Chinese adolescents. OBJECTIVE: This study examined whether the negative bias in self-appraisal is consistent between the first-person and third-person perspectives among adolescents with mild depression. METHODS: Adolescents with mild depression (29 in Experiment 1a and 36 in Experiment 2a) and adolescents without a diagnosis of depression (31 in Experiment 1b and 41 in Experiment 2b) were separately tested on their recognition memory using the Remember/Know self-reference paradigm in two experiments. RESULTS: In Experiment 1, there were higher recognition scores for positive valence adjectives than negative valence adjectives in both adolescents with and without mild depression. In contrast, the reflected self-appraisals of the mother exhibited a negative bias. In Experiment 2, reflected self-appraisals of the mother displayed a higher negative bias than that of a friend or classmate. CONCLUSION: Positive self-cognition exists in both adolescents with and without mild depression. Negative self-cognition of adolescents with mild depression might be derived more from the third-person perspective of the mother than that of a classmate or a friend, indicating that the mother's negative perspective was more valued. Thus, it is important to consider the mother's support during psychological interventions with Chinese adolescents in the early stages of depression.

Keywords: self-cognition, reflected self-appraisals, mother's perspective, mild depression, Chinese adolescents

家庭教养方式对幼儿科学能力发展的影响：家园共育的中介作用

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摘 要 科学领域发展是儿童全面发展的重要部分，教育部 2012 年发布的《3-6 岁儿童学习与发展指南》中明确指出，幼儿科学领域的发展是指幼儿在解决实际问题的过程中发现和理解事物本质和事物间关系的过程，主要包括科学探究和数学认知，培养其探究能力、逻辑思维能力，为其它领域的深入学习奠定基础。而学前期幼儿正处在家庭与幼儿园的双重环境中，对于幼儿的教育不是家庭教育能够独立完成的，只有两者通力配合才能达到充分的效果。因此为了探究家庭教养方式、家园共育对幼儿科学领域能力发展的影响，本研究使用《儿童科学领域发展水平量表》、《家庭教养方式评价量表》和《家园共育量表》，在某省 18 所幼儿园抽取 10561 名大班幼儿进行量表施测，量表由儿童的主要抚养者进行填写，其中男生 5647 名，女生 4914 名。结果显示：（1）幼儿科学能力和家庭教养方式都存在显著的性别差异（ $p < 0.001$ ），且两者之间呈显著正相关（ $r = 0.54$ ）；（2）家园共育在家庭教养方式和科学能力间起着部分中介的作用，中介效应量为 26.85%。结论如下：（1）总体来看，父母的家庭教养方式较为积极，大班幼儿的科学能力发展水平较高。（2）父母对女生的教养方式更为积极；女生的科学能力表现更好，这与我们通常的认知相反，这表明男性和女性之间科学能力的性别差异并不是先天俱来的，更可能是随着学校教育偏向及社会刻板印象的影响而产生的。（3）积极的教养方式可以直接促进儿童科学能力的发展，也可以通过提高家园共育参与度来促进幼儿科学能力的发展。因此，加强学校与家庭的联结意义重大，通过多种形式保证双向的信息畅通，学校和家庭密切配合，及时商量教育对策，使更多的家长积极投身到子女教育的行列中。

关键词 家庭教养方式 大班幼儿 科学能力 家园共育

The influence of parenting style on children's scientific ability: The mediating role of Family-kindergarten Co-education

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Abstract: Development in the field of science as an important part of the overall development of the child. The Guide to Learning and Development for Children Aged 3-6, published by the Ministry of Education in 2012, clearly states that the development of early childhood science refers to the process of discovering and understanding the nature of things and the relationships between things in the process of solving practical problems, mainly including scientific inquiry and mathematical cognition. It can cultivate children's inquiry ability and logical thinking ability, which can lay the foundation for in-depth study in other fields. In the pre-school period, children are in the dual environment of home and kindergarten. The education of children is not a family education that can be completed independently, but only with the cooperation of both can the full effect be achieved. Therefore, in order to explore the impact of family parenting style and family-kindergarten co-education on the development of young children's abilities in the science domain, this study used the Children's Science Domain Development Level Scale, the Family Parenting Style Evaluation Scale and Family-Kindergarten Co-education Scale. A total of 10,561 large-class children in 18 kindergartens in a province were selected for scale measurement, including 5,647 boys and 4,914 girls. The scale was filled in by the main caregivers of the children. The results show that: (1) There were significant gender differences ($p < 0.001$) in both children's scientific ability and parenting style, and there was a significant positive correlation between the two ($r = 0.54$); (2) Family-kindergarten co-education plays a partially mediating role between family parenting style and scientific ability, with a mediating effect volume of 26.85%. The conclusions are as follows: (1) Overall, parents' family education style is more positive, and the scientific ability of large class children has a higher level of development. (2) Parents are more positive in their upbringing of girls; girls perform better in science, contrary to common perceptions, suggesting that the gender difference in scientific ability between men and women is not inherent, but are more likely to result from schooling biases and social stereotypes. (3) Positive parenting style

can directly promote the development of children's scientific abilities, or through increased the involvement of Family-kindergarten co-education. Therefore, it is of great significance to strengthen the connection between kindergartens and families. We should ensure the smooth flow of two-way information through various forms, with kindergartens and families working closely together to discuss educational strategies in a timely manner, so that more and more parents can actively participate in their children's education..

Keywords: Parenting style, Children in higher class, Scientific ability, Family-Kindergarten co-education

初中生家庭功能、积极心理资本与欺凌旁观行为的关系：一个有调节的中介模型

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摘 要 学校欺凌，是指对无力保护自己的学生重复实施的攻击行为，对学生的身心健康有着多方面的消极影响和危害。欺凌是一个群体事件，除了欺凌者和受欺凌者，同伴会表现出起哄煽动、置身事外或积极干预等行为，影响到欺凌事件的持续。总体上研究者更多关注了影响欺凌旁观行为的个体因素以及同伴、教师因素，相对忽视了家庭环境，尤其是家庭功能这一整体环境系统的影响。家庭功能可以有效增加个体的心理资本，正向预测心理资本中的自我效能等因素，进而影响到同伴在欺凌事件中的旁观行为。相关研究发现，欺凌旁观行为、家庭功能和心理资本的发展水平上均存在显著的性别差异，由于这些性别差异的存在，积极心理资本在家庭功能与欺凌旁观行为的中介作用可能会受到性别的调节。为此，本研究以 1035 名初中生为对象，采用家庭功能问卷、欺凌参与角色问卷、积极心理资本问卷，考察家庭功能、积极心理资本与欺凌旁观行为的关系，以及性别在其中的调节作用。结果发现：（1）家庭功能、积极心理资本与保护行为呈显著正相关，与煽风点火、置身事外行为呈显著负相关，协同欺凌与家庭功能呈显著负相关；（2）积极心理资本在家庭功能对各欺凌旁观行为的影响中均具有部分中介作用。（3）性别调节了心理资本的中介作用，和男生相比，女生积极心理资本对欺凌旁观行为的预测作用更强。

关键词 家庭功能，积极心理资本，学校欺凌，旁观行为，初中生

Relationships among Family Function, Positive Psychological Capital and Bystanders Behavior in School Bullying among Junior High School Students: A moderated Mediation Effect

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Abstract: School bullying has been defined as an aggressive, repetitive behavior against a victim who cannot easily defend him or herself, and to be associated with many serious health problems. It has repeatedly been described as a group phenomenon in which, as well as the victims and the bullies, other peers play a crucial roles such as the reinforcer, outsider or defender. Generally research has shown peer bystanders may contribute to the cycle of bullying. Researchers pay more attention to the influence of the individual factors and school factors on the bystander behavior, while neglecting the family factors. Factor function as a whole environment system, can influence the peer bystander behavior by increasing the individual's psychological capital, such as it can positively predict the self-efficacy and etc. Research shows that there are significant gender differences in family function, positive psychological capital and bystander behavior in bullying, so gender probably moderate the mediated effect of positive psychological capital. Considering the aforementioned reasons, the present study examined the relationships among family function, positive psychological capital, and the moderating effect of gender. The Family Function Questionnaire, the positive psychological capital Questionnaire and the Participant Role Questionnaire in Bullying were administered to 1035 adolescents from junior high schools in Linyi city. The main results were shown below: (1)Both family function and positive psychological capital were positively associated with defending victims, and negatively associated with

outsider behavior and reinforcer behavior. (2)Positive psychological capital partly mediated the relationship between family function and different bystander behaviors. (3)Gender moderates the mediating effect of positive psychological capital. Compared with boys, positive psychological capital had a more obvious predictive effect on girls' bystander behaviors.

Keywords: family function, positive psychological capital, school bullying, bystander behaviors, junior high school students

大学生父母教养方式对幸福感的影响 ——人格、自我效能感的中介作用

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摘 要 总体幸福感是个体对自身生活做出的总体评价，能够直接反映个体是否幸福。总体幸福感受到众多因素影响，其中父母教养方式是影响大学生总体幸福感的重要因素。本文通过对大学生进行问卷调查，研究父母教养方式对总体幸福感的影响，以及人格、自我效能感的中介作用机制。本研究通过方便取样的方法，通过网络平台对大学生进行问卷调查，共回收问卷 330 份，有效问卷 300 份，有效问卷率 90.9%。采用的问卷有：《简式父母教养方式问卷中文版》（s-EMBU-C）、《艾森克人格问卷简式量表中国版》（EPQ-RSC）、《一般自我效能感量表》（GSES）以及《总体幸福感量表》（GWB）。研究中采用了独立样本 t 检验、单因素方差分析、相关分析、回归分析、中介效应检验、路径分析等统计学方法。研究结果显示：（1）大学生父母教养方式、人格、自我效能感和总体幸福感在部分人口学变量上存在显著性差异；（2）大学生父母教养方式、人格、自我效能感和总体幸福感两两变量之间存在显著相关；（3）大学生父母教养方式、人格、自我效能感均能够显著预测总体幸福感；（4）人格在大学生父母教养方式和总体幸福感之间起部分中介作用；（5）自我效能感在大学生父母教养方式和总体幸福感之间起部分中介作用；（6）人格和自我效能感在大学生父母教养方式和总体幸福感之间起链式中介作用。通过研究可知，大学生父母教养方式可以直接影响总体幸福感，也可以通过人格和自我效能感的中介效应及其两个变量的链式中介效应来间接影响总体幸福感。因此，本研究提示可以通过改善父母教养方式，尤其是采用父母对孩子表现出温暖与理解的教养方式，也可以通过改善大学生的人格特质，提高大学生自我效能感水平，进而提升大学生总体幸福感。

关键词 父母教养方式，幸福感，人格，自我效能感

The Influence of Parental Rearing Styles on Well-Being of College Students——Mediating role of personality and self-efficacy

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Abstract: General happiness is an individual's overall evaluation of his own life, which can directly reflect whether an individual is happy or not. The overall happiness of college students is affected by many factors, among which the parenting style is an important factor affecting the overall happiness of college students. Through a questionnaire survey of college students, this paper studies the influence of parenting style on overall happiness, as well as the mediating mechanism of personality and self-efficacy. Through the method of convenient sampling, this study conducted a questionnaire survey on college students through the network platform. A total of 330 questionnaires were collected, among which 300 were valid, and the effective questionnaire rate was 90.9%. The following questionnaires were used: Short-Form Egnä Minnen av Barndoms Uppfostran for Chinese(s-EMBu-C), Eysenck Personality Questionnaire (Chinese version) (EPQ-RSC), General Self-Efficacy Scale (GSES) and General Well-Being Scale (GWB). Statistical methods such as independent sample t test, one-way analysis of variance, correlation analysis, regression analysis, mediating effect test and path analysis were used in this study. The results show that :(1) There are significant differences in parental rearing style, personality, self-efficacy and general

well-being of college students on some demographic variables; (2) There is a significant correlation between college students' parental rearing style, personality, self-efficacy and general happiness. (3) Parental rearing style, personality and self-efficacy can significantly predict the overall well-being of college students; (4) Personality plays a partial mediating role in the relationship between college students' parental rearing style and their overall well-being; (5) Self-efficacy plays a partial mediating role in the relationship between college students' parental rearing style and their overall well-being; (6) Personality and self-efficacy play a chain-mediated role in the relationship between college students' parental rearing style and overall happiness. Through the study, it can be seen that the parenting style of college students can directly affect the overall well-being, and it can also indirectly affect the overall well-being through the mediating effect of personality and self-efficacy and the chain mediating effect of the two variables. Therefore, this study suggests that the overall well-being of college students can be improved by improving the parenting style, especially the parenting style in which parents show warmth and understanding to their children, and also by improving the personality traits of college students and the level of self-efficacy.

Keywords: Parenting style, happiness, personality, self-efficacy

道德认同对大学生自私行为传递效应的影响

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摘要 自私行为在社会生活中普遍存在, 做出自私行为的个体常常以自我为中心, 为满足自己不合理的私欲不惜以侵害他人的正当权益为代价。因此, 自私行为具有一定的危害性。已有研究发现, 自私行为具有可传递性, 那么避免自私行为持续发生十分重要, 如何削弱自私行为传递的效应值得研究。道德认同对自私行为的产生有抑制作用已被证实, 道德认同水平高的个体更加认可道德品质和规范, 更愿意与内心保持一致, 做出符合道德规范的行为。本研究旨在探讨中国文化背景下道德认同对大学生自私行为传递效应的影响。研究对象是 160 名在校大学生, 其中男女生人数分别为 66 和 94, 年龄在 18 到 23 岁之间。通过问卷调查法测量道德认同, 实验采用 2 (道德认同: 高、低) × 2 (分配条件: 自私、公平) 的二因素被试间设计, 自变量为道德认同和分配条件, 因变量为独裁者博弈任务中参与者分配给自己的金额数量。结果表明, 道德认同的主效应显著, $F(1,156) = 25.976, p < .05$, 即道德认同对大学生自私行为的产生有影响, 与低道德认同的个体相比, 高道德认同水平的人表现出更少的自私行为; 分配条件的主效应显著, $F(1,156) = 6.022, p < .05$, 即中国文化背景下存在大学生自私行为传递效应; 道德认同和分配条件的交互作用显著, $F(1,156) = 5.131, p < .05$ 。进一步进行简单效应分析, 结果发现高道德认同组的参与者分配给自己的金钱数量在自私条件($M = 3.050, SD = .639$)和公平条件下($M = 3.025, SD = .620$)不存在显著差异($F(1, 156) = .018, p = .894$); 而低道德认同组在自私条件和公平条件下存在显著差异($F(1,156) = 11.135, p < .01$), 相较于公平条件($M = 3.400, SD = .982$), 自私条件下参与者分配给自己的金钱数量更多($M = 4.025, SD = 1.025$)。这一结果表明道德认同对自私行为的传递效应有抑制作用, 即使遭遇了他人的自私行为, 高道德认同水平的人相较于低水平的人, 会更加关注公正, 保持自身的公平行为。

关键词 大学生, 道德认同, 自私行为传递效应

The Effect of Moral Identity on College Students' Pay-forward Effect of Selfish Behavior

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Abstract: Selfish behavior is common in social life. Individuals who act selfishly are often self-centered, and satisfy their unreasonable selfish desires at the cost of infringing others' legitimate rights and interests. Therefore, selfish behavior is harmful. Previous studies have found that selfish behavior is transferable, so it is very important to avoid the continuous occurrence of selfish behavior, and it is worth studying how to reduce the pay-forward effect of selfish

behavior. It has been confirmed that moral identity has an inhibitory effect on selfish behavior. Individuals with a high level of moral identity are more likely to recognize moral qualities and norms, and are more willing to conform to their hearts and act in accordance with moral norms. This study aims to explore the effect of moral identity on college students' pay-forward effect of selfish behavior in the context of Chinese culture. Questionnaire and experimental methods have been used in this study. 160 college students were selected as the research participants, including 66 males and 94 females, aged between 18 and 23. Moral identity was measured by questionnaire, and the experiment used 2 (moral identity: high, low) $\times$ 2 (resource allocation: selfish, fair) between subjects design, moral identity and distribution conditions were independent variables. In the task of dictator game, the amount of money allocated by participants to themselves was dependent variable. The results of this study showed that the main effect of moral identity was significant, $F(1,156) = 25.976, p < .05$, which meant that moral identity has an impact on college students' selfish behavior, compared with individuals with low moral identity, people with high moral identity show less selfish behavior. The main effect of distribution conditions was significant, $F(1,156) = 6.022, p < .05$. Therefore, there is a college students' pay-forward effect of selfish behavior in the context of Chinese culture. The interaction between moral identity and distribution conditions was significant as well, $F(1,156) = 5.131, p < .05$, which meant that moral identity could inhibit pay-forward effect of selfish behavior. Further simple effect analysis showed that there was no significant difference ($F(1, 156) = .018, p = .894$) in the amount of money allocated to participants in the high moral identity group under selfish condition ($M = 3.050, SD = .639$) and fair condition ($M = 3.025, SD = .620$). However, as for low moral identity group, there was significant difference between selfish condition and fair condition ($F(1,156) = 11.135, p < .01$). Compared with the fair condition ($M = 3.400, SD = .982$), participants in the selfish condition allocated more money to themselves ($M = 4.025, SD = 1.025$). This result indicates that moral identity has an inhibitory effect on the pay-forward effect of selfish behavior. Even when confronted with others' selfish behavior, people with high moral identity will pay more attention to justice and maintain their own fair behavior compared with those with low moral identity.

Keywords: college students, moral identity, pay-forward effect of selfish behavior

情绪的动机维度对创造性科学问题提出能力的影响及其机制

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摘 要 关于情绪与创造力关系的研究丰硕,但结论不一,甚至互相矛盾。Gable 等人提出情绪的动机维度模型,认为目前的研究大多依据情绪的效价维度划分情绪,而诱发的积极情绪属于低动机强度,如愉悦;诱发的消极情绪却属于高动机强度,如恐惧,故导致结论相反。创造力作为高级认知功能,对人才发展和国家进步至关重要。以往研究中多采用经典问题解决范式测量创造力,但研究者们日益认为提出问题比解决问题更需要创造力。因此本研究依据情绪的动机维度模型,并结合多种情绪理论探索动机维度、效价维度对创造性科学问题提出能力(CSPF)的影响及其认知机制。实验一采用 2(动机方向:趋近、回避) $\times$ 2(强度:高、低) $\times$ 2(CSPF 形式:开放、封闭)的混合实验设计,并设置中性情绪控制组。随机选择 150 名被试分入 5 组中,使用图片和视频诱发相应情绪后,让被试完成《创造性科学问题提出能力》测验(Hu et al., 2010),对被试的回答在独创性、新颖性和灵活性三个维度上进行评分。预期结果:1.低动机强度组表现显著优于高动机强度组,主要表现在流畅性和独特性上;2.情绪对 CSPF 是受动机维度和效价维度共同影响。实验二选择 150 名被试,随机分入五种情绪组中,以情绪图片作为实验材料,测量被试的“热”执行功能,随后分别完成 CSPF 测验。预期结果:1.低动机强度组在工作记忆刷新、抑制和转换上的反应时均显著优于高动机强度组;2.执行功能在情绪与创造力的关系中起部分中介作用。结果表明,情绪通过影响执行功能,进而影响个体的 CSPF。本研究在以往情绪与创造性科学问题提出能力研究的基础上,从情绪的动机维度出发进一步探讨了情绪与创造性科学问题提出能力的关系,表明情绪的动机维度对创造性科学问题提出能力的重要性,并发现执行功能在其中起中介作用。

关键词 情绪动机, 效价, 创造性科学问题提出能力

The influence of emotional motivation dimension on Creative Scientific Problem Finding Ability and its mechanism

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Abstract: There are abundant researches on the relationship between emotion and creativity, but the conclusions are different, even contradictory. Gable et al. Put forward the motivation dimension model of emotion, and thought that most of the current researches divided emotion according to the valence dimension of emotion, and the positive emotion induced by emotion belonged to low motivation intensity, such as pleasure; However, the negative emotions are of high motivation intensity, such as fear, which leads to the opposite conclusion. Creativity, as an advanced cognitive function, is of great importance to talent development and national progress. In the past, classical problem-solving paradigm has been used to measure creativity, but researchers increasingly believe that creativity is more needed to ask questions than to solve problems. Therefore, based on the motivation dimension model of emotion, this study explores the influence of motivation dimension and valence dimension on Creative Scientific Problem Finding Ability (CSPF) and its cognitive mechanism. In Experiment 1, 2 (motivation direction: approach, avoidance) * 2 (intensity: high, low) * 2 (CSPF form: open, closed) mixed experimental design was adopted, and neutral emotion control group was set. A total of 150 subjects were randomly divided into 5 groups. After using pictures and videos to induce corresponding emotions, the subjects were asked to complete the "ability to ask creative scientific questions" test (Hu et al., 2010), and their answers were scored on the three dimensions of originality, novelty and flexibility. Expected results: 1. The performance of low motivation intensity group was significantly better than that of high motivation intensity group, mainly in fluency and uniqueness; 2. The effect of emotion on CSPF is influenced by both motivation dimension and potency dimension. In Experiment 2, 150 subjects were randomly divided into five emotion groups. Emotional pictures were used as experimental materials to measure the hot executive function of the subjects, and then the CSPF test was completed. Expected results: 1. The reaction time of working memory refresh, inhibition and conversion in low motivation intensity group was significantly better than that in high motivation intensity group; 2. Executive function partly mediates the relationship between emotion and creativity. The results show that emotion affects executive function, and then affects individual CSPF. On the basis of previous studies on emotion and Creative Scientific Problem Finding Ability, this study further explores the relationship between emotion and creative scientific problem finding ability from the perspective of emotion motivation dimension, indicating the importance of emotion motivation dimension to creative scientific problem finding ability, and finds that executive function plays an intermediary role in it.

Keywords: emotional motivation dimension, valence, creative scientific problem finding ability

贫困地区儿童希望与心理韧性： 领悟社会支持的中介作用和亲子依恋的调节作用

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摘 要 心理韧性是指个体在面对压力和困境时表现出来的良好适应能力, 对于儿童、尤其贫困地区儿童的成长和发展起着重要作用。本研究基于生态系统理论, 从个体、家庭、社会环境相互作用的角度出发, 探讨希望对心理韧性的作用及领悟社会支持在其中的中介作用与亲子依恋对此过程的调节作用。采用整群抽样的方法, 以儿童希望感量表、Connor-Davidson 心理韧性量表、领悟社会支持量表和亲子依恋问卷为研究工具, 对陕西省某贫困地区共 481 名儿童进行问卷调查。结果发现: (1) 希望、心理韧性、领悟社会支持、亲子依恋之间两两显著正相关; (2) 在控制了家庭收入、年级后, 希望正向预测心理韧性; (3) 领悟社会支持在

希望与心理韧性之间起部分中介作用；（4）亲子依恋负向调节了“希望→领悟社会支持→心理韧性”的前半段，即当贫困地区儿童的亲子依恋降低时，希望对领悟社会支持的预测作用增强。结果表明，希望不仅直接影响贫困地区儿童的心理韧性，也会通过领悟社会支持间接影响贫困地区儿童的心理韧性；当亲子依恋较低时，希望通过领悟社会支持对心理韧性的作用增强，表现出了一种补偿作用，即当亲子关系不如意时，个体会转向其他关系寻求情感性联结，这支持了心理韧性的动态观。这些结果为儿童心理韧性的培养和发展提供了一定的参考，即不仅可以注重培养儿童自身积极特质，如希望，也可以为儿童提供家庭和家以外的支持。

关键词 贫困地区儿童，希望，心理韧性，领悟社会支持，亲子依恋

Hope and Resilience of Underprivileged Children: The Mediating Role of Perceived Social Support and the Moderating Role of Parent-Child Attachment

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Abstract: Resilience refers to a positive adaptability of individuals in the face of stress and difficulties, which plays an important role in the psychological growth and development of children, especially children in poor areas. Based on ecological systems theory, this research intends to explore the role of hope on resilience from the perspective of the interaction between individuals, families and social environment, and to further investigate the mediating role of perceived social support between hope and resilience, and the moderating role of parent-child attachment on this process. Using cluster sampling method, a total of 481 underprivileged children in a poor area of Shaanxi Province were surveyed with Children's Hope Scale, Connor-Davidson Resilience Scale, Perceived Social Support Scale and Inventory of Parent-child Attachment. The results showed that: (a) there was a significant positive correlation between hope, resilience, perceived social support and parent-child attachment; (b) hope positively predicted resilience after controlling factors such as the family income and grade; (c) perceived social support played a part of mediating role between hope and resilience; (d) parent-child attachment had a negative moderating role in the first half of “hope → perceived social support → resilience”, that is, when the level of parent-child attachment of underprivileged children was decreased, the predictive effect of hope on perceived social support increased. These findings suggested that hope not only directly affected underprivileged children's resilience, but also indirectly affected underprivileged children's resilience through perceived social support. In addition, when the level of parent-child attachment was lower, hope would have a stronger effect on resilience through perceived social support, which showing a compensatory effect. That is to say, when the parent-child relationship was not satisfactory, individuals would turn to other relationships for emotional connection, which supports the dynamic view of resilience. These results provide meaningful references for the cultivation and development of underprivileged children's resilience, that is, we can focus on the cultivation of underprivileged children's own positive characteristics, such as hope, as well as on the support for underprivileged children within and outside the family.

Keywords: Underprivileged children, Hope, Resilience, Perceived Social Support, Parent-Child Attachment

T2 加权像提升儿童青少年个体脑皮层结构分割效果

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摘要 基于 T1 加权的 MRI 图像可以显示大脑皮层的厚度、髓鞘化等脑解剖方面的信息, 有助于了解儿童青少年认知行为的脑解剖学基础。大脑皮层分割的准确性是至关重要的。本研究试图对儿童青少年群体增加 T2 加权像, 以便改善皮层分割效果。本研究汇集了齐鲁医院(Qilu)儿童数据集(N = 84; 男性, N = 70, 年龄 = 2.88 ± 0.89 岁; 女性, N = 14, 年龄 = 2.87 ± 1.06 岁)、纽约儿童所的 Healthy Brain Network(HBN)青少年早期数据集(N = 109; 男性, N = 64, 年龄 = 11.80 ± 3.74 岁; 女性, N = 45, 年龄 = 11.21 ± 3.75 岁)以及西南大学的 Gene Brain Behavior (GBB) 青少年晚期数据集(N = 155; 男性, N = 50, 年龄 = 20.65 ± 1.56 岁; 女性, N = 105, 年龄 = 20.66 ± 2.01 岁)。对每个数据集的所有被试, 使用 Freesurfer(6.0 版本)同时进行 T1 图像的脑皮层分割以及 T1+T2 图像的皮层分割。随后, 对其皮层厚度、髓鞘化等形态学指标进行对比分析。总体结果发现, 增加 T2 加权像的皮层分割显著增加了儿童及青少年的皮层厚度、髓鞘化指数。基于 vertex 水平的结果进一步发现, 皮层分割显著改善皮层厚度的区域位于内外侧的前额叶、双侧的顶叶及颞叶区域, 也就是额顶网络、默认网络、感知觉运动网络为最显著。尽管皮层髓鞘化显著改善的区域同样位于上述区域, 但是显著改善的程度低于皮层厚度。最后, 我们对青少年晚期(GBB)与青少年早期(HBN)及儿童期(Qilu)的改善程度进行了比较。在皮层厚度及髓鞘化方面, 青少年晚期被试在额顶网络等负责高级认知的脑功能区域都呈现出更大程度的改善, 但是在颞上回及中央前后回等负责感知觉及听觉的低级脑功能区呈现出更小程度的改善。综合以上结果, T2 加权图像对儿童青少年脑解剖的皮层分割会起到显著改善的效果。未来研究增加 T2 加权像会促进青少年高级认知功能区域分割及其与认知行为关联的准确性。

关键词 T2 加权像, 皮层分割, 皮层厚度, 髓鞘化, 儿童青少年

T2 weighted images improve the structural parcellation of cerebral parcellation in children and adolescents

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Abstract: T1-weighted MRI images inform us the brain anatomy with generated cortical thickness and myelination. The information could be potentially explored as neurocognitive marker of children and adolescents. However, the accuracy of cortical parcellation is of vital importance for the examination. Using T2-weight MRI images to improve the individual parcellation was attempted in the present study with subjects of children and adolescents. We included three cohorts, children dataset from Qilu Hospital (Qilu) (N = 84; male, N = 70, age = 2.88 ± 0.89 years; female, N = 14, age = 2.87 ± 1.06 years), early adolescence dataset from the Health Brain Network (HBN) of Child Mind Institute (N = 109; male, N = 64, age = 11.80 ± 3.74 years; female, N = 45, age = 11.21 ± 3.75 years) and late adolescence dataset from Gene Brain Behavior (GBB) of Southwest University (N = 155; male, N = 50, age = 20.65 ± 1.56 years; N = 105, age = 20.66 ± 2.01 years). For all subjects, cortical parcellation was performed two times with only T1 image and T1+T2 weighted images using Freesurfer (version 6.0). Subsequently, we compared the cortical thickness and myelination between two preprocessing methods. We found that cortical parcellation based on T1+T2 images

significantly improved the cortical thickness and myelination in children and adolescents. At the vertex level, we further found the improved regions were located at medial and lateral prefrontal lobes, bilateral parietal and temporal regions for cortical thickness. That is, frontoparietal network, default mode network and sensorimotor network were considered as the most significant. With similar regions that improved with T2 weighted images in cortical myelination, the significance was less than that in cortical thickness. Finally, we compared the improvement among children, early adolescence and late adolescence. Interestingly, subjects in late adolescence showed greater improvement in heteromodal association cortex, the frontoparietal network, but less improvement in unimodal cortices, such as the superior temporal gyrus and the precentral and postcentral gyrus which are responsible for somatosensory and auditory perception. To sum up, T2-weighted images can significantly improve the cortical parcellation of brain anatomy in children and adolescents. Future studies with T2-weighted images might improve the segmentation in regions that be responsible for higher-order cognitive functions and the accuracy in the associations between brain and cognition in adolescents.

Keywords: T2 weighted images , cortical parcellation , cortical thickness , cortical myelination , children and adolescents

亲子互动对两岁幼儿语言能力的影响： 父母语言输入与父母敏感性的作用

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摘 要 2-3 岁是幼儿语言能力发展的关键时期，与父母的语言互动则是幼儿语言获得的重要因素。本研究以 37 个普通话家庭为研究对象，通过家访在亲子阅读和自由游戏任务中探究亲子互动中亲子对话、父母语言输入以及父母敏感性对两岁幼儿语言发展的影响。研究结果表明：父母语言输入存在差异。母亲在互动中的词类总数显著多于父亲，平均话语长度显著长于父亲，父亲的提问数量则显著多于母亲。幼儿语言输出和语言能力存在性别差异。女童在亲子互动中的词汇总数和词类总数显著多于男童，平均话语长度显著长于男童，女童的词汇和句子能力显著高于男童。两个任务中父母分别与幼儿的对话与幼儿语言能力和语言输出显著正相关；父母在亲子阅读中的提问数量与幼儿语言输出显著相关；父亲的语言重复性与幼儿语言能力显著正相关，母亲的语言重复性与幼儿语言输出的数量和词汇多样性显著负相关；母亲在自由游戏环节中的词汇多样性和提问数量与幼儿语言输出显著相关。在控制父母双方教育程度和母亲语言输入变量后，两个任务中的父子对话回合数仍能显著预测幼儿输出的词汇总数、词类总数以及幼儿词汇量；父母的提问数量与幼儿语言输出之间存在显著相关关系，在控制父母教育程度和家庭月收入之后，父母提问总数能够显著预测幼儿输出的词汇总数和词类总数；幼儿参与度在父母敏感性和幼儿词汇量之间起完全中介作用。

关键词 亲子互动，对话回合数，语言输入，父母敏感性，幼儿语言能力

The impact of parent-child interaction on 2-year-olds' language ability: the role of parental language input and parental sensitivity

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Abstract: The age of 2-3 years is a critical period for children's language development, the language-based interaction with parents is an important factor in children's language acquisition. In this study, 37 Mandarin-speaking parent-child dyads completed book reading and free play tasks in home visits. The influence of parent-child conversation, parental language input, and parental sensitivity on the language development of two-year-old children was investigated. The gender differences in parental language input and children's language output and ability were

also analyzed. The results showed that word types and the mean length of utterances of mothers was significantly more and longer than that of fathers, while fathers' total number of questions was significantly higher than that of mothers. As children's language output and ability, word tokens and word types of girls were significantly more than that of boys, the mean length of utterances was significantly longer than that of boys, and the vocabulary and sentence ability of girls were significantly higher than boys. Parent-child conversation turn-taking in both tasks was significantly and positively associated with children's language outputs and ability; the number of questions of fathers and mothers was correlated to children's language outputs. Fathers' language repetition was positively correlated with children's language ability, while mothers' language repetition was negatively correlated with children's language output and vocabulary. Maternal vocabulary diversity and the number of questions in the free play task were significantly related to children's language output. After controlling parental education level and language input of the mother, the number of father-child conversation turns in the two tasks could still significantly predict children's word tokens, word types and vocabulary. There was a significant correlation between the number of questions of parents and children's language output; after controlling parental education level and family income, the total number of questions of parents could significantly predict children's word tokens and types. Children's engagement played a significant mediating role between parental sensitivity and children's vocabulary.

Keywords: Parent-child interaction, Conversation turns, Language input, Parental sensitivity, Children's language competence

幼儿性别颜色隐喻的发生与发展

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摘 要 为了探究 3.0-4.5 岁幼儿性别颜色隐喻的发生与发展, 以及其在心理理论上的表现, 本研究设计了 2 个实验。实验 1 采用对偶比较法探究了 186 名幼儿 (男生 89 名, 女生 92 名) 对七种颜色的偏好 (红、橙、黄、绿、蓝、紫、粉) 以及性别意识的分化的现状, 结果表明: (1) 幼儿在颜色偏好选择结果上存在性别差异, 女孩对于粉色的偏好显著高于男孩, 男孩对黄色的偏好显著高于女孩; (2) 幼儿性别意识在 3.0-4.5 岁之间不断发展, 幼儿优先发展出对自我性别的认知, 随后发展出对他人性别的认知。实验 2 在实验 1 的基础上引用了情景变量, 探究幼儿在自我情景、假设情景、同性情景、异性情景四种情景下的性别颜色偏好, 以此揭示幼儿性别颜色隐喻的发生与发展, 结果表明: (1) 3.0-3.5 岁的幼儿尚未形成性别颜色隐喻, 3.5-4.0 岁的幼儿开始形成性别颜色隐喻, 4.0-4.5 岁的幼儿形成相对稳定的性别颜色隐喻; (2) 幼儿性别颜色隐喻受心理理论水平的影响, 表现为在假设情景、异性情景、同性情景下的性别意识水平高于自我情景; (3) 随着幼儿年龄的增长, 幼儿形成的性别颜色隐喻越来越丰富, 3.5-4.0 岁时幼儿将 5 种颜色与性别建立了联系, 4.0-4.5 岁时幼儿将 7 种颜色与性别建立了联系。

关键词 幼儿, 性别颜色隐喻, 心理理论

The occurrence and development of gender color metaphor in children

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Abstract: In order to explore the occurrence and development of gender color metaphor in 3.0-4.5 years old children, as well as its performance in theory of mind, this study designed two experiments. In experiment 1, 186 children (89 boys and 92 girls) were used to investigate the preference of seven colors (red, orange, yellow, green, blue, purple, and pink) and the differentiation of gender consciousness. The results showed that: (1) There are gender differences in the results of children's preference for color preference. Girls have a significantly higher preference for pink than

boys, and boys have a significantly higher preference for yellow than girls; (2) Children's gender awareness continues to develop between 3.0 and 4.5 years old. Children first develop their own gender cognition, and then develop the gender cognition of others. Experiment 2, based on experiment 1, used situational variables to explore children's gender color preferences in four situations: self situation, hypothesis situation, same sex situation and opposite sex situation, so as to reveal the occurrence and development of children's gender color metaphor. The results showed that: (1) 3.0-3.5 years old children have not yet formed gender color metaphors, 3.5-4.0 years old children begin to form gender color metaphors, 4.0-4.5 years old children form relatively stable gender color metaphors; (2) Children's gender color metaphor is influenced by the level of theory of mind, which shows that the level of gender awareness in hypothetical situation, heterosexual situation and homosexual situation is higher than that in self situation; (3) With the growth of children's age, children formed more and more rich gender color metaphors. When 3.5-4.0 years old, children established the connection between five colors and gender, and when 4.0-4.5 years old, children established the connection between seven colors and gender.

Keywords: children, gender color metaphor, theory of mind

父母心理控制与青少年外化问题行为： 心理需求的满足与学校参与的作用

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摘要 大量研究表明父母心理控制与青少年外化问题行为之间存在联系。然而这两者之间的中介与调节机制尚未被探明。基于自我决定理论和压力缓冲模型，本研究将探讨心理需求的满足是否在父母心理控制与青少年外化问题行为之间起中介作用，以及学校参与在父母心理控制与青少年外化问题行为之间是否起调节作用。采用问卷法对来自中国南方的 966 名初中生（男生 467 名，女生 499 名；平均年龄 12.72 岁，标准差为 0.74 岁）进行问卷调查，考察了基本心理需求的满足在父母心理控制与青少年外化问题行为之间的中介作用，以及学校参与在这一关系中的调节作用。结果发现：（1）心理需求的满足显著中介父母心理控制与青少年外化问题行为之间的正向关系；（2）学校参与显著调节中介路径“父母心理控制 → 心理需求的满足 → 青少年外化问题行为”；具体而言，在低学校参与青少年群体中，父母心理控制会通过削弱其心理需求的满足进而增加其外化问题行为，然而，在高学校参与青少年群体中，这一中介效应不显著。这些结果启示我们，在家庭生活中，父母应该减少对青少年的心理控制，因为心理控制会促使青少年发展出外化问题行为。除此之外，在学校中，学校教育者可以通过提高青少年的学校参与去减少受到父母心理控制的青少年发展出外化问题行为的风险。

关键词 父母心理控制，心理需求的满足，学校参与，外化问题行为，青少年

Parental psychological control and adolescent externalizing problem behaviors: The effect of psychological needs satisfaction and school engagement

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Abstract: Abundant evidence has demonstrated an association between parental psychological control and adolescent externalizing problem behaviors. However, the mediating and moderating mechanisms underlying this relation are still under-investigated. Grounded in the self determination theory and stress-buffering model, this study investigated

whether satisfaction of psychological needs mediates the relation between parental psychological control and adolescent externalizing problem behaviors, and whether this indirect link is moderated by school engagement. A total of 966 junior middle school student (467 boys, 499 girls; $Mean_{age} = 12.72$ years, $SD = 0.74$) from southern China were tested by questionnaires to examine the mediating effect of satisfaction of psychological needs and the moderating effect of school engagement between parental psychological control and adolescent externalizing problem behaviors. The results indicated that : (1) Satisfaction of psychological needs mediated the relationship between parental psychological control and adolescent externalizing problem behaviors. (2) school engagement moderated the indirect link “parental psychological control $\rightarrow$ satisfaction of psychological needs $\rightarrow$ adolescent externalizing problem behaviors”. Specifically, for adolescents with low school engagement, parental psychological control could weaken their satisfaction of psychological needs, which in turn increase the likelihood of externalizing problem behaviors. However, this indirect link was nonsignificant for adolescents with high school engagement. These results suggest that parents should avoid controlling their adolescents’ psychological world in family life, as it might cause them to develop externalizing problem behaviors. In addition, school educators can effectively help adolescents (especially those with high parental psychological control) avoid developing externalizing problem behaviors by increasing their school engagement.

Keywords: parental psychological control, psychological needs satisfaction, school engagement, externalizing problem behaviors, adolescent

父母生涯教养对青少年生涯发展的影响： 心理弹性中介作用的纵向研究

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摘要 青少年早期是个体进行生涯探索的重要阶段, 他们需要开始逐渐了解不同的职业, 对未来职业生涯规划等。生涯决策和自我效能感的提升是青春期最重要的发展任务之一。家庭作为青少年成长的重要环境, 父母生涯教养方式会对个体的生涯发展产生影响。因此了解青少年早期个体的生涯发展轨迹及其影响因素, 能为家庭及学校干预个体的生涯问题提供依据, 更好的促进青少年早期个体心理健康成长。本研究采用亲子生涯一致性量表、父母生涯相关行为量表、父母生涯支持行为量表、生涯困扰量表、生涯决策自我效能感量表、心理弹性量表, 考察父母生涯教养对青少年早期个体生涯困扰和生涯决策自我效能感发展的影响及其中介机制。以广东省 706 名青少年及其父母为被试, 分别在 2018 年 11 月 (T1)、2019 年 5 月 (T2)、2019 年 11 月 (T3) 进行 3 次施测, 被试平均年龄为 12.08 ± 1.54 岁。结果表明: 心理弹性在父母生涯教养与生涯发展纵向中介模型拟合指数良好($\chi^2 = 30.28$, $df = 6$, $p < 0.001$, $CFI = 0.911$, $RMSEA = 0.077$, $90\%CI [0.051, 0.106]$, $SRMR = 0.031$), 即“高一一致-高支持组”的父母生涯教养相对于“高忽视-不支持”、“高干预-不支持”更有助于提升青少年的心理弹性水平从而提升其生涯决策自我效能感和降低其生涯困扰水平。研究结果说明了父母对孩子的生涯发展表现出一定程度的重视, 给予高水平的支持与适度干预, 以及与孩子的生涯相关的目标、方向保持一致性, 更能促进青少年的生涯发展。这些结果可以作为生涯顾问和教育工作者了解家庭环境如何影响青少年的生涯发展的重要信息来源, 为今后父母对孩子进行生涯教养提供理论依据。

关键词 父母生涯教养, 青少年生涯发展, 心理弹性, 中介效应, 纵向研究

Influence of Career-specific Parental Behaviors on Adolescent career Development:

A Longitudinal Study on the Mediating Effect of Resilience

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Abstract: Early adolescence is an important stage of individual career exploration, in which adolescents need to start learning about different professions and plan their future career. Career decision-making and self-efficacy promotion is one of the most important developmental tasks for adolescence. As an important environment for child to grow up, the career-specific parental behaviors will have an impact on the individual's career development. Therefore, understanding the career path and its influencing factors can provide the basis for family and school to intervene the individual's career problems, and better promote the early adolescent individual's mental health growth. This study used adolescent-parent career congruence scale, career-related parental behaviors scale, parental career support behavior scale, career ambivalence scale, career decision-making self-efficacy scale, resilience scale to investigate the impact of career-specific parental behaviors on early individual career ambivalence and career decision-making self-efficacy development of adolescents and its intermediary mechanism. The subjects of 706 adolescents and their parents in Guangdong province were tested three times in November 2018(T1), May 2019(T2) and November 2019(T3). The average age of subjects was 12.08 ± 1.54 years. The data fit well in the longitudinal mediation model of resilience plays a part in the relationship between career-specific parental behaviors and adolescent career development ($\chi^2 = 30.28$, $df = 6$, $p < 0.001$, $CFI = 0.911$, $RMSEA = 0.077$, $90\%CI [0.051, 0.106]$, $SRMR = 0.031$). Specifically, Highly congruent-supportive group" relative to "Highly neglect-unsupportive" group and the "Highly interference-unsupportive" group is more conducive to improving adolescents' resilience, career decision-making self-efficacy, and reducing their career ambivalence. The results show that parents pay more attention to their children's career development, give high level of support and moderate intervention, and keep consistent goals and directions related to their children's career, which can promote the career development of adolescent. These results can be used as an important source of information for career counselors and educators to understand how the family environment affects the career development of adolescent, and provide a theoretical basis for parents to carry out career upbringing for their children in the future.

Keywords: career-specific parental behaviors, adolescent career development, resilience, mediating effect, longitudinal design

青少年网络成瘾与生活满意度的关系： 自我控制和个人公正世界信念的链式中介作用

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摘要 电子科技的蓬勃发展, 给人们带来便捷的同时也带来了诸多社会问题, 譬如青少年网络成瘾以及由此带来的个人主观幸福感的降低。基于此本研究旨在探讨青少年网络成瘾 (*Internet addiction*) 与生活满意度 (*Life satisfaction*) 的关系, 同时考察自我控制 (*Self-control*) 和个人公正世界信念 (*Individual Belief in a just World*) 在二者之间的作用。研究方法: 本研究以 452 名青少年 (17.53 ± 1.10 岁) 为研究对象, 通过网络成瘾诊断问卷、自我控制量表、公正世界信念量表和生活满意度量表进行了数据收集。相关分析结果显示: 网络成瘾与自我控制、个人公正世界信念和生活满意度呈显著负相关 (网络成瘾与自我控制, $r = -0.48$, $p < 0.01$; 网络成瘾与个人公正世界信念, $r = -0.09$, $p < 0.05$; 网络成瘾与生活满意度, $r = -0.15$, $p < 0.01$); 自我控制、个人公正世界信念与生活满意度均显著正相关 (自我控制与个人公正世界信念, $r = 0.19$, $p < 0.01$; 自

我控制与生活满意度, $r = 0.25$, $p < 0.01$; 个人公正世界信念与生活满意度, $r = 0.47$, $p < 0.01$)。此外, 中介作用分析结果显示: 自我控制与个人公正世界信念在青少年网络成瘾与生活满意度之间起中介作用。其中, 网络成瘾既可以通过自我控制的单独中介作用影响生活满意度, 即随着网络成瘾程度的增加, 青少年的自我控制能力减弱, 随之生活满意度降低的可能性会增加 ($B = -0.07$, $SE = 0.03$, 95% CI [-0.124, -0.016]); 也可以通过自我控制→个人公正世界信念的链式中介作用影响生活满意度 ($B = -0.04$, $SE = 0.01$, 95% CI [-0.069, -0.015])。研究结论: 网络成瘾对生活满意度有负向影响, 自我控制和个人公正世界信念在二者之间起链式中介作用。因此, 提升青少年的自我控制能力和个人公正世界信念感对于改善青少年网络成瘾对个人主观幸福感的影响具有重要意义。

关键词 网络成瘾, 自我控制, 公正世界信念, 生活满意度

Assosiation between Internet Addiction and Life Satisfaction in Adolescents: The Mediating Role of the Self-control and Personal Belief in a just World

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Abstract: The rapid development of electronic technology not only brings convenience to people, but also brings many social problems, such as teenagers' Internet addiction and the resulting decrease of personal subjective well-being. Based on this study, the purpose of this study is to explore the relationship between Internet addiction and life satisfaction, and the mediators of self-control and individual belief in a just world. Methods: Data were collected from 452 adolescents (17.53±1.10 years old) using Diagnostic Questionnaire of Internet Addiction (Young & Rogers, 1998; Lee et al., 2012), self-control scale (Tan & Guo, 2008), belief in a just world scale (Su, Zhang et al., 2012), and Satisfaction with Life Scale (Diener, Emmons, Larsen & Griffin, 1985). The results of correlation analysis showed that Internet addiction was negatively correlated with self-control ($r = -0.48$, $p < 0.01$), personal belief in a just world ($r = -0.09$, $p < 0.05$), and life satisfaction ($r = -0.15$, $p < 0.01$); however, life satisfaction was positive correlated with self-control ($r = 0.25$, $p < 0.01$) and individual belief in a just world ($r = 0.47$, $p < 0.01$), and self-control was positively correlated with individual belief in a just world ($r = 0.19$, $p < 0.01$). In addition, a bootstrapped mediation analyses (Hayes, 2013; Zhao, Lynch, & Chen, 2010) indicated that self-control and belief in a just world mediated the decreased effect of Internet addiction on life satisfaction among adolescents. In which, Internet addiction impact life satisfaction through the separate mediating effect of self-control, that is, with the increase of Internet addiction degree, teenagers' self-control ability is weakened, and the possibility of life satisfaction is increase ($B = -0.07$, $SE = 0.03$, 95% CI [-0.124, -0.016]); life satisfaction can also be influence by the chain mediating effect of self-control → individual belief in a just world ($B = -0.04$, $SE = 0.01$, 95% CI [-0.069, -0.015]). Conclusion: Internet addiction negatively impact on life satisfaction, and self-control and belief in a just world act as a chain mediator between them. Therefore, it is of great significance to adjust the influence of internet addiction on teenagers' subjective well-being by improving their self-control ability and belief in a just world.

Keywords: Internet addiction, self-control, just world belief, life satisfaction

亲子关系对幼儿攻击性行为的影响

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摘要 为探讨幼儿攻击性行为与亲子关系的发展状况及其二者之间的关系, 采用家长和教师报告的测量法,

使用学前和幼儿园行为量表(PKBS)与亲子关系量表对180名3~6岁幼儿进行了测量。结果发现:1)幼儿攻击性行为在性别与年龄上存在差异,其中男孩的外部攻击强于女孩,女孩的关系攻击强于男孩;外部攻击随年龄增高而下降,而关系攻击逐渐增多。2)幼儿亲子关系也表现出性别差异与年龄特征,其中女孩在亲密性、冲突性方面均好于男孩,且随年龄增长不断发展。3)幼儿亲子关系与外部攻击及攻击总分之间均呈显著负相关,且前者能负向预测后者;亲子关系与关系攻击相关不显著。本研究结果提示,幼儿攻击性行为与亲子关系均具有年龄特征与性别差异;良好的亲子关系是幼儿攻击性行为的保护性因素。

关键词 攻击性行为, 亲子关系, 幼儿

The Influence of Parent-child Relationship on Young Children's Aggressive Behaviors

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Abstract: To explore the development status and relationship between aggressive behavior and parent-child relationship of young children, 180 children aged 3-6 years old were measured with the Pre-school and Kindergarten Behavior Scale (PKBS) and Parent-child Relationship Scale reported by parents and teachers. The results showed that: (1) children's aggressive behavior showed gender and age differences, in which boys' external attack was stronger than girls' one, and girls' relationship attack was stronger than boys' one; external attack decreased with age, while relationship attack increased. (2) Children's parent-child relationship also showed gender differences and age characteristics, in which girls were better than boys in intimacy and conflict dimension, and developed with age. (3) There was a significant negative correlation between parent-child relationship and external aggression and total score of aggression, and the former could negatively predict the latter, while the parent-child relationship had no significant correlation with relational aggression. The results suggest that children's aggressive behavior and parent-child relationship have age characteristics and gender differences; children's parent-child relationship has a significant impact on external aggression, and good parent-child relationship is the protective factor of children's aggressive behavior.

Keywords: aggressive behavior, parent-child relationship, young children

友谊同质性在中国青少年自我观念发展中的作用: 基于动态社会网络分析视角

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摘要 青春期是个体发生深刻发展变化的时期,在这一阶段建立清晰的自我观念(Self-view)是青少年发展的一项重要任务。“自我取向”(Self-orientation)和“群体取向”(Group-orientation)代表了个人看待世界和与世界互动的两种主要方式,是自我观的重要组成部分(Oyserman, 2017)。同伴间的互动为他们提供了一种形成和塑造关于“我是谁”的重要方式,其中与朋友之间的互动尤为重要。以往的研究大多集中于从变量中心的水平上分析自我观点与同伴关系的关系(例如友谊质量与自我概念之间的关系),但这仅仅是基于描述性范式或个体层面的分析,很少有研究从个体角度探讨友谊关系与自我观念之间的动态发展过程。同时,在高度重视社会交往和群体功能的中国文化背景下,对持不同自我观点的青少年的友谊生态了解甚少。因此,本研究拟从社会网络分析的角度出发,试图探讨持不同自我观念的中国青少年的友谊网络的特点,以及自我观念间的相似性是否会影响青少年自我观念的发展,例如自我观念相似的青少年会不会更容易成为朋友(相似-选择效应),并

且随着时间的发展他们的自我观念水平会更相似(相似-影响效应)。本研究选取 1254 名来自 22 个班级的 7 年级学生(48.4% girls, $M_{age}=13.2$ 岁, $SD=0.40$ 岁), 每年追踪一次, 共追踪三年。通过自我报告和友谊提名获得个体及其朋友的自我观念的数据和友谊网络数据。使用 SPSS 20.0 对原始数据进行录入、整理和描述性统计。使用 R 程序进行班级戏剧数据的分析和友谊提名数据的格式转换。使用 RSiena 软件包(Ripley, Snijders, & Preciado, 2011)对友谊网络和自我价值取向的相互作用进行建模。研究结果表明:

(1)高个体价值取向的青少年在社会互动中比低自我价值取向的青少年会更主动发出社会连接($Est.=0.11$, $p<0.01$), 同样的情况也出现在高群体价值取向的青少年身上($Est.=0.11$, $p<0.01$);

(2)从相似-选择效应来看, 相对于个体价值取向的相似性($Est.=0.11$, $p<0.01$), 青少年容易选择在集体价值取向上更相似的同伴成为朋友($Est.=0.30$, $p<0.01$);

(3)从相似-影响效应来看, 随着时间的发展, 青少年与其朋友的个体价值取向会朝着一致的水平发展($Est.=2.60$, $p<0.01$)。进一步分析表明, 这种影响效应存在性别的差异, 女生的个体价值取向更容易受到朋友的影响($Est.=2.60$, $p<0.01$)。

关键词 自我观念; 社交网络; 友谊同质性; 选择效应和影响效应

FRIENDSHIP HOMOPHILY IN THE DEVELOPMENT OF THE CHINESE ADOLESCENTS' SELF-VIEWS: A LONGITUDINAL DYNAMIC SOCIAL NETWORK STUDY

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Abstract: Establishing a clear self-view is a key developmental task of adolescent. Peer interactions provide them with a salient way to form and shape the views about who I am, and friendships are especially important in this process. The previous studies mostly focused on the relations on self-views and peer relations at a variable-centered level, which was merely based on a descriptive paradigm or individual-level analysis. However, little is known about the friendship ecology of adolescents who hold different self-views, especially in the Chinese cultural context which highly values social interaction and group functioning. This study aimed to investigate the friendship network characteristics of the Chinese adolescents who hold different types of self-views (i.e., self-orientation and group-orientations), as well as examining whether selection (i.e., adolescents tend to befriend with peers who are similar to them in self-view) and influence effects (i.e., adolescents' self-views could be influenced by their friends over time) could explain the similarity in self-views between adolescents and their friends. Participants ($N=1254$, 48.4% girls, $M_{age}=13.2$ years, $SD=0.40$ year at Time 1) came from 22 junior school classes in mainland China followed over three years from Grade 7 to Grade 9. Measures of adolescents' self-views and friend relationships were obtained each year from a combination of adolescents' self-reports and friendship nomination. All analysis was operated in the Simulation Investigation for Empirical Network Analysis software package in R (RSiena), package version 1.2-1.2. Results showed that (1) Higher self-orientation adolescents have, more initiatively they act in the social relationship ($Est.=0.11$, $p<0.01$), the same pattern could also be found on higher group-orientation adolescents ($Est.=0.23$, $p<0.01$). Moreover, higher group-orientated adolescents are more popular in their social networks than lower group-orientated adolescents ($Est.=0.12$, $p<0.01$). (2) For the similarity-selection hypothesis, the results showed that adolescents tend to select friends with similar levels of group-orientation ($Est.=0.30$, $p<0.01$) rather than self-orientation ($Est.=-0.03$, $p>0.5$). (3) As regards similarity-influence hypothesis, we found that friends increase each other's self-orientation as relationship endure ($Est.=2.60$, $p<0.01$); further analysis on gender difference

suggested that girls' self-orientation is more influenced by their friends' self-orientation level than boys' (Est.=1.85, $p<0.01$). These results emphasized the significance of looking at the interplay between adolescents' self-views and friendships over time, especially embedded in social networks.

Keywords: Self-views, Social network, Friendship homophily, Selection and influence effects

选择还重要吗？选择效价对学龄前儿童理解和评价选择权的影响

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摘要 人们通常表现出自主选择偏好, 即相比于他人给自己做选择, 更加偏好自己做出选择。并且, 近期社会善念方面的研究发现, 人们对于给予他人选择的权利的行为比限制他人选择权利的行为评价更高。但以往研究主要关注人们面临正性或中性的选择的情况, 少有关关注选择为负性的情况。本文探究, 选择的效价(正性或负性)对成人及儿童对于给他们留选择的的行为的评价的影响。特别地, 当选择为负性时, 儿童和成人是否还会认为选择权很重要? 本研究采用社会善念范式, 采用2(留选择 vs. 不留选择, 被试内)×2(正性 vs. 负性, 被试间)混合设计, 共招募120名4-6岁儿童和124名成人参与实验。我们让被试评价两个人物在选择水果(或玩具)时的表现; 其中一个人物在自己选择水果(玩具)时给排在后面的人留下两种不同水果(即, 给予后者的选择权); 另一个人物则给排在后面的人留下两个相同的水果(即, 剥夺后者的选择权)。在正性选项条件下, 所有的水果(玩具)都是完好的; 在负性选项条件下, 水果(玩具)是被损坏的。我们让儿童分别评价两个排在前面的人物对后面的人有多好, 并让儿童对排在后面的人的情绪进行推断。除此之外, 我们还测量了儿童在心理理论任务中的表现。结果发现, 其一, 随着年龄发展, 儿童的评价逐渐受到选项性质的影响。具体而言, 不论选项好坏, 4、5岁儿童均对给后者留选择的人物的评价更高, 而6岁儿童及成人在负性选项条件下对是否给他人留选择人物的评价差异要显著小于正性条件下的评价差异。其二, 4-5岁儿童均认为排在后面的人物在拥有选择时或选项为正性时情绪更积极, 但6岁儿童和成人则认为, 相比于拥有选择权, 当选择权被剥夺时, 选项性质对排在后面的人物的情绪几乎没有影响。最后, 我们发现儿童对不同情境中人物的评价以及对后者的情绪推断与心理理论存在显著相关。综上所述, 4-6岁儿童对选择权的认识逐渐成熟, 并且受到心理理论发展的影响。本研究对探究儿童对选择权的认识、理解和评价及其发展机制有重要意义。

关键词 社会认知发展, 选择权理解, 心理理论, 学龄前儿童发展, 社会善念

Does choice still matter? The influence of valence of choice on preschoolers' understanding and evaluation of the freedom to choose

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Abstract: People desire for the freedom to choose, that is, they usually prefer to make their own choices instead of abdicating the opportunity to others. Recent studies on social mindfulness revealed that people evaluated those who left a choice for others as nicer than those who deprived others' freedom of choice. However, previous studies only focused on attractive or neutral choice, it is largely unknown how people's evaluations may change when the options are aversive. So, in this study, we explored whether the valence of choice (good vs. bad) affects adults and children's evaluation of the actions of leaving a choice for others (or not). In particular, we wondered, when all the options are bad, whether it is still important for adults and children to make their own choice. We adopted the social mindfulness paradigm, using a 2 (leaving a choice vs. leaving no choice, within subjects) × 2 (good options vs. bad options,

between subjects) mixed design. We recruited 120 4- to 6-year-old children and 124 adults to participate in the study. We asked participants to evaluate the performance of two character when picking fruit (or toys). One character left two different kinds of fruit [toys] for the next character to choose from (i.e., leaving a choice). The other character left two identical fruit [toys] for the next character (i.e., leaving no choice). In the good choice condition, the fruits [toys] to pick were in good condition; while in the bad choice condition, the fruits [toys] were damaged. The participants were asked to rate how nice the first character was, and then infer the feeling of the second character. After that, the children participated in the theory-of-mind tasks. Our findings are as follows. First, with age, children's evaluations of the actions were increasingly influenced by the valence of choice. Specifically, 4- to 5-year-olds thought the first character who left a choice was much nicer than the character who left no choice, regardless of the valence of choice. However, 6-year-olds evaluated the character leaving a choice as significantly nicer in the good choice condition than in the bad choice condition, and they evaluated the character leaving no choice as equally nice in the good choice condition and the bad choice condition, which is highly consist with adults' evaluation. Second, children of 4 and 5 inferred the second character as happier when being left a choice (than when being left no choice) and when the items were in good condition (rather than in bad condition). But 6-year-olds and adults only inferred the character being left a choice as happier (than the one being left no choice) in the good choice condition, but not in the bad choice condition. Last, we found that children's evaluation of niceness and inference of feelings are significantly related to children's theory-of-mind abilities. In conclusion, children's understanding of choice gradually develops during age 4 to 6, and such understanding is related to the development of theory-of-mind. Our research makes great contributions to the investigation of children's understanding and evaluation of choice and its developmental mechanism.

Keywords: social cognitive development, choice understanding, theory of mind, preschoolers, social mindfulness

语素意识和句法意识对幼儿听力理解的影响

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摘 要 听力理解是从口头语言中获取信息的过程, 是儿童同伴交往和发展社会能力的前提。建构整合模型(Kintsch, 1988)认为, 听力理解作为口头语言技能的组成部分是一个建构整合的过程, 它不仅需要词汇和短语等底层的解码和加工, 还需要句法来分析和整合信息。而语素意识反映了儿童对词汇的最小语义单位的意识与操作, 儿童将词分解成语素并通过重新组合来构建整词意义, 这一过程在理解口头语言中尤其重要。句法意识反映的是儿童反思句子内在语法结构的能力, 儿童利用句法意识将字词组成有意义的句子, 对口头语言的理解有促进作用, 因此听力理解与这两种元语言意识密切相关。此外, 幼儿期是儿童元语言意识发展的重要时期, 语素意识在幼儿期开始萌芽并且整个幼儿园阶段都处于不断提高的状态, 句法意识从 2~3 岁开始萌芽, 4~8 岁迅速发展(Tunmer & Grieve, 1984)。已有研究(Ku & Anderson, 2003; Plaza, 2001)表明语素意识和句法意识的发展对儿童口头语言技能的提升至关重要, 但少有研究关注这两种元语言意识与幼儿听力理解的关系。为了考察语素意识和句法意识对幼儿听力理解的影响, 选取了 186 名幼儿园中班和 212 名大班儿童作为被试, 分别测查了儿童的语素意识、句法意识、工作记忆和听力理解。在控制了工作记忆之后, 结果发现: (1) 中班和大班儿童的语素意识分别解释了听力理解 8.7%和 8.6%的方差; (2) 中班和大班儿童的句法意识分别解释了听力理解 3.5%和 12.6%的方差。研究表明语素意识和句法意识均影响幼儿的听力理解, 但二者的预测力并不相同, 句法意识对幼儿听力理解的预测作用随年龄的升高而增强。

关键词 语素意识, 句法意识, 听力理解

The Influence of Morphological Awareness and Syntactic Awareness on Kindergarteners' Listening Comprehension

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Abstract: Listening comprehension is a skill of acquiring information from oral language, which is the premise of communication and social development. The construction-integration model (Kintsch, 1988) proposed that listening comprehension as an important part of oral language skills was the process of construction and integration, it required not only bottom level decoding of words and phrases, but also syntactic processing to analyze and integrate information so as to understand meaning of oral language. Morphological awareness reflects the ability of controlling semantic unit, children decode words into morphemes and construct the meaning of whole words, and the process plays important role in oral language. Syntactic awareness reflects to manipulate the grammatical structure of sentences, which prompts children to compose meaningful sentences with words, thus listening comprehension is closely related to morphological awareness and syntactic awareness. At the same time, the kindergarten is a critical stage for children development (Tunmer & Grieve, 1984). The prior studies (Ku & Anderson, 2003; Plaza, 2001) have shown that the development of morphological awareness and syntactic awareness played a role in the improvement of children's oral language skills, but few studies focused on the relationship between two metalinguistic awareness and listening comprehension. In order to investigate the influence of morphological awareness and syntactic awareness on listening comprehension for kindergarteners, 186 middle grade and 212 senior grade kindergarteners were tested by morphological awareness, syntactic awareness, working memory and listening comprehension. After controlling the role of working memory, the results showed that: (1) Morphological awareness accounted for 8.7% and 8.6% variances of listening comprehension in middle grade and senior grade kindergarten respectively; (2) Syntactic awareness accounted for 3.5% and 12.6% variances of listening comprehension in middle grade and senior grade kindergarten respectively. The conclusion indicated that both morphological awareness and syntactic awareness influenced listening comprehension for kindergarteners. The predictive power of syntactic awareness on kindergarteners' listening comprehension increased with grade.

Keywords: morphological awareness, syntactic awareness, listening comprehension

心理理论和执行功能对 3-5 岁儿童抵制诱拐行为的预测作用

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摘 要 儿童诱拐案件屡屡发生, 引起广大父母的强烈担忧和社会各界的广泛关注。儿童抵制诱拐行为是指在面对陌生人诱拐时, 儿童能够根据各种线索认识到存在风险, 并正确拒绝对方的行为。本研究旨在模拟的诱拐场景中探讨 3~5 岁儿童抵制诱拐行为的年龄发展趋势及其认知因素对抵制诱拐行为的预测作用。本研究模拟真实的诱拐场景: 首先由儿童熟悉的主试 1 将其单独带到室外并借故离开。主试 2(陌生人)试图跟儿童搭讪, 并试图用诱惑物引诱儿童离开。根据儿童的表现进行计分(0~3 分), 分数越高说明儿童越能抵制陌生人的诱拐。之后采用心理理论五任务量表(Wellman & Liu, 2004)和 Flanker Fish (丁晓攀, 2008; RÖthlisberger & Neuenschwander, 2011)分别测试心理理论和执行功能。本研究共纳入 90 名 3~5 岁($M_{\text{age}} = 4.54$, $SD = 0.80$)儿童被试, 其中男生 44 名, 女生 46 名。方差分析结果显示, 年龄的主效应显著($F(2, 88) = 10.33$, $p < 0.001$)。3 岁儿童(1.03 ± 1.10)相比于 4 岁(2.13 ± 1.07)和 5 岁儿童(2.21 ± 1.15)更容易被陌生人拐走, 而 4 岁和 5 岁儿童之间没有显著差异。采用回归分析发现在控制了年龄和性别之后, 心理理论对儿童抵制诱拐行为有显著的正向预测作用($\beta = 0.38$, $p < 0.01$), 执行功能的两个子成分灵活转换和抑制控制对抵制诱拐行为的预测作用都不显著($ps > 0.05$)。这项研究表明 3~5 岁儿童随着年龄的增长抵制诱拐行为表现越好, 4 岁可能是儿童抵制诱拐行为发展重要的转折点; 心理理论的发展水平越高的儿童抵制诱拐行为表现越好, 执行功能的发展水平则不能预测儿童的抵制诱拐行为。

关键词 儿童, 抵制诱拐行为, 心理理论, 执行功能

The Predictive Effect of Theory of Mind and Executive Function on 3- to 5-year-old Children's Behavior to Resist Abduction

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Abstract: Child abduction have occurred frequently, causing strong concerns among parents and widespread concern from all walks of life. Children's behavior to resist abduction means that when facing abduction by stranger, children can recognize the risk based on various clues and correctly reject the stranger. This study aims to explore the age development trend of 3- to 5-year-old children's behavior to resist abduction and the predictive effect of cognitive factors on children's behavior to resist abduction in a simulated abduction scenario. This study simulated a real-world abduction scenario: First, the experimenter 1 who child had been familiar with took child outside alone and left with excuses. The experimenter 2 (stranger) tried to talk to the child and attempted to lure the child away. Children's response to the stranger was coded to score 0~3, a higher score meaning children's better resistance to the abduction of stranger. Later, the theory of mind five task scale (Wellman & Liu, 2004) and Flanker Fish (Ding Xiaopan, 2008; RÖthlisberger & Neuenschwander, 2011) were used to test theory of mind and executive function respectively. A total of 90 children aged 3 to 5 years ($M_{age} = 4.54$, $SD = 0.80$) were included in this study, including 44 boys and 46 girls. The results of the analysis of variance showed that the main effect of age was significant ($F(2, 88) = 10.33$, $p < 0.001$). 3-year-old children (1.03 ± 1.10) were more likely to be abducted by strangers than 4-year-old (2.13 ± 1.07) and 5-year-old children (2.21 ± 1.15), and there was no significant difference between 4-year-old and 5-year-old children. Regression analysis found that after controlling for age and gender, theory of mind had a significant positive predictive effect on children's behavior to resist abduction ($\beta = 0.38$, $p < 0.01$). Flexible shifting and inhibitory control, the two subcomponents of executive function, did not have a significant predictive effect on children's behavior to resist abduction ($ps > 0.05$). This study shows that children aged 3 to 5 years old perform better in resisting abduction as aging, and 4 years old may be an important turning point in the development of children's behavior to resist abduction. Children with a higher level of development of theory of mind have a better performance in resisting abduction. The level of development of executive function cannot predict children's behavior to resist abduction.

Keywords: Preschool children, Behavior, Abduction resistance, Theory of mind, Executive function

戒毒所干警工作家庭冲突对职业倦怠的影响： 前摄应对与工作繁荣的链式中介作用

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摘要 戒毒所干警长期处于高负荷、高对抗、高风险的应激状态, 是职业倦怠的高危易感人群。强制隔离戒毒所干警经常面临教育矫治对象依从性差、复吸率高、教育矫治难度大的特殊性, 及环境封闭性的特点, 因此职业角色的付出通常难以抵消家庭角色的收益, 引发强烈的工作家庭冲突体验, 导致职业倦怠的产生。基于积极心理学视角, 越来越多学者将研究重点放在能够促使个体积极应对问题以及保持学习和活力状态的工作繁荣问题上, 这有利于减轻个体职业倦怠水平。前摄应对是一种朝向未来的、以目标达成为导向的积极应对方式, 是个体为预防潜在危险发生所做的努力, 可以缓冲角色压力带来的不良影响, 能有效减轻工作倦怠。另外, 良好的工作家庭关系能促进个体在工作中实现繁荣旺盛状态, 能够更好学习、能量恢复、不易倦

怠、减少缺勤和减轻压力。因此本研究主要探讨工作家庭冲突对戒毒所干警职业倦怠的影响，及前摄应对和工作繁荣在其中的作用机制。方法：采用工作家庭冲突量表、职业倦怠量表、前摄应对量表和工作繁荣量表对贵州省某强制隔离戒毒所的 311 名干警进行问卷调查。运用 SPSS21.0 对数据进行统计分析。结果：（1）工作家庭冲突与职业倦怠呈显著正相关($r=0.57, p<0.001$)。（2）前摄应对在工作家庭冲突与职业倦怠之间起着部分中介作用，中介效应为 0.04，其中介效应占总中介效应值的 7.02%；工作繁荣亦然，中介效应为 0.15，其中介效应占总中介效应值的 26.32%。（3）前摄应对和工作繁荣在工作家庭冲突与职业倦怠的关系中具有链式中介效应，中介效应为 0.07，其中介效应占总中介效应值的 12.28%。结论：本研究的结果为预防和干预戒毒所干警的职业倦怠提供了有效的实证依据与理论参考，也对降低其职业倦怠具有明显的应用价值。

关键词 戒毒所干警，工作家庭冲突，职业倦怠，前摄应对，工作繁荣

The Influence of Work-Family Conflict on Job Burnout about Police Officers in Drug Rehabilitation Center: the Chain Mediated Effect of Proactive Coping and Thriving at Work

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Abstract: The police officers in drug rehabilitation center are in the state of high load, high resistance and high risk for a long time, and they are the high risk susceptible population of job burnout. Police officers in drug rehabilitation center are often faced with the particularity of poor compliance, high relapse rate, difficulty in education correction, and the characteristics of closed environment. Therefore, the pay of professional role is usually difficult to offset the benefits of family role, trigger a strong experience of work family conflict, and further lead to job burnout. Based on the perspective of positive psychology, more and more scholars focus their research on individuals can actively cope with problems and the problems of thriving at work that keep learning and active, which is conducive to reducing the level of individual job burnout. Proactive coping is a positive and futures-oriented coping style, and also is an effort that individual to prevent the occurrence of potential danger. It can relieve the negative effects of role pressure and effectively reduce job burnout. In addition, a good work-family relationship can promote individuals' thriving at work, which can help individuals learn better, recover energy, reduce burnout, reduce absenteeism and reduce stress. Therefore, this study aims to explore the relationship between work-family conflict and job burnout among police officers in drug rehabilitation center, as well as the mechanism of proactive coping and thriving at work. Methods: Work-Family Conflict Scale, Job Burnout Scale, Proactive Coping Scale and Thriving at Work Scale were used to conduct investigation on 311 police officers in drug rehabilitation center. The research used SPSS21.0 to statistically analyze the data. Results: (1) Work-family conflict was significantly and negatively correlated with job burnout($r=0.57, p<0.001$). (2) Their proactive coping and thriving at work could partial mediate between work-family conflict on job burnout, the mediation effect of proactive coping and thriving at work were 0.04 and 0.15, of which the mediation effect accounted for 7.02% and 26.32% of the total mediation effect value.(3) Proactive coping and thriving at work showed a chain mediating effect in the relationship between work-family conflict and job burnout, the mediating effect was 0.07, and the mediating effect accounted for 12.28% of the total mediating effect value. Conclusion: This study reveals the effect of work-family conflict on their job burnout, which offers a effective guidance and theoretical reference for the prevention and intervention in job burnout about police officers in drug rehabilitation center, and has obvious application value about improving their job burnout.

Keywords: Police Officers in Drug Rehabilitation Center, Work-Family Conflict, Job Burnout, Proactive Coping, Thriving at Work

大学生孤独感与攻击性的关系：特质焦虑和羞怯的链式中介

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摘要 目的：探究特质焦虑和羞怯在孤独感与攻击性之间的链式中介作用。方法：采用中文大学生版 Buss-Perry 攻击性量表(CC-BPAQ)、特质焦虑问卷(TAI)、孤独感量表(UCLA)和羞怯问卷对贵州省 602 名大学生进行问卷调查。结果：大学生的敌意、身体攻击和易怒性有显著的性别差异，同时有恋爱对象大学生的易怒性显著高于没有恋爱对象的大学生。孤独感、羞怯、特质焦虑与大学生攻击性均呈显著正相关。特质焦虑和羞怯在大学生孤独感和攻击性之间的中介作用显著。特质焦虑-羞怯的链式中介作用显著。结论：大学生孤独感与攻击性的关系受特质焦虑和羞怯的单独中介作用，以及特质焦虑和羞怯的链式中介作用的影响。

关键词 大学生，孤独感，攻击性，特质焦虑，羞怯，链式中介

Relationship within Shyness Aggression, Anxiety and Loneliness

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Abstract: Objective: To explore the chain mediating role of trait anxiety and shyness between loneliness and aggression. Methods: 606 college students were investigated with the College Students' CC-BPAQ, Trait Anxiety Inventory, UCLA Loneliness Scale and the College Students' Shyness Scale. Results: There were significant gender differences in hostility, physical aggression and irritability of college students, and the irritability of college students with love objects was significantly higher than that of college students without love objects. There were significant positive correlations among loneliness, shyness and trait anxiety and aggression. The mediating effects of trait anxiety and shyness between loneliness and aggression in undergraduate were significant. The chain mediating effect of trait anxiety and shyness was significant. Conclusion: In undergraduate, trait anxiety and shyness have a chain mediating effect on the relationship between loneliness and aggression.

Keywords: Undergraduate, Loneliness, Aggression, Trait anxiety, Shyness, Chain mediation

初显期成人网络亲子沟通与自我同一性和生命意义感的关系研究

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摘要 以数字技术为中介的信息存储和传递的新媒介在大众社会交往中逐渐普及，它以互联网为依托、手机和微信为主要载体，成为现代社会人际沟通的主流工具，同时在家庭亲子沟通中扮演着重要的角色。新媒介的普及革新了人际之间的沟通交流方式，其中家庭成员间，尤其是父母与子女间的沟通受到显著影响。以往文献大多从传播学角度出发，采用质性研究和问卷调查相结合的研究方法，从留守儿童亲子沟通、住宿中学生和国外留学生、“成年初期”子女等不同年龄层孩子与双亲沟通出发，对新媒介广泛应用下亲子网络沟通的利弊问题，以及由此带来的“数字鸿沟”和与之对应的“技术反哺”等问题做了较多研究。但是，从心理学角度出发进行的量化研究却为数不多，已有的研究也多把目光集中在青少年、大学生身上，而较少关注新媒介变革下父母一辈的心理变化。因此，在后续研究中，网络亲子沟通中父母与子女双方的心理动态都值得受到积极关注。结合亲子双方视角揭示在数字媒介日新月异变化下的中国家庭沟通模式及其隐私管理方法，并且探究网络亲子沟通中父母子女双方关系的变化及每位家庭成员的心理发展。

关键词 新媒介，微信，网络沟通，亲子沟通

Network parent-child communication under the new media of social communication Literature review

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Abstract: Digital technology as the intermediary of information storage and transmission of new media in the mass social communication is gradually popular, it takes the Internet as the basis, mobile phone and WeChat as the main carrier, become the mainstream tool of modern social interpersonal communication, at the same time in the parent-child communication plays an important role. The popularization of new media has revolutionized the ways of interpersonal communication, among which the communication between family members, especially between parents and children, has been significantly affected. Mostly from the perspective of communication studies in the literature, by adopting the combination of qualitative research and questionnaire survey research methods, from the left-behind children and students in the parent-child communication, accommodation of foreign students, "into early stage" of different age children such as children and parents communication, under the new media widely used the pros and cons of parent-child communication network problems, and as a result of the "digital divide" and the corresponding problems such as "technical feedback" to do more research. However, there are few quantitative studies from the perspective of psychology, and most of the existing studies focus on teenagers and college students, but pay less attention to the psychological changes of parents under the new media revolution. Therefore, in the follow-up research, the psychological dynamics of both parents and children in online parent-child communication are worthy of positive attention. From the perspective of parents and children, this paper reveals the Chinese family communication mode and its privacy management method under the ever-changing digital media, and explores the changes in the relationship between parents and children in online parent-child communication and the psychological development of each family member.

Keywords: new media, WeChat, network communication, parent-child communication

校园欺凌中青少年共情与旁观者保护行为的关系：三水平元分析

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摘要 尽管许多研究表明，青少年的共情与校园欺凌中的旁观者保护行为呈正相关，但部分研究未能发现这两个变量之间的显著关联。为了解释这一差异，本研究对 27 篇论文(35 篇独立研究，N = 25012 名青少年)进行了三级荟萃分析。结果表明，共情与旁观者保护行为呈正相关。此外，共情类型和保护行为的评价主体对共情与旁观者保护行为之间的关系有调节作用。情感共情与旁观者防御的相关系数($r = 0.27$, 95% CI [0.22, 0.32])显著强于认知共情与旁观者防御的相关系数($r = 0.22$, 95% CI [0.17, 0.28])；采用自我评价测量旁观者保护行为获得的相关系数要显著高于采用同伴评价测量旁观者保护行为获得的相关系数。结果表明，共情与旁观者保护行为密切相关。因此，可以从增强青少年共情的角度来预防校园欺凌。

关键词 欺凌，共情，旁观者保护行为，三水平元分析，青少年

Adolescent Empathy Influences Bystander Defending in School Bullying: A Three-Level Meta-Analysis

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Abstract: Even though numerous studies have shown that adolescent empathy is positively related to bystander defending in school bullying, others have failed to detect a significant association between these two variables. To address this discrepancy, a three-level meta-analysis of 27 papers (35 independent studies, N = 25,012 adolescents)

was conducted. The results showed that empathy was positively correlated with bystander defending. Furthermore, the strength of the relationship between empathy and bystander defending was moderated by the type of empathy and the evaluators of defending. Specifically, the correlation coefficient between affective empathy and bystander defending ($r = 0.27$, 95% CI [0.22, 0.32]) was significantly stronger than that between cognitive empathy and bystander defending ($r = 0.22$, 95% CI [0.17, 0.28]). Finally, the strength of the relationship between empathy and bystander defending was moderated by the evaluator of defending behavior. That is, the correlation coefficient of bystander defending measured by self-evaluation was significantly stronger than that measured by peer-evaluation. The results showed that empathy was closely related to bystander defending. Thus, school bullying can be prevented from the perspective of enhancing empathy among adolescents.

Keywords: bullying, empathy, bystander defending, three-level meta-analysis, adolescents

成年与老年个体工作记忆刷新中面孔情绪加工的差异

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摘要 情绪在信息传播过程中起着重要的作用，其中面部表情是情绪表达最直接的方式。个体在识别不同情绪面孔时存在差异。部分研究者的研究结果显示，相比积极情绪面孔，个体对消极情绪面孔加工更有优势，而其他研究者则持相反态度。但对于成人和老年人个体对不同情绪面孔加工差异的研究则较少。据此，本研究以探讨面孔的情绪（积极、中性、消极）在成年与老年个体工作记忆刷新中的差异为目的。采用 N-back 实验范式，选取 40 张情绪面孔为刺激材料，使用情绪面孔一致性判断任务，对 21 名成人和 24 名老年人进行研究。结果发现，（1）正确率数据结果显示，两组被试的年龄特征主效应显著（ $F(1,38) = 6.525$, $p = 0.015$, $\eta^2 = 0.147$ ）。成年被试的正确率（80.5%）显著高于老年人被试（74.1%）。（2）反应时数据结果显示，两组被试的年龄特征主效应显著（ $F(1,38) = 46.836$, $p < 0.001$, $\eta^2 = 0.939$ ）。成年人被试情绪面孔刷新的反应时（959ms）显著快于老年人被试对情绪面孔刷新的反应时（1714ms）。（3）面孔情绪×年龄特征交互效应显著（ $F(2,76) = 7.242$, $p = 0.001$, $\eta^2 = 0.16$ ）。老年人对积极情绪面孔刷新正确率高于消极和中性情绪面孔，成年人对三种情绪面孔刷新正确率无明显差异。研究结果显示，首先，老年人执行功能减退可能是导致老年人情绪面孔识别反应时较慢，正确率低于成年人的原因。其次，老年人对消极情绪加工功能先行衰退，可能是导致对积极情绪面孔存在加工优势的原因。

关键词 老年人，工作记忆，情绪面孔，刷新

Differences in emotion faces processing between adults and older working memory updating

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Abstract: Emotion plays an important role in the process of information dissemination and facial expression is the most direct way of emotional expression. There are differences in the recognition of different emotional faces. The results of some researchers show that people have more advantages in processing negative emotional faces than positive emotional faces, while others hold the opposite attitude. However, there are few studies on the processing differences of different emotional faces between adults and older. Based on this, this study used N-back experimental paradigm that selected 40 emotional faces as stimulus materials, and used emotional face consistency judgment task to explore the differences of facial emotion (positive, neutral, negative) in working memory-updating test between adult and older. The results showed that: (1) the main effect of age characteristics of probe was significant ($F(1,38) = 6.525$, $p = 0.015$, $\eta^2 = 0.147$). The correct rate of adult subjects (80.5%) was significantly higher than that of older subjects (74.1%). (2) Reaction time data showed that the main effect of age characteristics of the two groups was significant ($F(1,38) = 46.836$, $p < 0.001$, $\eta^2 = 0.939$). The reaction time (959 ms) of adult subjects was significantly

faster than that of older subjects (1714 ms). (3) The interaction effect of facial emotion $\times$ age characteristics was significant ($F(2,76)=7.242, p=0.001, \eta^2=0.16$). The updating accuracy rate of positive emotional faces was higher than that of negative and neutral emotional faces, while there was no significant difference among adults. Conclusion that the decline of executive function in the older may be the reason that the response time of emotional face recognition is slower and the accuracy rate is lower than that of adults. Secondly, the older people's processing function of negative emotion first declines, which may be the reason for the processing advantage of positive emotional faces.

Keywords: older, working memory, emotion faces, updating

科学家印象对初一学生科学学习动机的影响

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摘要 在科技强国的大背景下培养科技创新人才成为当务之急, 提高正接受基础学习的中学生的科学学习动机就显得尤为重要。新型冠状病毒肺炎疫情期间, 亲赴一线的科学家们向普罗大众们诠释了“苟利国家生死以, 岂因祸福避趋之”的深刻内涵, 他们用实际行动展示了科学技术的力量。以此为契机, 本研究目的是探究疫情期间(于2020年2月23日进行线上测试)中学生对科学家的印象, 并进一步探究科学家印象对其科学学习动机的影响。鉴于此, 本研究以362名初一学生为研究对象, 其中包括189名男生, 173名女生。分别采用自编科学家印象问卷调查初一学生疫情期间对科学家的印象, 使用科学学习动机量表(SMTSL)调查其在校期间, 疫情期间的科学学习动机, 探讨科学家印象对初一学生科学学习动机的影响。结果发现: (1) 科学家印象与初一学生科学学习动机变化呈正相关; (2) 男生相较于女生更愿意在未来的大学学习中选择与科学相关的专业, 男生相较于女生更愿意未来从事与科学相关的专业。以上结果表明, 疫情期间增强了初一学生对科学家的正面印象, 科学学习动机有明显的增强, 科学学习动机的变化与初一学生对科学家印象的增强有关。相对于女生而言男生对学习科学、从事科学相关职业的意愿更强, 因此在此结果的基础上, 可以采取相应干预措施, 提高女生相应意愿。

关键词 科学学习动机, 中学生, 科学家印象

The Influence of Scientists' Impression on Science Learning Motivation of Junior high school students

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Abstract: Under the background of powerful country with science and technology, it is urgent to cultivate innovative talents in science and technology. It is particularly important to improve the motivation of science learning of middle school students who are accepting basic learning. During the outbreak of novel coronavirus pneumonia, scientists who went to the front line interpreted the profound meaning of "Gou Li's life and death, and why it was avoided by evil and fortune". Taking this opportunity, the purpose of this study is to explore the impression of middle school students on scientists during the epidemic period (on February 23, 2020), and further explore the impact of scientists' impression on their science learning motivation. In view of this, this study takes 362 junior high school students as the research object, including 189 boys and 173 girls. In order to explore the effect of impression of scientists on science learning motivation of junior high school students, the self-designed impression questionnaire of scientists was used to investigate the influence of impression of scientists on science learning motivation of junior high school students during the epidemic period, and the Science Learning Motivation Scale (SMTSL) was used to test their science learning motivation. The results show that: (1) there is a positive correlation between the impression of

scientists and the change of science learning motivation of junior high school students; (2) boys are more willing to choose science related majors than girls, and boys are more willing to engage in science related majors than girls. The results showed that the positive impression of the first grade students on the scientists was enhanced during the epidemic period, and the motivation of science learning was significantly enhanced. The change of science learning motivation was related to the enhancement of the impression of the scientists on the students. Compared with girls, boys are more willing to learn science and engage in science related professions. Therefore, based on the results, corresponding intervention measures can be taken to improve the corresponding willingness of female students.

Keywords: motivation of science learning, Middle school students, impression of scientists

孤独症谱系障碍儿童对社会互动动作“给-要”的理解

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摘要 在快速多变的世界中理解和预测他人的行为是社会互动成功与否的一个重要因素。本研究考察了孤独症儿童对基本的社会互动动作“给-要”动作的理解。实验一考察了孤独症儿童对“给”动作的理解, 选取了36名5-8岁的孤独症儿童和36名匹配的正常发育儿童, 采用眼动技术探讨了他们在正常“给”和异常“给”两种条件下的眼动注视特征。实验二考察了孤独症儿童对“要”动作的理解, 选取了38名5-8岁的孤独症儿童和34名匹配的正常发育儿童, 采用眼动技术探讨了他们在正常“要”和异常“要”两种条件下的眼动注视特征。结果发现孤独症儿童能够预测“给”和“要”这两种动作, 但是相比于正常发育儿童来说, 他们对具有社会交流意义的“给”动作的敏感性要更低。此外孤独症儿童对“要”动作的理解似乎没有缺陷。这些结果说明孤独症儿童对简单的互动动作进行预测的基本机制可能是完整的, 但是他们在自上而下的心理状态的推理上可能还是存在缺陷, 而且他们在动作预测时更多地依赖物理线索(如运动轨迹), 而对目标指向的社会互动进行心理状态推理时会存在困难。

关键词 孤独症谱系障碍, 给-要互动, 眼动, 动作预测

The understanding of give-and-take interactions in children with autism spectrum disorder

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Abstract: Understanding and predicting others' behavior in a dynamic and rapidly changing world is crucial for success in social interactions. The current study investigated the understanding of give-and-take interactions in children with autism spectrum disorder. Experiment 1 examined the understanding of giving action in children with ASD and 36 5- to 8-year-old children with ASD and 36 typically developing children participated in the experiment. Experiment 2 investigated children with ASD's perception of taking action and 38 5- to 8-year-old children with ASD and 34 typically developing children were recruited. We found that children with ASD could predict actions, but they were less sensitive to the social meaning of the giving action compared with typically developing children. Children with ASD's prediction of taking was preserved and it seemed that they could understand the taking action. These results indicate that the basic mechanisms of action prediction are intact in children with ASD whereas there may be deficits in the top-down mental state inferences. Moreover, children with ASD rely more on physical cues such as the kinematic information and have difficulties in mental inference when processing goal-directed social interactions.

Keywords: autism spectrum disorder, give-and-take interaction, eye tracking, action prediction

中国婴幼儿（0~36 月）光感发育研究

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摘 要 光感是基本的视觉功能，包含基本的原始光刺激反射和对不同波长光的辨别能力，反映了神经发育状态，临床上多用于判断异常发育、预后、死亡、自主反应等。由于研究方法和刺激选择等差异，光感的发育过程尚有争议。本研究研制了一套标准的光感测试体系（笔式手电筒和 5 种不同颜色反光板），招募了来自中国 5 个不同省份 868 名 0~36 个月婴幼儿，测量了由光线增强引起的瞳孔收缩和眼睑闭合反应，以及对不同颜色光斑的注视和躲避等光斑感知反应。结果发现，婴幼儿的瞳孔对光反射、光刺激瞬目反射、白色、红色、黄色、绿色、蓝色光反应的通过率均值分别为 76.7%（ $\pm 1.4\%$ ）、67.4%（ $\pm 1.6\%$ ）、62.4%（ $\pm 1.6\%$ ）、60.1%（ $\pm 1.6\%$ ）、59.9%（ $\pm 1.7\%$ ）、54.3%（ $\pm 1.7\%$ ）、52.0%（ $\pm 1.7\%$ ）；在每个项目中，7~12 个月通过率都高于均值以及其他年龄组。分层卡方检验表明，瞳孔对光反射在 0~7 个月发育速度显著快于其他项目，7 个月之后一致，且总体通过率高于其他功能；光刺激瞬目反射的发育节奏与不同颜色光反射一致，但总体通过率略高；白色和长波长光（红色和黄色）在项目通过率和发育节奏上均无显著差异，短波长光（绿色和蓝色）在项目通过率和发育节奏上也无显著差异，但前者总体通过率略高于后者。本研究在较大样本范围内证实了不同光感功能发育的异步性，瞳孔对光反射优先发育，光刺激瞬目反射和其他色光反射步调一致，都在 12 个月以后发育相对成熟；在不同色光中，长波长光感与短波长光感的发育节奏一致，但其成熟度高于短波长光感，表明长短波长光感的发育可能存在一定的不均衡。

关键词 光感，原始光反射，长波长光反射，短波长光反射，光感发育异常

Development of Light Sensation in Chinese Infants from 0~36 months

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Abstract: Light sensation, a foundational visual function, includes primitive reflex to light and the ability to distinguish lights of different wavelengths, reflecting neurodevelopmental status, and was widely used to diagnose premature and/or abnormal development, prognosis, death, and autonomic reaction in the clinic. The exact route map of light sensation development is still controversial. The current study established a set of standard test materials and associated procedures for light sensation assessment, screened pupillary constriction and eyelid closure with light enhancement paradigm, and the reflex of five lights of different wavelengths in 868 Chinese infants aged from 0~36 months across five different provinces in China. Average passing rate in pupillary light reflection, blink response to light, the reflex of white, red, yellow, green and blue light was 76.7%($\pm 1.4\%$), 67.4%($\pm 1.6\%$), 62.4%($\pm 1.6\%$), 60.1%($\pm 1.6\%$), 59.9%($\pm 1.7\%$), 54.3%($\pm 1.7\%$), 52.0%($\pm 1.7\%$), respectively; the passing rate in the group of 7-12 months was higher than that in all other age groups for all measures. A Cochran-Mantel-Haenszel test (CMH test) indicated that the developmental pace of pupillary light reflection was significantly faster than that of other functions

before the age of 7 months, although they were comparable thereafter, and the overall passing rate was also higher than that of other measures. The developmental pace of blink response to light was consistent with the reflex of chromatic lights, with higher passing rate. There was no significant difference in the passing rate and developmental pace between reflex response to white, red and yellow lights, as well as between green and blue lights, but the overall passing rate of the former three function was slightly higher than that of the latter two. Our results confirmed the asynchrony of different light sensation development in a large Chinese infant sample. Our results also indicated imbalance in the development of long- and short-wavelength light sense.

Keywords: light sensation, primitive reflexes, reflex of long-wavelength light; reflex of short-wavelength light, abnormal development of light sensation

大学生成人依恋与死亡态度的关系：社会支持的调节作用

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摘要 死亡态度是指个体对死亡表现出的积极或消极的稳定心理倾向, 与个体的生命意义感、抑郁、焦虑及自杀行为关系密切。同时, 大学生正处于自我成长和统合的关键期, 死亡态度的形成是重要且具有挑战性的阶段性发展任务。但目前为止, 针对我国大学生群体的死亡态度研究仍然较少。因此, 探究大学生死亡态度的影响因素和机制具有重要意义。本研究在恐惧管理理论的研究框架下, 检验成人依恋对于死亡态度的预测作用, 并探究社会支持的调节效应。本研究使用亲密关系体验问卷、社会支持评定量表和死亡态度描绘量表(包括死亡恐惧、死亡逃避、逃离接受、自然接受和趋近接受五个维度)对 414 名大学生进行问卷调查。结果发现: (1) 大学生依恋回避与死亡恐惧、趋近接受及逃离接受的死亡态度呈显著正相关, 与自然接受呈显著负相关。依恋焦虑与死亡恐惧、死亡逃避、趋近接受与逃离接受的死亡态度呈显著正相关; (2) 大学生依恋回避正向预测逃离接受的死亡态度; (3) 社会支持在依恋回避和逃离接受的死亡态度间起到显著的调节效应。当社会支持越高, 依恋回避越强的个体就越不容易形成逃离接受的死亡态度。研究发现, 当个体的依恋回避风格越强时, 越容易形成回避当前问题、视死亡为解脱的逃离接受的死亡态度, 而较高的社会支持可以降低此风险。这提示我们, 在针对大学生的死亡教育中, 需注意个体的成人依恋风格, 提供必要的社会支持。

关键词 死亡态度, 成人依恋, 社会支持, 大学生

Adult Attachment and Death Attitude in College Students: the Moderating Effect of Social Support

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Abstract: Death attitude refers to the individual's positive or negative stable psychological tendency to death, which is closely related to the low level of sense of life meaning, high depression, anxiety and suicidal behavior. Meanwhile, college students are in a critical period of growth and integration in self, and the formation of suitable death attitude is an important and challenging developmental task in this period. But up to now, there are still few studies on the death attitude of college students in China. Therefore, it is of great significance to explore the influencing factors and mechanism of college students' death attitudes. Within the framework of fear management theory, this study

examined the association between adult attachment and death attitude and explored the moderating effect of social support in this association. In this study, 414 college students were investigated with Intimacy Experience Scale, Social Support Rating Scale, and Death Attitude Description Scale (including five dimensions of death fear, death escape, fleeing acceptance, natural acceptance, and approaching acceptance). The results showed that: (1) Attachment avoidance of college students was significantly positive correlated with death fear, approaching acceptance, and death attitude of fleeing acceptance, while significantly negative correlated with natural acceptance. And attachment anxiety had a significant positive correlation with death fear, death escape, approaching acceptance, and death attitude of fleeing acceptance. (2) The death attitude of attachment avoidance was positively associated with fleeing acceptance among college students; (3) Social support played a significant moderated role in the relationship between attachment avoidance and death attitude of fleeing acceptance. When social support was higher, an individual with stronger attachment avoidance was less likely to form death attitude of fleeing acceptance. The study found that the stronger the attachment avoidance style of college students was, the easier it was to form the death attitude of fleeing acceptance that led to avoid the current problem and regard death as relief, and the higher social support could reduce such risk. This suggests that we should pay attention to individual adult attachment style and provide necessary social support in the death education for college students.

Keywords: death attitude, adult attachment, social support, college students

大数据背景下农村留守儿童社会适应性研究

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摘 要 农村留守儿童是我国庞大而又特殊的群体之一, 他们能否良好地适应当前环境, 顺利融入社会并健康发展, 不仅关系到留守儿童自身成长、农民家庭的幸福、农村教育发展, 对于早日建成高水平的小康社会也具有重要意义。因此, 农村留守儿童社会适应性相关研究一直是研究者关注的焦点。然而, 经过文献梳理发现, 适用于测量我国农村留守儿童社会适应性的成熟工具较少。本研究以 963 名农村儿童为研究样本, 并对其中 187 名农村儿童进行重复测量, 经过项目分析、探索性因素分析、验证性因素分析, 生成 26 个项目五个维度的《农村儿童社会适应问卷》, 问卷内部一致 α 信度系数为 0.919, 总问卷与各维度之间的相关系数在 0.337–0.925 之间, 重测信度在 0.334–0.446 之间, 具有良好的结构效度与相容效度。随后, 研究从 2919 名农村儿童中筛选出 1440 名留守儿童为被试, 考察了农村留守儿童的社会适应现状, 并构建了父母教养方式、亲子沟通、友谊质量、师生关系、人格、社会支持等因素影响社会适应性的结构方程模型 (SEM)。结果发现: (1) 农村留守儿童社会适应性显著差于农村非留守儿童, 农村留守儿童中双亲留守类型的留守儿童社会适应性显著差于单亲留守类型的留守儿童; (2) 农村留守女童社会适应性显著好于农村留守男童; 小学阶段的农村留守儿童社会适应性显著好于中学阶段的农村留守儿童。 (3) 与父母联系频率越高的农村留守儿童社会适应性越好; 对父母外出打工持有支持或不支持态度的农村留守儿童得分显著好于持无所谓态度的农村留守儿童。 (4) 农村留守儿童的师生关系、同伴友谊质量、自我意识直接影响其社会适应性; 亲子沟通分别通过师生关系、同伴友谊质量、自我意识间接影响其社会适应性; 同伴友谊质量分别通过师生关系、自我意识对社会适应性产生间接影响; 社会支持分别通过师生关系、同伴友谊质量、自我意识间接影响其社会适应性。

关键词 大数据、农村留守儿童、社会适应性

Research on social Adaptability of Rural Left-behind Children under the background of big data

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Abstract: Left-behind children in rural areas are one of the large and special groups in China, Whether they can adapt well to the current environment, smoothly integrate into the society and develop healthily is not only related to the growth of left-behind children themselves, the happiness of farmers' families and the development of rural education, but also of great significance for the early building of a high-level well-off society. Therefore, studies on social adaptability of left-behind children in rural areas have always been the focus of researchers' attention. However, through literature review, we found that there are few mature tools suitable for measuring the social adaptability of rural left-behind children in China. This study took 963 rural children as research samples, and repeated measurements were made on 187 of them. Through project analysis, exploratory factor analysis and confirmatory factor analysis, a five-dimension questionnaire on Social Adaptation of Rural Children in 26 projects was generated. The a reliability of the scale was 0.919, and the correlation coefficient between the scale and each dimension was between 0.337 and 0.925, retest reliability between 0.334 and 0.446, has good structure validity and consistency validity. Subsequently, we selected 1440 left-behind children from 2919 rural children as subjects, investigated the social adaptation status of rural left-behind children, and constructed a structural equation model (SEM) for the influence of factors such as parenting style, parent-child communication, friendship quality, teacher-student relationship, personality and social support on social adaptability. The results showed that: (1) The social adaptability of left-behind children in rural areas is significantly worse than that of non-left-behind children in rural areas. The social adaptability of left-behind children with both parents working outside the city is significantly worse than that of left-behind children with only one parent working outside the city. (2) The social adaptability of rural left-behind girls is significantly better than boys. The social adaptability of rural left-behind children in primary school is significantly better than that in secondary school. (3) The higher the frequency of contact with parents, the better the social adaptability of left-behind children in rural areas. Rural left-behind children who supported or did not support their parents to go out to work scored significantly better than those who did not care. (4) The teacher-student relationship, peer friendship quality and self-consciousness of left-behind children in rural areas directly affect their social adaptability. Parent-child communication indirectly affects their social adaptability through teacher-student relationship, peer friendship quality and self-consciousness. The quality of peer friendship has indirect influence on social adaptability through teacher-student relationship and self-consciousness. Social support affects their social adaptability indirectly through teacher-student relationship, peer friendship quality and self-consciousness.

Keywords: Big data, Left-behind children in rural areas, Social adaptation

道德推脱与校园欺负参与者角色的关系：三水平元分析

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摘 要 校园欺负是世界范围普遍存在的问题, 诸多研究分别探讨了道德推脱与校园欺负参与者角色的关系, 但研究结果存在很大差异。为了检验校园欺负中青少年道德推脱与各参与者角色之间的关系, 通过文献检索最终获得 64 篇文献(194 项独立样本研究, 43615 名被试)进行三水平元分析。结果发现: (1)道德推脱与欺负者和受害者角色存在正相关, 与防御者角色存在负相关; (2)道德推脱与欺负者和受害者之间的相关受年龄的调节, 随着年龄增长, 道德推脱与欺负者和受害者的相关呈下降趋势; (3)道德推脱与欺负者、受害者和局外者的相关受评价主体的调节, 采用自我评价获得的相关系数要显著高于采用同伴评价测量的相关系数; (4)道

德推脱与受害者之间的相关受欺负发生场景的调节,网络发生场景的相关系数要显著高于传统发生场景的相关系数。结果表明,道德推脱与参与者角色关系密切,未来可以从道德推脱角度来预防校园欺负的发生。

关键词 校园欺负,道德推脱,参与者角色,三水平元分析

The relationship between moral disengagement and the role of participants in school bullying: A three-level meta-analysis

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Abstract: School bullying is a widespread problem worldwide. Many studies have explored the relationship between moral disengagement and the role of participants in school bullying, but the results are quite different. In order to examine the relationship between adolescent moral disengagement and the role of each participant in school bullying, a three-level meta-analysis of 64 papers (194 independent samples, $N = 43,615$ subjects) was conducted. The results showed that moral disengagement was positively correlated with the role of bully and victim, and negatively correlated with the role of defender. Furthermore, the relationship between moral disengagement and the bully and the victim was moderated by age, the relationship between moral disengagement and the bully and the victim decreased with age. In addition, the evaluator moderated the relationship between moral disengagement and bully, victim and outsider, the correlation coefficient between moral disengagement and the bully, the victim and the outsider by self-evaluation was significantly higher than that measured by peer-evaluation. Finally, The context of bullying moderates the correlation between moral disengagement and victim, the correlation coefficient of the online scene is significantly higher than the correlation coefficient of the traditional scene. The results show that moral disengagement is closely related to the role of participants, and moral disengagement can be used to prevent school bullying in the future.

Keywords: School bullying, Moral disengagement, The role of the participant, Three-level meta-analysis

照顾者心灵智慧与农村幼儿的不安全依恋： 心理理论和留守类型的有调节的中介模型

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摘要 农村留守幼儿因在早期与父母长时间分离使其不安全依恋问题凸显。幼儿期的不安全依恋很可能成为他们身心健康发展和社会适应的羁绊,并影响其人格的健全发展。但是,如果父母之外的照顾者对幼儿当下心理状态给予主动关注和理解,便倾向于做出恰当的教养行为,这就可能减少和缓解幼儿的不安全依恋。Meins等人(1998)提出的“心灵智慧”概念,指的是照顾者将幼儿看作是有思想的独立个体,并尽力去了解幼儿内心想法的倾向。研究发现,照顾者心灵智慧影响着亲子互动的质量(Meins等人,2018)。因此,本研究首先探查有亲子分离经历的中国农村留守幼儿不安全依恋的特征表现,其次探查照顾者心灵智慧如何起影响作用以及照顾者心灵智慧是否通过幼儿其他相关心理因素(心理理论)影响其不安全依恋。选取163对3.00~6.69岁的农村幼儿(年龄: $M \pm SD = 5.26 \pm 1.09$;其中,女孩92人,男孩71人;留守幼儿74人,非留守幼儿89人)及其主要照顾者(年龄范围:27~73岁),进行照顾者心灵智慧、幼儿不安全依恋和心理理论的测量。结果发现:(1)农村留守与非留守幼儿照顾者心灵智慧、留守幼儿与非留守幼儿的不安全依恋和心理理论均差异显著,具体表现为留守幼儿照顾者心灵智慧水平显著低于非留守幼儿照顾者,留守幼儿总体不安全依恋和混乱型不安全依恋显著高于非留守幼儿、心理理论水平显著低于非留守幼儿;(2)幼儿心理理论在照顾者心灵智慧与幼儿不安全依恋之间起部分中介作用($ab/c = 50.1\%$);(3)留守类型调节了“照顾者心灵智慧→幼儿心理理论→幼儿不安全依恋”的后半段,即留守幼儿照顾者心灵智慧通过幼儿心理理论影响其不安全依恋的中介效应显著,而非留守幼儿的中介效应不显著。换言之,虽然留守与非留守幼儿照顾者心灵智慧都会影响幼儿的不安全依恋,但留守幼儿更容易受到自身心理理论水平的影响。高心理理论水平会减缓留守幼儿的不安全

依恋，而低心理理论水平则会加剧其不安全依恋。对于非留守幼儿，仅照顾者心灵智慧负向预测了其不安全依恋，心理理论水平没有产生影响作用。

关键词 农村留守幼儿，心灵智慧，不安全依恋，心理理论

Caregiver's mind-mindedness and young children insecure attachment in rural China: A moderated mediation model of theory of mind and type of left-behind

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Abstract: Left-behind children in rural areas are separated from their parents for a long time in the early stage, making insecure attachment prominent. Insecure attachment in early childhood is likely to become the fetters of their physical and mental development and social adaptation, directly affecting their personality's healthy development. However, caregivers outside parents actively pay attention to and understand children's current mental state is the precondition for making appropriate parenting behavior, reducing and alleviating children's insecure attachment. "Mind-mindedness" is assessed in terms of parents and/or other caregivers' tendency to comment appropriately on their child's thoughts and feelings, specifically to focus on mental characteristics when given an open-ended invitation to describe their children (Meins et al., 1998). Previous studies had shown that the mind-mindedness of caregivers affected the quality of parent-child interaction (Meins et al., 2018). Therefore, this study first explored characteristics of insecure attachment of left-behind children with parent-child separation experience in a rural area of China, and then explored how the mind-mindedness of caregivers affected their insecure attachment through other related psychological factors (i.e., theory of mind). This study selected 163 dyads of 3-6-year-old rural children ($M \pm SD = 5.26 \pm 1.09$; Among them, 92 girls, 71 boys; 74 left-behind children, 89 non-left-behind children) and their main caregivers (Age range = 27-73 years old). The mind-mindedness of caregivers, children's insecure attachment, and theory of mind were measured. The results showed that: (1) there were significant differences in mind-mindedness, insecure attachment and theory of mind between rural left-behind children and non-left-behind children. Specifically, the level of mind-mindedness of left-behind children was significantly lower than that of non-left-behind children; the level of left-behind children's insecure-disorganized was significantly higher than that of non-left-behind children, the level of theory of mind of left-behind children was significantly lower than that of non-left-behind children. (2) children's theory of mind played a partial mediating role between caregivers' mind-mindedness and children's insecure attachment ($ab/c = 50.1\%$); (3) the mediating effect of children's theory of mind was moderated by types of left-behind. Specifically, in left-behind children, the mediating effect of caregiver's mind-mindedness on children's insecure attachment through children's theory of mind was significant, but the mediating effect on non-left-behind children was insignificant. In other words, although the mind-mindedness of left-behind and non-left-behind caregivers affected children's insecure attachment, left-behind children were more likely to be affected by their theory of mind. The high level of theory of mind would slow down the left-behind children's insecure attachment, while the low level of theory of mind will intensify the left-behind children's insecure attachment. For non-left-behind children, only caregivers' mind-mindedness negatively predicted their insecure attachment, while the level of theory of mind did not affect.

Keywords: insecure attachment, mind-mindedness, the theory of mind, left-behind type, moderating mediated

校园欺凌中的“袖手旁观”： 校园氛围、学校联结和道德推脱的作用

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摘要 局外者行为指青少年在校园中无视欺凌事件, 独善其身, 采取不介入的消极态度对待欺凌事件。以往研究指出, 校园氛围是预测青少年局外者行为的重要因素。但校园氛围如何影响局外者行为少有研究涉及。“情境—过程—结果”模型指出, 情境(校园氛围)会通过影响青少年的心理过程(包括个人的情感和认知)进而影响其行为结果(局外者行为)。在回顾以往文献的基础上, 本研究认为情感因素(学校联结)和认知倾向(道德推脱)都可能是校园氛围影响局外者行为的重要中介变量。采用方便抽样的方法, 选取江西省四地八所中学共 1556 名青少年 ($M_{age} = 14.39$, $SD = 1.00$) 作为被试, 匿名填写特拉华州校园氛围量表、学校联结问卷、道德推脱量表以及保护者与局外者行为问卷中的局外者行为分问卷。结果显示: (1) 在控制了性别、年龄和年级后, 积极的校园氛围对局外者行为具有显著的负向预测作用。(2) 学校联结、道德推脱在校园氛围和局外者行为之间起中介作用。具体而言, 校园氛围通过三条路径对局外者行为产生作用, 即学校联结的单独中介作用, 道德推脱的单独中介作用以及二者的链式中介作用。本研究揭示了校园氛围与局外者行为之间的关系及其中介机制, 对减少青少年在校园欺凌中的“不作为”具有一定启发。

关键词 校园氛围, 学校联结, 道德推脱, 局外者行为, 中介作用

The Effect of School Climate on Adolescents' Outsider Behaviors: The Chain Mediating Role of School Connectedness and Moral Disengagement

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Abstract: Bullying as a group interactional process involved perpetrators, victims as well as bystanders. However, previous research on school bullying has examined the participant roles of perpetrators and victims, few studies have focused on the roles of bystanders who have witnessed the bullying. Salmivalli et al. (1996) identified four types of bystander roles in the school bullying: assistants are those who actively help the perpetrators and participate in the bullying; reinforcers support and provide positive feedback to perpetrators by cheering and laughing; defenders take sides with the victims by helping, supporting, and comforting; and outsiders remain passive or neutral and try to stay outside. Despite lack of involvement, the outsiders' passive responses facilitate the occurrence of school bullying. Recent research has suggested bullying can be significantly reduced by changing passive outsiders to act on behalf of the victims. Therefore, it is necessary to investigate the potential mechanisms of outsider's behaviors so as to design effective prevention and intervention programs.

Given the considerable time students spend at school and the critical role of school plays in promoting adolescents' positive development, previous literature has documented that school climate has an important influence on adolescents' outsider behaviors. However, little is known about the mediating processes underlying the above relation. “Context—Process—Outcomes” model proposed that the distal context affects adolescents' behavior through proximal psychological processes. Based on the “Context—Process—Outcomes” model, we tested whether emotional factor (school connectedness) and cognitive tendency (moral disengagement) served as mediators in the relationship between school climate and adolescents' outsider behaviors. A total of 1556 adolescents ($M_{age} = 14.39$, $SD = 1.00$) in Jiangxi Province was recruited to participate in this study. The participants anonymously filled out Delaware School Climate Surveys Scale, School Connectedness Questionnaire, Moral Disengagement scale as well as the subscale of Self-Reported Defender and Outsider Roles. Data was analyzed using SPSS 26.0 and *Mplus* 8.0. A bias-corrected bootstrapping method was used to calculate the mediating effects of school connectedness and moral disengagement in the relationship between school climate and adolescents' outsider behaviors. The results showed

that: (1) After controlling for gender, age, and grade, positive school climate is negatively related to adolescents' outsider behaviors. (2) school connectedness and moral disengagement mediated this association, which contained three significant mediating pathways: the separate mediating effects of (a) school connectedness and (b) moral disengagement, and the chain mediating effect of (c) school connectedness and moral disengagement. The mediation effects were 0.13, 0.04, and 0.04 respectively. These indirect effects accounted for 80.77% of the total effect. The present study uncovered the mechanisms underlying the relationship between school climate and adolescents' outsider behaviors, which contributes to the understanding of the internal psychological mechanisms of adolescents' outsider behaviors and provides suggestions for future bullying prevention interventions.

Keywords: school climate, school connectedness, moral disengagement, adolescents' outsider behaviors, mediation

儿童电子媒介接触时间与词汇理解的关系及其神经基础 ——基于静息态功能连接的研究

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摘要 儿童的语言能力从出生开始就在不断发展, 良好语言技能的缺失会增加儿童产生学习、社会交往和心理健康等问题的风险。除了个体因素, 生态科技微系统理论还提出家庭、学校以及社区中电子媒介的使用是微系统中直接影响儿童发展的重要环境因素。随着科技的进步, 电子媒介在儿童语言发展中的角色愈发重要。此外儿童的大脑还未发育完善, 电子媒介的使用也可能通过影响儿童大脑的功能连接从而间接影响语言发展。因此, 本研究包含两部分, 研究一选取 138 名儿童, 分别在 5 岁、7 岁和 9 岁进行追踪研究, 通过行为测试收集了儿童的家庭基本信息、电子媒介接触情况以及词汇理解能力分数, 从行为层面探讨 5-9 岁儿童电子媒介接触时间和词汇理解的关系; 研究二利用功能磁共振成像技术收集 47 名 9 岁儿童静息态功能连接的数据, 探究儿童 9 岁时电子媒介接触时间影响词汇理解能力的神经基础。研究一从行为结果发现, 在个体内水平上, 5-9 岁儿童电子屏幕使用时间显著负向预测儿童词汇理解能力, 背景屏幕暴露时间无论在个体内还是个体间与儿童词汇理解之间的关系均不显著。脑与行为的关系分析表明, 电子屏幕使用时间与左颞中回-左额上回、右颞中回-额中回/右额上回、左颞上回-左额上回之间功能连接正相关; 背景屏幕暴露时间与左颞中回-左额下回、右颞中回-左额中回、左颞上回-左枕中回/内侧额上回之间的功能连接正相关。为探究这些功能连接是否可以解释为电子媒介接触时间影响儿童词汇理解能力的神经机制, 进行中介分析发现左颞上回-左枕中回的功能连接在背景屏幕暴露时间和词汇理解能力之间起到部分中介作用。这些结果为电子媒介接触时间对儿童词汇理解能力的影响提供了静息态脑网络方面的证据。

关键词 电子媒介接触时间, 词汇理解, 功能连接, 静息态功能磁共振成像

Neural correlates reflecting the effects of electronic media exposure on children's vocabulary comprehension: Evidence From the functional Connectivity Under Resting State

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Abstract: Children's language skills develop from birth. Lack of good language skills will lead to academic failure, social difficulties as well as mental health problems in adulthood. Except from children's personal characteristics, Ecological Techno-Microsystem theory suggests that electronic media exposure is an important environmental factor

that affects children's development directly. With the advance of science and technology, electronics plays a crucial role in their language development. Moreover, electronic media exposure may affect language acquisition and development in children indirectly by influencing the functional connectivity of children's brains as children's brains are still developing. In study 1, we examined these issues in 138 children aged 5, 7, and 9 years by inventory to explore the relationship between electronic media exposure and vocabulary comprehension in children. In study 2, we examined the neural basis for electronic media exposure and vocabulary comprehension in 47 participants by assessing resting-state brain activity. Behaviorally, at the within-person level, children's screen use time negatively predicted vocabulary comprehension. The relationship between background screen time and vocabulary comprehension was not significant either within-person or between-person. Whole-brain correlation analyses revealed that screen use time is positively correlated with the following functional connections: LMTG-LSFG, RMTG-LMFG/RMFG/RSFG, LSTG-LSFG. Background screen time is positively correlated with the following functional connections: LMTG-LIFG, RMTG-LMFG, LSTG-LMOG/FSM. Functional connectivity in the LSTG-LMOG partially mediated the relationship between background screen time and vocabulary comprehension. These results provide resting-state evidence that background screen time affects children's vocabulary comprehension.

Keywords: Electronic Media Exposure, Vocabulary Comprehension, Functional Connectivity, Resting-state Functional Magnetic Resonance Imaging

母亲言语反应性与幼儿早期语言发展：流动和城市家庭对比

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摘要 母亲言语反应性是指母亲对孩子的快速、依随和恰当的言语反应, 对幼儿语言发展起重要作用。此外, 研究发现流动儿童与城市儿童在语言、认知、社会性等方面的发展中存在差异。因此探讨城市和流动家庭中母亲言语反应性对幼儿语言发展的影响, 对理解和发展这一关键年龄的语言学习和制定干预策略具有重要意义。本研究以一项追踪项目中的 46 个流动家庭 (男孩 28 名) 和 76 个城市家庭 (男孩 31 名) 为研究对象, 探究了在幼儿 3 岁时城市和流动家庭中的母亲言语反应性 (通过对母子互动录像编码测量母亲有无反应、是否复现反应以及母亲反应的具体类型) 特点以及母亲言语反应性与幼儿的接受性语言 (使用皮博迪图片词汇测量) 和表达性语言 (使用国际儿童语言数据交流系统测量) 之间的具体关系。研究结果表明: (1) 城市母亲与流动母亲使用最多的均是母亲有反应和母亲复现反应, 在两类家庭上不存在显著差异, 在母亲非复现反应上存在显著差异, 城市母亲使用较多非复现反应。(2) 城市幼儿在表达性语言发展上优于流动幼儿。(3) 两类家庭的母亲有反应和复现反应均显著预测幼儿表达性语言, 而且在城市家庭中母亲非复现反应也显著预测幼儿表达性语言。(4) 通过调节分析发现, 城市母亲复现反应越多, 男孩的语言发展越好。本研究结果表明, 城市和流动家庭在母亲言语反应性和幼儿语言发展上均存在显著的差异, 这就提示我们对待城市母亲和流动母亲制定不同的干预方法。因此, 在促进母亲复现反应的同时, 也要注重流动家庭母亲非复现反应能力的培养, 更加有利于促进幼儿早期语言能力的发展。

关键词 流动家庭, 城市家庭, 母亲言语反应性, 早期语言

Maternal responsiveness and early childhood language: a comparison of rural-to-urban migrant families and urban families

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Abstract: Maternal responsiveness refers to mothers' rapid, follow-through and appropriate verbal responses to their children, which play an important role in young children's language development. Moreover, research has found that there are differences in language, cognition, and social development between rural-to-urban migrant children and urban children. Therefore, this research focuses on exploring the differences and influencing factors of early language development between different groups, and provides a theoretical basis for further active intervention to promote language development. The participating families include 46 rural-to-urban migrant families (28 boys) and 76 urban families (31 boys) from a longitudinal study. This study explored the characteristics of maternal responsiveness (mother-child interaction video coding was used to measure whether the mother responses and whether reproductive responses, as well as the specific types of mother's responses) in urban and mobile families when children are 3 years old and the specific relationship between maternal responsiveness and children's receptive language (measured with the Peabody Picture Vocabulary Test) and expressive language (measured with the International Children's Language Data Exchange System). Research indicates: (1) The most used in urban mothers and rural-to-urban migrant family mothers are both response and reproductive responses, there is no significant difference between the two types of families, there is a significant difference in mother nonreproductive responses, and urban mothers use more nonreproductive responses. (2) Urban children are better than rural-to-urban migrant family children in the development of expressive language. (3) Both the response and reproductive responses significantly predict the child's expressive language, and in urban families, the mother's nonreproductive responses also significantly predict the child's expressive language. (4) Through moderation analysis, it is found that the more the urban mother reproductive responses the better the language development of boys. The results of this study show that there are significant differences in maternal responsibility and children's language development between urban families and rural-to-urban migrant families, which prompt us to develop different intervention methods for urban mothers and migrant mothers. Therefore, while promoting mother's reproductive responses, we should also pay attention to the cultivation of the nonreproductive responses ability of mothers of migrant families, which is more conducive to promoting the development of early childhood language ability.

Keywords: rural-to-urban migrant family; urban family; maternal verbal responsibility; early language

社会支持对中学生生命意义感的影响：一个链式中介模型

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摘要 生命意义感是指个体领会到生命的意义，并觉察到自己生命的目的、使命和首要目标。生命意义感的获取和维持是人类的基本动机之一，对个体的身心健康具有重要影响。中学阶段是个体生命意义感形成的关键时期，也是社会化的关键时期，关系对其身心发展十分重要。以往研究揭示社会支持对生命意义感的影响及其机制，但是较少从关系的视角考察二者关系的内在机制。本研究拟探讨关系需要满足和关系自尊在社会支持和生命意义感之间的链式中介作用。本研究采取整群抽样法，在四川和湖北选取四所中学，使用领悟社会支持量表、关系需要分量表、关系自尊量表和生命意义感量表，对 1064 名中学生进行调查，通过 SPSS25.0 和 Process 插件对数据进行处理和分析。结果表明：（1）社会支持、关系需要满足、关系自尊和生命意义感两两之间显著正相关；（2）关系需要满足的中介作用不成立；（3）关系自尊在社会支持和生命意义感之间起中介作用，中介效应占总效应的 36.76%；（4）关系需要满足→关系自尊的链式中介作用成立，占总效应的 24.30%。综上，社会支持不仅可以直接影响中学生的生命意义感，还可以通过关系自尊的中介作用，以及关系需要满足关系自尊的链式中介作用间接影响中学生的生命意义感。本研究启示学校和家庭教育中可以关系的视角来引导中学生生命意义感的形成和良好发展，从而减少生命意义感缺失所带来的负面影响。

关键词 中学生，社会支持，生命意义感，关系需要满足，关系自尊

The Influence of Social Support on Middle School Students' Meaning in Life: A Chain Mediating Model

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Abstract: Meaning in life refers to individual's understanding of the meaning of life and awareness of the purpose, mission, and primary goal of his life. The acquisition and maintenance of meaning in life is one of the basic motivations of human beings, which has an important influence on the individual's physical and mental health. The middle school stage is a vital period for the formation of an individual's meaning in life and also a key period for socialization. The relationship is very important for their physical and mental development. Previous studies have revealed the influence of social support on meaning in life and its mechanism, but few have examined the internal mechanism of their relationship from the perspective of "relationships". This study selected four middle schools in Sichuan and Hubei by cluster sampling approach and using perceived social support scale, relatedness need subscale, relational self-esteem scale and meaning in life questionnaire. Using SPSS 25.0 and Process macro for data processing and analyzing. The results showed that: (1) There was a significant positive correlation between social support, relatedness need satisfaction, relational self-esteem and meaning in life; (2) The mediating role of relatedness need satisfaction was not supported; (3) The mediating role of relational self-esteem was supported, accounting for 36.76% of the total effect; (4) the chain mediating of relatedness need satisfaction and relational self-esteem was supported, accounting for 24.30% of the total effect. In conclusion, social support can not only directly affect middle school students' meaning in life, but also indirectly affect their meaning in life through the mediating effect of relational self-esteem, and the chain mediating effect of relatedness need satisfaction and relational self-esteem. This study suggests that school and family education could guide the formation and good development of middle school students' meaning in life through relationships perspective, to reduce the negative impact caused by the loss of meaning in life.

Keywords: middle school students, social support, meaning in life, relatedness need satisfaction, relational self-esteem

结果预期和心理距离对网络助人意愿的影响

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摘 要 互联网技术的成熟以及移动电子设备的广泛普及使得越来越多的人开始利用微博、微信等网络社交软件发布求助信息或为他人提供帮助。本研究通过两个研究考察结果预期和心理距离对网络助人意愿的影响。研究1采用单因素被试内实验设计，探讨结果预期（有回报/无回报）对个体网络助人意愿的影响。研究2通过4个实验，分别探四种心理距离（时间距离、空间距离、社会距离、概率距离）和结果预期对网络助人意愿的影响。研究发现：（1）结果预期、四种心理距离的主效应均显著。与无回报的结果预期相比，有回报的结果预期会产生更多的网络助人意愿；对时间距离、空间距离、社会距离而言，距离越近，网络助人意愿越多；对于概率距离而言，距离越远，网络助人意愿越多。（2）结果预期与时间距离及结果预期与空间距离的交互作用均不显著；结果预期与社会距离及结果预期与概率距离的交互作用均显著。当社会距离近时，结果预期有回报组和无回报组间的网络助人意愿不存在显著差异；当社会距离远时，有回报组的网络助人意愿显著多于无回报组；当概率距离近时，结果预期有回报组和无回报组间的网络助人意愿不存在显著差异；当概率距离远时，有回报组的网络助人意愿显著多于无回报组。本研究进一步验证了代价-回报理论、互惠利他理论和解释水平理论。

关键词 结果预期，心理距离，网络助人意愿

The effect of outcome expectation and psychological distance on online helping intention

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Abstract: With the maturity of Internet technology and the popularity of mobile electronic devices, more and more people begin to use Weibo, WeChat and other network social software to ask for help or offer help to others. This study investigated the effects of outcome expectation and psychological distance on online helping willingness through two studies. In study 1, a single-factor within-subject design was used to investigate the effect of outcome expectation (with or without reward) on individuals' willingness to help online. In study 2, four experiments were conducted to explore the effects of four psychological distances (temporal distance, spatial distance, social distance, and probability distance) and outcome expectation on online helping willingness. The results showed that: (1) the main effects of outcome expectation and four kinds of psychological distance were significant. Compared with the non-rewarding outcome expectation, the rewarding outcome expectation will produce more online helping willingness. In terms of temporal distance, spatial distance and social distance, the closer the psychological distance, the more willingness to help online; For the probability distance, the closer the probability distance, the less willingness to help online. (2) The interaction between outcome expectation and time distance and between outcome expectation and temporal distance was not significant; The interaction between outcome expectation and social distance and between outcome expectation and probability distance was significant. When the social distance was close, there was no significant difference in the willingness to help online between the rewarding group and the non-rewarding group. When the social distance was far, the online helping willingness of the rewarding group was significantly higher than that of the non-rewarding group. When the probability distance is close, there is no significant difference in the willingness to help online between the rewarding group and the non-rewarding group. When the probability distance was far, the willingness to help online in the group with reward was significantly higher than that in the group without reward. This study further validated the cost-reward theory, reciprocal altruism theory and explanatory level theory.

Keywords: outcome expectation, psychological distance, online helping willingness

社交网站使用与孤独感关系的元分析

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摘要 社交网站作为一个网络交流平台, 因其快速高效获取信息的便捷性、隔空联络其他用户的异步性和不暴露自己信息的情况下浏览他人信息的匿名性等特点, 受到用户的青睐。社交网站的迅速普及引发了研究者对社交网站使用与孤独感之间关系的关注, 由此产生了很多研究成果。孤独感对个体心理发展的负面影响以及关于社交网站与孤独之间关系的不一致的研究结论是本研究的出发点, 本研究采用元分析的方法探究了两者之间的总体关系。研究者通过文献搜索和筛选, 最终纳入了 82 篇文献, 产生了 90 个效应值, 包括 48383 名被试。研究分别使用随机效应模型和混合效应模型进行主效应分析和调节效应分析, 结果发现, 社交网站使用与孤独感存在显著但较小的正相关 ($r=0.052$); 社交网站使用类型调节了两者之间的关系, 具体来说, 非正常社交网站使用和被动性社交网站使用与孤独感显著正相关, 但社交网站使用与孤独感之间的关系在一般性使用和主动性使用中不存在显著差异。此外, 性别、年龄和文化的调节效应均不显著。

社交网站使用与孤独感的显著正相关结果为替代假说和社交补偿假说提供了证据支持。个体因为社交网站使用的增多占用线下人际交往的时间, 用线上的较弱的关系替代了线下较强的关系, 导致线下友谊质量下

降,体会到较强的孤独感;反过来,孤独感较强的人也容易被社交网站提供的便利功能所吸引,将社交网站使用作为缓解负面情绪的一个方式,引发更多的社交网站使用。根据社会比较理论和病理性网络使用的认知模型,由向上社会比较带来的嫉妒、缺乏归属感和社会支持引发的孤独感以及社交网站使用与孤独感之间的恶性循环可以解释被动性社交网站使用和非正常社交网站使用对两者关系的正向调节。本研究的结果提醒我们,对于社交网站使用产生的负面心理效应客观地看待,尽管社交网站使用与孤独感之间相关显著,但效应值很小,说明该领域还有很多值得关注的问题。未来我们应考虑关注社交网站带来的积极影响,推动社交网站在生活领域的积极应用。

关键词 社交网站使用,孤独感,元分析,替代假说,社交补偿假说

亲子冲突与青少年非自杀性自伤的关系: 同伴侵害和拒绝敏感性的作用

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摘要 尽管大量研究表明家庭环境中不利因素(如不良教养方式)会对青少年非自杀性自伤(non-suicidal Self-Injury, NSSI)产生负面影响,但从青少年亲子冲突的角度探讨其与NSSI之间关系及其机制的研究相对较少。依据NSSI发展的综合理论模型,童年虐待或家庭成员的对抗以及敌意等家庭因素作为NSSI的远端风险因素,将会对NSSI带来一定的影响。亲子冲突作为家庭成员之间对抗的重要表现,其与NSSI之间的关系是不能被忽视的。因此,本研究考察了青少年亲子冲突与NSSI之间的关系,同时考察了同伴侵害在其中的中介作用,以及该过程是否受到拒绝敏感性的调节。本研究采用问卷法对广东省三所初中的1006名青少年(女生521人,占51.78%,平均年龄为13.16,标准差为0.67)进行问卷调查。结果表明:(1)青少年亲子冲突与同伴侵害和NSSI呈正相关,同伴侵害与NSSI存在正相关关系,拒绝敏感性与同伴侵害和NSSI呈正相关;(2)同伴侵害显著中介了青少年亲子冲突与NSSI之间的正相关关系;(3)拒绝敏感性调节了青少年亲子冲突与NSSI之间的关系,具体而言,对于高拒绝敏感性的个体,青少年的亲子冲突会显著提高NSSI,而对于低拒绝敏感性的个体而言,该路径不显著;(4)拒绝敏感性调节了中介模型的后半段(同伴侵害→NSSI),具体而言,对于高拒绝敏感性的个体,同伴侵害会显著提高NSSI,而对于低拒绝敏感性的个体而言,该路径同样不显著。这些发现强调了同伴侵害是将青少年亲子冲突与NSSI联系起来的潜在机制,而高拒绝敏感性是放大这种间接影响的重要风险因素。本研究提示我们,预防青少年NSSI问题的出现,不仅需要青少年有良好的亲子关系,还要尽可能避免其遭受同伴侵害,拥有良好的同伴关系,此外,还要重视负面个人特质(如拒绝敏感性)对青少年NSSI的影响。

关键词 亲子冲突,非自杀性自伤,同伴侵害,拒绝敏感性

The relationship between parent-adolescent conflict and non-suicidal self-injurious behavior: The role of peer victimization and rejection sensitivity

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Abstract: Many studies have shown that risky factors from family environment, such as problematic parenting styles, have negative effects on non-suicidal self-injury (NSSI) in adolescents. However, few studies have explored the relationship between parent-adolescent conflict and NSSI and the underlying mechanisms between them. According to the integrated theoretical model of the development and maintenance of nonsuicidal self-injury, family factors such as childhood abuse or confrontation and hostility between family members are distal risk factors of NSSI. The relationship between parent-adolescent conflict and NSSI cannot be ignored, as the former is an important manifestation of confrontation between family members. Therefore, the current study examines the relationship

between parent-adolescent conflict and NSSI, as well as the mediating role of peer victimization between them, and whether the pathways could be moderated by rejection sensitivity. In this study, 1006 adolescents (51.78% females, $n=521$, $M_{age}=13.16$, $SD=0.67$) from three junior middle schools in Guangdong Province were surveyed by questionnaire. The results showed that : (1) Parent-adolescent conflict was positively correlated with peer victimization and NSSI, peer victimization was positively correlated with NSSI, and rejection sensitivity was positively correlated with peer victimization and NSSI. (2) Peer victimization significantly mediated the positive correlation between parent-adolescent conflict and NSSI; (3) Rejection sensitivity moderated the relationship between parent-adolescent conflict and NSSI. Specifically, for individuals with higher level of rejection sensitivity, parent-adolescent conflict significantly increased the prevalence of NSSI, while for individuals with lower level of rejection sensitivity, this pathway was not significant. (4) Rejection sensitivity moderated the latter part of the mediation model (peer victimization $\rightarrow$ NSSI). Specifically, for individuals with higher level of rejection sensitivity, peer victimization significantly increased the occurrence of NSSI, while for individuals with lower level of rejection sensitivity, the pathway was not significant. These findings highlighted peer victimization as a potential mechanism linking parent-adolescent conflict to NSSI, and high rejection sensitivity was suggested to be an important risk factor that amplified the indirect effect. This study suggests that the prevention of adolescent NSSI problems requires not only a good parent-child relationship, but also a good peer relationship to avoid peer victimization. In addition, it is necessary to pay attention to the impact of negative personal traits, such as rejection sensitivity, on adolescent NSSI.

Keywords: parent-adolescent conflict, NSSI, peer victimization, rejection sensitivity

遭受情感和言语虐待与女大学生自杀风险的关系： 一个有调节的中介模型

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摘要 亲密关系暴力与自杀作为重要的公共卫生问题一直以来都受到人们的重视。根据埃里克森的心理社会发展理论, 大学生正处于与他人建立亲密关系的时期。亲密伴侣的情感和言语虐待会给女大学生带来消极的心理健康影响, 增加自杀风险。目前国内针对大学生亲密关系暴力研究多集中于流行病学调查与相关分析, 对遭受亲密关系暴力对自杀风险影响的背后机制还有待深入探讨。本研究探讨了抑郁症状是否在情感和言语虐待与自杀风险之间起中介作用, 以及这种中介过程是否受到痛苦不耐受的调节。本研究基于广东省三所大学的中国大学生的大规模健康相关队列数据, 共 1968 名当前或曾经处于亲密关系的女大学生完成了情感和言语虐待、抑郁症状、痛苦不耐受和自杀风险的问卷调查。结果表明: 37.7% ($n=742$) 的参与者经历过至少一次情感和言语虐待, 8.3% ($n=164$) 的参与者报告了自杀风险。在控制了年龄、独生子女、家庭居住地、父亲文化水平、身体健康状况和饮酒等人口统计学变量后, 情感和言语虐待与自杀风险呈正相关。中介分析表明, 抑郁症状在情感和言语虐待与自杀风险之间起部分中介作用。有调节的中介检验进一步显示, 痛苦不耐受调节了后半段中介路径。具体来说, 对于痛苦不耐受较高的个体而言, 抑郁症状对自杀风险的预测作用更强。研究结果有助于制定有针对性的干预措施, 以减少那些经历过亲密关系暴力个体的自杀风险。

关键词 情感和言语虐待, 抑郁症状, 痛苦不耐受, 自杀风险

Emotional and verbal abuse and suicidal risk among Female college students: A moderated mediation model of depression symptoms and distress intolerance

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Abstract: As an important public health problem, intimate partner violence and suicide have been paid much attention. According to Erikson's theory of psychosocial development, college students are in the period of establishing intimate

relationships with others. Emotional and verbal abuse by intimate partners can have a negative mental health impact on female college students and increase the risk of suicide. At present, domestic research on IPV among college students mainly focuses on epidemiological investigation and related analysis. It remains unclear the underlying mechanism how IPV victimization increases suicide risk. The present study examined whether depression symptoms mediate the relationship between emotional and verbal abuse and suicidal risk, and whether this mediating process is moderated by distress intolerance. The study is based on data from a large-scale health-related cohort among Chinese college students at three universities in Guangdong Province. A sample of 1,968 female college students who were currently dating someone or had dated someone completed questionnaires regarding emotional and verbal abuse, depression symptoms, distress intolerance, and suicidal risk. The results showed that: Of 1968 female college students sampled, 37.7% ($n=742$) of participants experienced at least one emotional and verbal abuse, and 8.3% ($n=164$) of participants reported suicidal risk. After controlling for demographic variables such as age, only child, residence, father education, physical health and current drinking, emotional and verbal abuse was positively associated with suicidal risk. Mediation analysis indicated that depression symptoms partially mediated the association between emotional and verbal abuse and suicidal risk. Tests of moderated mediation further revealed that distress intolerance moderated the second part of the mediation process. Specifically, the positive relationship between depression symptoms and suicidal risk was stronger for those individuals with higher distress intolerance. These findings may be helpful for developing targeted interventions to reduce suicidal risk for those who had experienced IPV.

Keywords: Emotional and verbal abuse, Depression symptoms, Distress intolerance, Suicidal risk

因人而异？受益人道德品质对学龄前儿童体贴行为评价的影响

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摘要 “燃烧自己，照亮他人”是中华民族的传统美德。大量关于亲社会行为的研究聚焦于直接让接受者受益的亲社会行为，如帮助、分享等。这些行动通常包括有明确目的的物资、资源或信息的转移，会为受援者带来直接的、积极的影响。近期，研究者们开始关注一种间接亲社会行为——体贴的社会善念行为，即个体实现自身目标的同时考虑他人选择权的亲社会行为。已有研究发现，理解和评价体贴行为的能力在4-6岁得到发展，到6岁的时候，中美儿童都会对体贴行为做出更高评价，但尚未有研究探究这种社会评价是否受到受益人的特质的影响。本研究从受益人道德品质的角度探究儿童体贴行为评价的影响因素及发展情况。共有101位儿童（4-6岁）及78位成人参与本研究。研究采用2（体贴行为 vs 不体贴行为）*2（受益人道德品质：高 vs. 低）被试内设计。我们让被试评价两个人物在选择水果时的表现：其中一个人物在自己选择水果时给排在后面的人（即受益人）留下两种不同的水果（即，表现出体贴行为）；另一个人物则给排在后面的人留下两个相同的水果（即，表现出不体贴行为），并操控排在后面的受益人的道德品质高低。在故事呈现之后，我们让被试评价排在前面的人物做得有多好。对于成人和儿童的评价进行2X2重复测量方差分析，均发现：留选择与否主效应显著（成人： $F(1,77)=112.38, p<0.001$ ；儿童： $F(1,100)=5.19, p=0.025$ ）、受益人道德品质主效应不显著、两者交互作用显著（成人： $F(1,77)=14.16, p<0.001$ ；儿童： $F(1,100)=10.07, p=0.002$ ）。具体来说，相比不留选择的个体，儿童及成人都对留选择的个体评价更高。重要的是，儿童及成人对体贴行为的评价都会受到受益人道德品质的影响。对于成人来说，虽然无论受益人道德品质高或低，成人对体贴行为的评价都显著高于不体贴行为，但当受益人道德品质低时，此评价差异显著缩小；对儿童来说，他们只有在受益人道德品质高时才会对体贴行为做出更高评价，在受益人道德品质低时对体贴行为与不体贴行为的评价不存在显著差异。

关键词 社会认知发展，学龄前儿童发展，体贴行为理解与评价

Does it vary from person to person? The influence of moral character of beneficiary on preschoolers' understanding and evaluation of considerate behavior

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Abstract: "Burn oneself to illuminate others" is a traditional virtue in Chinese culture. A large body of research on early prosocial behaviors have focused on prosocial actions that are directly intended to benefit recipients, such as helping, sharing, etc. Such actions usually involve purposeful transfer of physical aid, resources or information aimed to create direct and positive consequences for the recipient. Recently, researchers have started to investigate one type of indirect prosocial action – considerate, socially mindful actions that simultaneously benefit the self and are considerate of another's freedom of choice. Existing research has shown that the ability to understand and evaluate considerate behaviors develops between the ages of 4 and 6. By age 6, both Chinese and American children evaluate someone who leaves a choice for another person as "nicer" than someone who does not. However, no previous research has explored whether such social evaluation is influenced by characteristics of beneficiaries. This study aims to explore the influence of moral character of beneficiaries on preschoolers' understanding and evaluation of considerate behavior. A total of 101 children (4-6 years old) and 78 adults participated in the study. The study used a 2 (considerateness of the first person's behavior: considerate behavior vs inconsiderate behavior) * 2 (beneficiary's moral character: moral vs. immoral) within-subject design. We asked participants to evaluate how good two characters were in fruit selection scenarios: one character left two different kinds of fruits for the next character (the beneficiary) to choose from (i.e., considerate behavior) while the other character left two identical fruits for the beneficiary (i.e., inconsiderate behavior). We also manipulated whether the beneficiary was a moral person or an immoral person. After the story was presented, we asked participants to evaluate how good the first character was. Repeated measure ANOVAs on participants' responses revealed significant main effects of considerateness of the first person's behavior (adults: $F(1,77) = 112.38, P < 0.001$; children: $F(1,100) = 5.19, P = 0.025$), and significant interactions between considerateness of the first person's behavior and the beneficiary's moral character (adults: $F(1,77) = 14.16, P < 0.001$; children: $F(1,100) = 10.07, P = 0.002$). Specifically, both children and adults evaluate characters who left a choice for the other as better than those who left no choice. Importantly, both children's and adults' evaluations of considerate behavior were influenced by the moral character of beneficiaries. For adults, although the evaluation of considerate behavior was significantly higher than that of inconsiderate behavior regardless of beneficiaries' moral character, this evaluation gap was significantly smaller when the beneficiaries were immoral. For children, children evaluate considerate behavior more positively only when beneficiaries were moral, but not when beneficiaries were immoral.

Keywords: social cognitive development, preschoolers, understanding and evaluation of considerate behavior

比较和位置图片启动对 4-6 岁幼儿位置关系类别学习的影响

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摘要 关系类别是指类别成员因具有一个共同的关系而形成的类别。掌握关系能力是人类智力发展的标志之一, 也是人类区别于其他物种的能力之一。已有研究表明, 4-6 岁幼儿进行分类的依据是从表面特征(形状、颜色、大小)到内部特征(情景、功用)再到本质特征的发展过程, 但目前对幼儿关系类别学习的年龄发展

特征及发展趋势尚不明确。类别学习中加入比较能够促进分类,但增加比较是否能帮助幼儿更好的进行关系类别学习仍需进一步探讨。另外,由于已有研究中的实验材料、实验设计上存在一些不足,使得幼儿关系类别学习的研究结果存在争议。因此,有必要对幼儿关系类别学习进行深入探讨。本研究旨在探究幼儿位置关系类别学习的发展,以及增加比较和位置图片启动是否能促进幼儿的关系类别学习。研究分三个实验进行。实验一以4、5、6岁幼儿为被试,年龄为被试间变量,以黑白动物图片为实验材料,考察幼儿在位置关系类别学习上的发展特征。实验二选取了4、5岁幼儿为被试,增加了比较项,采用2(年龄:4岁、5岁)×2(有无比较:有比较、无比较)的被试间设计,考察比较能否促进幼儿在位置关系类别学习中倾向于选择位置关系匹配。实验三以4岁幼儿为被试,增加位置图片启动,以有无位置图片启动为被试间变量,进一步考察位置图片启动能否帮助4岁幼儿提高在位置关系类别学习中的表现。实验结果表明,(1)幼儿位置关系类别学习从基于形状相似性转向基于位置关系匹配。4岁幼儿倾向于选择形状相似性,6岁幼儿倾向于选择位置关系,5岁幼儿处于转折期。(2)增加比较对于4、5岁幼儿学习位置关系类别都具有促进作用。(3)提供位置图片启动能更好的促进4岁幼儿学习位置关系类别。(4)口语报告的分析结果表明,在基线条件下,4岁幼儿倾向于关注动物的形状和功能特征;在比较条件下,5岁幼儿比4岁幼儿更多地选择位置关系,且可进行归纳推理;在图片启动下,4岁幼儿能够更多地报告和启动图片相关的内容。

关键词 关系类别,位置关系,4-6岁幼儿,比较,位置图片启动

Effects of Comparison and Location Picture Priming on Category Learning of Location Relationships in Children Aged 4-6 Years

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Abstract: A relationship category formed by the members having a common relationship. Mastering relationships is one of the hallmarks of human intelligence and one of the most important abilities that distinguish humans from other species. Studies have shown that the classification of 4-6 year olds is based on the development process from surface features (shape, color, size) to internal features (scene, function) and then to essential features. However, the age developmental characteristics of children relationship category learning are not clear. Some studies have found that comparison improves to learn relationship category, but it is not clear whether comparison also helps children learn relationship category. In addition, there are some deficiencies in experimental materials and experimental design in the existing researches, which also make the research results inconsistent. Therefore, it is necessary to further explore children's relation category learning by improving the research materials and designs. In order to explore how children learn about the positional relation category, and whether comparison and the starting of position picture can help children to learn the positional relation category. This study designed three experiments. In experiment 1, children aged 4-6 were selected as subjects and age was taken as the inter-subject variable and black-and-white animal pictures as experimental materials to investigate the developmental characteristics of children in positional relation category learning. In experiment 2, 4- and 5-year-old children were selected as subjects, and comparison terms were added. 2 (age: 4, 5) × 2 (with or without comparison: with comparison or without comparison) was adopted as the inter-subject design, to investigate whether increased comparison can promote children to choose the matching of position relation in the category learning of position relation. In experiment 3, 4-year-old children were taken as subjects, and position picture priming was added, and whether or not position picture priming was taken as an inter-subject variable, to further investigate whether position picture priming could help 4-year-old children improve their performance in position relation category learning. This study draws the following conclusions:

(1) Children's learning of the category of positional relationship changes from shape matching to location matching. To be specific, 4-year-old children are more likely to choose shape similarity, 6-year-old children are more likely to choose position relation, and 5-year-old children are in a transition period from shape similarity classification to position relation classification.

(2) Providing comparison can promote the selection of positional relationship matching by 4- and 5-year-olds.

(3) Providing priming of position pictures can better promote 4-year-olds to learn the category of location relationships.

(4) The analysis of the oral report shows that: under the baseline condition, 4-year-olds tend to pay more attention to the shape and function of animals. Under the condition of comparison, 5-year-olds children choose more position relation than 4-year-olds children, and can carry on inductive reasoning. Under the influence of residual attention, 4-year-olds reported more content related to image activation.

Keywords: Relationship category, Position relation, 4 to 6 years old children, Comparison, Priming of Position picture

儿童早期母亲与父亲的侵入性养育：一项系统综述与元分析

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摘要 养育科学的研究已经从只关注母亲在儿童照料中的单一作用转变为强调父母双方的重要性。然而，在同一个家庭中父母的养育是更为相似还是存在差异的？父母的养育行为对儿童发展的影响是否有所不同？仍然是有待回答的问题。本研究旨在通过系统综述和元分析比较儿童早期父亲与母亲的侵入性养育的相似性与差异性，以及比较和确定它们各自在儿童发展中的作用。对四个数据库的系统检索获得的 55 项研究（385 个效应值；20,621 名参与者）使用随机效应模型进行三水平的元分析，分别估计了 1) 父母侵入性养育的相似性 (r)，2) 父母侵入性养育均值水平上的差异 (hedges' g) 以及父母侵入性养育与儿童发展结果之间的关系 (r)。结果表明：1) 父母侵入性养育有着中等程度的正相关 ($r = .256$, 95% CI = [0.180, 0.329])，2) 父母侵入性养育在均值水平上没有显著差异 ($g = 0.035$, 95% CI = [-0.034, 0.103])，3) 父母侵入性养育与儿童发展结果间的关系是相似的，父母侵入性养育都与儿童的情绪社会性问题有着正向关系（母亲： $r = 0.098$, 95% CI = [0.051, 0.145]；父亲： $r = 0.098$, 95% CI = [0.113, 0.162]；父母侵入性养育与儿童的认知能力均都没有显著的相关。尽管效应值之间存在显著的异质性，只有样本来自的国家可以解释父亲与母亲侵入性养育之间的部分异质性。东亚国家中母亲的侵入性养育的水平显著高于父亲的侵入性养育的水平，而西方国家的父母之间没有发现这种差异。总之，这些结果揭示了在侵入性养育行为方面中，同一个家庭中父母之间的相似性大于差异性，而且文化可能在塑造具有性别特异性养育行为中发挥了作用。

关键词 元分析综述，侵入性养育，儿童早期发展，文化

Intrusive Parenting of Mothers and Fathers in Early Childhood: A Systematic Review and Meta-Analysis

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Abstract: Developmental research on parenting has shifted from emphasizing solely the role of mothers in caregiving to acknowledging the importance of both parents. Yet, whether parenting between mothers and fathers within the same family are more similar or different? Whether the effects of parenting between mothers and fathers on the child development are different? These questions still remain to solve. This research is through systematic review and meta-analysis to compare the similarities and differences between intrusive parenting between fathers and mothers, and compare and determine their respective roles in child development. A total of 55 studies (385 effect sizes; 20,621 participants) were identified from a systematic search in four databases. We conducted three-level meta-analyses using random-effects models to estimate 1) the similarity between mothers' and fathers' intrusive parenting (r), 2) the mean-level difference between mothers' and fathers' intrusive parenting (hedges' g), and 3) the relations of mothers' and fathers' intrusive parenting with child developmental outcomes (r). Results indicated that 1) mothers' and fathers'

intrusive parenting were moderately and positively correlated, ($r = .256$, 95% CI = [0.180, 0.329]), 2) mothers and fathers did not differ on mean levels of intrusive parenting, ($g = 0.035$, 95% CI = [-0.034, 0.103]), 3) mothers' and fathers' intrusive parenting were both positively related to children's social-emotional problems, (mothers: $r = 0.098$, 95% CI = [0.051, 0.145]; fathers: $r = 0.098$, 95% CI = [0.113, 0.162]), mothers' and fathers' intrusive parenting were not related to children's cognitive skills. Despite the significant heterogeneity of effect sizes, only the country of the sample explained a small proportion of the heterogeneity in the mean difference of mothers' and fathers' intrusive parenting. Mothers from East Asia were more intrusive than fathers, whereas no such difference was found for western parents. In conclusion, these results reveal more similarities than differences in mothers' and fathers' intrusive parenting and that culture likely plays a role in shaping gender-specific parenting behaviors.

Keywords: meta-analytic review, intrusive parenting, early child development, culture

童年期情感忽视对青少年问题性社交网站使用的影响： 一个有调节的中介模型

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摘要 随着互联网的快速发展及智能手机的普及，社交网站已成为青少年日常交往的重要平台。然而，由于社交网站具有较强的社会粘性，用户频繁地登陆社交网站被证明是有害的，这可能会导致问题性社交网站使用。考虑到其对个体身心发展所带来的诸多消极后果（如焦虑，抑郁甚至自杀倾向），越来越多的研究者开始关注问题性社交网站使用的影响因素。情感忽视是一种常见的童年期虐待，被定义为父母在情感上的无能为力和无反应，其特征是父母和孩子之间缺乏互动。尽管其与问题性社交网站使用之间的关系也得到了一些研究者的关注，但我们对这两者间的作用机制仍知之甚少。因此，本研究基于生命史理论，拟探讨未来消极时间洞察力和同伴关系在童年期情感忽视与青少年问题性社交网站使用关系中的作用。采用横断设计，从陕西省西安市的两所中学随机选取了 842 名初高中生（46.9%女生； $M_{\text{年龄}}=14.76$ 岁； $SD_{\text{年龄}}=1.64$ ），使其完成有关人口学变量、童年期情感忽视、未来消极时间洞察力、同伴关系及问题性社交网站使用的调查。结果发现，在控制个体的性别和年龄后：(1)童年期情感忽视对问题性社交网站使用具有显著的正向预测作用；(2)未来消极时间洞察力在童年期情感忽视与问题性社交网站使用之间起完全中介作用；(3)童年期情感忽视和未来消极时间洞察力的关系（中介效应的前半段路径）受到同伴关系的调节，即童年期情感忽视对未来消极时间洞察力的正向影响随着同伴间的关系越好而越强。这些发现不仅从新的视角（未来消极时间视角）解释了童年期情感忽视和问题性社交网站使用之间的关系，而且提示良好的同伴关系并不总是起保护作用，特别是随着家庭因素的恶化，学校因素的保护作用会逐渐减弱。

关键词 童年期情感忽视，问题性社交网站使用，未来消极时间洞察力，同伴关系，青少年

Childhood emotional neglect and problematic social media use among Chinese adolescents: A moderated mediation model

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Abstract: With the rapid development of the Internet and the popularity of smartphones, social networking sites (SNS) have become an important platform to communicate with each other for teenagers. However, due to the strong social stickiness of SNS, spending too much time on SNS is supposed to be detrimental, which may lead to problematic SNS use. Considering that excessive use of SNS may have many negative effects on individuals' mental and health, such as anxiety, depression, and even suicidal tendencies, A growing body of researchers have begun to concern the antecedents of problematic SNS use. Emotional neglect is a relatively common type of childhood maltreatment. It is defined as a parent's emotional unavailability and unresponsiveness, and is characterized by a lack of interaction between parent and child. Although the relationship between childhood emotional neglect and problematic SNS use

has obtained attention from some researchers, little is known the potential mechanisms. Thus, based on the life history theory, this study aims to examine the effect of future negative time perspective and student-student relationship in the link between childhood emotional neglect and problematic SNS use among adolescents. Using a cross-sectional design, 842 adolescents (46.9% girls; M age =14.76 years; SD age =1.64) were recruited randomly from two middle schools in Xi'an of Shaanxi province. They completed this survey regard demographic variables, childhood emotional neglect, future negative time perspective, student-student relationship, and problematic SNS use. After controlling for gender and age, the results showed that, (a) Childhood emotional neglect can significantly positively predict adolescents' problematic SNS use. (b) Future negative time perspective fully mediated the association between childhood emotional neglect and problematic SNS use. (c) The relationship between childhood emotional neglect and future negative time perception was moderated by student-student relationship, namely, the positive effect of childhood emotional neglect on future negative time perspective was stronger as better student-student relationship. These findings not only shed new light on the relationship between childhood emotional neglect and problematic SNS use, but also suggest that better student-student relationship do not always play a protective role, especially as the protective effect of school factors gradually weakened with the deterioration of family factors.

Keywords: Childhood emotional neglect, Problematic social networking sites use, Future negative time perspective, Student-student relationship, Adolescents

同伴侵害、抑郁与青少年非自杀性自伤的关系： GABRA2 基因 rs279827 多态性的调节作用

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摘要 非自杀性自伤（Non-suicidal self-injury, NSSI）是指个体在没有自杀意图的前提下，故意伤害自己的身体，包括咬、切、烧等行为。理论和实证研究表明同伴侵害对青少年 NSSI 的形成和发展具有重要影响，但是目前针对同伴侵害与青少年 NSSI 关系的具体机制的研究较少。动机意志理论（integration theory of motivation will）认为表明，消极的生活事件造成个体抑郁，影响个体情绪调节能力，进而导致 NSSI。此外，来自神经生物学的证据表明，GABRA2 基因 rs279827 多态性能够调节个体对情绪的调节，进而影响个体的社会适应性。据此，本研究采用同伴侵害量表、抑郁量表、非自杀性自伤量表对 468 名青少年进行调查（Mage=13.31 岁，SD=0.47；男生占 52.45%），探讨同伴侵害与青少年 NSSI 的关系，以及抑郁的中介作用、GABRA2 基因 rs279827 多态性的调节作用。结果发现：（1）同伴侵害可以通过抑郁间接影响青少年 NSSI；（2）GABRA2 基因 rs279827 多态性显著调节“同伴侵害→抑郁→青少年 NSSI”的前半段路径以及“同伴侵害→青少年 NSSI”这一直接路径。具体而言，携带 AA 基因型的青少年，同伴显著正向预测抑郁，并进一步正向预测青少年 NSSI。相反，携带 G 等位基因的青少年，“同伴侵害→抑郁→青少年 NSSI”这一中介路径不显著。此外，只有携带 AA 基因型的青少年，其同伴侵害显著预测 NSSI。本研究结果为理解同伴关系影响青少年 NSSI 的内部机制提供了证据，同时为揭示 NSSI 的“基因 X 环境→行为”框架提供了启示。

关键词 同伴侵害，非自杀性自伤，抑郁，GABRA2 基因 rs279827 多态性

Peer victimization and non-suicidal self-injury(NSSI): The mediating role of depression and moderating role of GABRA2 Gene rs279827 polymorphism

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Abstract: Non-suicidal self-injury (NSSI) refers to an individual intentionally injuring his body without suicidal intention, including biting, cutting, burning and other behaviors. The study found that the annual prevalence of NSSI

among adolescents in China ranged from 15% to 32.7%. Theoretical and empirical studies have shown that peer victimization plays an indispensable role in the formation and development of adolescent NSSI, but there are few studies explore the underlying mechanism. According to the integration theory of motivation will (IMV), negative life events cause individual depression, affect individual emotion regulation ability, and then lead to NSSI. Furthermore, neurobiological evidence suggests that the GABRA2 Gene rs279827 may regulate individual emotion, and then affect individual social adaptability. A total of 469 adolescents (52.45% boys, $n = 246$) ranging in age from 12 to 15 (Mage = 13.31 years old, $SD = 0.47$) participated in this study. First, we collected saliva from adolescents for DNA. Then, adolescents reported the frequency of peer victimization, depression symptoms, and rate of NSSI. All the measurement methods have good reliability and validity. In this study, Model 4 and Model 59 of PROCESS for SPSS were used to test the mediating effect and moderated mediating effect, respectively. The results showed that: (1) peer victimization and depression positively predicted adolescent NSSI. (2) The mediating effect showed that the effect of peer victimization on adolescent NSSI partially mediated by depression. (3) The GABRA2 Gene rs279827 moderated the mediating role of depression on the relationship between peer victimization conflict and adolescent NSSI. Specifically, for adolescents with AA genotype, peer victimization significantly positively predicted depression and further positively predicted adolescent NSSI. In contrast, the pathway of peer victimization $\rightarrow$ depression $\rightarrow$ adolescent NSSI was not significant in adolescents with G allele. In addition, peer victimization significantly predicted NSSI only in adolescents with AA genotype. The results of this study provided evidence for understanding the underlying mechanism of peer relationship affecting adolescent NSSI, and provide enlightenment for revealing the “gene x environment-behavior” framework of NSSI.

Keywords: Peer victimization, NSSI, depression, GABRA2 Gene rs279827

家庭防拐教育对 3-5 岁幼儿抵制诱拐行为的影响

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摘要 研究儿童诱拐现象从而预防和减少该现象的发生, 对社会安定和家庭幸福都具有重要意义。目前较少有研究探讨家庭防拐安全教育对于培养儿童的防诱拐意识的有效性。因此本研究旨在探究日常家庭防拐教育和事先叮嘱能否影响 3-5 岁幼儿在抵制诱拐时的行为表现。本研究采用生态效度较好的模拟诱拐场景, 首先儿童跟主试 1 进入场景, 主试 1 借故离开, 主试 2 (陌生人) 进入场景对儿童实施“诱拐测试”。儿童跟随陌生人离开则视为测试不通过, 计为 0; 儿童拒绝与陌生人离开则测试通过, 计为 1。

研究一选取 121 名 3~5 岁儿童作为被试, 父母对儿童进行日常防拐安全教育的频率为自变量, 探究父母日常防拐教育是否能有效地培养儿童抵制诱拐意识; 研究二选取 124 名 3~5 岁儿童作为被试, 采取以离开前事先叮嘱 (有叮嘱 VS 无叮嘱) 为自变量的单因素被试间实验设计, 探究离开前的事先叮嘱是否能够有效地向儿童传授防拐安全知识, 使儿童在面临诱拐时做出正确的反应。

采用二元 Logistic 回归分析对数据进行分析, 结果表明年龄能够正向预测 3~5 岁幼儿在抵制诱拐中的表现 ($\beta = 0.10, p < 0.001, OR = 1.10$), 随着年龄的增长, 能够拒绝与陌生人离开的幼儿的比例逐渐上升; 父母日常防拐教育频率不能显著地预测儿童在诱拐测试中的表现 ($\beta = -0.20, p = 0.954, OR = 0.98$); 而事先叮嘱能够显著地正向预测儿童在诱拐测试中的表现 ($\beta = 1.20, p = 0.002, OR = 3.31$), 受到事先叮嘱的儿童在接下来的诱拐测试中更不容易与陌生人离开。本研究的研究结果对于指导未来的家校防拐安全教育具有重要价值。

关键词 儿童诱拐, 日常安全教育, 事先叮嘱, 防拐意识

The Influence of Family Education about Abduction Prevention on 3-to 5-Year-Old Children's Behavior to Resist Abduction

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Abstract: Studying the phenomenon of child abduction to prevent and reduce the occurrence of this phenomenon is of great significance to social stability and family happiness. At present, there are few studies to explore the effectiveness of family education about abduction prevention in cultivating children's awareness to resisting abduction. Therefore, this study aims to explore whether daily family education about abduction prevention and advance warning can affect the behavior of 3-5 year old children in resisting abduction. This study uses a simulated abduction test with good ecological validity. The child entered the scene with the experimenter 1 and the subject tried to leave with an excuse, and the experimenter 2 entered the conversation, and she implements the "abduction test" on the child. If a child leaves with a stranger, the test is considered as a failure and counts as 0; if a child refuses to leave with a stranger, the test is passed and counts as 1.

Study 1 selected 121 children aged 3 to 5 years old as the subjects, and the frequency of the parents' daily safety education about abduction prevention to the children was used as an independent variable to explore whether the parents' daily safety education can effectively cultivate children's awareness of resisting abduction; study 2 selected 124 Children aged 3~5 years old were taken as subjects, and adopted one way between subjects design with advance warning before leaving (with warnings VS no warning) as the independent variable, to explore whether the advance warning before leaving can effectively teach children about the safety of abduction prevention, so that children can make the right response when facing abduction.

Using binary logistic regression analysis to analyze the data, the results show that age can positively predict the performance of 3~5 years old children in resisting abduction ($\beta = 0.10$, $p < 0.001$, $OR = 1.10$). As age increases, The proportion of children who refuse to leave with strangers is gradually increasing; the frequency of parents' daily safety education about abduction prevention cannot significantly predict the performance of children in the abduction test ($\beta = -0.20$, $p = 0.954$, $OR = 0.98$); and advance warnings can significantly predicts the child's performance in the abduction test ($\beta = 1.20$, $p = 0.002$, $OR=3.31$), and children who have been instructed in advance are less likely to leave with strangers in the subsequent abduction test. The results of this study are of great value for guiding future home and school abduction prevention education.

Keywords: child abduction, daily safety education, warning, awareness of resisting abduction

屏幕暴露对学龄前儿童情绪调节的影响：家长介入的作用

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摘要 情绪调节指的是个体采用各种有意识或无意识的策略, 来提高、维持或减弱情绪反应, 以达到目的的过程, 对个体的发展至关重要, 其发展受到诸多因素的影响。已有研究发现过度使用社交媒体不利于青少年的情绪调节, 随着近年来屏幕暴露呈现低龄化趋势, 探究其对学龄前群体情绪调节的影响势在必行。本研究采用家长报告法, 通过结构方程模型探讨屏幕暴露与情绪调节能力之间的关系: 1) 向外的情绪调节, 即为了达到适应社会情境的目的, 抑制不恰当的情绪的能力; 2) 向内的情绪调节, 即对自身情绪觉察、维持和恰当表达的能力; 3) 适应性和非适应性情绪调节策略, 其中, 适应性策略包括认知重建, 问题解决和替代活动, 非适应性策略包括发泄和被动应对。研究1测量了897名2~6岁幼儿, 探究屏幕暴露对向外的情绪调节能力以及策略使用情况的影响。研究发现, 1) 在家长陪伴使用频率较高时, 屏幕暴露时间越长, 幼儿向外的情绪调节能力越好。2) 在家长陪伴使用频率较低时, 屏幕暴露时间越长, 儿童使用适应性情绪调节策略的比例越

低。研究表明家长陪伴使用调节了屏幕暴露对向外的情绪调节能力的影响作用。研究 2 测量了 633 名 2~6 岁幼儿，探究屏幕暴露对向内的情绪调节的影响及作用机制，并在研究 1 的基础上，进一步探究两种家长介入方式（筛选、引导）的作用。研究发现，1）家长陪伴使用的频率越高，儿童向内的情绪调节越好，屏幕暴露的主效应和交互效应均不显著。2）屏幕暴露时间能够通过增加幼儿使用非适应性策略的频率，对其向内的情绪调节产生不利影响；3）家长的筛选和引导均能够通过提高认知重建策略的使用频率，对幼儿向内的情绪调节起到保护作用，此外，家长筛选还能够通过被动应对策略的中介产生保护作用。综上，本研究揭示了屏幕暴露的时间和方式对儿童向内和向外情绪调节的不同影响及作用机制，对科学指导儿童使用电子屏幕设备具有重要意义。

关键词 屏幕暴露，情绪调节，家长介入，学前儿童

Impact of Screen Exposure on Preschooler's Emotion Regulation: Essential role of caregivers' mediation

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Abstract: Emotion regulation refers to the process in which individuals enhance, maintain or weaken emotional response resorting to conscious or unconscious strategies to achieve their goals. It plays a crucial role during people's life span and could be influenced by multiple factors. Previous research found significant correlations between excessive use of social media and adolescents' emotional dysregulation. Since the prevalence of screen use within preschoolers, it's imperative for us to explore the relationship between preschoolers' screen exposure and their emotion regulation: 1) outward emotion regulation, defined as the ability to suppress inappropriate emotion arousal for the purpose of social adaptation; 2) inward emotion regulation, refers to the ability to perceive, maintain and properly express personal emotions; 3) emotion regulation strategies that preschoolers use, adaptive strategy includes cognitive reconstructing, alternative activities and problem solving, while venting and passive coping constitutes the opposite. Structural equation model (SEM) was employed to estimate this relationship in our study, with data collected from parent report. Study 1 recruited 897 children aged 2 to 6 years to explore how screen exposure influences outward emotion regulation and strategy use, the role of caregiver co-use was also tested. Results show that, 1) there is positive association between outward emotion regulation and active exposure time only under high frequency caregiver co-use conditions; 2) in preschoolers with low frequency of caregiver co-use, active exposure time is associated with relative more maladaptive strategy use. Our results indicate the moderating role of caregiver co-use in associations between screen exposure and emotion regulation. Based on study 1, study 2 included 633 children aged 2 to 6 years to estimate how screen exposure affect inward emotion regulation. Another two aspects of caregivers' mediation, guidance and selection, were further tested. Results show that, 1) better inward emotion regulation is associated with more frequent caregiver co-use, while interaction effect and the main effect of screen exposure fails to reach significance. 2) although the direct effect of exposure time is not significant, it is negatively associated with preschoolers' inward emotion regulation through the mediation of more frequent use of passive coping strategy. 3) both caregivers' guidance and selection are positively associated with preschoolers' inward emotion regulation through the mediation of more frequent use of cognitive reconstructing strategy. Caregivers' selection is also positively associated with children's inward emotion regulation through the mediation of more frequent use of passive coping strategy. In conclusion, this study illustrates the effects and mechanism of screen exposure on preschoolers' emotion regulation and the important role of caregivers' mediation. Our results provide evidence for scientific guidance on children's screen exposure.

Keywords: Screen exposure; Emotion regulation; Caregivers' mediation; Preschool children

婴幼儿动作能力与执行功能的关系：一个有调节的中介模型

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摘要 基于皮亚杰的经典认知发展理论和当代的具身认知的视角，大量实证研究表明婴幼儿期动作能力（粗大和精细）的发展为日后高级认知技能（如：执行功能）的获得奠定了基础。此外，睡眠作为易于在教养实践中调节的活动之一可能在认知发展中承担了独特的作用，但睡眠与执行功能之间的关系在婴幼儿群体中的研究结果并不一致。本研究旨在通过一项追踪研究考察幼儿的睡眠从其婴幼儿期动作能力到幼儿期执行功能的阶段性发展过程中起到的调节作用。以 255 个婴幼儿家庭为参与者，在婴儿 6 个月和 1 岁时，采用《贝利婴幼儿发展量表第三版》（贝利 III）中的动作分量表测量他们粗大动作和精细动作的能力；在幼儿 2 岁时，采用贝利 III 中的认知分量表测量了他们的一般认知能力；在幼儿 3 岁时，采用图片指认任务、白天黑夜任务及卡片分类任务分别测量了他们执行功能中的三个成分，分别是工作记忆、抑制控制和认知灵活性，并由母亲填写了《儿童睡眠习惯问卷（CSHQ）》。通过构建了一个包含潜变量的有调节的中介模型，考察 2 岁一般认知能力在 1 岁前动作能力和 3 岁时执行功能之间的中介作用，以及幼儿 3 岁夜间睡眠时长和睡眠问题的调节作用。通过中介效应检验，结果表明：婴儿 1 岁前的动作能力可以通过 2 岁一般认知能力显著正向预测 3 岁执行功能。有调节的中介效应检验进一步表明：3 岁时工作日的夜间睡眠时长在 2 岁一般认知能力和 3 岁执行功能之间起到了调节作用，具体来说：当工作日夜间睡眠时长较长时，2 岁一般认知能力能显著正向预测 3 岁执行功能，而在工作日夜间睡眠时长较短的情况下，2 岁一般认知能力能负向预测 3 岁执行功能，但这种效应并不显著。但是，3 岁时的睡眠问题没有起到相似的调节作用。

关键词 婴幼儿，动作，认知能力，执行功能，睡眠

Relationship between motor ability and executive function in infants and toddlers: a moderated mediation model

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Abstract: Based on Piaget's classical theory of cognitive development and the contemporary perspective of embodied cognition, a large number of empirical studies have shown that the development of motor abilities (gross and fine motor) in infancy lays the foundation for the acquisition of higher cognitive skills (e.g., executive function) in later life. In addition, Sleep, as one of the activities that can be easily regulated in parenting practices, may play a specific role in cognitive development, but the relationship between sleep and executive function in infants and young children has been inconsistent. The purpose of this study was to examine the role of sleep in the gradual development of infant motor ability through early childhood executive function in a follow-up study. The sample for this longitudinal study included 255 infants aged from 6 months to 3 years. At 6 months and 1 year old, motor subscales of The Bayley Scales of Infant and Toddler Development, Third Edition (BSID III) was used to measure gross and fine motor ability, and cognitive subscales was used to measure toddlers' general cognitive abilities at 2 years of age. At 3 years of age, Children's executive functions, including working memory, inhibitory control, and cognitive flexibility, were assessed by Self-Ordered Pointing Task, Day and Night Task, The Dimensional Change Card Sort Task respectively, and mothers completed the "Children's Sleep Habit Questionnaire (CSHQ)". We constructed a moderated mediation model with latent variables to investigate the mediating role of general cognitive ability at 2 years of age, and the moderating role of weekday night sleep duration and sleep problems at 3 years of age. Through mediating effect test, the results showed that motor ability at 6 months and 1 year of age significantly positively predicted executive function at 3 years of age through general cognitive ability at 2 years of age. The moderated mediating effect analysis further showed that the mediating effect of general cognitive ability at 2 years of age was

moderated the weekday night-time sleep duration at 3 years of age. Specifically, general cognitive ability at age 2 significantly positively predicted executive function at age 3 when weeknight sleep duration was longer, while general cognitive ability at age 2 negatively predicted executive function at age 3 when weeknight sleep duration was shorter, but this effect was not significant. However, sleep problems at age 3 did not have a similar moderating effect.

Keywords: infant, motor, cognitive ability, executive function, sleep

自我扩展与青少年智能手机成瘾的关系 ——归属需求与极端同伴取向的作用

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摘 要 智能手机成瘾主要是指个体过度使用和依赖手机, 对其使用失去控制, 进而导致个体出现生理、心理和行为等问题。在中国, 手机成瘾的流行率令人担忧, 而青少年是智能手机成瘾的高发易感群体。有数据显示, 手机成瘾在年轻人群体中具有较高的检出率。因此本研究关注智能手机成瘾的影响因素, 将人-人亲密关系中的自我扩展延伸到人-机关系中的自我扩展, 并探讨高中生手机自我扩展与智能手机成瘾的关系, 探索归属需求与极端同伴取向的作用, 并提出一个有调节的中介模型, 以期为青少年智能手机成瘾的干预提供证据。采用手机自我扩展量表、归属需求量表、智能手机成瘾量表和极端同伴取向量表, 对来自湖北省一所高中的 866 名高中生进行问卷调查, 使用 SPSS 25.0 和 Mplus 8.3 对数据进行分析, 结果显示: (1) 手机自我扩展与智能手机成瘾、归属需求、极端同伴取向显著正相关; 归属需求与极端同伴取向、智能手机成瘾显著正相关; (2) 手机自我扩展对智能手机成瘾具有显著的正向预测作用; (3) 归属需求在手机自我扩展与智能手机成瘾的关系中起部分中介作用; (4) 极端同伴取向在手机自我扩展通过归属需求影响智能手机成瘾的中介模型的前半段和直接效应路径中起调节作用。因此, 手机自我扩展和青少年智能手机成瘾之间存在着有调节的中介效应。

关键词 手机自我扩展, 智能手机成瘾, 归属需求, 极端同伴取向, 青少年

The Relationship between Self-expansion and Adolescent Smartphone Addiction: The Roles of Need To Belong and Extreme Peer Orientation

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Abstract: Smartphone addiction mainly refers to individuals' excessive use and dependence on smartphone, and loss of control over their use, which in turn leads to physical, psychological, and behavioral problems. In China, the prevalence of smartphone addiction is alarming, and adolescents are a high-risk group of smartphone addiction. In addition, data has showed that smartphone addiction has a higher detection rate among young people. Therefore, the present study elaborated the mechanism of self-expansion from the intimate relationship between individuals to the human-computer relationship, explored the predictors of smartphone addiction, examined whether need to belong mediated the relationship between self-expansion and adolescent smartphone addiction, and whether this mediating process was moderated by extreme peer orientation, in order to provide evidence for the intervention of adolescent smartphone addiction. A total of 866 high school students from a high school in Hubei province were investigated using Mobile Phone Self-Expansion Scale, Need to Belong Scale, Extreme Peer Orientation Scale and Smartphone Addiction Scale. SPSS25.0 and Mplus 8.3 were used in present study. Results revealed that: (1) Self-expansion via smartphone was positively correlated with need to belong, smartphone addiction, and extreme peer orientation. Besides, need to belong was positively associated with smartphone addiction and extreme peer orientation. (2) The

self-expansion positively predicted adolescent smartphone addiction. (3) The positive association between self-expansion via smartphone and high school students' smartphone addiction was mediated by need to belong. (4) The first half of the path of the indirect relationship and the direct pathway were moderated by extreme peer orientation, with these effects being stronger among adolescents high on extreme peer orientation.

Keywords: Self-expansion via smartphone, Smartphone addiction, Need to belong, Extreme peer orientation, Adolescents

初中生班级竞争氛围对抑郁的影响：学习压力的多层中介分析

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摘要 近年来, 抑郁的发生率居高不下, 研究表明, 抑郁会影响青少年认知和行为的发展。处于青春期的初中生大部分活动时间都是在学校尤其是在班级中与老师和同学度过的, 国内的班级结构为固定式, 这使得班级内易形成稳定的班级氛围, 根据班级社会体系理论, 班级氛围可以影响个体的心理和行为, 青少年的抑郁便与消极的班级氛围有关。班级竞争氛围作为班级氛围的重要组成成分之一同样会影响学生的心理健康。此外, 有研究表明, 班级氛围可以影响学生的学习压力, 初中生的学习压力相比于小学有明显的增加, 这些学习压力正是引发青少年抑郁的风险因素。因此, 可推知班级竞争氛围可以影响学生的学习压力, 进而影响抑郁。个体的心理健康会受到多个层次的多个因素的影响, 以往的研究将班级氛围视为个体层次的变量探究对个体心理健康的影响, 忽略了班级氛围作为班级层次的影响。综上, 本研究同时关注班级层变量和个体层变量对初中生抑郁的影响, 班级竞争氛围是数据结构的第二层, 学习压力和抑郁是数据结构的第一层, 研究学习压力在班级竞争氛围和抑郁中的中介作用。为了探讨班级竞争氛围对初中生抑郁的影响机制, 本研究采用问卷法对北京市 3 所学校 50 个班级 1250 名初二学生的竞争氛围, 学习压力和抑郁进行了调查, 将学生个体水平上的竞争氛围合成到班级水平, 通过建立 2-1-1 多层结构方程模型(MSEM)分析班级竞争氛围、学习压力和抑郁之间的关系, 使用 SPSS 和 Mplus 进行数据处理。结果发现: (1) 班级竞争氛围与学习压力、抑郁显著负相关, 学习压力与抑郁显著正相关 (2) 多层中介模型拟合良好, 班级竞争氛围不但可以直接影响学生抑郁, 还可以通过学习压力间接影响抑郁。研究结果表明, 班级层面的竞争氛围可以降低学习压力, 减少抑郁, 这为从班级层面对初中生抑郁的干预提供了实证研究的依据。

关键词 抑郁, 班级竞争氛围, 学习压力, 多层线性模型

The Hierarchical Linear Model Analysis on the Relation between Classroom Competitive Climate and Junior Middle School Students' Depression: the Mediating Role of Academic Stress

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Abstract: In recent years, the prevalence of depression has been high, and studies have shown that depression affect the cognition and behavior development of adolescents. Junior middle school students spend most of their activity time in school, especially in class, with their teachers and classmates. In China, the class structure is fixed, which is easy to form a stable classroom climate. According to the "Classroom as a Social System", classroom climate affected students' psychology and behavior, and the adolescent depression related to the negative classroom climate. Studies have shown that the classroom competitive climate, as one of the important components of the classroom climate, also affects students' mental health. In addition, researches have indicated that classroom climate influence students' academic stress, and the academic stress of junior middle school students is significantly increased compared with that of primary school students, which is a risk factor for adolescent depression. Therefore, it can be inferred that classroom competitive climate affects the academic stress, and then affects the depression. Students' mental health was affected by multiple factors at multiple levels, but previous studies regarded classroom climate as

an individual-level variable to explore the impact of classroom climate on students' mental health and ignored the impact of it as a class-level variable. In summary, this study focused on the influence of class-level variable and individual-level variable on junior middle school students' depression. Classroom competitive climate was the second level of data structure, while academic stress and depression were the first level of data structure, and investigated the mediating role of academic stress between classroom competitive climate and individual depression. In order to explore the influence mechanism of classroom competitive climate on junior school students' depression, a total of 1250 Beijing junior middle school students from 50 classes in 3 schools completed scales that assessed classroom competitive climate, academic stress and depression. The classroom competitive climate perceived by students is synthesized to the class level. The 2-1-1 multilevel structural equation model (MSEM) was built to analyze the mediating effect of individual academic stress on classroom competitive climate and depression. SPSS and Mplus were used for data processing. The results showed that : (1) Classroom competitive climate was significantly negatively correlated with academic stress and depression, besides, academic stress was significantly positively correlated with depression; (2) The hierarchical linear mediating model had good fit indices, and classroom competitive climate not only directly influenced students' depression, but also indirectly through academic stress. The results showed that the competitive climate at the class level reduce depression by alleviating academic stress, which provided a reference of empirical research for intervention of depression in junior middle school students by creating a right classroom climate.

Keywords: depression, classroom competitive climate, academic climate, hierarchical linear model

社会排斥与大学生冲动性消费的关系：有调节的中介效应

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摘要 购物已经成为了大学生的一种重要生活方式, 新时代的营销手段和消费模式使得消费变得更加容易, 这导致大学生的冲动性消费更有可能发生, 而大学生的冲动性消费也往往导致一系列的消极后果, 如低自尊和债务负担等等, 因此探究大学生冲动性消费的具体作用机制具有相当重要的意义。本研究基于认知—情感理论和自我控制理论, 构建了一个有调节的中介模型, 检验名人崇拜在社会排斥和冲动性消费之间的中介作用, 以及自我控制在其中的调节作用。本研究采用社会排斥量表、名人崇拜量表、冲动性消费量表和自我控制双系统量表对 811 名大学生进行测查, 结果发现: (1) 在控制了性别、年龄、家庭月收入 and 每月生活费后, 社会排斥对大学生的冲动性消费具有显著的正向预测作用 ($\beta = 0.39, SE = 0.03, p < 0.001$)。 (2) 中介效应分析表明, 名人崇拜在社会排斥与冲动性消费的关系之间具有部分中介作用 (indirect effect = 0.08, $SE = 0.02$, 95%CI = [0.06, 0.12])。 (3) 有调节的中介效应检验进一步表明, 自我控制调节了“社会排斥→名人崇拜→冲动性消费”的前半段 ($\beta = 0.07, SE = 0.03, p < 0.05$) 和直接路径 ($\beta = -0.06, SE = 0.03, p < 0.05$), 具体而言, 自我控制能够更好地缓冲弱社会排斥对名人崇拜的影响, 并且随着自我控制资源的提升, 社会排斥对冲动性消费的预测作用减弱。结果表明, 社会排斥是影响大学生冲动性消费的重要因素, 社会排斥通过加剧名人崇拜, 从而增加冲动性消费。此外, 良好的自我控制能力有助于削弱社会排斥对冲动性消费的消极影响。本研究验证了同伴系统和个人系统对大学生冲动性消费的联合作用, 对于大学生冲动性消费的干预具有重要指导意义。

关键词 社会排斥, 名人崇拜, 冲动性消费, 自我控制, 大学生

Social Exclusion and Impulsive Buying among Chinese College Students: The Moderated Mediation Effect

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Abstract: According to the statistical report of China Internet Network Information Center (2020), as of December 2019, the proportion of Internet shopping of senior high school students in China accounts for 46.9% of all kinds of activities. Many marketing strategies also aims at college students. Buying has become a daily behavior of college students, which has aroused wide attention of the society. With the continuous progress of science and technology, it is more and more convenient for college students to buy, but it has brought serious social problems of impulsive buying to college students. Impulsive buying not only brings immediate satisfaction to college students, but also brings a series of problems such as debt burden and low self-esteem. Therefore, it is necessary to explore the psychological mechanism of impulsive buying of college students. In order to prevent and intervene impulsive buying better and avoid the negative effects of impulsive buying, this paper puts forward a moderated mediation model based on previous studies to explore its internal psychological mechanism.

Therefore, this study aimed at exploring the impact of social exclusion on impulsive buying, as well as the mediating role of celebrity worship and the moderating role of self-control. Based on perspective of cognitive-affective system theory, the social exclusion theory and the self-control theory, we used social exclusion scale, celebrity worship scale, self-control dual system scale and impulsive buying scale to investigate 811 college students in the late adolescence. The macro program process of SPSS 23.0 was used to process and analyze the data. By estimating the three equations, we tested the impact of social exclusion on impulsive buying, the mediating role of celebrity worship and the moderating role of self-control. The results showed that: (1) After all the predictors were standardized and controlling for gender, age, family monthly income and monthly living expenses, social exclusion could significantly positively predict impulsive buying ($\beta = 0.39$, $SE = 0.03$, $p < 0.001$); (2) Social exclusion predicted impulsive buying through the mediating role of celebrity worship (indirect effect = 0.08, $SE = 0.02$, 95%CI = [0.06, 0.12]); (3) The first half of the mediating effect of celebrity worship ($\beta = 0.07$, $SE = 0.03$, $p < 0.05$) and the direct influence of social exclusion on impulsive buying were moderated by self-control ($\beta = -0.06$, $SE = 0.03$, $p < 0.05$). Specifically, in terms of direct effect, compared with high self-control college students, low self-control college students' social exclusion had a greater predictive effect on their impulsive buying. The moderated mediation model was well proven. As a positive factor, self-control could buffer the adverse effect of social exclusion on impulsive buying. On the mediating path, self-control could moderate the influence of social exclusion on celebrity worship, and the protective effect of self-control was more obvious in the situation of weak social exclusion. The results helped to reveal the formation mechanism of college students impulsive buying, and had a certain guiding significance for the prevention and intervention of impulsive buying. In a word, this study constructed a moderated mediating model to reveal the internal psychological mechanism of social exclusion and impulsive buying, and helped us understand how social exclusion affects college students impulsive buying. In addition, the results of the study also provided some enlightenment for the intervention and prevention of impulsive buying. For example, educators could improve college students' self-control ability through certain course training and physical exercise, or guided them to correctly understand their attachment to celebrities, so as to avoid pathological infatuation, or administrators should formulate reasonable management measures to create a good peer environment which could reduce the possibility of social exclusion. There are also some deficiencies in this study. First, there may be other mechanisms behind these associations. Future research can explore other psychological mechanisms besides celebrity worship. Second, as a cross-sectional study, the causal relationship between variables can't be well inferred. Future research can improve this by focusing on longitudinal research or on methods of experiments.

Keywords: social exclusion, impulsive buying, celebrity worship, self-control, college student

父母监管、自我控制对青少年欺骗行为和亲社会行为的影响：来自 ERPs 的证据

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摘要 父母监管是培养子女社会化行为的重要环境成分。自我控制作为一种重要的心理机能, 对个体抑制冲动、实现长远目标发挥着关键作用。父母监管、自我控制是青少年欺骗行为和亲社会行为的重要影响因素。培养亲社会行为, 减少欺骗行为, 对青少年而言具有重要意义。本研究通过 2 个实验并结合事件相关电位(ERPs)技术, 探究父母监管、自我控制对青少年欺骗行为和亲社会行为的影响及其神经机制。实验一采用情境回忆法并结合父母眼睛图片操纵父母监管, 纳入自我控制双系统变量, 采用点判断任务诱发欺骗行为, 探究父母监管和自我控制双系统对青少年欺骗行为的影响。结果发现: 高控制低冲动组比低控制高冲动组有更少的欺骗行为次数($t(39) = -0.07, p > 0.05$, Cohen's $d = 0.38$)、更长的欺骗决策反应时($t(39) = 2.49, p = 0.09$, Cohen's $d = 0.80$)、诱发更小的 P300、N200 波幅。个体在父亲监管条件下和母亲监管条件下比无意义监管条件做出欺骗行为更少($F(2, 78) = 1.73, p > 0.05, \eta^2 = 0.04$)、欺骗决策反应时更短($F(2, 78) = 4.16, p < 0.05, \eta^2 = 0.10$), 诱发的 P300、N200 波幅均显著大于无意义条件。实验二采用捐献任务考察个体的亲社会行为, 探究父母监管和自我控制双系统对青少年亲社会行为的影响。结果发现: 相比于无意义监管条件下, 母亲监管条件和父亲监管条件下青少年会做出更多的亲社会行为($F(2, 90) = 5.53, p < 0.01, \eta^2 = 0.11$), 诱发的 P300 和 N200 波幅差异无显著差异; 高控制低冲动组较低控制高冲动组做出更少的亲社会行为($F(1, 34) = 0.31, p > 0.05, \eta^2 = 0.007$), 诱发的 P300 和 N200 的波幅显著小于低控制高冲动组。本研究从个体内部和外部的角度探讨了欺骗行为和亲社会行为的产生机制, 揭示了欺骗行为和亲社会行为的心理和神经机制, 为促进青少年亲社会行为、干预及预防欺骗行为提供实证支持, 助力青少年健康成长发展。

关键词 父母监管, 自我控制, 欺骗行为, 亲社会行为, 青少年

The Effects of Parental Supervision and Self-control on Adolescent Deception and Prosocial Behavior: Evidence from an ERP Study

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Abstract: Parental supervision is an important environmental component of cultivating children's socialized behavior. As an important psychological function, self-control plays a key role in restraining impulses and achieving long-term goals. Parental supervision and self-control are important influencing factors of adolescents' deception and prosocial behavior. Cultivating prosocial behavior and reducing deception are of great significance to adolescents. Through two experiments and event-related potentials (ERPs) technology, this study explored the effects of parental supervision and self-control on adolescents' deceptive behavior, prosocial behavior and its neural mechanism. Experiment 1 used the situational recall method and combined with parental eye pictures to manipulate parental supervision, included the variable of dual system self-control, used the point judgment task to induce deception, and explored the impact of parental supervision and self-control on adolescents' deception. The results showed that the high control low impulse group had fewer times of deception ($t(39) = -0.07, p > 0.05$, Cohen's $d = 0.38$), longer deception decision-making response time ($t(39) = 2.49, p = 0.09$, Cohen's $d = 0.80$) and smaller P300 and N200 amplitudes than the low control high impulse group. Individuals under father supervision and mother supervision made less deception decision than those under meaningless supervision ($F(2, 78) = 1.73, p > 0.05, \eta^2 = 0.04$), and the reaction time of deception decision-making is shorter ($F(2, 78) = 4.16, p < 0.05, \eta^2 = 0.10$), and the induced P300 and N200 amplitudes were significantly greater than those in meaningless condition.

In Experiment 2, the donation task was used to investigate the prosocial behavior of individuals, and to explore the impact of parental supervision and self-control on adolescents' prosocial behavior. The results showed that

compared with meaningless supervision, adolescents under mother supervision and father supervision will show more prosocial behaviors ($F(2, 90) = 5.53, p < 0.01, \eta^2 = 0.11$), there was no significant difference in the amplitude of P300 and N200 induced; The high control low impulse group show less prosocial behavior than the low control high impulse group ($F(1, 34) = 0.31, p > 0.05, \eta^2 = 0.007$), the amplitudes of P300 and N200 induced were significantly smaller than those in the low control high impulse group. This study discusses the generation mechanism of deception and prosocial behavior from the internal and external perspectives of individuals, reveals the psychological and neural mechanisms of deception and prosocial behavior, provides empirical support for promoting adolescents' prosocial behavior, intervention and prevention of deception, and helps adolescents grow and develop healthily.

Keywords: parental supervision, self-control, deception behavior, prosocial behavior, adolescent

快乐表情对婴儿面孔种族知觉窄化的影响

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摘要 知觉-社会联结假说认为婴儿面孔种族的知觉加工与社会性加工存在联结, 已有研究发现, 婴儿出生后第一年表现出面孔种族的知觉窄化现象, 3个月婴儿能够识别所有种族面孔, 9个月婴儿只能识别本族面孔, 也有研究已证实婴儿面孔种族知觉窄化会影响其对面孔种族的社会性加工。然而, 尚不清楚面孔种族社会性加工是否能够影响面孔种族知觉窄化。本研究将探究快乐表情能否改变6个月和9个月婴儿对他族面孔的知觉窄化。实验采用完全被试间设计, 设置了两种实验条件, 熟悉快乐面孔或中性面孔。实验范式改进了以往婴儿识别任务使用的视觉配对比较范式(VPC), 在熟悉阶段和测试阶段的基础上增加了前测阶段。婴儿随机参与快乐或中性实验条件, 首先进入前测阶段, 配对呈现两张不同的中性的非洲女性面孔, 包含2个试次, 左右平衡顺序, 每个试次10秒。随后进入熟悉阶段, 配对呈现两张相同的, 前测中出现过的某一个体的快乐或中性面孔, 共6个试次, 每个试次20秒, 最后进入测试阶段, 与前测阶段完全一致。结果发现, 在中性面孔条件下, 6个月和9个月婴儿无论前测阶段还是测试阶段, 均未表现出对非洲新异面孔的偏好, 与以往研究一致, 6个月和9个月婴儿不能区分他族非洲面孔。在快乐面孔条件中, 6个月和9个月婴儿均能够在测试阶段对非洲新异面孔表现出偏好, 且在熟悉快乐面孔后, 测试阶段中的新异面孔偏好得分显著高于前测阶段中的新异偏好得分。这些结果表明快乐表情可以改变婴儿的面孔种族知觉窄化, 支持了知觉-社会联结假说, 证明了婴儿对面孔种族社会性加工也会影响面孔种族的知觉加工。

关键词 知觉窄化, 表情, 面孔识别, 婴儿, 面孔种族

Happy Expressions Influence Perceptual Narrowing of Racial Faces in Infants

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Abstract: The perceptual-social linkage hypothesis suggests that there is overlap between perceptual and social processing of face race in infants. It has been found that infants show perceptual narrowing of face race in the first year of life. 3 months infants can recognize faces of all races whatever own race or other race, but 9 months of age can only recognize faces of their own race. Some studies have also demonstrated that the perception narrowing of face race affects infantile social processing of face race. However, it is not clear whether face racial social processing can influence face racial perception narrowing. This study will explore whether happy expressions alter the perception narrowing of other race faces in 6- and 9-month-old infants. A completely between subject design was used in the experiment. Two experimental conditions were set up, familiar happy face or neutral face. The experimental paradigm improved the visual pairing comparison paradigm (VPC) used in the previous infant recognition task, adding the pretest phase before the familiar and the test phase. Infants were distributed to happy or neutral experimental conditions randomly. Beginning with the pretest phase, two different African women neutral

faces paired present for 2, 10-s every test trials, left-right positioning of the stimuli was counterbalanced across infants on the first pretest trial and reversed on the second pretest trial. And then into the familiar phase, each infant from both age groups was familiarized with one African face (neutral or happy) for 6, 20-s every familiarization trials (with two identical copies of the face presented on each side of the display on each trial), and finally enter the test phase, same as pretest phase. The results showed that under the neutral face condition, 6 - and 9-month-old infants did not show preference for African faces in both pretest and test phases, which was consistent with previous studies. 6 - and 9-month-old infants could not distinguish other African faces. In the happy face condition, both 6-month-old and 9-month-old infants were able to show preference for novel African faces during the test phase, and the novel preference score during the test stage was significantly higher than that during the pretest phase after they were familiar with the happy face. These results suggest that happy expressions can alter the perceptual narrowing of face race in infants, which supports the perception-social linkage hypothesis and demonstrates that infants' social processing of face race also affects the perceptual processing of face race.

Keywords: perceptual narrowing, facial expression, face recognize, infant, racial face

流动与城市家庭母亲疑问句输入特征及其与幼儿语言能力的关系

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摘 要 母亲疑问句输入特征, 尤其是以特殊疑问句为提问方式的言语输入对幼儿语言能力的提升有重要的作用。母亲与幼儿进行对话交流的过程中, 问题的提出会加深幼儿对世界的理解以及对当前事物的认识, 进而提高幼儿的语言能力。流动家庭与城市家庭的母亲与幼儿可能在母子互动中有不同的语言表现。本研究招募了 117 名 35-41 个月(37.68 ± 1.00)的幼儿及其家长, 参加项目的家庭包括 41 个流动家庭(男孩 26 名)和 76 个城市家庭(男孩 31 名), 使用皮博迪图片词汇测量(修订版)测量其接受性语言能力, 使用 CHILDES 语料分析系统考察幼儿表达性语言能力以及母亲疑问句输入特征, 使用基本情况调查表收集人口学信息。利用分层回归模型考察母亲疑问句输入特征对不同家庭类别幼儿的语言能力的影响, 结果表明:

(1)母亲疑问句输入特征在流动家庭与城市家庭中无显著差异; 幼儿语言能力中, 接受性语言能力与词汇多样性指标在流动家庭与城市家庭中有显著差异, 城市家庭显著大于流动家庭。

(2)母亲疑问句输入特征与幼儿的词汇类型和词汇数量具有显著正向相关关系, 母亲疑问句输入特征与幼儿的平均语句长度具有显著负向相关关系。

(3)在流动家庭中, 母亲特殊疑问句个数正向预测了幼儿的词汇类型和词汇数量; 在城市家庭中, 母亲其他疑问句个数正向预测了幼儿的词汇数量, 母亲其他疑问句个数显著负向预测了幼儿的平均语句长度。

本研究结果表明, 母亲疑问句输入特征对幼儿语言能力的影响存在差异, 具有挑战性的疑问句输入有助于促进幼儿的语言能力提升, 而频繁的无策略的提问则会导致幼儿话语长度的减少。特殊疑问句的提问方式可能对流动家庭的幼儿语言能力的提升更有作用, 而过于频繁地提问非特殊疑问句可能对幼儿语言能力具有负面影响。

关键词 母亲疑问句输入, 流动家庭, 城市家庭, 幼儿, 语言能力

The relationship between the features of maternal questions input in different families and children's language ability

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Abstract: The features of maternal questions input, especially wh-question, play an important role in the

improvement of children's language ability. In the process of dialogue between adults and children, questions raised by adults will deepen children's understanding of the world and the knowledge of current things, thus improving children's language ability. Mother-child interaction may be different between mother and child in migrant families and city families. This study recruited 117 children with 35 to 41 months (37.68 ± 1.00) and their parents, The participating families included 41 migrant family (26 boys) and 76 city family (31 boys). The Peabody Picture Vocabulary Test-Revised was used to measure children's receptive language ability, the Child Language Data Exchange System corpus was used to measure children's expressive language ability and relevant variables of maternal questions input features, and the basic information form was used to collect demographic information. The hierarchical regression model was used to investigate the influence of maternal questions input features on children's language ability in different family types. The results showed that:

(1) There is no significant difference in the features of maternal questions input between migrant families and city families; In children's language ability, receptive language and vocabulary diversity have no significant differences between migrant families and city families, city families are significantly larger than migrant families.

(2) The features of maternal questions input with children's vocabulary type and number of vocabulary has a significant positive correlation, but with children's mean length of utterance has a significant negative correlation.

(3) In migrant families, the number of maternal wh-question positively predicted children's vocabulary type and number of vocabulary; in city families, the number of other questions positively predicted children's number of vocabulary, and significantly negatively predicted children's mean length of utterance.

The results of this study indicate that maternal questions input features have different effects on children's language ability. Challenging questions input is helpful to improve children's language ability, while frequent but non-strategic questions will lead to the reduction of children's speech length. The questioning method of wh-question may be more effective in improving the language ability of children in migrant families, and the questioning method of other questions may have a negative impact on children's language ability if it used too frequently.

Keywords: Maternal Questions Input, Migrant Family, City Family, Children, Language Ability

学步期父母婚姻质量与严厉管教的关系： 基于纵向主客体互倚模型的研究

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摘 要 已有的一些研究表明，处于学步期的父母严厉管教行为会对儿童发展产生深远影响，同时作为衡量父母婚姻关系的婚姻质量状况，也和父母的教养行为息息相关。受家庭系统理论的启发，越来越多研究扩大到了对夫妻子系统以及不同子系统之间关系的探讨。自改革开放以来，社会变迁带来的新旧观念更替对传统的家庭权力结构带来了冲击，这种变化不仅会影响家庭中夫妻间和亲子间的关系模式，还可能会改变夫妻婚姻关系与其自身和对方教养方式的关系。已有研究证实婚姻质量和严厉管教行为都会在学步期发展变化，因此很有必要进一步通过对偶、追踪的研究设计了解在当今我国社会文化背景下，父母双方婚姻质量和严厉管教之间的关系，进而理解当前的家庭权力结构模式。本研究样本来自一项从 2015 年开始的纵向追踪队列研究，包括 240 个家庭。在儿童 1 岁、2 岁和 3 岁时，通过问卷收集了 189 个家庭父母各自报告的婚姻质量和严厉管教的信息。通过建构纵向主客体互倚模型(L-APIM)，本研究得到如下结果：1) 在婚姻质量和体罚方面，研究发现了时间平均水平上符合溢出假设的主体效应，即随着时间的推移，父母各自体验到较好的婚姻质量与其各自较少使用体罚策略有关；在婚姻质量和心理攻击方面，研究仅发现了时间特异水平上符合溢出假设的母亲主体效应，即只有母亲报告的特定时间点婚姻质量的升高与其自身下一个时间点更少使用心理攻击有关。2) 父母婚姻质量和对方的体罚/心理攻击行为之间均未发现显著的客体效应。3) 在父母体罚的关系上，研究发现特定某一年父亲体罚与母亲体罚的共变程度较低。也就是说，当父亲在某一年较多采取体罚时，母亲可能并不会倾向于也采取更多的体罚措施，反之亦然；在父母心理攻击的关系上，研究同样发现较低的共变程

度，但后者的共变程度高于前者。本研究采用纵向主客体互倚模型，系统考察了学步期父母婚姻质量和严厉管教的关系，这些结果不仅丰富了相关领域的研究，对现实家庭生活以及临床干预也均带来一定的启发。

关键词 学步期，婚姻质量，严厉管教，纵向主客体互倚模型

The relations between marital quality and harsh parenting in toddlerhood: A research based on L-APIM

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Abstract: In previous studies, researchers have found that harsh parenting, especially during the toddler years, have profound effects on children's development. The marital quality, as a measure of the marital relationship between parents, is also closely related to the parenting behavior of parents to children. Inspired by family system theory, more and more researches no longer focus only on parent-child subsystem, but also extend to husband-wife subsystem trying to explore the relationship between different subsystems. Since reform and opening-up, China's society has been in a period of development and change. The conflict of old and new concept, brought by social change, has also brought an impact on the traditional family power structure, which not only affects husband-wife and parent-child relationship, but also can change the association between marital relationships and parenting styles. Studies have found that both marital quality and harsh parenting are changing and developing during the toddlerhood. Therefore, it is very necessary to understand the association between the marital quality and harsh parenting behavior of both parents under the current social and cultural background in China, through the study design of dyad and longitudinal, so as to understand the current pattern of family power structure. Participants were from the Beijing Longitudinal Study 2015 (BELONGS 2015), including 240 families. At age of 1, 2, and 3, 189 parents reported marital quality and harsh parenting information respectively. By constructing a longitudinal actor-partner interdependence model (L-APIM), this study obtained the following results: (1) In terms of the association between marital quality and corporal punishment, the study found that the spillover hypothesis was consistent with the actor-effect at the time-average level. That means, parents' better marital relationships over time were associated with their respective lower corporal punishment strategies, but this effect was not reflected at year-to-year levels. In terms of the association between marital quality and psychological aggression, only the maternal actor-effect at the time-specific level is consistent with the spillover hypothesis. That means, only an increase in maternal marital quality was associated with less maternal psychological aggression parenting at the next point in time. (2) No significant partner-effect was found between marital quality and corporal punishment/psychological aggression. (3) In terms of the association between paternal and maternal corporal punishment, the study found that the covariation between paternal corporal punishment and maternal corporal punishment in a particular year is low. That is, when fathers take more corporal punishment in a particular year, mothers may not to take more corporal punishment, and vice versa. In terms of the association between paternal and maternal psychological aggression, the study also found the covariation in a particular year is low, but the degree of covariation of the latter is higher than the former. In current study, the L-APIM was used to systematically examine the association between the marital quality and harsh parenting during toddlerhood. This study not only further enrich the research in related fields, but also have some enlightening implications for real family life and clinical intervention treatment.

Keywords: Toddlerhood, Marital quality, Harsh parenting, L-AIPM

初中生心理健康与主观家庭环境的关系研究：基于交叉滞后分析

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摘要 初中生处在个人身心发展的关键时期，其心理健康问题一直为社会所重视。根据布朗芬布伦纳的生态系统理论和 PPCT 模型，家庭是初中生成长的重要环境，这一环境对于初中生心理健康的纵向影响十分值得关注。目的：本研究采用纵向研究分析方法探讨初中生的主观家庭环境与其心理健康之间的双向关系，其中主观家庭环境包括父母关系、家庭管教和亲子活动等三个维度。通过交叉滞后模型，探究家庭因素与初中生心理健康的因果时序关系，进一步揭示家庭因素对初中生心理健康影响的作用机制。方法：本研究使用中国教育追踪调查(CEPS)两期数据。在 2013-2014 学年的基线数据中，抽取了 8101 名初一年级学生，使用其自评的心理健康测量和主观家庭环境（包含父母关系、家庭管教和亲子活动三个维度）测量数据。在 2014-2015 年的追踪数据中，追踪这些学生的相同变量数据。以两年的追踪数据进行交叉滞后分析。结果表明：（1）第一年的心理健康水平正向预测第二年的父母关系，而第一年的父母关系反向预测初中生的心理健康。（2）第一年的父母关系反向预测第二年的父母关系。（3）第一年的心理健康正向预测第二年的亲子活动，第一年的亲子活动正向预测第二年的初中生心理健康。本研究启示，亲子活动与初中生心理健康呈双向动态关系，亲子活动对初中生心理健康有着正反馈作用，越多的亲子活动，预测未来更良好的心理健康，而更良好的心理健康，也预测着未来更多的亲子活动。此外，父母关系与心理健康的双向关系，有待进一步研究分析。综上，可以尝试鼓励动员家长陪伴孩子参加更多的亲子活动，来优化初中生的心理健康状态。

关键词 心理健康，主观家庭环境，交叉滞后分析，初中生

Mental Health and Subjective Family Environment of Junior Middle School Student: A Cross-Lagged Analysis

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Abstract: Junior middle school students are in a critical period of personal physical and mental development, and their mental health issues have always been paid attention to by the society. According to Bronfenbrenner's ecosystem theory and PPCT model, the family is an important environment for the growth of junior high school students. The longitudinal impact of this environment on the mental health of junior middle school students is very worthy of attention. Objective: This study explores the two-way relationship between the subjective family environment of junior middle school students and their mental health through cross-lagged analysis, explores the causal relationship between the two, and further reveals the mechanism of family factors affecting the mental health of junior middle school students. Methods: This study uses China Education Panel Survey (CEPS) data. In the baseline data for the 2013-2014 school year, 8101 seventh-grade students were selected and used their self-evaluated mental health measurement and subjective family environment (including three dimensions of parental relationship, family education, and parent-child activities) measurement data. In the tracking data from 2014 to 2015, track the same variable data of these students. The cross-lagged analysis is performed with two-year tracking data. Results: (1) The mental health in the first year positively predicts the parental relationship in the second year, while the parental relationship in the first year negatively predicts the mental health. (2) The parental relationship in the first year reversely predicts the parental relationship in the second year. (3) The mental health of the first year positively predicts the parent-child activities of the second year, and the parent-child activities of the first year positively predict the mental health of the second year. This study reveals that parent-child activities have a two-way dynamic relationship with the mental health of junior high school students. Parent-child activities have a positive feedback effect on the mental health of junior high school students. Predicting more parent-child activities in the future. In addition, the two-way relationship between parental relationship and mental health needs further research and analysis. In summary, we can try to encourage parents to accompany their children to participate in more parent-child

activities to optimize the mental health of junior high school students.

Keywords: mental health, subjective family environment, cross-lagged analysis, junior middle school students

4-5 岁儿童对不同熟悉性信息提供者的选择性信任

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摘要 儿童的选择性信任受诸多因素影响。对于陌生人提供的信息, 儿童通常能根据信息提供者的准确性做出理性的信任选择。为探究儿童能否根据母亲提供的信息准确性做出理性的信任选择, 以及儿童对母亲和陌生人的选择性信任特点, 本研究从信息提供者熟悉性出发设计了两项实验。研究 1 采用冲突信息源范式, 探究 118 名 4-5 岁儿童在不同相对准确性下对母亲的选择性信任, 并比较其对母亲和陌生人的信任差异。结果发现不同性别的儿童对母亲的选择性信任无显著差异, 儿童对母亲的信任显著高于陌生人; 在两者准确性分别为 50%-50% 条件下, 儿童选择母亲的答案比率显著高于随机水平; 在两者准确性分别为 25%-75% 条件下, 儿童选择母亲的答案比率低于随机水平; 在 25% 准确性条件下, 儿童对母亲和陌生人的信任选择显著低于 75% 条件下, 信任选择随信息提供者相对准确性下降而下降。研究 2 采用单一信息源范式, 比较 62 名 4-5 岁儿童自主探究前后对母亲的选择性信任, 以及对母亲和陌生人的信任差异。结果表明儿童在探索前存在显著的母亲轻信偏差, 但在探索后拒绝了母亲和陌生人的答案, 两者信任选择不存在显著差异; 儿童自主探索后获得的信息提供者的准确性, 在陌生人条件下得到了概括运用, 但在母亲条件下未概括运用。

关键词 选择性信任, 熟悉性对比, 相对准确性, 自主探索

4-5-year-old Children's Selective Trust in Information Providers with Different Levels of Familiarity

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Abstract: Children's selective trust is affected by many factors. For the information provided by strangers, children can usually make rational trust choices according to the accuracy of information providers. In order to explore whether children can make rational trust choices according to the accuracy of information provided by their mother, and the characteristics of children's selective trust in their mother and strangers, this study designed two experiments based on the familiarity of information providers. Study 1 used the conflict information source paradigm to explore 118 4-5-year-old children's selective trust in their mother under different relative accuracy, and compared their trust in their mother and strangers. The results showed that there was no significant difference in children's selective trust in their mothers. Under the condition of 50% - 50% accuracy, the answer rate of children choosing their mother was significantly higher than that of random level; Under the condition of 25% - 75% accuracy, the answer rate of children choosing their mother is lower than the random level. Children's trust in their mothers was significantly higher than that of strangers; Under the condition of 25% accuracy, children's trust choice for mothers and strangers is significantly lower than that under the condition of 75%, and the trust choice decreases with the decline of the relative accuracy of information providers. Study 2 used the single information source paradigm to compare the selective trust of 62 children aged 4-5 years to their mothers before and after independent inquiry, as well as the differences in trust between mothers and strangers. The results showed that children had significant mother credulity bias before exploration, but rejected the answers of mother and stranger after exploration, and there was no significant difference in trust choice between them; The accuracy of information providers obtained by children's independent exploration has been generalized under the condition of strangers, but not under the condition of mothers.

Keywords: Selective trust, Familiarity comparison, Relative accuracy, Independent exploration

社交网站中的上行社会比较对网络强迫性购买的影响： 物质主义和抑郁的中介作用

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摘要 社交网站中的上行社会比较是现实上行社会比较在网络中的延伸,是个体在社交网站使用过程中通过浏览其他用户的线上积极自我呈现,在能力、成就、外貌特征、受欢迎程度等方面与优秀他人进行比较的过程。上行社会比较会降低自我评价,从而导致广泛的负面后果,包括不良购买行为。网络强迫性购买是个体无法控制的过度网购行为,是一种适应不良的问题行为。沉溺于强迫性购买会导致许多负面结果,如后悔、内疚、或多或少失去自我控制能力、戒断症状、过度支出和家庭债务、人际关系危机、职业生涯的中断、行为或物质成瘾的共病,甚至是法律问题。尽管已有研究表明社交网站中的上行社会比较与网络强迫性购买有关,但很少有研究探讨这种关系背后的作用机制。本研究采用社交网站中的上行社会比较问卷、物质主义量表、抑郁量表和网络强迫性购买问卷对武汉高校的737名在校大学生进行调查,探讨了社交网站中的上行社会比较对大学生网络强迫性购买行为的影响,以及物质主义和抑郁在其中的中介作用。结果发现:(1)社交网站中的上行社会比较、物质主义、抑郁与网络强迫性购买之间呈两两显著相关,且社交网站中的上行社会比较能显著正向预测网络强迫性购买;(2)物质主义和抑郁在社交网站中的上行社会比较与网络强迫性购买之间起显著的中介作用,具体包括三条路径:一是物质主义的单独中介作用;二是抑郁的单独中介作用;三是物质主义与抑郁的链式中介作用。本研究强调了物质主义和抑郁作为社交网站中的上行社会比较和网络强迫性购买之间潜在机制的中介作用,并对预防和干预大学生网络强迫性购买行为具有重要意义。

关键词 社交网站, 大学生, 上行社会比较, 网络强迫性购买

The Impact of Upward Social Comparison in Online Social Network Sites on Online Compulsive Buying: The Effect of Materialism and Depression

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Abstract: The upward social comparison in social networking sites is an extension of the actual upward social comparison in the network. It is a process in which individuals compare with others in terms of ability, achievement, appearance, characteristics, popularity and other aspects by browsing other users' online positive self-presentation during the use of social networking sites. upward social comparison can decrease self-evaluation, thereby lead to a wide range of negative outcomes, including maladaptive buying behavior. Online compulsive buying, which refers to an individual's failure to control excessive online purchases, is a common maladaptive and problematic behavior. Indulging in compulsive buying can lead to a number of negative outcomes, such as regret, guilt, loss of self-control to a greater or lesser extent, withdrawal symptoms, excessive expenditures and debts of the household, crisis of interpersonal relationships, interrupted professional career, comorbidity of behavioural or substance addiction, or even problems with the law. Although upward social comparison on social network site (SNS) usage has been shown to be related to online compulsive buying, little is known about the mediating mechanisms underlying this association. The present study examined the mediating role of materialism and depression in the association between upward social comparison on SNS and online compulsive buying. A sample of 737 undergraduates completed questionnaire measures of upward social comparison on SNS, materialism, depression, and online compulsive buying. Results indicated that: (1) upward social comparison on SNS, materialism and depression were significantly correlated with online compulsive buying, and upward social comparison on SNS could significantly predict online compulsive buying positively; (2) materialism and depression played significant mediating roles between upward social comparison on SNS and online compulsive buying, including three specific pathways: the separate mediation effect

of materialism and depression, and the serial mediation effect of materialism and depression. This study highlights the mediating role of materialism and depression as a potential mechanism between upward social comparison on SNS and online compulsive buying, and has important significance for preventing and intervening college students' online compulsive buying behavior.

Keywords: Social Network Site, Undergraduate students, Upward Social Comparison, Online Compulsive Buying

家庭嘈杂度与烟酒使用：生命史策略和神经质的作用

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摘要 烟酒使用是我国关注的青少年问题行为之一。烟酒使用不仅对青少年当下的身心健康伤害极大, 还增加青少年后期的继续烟酒使用和成年后的物质滥用风险, 持续带来不良影响。鉴于青少年早期往往是烟酒使用早发期, 探讨青少年早期烟酒使用行为的影响因素和影响路径十分有必要。家庭嘈杂近来在公共健康领域备受关注, 被确定为影响青少年烟酒使用行为的重要风险因素, 但背后的作用机制和作用条件尚未可知。生命史理论指出, 为适应环境, 青少年会采取不同的生命史策略, 从而导致发展结果的差异。且青少年的环境反应性如神经质存在差异, 因此家庭嘈杂度对不同神经质水平青少年的影响可能存在异质性。因此本研究从生命史理论及其相关的压力反应性的适应调节模型出发, 探讨家庭嘈杂度在影响青少年烟酒使用过程中, 生命史策略的中介作用和神经质的调节作用。通过采取整群抽样的方式, 对来自 5 所中学的 2550 名初中生 (50.6% 男生; $M = 13.50$ 岁, $SD = 1.05$) 及其主要抚养人进行了问卷调查, 由初中生填写烟酒使用问卷、Mini-K 生命史策略量表和小五人格量表的神经质分量表, 报告近 30 天内烟酒使用情况、生命史策略和神经质, 主要抚养人填写 CHAOS 量表 (Confusion, Hubbub and Order Scale) 报告家庭嘈杂度。在控制了人口统计学变量后, 使用结构方程模型对变量进行拟合, 并采用 Bootstrap 法进行有调节的中介模型检验, 结果表明: 生命史策略在家庭嘈杂和青少年烟酒使用之间起部分中介作用 (间接效应 = .013, 95% 置信区间 [.003, .026]), 在高家庭嘈杂度中的青少年有更快的生命史策略 ($\beta = -.15, p < .001$), 进而引发烟酒使用行为 ($\beta = -.09, p < .05$)。神经质调节家庭嘈杂对生命史策略的影响 ($\beta = .09, p < .001$), 具体而言, 相对于高神经质的青少年而言, 家庭嘈杂对生命史策略的影响在低神经质的青少年群体中更强。研究结果不仅强调了不利家庭环境对青少年烟酒使用适应的影响, 以及青少年对环境敏感性差异在其中的作用, 而且是在心理病理学模型之外理解青少年烟酒使用的原因的一次探索, 这对青少年烟酒使用的干预和预防有重要意义。

关键词 青少年烟酒使用, 生命史策略, 不可预测性, 家庭嘈杂, 神经质

Household chaos and substance use:

The role of life history strategies and neuroticism

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Abstract: Substance use is rising among Chinese adolescents and poses a significant public health concern. Underage substance use often increases the likelihood of SU dependence, and poses a possible long-term severe threat to health and social development. Thus, it is necessary to identify the risk factors and how these factors work in early

adolescence when substance use usually emerges. Household chaos, which has been identified as a risk factor for adolescent health outcomes above and beyond poverty-related variables, has increasingly gained attention for its role in substance use. However, how and why adolescents engage in substance use in high-chaos contexts is not well understood. This study examined the effect of household chaos on substance use, and whether this effect is mediated by life history strategies and moderated by neuroticism. The participants were recruited 2,550 adolescents (50.6% boys; Mage = 13.50 years, SD = 1.05) from 5 junior middle schools in China and their primary caregivers, using the randomized cluster-sampling method. Adolescents completed self-report questionnaires concerning LH strategies, neuroticism, and substance use, and their primary caregivers responded to a questionnaire measuring household chaos. The conceptual moderated-mediation model was examined with bootstrapping. The results indicated that adolescents in more chaotic households reported faster life history strategies ($\beta = -.15, p < .001$), and in turn more substance use ($\beta = -.09, p < .05$). Furthermore, the relation between household chaos and life history strategies was moderated by neuroticism ($\beta = -.09, p < .05$). Specifically, the effect of household chaos on life history strategies was stronger for less neurotic adolescents. These findings indicate that challenging family environments have an effect on adolescent substance use, and that individual differences in sensitivity to the environment are also operative. Findings highlight the importance of understanding adolescent substance use beyond the developmental psychopathology model, and identify important targets in the prevention of adolescent substance use.

Keywords: Adolescent substance use, Life history strategies, Unpredictability, Household chaos, Neuroticism

新冠疫情期间研究生学术支持对焦虑、抑郁影响： 学术表现的中介作用

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摘要 2019年新冠疫情爆发并在全球迅速蔓延，成为突发公共卫生事件。由于疫情的影响，学生的生活和学习条件发生了很大改变，而研究生群体由于其特殊的学习方式，受疫情负面影响可能更严重。已有研究表明，学生在疫情期间普遍出现焦虑、抑郁情绪，但这些负面情绪的作用机制是如何形成仍需进一步探讨。社会支持的直接效应机制认为，社会支持对心理健康具有增益效果；班杜拉的三元交互理论提出，环境、行为和主体是相互联结的，环境是决定行为的潜在因素。个体的社会支持受疫情负面影响越大，行为表现也越可能面临风险，进而导致个体出现心理危机。因此，研究生学术表现受影响可能在学术支持受影响与焦虑、抑郁间发挥中介作用。本研究自编研究生受疫情影响问卷，并运用焦虑自评量表（SAS）和抑郁自评量表（SDS），对3137名硕博研究生开展调查。选取研究生与导师、同学、社会院校间的学术交流受影响作为高阶学术支持受影响的测量指标，选取资料收集、论文写作受影响作为高阶学术表现受影响的测量指标，将性别、学位类型、学习方式（全日制/非全日制）作为控制变量，并将焦虑、抑郁作为因变量同时纳入中介模型。结果显示，（1）疫情对82%研究生的学术支持与学术表现的各指标产生不同程度影响，20.9%研究生出现不同程度焦虑，33.9%研究生出现不同程度抑郁；（2）学术支持受影响的各指标与焦虑、抑郁呈正相关（ $p < 0.001$ ），学术表现受影响的各指标与焦虑、抑郁呈正相关（ $p < 0.001$ ）；（3）中介模型拟合良好（CFI=0.96, RMSEA=0.078, SRMR=0.04），研究生学术支持受影响分别对焦虑、抑郁具有显著的正向预测作用，学术表现受影响分别在学术支持受影响与焦虑、抑郁间的中介作用显著。由此说明，疫情对研究生学术支持的影响不仅直接预测其焦虑、抑郁，而且会通过影响学术表现产生作用，即研究生的学术支持受疫情负面影响越大，学术表现受影响也会越大，最后导致焦虑、抑郁。这启示我们，疫情期间需要及时对研究生群体的心理健康状况评估，并注重在不同方面提供学术支持与帮助。

关键词 研究生，学术支持，学术表现，焦虑，抑郁

The impact of academic support on anxiety and depression during the outbreak of COVID—19: the mediating role of academic performance

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Abstract: A COVID-19 epidemic has been spreading in China and other parts of the world since 2019 and become a bursting public health event. Because of the epidemic, great changes have taken place in students' life and learning mode, and the graduate group may be more affected due to its special training program. Studies have shown that the epidemic has brought unbearable psychological problems such as anxiety and depression, but the mechanism of these negative emotions still needs to be further explored. The main-effect model of social support believes that social support has a beneficial effect on mental health; Bandura's reciprocal determinism proposes that environment, behavior, and subject are interconnected, and environment is the potential factor determining behavior. The more negative impact of the epidemic on individuals' social support, the behavior performance is more likely to face risk, which in turn leads to the psychological crisis. Therefore, the academic performance affected of graduates may play a mediating role between academic support affected, anxiety and depression.

A sample of 3137 graduate students was investigated with the questionnaire on the academic impact of the epidemic, Self-rating Anxiety Scale(SAS) and Self-rating Depression Scale(SDS). For the investigation of academic support is affected by the epidemic, the impact of academic exchanges between graduate students and tutors, schoolmates, and other colleges is selected as the measurement index for academic support affected. Take data collection and paper writing as the measurement indicators of the impact of academic performance affected, and consider gender, degree and learning form(full-time/part-time) are used as control variables, and take anxiety and depression as dependent variables into the mediation model at the same time. The results showed that: (1) the epidemic affected 82% of graduates' academic support and academic performance indicators in varying degrees, 20.9% of students had varying degrees of anxiety, and 33.9% of students had varying degrees of depression; (2) academic support affected variables(i.e., academic exchange with tutors, schoolmate, and other colleges) were positively correlated with anxiety and depression($p<0.001$), academic performance affected variables(i.e., paper writing and data search) were significantly associated with anxiety and depression($p<0.001$); (3) The model fits the data well, CFI=0.96, RMSEA=0.078, SRMR=0.04. This direct effects from academic support affected to anxiety and depression were significant. This indirect effects from academic support affected to academic performance affected to anxiety, depression were significant. The results of this study suggest that the impact of the epidemic on the academic support of graduate students not only directly affects their anxiety and depression, but also affects their academic performance. This enlightens us that it is necessary to assess the psychological health of the graduate group during the COVID-19 epidemic, and provide academic support and assistance in different aspects for the students.

Keywords: graduate students, academic support, academic performance, anxiety, depression

青少年和成年群体的盲盒成瘾研究—— 冲动性及强化敏感性对购买盲盒成瘾行为的影响

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摘要 本研究旨在探究冲动性及强化敏感性对购买盲盒成瘾行为的影响在青少年晚期和成年群体间的差异。青少年晚期个体开始踏入社会, 但仍处于身心发展阶段, 尤其支持执行控制、抑制冲动的前额叶脑区尚未成熟, 所以晚期青少年成瘾的神经机制与成年群体有一定差异。前人研究中对晚期青少年成瘾心理机制的分析大多以网络或游戏成瘾等为入手点, 盲盒作为一种新的消费形式已经在许多报导中认为存在成瘾的风险和

迹象，但却鲜有研究从发展或成瘾的视角去探究购买盲盒行为。以往研究表示，冲动性与强化敏感性对网络成瘾行为有一定影响，且青少年向成年发展过程中冲动控制与敏感性也会有所变化。故以下研究将基于冲动二维模型以及强化敏感性理论探究青少年晚期和成年群体购买盲盒成瘾行为。本研究计划采用中文版行为抑制-激活系统量表（BIS-BAS）、中文版 Barratt 冲动量表（BIS-11）、改编版盲盒购买成瘾问卷对青少年晚期到成年群体进行测量。改编版盲盒购买成瘾量表是基于中文版网络成瘾测试（Internet Addiction Test）进行词语用语的修改，从而测量个体对购买盲盒的成瘾程度。以下研究计划采集 300 名 18-24 岁青少年晚期个体、300 名 25-31 岁成年个体共 600 人作为被试，收集上述三个问卷的数据。本研究将使用 SPSS26.0 对实验数据进行差异分析、相关分析以及回归分析。本研究假设冲动性与强化敏感性对晚期青少年及成年群体盲盒成瘾程度存在显著影响，且对晚期青少年的影响更大；即晚期青少年中，年龄越小，影响越大。上述两种群体盲盒成瘾程度与冲动性呈显著正相关；与强化敏感性中的奖励敏感性得分呈显著正相关，与惩罚敏感性得分呈显著负相关。研究结果表示，在晚期青少年和成年群体中，青少年群体可能仍处于身心发展阶段，其冲动性较高、自控能力弱因此购买盲盒成瘾的程度与成年群体存在差异。外加高奖励敏感性、低惩罚敏感性者，专注成就而忽视消极后果，更易购买盲盒成瘾。

关键词 青少年晚期，成瘾，盲盒，冲动性，强化敏感性

An investigation on blind box purchase addiction between late adolescents and young adults: The effect of impulsivity and reinforcement sensitivity on the degree of blind box purchase addiction

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Abstract: The purpose of the study is to explore the effects of impulsivity and reinforcement sensitivity on the degree of addiction to buying blind boxes between late adolescents and young adults. Late adolescents begin to enter society but are still in the stage of individual physical and mental development, especially the prefrontal region that supports executive control and impulse suppression has yet to fully develop and mature. Thus, the neural mechanism of adolescent addiction is different from that in adults. Most of the previous studies have analyzed the psychological mechanisms of addiction of adolescents by identifying Internet or game addiction. However, investigations on blind box purchase from an addiction and development perspective are rare despite recent reports of signs of behavioral addiction related to blind box purchase behavior. Previous studies have indicated that impulsivity and reinforcement sensitivity influenced Internet addiction, therefore the following study will investigate the addiction phenomenon in late adolescents and adults' purchase of blind boxes in terms of impulsivity and reinforcement sensitivity based on the two-dimensional model of impulsivity and Reinforcement Sensitivity Theory. The study plans to measure adolescents by using the Chinese version of Behavioral Inhibition-Activation System Scale (BIS-BAS), the Chinese version of Barratt Impulsiveness Scale (BIS-11), and the adapted Blind Box Addiction Test. The adapted Blind Box Addiction Test was modified by words based on the Chinese version of Internet Addiction Test to measure subjects' addiction to the purchase of blind boxes. This study plans to randomly select 600 individuals in total including 300 late adolescents aged 18-24 and 300 adults aged 25-31 as subjects to collect data for the above three scales. The study will use SPSS 26.0 to conduct difference analysis, correlation analysis, and regression analysis on questionnaire data. This study hypothesizes that there is a significant effect of impulsivity and reinforcement sensitivity on the degree of blind box addiction in both late adolescents and adult groups, and the effect is greater in late adolescents; specifically amongst late adolescents, wherein the effect is greater for younger individuals'. The degree of blind box addiction in

both groups is positively correlated with the scores of rash impulsivity; is positively correlated with the scores of BAS, and negatively correlated with the scores of BIS in reinforcement sensitivity. Results indicate that adolescents, due to the fact that they are still undergoing both physical and mental development, display higher impulsiveness and weaker self-control and therefore are more likely to be exhibit blind box purchase addiction behavior in comparison to young adults. Furthermore, individuals with high reward sensitivity and low punishment sensitivity are more likely to be addicted to purchasing blind boxes due to their focus on achievement and ignorance of negative consequences.

Keywords: late adolescence, addiction, blind box, impulsivity, reinforcement sensitivity

母亲抑郁与家庭出生顺序对婴儿期睡眠的影响 -----母亲养育方式的多重中介作用

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摘要 睡眠是儿童期发展的重要基石, 睡眠不仅会影响儿童早期发展, 甚至会对儿童发育产生长远影响。根据进化论的观点, 婴儿的睡眠应该放在更广泛的家庭环境中去讨论。更广泛的家庭环境中的因素包括母亲抑郁、婴儿的出生顺序、家庭养育方式(严厉管教和积极管教)等。在过去的几年中, 西方学者越来越多的关注母亲抑郁和母亲养育方式对婴儿睡眠的重要影响, 但是大多数的研究集中在童年中期, 很少有研究集中在婴幼儿时期。随着全面二胎政策的出现, 越来越多的学者开始关注二胎家庭婴儿的发育, 但是很少有研究进行横向对比, 从而提供更多的养育信息给二胎家庭。基于此, 本文试图探究母亲抑郁、家庭中婴儿的出生顺序与婴儿睡眠之间的关系, 并讨论母亲积极管教和严厉管教在其中所起的作用。本研究被试来自北京市东城区的横向探究, 研究包括 2225 名月龄为 18-32 个月婴儿及其父母。通过问卷收集母亲报告的婴儿期睡眠, 母亲抑郁、婴幼儿出生顺序、母亲的严厉管教与积极管教以及母亲报告的婴幼儿性别、月龄和家庭的社会经济地位。结果发现, 母亲抑郁与出生顺序会影响婴儿睡眠, 且中介效应成立, 母亲抑郁与家庭出生顺序不存在交互作用。具体来说, 母亲抑郁得分越高, 母亲严厉管教越多, 积极管教越少, 婴儿的夜间睡眠时间越短, 夜间醒来时间越长。二胎家庭的母亲严厉管教更多, 孩子的夜间睡眠时长更短, 夜醒时长更长。但是无论是母亲抑郁还是出生顺序都与婴儿的白天睡眠时长有关。因此, 母亲应调整心态, 减少抑郁情绪, 更多的采用积极的养育策略, 从而促进婴儿的良好发展; 随着二胎家庭的数量越来越多, 分析二胎家庭与独生子女家庭的差异有助于帮助二胎家庭调整养育方式, 对儿童福祉具有重要作用。

关键词 母亲抑郁, 二胎家庭, 独生子女家庭, 母亲养育, 婴儿睡眠

Effects of maternal depression and family birth order on sleep in infancy-----Multiple mediating effects of mother's parenting

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Abstract: Sleep is an important cornerstone of childhood development. Sleep will not only affect children's early development, but also have a long-term impact on children's development. According to evolutionary theory, infant sleep should be discussed in a broader family environment. Factors in the broader family environment include mother depression, birth order of infants, parenting (harsh discipline and positive discipline) etc. In the past few years, western scholars have paid more and more attention to the important effects of maternal depression and

maternal parenting on infant sleep. However, most studies focus on the middle childhood, and few studies focus on the infancy. With the emergence of the comprehensive two-child policy, more and more scholars begin to pay attention to the development of infants in two-child families, but few studies make horizontal comparison, so as to

provide more parenting information to two-child families. Based on this, this paper attempts to explore the relationship between mother depression, the birth order of infants in the family and infant sleep, and discuss the role of mother's positive discipline and harsh discipline. The subjects of this study were from a cross-sectional study in

Dongcheng District, Beijing. The study included 2225 infants aged 18-32 months and their parents. The infants' sleep, maternal depression, birth order of infants, harsh discipline and positive discipline of mothers, and the infants' gender, month age and family socio-economic status reported by mothers were collected through questionnaires. The results showed that maternal depression and the number of children in the family would affect infant sleep, and the mediating effect was established. There was no interaction between maternal depression and family birth order. Specifically, the higher the mother's depression score, the more severe the mother's discipline and the less positive discipline, the shorter the baby's sleep time at night and the longer the baby wakes up at night. Mothers in families with two children are more disciplined, and their children sleep less and wake up longer at night. However, both maternal depression and birth order of infants are related to the length of sleep during the day. Therefore, mothers should adjust their mentality, reduce depression and adopt more positive parenting strategies, so as to promote the good development of infants; With the increasing number of second child families, analyzing the differences between second child families and one-child families will help second child families adjust their parenting styles and play an important role in children's well-being.

Keywords: maternal depression, two child family, one-child family, maternal parenting, infant sleep

内蒙古农村地区失依儿童亲子疏离、同伴关系及孤独感的关系研究

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摘 要 为了关爱失依儿童，帮助失依儿童建立良好的心理健康品质，促进儿童亲社会行为的发展，研究失依儿童亲子疏离、同伴关系及孤独感的关系，为其身心健康以及未来的发展奠定基础。针对内蒙古某地区六所农村小学的三至六年级 318 名小学生为研究对象，发放青少年亲子疏离感问卷、同伴关系量表和儿童孤独感量表进行研究，得出以下结论：

内蒙古农村地区失依儿童的亲子疏离总分、母子疏离及父子疏离得分均显著高于非失依儿童，且母子疏离水平显著高于父子疏离水平。

- (1) 是否失依和是否独生子女对农村儿童母子疏离有显著影响，但只有是否失依对农村儿童父子疏离有显著影响。
- (2) 内蒙古农村地区失依儿童总体同伴接纳水平显著高于正常儿童，同时其同伴恐惧自卑水平也显著高于正常儿童。
- (3) 内蒙古农村地区失依儿童的孤独感显著高于正常儿童。
- (4) 内蒙古农村地区失依儿童亲子疏离感和同伴接纳以及同伴恐惧自卑两个维度分别呈现显著正相关。
- (5) 内蒙古农村地区失依儿童孤独感和同伴接纳以及同伴恐惧自卑两个维度分别呈现显著正相关。
- (6) 内蒙古农村地区失依儿童亲子疏离感和孤独感呈显著正相关。
- (7) 失依儿童的同伴接受和同伴恐惧自卑在亲子疏离与孤独感之间均存在部分中介作用。

关键词 农村地区失依儿童，亲子疏离，同伴关系，孤独感

Parent-child Estrangement and Companionship of Childless Children in Rural Areas of Inner Mongolia And loneliness Research

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Abstract: In order to care for the dependent children, help the dependent children to establish good mental health quality, promote the development of children's pro-social behaviors, study the relationship between parent-child alienation, peer relationship and loneliness of the dependent children, for their physical and mental health and future

Lay the foundation for development. 318 primary school students from grades 3 to 6 in six rural primary schools in Inner Mongolia were selected as the research objects. The questionnaire on parent-child alienation, the peer relationship scale and the child loneliness scale were distributed to conduct research, and the following conclusions were drawn:

(1) The total score of parent-child alienation, mother-child alienation, and father-child alienation scores of children in rural areas of Inner Mongolia were significantly higher than those of normal children, and the level of mother-child alienation was significantly higher than that of father-child alienation.

(2) Whether or not they are dependent and whether they are the only child has a significant impact on the separation of rural children from mother and child, but only whether or not they are dependent has a significant impact on rural children's parent-child sorting.

(3) In the rural areas of Inner Mongolia, the overall peer acceptance level of dependent children was significantly higher than that of normal children, and their peers' fear and low self-esteem levels were also significantly higher than normal children.

(4) The sense of loneliness of children who have lost their dependency in rural areas of Inner Mongolia is significantly higher than that of normal children.

(5) The two dimensions of parent-child alienation, peer acceptance and peer fear and low self-esteem of children who are dependent in rural areas of Inner Mongolia were significantly positively correlated.

(6) The two dimensions of loneliness and peer acceptance and peer fear and low self-esteem of children in Inner Mongolia rural areas were significantly positively correlated.

(7) The sense of parent-child alienation and loneliness of dependent children in rural areas of Inner Mongolia are significantly positively correlated.

(8) Peer acceptance and peer fear and low self-esteem of dependent children have a partial mediating effect between parent-child alienation and loneliness.

Keywords: rural area dependent children, parent-child alienation, peer relationship, loneliness

留守青少年亲子亲合与友谊质量之间关系的追踪研究： 积极情绪和消极情绪的作用

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摘要 与同伴之间建立良好的友谊关系不仅是青少年期个体的发展主题，也构成了青少年成长的重要背景。根据依恋理论和人际关系理论，亲子关系对于青少年的友谊关系具有重要影响。已有研究也表明，拥有亲密、温暖亲子关系的青少年能更好地处理与同伴之间的关系。然而，随着近年来留守青少年数量的增多，有些研究者认为：“父母已经成为留守青少年发展的‘旁观者’”。在长期亲子分离背景下，亲子关系是否还能够影响青少年的友谊关系及其相应的作用机制等成为该领域研究中的一个新的重要问题。基于留守青少年和非留守青少年之间的对比，本研究将聚焦留守青少年的亲子关系和友谊关系，在探讨亲子亲合与留守青少年友谊质量之间关联的同时，检验积极情绪和消极情绪在二者关系中的中介作用。基于追踪研究设计，对 1214 名农村初一学生（364 名双亲外出留守、452 名父亲外出、398 名非留守）进行了间隔 6 个月的 3 次测量，在 T1、T2 和 T3 分别测量青少年的亲子亲合、积极/消极情绪和友谊质量。结果表明：（1）父子亲合和母子亲合均能显著正向预测青少年友谊质量，这在留守与非留守青少年中均是如此；（2）积极情绪能显著正向预测青少年友谊质量，但是消极情绪的预测作用不显著；（3）在双亲外出家庭中，只有母子亲合能够通过提升青少年的积极情绪来作用于友谊质量的提升；但是在父亲外出家庭和非留守家庭中，父子亲合和母子亲合均能够通过积极情绪作用于青少年友谊质量的提升；（4）仅在父亲外出家庭中，父子亲合能够负向预测青少年的消极情绪，但是消极情绪在亲子亲合与青少年的友谊质量之间不存在中介作用。这表明，在长期的亲子分离背景下，良好的亲子关系依然是提高青少年友谊质量的重要资源，它不仅可以直接提高青少年友谊质量，还可以通过增加其积极情绪来帮助青少年发展高质量的友谊。

关键词 留守青少年, 亲子亲合, 积极情绪, 友谊质量

A Longitudinal Study on the Relationship between Parent-Adolescent Cohesion and Friendship Quality of Left-behind Adolescents: The Effects of Positive Affect and Negative Affect

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Abstract: Establishing good friendship with peers is not only the development theme of adolescents, but also constitutes an important background for teenagers' growth. According to attachment theory and interpersonal relationship theory, parent-adolescent relationship has an important influence on teenagers' friendship. Previous studies have also shown that teenagers with close and warm parent-adolescent relationship can better deal with their peers. In recent years, however, with the increasing number of left-behind teenagers, some researchers believe that "parents have become 'bystanders' in the development of left-behind adolescents". Under the background of long-term parent-adolescent separation, whether the parent-adolescent relationship can still affect the friendship between teenagers and its corresponding mechanism has become a new important issue in this field. Based on the comparison between left-behind adolescents and non-left-behind adolescents, this study will focus on the parent-adolescent relationship and friendship relationship of left-behind adolescents, explore the relationship between parent-adolescent cohesion and friendship quality of left-behind adolescents, and test the mediating role of positive affect and negative affect in their relationship. Based on longitudinal design, 1214 rural junior high school students (364 adolescents from both-parent migrant families, 452 adolescents from father-only migrant families, and 398 adolescents from non-left-behind families) were measured three times at intervals of 6 months. The parent-adolescent cohesion, positive/negative affect and friendship quality of adolescents were measured at T1, T2 and T3 respectively. The results showed that: (1) Both father-adolescent cohesion and mother-adolescent cohesion positively predicted the friendship quality of adolescents, which was true for both left-behind and non-left-behind adolescents; (2) Positive affect positively predicted the friendship quality of adolescents, but negative affect had no significant predictive effect. (3) In both-parent migrant families, only mother-adolescent cohesion improved the friendship quality by promoting the positive affect of teenagers; However, both father-adolescent cohesion and mother-adolescent cohesion improved the friendship quality of teenagers through positive affect in the father-only migrant families and non-left-behind families. (4) Father-adolescent cohesion negatively predicted adolescents' negative affect, but negative affect had no mediating effect between parent-adolescent cohesion and adolescent friendship quality. This study indicated that under the background of long-term parent-adolescent separation, good parent-adolescent relationship was still an important resource to improve the quality of youth friendship. It can not only directly improve the quality of adolescent friendship, but also help adolescents develop high-quality friendship by increasing their positive affect.

Keywords: Left-behind teenagers, parent-adolescent cohesion, positive affect, friendship quality

大学生社交网站自我呈现对自我同一性的影响： 网络社会支持和基本心理需要的链式中介作用

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摘要 采用社交网站中的自我呈现问卷、网络社会支持问卷、基本心理需要问卷和自我同一性状态问卷对济南、青岛某高校的 1713 名在校大学生进行调查, 探讨了社交网站中的积极自我呈现、真实自我呈现对个体自我同一性状态的影响以及网络社会支持和基本心理需要的链式中介作用, 结果发现: (1) 社交网站中的真实

自我呈现与网络社会支持、基本心理需要、自我同一性的获得状态、延缓状态、早闭状态、扩散状态呈显著正相关，社交网站中的积极自我呈现与网络社会支持、自我同一性的获得状态、延缓状态、早闭状态、扩散状态呈显著正相关；网络社会支持与自我同一性的获得状态、延缓状态、早闭状态和扩散状态呈显著正相关；基本心理需要与自我同一性获得状态呈显著正相关，与自我同一性的延缓状态、早闭状态、扩散状态呈显著负相关；(2)社交网站中的真实自我呈现、积极自我呈现可直接预测自我同一性的获得状态、延缓状态、早闭状态和扩散状态；不同点在于：社交网站中真实自我呈现不仅通过网络社会支持间接预测自我同一性的获得状态、延缓状态和早闭状态，通过基本心理需要间接预测自我同一性的获得状态、延缓状态、早闭状态、扩散状态，还能通过网络社会支持、基本心理需要的链式中介作用影响自我同一性的四种状态；而社交网站中的积极自我呈现只能通过网络社会支持以及网络社会支持与基本心理需要的链式中介作用影响自我同一性的四种状态。

关键词 大学生社交网站自我呈现，网络社会支持，基本心理需要，自我同一性，链式中介

The Effect of Self-presentation in Online Social Networking Sites of College Students on Ego-identity: The Chain Mediating Role of Online Social Support and Basic Psychological Needs

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Abstract: In order to investigate the impact of self-presentation in SNS (Social Network Site) on Ego-identity as well as The chine mediating role of online social support and basic psychological needs, a sample of 1713 college students in a university in Jinan and Qingdao completed Questionnaire of Self-presentation in SNS, Ego Identity Questionnaire, Online Social Support Questionnaire and Basic Psychological Needs Questionnaire . Results revealed that:(1) social networking sites true self in the present and the network of social support, basic psychological needs, ego identity status, slow state, early close state, diffusion was significantly positively related to active self-presentation of social networking sites and Internet social support and ego identity status, slow state, early close state, diffusion was significantly positively related; There is a significant positive correlation between network social support and self-identity acquisition state, delayed state, early closure state and diffusion state. There is a significant positive correlation between basic psychological needs and the state of self-identity acquisition, and a significant negative correlation between basic psychological needs and the state of self-identity delay, early closure and diffusion.(2) Real self-presentation and positive self-presentation in social networking sites can directly predict the status of self-identity acquisition, delayed state, early closure state and diffusion state; The differences are: The real self-presentation on social networking sites not only indirectly predicts the acquisition state, delayed state and early closure state of self-identity through network social support, but also indirectly predicts the acquisition state, delayed state, early closure state and diffusion state of self-identity through basic psychological needs. Moreover, the four states of self-identity can be influenced by the chain mediation of network social support and basic psychological needs. However, the positive self-presentation on social networking sites can only affect the four states of self-identity through online social support and the chain mediation between online social support and basic psychological needs.

Keywords: self-presentation on college students' social networking sites; network social support; basic psychological needs; ego-identity; chain mediate

青少年问题性网络使用与睡眠问题的关系：一项交叉滞后研究

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摘要 睡眠是影响青少年健康发展的重要因素，睡眠问题可能导致青少年出现抑郁焦虑、认知功能下降、学业不良、攻击行为等各类内外化问题。根据2019年中国睡眠研究会发布的《中国青少年儿童睡眠白皮书》，我国约有81.2%的青少年存在睡眠不足等问题。鉴于睡眠问题的高发生率及其可能对个体发展造成的消极影响，有必要对青少年睡眠问题的影响机制进行研究。问题性网络使用是指对个体心理健康、社会适应、学业及工作等方面造成负面影响的网络使用行为。以往研究指出，问题性网络使用可能通过诱发个体生理兴奋，抑制褪黑素产生等机制影响个体的睡眠质量，使其出现睡眠问题。此外，存在睡眠问题的个体通常会报告较多的消极情绪，他们可能通过使用网络这一非适应性的应对方式来缓解其负面影响，进而导致问题性网络使用。综上，问题性网络使用与睡眠问题之间可能存在双向关系。目前研究较多采用横断设计对二者间的单向关系进行探究，对其相互关系的研究相对较少。本研究采用交叉滞后设计来探讨青少年问题性网络使用与睡眠问题之间的双向关系，试图阐明二者之间具体的作用机制，为预防青少年睡眠问题，促进其健康发展提供科学参考。采用问题性网络使用诊断工具与匹兹堡睡眠质量指数（PSQI）对广东省南部地区981名青少年（ $M_{age} = 15.00$ ，44%为男生）进行了为期一学年的追踪调查。结果表明：（1）在一学年内，青少年的问题性网络使用和睡眠问题均表现出较强的稳定性（ $r = 0.61, p < 0.01$ ； $r = 0.52, p < 0.01$ ）；（2）学年初的睡眠问题可以正向预测学年末的问题性网络使用（ $b_1 = 0.09, SE = 0.03, p < 0.01$ ），但学年初的问题性网络使用不能预测学年末的睡眠问题（ $b_2 = -0.02, SE = 0.03, p > 0.05$ ）；（3）通过多组比较分析得出，上述交叉滞后效应不存在性别及年级差异。综上所述，睡眠问题可能是增加青少年问题性网络使用的重要风险因素之一。学校及家长应当对青少年的睡眠健康予以关注，以预防睡眠问题给其成长发展带来的负面影响。

关键词 问题性网络使用，睡眠问题，青少年，交叉滞后分析

Problematic Internet Use and Sleep Problems among Adolescents: A Cross-Lagged Panel Analysis

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Abstract: Sleep plays an important role in the growth of young people. Poor sleep may lead to a variety of internalizing and externalizing problems, such as depression, anxiety, cognitive deficit, academic failure, and aggressive behavior. According to the "White Paper on Sleep for Chinese Adolescents and Children" issued by the China Sleep Research Society (CSRS) in 2019, about 81.2% of adolescents in China have problems such as insufficient sleep. In view of the high incidence of sleep problems and its possible negative impacts on adolescent development, it is essential to understand the influencing mechanism of adolescents' sleep problems. Problematic Internet use (PIU) refers to use of the Internet that creates psychological, social, school, and/or work difficulties in a person's life. Previous studies have pointed out that PIU may affect the individual's sleep quality through mechanisms such as inducing individual physiological excitement and inhibiting the production of melatonin. In addition, individuals who have sleep problems usually reported more negative emotions, and they may use the Internet as a non-adaptive coping to alleviate its negative effects, leading to problematic Internet use. In summary, there may be a bidirectional relationship between PIU and sleep problems. However, most previous studies have explored the unidirectional relationship between them utilizing cross-sectional design, and few studies have examined their bidirectional relationship. This study used a cross-lagged design to explore the bidirectional relationship between PIU and sleep problems among adolescents and provide a scientific reference for preventing sleep problems in adolescents and promoting their positive development. Participants are 981 adolescents ($M_{age} = 15.00$, 44% were boys) who provided self-report data on PIU and sleep problems at the beginning and end of the school year. The

results showed that: (1) PIU and sleep problems showed strong stability across time ($r = 0.61, p < 0.01$; $r = 0.52, p < 0.01$); (2) Sleep problems at the beginning of the school year positively predicted PIU at the end of the school year ($b_1 = 0.09, SE = 0.03, p < 0.01$), however PIU at the beginning of the school year did not predict sleep problems at the end of the school year ($b_2 = -0.02, SE = 0.03, p > 0.05$); (3) There is no gender and grade differences in the above effect by subgroup analyses. In summary, sleep problems serve as a risk factor for increasing PIU in adolescents. More attention should be paid to the sleep health of teenagers to prevent the negative effects of sleep problems on their positive development.

Keywords: problematic Internet use, sleep problems, adolescents, a cross-lagged panel analysis

幼儿学习品质的发展类型：家庭社会经济地位的作用

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摘要 学习品质是个体在学习的各个环节中所表现出来的学习方式、学习习惯、学习态度和学习倾向, 涵盖了坚持性、好奇心、注意力、独立性、灵活性和创造力等内容。作为幼儿入学准备的重要领域之一, 学习品质对幼儿未来学业能力的发展至关重要, 探讨幼儿学习品质的发展模式十分必要。根据家庭投资模型, 家庭社会经济地位作为家庭系统中的重要变量, 保障了儿童发展的基本需求和质量, 尽管已有研究考察了家庭社会经济地位与幼儿学习品质之间的关系, 但其对幼儿学习品质发展类型的作用尚不清楚。因此, 本研究旨在探究幼儿从小班到大班的学习品质发展类型及家庭社会经济地位的作用, 从而丰富和完善中国背景下关于幼儿学习品质发展的理论体系, 并为学前儿童家长提供有效的实证依据。本研究通过两阶段分层随机抽样法对 1333 名幼儿(男:52.8%; $M = 42.27$; $SD = 3.56$)进行为期三年的追踪研究, 幼儿主要抚养人在 T1 完成家庭社会经济地位的信息收集, 在 T1 到 T3 完成儿童学习品质量表。通过建立潜变量增长混合模型分析幼儿学习品质的发展类型, 并通过比例差异检验探究家庭社会经济地位对幼儿学习品质发展类型的作用, 结果表明: (1) 幼儿的学习品质存在四种发展类型, 分别为 19.7%的高起点-上升型(截距=3.11, $p < .001$; 斜率=.31, $p < .001$)、2.9%的高起点-下降型(截距=3.55, $p < .001$; 斜率=-.18, $p < .05$)、61.1%的低起点-上升型(截距=2.80, $p < .001$; 斜率=.13, $p < .001$)和 16.4%的低起点-下降型(截距=2.65, $p < .001$; 斜率=-.07, $p < .01$); (2)不同家庭社会经济地位幼儿的学习品质发展类型分布差异显著($\chi^2(6)=42.41, p < .001$), 低家庭社会经济地位的幼儿在低起点-下降型的分布显著多于其他类型($ps < .001$), 高家庭社会经济地位幼儿则更多分布在高起点类型中($ps < .001$)。研究结果不仅说明了幼儿在整个幼儿园期间学习品质发展类型的特点, 同时揭示了低家庭社会经济地位的幼儿更容易面临学习品质发展不利的风险, 提升家庭社会经济地位有助于促进幼儿学习品质的发展, 从而为幼儿学习品质的形成与发展提供重要保障。

关键词 学习品质, 幼儿, 发展类型, 家庭社会经济地位

Growth Patterns of Approaches to Learning Among Preschool Childhood: The Role of Socioeconomic Status

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Abstract: Approaches to Learning (ATL) is the learning style, learning habits, learning attitudes, and learning tendencies exhibited by individuals in all aspects and activities of learning, covering perseverance, curiosity, concentration, independence, flexibility, and creativity. As one of the key domains of children's learning and school readiness, ATL has been shown to contribute to the development of children's later academic achievement. It is necessary to explore the growth patterns of ATL among preschool childhood. As one of the important variables in the family system, socioeconomic status (SES) guarantees the basic needs and quality of children's development according to the family investment model. Although studies have examined the relationships between SES and ATL,

little is known about the role of SES on the growth patterns of ATL. Therefore, the present study aims to examine the growth patterns of ATL of preschool children from junior grade to senior grade in kindergarten, as well as the role of SES, to enrich and improve the theoretical system of the development of children's ATL under the Chinese background, and provide an effective empirical basis for parents of preschool children. 1333 children (male:52.8%; M = 42.27; SD = 3.56) were followed in a 3-year period longitudinal investigation, which began with a two-stage stratified random sampling method. Primary caregivers completed the collection of SES information at T1 and the approaches to learning scale from T1 to T3. The study analyzes the growth patterns of ATL in preschool childhood by establishing the latent class growth model and explores the role of SES on the growth patterns of ATL by the proportion difference test. The results indicated that: (1) There were four growth patterns of ATL among preschool childhood, which were 19.7% high initial point-rising type (intercept = 3.11, $p < .001$; slope = .31, $p < .001$), 2.9% high initial point-falling type (intercept = 3.55, $p < .001$; slope = -.18, $p < .05$), 61.1% low initial point-rising type (intercept = 2.80, $p < .001$; slope = .13, $p < .001$) and 16.4% low initial point-falling type (intercept = 2.65, $p < .001$; slope = -.07, $p < .01$); (2) The distribution of growth patterns of ATL of children from different SES is significantly different ($\chi^2(6)=42.41$, $p < .001$). Compared with other types, low SES children's ATL growth patterns were mainly characterized by the low initial point-down type ($ps < .001$) and children with high SES were more distributed in the high initial point type ($ps < .001$). These results not only show the characteristics of the growth patterns of ATL among preschool childhood throughout kindergarten, but also reveal that children with low SES were more likely to face the risk of adverse development of ATL. Improving SES is conducive to promoting the growth of children's ATL, thus providing an important guarantee for the formation and development of children's ATL.

Keywords: Approaches to Learning, Preschool Children, Growth Patterns, Socioeconomic Status

母亲自主支持和鼓励联结与幼儿社会行为发展的关系研究

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摘要 母亲自主支持是促进幼儿自主决定和主动解决问题的行为。母亲鼓励联结是增强幼儿与母亲或他人建立相互支持、信任、稳固联系的行为。为了实现母亲的自主支持和鼓励联结的行为目的, 母亲会对幼儿使用不同等级程度的策略, 分为高中低压三种策略。幼儿社会行为是指幼儿在社会交往中对人、事、物的一系列行为态度和行为反应, 分为亲社会性行为和问题行为, 问题行为包含情绪问题、品行问题、多动问题、同伴交往问题。以往研究指出, 母亲自主支持使幼儿更有可能表现出较高的内在学习动机、社会能力和较少的内化和外化行为问题; 母亲鼓励联结和情感亲密可以促进幼儿亲社会 and 移情的发展。本研究以 47 名中班幼儿(男孩 20 名, 女孩 27 名)及其母亲为研究对象, 深入探索母亲自主支持和鼓励联结与幼儿社会行为发展的关系。用《母子互动行为编码方案》, 以 5 秒为原则采取事件取样的方式, 对 15 分钟的母子互动游戏视频中母亲自主支持和鼓励联结两中目标导向下的语言和行为进行编码, 进而分析研究母亲的自主支持和鼓励联结行为, 并采用《长处和困难问卷-教师版》(SDQ-T)由教师评价幼儿社会行为的发展状况, 最终探索母亲自主支持和鼓励联结与幼儿社会行为发展的关系, 并提出教育建议。结论: 1.母亲自主支持得分高于鼓励联结, 且母亲自主支持低中高压策略均存在显著性差异。不同性别幼儿、是否独生及母亲不同受教育程度的母亲, 在自主支持和鼓励联结间不存在显著差异。不同性别幼儿在情绪问题、多动问题、同伴交往问题和困难总分中均存在显著差异。2.自主支持可以显著负向预测幼儿的情绪问题、多动问题、同伴交往问题和困难总分。鼓励联结与幼儿社会行为发展没有显著相关。3.自主支持低压策略能单独负向预测幼儿的情绪问题、多动问题、同伴交往问题、困难总分。鼓励联结中压策略可以单独正向预测幼儿的品行问题, 鼓励联结高压策略可以单独负向预测幼儿的亲社会行为。

关键词 自主支持、鼓励联结、社会行为

Relationship between the maternal autonomy support-encouragement connectedness and the children's social behaviors development

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Abstract: Maternal autonomy support is the behavior of promoting children making decisions and solving the problem by themselves. Maternal encouragement connectedness is the behavior of strengthening the young children to establish the mutual support, the trust, the firm connection with the mother or the others. In order to achieve the purpose of maternal autonomy support and encouragement connectedness, mothers will use different levels of strategies for children, which are divided into three strategies: high, medium and low pressure. Children's social behavior, which are divided into prosocial behavior and problem behavior, refers to a series of behavior attitudes and behavior reactions to other people and things when children in social communication. Problem behavior includes emotional problems, conduct problems, hyperactivity problems, peer communication problems. Previous studies have pointed out that maternal autonomy support makes children more likely to show higher internal learning motivation, social ability and less internalized and externalized behavior problems; Maternal encouragement connectedness and emotional intimacy can promote children's prosocial and empathic development. In this study, 47 middle-class children (20 boys and 27 girls) and their mothers were studied to explore the relationship between maternal autonomy support-encouragement connectedness and children's social behavior development. Using the coding scheme of mother child interaction behavior, taking 5 seconds as the principle and adopting the method of event sampling, code the language and behavior under the goal orientation of the maternal autonomy support-encouragement connectedness in the 15 minute mother child interaction game video, and then analyze and study the maternal autonomy support-encouragement connectedness behavior. The strengths and difficulties questionnaire for teachers (SDQ-T) was used to evaluate the development of children's social behavior. And then explored the relationship between the maternal autonomy support-encouragement connectedness and the children's social behaviors development, and gave mothers educational suggestions. Conclusion: 1. The score of maternal autonomy support was higher than encouragement connectedness, and there were significant differences in the strategies of low, medium and high pressure maternal autonomy support. There was no significant difference in autonomy support and encouragement connectedness in different genders of children, whether an only child and education level of mother. There were significant differences in emotional problems, hyperactivity problems, peer interaction problems and total score of difficulties. 2. Autonomy support can significantly and negatively predict children's emotional problems, hyperactivity problems, peer communication problems, difficulty total score. There was no significant difference in encouragement connectedness and the social behavior development of children. 3. Autonomy support low-pressure strategy can negatively predict children's emotional problems, hyperactivity problems, peer communication problems, difficulty total score. The strategy of encouragement connectedness medium pressure can predict children's behavior problem positively and encouragement connectedness high pressure strategy can predict children's behavior problem negatively.

Keywords: autonomy support, encouragement connectedness, social behavior

疫情期间大学生的感戴与心理复原力：社会价值观的中介作用

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摘要 目的：探究大学生感戴和社会价值观对疫情期间大学生心理复原力的影响及其路径，为开展相关心理健康教育、心理疏导工作提供依据。方法：采用大学生感戴量表（GRAT）、大学生复原力量表（RSUS）、自编社会价值观量表对四川电影电视学院 8719 名在校大学生实施调查。结果：大学生感戴、社会价值观、心理复原力在性别和年级上有统计学意义。男生的感戴得分显著低于女生，但社会价值观显著低于女生，男生

的心理复原力总分、自我效能、自我接纳、稳定性、问题解决显著高于女生，而朋友支持和家人支持这两项在没有显著的性别差异；心理复原力总分和感戴总分按年级高低分排列为大四>大三>大二>大一，大一年的价值观明显高于大一大二，大二年级的社会价值观明显高于大三，大四年级与其他三个年级没有显著性差异。大学生感戴、社会价值观、心理复原力三者之间相互呈低到中等程度的正相关($r=0.17^{***}$, $p<0.001$; $r=0.61^{***}$, $p<0.001$; $r=0.13^{***}$, $p<0.001$)。大学生感戴对心理复原力的影响上存在社会价值观的部分中介效应，大学生的感戴和社会价值观一共能解释 37.8% 的学生康复力。结论：大学生感戴既直接影响又通过良好的自我概念间接影响学生的心理复原力。

5.3“理论心理与心理学史专业委员会”分组展贴报告

自由通向幸福的心理机制研究

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摘要 自由和幸福一直是哲学领域探讨的重要主题，也是人世间每个人渴求并不懈追寻的事物。理论和实证研究表明，自由是预测幸福的一种重要因素，幸福的实现需要以自由为前提。然而，自由意味着幸福吗？是否越自由就越幸福？近代以来，自由成为启蒙的重要概念，彰显了人之为人和人的全面发展的价值和意义。它不仅仅是个体的追求，更是伦理社会存在的基石，具有普遍的价值。然而，不同领域所用自由概念不同，研究焦点各异，如哲学家探讨决定论与自由意志是否存在的问题，神经科学家通过脑成像技术试图发现脑神经活动与意图行为产生的关系，经济学家聚焦经济自由是否提升了国家的总体幸福，法学界关注自由与道德、法律责任的承担问题。本文对于自由的讨论基于人们日常生活中的自由意志体验，即一个人感受到的对行为的自主选择性和对命运的自我控制性。伴随着积极心理学的变革和发展，幸福研究受到了学界的广泛关注，逐渐形成了以享乐主义为主体的主观幸福感，以及基于实现论的心理幸福感和社会幸福感等研究取向。近年来，幸福研究呈现出整合趋势，即一个人可能同时拥有享乐主义和实现论两种幸福观，根据不同情境的具体条件，某种取向的幸福感寻求占据主导地位。本研究采用自由意志问卷、生活满意度量表、积极消极情绪量表、心盛量表和生命意义问卷对 652 名大学生进行测量，探讨个体的自由意志体验与快乐论、实现论两种取向的幸福感之间的关系，并揭示生命意义在其中的作用。结果发现，自由意志体验与两种幸福感之间均存在显著的正相关，并且生命意义体验的中介作用显著。本研究结论在自由、意义和幸福的探讨上更进一步，为持续幸福的观点提供科学依据，也为积极心理干预指明方向，更为缓解个体精神迷茫和痛苦提供启示，具有理论和现实意义。

关键词 自由意志，快乐论幸福感，实现论幸福感，生命意义，中介作用

Mechanisms in the Way from Freedom to Happiness

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Abstract: For thousand years freedom and happiness are the most precious thing ordinary people cherished and whereby become the hot topics philosophers endeavoring to figure out. Freedom is one of the predictors of happiness and predetermines one's possible happiness to some extent, which have been proved by many theoretical and practical studies. But does more freedom predict more happiness? Freedom, one of the most important concepts, reveals the value of human being and all round development. People pursue it and the society builds on it. The concept of freedom, however, varies in various fields. For instance, philosophers talk about if freedom exists and if freedom is compatible with determinism, neuroscientists dedicate to discover the evidence that intentional behavior relate to the activity of brain nerve cell, economists focus on whether the global happiness improves with the rapid development of social economy, jurists try to figure out the relationship between freedom and consequent responsibility. The study payed attention to people's freedom belief in daily life, which reflects one's subjective

feeling for self choice and self control. With the revolution and development of positive psychology, happiness becomes a hot topic in psychology. Both hedonic happiness and eudainomic happiness attract psychologists' attention, and a new trend is integrating two approaches of happiness. This study tested the relationship between belief in free will and happiness and the mediating effect of meaning in life on the relationship by measuring 652 undergraduates with the Free Will Scale, Satisfaction with Life Scale, PANAS, Flourishing Scale and Meaning in Life Scale. Results show that there is significant positive relationship among belief in free will, subjective well-being and flourishing, meanwhile the mediation of the presence of meaning in life is also significant. The study implies great theoretical and practical values, promoting theoretical discussion and empirical studies on free will, meaning in life and happiness, as well as, providing clues for relieving mental confusion and pain.

Keywords: free will, hedonic happiness, eudainomic happiness, meaning in life, mediation effect

先秦儒学“情”思想的心理学阐释

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摘要 情是儒学思想体系的基本构成部分,《论语》开篇就用乐、悦、愠来表达君子好学、乐群、宽容的良好品格。发掘先秦儒学关于“情”的思想对于当前情绪心理学理论发展和实践研究具有直接的启发意义。本研究从“情”的概念、情在儒学理论建构中的基础地位以及以礼节情的原则三个层面阐释先秦儒学的“情”思想。先秦儒学思想中的情是一个统合的范畴,其内涵和外延不同于现代心理学的情绪、情感概念。“情”字在先秦儒家典籍中具有至少三层含义:性情,情感,情绪。在儒家看来,情不是单纯的喜怒哀乐,而是人性、情感和情绪的统一体。情发自内心,出于本性,贯通物质生活和精神活动,成为儒家“仁义礼智”思想体系建立的重要基点。“物质不齐,物之情也。惟其不齐,则不得以己之性情,例诸天下之性情”,说明人情与人性之间存在个体差异性。“己所不欲,勿施于人”所表达的推己及人之情又反映了人情与人性之间的共通性。儒学在肯定情的共性与个性的基础上,强调情在形成道德情感,树立人生态度和建立良好社会关系中的重要作用。情虽好但需节制。“喜怒哀乐之未发谓之中,发而皆中节,谓之和”,心动、意兴、情发,无不需中节,需要与作为社会规范的礼和作为宇宙万物规律的理相谐和。以礼节情与以理节情是根据具体情境和社会规范调节情绪发生与表达以达到与社会场景相契合的原则。儒家还提出情绪表达度的问题。“乐而不淫,哀而不伤”,情不过度才是有益。这与当前积极心理学提倡的辩证看待积极和消极情绪的观点不谋而合。先秦儒学“情”的思想对于现代心理学,特别是对于情绪心理学的发展具有重要的理论价值与实践意义。先秦儒学中的“情”融合了个体的知情意行,以整体的、综合的视角解读人的心理活动和行为,对于当前心理科学研究的整合趋势大有裨益,为现世生活中的人们确立本心、化解情绪心理问题、实现自我超越、提升自我境界提供指导。

关键词 先秦时期, 儒学, 情绪情感, 传统文化

An Exploration on the Inner Psychological Thoughts of Confucian Qing in the Pre-Qin Days

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Abstract: It's worth to illuminate the *Qing* concept of Confucianism in the pre-Qin days. *Qing* plays a key role in the Confucian ideological system. The study clarified the inner psychological thoughts of Confucian *Qing* in the pre-Qin days in three levels. Firstly, the conception of Confucian *Qing* in the pre-Qin days is a comprehensive word, containing as least three meanings, such as disposition, emotion and feeling, which is quite different from the concept of emotion and affection in modern scientific psychology. Confucianism considers *Qing* not just as some discrete basic emotions but as an integration of humanity, emotion and feelings. Secondly, *Qing* stemmed from the inner mind closely interacts with one's temperament and reflects the situation of social life. Confucianism proposed the discrepancy in different people's disposition and also inter-community in people's feelings. Hence, the influence of

Qing in the formation of moral emotion, meaning in life and social relationship was greatly commended and stressed. Thirdly, *Qing* needs to be regulated in accordance with specific social norms and also natural laws. One's emotion and behavior should be consist with the specific situation. If it is not, one should adjust to it. Confucianism also stressed pursuing the balance of *Qing*, which is similar to the point that dialectically view positive emotion and negative emotion in modern positive psychology. Confucian *Qing* in the pre-Qin days has great implication in modern psychology and emotion psychology. Instead of isolated cognition, emotion, will and behavior, Confucian *Qing* theory advocated the integral mind. It also provides clues for people in resolving psychological problems and improving positivity in life.

Keywords: the pre-Qin days, Confucianism, emotion, traditional Chinese culture

后物质主义心理学：缘起、理论及评价

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摘要 后物质主义心理学是在量子力学逐渐被应用于神经科学、心理学中，加之后现代主义哲学思潮的启发、超心理学研究逐渐受关注的时代背景下，心理学中第二代认知心理学研究范式的巨大冲击下的一种学术思潮。2014年，在图森的峡谷牧场召开的由美国亚利桑那州大学 Gary E. Schwartz 教授发起，Miller 和 Mario Beauregard 两位博士负责组织筹办，亚利桑那和哥伦比亚两所大学共同承办的首届“后物质主义科学、灵性国际学术峰会”，标志着后物质主义心理学的诞生。此次会议创建了“后物质主义心理学”官网，大多数会议参与者著书立作，为后物质主义心理学的形成创造条件。后物质主义心理学以“心脑关系的传递假说”挑战传统认知心理学中意识副现象论，强调意识可以脱离生命体而存在，所以不是大脑生理活动的产物，更可能和大脑同时存在；在认知与环境关系上，主张用宇宙中心论取代以人为中心的观点，即人和环境都不是认知的中心；心理学的研究主题拓宽为灵性与科学的交叉领域。该思潮主要集中于濒死体验、脑死亡后意识现象的临床实验中，或者是灵异现象等超心理学现场试验。该思潮理论主张对健康和治疗、生态学和意识演化等领域会产生影响，但目前学界对此评价不一，与物质主义心理学的地位相比，形成否定、中立、肯定三种定位。当前来看，后物质主义心理学还只是新生物，不能过早下结论。该思潮带有明显后现代主义，因此可能也同样陷入非此即彼的二歧视野中，例如过分强调大脑和意识平行关系而忽略了意识产生于大脑的生理证据的客观性。同时，该思潮部分理论主张带有神秘主义甚至是“有神论”之疑；又由于其研究对象不再聚焦于完整的人的形象，因此其理论主张可能偏离了整个心理学理论成熟之路。将意识抽离于人鲜活身体进行研究，又不免陷入了传统认知心理学中身心平行论窠臼中。未来，学界应对此思潮加以关注，在马克思主义实践观视野下探寻人的完整形象以及与之相适的研究方式，真正意义上寻求心理学和灵性生活相融合的解决途径。

关键词 后物质主义心理学，灵性，科学，物理主义，理论研究

Postmaterialist psychology: Causes, theories, and evaluation

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Abstract: Post-materialist psychology is an academic trend of thought under the great impact of the second generation of cognitive psychology research paradigm in psychology under the background of the era when quantum mechanics is gradually applied in neuroscience and psychology, with the inspiration of postmodern philosophy trend of thought and the increasing attention of parapsychological research. In Tucson canyon ranch 2014, the first

"scientific materialism, spiritual world after academic summit" which launched by Professor Gary E. Schwartz (University of Arizona, USA), organized by Dr. Miller and Dr. Mario Beauregard, and undertaken by two colleges that Arizona and Colombia's, marks the the birth of post-materialist psychology. The conference created the official website of "Post-materialistic Psychology", and most of the participants wrote books to create conditions for the formation of post-materialistic psychology. Postmaterialist psychology challenges the theory of consciousness by phenomena in traditional cognitive psychology with the "transfer hypothesis of mind-brain relationship", emphasizing that consciousness can exist apart from the living body, so it is not the product of brain physiological activities, but more likely to exist at the same time with the brain. In terms of the relationship between cognition and environment, it is advocated to replace the human-centered view with the universal-centered theory, that is, neither man nor environment is the center of cognition. The research topics of psychology are broadened to the intersection of spirituality and science. This trend of thought mainly focuses on clinical trials of near-death experiences, consciousness after brain death, or parapsychological field trials of paranormal phenomena. The theory of ideological trend holds that it will have an impact on health and treatment, ecology and consciousness evolution, etc., but the current academic evaluations are different: compared with the status of materialist psychology, it has formed three positions: negative, neutral and positive. At the moment, post-materialist psychology is still new and cannot be drawn to conclusions. This trend of thought, with its obvious postmodernism, may also fall into the binary field of either/or discrimination, such as overemphasizing the parallel relationship between the brain and consciousness while neglecting the objectivity of the physiological evidence that consciousness originates in the brain. At the same time, some theories of this trend of thought hold the suspicion of mysticism or even "theism". And because the object of the research is no longer focused on the image of a complete person, the theory may deviate from the mature road of the whole psychological theory. The research of consciousness away from the living body inevitably falls into the traditional mind-body parallelism in cognitive psychology. In the future, the academic circle should pay close attention to this trend of thought, and explore the complete image of human and the appropriate research method from the perspective of Marxist practice view, so as to seek the solution that integrates psychology and spirituality in a real sense.

Keywords: post-materialist psychology, spirituality, science, physicalism, theoretical research

生成认知范式的潜在危机及超越

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摘要 认知心理学在当前已经发生了范式革命, 这就是以“4E 认知”为主的第二代认知科学的兴起。本研究对“4E 认知”中的生成认知范式形成和发展以及潜在危机进行阐述, 并探讨超越这种危机的努力方向。受到哲学、自然科学和心理学的共同影响, 生成认知研究范式肇始于 20 世纪 90 年代初, 由瓦雷拉等人将生物学、神经科学当中发现的“创生”现象和东方佛教哲学文化中正念觉知等教义整合产生, 也是在认知心理学当中尝试对人文科学主义、科学主义方法论进行整合。该研究范式注重行为在产生认知中的作用, 主张反表征和反计算主义的研究路线, 并通过引用动力系统理论以及“4E 认知”理论当中外在主义、动态系统等概念, 推广人工智能当中“进化机器人仿真模型”的研究技术。较之传统“GOFAI”认知研究范式, 生成认知更为真实、形象、生动构造对人类认知过程的研究。但是生成认知存在着潜在的危机: 1、现象学、存在主义哲学、宗教哲学指导力问题; 2、未开发出完善的研究技术, 且动力系统理论或者进化机器人仿真模型实用性较小; 3、仍然落入人机类比研究隐喻窠臼当中, 人的形象并未被完整揭示出来。4 与延展认知、嵌入认知、情感认知等关系未充分厘清, 导致理论当中还存有许多背离传统认知科学范式不够彻底之处。这些危机已经在生成认知几个主要的研究方案中体现出来, 例如自创生生成研究方案、激进生成研究方案、交互生成研究方案、感觉运动

生成研究方案等。本研究认为，有效避开这种危机的途径是更好切合人的完整形象，关注理论与科学技术发展的融合。

关键词 生成认知范式，4E 认知，理论研究，生成认知研究方案

The potential crisis of enactive cognitive paradigm and to beyond

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Abstract: A paradigm revolution has taken place in cognitive psychology, which is the emergence of the second generation of cognitive science, mainly "4E cognition". This research expounds the formation and development of enactive cognition paradigm in "4E cognition" and the potential crisis, probes into the direction of efforts beyond such crisis. Influenced by philosophy, natural science and psychology, enactive cognitive research paradigm started in the early 1990s. It was formed by Valera and others who integrated the "enaction" phenomenon found in biology and neuroscience with the doctrines of mindfulness awareness in Oriental Buddhist philosophy and culture. It was also an attempt to integrate humanistic scientism and scientism methodology in cognitive psychology. This research paradigm focuses on the role of behavior in enactive cognition, advocates the research route of anti-representation and anti-computationism, and promotes the research technology of "evolutionary robot simulation model" in artificial intelligence by referring to the concepts of externalism and dynamic system in the theory of "4E cognition". Compared with the traditional "GOFAI" cognitive research paradigm, the enactive cognition is more real, vivid to construct the research on human cognitive process. However, there are potential crises in enactive cognition: 1. The theory guiding force of Phenomenology, existentialist philosophy and religious philosophy; 2. It has not developed a complete research technology, and the utility of dynamic system theory or evolutionary robot; This study believes that the effective way to avoid this kind of crisis is to better fit the whole image of people and pay attention to the integration of theory and science and technology development.

Keywords: enactive cognitive paradigm, Theoretical psychology, Philosophical way of thinking

“新瓶装旧酒”：人机类比隐喻在认知心理学中的地位和演化

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摘要 本文从人机类比研究隐喻根源、理论内涵及在第一代认知科学学派、第二代认知科学思潮、认知神经科学进路三个形态中的特征及表现进行探讨，对这种研究隐喻优势、局限性和未来认知心理学理论发展道路进行评价和展望。人机类比研究隐喻简单而言是将人视为机器的一种研究前提，由此决定了研究的方式、方法以及应然的结论。认知心理学发展至今已经呈现出三种形态：以信息加工、联结主义心理学为主的第一代认知科学学派、“4E 认知”为主的第二代认知科学思潮、认知神经科学进路（approach）。三者之间的关系是互相影响、借鉴和共同发展的，更为重要的，认知神经科学进路拓宽了第一代认知科学在当今发展的道路，能够以更为合理、科学和整合的方式对人的大脑思维活动进行仿真模拟，是第一代认知科学学派的人机类比研究隐喻的发展。第二代认知科学思潮反对第一代认知科学学派人机类比研究隐喻，企图将认知心理学研究导向真实生活情境当中并更为合理揭示符合于真实的人的动态变化特征的研究，例如动力系统理论和进化机器人仿真模型技术等，但是同样不可避免陷入了人机类比的研究隐喻困境中。因此，人机类比隐喻仍然主宰着认知心理学的研究。

关键词 人机类比，认知心理学，研究隐喻

‘Old wine in a new bottle’: the status and evolution of man-machine analogy metaphor in cognitive psychology

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Abstract: This research on the ‘man-machine analogy’ research root metaphor, theoretical connotation, and in the first generation of cognitive science school, the second generation cognitive science thoughts and cognitive neuroscience approach to discuss the characteristics and performance of the three forms, metaphor advantages, limitations and future research on the cognitive psychology theory, evaluation and prospect development path. The metaphor of ‘man-machine analogy’ is simply a research premise to treat human as a machine, which determines the research methods and conclusions. Up to now, the development of cognitive psychology has taken on three forms: the first-generation cognitive science school, which mainly focuses on information processing and connectionist psychology; the second-generation cognitive science trend, which mainly focuses on "4E cognition"; and the approach of cognitive neuroscience. The relations between and among is influence each other, and common development, more important, a cognitive neuroscience approach to widen the first generation of cognitive science in today's road of development, to be more reasonable, scientific and integrated way of thinking activity carries on the simulation of the brain, is the first generation of cognitive science school of man-machine simulation development of metaphor research. The second generation cognitive science trend against the first generation of human cognitive science school research metaphor, analogy to cognitive psychology research orientation of real life situation is more reasonable and reveal in the research of dynamic characteristics of real people, such as dynamical system theory and evolutionary robot simulation model technology, but also inevitably fall into the predicament of ‘man-machine analogy metaphor’. Therefore, ‘man-machine analogy metaphor’ still dominates the researches of cognitive psychology.

Keywords: man-machine analogy; Cognitive psychology; Research on metaphor

后殖民主义批判心理学的内涵与价值

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摘 要 作为批判心理学的一种历史样态, 后殖民主义批判心理学试图澄清、消解西方主流心理学知识中所蕴含的后殖民主义立场, 强调以去“西方中心主义”的后现代主义态度来建设平等、共存的多元文化心理学。它从心理学与话语、心理学与文化、心理学与种族之间的关系等维度, 澄清西方主流心理学知识中所蕴含的西方中心主义偏见和后殖民主义立场, 批判西方主流心理学借“科学”、“客观”之名在世界范畴内推广其带有主观偏见的知识, 如通过操控心理学知识标准界定的话语权来确立西方科学中心; 通过心理学的权威性裁决来确立非西方心理学对西方心理学的“单向依附性关系”与西方文化中心; 通过验证跨文化心理学中的普适性理论、力推本质主义的心理观来鼓吹西方种族中心, 等等。它强调不同文化心理学“共享心理学话语权”以取代西方心理学的话语主导权, 主张以多元文化心理学的“双边平等”关系来代替后殖民主义心理学中所暗含的“单向依附性”关系; 力陈以非本质主义的心理观来实现对“西方中心主义”的消解与超越, 试图为各种非西方的心理学争得平等的话语权, 使心理学知识体系能够解读整个人类的心理与行为。作为一种兼具批判性与建设性的完善心理学建设的努力, 后殖民主义批判心理学在澄清、消解蕴含于西方主流心理学研究中“西方中心主义”、后殖民主义立场, 并以平等、共存的多元文化心理学立场重建心理学方面均取得了一些丰硕的成果。其所秉持的科学批判精神, 有助于心理学回归理性思考, 促进中国心理学家识别西方心理学所蕴含的后殖民主义特征进而推动中国心理学步入更加健康的发展轨道。

关键词 批判心理学, 后殖民主义, 主体性立场, 批判精神, 多元文化心理学

The Connotation and Value of Post-Colonial Critical Psychology

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Abstract: As a kind of historical state of critical psychology, the post-colonial critical psychology attempts to clarify and disentangle the postcolonial position contained in the western mainstream psychology knowledge, and emphasizes the post-modernist attitude of "de-Western-centralism" to construct the equal and coexistence multi-cultural psychology. From the dimensions such as psychology and discourse, psychology and culture, psychology and race, it clarifies the western-centric prejudices and post-colonial positions contained in the knowledge of mainstream western psychology, and criticizes the fact that the western mainstream psychology promotes its subjectively biased knowledge in the world with the names of "science" and "objectivity". The examples are as follows: establishing the western science center by manipulating the discourse power defined by the psychological knowledge standard; establishing the "unidirectional dependence relationship" of the non-Western psychology to the western psychology and the western culture center through the authoritative judgment of psychology; advocating western ethnocentrism by verifying the universal theory of cross-cultural psychology and pushing the psychological view of essentialism, etc. It emphasizes that different cultural psychology should "share psychological discourse power" to replace the dominant discourse power of western psychology, and advocates that the "bilateral equality" relationship of multicultural psychology should replace the "unidirectional dependence" relationship implied in post-colonial psychology; it strives to achieve the elimination and transcendence of "Western-centrism" with a non-essentialist psychological view, and attempts to win equal discourse rights for various non-Western psychology so that the psychological knowledge system can interpret the entire human psychology and behavior. As a kind of critical and constructive efforts to perfect the construction of psychology, the post-colonial criticism psychology has achieved fruitful results in clarifying and dispelling the "Western-centrism" and the post-colonialist position contained in mainstream western psychology research, and rebuilding psychology with a multicultural position of equality and coexistence. The spirit of scientific criticism is beneficial for psychology to return to rational thinking and promote Chinese psychologists to recognize the post-colonial characteristics of western psychology so as to push Chinese psychology into a more healthy development track.

Keywords: critical psychology, post-colonialism, subjectivity position, critical spirit, multicultural psychology

批判心理学的历史形态

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摘 要 从最广泛的意义上看，批判心理学是一种秉持科学的批判精神，试图澄清、消解研究者自觉或不自觉地秉持的某种心理学研究的主体性立场，并以研究者认可的某种更为恰当的的主体性立场来进行心理学重构的心理学形态或运动。迄今已呈现出五种不同的历史形态：自然科学批判心理学（澄清、消解哲学与人文科学心理学中的非科学立场，试图以自然科学立场来建设心理学）、人文科学批判心理学（澄清、消解主流心理学中的自然科学立场，试图以人文科学立场来建设心理学）、阶级批判心理学（澄清、消解主流心理学中的资产阶级立场，试图以无产阶级立场来建设心理学）、女权主义批判心理学（澄清、消解主流心理学中的男性中心主义立场，试图以女权主义立场来建设心理学）和后殖民主义批判心理学（澄清、消解主流心理学中的后殖民主义立场，试图以后现代主义的多元化立场来建设心理学）。作为一种兼具批判性与建设性的完善心理学建设的努力，各种形态的批判心理学在澄清、消解蕴含于心理学研究中的主体性立场并以新的主体性立场重建心理学方面均取得了一些丰硕的成果。其所秉持的科学批判精神，有助于心理学回归理性思考

并步入健康发展轨道。

关键词 批判心理学, 主体性立场, 批判精神, 历史形态, 心理学重建

The Historical Form of Critical Psychology

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Abstract: From the broad sense, critical psychology is a psychological form or movement which adheres to the critical spirit of science, attempts to clarify and dispel a certain subjective position of psychological research consciously or unconsciously held by researchers, and conducts the psychological reconstruction with a more appropriate subjective position recognized by the researchers. So far, it has present five different historical forms as follows: natural science critical psychology (clarifying and dispelling the non-scientific position in philosophy and human science psychology, and attempting to construct psychology with the position of natural sciences), critical psychology in human science (clarifying and dispelling the natural science position in mainstream psychology, and attempting to build psychology with the position of human science), class criticism psychology (clarifying and dispelling the bourgeois position in mainstream psychology, and attempting to construct psychology with the position of proletarian), feminist criticism psychology (clarifying and dispelling the male-centered position in mainstream psychology, and attempting to construct psychology with a feminist position), and post-colonial critical psychology (clarifying and dispelling the post-colonial position in mainstream psychology, and attempting to build psychology with a diversified position of post-modernism). As a critical and constructive effort to perfect psychology, various forms of critical psychology have achieved fruitful results in clarifying and dispelling the subjective position contained in psychological research and rebuilding psychology with a new subjective position. The spirit of scientific criticism is beneficial for psychology to return to rational thinking and step into the track of healthy development.

Keywords: critical psychology, subjectivity position, critical spirit, historical form, psychological reconstruction

机能主义在美国心理学内在思想逻辑演进

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摘要 机能主义是美国心理学中第一个独特的心理学体系,它是在与构造心理学的争论中产生和获得发展。作为一个学派,在构造心理学消失以后,慢慢退出了历史舞台,但是作为一种研究取向的机能主义并没有消失,而是融入美国主流心理学之中。机能主义在美国的早期发展见于詹姆斯心理学思想,詹姆斯创造性地把进化论和实用主义的思想相互结合,并且突出意识的实用机能,指引美国主流心理学拒绝以元素分析为特征的心理学研究传统,进而朝向对心理的机能开展研究。机能主义在美国的正式发展分为芝加哥学派和哥伦比亚学派。芝加哥学派始于杜威,发展于安吉尔,成熟于卡尔,该学派强调了与构造心理学的区别。哥伦比亚学派主要代表人物有卡特尔、桑代克和吴伟士等人。哥伦比亚学派没有高举机能主义学派的旗帜,而是追求广泛学术研究自由精神。机能主义最初从封闭的意识分析研究转向有机体适应外部环境关系的研究,这种研究重心的转变为后来的主流心理学所继承。行为主义将研究的焦点放在行为与环境的关系中,强调行为的适应机能;认知心理学侧重对认知过程的机能分析;人本主义心理学强调需要的动力机能研究;进化心理学侧重对机能的进化机制研究。这些研究取向都体现了美国心理学机能主义的研究倾向。美国心理学在不同时期表现出不同的流派,而不同流派在研究对象、方法也存在差异,但是它们却有一个共同点,即这些流派一直贯穿着一条亘古不变的发展路线——机能研究。总之,机能研究一直是美国心理学中的一个特色主题,它沿着机能主义心理学、行为主义心理学、认知心理学、人本主义心理学以及进化心理学不断发展,它们从各自的维度共同揭示了心理发生发展的规律,在不同阶段的流派对机能的研究也不尽相同,但正是由于这些相

异的结果组成了美国心理学富有特色的机能研究，也构成了美国心理学多姿多彩的形态。

关键词 机能主义，美国心理学，内在思想

Evolution of the Intrinsic Logics of Ideology in Functionalism of American Psychology

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Abstract: Functionalism is the first unique psychological system in American psychology, which emerged and developed in the debate with constructional psychology. As a school, after the disappearance of structural psychology, functionalism gradually quitted from the historical stage. However, as a research orientation, functionalism did not disappear, but merged into the American Mainstream Psychology. The early development of functionalism in the United States can be found in James' psychology thought, James creatively put evolution theory and pragmatism ideas together, and highlights the practical function of consciousness, guides the American mainstream psychology to refuse the tradition of psychological research characterized by element analysis, and then headed to the function of psychological research. The formal development of functionalism in the United States is divided into Chicago school and Columbia School. The Chicago School, which began with Dewey, developed with Angel, and matured with Carl, emphasizes the distinction with structural psychology. The main representatives of The Columbia School are Cartier, Thorndike and Woodworth. The Columbia School does not hold the banner of the functionalist school, but pursues the free spirit of extensive academic research. Functionalism initially shifted from the closed analysis of consciousness to the adaptation of organisms to the external environment, which was inherited by the later mainstream psychology. Behaviorism focuses on the relationship between behavior and environment and emphasizes the adaptive function of behavior. Cognitive psychology focuses on the functional analysis of cognitive processes. Humanistic psychology emphasizes the need for dynamic function research. Evolutionary psychology focuses on the study of the evolutionary mechanism of function. These research orientations reflect the research tendency of American psychology functionalism. American psychology has shown different schools in different periods, and different schools have different research objects and methods, but they share one thing in common, that is, these schools have been running through a timeless development line - functional research. In short, the study of function has always been a characteristic theme in American psychology, which has been developing along with functionalist psychology, behaviorist psychology, cognitive psychology, humanistic psychology and evolutionary psychology. They have revealed the law of psychological development from their own dimensions, and different schools have different studies on function in different stages. However, it is the different results that constitute the distinctive functional studies of American psychology, as well as the various forms of American psychology.

Keywords: functionalism, American Psychology, Intrinsic thoughts

梅洛-庞蒂知觉现象学对具身认知的影响

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摘要 梅洛-庞蒂是现象学的重要代表人物，他在重新理解胡塞尔现象学的基础上提出了独具特色的现象学——“知觉现象学”，其根本目的是克服传统哲学中身心二元对立。其思想要点有：知觉就是对世界上各种事物的体验，甚至包括对人本身的体验，知觉是人类行动的基础。知觉处在首要地位，因为知觉的存在，为我们带来了物本身。在认知、理性、判断实施之前，有自己身体的感知经验存在，因此，知觉“就像是必不可少的根基”，知觉活动的主体是活的身体。具身认知的基本涵义是强调认知对身体的依赖，主要表现在：身体的状态直接影响着认知过程的进行；离线认知是以身体为基础的；认知根植于环境，环境是认知系统的组成部分。

分。目前对具身的理解存在着“弱具身”和“强具身”之分,“弱具身”强调了认知对身体的依赖性,但是却保留了认知的计算和表征功能。“强具身”则极力主张认知是被身体作用于世界的活动塑造出来的,身体的特殊细节造就了认知的特殊性。梅洛-庞蒂知觉现象学对具身认知的影响表现在:(1)他主张知觉的主体是身体,而身体嵌入世界之中,就像心脏嵌入身体之中,知觉、身体和世界是一个统一体。人是通过身体与世界的互动,通过身体对客观世界的作用而产生知觉和认识世界的。(2)梅洛-庞蒂提出了“具身的主体性”的概念,它既不把人视为离身的心智,也不把人看作复杂的机器,而是视人为活生生的、积极的创造物,其主体性是通过身体与世界的物理性互动而实现的。(3)梅洛-庞蒂提出的意向弧和最大把握倾向体现了具身认知的核心思想。(4)梅洛-庞蒂提出的肉身图式认为,我们的“肉身”使身体和心灵紧密地结合在一起,交织成我们生活的存在,并且我们由此才能和真正的事物本身所在的世界相互作用。

关键词: 梅洛-庞蒂, 知觉现象学, 具身认知

The influence of Merleau-Ponty's phenomenology of perception on embodied cognition

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Abstract: Merleau-Ponty is an important representative of phenomenology. On the basis of re understanding Husserl's phenomenology, he put forward a unique Phenomenology-“perceptual phenomenology”, whose fundamental purpose is to overcome the binary opposition between body and mind in traditional philosophy. The main points of his thought are: perception is the experience of all kinds of things in the world, even the experience of man himself. Perception is the basis of human action. Perception is in the first place, because the existence of perception brings us the object itself. Before the implementation of cognition, rationality and judgment, there is a perceptual experience of one's own body. Therefore, perception “seems to be the essential foundation”, and the subject of perceptual activity is the living body. The basic meaning of embodied cognition is to emphasize the dependence of cognition on the body, which is mainly manifested in the following aspects: the state of the body directly affects the cognitive process; off-line cognition is based on the body; cognition is rooted in the environment, and environment is a part of the cognitive system. The current understanding of embodiment is divided into “weak embodiment” and “strong embodiment”. “Weak embodiment” emphasizes the dependence of cognition on the body, but retains the computational and representational functions of cognition. “Strong embodiment” strongly advocates that cognition is shaped by the activities of the body acting on the world, and the special details of the body create the particularity of cognition. The effects of Merleau-Ponty's phenomenology of perception on embodied cognition are as follows:(1) He claims that the subject of perception is the body, and the body is embedded in the world, just as the heart is embedded in the body. Perception, body and the world are a unity. Man perceives and understands the world through the interaction between the body and the world, and through the body's role in the objective world. (2) Merleau-Ponty put forward the concept of embodied subjectivity. It does not regard human beings as detached minds or complex machines, but as living and positive creations. Its subjectivity is realized through the interaction between the body and the world. (3) The intentional arc and a maximum grip proposed by Merleau Ponty embody the core idea of embodied cognition. (4) According to Merleau-Ponty's physical schema, our "flesh body" makes the body and mind closely linked together and interweave into the existence of our life, and thus we can interact with the world where the real things are.

Keywords: Merleau-Ponty, phenomenology of perception, embodied cognition

当代西方话语心理学评析

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摘要 话语心理学是一种将目光聚集于日常生活中的话语活动, 试图通过话语分析(discourse analysis)来阐明人们的心理(个体心理、社会心理)在话语活动中的建构过程的新兴心理学研究思潮。它强调心理(认知、角色、身份、权力等)的情境性和建构性, 认为心理是在人与外界对话的过程中不断生成、建构的, 心理学研究应该将目光集中在具有建构意义的话语本身, 透过日常生活世界中的话语文本来洞见个体与社会生活实践中的心理过程如何进行。迄今, 它展现出两种研究取向: 谈话分析取向采用的是一种非批判性的相对“静态”的理论视角, 着眼于话语本身并以话语解释心灵, 关注的是人们为实现各种利益与目的而选择的表达方法与策略, 主要集中在蕴含于叙事和隐喻等修辞中的情感、健康、态度等主题; 后结构主义取向采取的是一种批判性的“动态”的理论视角, 关注的是话语的社会实践性并以话语解释社会心理, 主要聚焦于话语与权力的关系, 如不同身份立场的话语比较、政治性文本中的潜在冲突以及社会成员范畴分析等。目前, 话语心理学已呈现出“跨学科, 深融合, 多元化”的发展态势, 作为对主流的科学主义心理学的一种反叛与重塑, 它能给中国心理学的健康发展提供诸多有益的启迪。

关键词 话语心理学, 话语分析, 谈话分析取向, 后结构主义取向

Exploration on the Evaluation of Contemporary Western Discursive Psychology

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Abstract: Discursive psychology is a new research trend of psychology, that focuses on discourse activity in daily life and attempts to illustrate the construction process of people's psychology (individual psychology and social psychology) in discourse activities through discourse analysis. It emphasizes the situational and constructive nature of psychology (cognitive, roles, status, power, etc.), and believes that psychology is constantly generated and constructed in the process of human and external dialogue, constructed, so that psychology research should focus on the discourse itself with constructive significance. Through the discourse texts in the daily life world, we can find out how the psychological process of individuals and social life practice goes on. So far, discursive psychology shows two research orientation: The approach of conversation analysis is a kind of relative "static" of critical theory perspective, focusing on discourse itself and to explain the mind, focus on the people select representation methods and strategy to achieve a variety of interests and purpose. The research topic includes emotion, health, attitudes etc. embedded in narration and metaphor; The approach of post-structuralism adopts a critical "dynamic" theoretical perspective. It focuses on the social practicality of discourse and explains social psychology with discourse, mainly focusing on the relationship between discourse and power, such as discourse comparison of different identities and positions, potential conflicts in political texts, and category analysis of social members. At present, discursive psychology has presented a development trend of "interdisciplinary, deep integration and diversification". As a rebellion against and reconstruction of mainstream scientist-oriented psychology, discursive psychology can provide many beneficial inspirations to the development of psychology in China.

Keywords: discursive psychology, discourse analysis, discourse analysis approach, post-structuralist approach

心理学与人工智能的关系及现状

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摘 要 人工智能循着心理学的脚步不断发展，特别是认知心理学，它给予了人工智能理论上的支持。可以说心理学研究的是人类的智能，而人工智能研究的是如何模拟人类的智能。就目前人工智能的发展现状来看，人类智能中直觉思维层面和简单重复动作此类较为基础的部分已经被人工智能很好的模拟；人类智能中逻辑思维层面和复杂连续动作等具备一定复杂性的中等部分被人工智能初步模拟但不够完全，不够成熟；人类智能中辩证思维层面和高难度、高精度动作这类具有社会性的高级部分还不能被人工智能模拟。此外人类心理中的意识与自我意识、情绪情感、人格等人类自己还尚未探究清楚的部分，人工智能更无法得之精髓。整体来看，从人类智能已能够被人工智能模拟的部分，到人类智能未完全被人工智能模拟的部分，再到人类智能尚不能被人工智能模拟的部分，这种层次的不断上升体现了人类智能或人类心理从简单到复杂，从基础到高级，从物质性到社会性的不同层次，人类的心理和智能同时具备着这些不同层次的特性，是其高度综合。

关键词 心理学，人类智能，人工智能，智力，技能

Current Situation and Relationship between Psychology and Artificial Intelligence

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Abstract: Artificial intelligence follows the pace of psychology, in particular, cognitive psychology, which gives theoretical support to artificial intelligence. As far as the current development of artificial intelligence is concerned, in human intelligence and skill, such as direct thinking and simple repetitive action have been well simulated by artificial intelligence; The middle level of human intelligence and skill, such as logical thinking and complex continuous action, is initially simulated by artificial intelligence but not completely and maturely; Dialectical thinking, high difficulty and high precision action in human intelligence cannot be simulated by artificial intelligence. In addition, consciousness and self-consciousness, emotion, personality and other parts of human psychology have not yet explored clearly by themselves, artificial intelligence cannot get the essence, too. Overall, from the part that human intelligence can be simulated by artificial intelligence, to the part that human intelligence is not completely simulated by artificial intelligence, further to the part that human intelligence can not be simulated by artificial intelligence, this rising level reflects the different levels of human intelligence or human psychology from simple to complex, from basic to advanced, from material to social. Human psychology and intelligence have these different levels of characteristics at the same time, is its high synthesis.

Keywords: Psychology, Human intelligence, Artificial Intelligence, intelligence, skill

大数据时代下心理学的可重复危机与行为变异性

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摘 要 研究结果的可重复性是科学实验的基本特征，而近年来，心理学正经历着一场可重复危机，不少心理学实验结果无法得到验证。面对质疑，国内外学者大多尝试从统计方法上提高研究质量，但这些建议大部分是基于线性投入-产出方法，并将行为变异性视为不受控制的随机变量的结果。与这种主流观点不同，Arocha（2021）为我们提供一个新的视角，即变异性应当作为个体外显行为的重要特征，而不是一些未知变量随机影响个体产出的结果，同时，采用包含个体行为变异性和复杂性的研究模型来解决可重复危机。虽然在传统心理学研究中，有限样本规模限制了复杂模型的构建，但大数据的出现也许可以为这一观点提供有力的支撑。

大数据除了在技术上让行为变异性纳入模型成为可能,更重要的是其可以在研究逻辑和研究方法上对心理学产生深刻影响——其强调“非精确性”与“精确性”辩证统一的思想,极大地丰富了心理学在群体与个体关系、总体数据与具体个体行为关系上的思考;其强调的“概率推理”和“相关性”分析,其关于不确定信息推理的逻辑,为心理学的因果思维机制起到完善和补充的作用。总之,大数据的出现让心理学研究个体行为的变异性 and 复杂性、解决可重复危机提供了新的思路,而这也将更加强调心理学为一门研究复杂现象的学科。

关键词 大数据,心理学,可重复危机,行为变异性

Replication crisis and behavioral variability of psychology in the era of big data

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Abstract: The repeatability of research results is the basic feature of scientific experiments. In recent years, psychology is experiencing a replication crisis, and many psychological experimental results can not be verified. In the face of doubt, most scholars at home and abroad try to improve the research quality from statistical methods, but most of these suggestions are based on linear input-output methods, and regard behavior variability as the result of uncontrolled random variables. Different from this mainstream view, Arocha (2021) provides us with a new perspective, that is, variability should be an important feature of individual explicit behavior, rather than the result that some unknown variables randomly affect individual output. At the same time, a research model including individual behavior variability and complexity is used to solve the repeatable crisis. Although in traditional psychological research, the limited sample size limits the construction of complex models, the emergence of big data may provide strong support for this view. In addition to making it possible to incorporate behavioral variability into the model technically, big data can have a profound impact on psychology in research logic and research methods - its idea of emphasizing the dialectical unity of "imprecision" and "accuracy" has greatly enriched psychological thinking on the relationship between groups and individuals, and the relationship between overall data and specific individual behavior; Its emphasis on "probability reasoning" and "correlation" analysis, and its logic on uncertain information reasoning play a perfect and supplementary role in the causal thinking mechanism of psychology. In short, the emergence of big data provides new ideas for psychology to study the variability and complexity of individual behavior and solve repeatable crises, which will also put more emphasis on psychology as a discipline to study complex phenomena.

Keywords: big data, psychology, replication crisis, behavioral variability

心理健康观的演进趋势及启示

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摘要 从单维到多维(从某个维度界定心理健康,到多维度的整合心理健康体系),从事实到价值(从关注人的心理事实到注重人的价值、生命意义等),从个体到社会(从关注个体心理健康到关注社会心理健康),从二歧到整合(从静态、孤立、片面地看待心理健康到以整合地视野看待心理健康),是西方心理学百余年来心理健康观演进的基本轨迹。“完全心理健康模型”、“幸福的正向/反向辩证法”代表着当代心理学心理健康观建构的最新进展。西方心理健康观演进趋势的重要启示在于:任何心理机能的特征(品质),其对于心理健康的意义都是双面的,心理健康的问题不仅是一个“实然”(事实)问题,而且也是一个“应然”(价值)问题。中国特色心理健康学术体系、学科体系、话语体系的构建,需以辩证唯物主义的立场去看待心理健康与心理疾病的关系;以马克思主义关于人的自由全面发展学说作为自己的理论基石;以习近平新时代中国特色社会主义思想,特别是社会主义核心价值观作为自己的精神内核。在这样的情况下,心理健康的评估指标体系,

将是一种多维度、多层次且内在有机统一的完整系统；各项心理机能的特征（品质）对于心理健康的意义，都是双重且有主次之分的。以社会主义的核心价值培育个体的健全人格与良好的社会心态，则是中国心理健康学科发展的根本目标与努力方向。

关键词 心理健康观，完全心理健康模型，幸福的正向/反向辩证法，中国特色

The evolution trend and Enlightenment of mental health view

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Abstract: From single dimension to multi-dimension (defining mental health from a certain dimension to multi-dimensional and integrated mental health system), from fact to value (from paying attention to people's psychological facts to focusing on people's value and meaning of life, etc.), from individual to society (from paying attention to individual mental health to paying attention to social mental health), from dichotomy to integration (from a static, isolated and unilaterally view of mental health to an integrated view of mental health), which is the basic track of the evolution of the concept of mental health in western psychology for more than 100 years. "Complete mental health model" and "positive / negative dialectics of happiness" represent the latest progress in the construction of mental health view in contemporary psychology. The important enlightenment of the evolution trend of Western mental health view is that the characteristics (qualities) of any psychological function have two-sided significance for mental health, and the problem of mental health is not only a matter of fact, but also a matter of value. The construction of academic system, discipline system and discourse system of mental health with Chinese characteristics needs to treat the relationship between mental health and mental illness with the standpoint of dialectical materialism; Take the Marxist theory of human's free and all-round development as its theoretical cornerstone; Xi Jinping's Thought on Socialism with Chinese characteristics for a New Era, especially using the socialist core values as the spiritual core. In this case, the evaluation index system of mental health will be a multi-dimensional, multi-level and integrated system; The significance of the characteristics (qualities) of various psychological functions for mental health is dual and has primary and secondary points. It is the fundamental goal and direction of the development of China's mental health discipline to adopt the core value of socialism to cultivate individual sound personality and good social mentality.

Keywords: mental health view, complete mental health model, positive / negative dialectics of happiness, Chinese characteristics

积极心理学的新动向——“幸福辩证法”评析

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摘要 “幸福辩证法”是 Paul Wong 等人为克服积极心理学 1.0 之弊而提出的一种幸福研究的方法论主张。针对积极心理学 1.0 以非此即彼的思维方式区分“积极”与“消极”、片面强调“积极”心理品质对幸福（或心理健康）的价值所导致的“积极和消极的再失衡”、“积极暴政”等诸多问题，“幸福辩证法”主张，心理学应以辩证法来看待幸福的本质与各种心理品质对于幸福的价值。即：幸福的本质是辩证的，各种心理品质对于幸福的价值也是相对的、变化着的。心理品质“积极”与“消极”性质的判定，遵循着一个“正题（“积极心理—积极效应”）—反题（“积极—消极悖反”）—合题（“超越并保留两个原始对立的真理，创造一种更高的统一性”）”的发展过程。幸福的辩证本质则由三个不同的原则展现出来：①评估原则，即难以确定特定现象是积极的还是消极的，因为这种判断不可避免地取决于背景环境。②共价原则，很难将特定的现象描述为正面的还是负面的，因为许多情绪状态都是“共价的”。③互补原则，幸福本身可以被看作是“生活的积极方面和消极方面之间必然的辩证关系”。显然，作为积极心理学 2.0 的重要成就，幸福辩证法一定程度上消除了传统消极心理学与积极心理

学 1.0 之弊，对于我们更为全面准确的评定心理品质的“积极”与“消极”性质，更为合理深入的理解幸福的本质与增进途径，亦能提供有益的启迪、借鉴。

关键词 积极心理学 1.0，积极心理学 2.0，积极与消极，幸福辩证法

An Analysis of Dialectics of Wellbeing —A New Trend of Positive Psychology

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Abstract: "Dialectics of wellbeing" is a methodology of wellbeing research proposed by Paul Wong and others to overcome the disadvantages of Positive Psychology 1.0. In view of the many problems in positive psychology 1.0, which distinguish "positive" from "negative" in either-or way of thinking, and "positive and negative rebalancing" and "positive tyranny" caused by one-sided emphasis on the value of "positive" psychological quality to wellbeing (or mental health), the "dialectics of wellbeing" advocates that, Psychology should treat the essence of wellbeing and the value of various psychological qualities to wellbeing by dialectics. That is: the essence of wellbeing is dialectical, and the value of various psychological qualities to wellbeing is also relative and changing. The determination of the "positive" and "negative" qualities of psychological quality follows a development process of "thesis (" positive psychology -- positive effect") -- antithesis (" positive -- negative contradiction ") -- synthesis (" to transcend and retain the two original opposite truths and create a higher unity "). The dialectical nature of wellbeing is revealed by three different principles:①principle of appraisal:it can be difficult to categorize particular phenomena as positive or negative, as such appraisals are fundamentally contextually-dependent. In principle of appraisal, Eastern and Western cultures show distinct differences. ② principle of co-valence: not only is it difficult to characterize particular phenomena as either positive or negative, many emotional states are co-valenced. ③ principle of complementarity: wellbeing itself can be seen as involving an “inevitable dialectics between positive and negative aspects of living”. Obviously, as an important achievement of positive psychology to 2.0, which eliminated traditional dialectics of happiness a certain degree of negative psychology and positive psychology 1.0 disadvantage, for our more comprehensive and accurate evaluation of the psychological quality of "positive" and "negative" character, more reasonable thorough understanding of the nature of happiness and way to improve, also can provide beneficial enlightenment and reference.

Keywords: Positive Psychology 1.0, Positive Psychology 2.0, Positive and Negative, Dialectics of Wellbeing

5.4“普通心理和实验心理专业委员会”分组展贴报告

道德概念洁净隐喻的干预

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摘 要 道德概念洁净隐喻强调，洁净的始源域概念与道德抽象的目标域概念相联结，数千年前便存在“洁净近乎美德”的思想。研究表明，道德概念洁净隐喻具有心理现实性，且对被试的道德行为具有一致性或补偿性效应；道德概念隐喻联结强度影响个体随后的道德行为，且个体认知程度越高其隐喻联结强度越强；洁净指向环境或是自身其影响效果存在差异；评价性条件反射可加强或减弱刺激间的联结。因此，本研究尝试采用评价性条件反射法对洁净与道德的联结进行干预，探究道德概念洁净隐喻干预的有效性以及对随后的道德行为是否存在迁移效应，以及环境与自身洁净的影响差异。研究结果表明：(1) 评价性条件反射法可有效干预道德概念环境洁净隐喻，即实验组后测中环境洁净句子与道德词汇联结时的反应显著快于前测，控制组前后测差异不显著，干预后两组被试亲社会倾向得分差异不显著；(2) 评价性条件反射法可有效干预道德概念自身洁净

隐喻,即实验组后测中自身洁净句子与道德词汇联结时的反应显著快于前测,控制组前后测差异不显著,且干预后实验组被试亲社会倾向得分显著高于控制组。以上研究表明,评价性条件反射可以有效干预道德概念洁净隐喻,且自身洁净干预对被试的亲社会行为有迁移作用。该研究丰富了道德概念隐喻及其干预研究,使得道德教育更具可操作性,也为道德教育干预提供了实证基础。

关键词 概念隐喻, 洁净, 道德, 评价性条件反射, 干预

The Intervention of the Clean Metaphor of the Moral Concepts

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Abstract: The clean metaphor of the moral concepts emphasizes the connection between the concept of source domain and objective domain, such as cleanliness and morality. The idea that cleanliness is close to virtue has existed for thousands of years. Studies have shown that the clean metaphor of the moral concepts has psychological reality, and has a consistent or compensatory effect on the moral behavior of the subjects. The strength of metaphorical association of moral concepts influences individuals' moral behavior, and the strength of metaphorical association is stronger when individuals cognitive level were higher. There are differences in the effect of cleanliness on the environment or individual. What's more, evaluative conditioning can strengthen or weaken the bond between stimuli. Therefore, This study attempts to use evaluative conditioning to intervene the association between cleanliness and morality. To explore the effectiveness of moral concept cleansing metaphor intervention and whether there is a transfer effect on subsequent moral behavior, and the differences in the impact of environmental and self-cleanliness. The results show that: (1) The evaluative conditioning method can effectively interfere with the moral concept of environmental cleansing metaphor. In the experimental group, the response to the association between environmental clean sentences and moral words was significantly faster than that in the pretest, while the control group was no significant difference. The scores of prosocial tendency were not significantly different; (2) The evaluative conditioning method can effectively intervene the self-cleansing metaphor of moral concepts. In the experimental group, the response to self-cleansing sentences associated with moral words was significantly faster than in the pretest, while the control group was no significant difference. The scores of prosocial tendency in the experimental group were significantly higher than the control group. The above studies show that evaluative conditioning can effectively interfere with the clean metaphor of the moral concepts, and self-cleansing intervention had a migratory effect on prosocial behavior of the subjects. and provides an empirical basis for educational intervention. This study enriches the conceptual metaphor theory and its intervention research, which makes moral education more operable, and provides an empirical basis for educational intervention.

Keywords: conceptual metaphor, morality, cleanliness, evaluative conditioning, intervention

听觉工作记忆内容对视觉持续性注意影响

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摘要 以往研究表明,当听觉工作记忆内容与视觉搜索任务中的刺激匹配时会产生注意捕获效应。听觉工作记忆内容能否促进动态情景中的视觉持续性注意,目前尚不清楚。本研究将听觉言语工作记忆任务与多身份追踪任务相结合,通过两个实验考察视听两任务的信息匹配程度对视觉持续性注意的影响。实验一考察两者整体匹配条件下的影响,采用2(声音出现阶段:线索阶段、追踪阶段)×3(声音类型:目标字母、干扰字母、无关字母)的被试内设计。多身份追踪任务中呈现8个带字母的随机运动客体,其中4个为目标,同时在线索或追踪阶段以听觉方式呈现4个目标字母、4个干扰字母或4个无关字母,被试执行视觉追踪和听觉记忆的双任务。结果发现,对于视觉追踪任务,当声音为目标字母时,多身份追踪的位置正确率($F(2,44) = 6.483, p = .003, \eta_p^2 = .228$)和身份记忆正确率($F(2,44) = 10.339, p < .001, \eta_p^2 = .320$)显著高于声音为干扰字母的条

件, 但身份-位置绑定正确率无显著差异; 对于听觉工作记忆任务, 声音为目标字母的正确率显著高于干扰和无关字母($F(2,44) = 108.843, p < .001, \eta_p^2 = .832$)。实验二将听觉工作记忆内容由整体匹配改为部分匹配, 采用 2 (声音出现阶段: 线索阶段、追踪阶段) $\times$ 3 (声音类型: 目标+干扰、目标+无关、干扰+无关) 的被试内设计, 听觉方式呈现的 4 个字母包括两种不同类型的字母各 2 个。结果发现视觉追踪任务不同条件无显著差异, 听觉工作记忆任务中声音出现在线索阶段的正确率显著低于追踪阶段($F(1,21) = 9.945, p = .005, \eta_p^2 = .321$), 声音为目标+干扰字母时正确率显著低于其他条件($F(2,42) = 3.808, p = .03, \eta_p^2 = .153$)。研究结果表明, 视觉与听觉任务身份信息匹配程度对多身份追踪的影响不同, 在视觉与听觉任务身份信息整体匹配的条件下, 能促进听觉任务表现以及视觉位置和身份信息的加工, 而视觉身份-位置的绑定可能是额外的独立加工过程; 视觉与听觉任务身份信息部分匹配的情况下不存在促进效应, 而且损害了听觉任务的表现, 说明部分信息匹配不能有效促进任务表现, 反而需消耗更多认知资源。

关键词 多身份追踪, 听觉工作记忆, 视觉注意, 持续性注意

The effect of auditory working memory content on visual sustained attention

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Abstract: Previous research has shown that the attention capture effect occurs when auditory working memory content is matched to stimuli in the visual search task. Whether the content of auditory working memory can promote visual sustained attention in dynamic situations is currently unclear. The present study combined the auditory verbal working memory task with the multiple identity tracking task in two experiments to examine the effects of the degree of information matching between the two tasks on visual sustained attention. Experiment 1 examined the influence of the overall matching conditions between the two tasks, using the 2 (sound appearance stage: cueing stage, tracking stage) $\times$ 3 (sound type: target letter, interference letter, irrelevant letter) design within the subject. In the multiple identity tracking task, 8 random motion objects with letters were presented, 4 of which were targets. At the same time, 4 target letters, 4 interfering letters, or 4 extraneous letters were presented in an auditory manner during the cueing or tracking stage. Participants performed dual tasks of visual tracking and auditory memory. It was found that, for visual tracking tasks, when the sound was the target letters, the position accuracy rate of multiple identity tracking ($F(2,44) = 6.483, p = .003, \eta_p^2 = .228$) and the accuracy rate of identity memory ($F(2,44) = 10.339, p < .001, \eta_p^2 = .320$) were significantly higher than in the condition that the sound was the interference letters, but there was no significant difference in the accuracy of the identity-position binding; for the auditory working memory task, when the sound was the target letters, the accuracy was significantly higher than that of the interference and irrelevant letters ($F(2,44) = 108.843, p < .001, \eta_p^2 = .832$). In Experiment 2, we changed the content of auditory working memory from overall matching to partial matching, using the 2 (sound appearance stage: cueing stage, tracking stage) $\times$ 3 (sound type: target + interference, target + irrelevant, interference + irrelevant) design, and the 4 letters presented aurally included 2 each of two different types of letters. It was found that there were no significant differences in the different conditions of the visual tracking task. The accuracy of the sound in the cueing stage of the auditory working memory task was significantly lower than that of the tracking stage ($F(1,21) = 9.945, p = .005, \eta_p^2 = .321$). When the sound was the target and interference letters, the accuracy was significantly lower than that of the other conditions ($F(2,42) = 3.808, p = .03, \eta_p^2 = .153$). The results showed that the degree of matching of visual and auditory task identity information had different effects on multiple identity tracking. In the condition of overall matching of visual and auditory task identity information, it promoted auditory task performance and processing of visual location and identity information, while visual identity-location binding might be an additional independent process; in the condition of partial matching of visual and auditory task identity information, there was no promotion effect, and the performance of the auditory task was impaired, indicating that partial information matching was not effective in

promoting task performance, but required more cognitive resources.

Keywords: multiple identity tracking, auditory working memory, visual attention, sustained attention

威胁刺激条件下个体的工作记忆表征策略：工作记忆表征精度和容量的研究

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摘要 工作记忆是一种对信息进行暂时加工和贮存的记忆系统。对威胁刺激的注意或回避都有利于个体的生存。因此, 在有威胁刺激的情境中, 个体的工作记忆表征模式以何种加工策略进行运作, 还有待进一步探讨。以往的研究显示, 个体会优先加工威胁刺激相关信息, 增强工作记忆表征; 相反, 一些研究发现威胁刺激会使个体分心, 损害工作记忆表现。本研究在前人研究的基础上, 用两个实验来探讨不同记忆负荷下, 威胁刺激影响工作记忆目标信息保持的认知神经机制。实验一: 招募 44 名被试, 采用电刺激联结训练, 使被试将特定刺激色块与电刺激联结, 然后进行颜色延迟估计任务, 并用状态焦虑量表(SAI)、正负性情绪量表(PANAS)测试被试的情绪反应, 探讨不同记忆负荷条件下, 威胁刺激对个体工作记忆表征精度与容量的影响。采用 3 (记忆负荷: 2, 4, 6) × 3 (刺激呈现条件: 无威胁刺激, 两个威胁刺激(目标, 非目标), 一个威胁刺激(目标)) 的实验设计。结果发现: (1) 状态焦虑量表、负性情绪量表得分的时间点主效应显著; (2) 工作记忆负荷在工作记忆表征容量上主效应显著; (3) 刺激呈现条件类型在工作记忆表征精度上主效应不显著。实验二: 招募 43 名被试, 在实验一的基础上, 采用生理多导仪采集被试生理信号, 观察被试在不同威胁刺激条件下皮肤电与心电的生理反应, 进一步探讨个体对不同条件下威胁刺激的工作记忆表征精度和容量的不同策略。采用 3 (记忆负荷: 2, 4, 6) × 3 (刺激呈现条件: 无威胁刺激, 一个威胁刺激(非目标), 两个威胁刺激(非目标)) 的实验设计。结果发现: (4) 心电和皮肤电反应在时间点和刺激呈现类型上均无显著差异; (5) 刺激呈现条件类型在工作记忆表征精度上主效应显著; (6) 工作记忆负荷在工作记忆表征容量上主效应显著。本研究结果表明, 个体对威胁刺激采用全或无的加工方式, 且当威胁刺激作为非目标时, 个体会采用抑制策略以提升目标刺激的工作记忆表征精度。

关键词 工作记忆, 威胁刺激, 工作记忆精度, 工作记忆容量

Strategies for working memory representation of individuals under threat stimuli: A Study of working memory representation accuracy and capacity

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Abstract: Working memory is a memory system that processes and stores information temporarily. Attention to or avoidance of threatening stimuli is beneficial to the survival of individuals. Therefore, it remains to be further explored what processing strategies the individual's working memory representation mode USES in the context of threatening stimuli. Previous studies have shown that individuals preferentially process information related to threat stimuli and enhance working memory representation. Instead, some studies have found that threatening stimuli can distract individuals and impair working memory performance. In this study, based on previous studies, two experiments were conducted to explore the cognitive neural mechanism of threatening stimuli affecting the retention of target information in working memory under different memory loads. Experiment one: recruiting 44 subjects, connected by electrical stimulation training, the participants will be specific to stimulate piece connected to electrical stimulation, then color delay estimation tasks, and state anxiety scale (SAI), the positive and negative emotion scale

(PANAS) test subjects of emotional response, to explore different memory load conditions, threat stimulus for individuals to characterize the effect of the precision and capacity of working memory.³ (memory load: 2,4,6) ×3 (stimulus presentation condition: no threat stimulus, two threat stimuli (target, non-target), and one threat stimulus (target)) were used in the experimental design. The results showed that : (1) the time point main effect of the scores of state anxiety scale and negative emotion scale was significant; (2) Working memory load has a significant main effect on the capacity of working memory representation; (3) The main effect of stimulus presentation condition type on working memory representation accuracy is not significant. Experiment 2: 43 subjects were recruited. On the basis of experiment 1, physiological signals of the subjects were collected by using a physiological multiconductometer to observe the physiological responses of the subjects to skin and ecg under different threat stimuli conditions, so as to further explore the different strategies of individual's working memory representation accuracy and capacity under different threat stimuli conditions.³ (memory load: 2,4,6) ×3 (stimulus presentation condition: no threat stimulus, one threat stimulus (non-target), two threat stimuli (non-target)) was used in the experimental design. The results showed that : (4) there was no significant difference between electrocardiogram and electrodermal response in time point and type of stimulation; (5) The stimulus presentation condition type has a significant main effect on the working memory representation accuracy; (6) Working memory load has a significant main effect on the capacity of working memory representation. The results of this study showed that individuals processed the threat stimulus in an all-or-nothing way, and when the threat stimulus was not a target, individuals adopted inhibition strategies to improve the working memory representation accuracy of the target stimulus.

Keywords: working memory, threatening stimulus, working memory accuracy, working memory capacity

受害者对冒犯者共情还是反共情？宽恕的中介作用

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摘要 共情是指个体能感知和理解他人的处境，能对他人的处境产生相似的情绪反应。而反共情是指个体对他人的负性情绪产生正性体验，而对他人的正性情绪产生负性体验，即个体产生与共情对象不一致的情绪反应。共情可以促进个体的亲社会行为，而反共情不仅会阻碍亲社会行为的发生，甚至会诱发个体的攻击行为。以往研究表明了共情与宽恕之间存在正相关，而较少考虑到人际冒犯发生后宽恕对受害者的共情，尤其是反共情的影响。本研究探讨了不同强度的人际冒犯会怎样影响受害者对冒犯者的共情，是导致受害者对冒犯者共情的减少还是反共情的增加，并同时考察了宽恕在其中的中介作用。本研究以 40 名大学生为被试（ $M_{age} = 24.05$ 岁， $SD = 2.03$ ；女性 23 名），采用 3（冒犯强度：无，低，高）×2（事件效价：积极，消极）的被试内实验设计。被试首先在没有受到共情对象冒犯时，自我报告对共情对象经历积极和消极事件时产生的情绪体验。然后被试需要将自己代入到不同强度的冒犯情景中，在这些情景中被试作为受害者受到了来自共情对象的冒犯，随后被试报告感知到冒犯的强度和对共情对象的宽恕意愿，并再次报告对共情对象经历积极和消极事件时产生的情绪体验。结果显示：（1）在无冒犯时，被试对共情对象产生了共情，一旦受到共情对象的冒犯，被试原本对共情对象的共情变为反共情，并且反共情程度随着冒犯强度的增加而增大；（2）宽恕在个体感知到的冒犯强度和反共情之间起到中介作用。本研究结果为普遍的人际交往中反共情的存在提供了证据，表明人际冒犯会增加受害者对冒犯者的反共情，并进一步强调了人际冒犯后提高受害者对冒犯者宽恕的重要性。

关键词 反共情；共情，宽恕，冒犯

Is the Victim Empathic or Counter-Empathic Towards the Offender?

The Mediating Role of Forgiveness

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Abstract: Empathy is defined as the ability of people to perceive and understand the situation of others, and to produce similar emotional responses to the others' situation. Counter-empathy refers to people have positive experience for others' negative emotions and negative experience for others' positive emotions, that is, people have inconsistent emotional responses with the empathic objects. Empathy can promote people's prosocial behavior, while counter-empathy can not only inhibit prosocial behavior, but also have the possibility to engage in aggressive behaviors. Previous studies have shown that there is a positive correlation between empathy and forgiveness, but have rarely considered that after interpersonal transgression, the effect of forgiveness on empathy, especially counter-empathy. In our study, we investigated how different levels of interpersonal transgression affect the victim's empathy for the offender, whether it leads to a decrease in the victim's empathy for the offender or an increase in counter-empathy for the offender, and also examined the mediating role of forgiveness. Forty college students ($M_{age} = 24.05$, $SD = 2.03$; 23 female) were selected as the subject to participate in this study. The design of the study is 3 (transgression intensity: no, low, high) $\times$ 2 (event valence: positive, negative) within-subject design. At first, participants reported their emotional experience about the empathic object when they experienced positive and negative events without transgression. Then the participants need to plug themselves into different offensive scenarios where the participants were the victim who was offended by the empathic object. After that, the participants reported the extent to which they were offended and their willingness to forgive the offender. Finally, they reported again their emotional experience about the empathic object when they experienced positive and negative events after transgression. The results showed (1) that the participants showed empathy towards the empathic object without transgression. Once the participants were offender by the empathic object, their original empathy towards the empathic object changed to counter-empathy. The degree of counter-empathy increased with the intensity of the transgression; (2) that forgiveness played a mediating role between the intensity of perceived transgression and counter-empathy. The findings of our study provide evidence for the existence of counter-empathy in general interpersonal interaction, suggesting that interpersonal transgression can increase the victim's counter-empathy. In addition, this study further emphasizes the importance of improving the victim's forgiveness for the offender after transgression.

Keywords: Counter-empathy, Empathy, Forgiveness, Transgression

拥挤效应导致视觉特征合成的空间各向异性

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摘要 当某一物体邻近位置存在其他物体时, 我们往往难以将其分辨出来, 这种发生在外周视野的妨害视觉辨认能力的现象, 被称为视觉拥挤效应 (visual crowding)。拥挤情境下, 多客体刺激的朝向辨别任务的结果能够反映拥挤效应对多个客体朝向信息整合所造成的影响, 但整合的具体机制尚不清楚。有研究者认为信息整合采用“平均化(averaging)”策略, 也有研究者提出整合采用“带符号的最大化(signed-max)”策略。同时, 拥挤效应的显著特征之一是空间上存在径切向各向异性。为了探究拥挤效应的信息整合机制及其空间各向异性特征对视知觉的影响, 我们使用朝向匹配任务范式测量被试对目标朝向的辨别阈限和对倾斜角的知觉分布, 并比较其在径向和切向布局方式下的差异。结果显示, 切向布局的辨别阈限小于径向布局; 在阈下试次中, 径向布局的知觉分布曲线呈双峰分布, 但切向布局的呈单峰分布。我们认为拥挤效应的各向异性影响了朝向

辨别任务中不同相对方向的客体之间的特征混合方法，并表现在辨别阈限和知觉分布在不同布局方式下的差异。刺激材料中径向相对位置的客体之间会发生“平均化”效应，而切向相对的客体之间更多通过“带符号的最大化”整合，这与拥挤效应关键距离的径切向各向异性相一致。本研究的发现支持拥挤情境下视觉信息加工可能采用“平均化”和“带符号的最大化”的混合策略。

关键词 拥挤效应，空间各向异性，朝向匹配任务，带符号的最大化

Spatial anisotropy of feature integration in visual crowding

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Abstract: When there are other objects in the vicinity of an object, it is often difficult to identify the target. This phenomenon, which hinders the parafoveal visual acuity, is called “visual crowding”. In the context of crowding, subjects’ discrimination performance of multi-item stimulus can reflect the integration strategy of visual signals. However, the integration mechanism is still unclear. Some researchers believe that signal integration adopts the “averaging” strategy, and some others propose the “signed-max” integration strategy. Meanwhile, one of the important characteristics of crowding is the radial-tangential anisotropy. To investigate the information integration mechanism of crowding and the influence of its spatial anisotropy, we measured subjects’ internal response distributions with the signal presented in the radial or the tangential direction. Subjects reported both the direction and the magnitude of the tilt with surrounding flankers in a crowded display. We found that their discrimination threshold is lower for tangential configuration than the radial one. In subthreshold conditions, the perceptual distribution was bimodal for the radial configuration, while unimodal for the tangential configuration. We propose that the anisotropy of crowding influences the integration strategy and consequently leads to differences in the discrimination thresholds and perceptual distributions in different configurations. Radially arranged signals are more susceptible to the “averaging” integration rule, and tangentially arranged signals are more susceptible to the “signed-max” integration rule. Our findings support a hybrid strategy of the “averaging” and the “signed-max” model in visual crowding.

Keywords: crowding effect, spatial anisotropy, orientation matching task, signed-max rule

听觉刺激对持续性视觉追踪任务的影响

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摘要 目的：以往研究显示，当听觉刺激与目标视觉刺激同时呈现时，能增强被试对目标刺激的识别，影响被试在视觉空间搜索任务和目标识别任务中的表现。上述对视听同步性作用的探讨仅局限于静态情境，罕有研究动态情景下听觉刺激对持续性视觉任务的影响，本研究采用多目标追踪任务结合消失范式对此问题进行探究。**方法：**本研究选取 19 名研究参与者，其中男生 3 名，女生 16 名，平均年龄 22±1.8 岁。视觉追踪任务流程如下：12 个客体中的 4 个以闪烁的方式被标记为目标；所有客体独立随机运动 5s，600ms 的消失事件随机发生在运动的第 2-4s 内，消失事件结束后，客体出现在预测点（按照原有状态运动时出现的位置）并继续运动；运动停止后，被试点选目标客体。在追踪过程中可能响起一个 100ms 的声音刺激，其呈现时刻可能为：客体消失前、客体消失时、客体消失阶段、客体出现时、客体出现后；另外，将无声音的条件作为基线条件。所有 6 种条件在实验中随机混合呈现。被试在完成视觉追踪目标点选后，报告声音刺激与视觉刺激的消失和出现的同步性。**结果：**以声音刺激在视觉追踪中的呈现时刻为自变量，以视觉追踪正确率为因变量，通过单因素 6 水平重复测量方差分析显示：1）当声音呈现在客体消失前以及出现后，追踪正确率显著低于无声音时；2）当声音呈现在消失阶段，追踪正确率与无声音时无显著差异，但显著高于消失前、出现时和出现

后; 3) 其他条件间均无显著差异。**结论:** 听觉刺激对视觉任务不同阶段的影响不同: 1) 在视觉刺激持续呈现的阶段, 听觉刺激的出现损害了视觉追踪任务的表现, 说明听觉刺激可能影响了视觉注意或感知觉成分; 2) 在视觉刺激消失的阶段, 听觉刺激并不损害视觉追踪任务表现, 说明听觉刺激并不影响工作记忆中的视觉信息保持; 3) 听觉刺激与视觉刺激消失或出现时同步呈现并不影响视觉追踪表现。

关键词 多目标追踪, 消失范式, 听觉刺激, 视听同步性

The effect of auditory stimuli on continuous visual tracking task

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Abstract: Objective: Previous studies has shown that when auditory stimuli were presented simultaneously with target visual stimuli, the identification of target stimuli and the task performance could be enhanced in visual space search task and target identification task. The above studies on the role of audiovisual synchronization were limited to static situations. The effect was rarely studied when auditory stimuli presented with continuous visual stimuli in dynamic situations. This study explored the question by combining multiple object tracking paradigm and vanishing paradigm. **Methods:** Nineteen students (3 male, $M \pm SD = 22 \pm 1.8$ years) were recruited as participants in this study. The process of the visual tracking task was as follows: 4 of the 12 objects were marked as targets with several flickers; all objects randomly moved for 5s, and the disappearing event of 600ms occurred randomly within the 2-4s of the movement, after the disappearance event, the object appears at the prediction point (the position that objects appeared when moving according to the original state) and continued to move; after the movement stopped, participants selected the target objects. During the tracking process, a 100ms sound stimulus might appear. The presentation time was as follows: before the objects disappeared, at the objects disappearing point, in the disappearing phase, at the objects appearing point, and after the objects appeared; in addition, the condition without sound was taken as the baseline condition. All six conditions were randomly mixed in the experiment. After completing the visual tracking targets selection, the participants reported the synchronization of the sound stimulus and the appearance and disappearance of the visual stimulus. **Results:** The presentation time of the sound stimulus in the visual tracking was the independent variable, and the visual tracking accuracy rate was the dependent variable. The one-factor 6-level repeat measurement variance analysis showed : 1) When the sound was presented before the disappearance and after the appearance of the objects, the correct rates were significantly lower than it when there was no sound; 2) When the sound was in the disappearing phase, the correct rate was not significantly different from it when there was no sound, but significantly higher than it when the sound was before the disappearance, after the appearance and at appearing point; 3) There were no significant difference between the correct rates of other conditions. **Conclusion:** There were different effects of auditory stimuli on different stages of visual tasks: 1) At the stage of continuous presentation of visual stimuli, the appearance of auditory stimuli impaired the performance of visual tracking tasks, indicating that auditory stimuli might affect visual attention or perceptual components; 2) At the stage of visual stimuli disappearing, auditory stimulation did not impair the performance of visual tracking tasks, indicating that auditory stimuli did not affect the retention of visual information in working memory; 3) Visual tracking performance was not affected when auditory stimuli simultaneous presented at the appearing and disappearing points of visual stimuli.

Keywords: multiple object tracking, vanishing paradigm, auditory stimuli, audiovisual synchronization

听觉注意负荷对视听整合的影响

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摘 要 注意可以在视听整合(Audio-visual integration, AVI)的多个阶段调节发挥作用, 但在不同听觉注意负荷条件下, AVI 的变化趋势尚不清楚。本研究采用双任务(Dual tasks)范式, 通过快速系列听觉呈现(Rapid Serial

Auditory Presentation, RSAP)任务控制听觉注意负荷,通过呈现在外周视野的视/听觉辨别任务评价无注意负荷、低注意负荷、中注意负荷以及高注意负荷条件下的 AVI。本研究采用 4(注意负荷:无负荷、低负荷、中负荷、高负荷)×3(刺激类型:听觉刺激、视觉刺激、视听觉刺激)的实验设计。重复测量方差分析结果显示,注意负荷主效应显著 $[F(3, 57) = 28.939, p < 0.0001, \eta_p^2 = 0.604]$,无注意负荷条件下的反应速度(401 ms)显著高于低注意负荷(431 ms)、中注意负荷(565 ms)、高注意负荷(662 ms)条件下的反应速度;刺激类型主效应显著 $[F(2, 38) = 91.017, p < 0.001, \eta_p^2 = 0.827]$,被试对视听觉刺激的反应速度(456 ms)显著高于对视觉刺激(518 ms)和听觉刺激(570 ms)的反应速度。竞争模型(Race model)分析结果显示,低注意负荷条件下的 AVI(18.8%)显著高于无注意负荷(12.4%)、中注意负荷(13.4%)、高注意负荷(7%)条件下的 AVI;在无注意负荷条件下视听觉整合的峰值潜伏期(290 ms)小于低注意负荷(340 ms)、中注意负荷(360 ms)、高注意负荷(380 ms)条件下 AVI 的峰值潜伏期。该结果表明,随着听觉注意负荷的增加,被试的反应速度显著变慢且 AVI 推迟;在适宜注意负荷条件下 AVI 高于无注意负荷下的 AVI,当注意负荷过高时 AVI 反而减弱。

关键词 视听觉整合, 听觉注意负荷, 注意资源, 竞争模型

The effect of auditory attentional load on audio-visual integration

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Abstract: Previous studies confirmed that attention influences audio-visual integration (AVI) in multiple stages, however, how the AVI effect changes with the alteration auditory attentional load is still unclear. To address this question, a dual-task paradigm was performed in the current study, including an AV discrimination task for evaluating the AVI effect and a rapid serial auditory presentation task (RSAP) for manipulating attentional load. The results showed a significant main effect of attentional load $[F(3, 57) = 28.939, p < 0.0001, \eta_p^2 = 0.604]$, showing a faster response in no attentional-load condition (401 ms) than that in low (431 ms), medium (565 ms), and high (662 ms) attentional-load conditions. Besides, there was a main effect of stimulus type $[F(2, 38) = 91.017, p < 0.001, \eta_p^2 = 0.827]$, showing that the response was faster to audio-visual stimulus (456 ms) than that to visual stimulus (518 ms) and auditory stimulus (570 ms). The race model analysis showed that the AVI effect was higher in low attentional-load condition (18.8%) than that in no (12.4%), medium (13.4%), high (7%) attentional-load conditions. Besides, the peak latency was shorter in no attentional-load condition (290 ms) than that in low (340 ms), medium (360 ms), and high attentional-load (380 ms) conditions. These results suggested that the response was slowed down and the AVI was delayed with the addition of attentional load. The AVI effect was higher in adaptive attentional-load condition than no attentional-load condition and exorbitant attentional-load condition.

Keywords: Audio-visual integration, Auditory attentional load, Attentional recourse, Race model

视觉纹理识别中的外周-中央反馈机制

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摘要 人类视觉系统包含复杂的前馈和反馈过程。脑成像研究发现,来自外周视野的输入信息可在表征中央视野的初级视皮层被解码,该结果提示存在自上而下的外周-中央反馈机制。一系列行为和经颅磁刺激研究显示,该反馈机制存在于形状、颜色以及客体类别判断等视觉辨别任务中。自然纹理图像作为外周视野的常见刺激,其加工过程中是否涉及外周-中央反馈,这一机制尚不清晰。本研究采用后掩蔽范式,考察自然纹理加工是否存在外周-中央反馈机制及其时间特性。实验中给被试先后呈现位于外周视野 7° 的目标纹理图像和位于中央视野的噪声图像,通过系统操纵目标刺激与后掩蔽刺激的出现时距 (50/100/150/200/250/300/350 ms),测量被试对目标刺激的辨别能力。结果显示,当后掩蔽刺激呈现在目标刺激的 150 ms 后,被试的辨别敏感性显著下降。实验结果表明外周视野的纹理识别任务中存在中央凹反馈,且反馈到达初级视皮层的时间约为目标出现后 150 ms。

关键词 纹理识别, 反馈, 中央视野, 外周视野

The peripheral-foveal feedback mechanism in visual texture recognition

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Abstract: The human visual system contains complex feedforward and feedback processes. Brain imaging studies have found that input from the peripheral visual field can be decoded in the foveal retinotopic primary visual cortex, suggesting a top-down peripheral-foveal feedback mechanism. A series of behavioral and transcranial magnetic stimulation studies have shown that this feedback mechanism is present in visual tasks such as shape/color discrimination and object categorization. However, as a common stimulus in peripheral vision, whether the processing of naturalistic texture involves peripheral-foveal feedback is unclear. The present study used a backward masking paradigm to examine whether there is a peripheral-foveal feedback mechanism for naturalistic texture processing and its temporal properties. Subjects were presented with a target texture at 7° in the periphery, followed by a central noise mask. We measured subjects' ability to discriminate the target stimulus by systematically manipulating the temporal distance between the onsets of the target stimulus and the backward masking (50/100/150/200/250/300/350 ms). The results showed that the subjects' discrimination sensitivity significantly decreased when the backward masking stimulus was presented 150 ms after the target stimulus. These results suggest that the processing of naturalistic texture involves peripheral-foveal feedback and that the feedback reaches the primary visual cortex approximately 150 ms after the target presentation.

Keywords: texture recognition, feedback, fovea, periphery

生理指标、情绪与睡眠质量间的关系：一项基于可穿戴设备的研究

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摘要 睡眠质量是衡量个体生活质量高低的重要指标, 良好的睡眠质量是个体生理功能和心理功能正确发挥作用的必要条件之一, 而长期的睡眠质量低下则会导致严重的身心健康问题。为探究睡前情绪对夜间睡眠质量的影响以及生理指标 (包括心率、运动加速度) 对情绪及睡眠质量的预测作用, 本研究采用问卷法、经验取样法对 22 名佩戴了汇心联公司可穿戴腕表的被试进行了为期一周的数据收集。结果发现: (1) 将情绪根据效价维度和唤醒维度划分为四种: 正效价、负效价、高唤醒、低唤醒, 其中睡前的高唤醒情绪与当晚的睡眠质量存在显著的负相关; (2) 在测量睡前情绪前 5 分钟内的运动强度能够正向预测高唤醒情绪, 同时低唤醒情绪能够负向预测其后 2 分钟内的运动强度; (3) 不同的情绪维持时间不同, 但都维持在两分钟左右, 正效价、高唤醒情绪的维持时间要短于负效价、低唤醒情绪; (4) 睡前 90 分钟内心率能够负向预测当晚睡眠质量。综上, 本研究的发现有利于揭示睡前情绪对睡眠质量的影响, 以及从客观的角度探究了生理指标与情绪、睡眠质量的关系, 这些发现不仅丰富了可穿戴设备的相关研究, 而且对如今快节奏的社会环境下改善和提高大学生的睡眠质量提出了启示: 在入睡前保持平稳、较低唤醒的情绪有助于提高睡眠质量。

关键词 可穿戴设备, 生理指标, 睡前情绪, 睡眠质量, 经验取样法

Relationship between physiological indicators, emotion and sleep quality: a study based on wearable equipment

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Abstract: Sleep quality is an important index to measure the quality of individual life. Good sleep quality is one of the necessary conditions for the correct functioning of individual physiological and psychological functions. Having low sleep quality for long term may lead to serious physical and mental health problems. In order to explore the influence of emotion (including daily emotion and pre sleep emotion) on night sleep quality and the predictive effect of physiological indicators (including heart rate and motion) on emotion and sleep quality, we call up 22 participants wearing huixinlian's wearable wristwatches and use questionnaires and empirical sampling measures, the whole research last for one week. It found that: (1) According to the valence dimension and arousal dimension, emotions are divided into four categories: positive valence, negative valence, high arousal and low arousal. And there was a significant negative correlation between high wake-up emotion before bed and sleep quality; (2) The motion within 5 minutes before tested can positively predict the high arousal pre sleep emotion, while the low arousal emotion can negatively predict the motion within 2 minutes; (3) The maintenance time of different emotions is different, but they are all maintained at about two minutes. The maintenance time of positive titer and high arousal emotion is shorter than that of negative titer and low arousal emotion; (4) The 90 minutes' average heart rate before going to bed can negatively predict the sleep quality that night. In conclusion, the findings of this study help to reveal the impact of pre sleep emotion on sleep quality, and explore the relationship between physiological indicators, emotion and sleep quality from an objective perspective. These findings not only enrich the relevant research about wearable equipment, but also provide enlightenment for improving and improving college students' sleep quality in today's fast-paced social environment: keep stable before going to sleep Lower arousal helps improve sleep quality.

Keywords: wearable equipment, physiological indicators, pre-sleep emotion, sleep quality, empirical sampling method

注意降低视觉拥挤：内外源注意线索的不同效应

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摘要 视觉拥挤效应是指在外周视野共同呈现目标和干扰刺激时，个体对目标刺激的识别率会显著低于单独呈现条件下的识别率。外周空间的低注意分辨率被认为是导致拥挤效应产生的内在机制之一（He, Cavanaugh, & Intriligator, 1996; Intriligator & Cavanaugh, 2001）。研究表明，在刺激出现前呈现一个有效线索将被试的注意引向目标所在的位置时可以显著地降低拥挤效应（Freeman & Pelli, 2007; Scolari et al., 2007; Yeshurun & Rashal, 2010），这可能是由于线索的呈现增强了对目标的注意分辨率（Scolari et al., 2007）。然而，以往研究均采用外源性注意线索作为提示线索，而缺少对内源性注意线索的研究。研究者们通常认为这两种注意存在不同的加工机制（Klein, 2000）。内源性注意是一种缓慢并持续时间长的过程，而外源性注意是一种发生迅速并且持续时间短暂的过程。本研究考察了两种注意线索对于视觉拥挤的影响的异同。研究综合了 Posner 线索范式和视觉拥挤范式，以正立或倒立的英文字母 T 作为目标，以字母 H 和 I 作为旁侧干扰，被试需要判断字母 T 是正立的还是倒置的。结果发现：（1）两种注意线索均可以显著地降低视觉拥挤的影响，与内源性注意

线索相比, 外源性注意线索能更大程度地降低视觉拥挤的影响; (2) 外源性注意线索在最短 SOA 时已经起到缓解视觉拥挤的作用, 并且其效应随着 SOA 的增加而增大, 并在 400ms 时趋于平缓; 而内源性注意线索在短 SOA 时具有阻碍作用, 直到 SOA 为 275ms 时正确率超过无线索条件, 并且随着 SOA 的变长正确率持续升高。本研究表明两种注意线索都能够有效降低视觉拥挤的影响, 但外源注意的效果更好并且所需要 SOA 更短。
关键词 视觉拥挤, 内源性注意, 外源性注意, 线索提示

Attention relieves crowding: Different effects of endogenous and exogenous attention cueing

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Abstract: Visual crowding effect refers to the phenomenon that the recognition rate of target identification is significantly lower than individually presented when the target and interference stimuli are presented both in the peripheral visual field. The low attentional resolution in the peripheral visual field is considered to be one of the underlying mechanisms of crowding (He, Cavanaugh, & Intriligator, 1996; Intriligator & Cavanaugh, 2001). Studies have shown that the crowding effect can be reduced when attention is directed to the target by an effective cue before the presentation of stimulus (Freeman & Pelli, 2007; Scolari et al. 2007; Yeshurun & Rashal, 2010). This could be a result of the enhancement of attentional resolution to the target due to the presence of the effective cue (Scolari et al., 2007). However, most previous studies only used exogenous attention as a cue, and no research till now have explored the role of endogenous attentional cues in visual crowding. Research has shown that these two kinds of attention involve different processing mechanisms (Klein, 2000). Endogenous attention is a slow and long lasting process, while exogenous attention is a rapid and short lasting process. This study examined the role of endogenous and exogenous cues on visual crowding. We combined Posner cueing task and visual crowding task and employed letter “T” as target and “H” “I” as flankers. Participants were asked to determine whether the target letter was upright or inverted. The results showed: (1) Two kinds of attention cues significantly reduced the effect of visual crowding, and compared with endogenous attentional cues, exogenous attention cues can reduced the effect of visual crowding to a greater extent; (2) Exogenous attentional cues started to relieve visual crowding at the shortest SOA, and the relieving effect increased with SOA and reached a plateau at 400ms. However, endogenous attentional cues harmed participants’ performance at short SOAs. Until the presented SOA is 275ms that the accuracy of endogenous attentional cues was higher than the no cue condition, and the accuracy continued to increased follow with longer SOAs. Taken together, this study confirmed that both attention cues can significantly relieve visual crowding but that exogenous attention is more effective and requires a shorter SOA in relieving visual crowding relative to endogenous attention.

Keyword: visual crowding, endogenous attention, exogenous attention, cues

汉语的听觉阈下启动效应研究

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摘要 阈下启动效应是指阈下呈现的启动刺激对随后出现的与之相同或有语义关系的目标刺激在认知加工上的促进作用。听觉阈下启动是研究听觉通道下语言自动加工的重要工具。虽然已经有一些研究考察了印欧语系词语的听觉阈下启动, 但还没有研究考察属于汉藏语系的汉语词语是否存在听觉阈下启动效应。因此, 本研究以汉语双字词为刺激材料, 使用听觉掩蔽启动范式, 考察汉语词语的听觉阈下启动效应。本研究共包括两个实验。实验一采用 3 (启动刺激时间压缩率: 40%, 50%, 60%) × 2 (启动-目标相关性: 启动、非启动) × 6 (启动类型: 真词: 重复启动、词素启动、语音启动、语义启动; 假词: 重复启动、首字启动) × 2

（目标词词频：高频、低频）的混合实验设计，考察汉语听觉阈下启动效应的加工水平。考察汉语词语是否存在听觉阈下启动效应。结果显示，当压缩率为 40% 时启动刺激处于阈下水平只有真词的阈下重复启动和词素启动效应显著，并且假词不存在显著的阈下启动效应。实验二采用 2（启动-目标刺激发音者性别一致性：一致、不一致）× 2（启动-目标相关性：启动、非启动）× 2（真假词：真词、假词）的三因素被试内实验设计进一步考察汉语词语的阈下重复启动效应是否是基于启动词和目标词声音的表面知觉特征的相似性。结果发现，无论启动与目标的发音者性别是否一致，均可以观察到同样显著的听觉阈下重复启动效应。本研究结果说明汉语词语存在显著的听觉阈下重复启动效应，且该效应是基于对听觉词语的抽象言语信息的无意识加工。

关键词 阈下启动效应，听觉掩蔽启动范式，无意识加工

Subliminal Speech Priming Effect of Mandarin Chinese

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Abstract: The subliminal priming effect refers to the prime stimuli which was presented subliminally could promote the cognitive processing of the subsequent target stimuli which shared the same or related semantic information with the prime. Subliminal speech priming has become an important tool for studying the automatic stages of language processing. Although a few studies have tried to explore the subliminal speech priming effect of words from Indo-European languages, it is still unclear whether subliminal priming effects exist in words from mandarin Chinese which belongs to Sino-Tibetan languages. The present study used auditory masked priming paradigm and Chinese two-character words to examine the subliminal speech priming of mandarin Chinese. The Experiment 1 was conducted with a 3 (time compression of the prime: 40%, 50% or 60%) × 2 (relation: related vs. unrelated) × 6 (prime condition: word: repetition, morpheme, phonological and semantic; nonword: repetition and first-character) × 2 (word frequency: high vs. low) mixed design to examine subliminal speech priming of mandarin Chinese. The results show that subliminal repetition priming and morpheme priming are significant when the compression rate is 40%, at which compression rate the prime is subliminal. There was no significant subliminal speech priming for nonword. The Experiment 2 was conducted with a 2 (voice change: same vs. different) × 2 (relation: related vs. unrelated) × 2 (word type: word vs. nonword) within-subject design to examine whether subliminal speech priming involved unconscious lexical activation of abstract word form. The subliminal repetition priming effect was significant regardless of whether the speakers' gender of the prime and the target is different. The present study indicates that there is a significant subliminal repetition priming effect in mandarin Chinese, and this effect is based on the unconscious processing of abstract lexical information of subliminal primes.

Keywords: subliminal priming effect, auditory masked priming paradigm, unconscious processing

运动学习中情境线索的作用如何随时间变化

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摘 要 想改变长期养成的行为习惯是很困难的，虽然人能通过学习临时地调整行为，一旦失去了反馈的监督，行为模式又会逐渐恢复到原来的状态。我们之前的研究发现，这种行为的“反弹”可能和情境的变化有关。在抛球任务中，当测试阶段的情境（和任务本身不直接相关的环境信息）与学习阶段的情境差得很大时，行为的“反弹”明显；而当这两个情境接近时，即使没有反馈被试的行为也能很好保持。这种情境的作用（后称情境效应）只是暂时的，还是长时间存在的呢？在本研究中，我们使用虚拟现实（Virtual Reality, VR）设备，训练被试向目标线抛小球的动作。在测得被试的动作基线后，我们向 VR 环境中加入一个虚拟的力场，使得被试要用比基线动作更大的力气，才能把小球扔到目标线上。被试会通过反馈逐渐适应这个虚拟的力场，而

当反馈消失，他们的动作又逐渐回到基线水平。反馈消失引起了抛球情境的变化——球扔出去就消失了，不像学习时一样能看到它飞行落地的过程。于是我们增加了一个假反馈测试阶段，即在被试把小球扔出去之后，显示一个“假球”飞行落地的过程，它的飞行速度、方向都是在固定范围内随机的，和被试的实际动作无关，它的落点也一直在目标线上。假反馈使测试阶段和学习阶段的情境非常接近，但没有有效的反馈可以继续学习。在这个阶段，被试已经回到基线的行为又逐渐恢复到学习阶段的水平，重复了我们之前发现的情境效应。被试在休息一天后继续同样的抛球任务，被试需要先依次完成一组无反馈测试（小球扔出去后消失），和一组假反馈测试（模拟第一天学习阶段的情境）。结果发现被试的行为在无反馈阶段仍保持在基线水平，但在假反馈阶段又向第一天学习阶段的水平恢复，但没有完全恢复。接下来被试重复了第一天的学习和测试流程，结果发现经过再学习后，情境效应比之前更为明显了。本实验结果表明，运动学习中的情境效应至少可以持续到第二天，并可能长时间对新形成的运动记忆的提取起到积极作用。

关键词 运动学习，运动适应，情境效应

Overnight Persistence of Context Dependent Visuomotor Memory

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Abstract: It can be difficult to change a long-established behavior, but while one can learn to adjust behavior temporarily, without the supervision of feedback, the pattern gradually returns to its original state. Our previous research found that this "rebound" of behavior might be related to a change in context. In the task of throwing the ball, when the context (environmental information that is not directly related to the task itself) of the test phase and that of the learning phase were distinct, the "rebound" of the behavior was obvious. However, when the two contexts were close to each other, the participants' behaviors could be well maintained without feedback. How will the context effect change after long retention period? In this study, we used Virtual Reality (VR) equipment to train the participants to throw a ball towards a target line. After measuring the participants' baseline movement, we introduced a virtual force field into the VR environment, so that the participants had to use more strength than the baseline movement to throw the ball on the target line. The participants gradually adapted to the virtual force field through feedback, but when the feedback was removed, their throwing behaviors gradually returned to baseline. The removal of feedback induced a change in the task context -- the ball vanished as it was thrown, unlike that in the learning phase, the flying trajectory and landing point of the ball could not be seen. Therefore, we created a test stage of fake feedback, that was, after the participants threw the ball, a "fake ball" would be displayed to simulate the flying and landing process. However, the flying speed and direction of the "fake ball" were all randomly generated from within a fixed range, independent of the actual actions of the participants, and its landing point was always on the target line. Fake feedback made the context in the test phase and the learning phase considerably close, as long as no effective feedback could facilitate learning. At this stage, the behavior of the participants, which had dropped to baseline gradually returned to the level in the learning phase, which repeated the context effect we had previously found. After a 24-hours rest, the participants continued to perform the same task. They would complete one block of non-feedback tests (the ball disappeared after being thrown) and one block of fake feedback tests (context simulating the first day of learning). The results showed that the participants' behavior remained at the baseline level in the no-feedback stage, but in the fake feedback phase, they recovered from the baseline level towards that of the learning stage in the first day. The participants then repeated the learning and testing process in the first day and found that the context effect was even more pronounced after the relearning. The results of this experiment indicated that the context effect in motor adaptation learning could last at least a day and might play an active role in the retrieval of newly formed motor memory in the long run.

Keywords: motor learning, motor adaptation, context effect

返回抑制中的抑制性代偿机制

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摘要 返回抑制(inhibition of return, IOR)是指个体对于线索化位置出现的目标的反应, 慢于非线索化位置出现的目标的一种现象。基于空间的返回抑制与大脑的定向网络有关, 而基于特征的返回抑制则与大脑的执行网络有关。以往单一感觉通道的研究表明, 定向网络和执行网络在返回抑制中存在抑制性的代偿机制, 即当定向网络不能对目标进行抑制时, 执行网络发挥作用; 执行网络不能对目标进行抑制时, 定向网络发挥作用。本研究整合基于空间和非空间跨通道返回抑制的研究范式, 使用具有语义特征的色字作为刺激材料, 同时操纵线索和目标的通道对应关系, 探究在跨听-视和跨视-听两种任务下, 定向网络和执行网络是否仍表现出代偿机制。实验结果发现: (1) 在跨听-视任务下, 当目标出现在非线索化位置时, 出现了基于特征的返回抑制, 即执行网络代偿了定向网络的抑制功能; 当目标的特征与线索特征不同时, 出现了基于空间的返回抑制, 即定向网络代偿了执行网络的抑制功能。(2) 在跨视-听任务下, 当目标出现在非线索化位置时, 原有基于特征的易化作用消失, 但基于特征的返回抑制并未达到统计上的显著水平; 当目标的特征与线索特征不同时, 出现了基于空间的返回抑制。研究表明, 定向网络和执行网络之间的抑制性代偿机制存在于跨通道领域, 可能是一种超通道的机制, 但同时这种代偿机制也存在跨听-视和跨视-听下的通道不对称性。

关键词 返回抑制, 定向网络, 执行网络, 跨通道

Inhibitory compensatory mechanism in inhibition of return

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Abstract: Inhibition of return (IOR) refers to the phenomenon that the response time of an individual to a target presented at a cued location is slower than that presented at a non-cued location. Spatial-based IOR is associated with the orienting network, while feature-based IOR is associated with the executive network. Previous studies on unimodal have shown that there is a compensatory mechanism between the orienting network and the executive network in IOR, that is, when the orienting network fails to inhibit the target, the executive network operates; when the executive network fails to inhibit the target, the orienting network operates. In current study, we integrated spatial and non-spatial crossmodal IOR paradigms, and used semantic(color-based) words as stimulus materials to simultaneously control the model correspondence between cues and targets, and explored whether the compensatory mechanisms of the orienting network and the executive network still operated in crossmodal audio-visual and visual-audio tasks. The results showed that: (1) in crossmodal audio-visual task, when the target appeared in non-cued location, feature-based IOR appeared, that is, the execution network compensated for the inhibition function of the orienting network; when the target and cue did not share common feature, spatial-based IOR appeared, that is, the orienting network compensated for the inhibition function of the execution network. (2) in crossmodal visual-audio task, when the target appeared in non-cued location, feature-based facilitation effect of cue disappeared, but feature-based IOR did not reach significant level; when the target and cue did not share common feature, spatial-based IOR appeared. These findings demonstrated that the compensation mechanism between the orienting network and the executive network existed in the crossmodal domain, which may be a supramodal mechanism, and such mechanism between crossmodal audio-visual and visual-audio had asymmetry.

Keywords: Inhibition of return, Orienting network, Executive network, Crossmodal

基于时间特性视角的视觉审美和愉悦感受研究

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摘要 美感和愉悦感受的关系是近些年审美研究者们十分关注的话题。虽然行为和核磁实验都提示美感和愉悦感受有非常紧密的关系, 但由于刺激材料选择的局限性, 二者是否可以等同还有较大争议。本研究招募了 30 名无长期美术培训经验的被试, 通过预实验建立了四种不同美感-愉悦度组合的图片库 (美-愉悦、美-不愉悦、不美-愉悦和不美-不愉悦), 旨在从时间特性的角度探索了审美和愉悦感受的关系。实验过程中, 每张图片的呈现时间有 8 种条件, 分别为 17ms、34ms、50ms、100ms、200ms、400ms 和自由呈现时间, 被试对所有图片进行美感、愉悦感受和唤醒度的打分。结果发现, 被试欣赏所有图片时美感和愉悦感受的评分结果同前期进行分类图片时其他被试评分的结果相近。对于美-愉悦和不美-不愉悦两种类型的图片而言, 美感和愉悦感受评分在所有呈现时间条件下都呈现显著的正相关; 而对于不美-愉悦和美-不愉悦两种类型的图片, 图片带给被试的美感和愉悦感受则呈现显著的负相关。将美感和愉悦感受在控制呈现时间条件和自由呈现时间条件下的相关系数作为此感受趋于稳定的程度, 我们探究了形成稳定的美感和愉悦感受所需要的最短时间。结果表明美感和愉悦感受评价一般在图片呈现 50~100ms 后逐渐趋于稳定。对于美-愉悦和不美-不愉悦类型的图片而言, 愉悦感受 and 美感在所有控制呈现时间条件下和不控制呈现时间条件下的相关系数的差异均不显著; 对于美-不愉悦和不美-愉悦两种类型的图片, 当呈现时间为 200ms 时, 相关系数表现出显著差异。我们的结果表明美感和愉悦感受的极性并不总是一致的, 在时间特性上可以出现分离, 提示二者虽然可美感和愉悦感受具有部分独立的神经基础, 一定程度上挑战了前人对美感来源于欣赏作品时产生的愉悦体验的解释。

关键词 视觉审美, 美感, 愉悦感受, 时间特性

On Beauty and Pleasure Experience: Time Course Aspect

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Abstract: The relationship between beauty and pleasure evaluation has raised interest among aesthetics researches in recent years. Although most behavioral and fMRI experiments implied highly positive correlation between beauty and pleasure experience, controversy about the equivalence of them still exists because of the limitations of stimulus materials in previous studies. The current study recruited thirty naïve subjects, constructed a set of image battery that covers four different combinations of beauty and pleasure level (i.e., beautiful-pleasant, beautiful-unpleasant, unbeautiful-pleasant, and unbeautiful-unpleasant), and explored the relationship between aesthetics and pleasure evaluation from the perspective of time course. Eight presentation durations, i.e., 17 ms, 34 ms, 50 ms, 100 ms, 200 ms, 400 ms, and unlimited time, were adopted. All participants were asked to rate their feeling of beauty, pleasure, and arousal for each image in all presentation conditions. Our results about the aesthetic and pleasure evaluation of these images were similar to the previous scoring experiments that done with other group of subjects. For the beautiful-pleasant and unbeautiful-unpleasant images, the beauty evaluation showed a positive correlation with the pleasure score; on the contrary, for unbeautiful-pleasant and beautiful-unpleasant images, the beauty evaluation was negatively correlated with the pleasure feeling. We calculated the correlation coefficient of beauty and pleasure between limited and unlimited presentation time condition to determine the time course of forming stable beauty and pleasure experience. We found that the evaluation of beauty and pleasure generally stabilized after the image was presented for 50-100ms. For beautiful-pleasant and unbeautiful-unpleasant images, there is no significant difference in the correlation coefficients among all limited presentation conditions and unlimited presentation condition; However, significant difference of correlation coefficients between beauty and pleasure was found for beautiful-unpleasant and unbeautiful -pleasant images when limited presentation time is 200ms. Our results suggest

that the polarity of aesthetic and pleasant evaluation is not always the same, and they can separate in time course, indicating a partly independent neural basis of beauty and pleasure evaluation. Our result also, to some extent, challenges the explanation of aesthetic experience purely based on pleasant feelings.

Keywords: Visual aesthetics, beauty, pleasure, time course

SNARC 效应和序列位置效应：并存还是互斥？

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摘 要 空间数字联合反应编码（Spatial-Numerical Association of Response Codes effect,即 SNARC 效应）是指在完成奇偶判断任务或大小比较任务时，被试左手对小数反应较快，右手对大数反应较快的倾向。关于 SNARC 效应来自于长时记忆的心理数字线还是工作记忆存在一定的争议。Van Dijck 等（2011）发现工作记忆中数字位置和空间的暂时联结，被试左手对于记忆序列前面位置的项目反应较快，右手对于记忆序列后面位置的项目反应较快，命名为序列位置效应（the Ordinal Position effect）。然而以往的研究没有考虑到位置信息对于 SNARC 和序列位置效应的影响。因此本研究采用 GO/No-go 的实验范式，设置了记忆序列中每个数字的位置信息，使数字的大小信息前后一致（如：31689，前两个位置的数量大小信息一致，后两个位置也是），结合反应手规则，让被试完成大小比较任务，从而考察在数字位置的冲突对序列位置效应和 SNARC 效应的影响。方差分析结果：（1）存在数字和位置的交互作用，被试左手对于记忆序列前面位置的数字反应快，右手对于记忆序列后面的位置反应快，即存在序列位置效应；（2）存在数字、反应手和位置的三者交互作用，进一步简单效应分析发现存在序列位置效应和 SNARC 效应。回归分析结果：（1）对每个数字的反应时差作回归发现，t 检验显著，说明存在序列位置效应；（2）对每个位置的反应时差的回归分析发现，t 检验显著，说明存在序列位置效应。这些结果说明 SNARC 效应是来自于长时记忆中的数字与空间的联结，受到数字位置信息的影响，支持心理数字线的假设；序列位置效应是数字的序列位置和空间在工作记忆中建立起来的暂时联结，所以 SNARC 效应和序列位置效应并存。

关键词 SNARC 效应，序列位置效应，长时记忆，工作记忆

SNARC effect and Ordinal Position effect: Coexistence or mutual exclusion?

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Abstract: The Spatial Numerical Association of Response Codes effect, refers to the tendency of participants respond faster to small numbers with the left hand side and to large numbers with the right hand side when completing the parity judgment task or magnitude comparison task. A longstanding debate is whether the SNARC effect comes from long-term memory or working memory. Van Dijck et al. (2011) found a temporary association of the ordinal position of number and space to be formed in working memory, participants responded faster with the left hand than the right hand to numbers, which were presented early in the to-be-memorized sequence, whereas numbers presented toward the end of the sequence were responded to faster with the right hand. But previous study did not specifically investigate the influence of number position information. In this study, we use Go/No-go experimental paradigm as Van Dijck (2011), also setting the position information of each number in the memory sequence to make the size information of the number consistent, e.g.: 31689, the first two locations have the same magnitude information, as do the last two locations, combined with the reaction hand rule, the participant were asked to complete the magnitude comparison task, so as to investigate the impact of the number position conflict on the Ordinal Position effect and the SNARC effect. In the experiment, we found: (1) the repeated measures ANOVA revealed a clear interaction between position and response, indicating items from the beginning of a verbal WM sequence are responded to faster and more accurately with the left than with the right hand during the maintenance interval and the opposite is true for

items towards the end of the sequence, which named the Ordinal Position effect.;(2) there are three interactions of number, reaction hand and position, simple effect analysis found that there are the Ordinal Position effect and SNARC effect. Regression analysis found: (1) Regression of the response time difference of each number found that the T-test was significant, indicating the existence of sequence position effect; (2) Regression analysis of the response time difference of each position found that the T-test was significant, indicating the existence of sequence position effect. The results of this study suggest that the SNARC effect comes from the association between numbers and space in long-term memory, which is influenced by the location information of numbers, supporting the hypothesis of mental number line; the Ordinal Position effect is a temporary association between serial position and space of numbers in working memory, so both SNARC effect and the Ordinal Position effect can exist simultaneously.

Keywords: SNARC effect, the Ordinal Position effect, long-term memory, working memory

注意分配双阶段模型可部分解释视觉搜索的无记忆模式

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摘要 视觉搜索是我们在日常生活中十分常见的行为。直觉告诉我们, 搜索过程中对于搜寻过的物体, 我们会保留记忆痕迹以免重复搜索。然而早期研究显示 (Horowitz & Wolfe, 1998), 视觉系统可能会采取无记忆的搜索模式, 即重复搜索已拒绝过的干扰项。近期研究 (Li, Xin, Lou, & Li, 2019) 进一步对无记忆的视觉搜索模式进行拓展, 发现即使是视觉搜索的目标也未必需要存入工作记忆。Li 等人 (2019) 的研究中设计了“目标记忆”和“目标呈现”两种视觉搜索条件。“目标记忆”条件下, 视觉搜索的目标提前呈现并在搜索阵列出现前移除; 而在“目标呈现”条件下, 视觉搜索目标与搜索阵列同时呈现且始终可见。实验结果显示, “目标呈现”条件下的视觉搜索效率 (即刺激最短呈现时间与搜索集大小的线性函数的斜率) 约为“目标记忆”条件下的一半, 暗示“目标呈现”条件下被试并非一次性记忆目标, 而是在每次识别搜索项时再次识别目标项, 因而耗时翻倍。本研究实验一更换实验刺激 (中文数字和阿拉伯数字) 对“目标记忆”和“目标呈现”两种条件进行重复, 发现阿拉伯数字刺激重复了两倍效率差的结果; 但对于中文数字刺激, 发现“目标记忆”条件的搜索效率出现明显分界, 而当项目数较大时, 两种条件下的搜索速率相同。前人提出的注意分配双阶段模型 (Theeuwes, 2010) 认为注意分配存在两个阶段, 前期 (自刺激出现 150 毫秒左右) 纯粹由自下而上的刺激驱动, 效率较高; 后期由自上而下的方式目标主导, 效率较低。据此我们认为, “目标记忆”条件由于用时较短, 可能包含两个阶段, 且后期才表现出记忆对视觉搜索的引导作用; “目标呈现”条件由于用时较长, 只包含后期阶段。两种条件在项目数量较大时效率相同, 说明“目标呈现”条件下被试仍利用记忆帮助搜索。实验二用不同的视觉刺激 (色块与数字) 验证了搜索效率存在由快变慢的转折点。本研究对搜索目标的无记忆搜索模式提出质疑, 同时, 结合实验一与实验二, 我们发现搜索效率转折点发生时的时间基本相同, 进一步支持了双阶段模型的假设。

关键词 视觉注意, 工作记忆, 视觉搜索, 双阶段模型

The Two-stage Model of Attention Deployment Partially Contribute to the Memory-free Mode of Visual Search

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Abstract: Visual search is a common behavior in our daily life. Common sense suggests that rejected items should be noted in some fashion so that effort is not expended in re-examining items that have been attended to and rejected. However, earlier studies (eg, Horowitz & Wolfe, 1998) have shown that visual system may adopt a memory-free search mode which leads to repeated searching for rejected distractors. Recent research (Li, Xin, Lou, & Li, 2019) further expanded the memory-free search mode and found that even the search target does not necessarily store in working memory. In the study of Li et al. (2019), two visual search conditions were designed. In ‘Target in Memory’

condition, the search target was presented in advance and removed before the search array appears. In ‘Target on Screen’ condition, search target and search array were presented simultaneously and the target was always accessible. Results showed that the visual search efficiency (the linear slope of search time and search array set-size) in ‘Target on Screen’ condition was about half compared of that in the ‘Memory on Screen’ condition, which suggested that in ‘Target on Screen’ condition, instead of memorizing the target at once, participants identified the search target again each time they identified the search item, thus doubling the time. In our Experiment 1, different stimuli (Chinese digits and Arabic digits) were used to repeat ‘Target in Memory’ and ‘Target on Screen’ procedures. We found that Arabic digits stimuli did repeat the results of twice efficiency difference; but for Chinese digits stimuli, the search efficiency was clearly divided in ‘Target in Memory’ condition, while when set-size was large the search slope was the same under two conditions. Previous studies have pointed out (Theeuwes, 2010) that there may be two stages (‘fast bottom-up and late top-down selection’) in attention deployment: The early stage (about 150 milliseconds from the onset of stimulus) was purely driven by bottom-up mechanism with high search efficiency; the latter stage was dominated by the top-down mechanism with low efficiency. Therefore, we argued that ‘Target in Memory’ condition may contain two stages due to its short processing time and only in the latter stage memory can guide visual search; while ‘Target on Screen’ condition only included the latter stage due to its long time. The result that search efficiency of the two conditions was same when set-size was large indicated participants still used memory to help search in ‘Target on Screen’ condition. In Experiment 2, different visual stimuli (color blocks and digits) were used to verify that there was a turning point of search efficiency in visual search. In our study, the memory-free search mode of search target was questioned. Meanwhile, combining Experiment 1 and Experiment 2, we found that the time at efficiency turning point was basically the same, which further supported the hypothesis of the attention deployment two-stage model.

Keywords: Visual attention, Working memory, Visual search, Two-stage model

直觉优势的消失？图式熟悉性对直觉加工的影响

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摘要 推理和思维的双加工理论认为个体存在直觉和分析两种不同的加工模式。以往研究发现，虽然两种加工均受到认知资源的影响，但是直觉加工在认知资源有限的条件下仍然存在优势效应，表现为其对认知资源的依赖程度远低于分析加工。然而，图式熟悉性对直觉和分析加工的影响机制还未得到充分阐明。具体而言，在熟悉图式下，直觉的这一优势效应是否会进一步增强还不得而知，且在不熟悉图式下直觉与分析加工的表现是否受认知资源的影响也还需进一步探讨。因此，本研究通过两个实验操纵了图式熟悉性和认知资源来探究二者对两种加工的影响。实验1通过组块破解任务，探究了图式熟悉性如何影响个体直觉和分析加工的表现。结果发现，个体在熟悉图式下对直觉材料反应的正确率显著高于不熟悉图式下，且熟悉图式下直觉材料的正确率显著高于分析材料；但在不熟悉图式下直觉和分析材料的正确率则没有显著差异。实验2通过加入双任务范式进一步操纵认知资源。结果发现，在熟悉图式下直觉材料在低负荷的正确率显著高于高负荷，且分析材料在低负荷的正确率也显著高于高负荷，但在不熟悉图式下，对认知资源的操纵则没有产生显著差异。本研究表明，熟悉图式会提高个体直觉加工的表现，并且它可以通过认知资源进一步影响个体直觉加工和分析加工的表现；相反，在不熟悉图式下对认知资源的操纵并没有产生显著效应。这体现了随着对图式的内化，个体能够对认知资源进行调节，将更多的认知资源从对材料的初级知觉加工调配到更高级的思维加工中，进而更好地发挥直觉加工的优势。

关键词 直觉加工，分析加工，图式熟悉性，认知资源

The disappearance of intuitive advantage? The influence of schema familiarity on intuitive processing

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Abstract: BACKGROUND: The dual-processing theory of reasoning and thinking holds that individuals have two instinct processing modes: intuition and analysis. Previous studies have found that although the two kinds of processing are affected by cognitive resources, intuitive processing still has a dominant effect under the condition of limited cognitive resources, which shows that its dependence on cognitive resources is far lower than that of analytical processing. However, the influence of schema familiarity on intuition and analytical processing has not been fully clarified. Specifically, it is still unknown whether this dominant effect of intuition will be further enhanced under familiar schemata, and whether the performance of intuition and analytical processing under unfamiliar schemata is affected by cognitive resources needs to be further fine-grained discussion. **OBJECTIVE:** Therefore, the current study manipulated schema familiarity and cognitive resources through two experiments to explore their effects on the two processes. **METHODS & RESULTS:** Experiment 1 explored how schema familiarity affected the performance of individual intuition and analytical processing. The results showed that the accuracy to intuitive materials under familiar schema was significantly higher than that under unfamiliar schema, and the accuracy of intuitive materials under familiar schema was significantly higher than that of analytical materials. However, there was no significant difference in the accuracy of intuitive and analytical materials when they were unfamiliar with schemas. Experiment 2 further manipulated cognitive resources by adding the dual-task paradigm. The findings indicated that the accuracy of intuitive materials was significantly higher than that of high load under the familiar schema, and the accuracy of analysis materials was significantly higher than that of high load, but there was no significant difference in cognitive resources under the unfamiliar schema. **CONCLUSIONS:** These results elucidate that familiarity with schema can improve the performance of individual intuitive processing, and it further influences the performance of individual intuitive and analytical processing through cognitive resources. On the contrary, the cognitive resources have not produced significant effect under unfamiliar schema. This figures that with the internalization of schema, individuals are able to regulate cognitive resources, and allocate more resources from the inferior perceptual processing to the superior thinking processing, giving full play to the advantages of intuitive processing.

Keywords: intuitive processing, analytical processing, schema familiarity, cognitive resources

言语的情绪韵律和情绪语义对听觉去信息掩蔽的影响

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摘要 言语的情绪信息(如情绪韵律)具有去听觉掩蔽的作用。但其去听觉掩蔽的具体机制还不清楚。本研究采用主观空间分离范式,分别探究言语的情绪韵律和情绪语义去信息掩蔽的机制。实验1a使用不具有语义可懂度的时间逆转语句作为掩蔽声(仅具有知觉信息掩蔽作用)。结果表明,以情绪韵律发出的目标语句的识别正确率显著高于以中性韵律发出的目标语句的识别正确率。实验1b使用句法正确的无意义语句作为掩蔽声(具有知觉、认知双重信息掩蔽作用)。结果表明,以情绪韵律发出的目标语句的识别正确率显著高于以中性韵律发出的目标语句的识别正确率。将实验1a所求得的情绪韵律的去掩蔽量和实验1b所求得的情绪韵律的去掩蔽量进行对比,结果差异不显著。实验2a使用时间逆转语句作为掩蔽声。结果表明,包含情绪语义的目标语句的识别正确率与包含中性语义的目标语句的识别正确率差异不显著。实验2b使用句法正确的无意义语句作为掩蔽声。结果表明,包含情绪语义的目标语句的识别正确率显著高于包含中性语义的目标语句

的识别正确率。综合两个研究的实验结果表明,言语的情绪韵律和情绪语义去信息掩蔽的机制不同。言语的情绪韵律能够吸引听者更多的注意具有去知觉信息掩蔽的作用,而不具有去认知信息掩蔽的作用。言语的情绪语义能够占据听者更多的认知加工资源具有去认知信息掩蔽的作用,而不具有去知觉信息掩蔽的作用。

关键词 知觉信息掩蔽, 认知信息掩蔽, 情绪韵律, 情绪语义, 主观空间分离

The Influence of Emotional Prosody and Emotional Semantics of Speech on Auditory Informational Masking

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Abstract: Emotional information of speech (such as emotional prosody) has the effect of the unmasking of auditory masking. However, the specific mechanism of the unmasking of auditory masking is still unclear. This study uses the perceived spatial separation paradigm to explore the specific mechanisms of emotional prosody and emotional semantics in the unmasking of informational masking. Experiment 1a used time-reversal sentences with no semantic intelligibility as masking sounds (only perceptual informational masking). The results showed that the accuracy of the recognition of the target sentence uttered in emotional prosody was significantly higher than that of the target sentence uttered in neutral prosody. Experiment 1b used syntactically correct nonsense sentences as masking sounds (both perceptual informational masking and cognitive informational masking). The results showed that the accuracy of the recognition of the target sentence uttered in emotional prosody was significantly higher than that of the target sentence uttered in neutral prosody. Comparing the masking release of the emotional prosody obtained in experiment 1a with that obtained in experiment 1b, the difference was not significant. Experiment 2a used time-reversal sentences as masking sounds. The results showed that there was no significant difference in the recognition accuracy between the target sentences with emotional semantics and those with neutral semantics. Experiment 2b used syntactically correct nonsense sentences as masking sounds. The results showed that the accuracy of the recognition of target sentences with emotional semantics was significantly higher than that of target sentences with neutral semantics. Combining the experimental results of the two studies, it find that the mechanisms of emotional prosody and emotional semantics are different in the unmasking of informational masking. Emotional prosody of speech can attract more attention of the listeners and remove perceptual informational masking, but it cannot fulfill the function of unmasking of cognitive informational masking. The emotional semantics of speech can occupy more cognitive processing resources of the listeners and can remove the masking of cognitive information, but it fails to fulfill the role of unmasking of perceptual informational masking.

Keywords: Perceived informational masking, Cognitive informational masking, Emotional prosody, motional content, Perceived spatial separation

贝叶斯新视角下对有偏学习中因果推断的模型预测

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摘 要 人们在学习与决策过程中存在着好消息与坏消息效应 (Good News and Bad News effect), 即在学习与决策过程中如果有隐含原因能够影响结果, 那么人们会更多地将负效价的结果归因于隐含原因。已有研究大多将这一现象归入强化学习范畴, 运用强化学习模型对其机制进行建模预测。本研究从贝叶斯建模角度出发, 设计了两个递进的实验, 尝试使用贝叶斯推断模型预测在学习过程中存在的有偏学习现象, 并且比较贝叶斯推断模型与强化学习模型对有偏学习的预测率的优劣。实验 1 采用 jsPsych 线上实验, 根据被试在新设计

的 21 点纸牌游戏中的行为数据，建立贝叶斯推断模型；招募 86 名被试，由正确率筛选，62 名被试被纳入分析。研究对每个隐含条件（有利、不利、中性）及效价结果进行配对样本 t 检验。行为数据结果显示，总体而言，被试相信较正效价，隐含原因显著多地导致负效价结果出现（ $t(61)_{\text{总计}} = 2.273, p = 0.027$ ）；不利条件下，被试相信负效价较正效价，显著地被归因于隐含原因的影响（ $t(61)_{\text{不利}} = 24.19, p < 0.0001$ ）；且被试相信中性条件下负效价较正效价，更显著地被归因于隐含原因的影响（ $t(61)_{\text{中性}} = 3.122, p = 0.003$ ）。同时，研究建立贝叶斯经验模型、强化学习基本模型和贝叶斯强化学习模型对行为数据进行拟合，运用 BMS（Bayesian Model Selection）算法求得 PXP（Protected Exceedance Probability）值对三个模型的预测效率进行比较。模型比较结果显示，贝叶斯经验模型能够更好地预测决策过程（PXP = 1.0000）。实验 2 在实验 1 的基础上，移除被试获得隐含原因信息的条件，使生态效度更高；招募 92 名被试，由正确率筛选，80 名被试被纳入分析。行为数据结果趋势与实验 1 一致，同样证实好消息与坏消息效应。同时，在沿用实验 1 的模型建立及模型比较的基础上，加入模型结构与计算过程上更为复杂的自适应贝叶斯强化学习模型，模型比较结果显示，贝叶斯经验模型仍能更好地预测决策过程（PXP = 0.9996）。这表示贝叶斯经验模型很有可能就是量化预测效价学习中决策过程的最优模型。

关键词 贝叶斯推断模型，强化学习，因果推断，有偏学习

Causal inferences contributing to biased learning, predicted by a novel Bayesian model

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Abstract: The optimistic cognitive bias effect, known as the 'Good News and Bad News effect', which means that people tend to attribute negative valence outcome to hidden causes if there is one, exists in people's learning and decision-making process. And most of the existing studies have classified this phenomenon as the reinforcement learning process and use reinforcement learning models to interpret its mechanism to predict the outcomes. In this study, two progressive experiments were designed from the perspective of Bayesian modeling to try to apply Bayesian inference models to describe and predict the biased learning phenomenon in the learning process and to compare the prediction efficiency of Bayesian models and reinforcement learning models of the valence-dependent learning asymmetries. Experiment 1 used the jsPsych online experiment to build a Bayesian inference model based on subjects' behavioral data in a newly designed blackjack poker game. 86 subjects were recruited and modified by task correctness, and 62 subjects were included in the data analysis. The study conducted paired-sample t -tests for each hidden cause condition (beneficial, adversarial, neutral) and valence results. The behavioral data results showed that, overall, participants believed that hidden causes significantly led to negative valence results more often than positive valence results ($t(61)_{\text{total}} = 2.273, p = 0.027$), and in the adversarial condition, participants believed that more negative valence outcomes than positive outcomes were significantly more likely to be attributed to the influence of hidden causes ($t(61)_{\text{adversarial}} = 24.19, p < 0.0001$). Participants believed that negative valence outcomes were more significantly resulted by hidden causes than positive outcomes in the neutral condition ($t(61)_{\text{neutral}} = 3.122, p = 0.003$). Meanwhile, the study developed a Bayesian empirical model, a basic reinforcement learning model and a Bayesian reinforcement learning model to fit the behavioral data, and used BMS (Bayesian Model Selection) to figure out PXP (Protected Exceedance Probability) values to compare the prediction efficiency of the three models. The model comparison results showed that the Bayesian empirical model was able to best predict the decision process (PXP = 1.0000). In experiment 2, the information that participates could obtained about hidden causes was ruled out to increase the ecological validity of the task. 92 subjects were recruited and modified by task correctness, and 80 subjects were included in the analysis. The behavioral data results were consistent with Experiment 1, again

confirming the optimistic cognitive bias effect. Meanwhile, the model building and model comparison following Experiment 1, an adaptive Bayesian reinforcement learning model with more complex model structure and computational process was introduced. The model comparison results showed that the Bayesian empirical model still best predicted the decision process ($PXP = 0.9996$). It indicated that the Bayesian empirical model was likely to be the optimal model for the human decision process in quantitative prediction of valence learning.

Keywords: Bayesian inference models, Reinforcement learning, Causal inference, Biased learning

视觉工作记忆的再激活：视觉脉冲刺激中位置信息的功能

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摘要 视觉工作记忆是个体暂时性地保持和操纵视觉信息的能力。Cowan 等学者根据记忆项目是否处在注意焦点将工作记忆中的项目分为与当下任务相关的优势项目和只与未来任务相关的非优势项目。近年来, 脑成像研究发现, 优势项目的神经表征通常处于可解码的活跃状态, 而非优势项目则处于无法解码的静默状态。最新一系列研究发现, 非优势项目的神经表征可以在与任务无关的视觉脉冲刺激下恢复到再激活状态。本研究采用双回溯线索的朝向延迟回忆任务对该现象背后的作用机制进行了考察。实验一采用了被试内设计 ($n=25$), 在第一个回溯线索的延迟阶段设置了三种条件: 没有视觉脉冲刺激的基线条件, 水平脉冲条件 (包含了左、中、右三个白色圆形脉冲刺激) 以及竖直脉冲条件 (包含了上、中、下三个白色圆形脉冲刺激)。其中, 水平脉冲条件是工作记忆再激活研究中常用的刺激类型, 左右刺激分别与两个记忆项目的位置重合; 竖直脉冲条件是将水平脉冲旋转 90 度, 唯一的不同在于脉冲刺激均不与记忆项目位置重合。研究重点比较了不同条件下第一次回忆的精确度和正确率。结果发现, 与基线条件相比, 水平脉冲提高了回忆正确率, 对回忆精确度没有影响; 垂直脉冲对两个回忆参数均没有影响。该结果提示了视觉脉冲刺激中包含的记忆项目的位置信息对记忆再激活可能有关键作用。实验二进一步增加了与优势项目位置一致的单测脉冲刺激和与非优势项目位置一致的单测脉冲刺激两种条件 ($n=41$)。实验流程和分析方法与实验一类似。结果显示, 与基线条件相比, 与优势项目位置重合的单测刺激对回忆没有影响, 与非优势项目位置重合的单测脉冲刺激显著降低了回忆正确率。该结果与以往研究中发现的非优势项目再激活干扰优势项目再认的结果一致, 进一步支持了视觉脉冲刺激中位置信息的重要性。通过两个实验, 本研究揭示了位置信息在视觉脉冲刺激引起视觉工作记忆再激活中的关键性作用, 为未来结合脑成像数据深入考察不同注意状态下的视觉工作记忆项目之间的交互机制奠定了基础。

关键词 视觉工作记忆, 再激活, 视觉脉冲刺激, 位置信息

Reactivation of visual working memory: the location of the visual impulse matters

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Abstract: Visual working memory (VWM) is the ability that human temporally maintain and manipulate visual information. According to the items in or out of the focus of attention during VWM, Cowan and his colleagues divided memorized items into the “prioritized memory item” (PMI) and the “unprioritized memory item” (UMI). PMI is kept for completing the current task while UMI is kept for the future task. Recent neural imaging studies found the neural representation of PMI was usually in a decodable active state, while the representation of UMI was in an undecodable activity-silent state. However, some latest studies revealed the representation of UMI could be reactivated through task-irrelevant visual impulse stimuli. The present study aimed to uncover the underlying mechanism of the VWM reactivation. The first experiment adapted a delay estimation task for orientations with a dual retro-cue design (Experiment 1, $n=25$). Our task included three conditions according to the different settings

during the first delay period: the baseline condition only contained a fixation, the horizontal impulses condition consisted of three white circle impulses (left, middle, and right) and the vertical impulses condition consisted of three same white circle impulses but in a vertical way. The horizontal impulses condition was used in most of the previous VWM reactivation studies, and the impulses were organized in the same way as the memorized items. By rotating 90 degree from the horizontal impulses condition, the locations of our vertical impulses were not overlapped with the locations kept in VWM. We compared the correctly response probability and recall precision during the first probe in the horizontal and vertical impulse conditions with the baseline. The results revealed that the horizontal impulses improved the correctly response probability but did not change the recall precision, while the vertical impulses had no effect on neither of them. These results suggested that the locations of visual impulses may play an important role in affecting the VWM recall. Our second experiment further explored the functional role of the location of visual impulses by adding two unilateral impulse conditions. In these two conditions, the location of visual impulse was the same as that of PMI or UMI, respectively (Experiment 2, $n = 41$). The experimental procedure and analyses were similar to the Experiment 1. Our results demonstrated that, the PMI-unilateral impulse had no effect on recall performance, while the UMI-unilateral impulse significantly reduced the correctly response probability, but had no effect on recall precision. These results were consistent with the previous finding that the reactivation of UMI would interfere with the recognition of PMI. Through two experiments, our results suggested the key role of the visual impulses' locations in affecting the reactivation of VWM, which shed a light on further studies investigating the interaction mechanism between VWM items under different attentional states.

Keywords: visual working memory, reactivation, visual impulse stimuli, location information

混合式三维多目标追踪训练对认知表现的影响

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摘要 目的: 多目标追踪范式具有动态、并行、基于客体的特征,近年来在大量理论研究基础上已有研究发现,将三维的多目标追踪(Multiple Object Tracking, MOT)范式作为认知能力训练的工具,在经过 4-8 周训练后能够提高儿童、成年人、神经发育障碍患者以及运动员等群体的认知表现。然而目前有关多目标追踪训练的研究多采用自适应的方式进行,而已有研究表明通过在困难的任务中加入简单任务的混合认知训练会提高个体在困难任务中的表现,由此本研究将混合认知训练与三维多目标追踪训练相结合提出一种新的认知训练方式,考察短期单次混合认知训练对动态注意的效果及其对注意网络功能、工作记忆以及认知控制的迁移作用。**方法:** 选取陕西省某职业学院学生 81 名,平均年龄 20.1 岁,视力或矫正视力正常。采用 3(时间:干预前、干预后即刻、干预后一天)×3(组别:自适应训练组、混合训练组、对照组)的混合设计,训练组进行 40min(共四组)3D MOT 训练。混合训练采用简单-困难任务组交替进行,高难度与低难度任务组的小球运动的速度恒定,低速度为参与者基线成绩的 40%,高速度为参与者基线成绩的 110%。自适应训练采用自适应程序控制客体的运动速度,小球的初始速度为 68cm/s,当参与者反应正确时,下一试次中客体的运动速度将上调 30%;反应错误时,客体的运动速度会下调 20%。采用自适应 3D-MOT 范式、n-back($n=2、3$)、注意网络测验以及 go/no go 进行基线以及训练后多目标追踪能力的测试。**结果:** 以时间和组别为自变量,后测成绩为因变量做二因素重复测量协方差分析检验。结果显示:(1)混合训练显著提高了动态注意能力的平均阈值($F(4,148)=2.625$, $p=0.044$ $\eta_p^2=0.065$),干预后混合训练组动态注意能力的平均阈值显著高于对照组($M_{混合-对照}=0.96$, $p=0.019$);(2)训练组工作记忆、注意网络功能和执行抑制功能对照组没有差异。**结论:** 短期单次混合式三维多目标追踪训练能够提高平均动态追踪能力,但效果未能迁移到注意网络功能、工作记忆以及认知控制上。

关键词 多目标追踪; 认知训练; 短期单次干预

Effects of Mixed 3D Multiple Object Tracking Training on Cognitive Performance

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Abstract: objective: Multiple Object Tracking model has the characteristics of dynamic, parallel, based on the Object, on the basis of a large number of theoretical research in recent years studies have found that the three-dimensional Multiple Object Tracking (MOT) paradigm as the tool of cognitive training, after 4 to 8 weeks after training can improve the children, adults, and neurodevelopmental disorder and athlete group cognitive performance. However, most studies on MOT training are conducted in an adaptive way. Some studies have shown that adding simple tasks to difficult tasks can improve individuals' performance in difficult tasks. Meanwhile. Therefore, this study combined mixed cognitive training with three-dimensional MOT training to propose a new cognitive training mode, and investigated the effect of short-term single mixed cognitive training on dynamic attention and its transfer to attention network function, working memory and cognitive control. **Methods:** 81 students of a vocational college in Shaanxi province, with average age of 20.1 years old, had normal vision or corrected vision. A mixed design of 3(time: before intervention, immediately after intervention, one day after intervention) $\times$ 3(group: adaptive training group, mixed training group, control group) was adopted, the training group received 40 min (four groups) 3D MOT training. The mixed training was carried out alternately in the simple and difficult task groups. The speed of small ball movement in the high and low difficulty task groups was constant. The low speed was 40% of the participants' baseline performance, and the high speed was 110% of the participants' baseline performance. Adaptive training adopts the adaptive program to control the movement speed of the object. The initial speed of the ball is 68cm/s. When the participant reacts correctly, the movement speed of the object in the next trial will be increased by 30%. When the response is wrong, the object's speed of motion will be reduced by 20%. The adaptive 3D-MOT paradigm, N-back ($n=2, 3$), attention network test and GO/No Go were used to test the tracking ability of multiple targets after baseline and training. **Results:** Time and group were used as independent variables, and post - test results were used as dependent variables. The results show that: The average threshold value of dynamic attention ability ($F(4,148) = 2.625, p = 0.044, \eta_p^2 = 0.065$) was significantly higher in the mixed training group than in the control group ($M_{mixed-control} = 0.96, p = 0.019$). (2) There was no difference in working memory, attention network function and executive inhibition function in the training group. **Conclusion:** Short-term mixed 3D MOT training can improve the average dynamic tracking ability; But the effect did not migrate to attention network function, working memory and cognitive control.

Keywords: Multiple Object Tracking; cognitive training; short-term single intervention

注意定向对无意识加工的影响

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摘要 无意识加工在人类适应环境的过程中发挥着重要作用, 对个体解决高难度创造性问题具有促进作用。阈下语义启动效应是无意识加工的主要研究方法, 指的是使用语义信息作为启动刺激的一种促进作用。目前, 注意对个体无意识加工是否存在影响尚存在争议。本研究采用注意定向的视觉线索化与阈下语义启动的掩蔽启动研究范式, 以大学生为研究对象, 通过两个研究探讨不同注意类型对阈下语义启动的影响以及特点。研究一通过对比有提示线索和无提示线索, 使用汉字词语作为实验材料, 探究视觉注意定向对阈下语义启动的影响。研究二分别使用外周线索和中央线索, 并加入不同 SOA 作为条件, 考查外源性和内源性注意对阈下语义启动造成的不同影响特点。结果发现: (1) 注意定向对阈下语义启动有促进作用, 具体表现为位置提示线

索与启动-目标词语一致性的交互作用显著,在有效提示的条件下,一致的效果比不一致的明显更好。(2)外源性注意对阈下语义启动有促进作用,表现在位置提示线索、SOA 水平与启动-目标词语一致性三者交互作用显著,SOA=160ms 时,外源性注意影响阈下加工,阈下语义启动效果更好,而 SOA>300ms 时,阈下语义启动效果不明显。(3)内源性注意对阈下语义启动有促进作用,SOA=1000ms 时,内源性注意仍能促进阈下语义启动效应,并延长无意识的加工,放大其注意时间窗口。上述研究表明,不同的注意类型对阈下语义启动存在差异,外源性注意的阈下语义启动具有短暂性,内源性注意的阈下语义启动具有持续性效应。

关键词 无意识加工,阈下语义启动效应,注意定向,启动-目标刺激之间的时间间隔

The Effect of Attentional Orienting on Unconscious Processing

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Abstract: Unconscious processing plays an important role in the process of human adaptation to the environment and promotes individuals to solve difficult creative problems. Subliminal semantic priming is the main research method of unconscious processing, which refers to the use of semantic information as a promoter of priming stimulus. At present, the influence of attention on individual unconscious processing is still controversial. In our research, we use the visual cueing of attentional orientation and the masking priming of subliminal semantic priming, to investigate the effects and characteristics of different attentional types on subliminal semantic priming with college students as research objects. Study 1 explored the effects of visual attentional orientation on subliminal semantic priming by comparing the results with and without cue, through using Chinese words as experimental materials. In study 2, exogenous cues and endogenous cues were used respectively, and different stimulus-onset asynchrony (SOA) were added as conditions to explore the different effects of exogenous and endogenous attention on subliminal semantic priming. The results showed that: (1) attentional orienting promoted subliminal semantic priming, and the interaction between the cue of location and the consistency of the target words was significant. Under the condition of effective cue, the consistent accuracy and reaction time results were significantly better than the inconsistent effect. (2) exogenous attention has a promoting effect on subliminal semantic priming, which is shown in the interaction of the cue of location, SOA level and the consistency of the target words was significant. When SOA=160ms, exogenous attention has a positive effect on subliminal processing and the effect of subliminal semantic priming is better. While when SOA > 300ms, the effect of subliminal semantic priming is not obvious. (3) when SOA=1000ms, endogenous attention can still promote the subliminal semantic priming effect, prolong the unconscious processing and enlarge the time window of attention. The above studies indicate that different types of attention have different effects on subliminal semantic priming. Exogenous subliminal semantic priming is transient, while endogenous subliminal semantic priming has persistent effects.

Keywords: Unconscious processing, Subliminal Semantic Priming Effects, Attentional Orienting, Stimulus-onset Asynchrony

阈下抑郁症对动态愤怒表达的稳定缺陷：纵向研究

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摘 要 许多先前的研究表明,抑郁症患者存在面部情绪感知缺陷。然而,这些研究中的大多数使用静态面部表情而不是动态面部表情。与静态面部表情相比,动态面部表情是社交互动中更自然的媒介。先前的研究发现,重度抑郁症(MDD)患者的动态情绪感知受损。阈下抑郁症(StD)是重度抑郁症的早期阶段,发展为MDD的风险很高。然而,对阈下抑郁者的动态情绪感知知之甚少。因此,本研究的目的是调查阈下抑郁者是否会在动态面部表情的感知方面存在障碍,如果存在,这些障碍是否会随着时间的推移保持稳定。783个人完成了问卷筛选。最后,共有91名参与者参与了研究,其中包括46名阈下抑郁者和45名匹配的健康人。所有参与者完成了动态情绪识别任务和静态情绪识别任务。在动态情绪识别任务的每次试验中,从中性(0%)

表情到极端 (100%) 表情 (快乐、悲伤、愤怒或恐惧) 的刺激序列由 51 个图像组成。为了避免时间和情绪表达强度之间有很强的相关性,我们在呈现下一张图像之前随机重复序列中的一些图像。因此,一个序列有 51 张独特的图像,但总共呈现了 71 张图像。在每次试验开始时,在屏幕中心呈现 2000 毫秒的注视点。然后连续呈现 71 张图像,每张图像持续 500 ms。参与者被要求在识别出表情后立即按下空格键。最后,他们用鼠标选择了相应的情感词。所有参与者都被要求完成 64 项试验,其中反应正确的试验被用于分析。在静态情绪识别任务的每次试验中,在每次试验开始时,在屏幕中心呈现 1500 毫秒的注视点。然后呈现具有不同情绪强度 (20%、40%、60%、80% 和 100%) 的情绪面孔 (高兴、悲伤、愤怒或恐惧) 或中性面孔,持续 100 毫秒。进行与动态情绪识别任务相同的判断任务。所有参与者都被要求完成 480 次试验,其中反应正确的试验被用于分析。所有参与者在大约 4 个月的时间间隔后完成了这些相同的任务。在初步评估中,与健康对照组相比,阈下抑郁组仅对动态愤怒表情表现出更强的敏感性。然而,对于静态情绪表达,这两组之间没有发现显著差异。在 4 个月的随访评估中,我们发现了与初始评估相同的结果。总之,阈下抑郁者对动态愤怒表达的感知有缺陷,但对静态情绪表达的感知没有缺陷。这些结果表明,对动态情绪表达的敏感性可能是区分阈下抑郁个体与健康个体的生物标志物。未来的研究可以使用动态情绪的识别作为阈下抑郁者抑郁症状改善的指标。

关键词 阈下抑郁, 动态情绪识别任务, 静态情绪识别任务, 情绪表达

Stable deficits to the dynamical angry expression in subthreshold depression: a longitudinal study

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Abstract: Many previous studies have demonstrated that individuals with depression have deficits of facial emotion perception. However, most of these studies used static facial expressions rather than dynamic facial expressions. Compared to static facial expressions, dynamic facial expressions are more natural media in social interaction. Previous studies have found that individuals with major depression (MDD) suffer from impaired perception of dynamic emotions. Subthreshold depression (StD) is the early stage of severe depression, which is highly risk to develop into MDD. However, little is known about the dynamic emotional perception of StD. Therefore, the purpose of the present study was to investigate whether individuals with StD could have impairments in the perception of dynamic facial expressions, and if it existed, whether the impairments could remain stable over time. Seven hundred and eighty-three individuals completed the questionnaire screening. Finally, a total of 91 participants participated in the study, including 46 individuals with StD and 45 matched healthy individuals. All participants completed a dynamic emotion recognition task and a static emotion recognition task. In each trial of the dynamic emotion recognition task, 51 images ranging from a neutral (0%) expression to an extreme (100%) expression (happy, sad, angry, or fear) consisted of stimulus sequences. To avoid having a strong correlation between time and emotional expression intensity, we randomly repeated some images within sequences before presenting next image. Thus, a sequence had 51 unique images but 71 images were presented in total. At the beginning of each trial a fixation cross was presented 2000 ms at the center of screen. Then 71 images were continuously presented and each image lasted for 500 ms. Participants were instructed to press the space key as soon as they recognized the expression. Finally, they used the mouse to select the corresponding emotional word. All participants were required to complete 64 trials in which the trials with correct responses were used for analysis. In each trial of the static emotion recognition task, at the beginning of each trial a fixation cross was presented 1500 ms at the center of screen. Then an emotional face (happy, sad, angry, or fear) with different emotional intensity (20%, 40%, 60%, 80%, and 100%) or neutral face was presented for 100 ms. A same judgment task as that in the dynamic emotion recognition task was conducted. All participants were required to complete 480 trials in which the trials with correct responses were used for analysis. All participants completed these same tasks after an approximately 4-month time interval. At the initial assessment,

compared with the healthy control group, the StD group demonstrated a stronger sensitivity only to the dynamical angry expression. However, for the static emotional expressions, no significant difference was found between these two groups. At the 4-month follow-up assessment, we found the same results as that in the initial assessment. In conclusion, individuals with StD had a deficit to the perception of the dynamical angry expression but not of the static emotional expressions. These results indicated that the sensitivity to the dynamical emotion expressions might be a biomarker for distinguishing individuals with StD with the healthy individuals. Future research can use the recognition of dynamic emotions as an indicator of improvement in depressive symptoms of StD.

Keywords: Subthreshold depression, dynamic emotion recognition task, static emotion recognition task, emotional expression

认知的悖论：认知能力越强，越容易被无关情绪信息干扰

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摘要 任务无关的情绪刺激会损害认知任务的表现，这种现象被称为情绪分心。既往研究发现，增加任务的注意负载时，任务无关情绪刺激对任务表现的损害会减少甚至消失。根据有限认知资源的观点，只有在认知负载较低的情况下，个体才有多余的认知资源用于加工无关的情绪信息。然而，既往研究多直接操纵任务的难度来改变认知负载，很少有研究从个体差异的角度进行分析。不同个体的认知能力不同，因此同一任务在不同个体间占用的认知资源比例会有所差异，进而会影响个体对无关信息的加工。基于上述分析，本研究假设，在同一任务中，那些认知能力更强（无情绪干扰刺激时的任务表现更好）的个体将更容易受无关情绪信息干扰。35名成年人（57%为女性，平均年龄20.1岁，年龄范围19~24岁）参与了本研究。本研究为被试内设计，所有被试均需完成一个知觉任务和一个工作记忆任务，两个任务中均包含54张情绪图片（正性情绪、负性情绪各27张）和27张中性图片，作为干扰刺激。被试在中性情境下的表现作为“认知能力”的指标，而中性情境与正性/负性情境中的表现之差分别作为“正性/负性情绪分心损耗”的指标。将认知能力、年龄、性别作为自变量，将正性情绪分心损耗、负性情绪分心损耗分别作为因变量，使用逐步回归进行数据分析。与假设一致，在知觉任务中，认知能力可显著预测正性、负性情绪分心损耗的程度，在工作记忆任务中，认知能力可显著预测负性情绪分心损耗的程度，但无法预测正性情绪分心损耗的程度。两个任务中，认知能力越强，分心损耗越多。这种预测作用具有任务特异性。此外，本研究还发现，性别可以显著预测工作记忆任务中正性情绪分心损耗的程度，男性的正性情绪分心损耗少于女性。本研究表明，任务特异的认知能力越强，受无关情绪刺激的干扰越大，从个体水平支持了有限认知资源的观点。此外，工作记忆中正性情绪刺激的干扰具有性别差异，男性受到的干扰弱于女性。

关键词 情绪分心，知觉，工作记忆，有限认知资源

The paradox of cognition: the greater the cognitive capacity, the more interference by irrelevant emotional distractors

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Abstract: Task-irrelevant emotional stimuli can impair performance on cognitive tasks, a phenomenon known as emotional distraction. Previous studies have shown that the impairing effect of task-irrelevant emotional stimuli on performance decreases or even disappears when increasing the attentional load. According to the limited cognitive resource perspective, individuals have excess cognitive resources to process irrelevant emotional information when cognitive load is low. However, most previous studies changed the cognitive load by directly manipulating the difficulty of the task itself, and few studies have examined the impairing effect from the perspective of individual differences. Individuals have different cognitive capacity, and therefore the proportion of cognitive resources

occupied by the same task may vary between individuals, which in turn may affect the processing of irrelevant information. Based on the above analysis, the current study hypothesized that individuals with greater cognitive ability (better performance on the task without emotional distractors) would be more likely to be distracted by irrelevant emotional information in the same task. 35 participants (57% female; $M_{age} = 20.1$; range 19 ~ 20 years) participated in the study. The study was a within-subjects design in which all subjects were asked to complete a perception task and a working memory task, both of which contained 54 emotional pictures (27 positive and 27 negative) and 27 neutral pictures as distractors. Performance in neutral condition was seen as “cognitive compacity”, and the difference between the performance in the neutral condition and the positive/negative condition was used as an indicator of “positive/negative emotional distractor impairment”. Cognitive capacity, age and gender were used as independent variables, and positive/negative emotional distractor impairment was used as dependent variable respectively, and the data were analyzed using stepwise regression. Consistent with the hypothesis, cognitive capacity significantly predicted the extent of positive and negative emotional distractor impairment in the perception task, and the extent of negative emotional distractor impairment rather positive emotional distractor impairment in the working memory task. The stronger the cognitive capacity, the greater the emotional distractor impairment in both tasks. This predictive effect was task specific. In addition, the present study found that gender significantly predicted the extent of positive emotional distractor impairment in the working memory task, with male having less positive emotional distractor impairment than female. The present study suggests that the greater the task-specific cognitive capacity, the greater the interference by irrelevant emotional stimuli, supporting the idea of limited cognitive resources from the individual perspective. In addition, there were sex differences in the interference of positive emotional distractors in working memory, and male were interfered less compared to female.

Keywords: emotional distraction, perception, working memory, limited cognitive resource

联合层级规则切换中分工要素与操作者选择之间的加工机制

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摘要 先前的研究已经提出, 当行为选择和操作者选择绑定时, 在联合任务转换实验中会出现个体间转换代价。然而, 任务选择之间的分工也是一种任务要素的分工。我们旨在确定当任务分工和任务执行者选择被绑定时, 联合任务转换实验中是否仍会有个体间转换代价产生。此次研究采用了改进后的层级规则转换范式, 来考察任务类型(实验1)和响应选择(实验2)之间的分工。其中, 线索是同时具有三种不同知觉特征(字体、颜色、正反向)的大写字母 R, 目标是阿拉伯数字(1-9, 5 除外)。根据三种知觉特征的提示, 将线索提示分为高层级规则切换、低层级规则切换和重复; 而根据不同层级规则的提示, 将对目标进行奇偶数或者大小数的判断。实验结果表明, 这两项实验都在联合任务规则转换实验中表现出了个体间的转换代价。这些结果说明参与者会首先处理与判断当前试次是否应该个体本人操作, 并加工与其有关的任务分工要素, 而这一加工过程会导致参与者对属于合作者的分工要素进行共同表征。此外, 与个体独立完成所有实验内容的情境相比, 联合情境实验中表现出的转换代价较小, 这表明了参与者在进行 no-go 试次后不需要太多额外的反应性控制来克服干扰问题。在联合情境的实验条件下, 由于参与者和合作者之间的任务分工减弱了高层级结构的影响, 导致了高层级规则切换和低层级规则切换之间没有显著的表现差异。

关键词 任务分工, 转换代价, 共同表征, 联合规则转换, 层级转换

价值联结奇异项的主动抑制

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摘要 近期的视觉注意理论指出, 与价值建立联结的刺激特征可以通过改变其物理显著性自动捕获注意。最近有研究发现, 人们能够通过习得奇异干扰项的特征对其进行主动抑制。那么一个重要的理论问题就是人们

能否通过学习价值联结奇异项的特征对其进行主动抑制。本研究采用捕获探针范式,通过两个实验对这一理论问题进行探究。在实验1中,通过变化奇异项的颜色特征值对抑制的机制进行研究,结果发现,当奇异项的颜色特征值在试次间变化时,相对于奇异干扰项的缺失试次,奇异干扰项出现试次上的搜索反应时更快;且奇异干扰项位置上的探针字母的回忆率低于中性干扰项位置上的,支持基于特征维度上局部不连续性的二阶特征抑制的观点。在实验2中,首先通过训练将奇异干扰项的颜色特征与价值建立联结,然后探究奖赏联结干扰项能否得到主动抑制,结果发现,相对于奖赏联结干扰项的缺失试次,无奖干扰项出现试次上的搜索反应时更快;且与有、无奖赏建立联结的干扰项位置上的探针字母回忆率低于中性干扰项上的,无奖干扰项上的字母回忆率最低,结果表明,人们能够对价值联结的奇异项进行主动抑制,且抑制程度会受到价值的调节。这些发现在提升人们对奖赏相关刺激注意抑制的理解,减少临床、教育和工作领域中奖赏相关刺激的干扰作用具有重要的启示意义。

关键词 主动抑制,价值联结,注意捕获

Active suppression of value-associated singletons

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Abstract: The recent visual attentional control theory suggests that stimulus features that are associated with values can automatically capture attention by changing their physical saliences. In addition, recent research demonstrates that people can actively suppress singleton distractor by learning the feature of irrelevant stimuli. Hence, a significant theoretical issue is whether irrelevant value-associated singletons can be suppressed through learning their feature. Here, we employed a capture-probe paradigm to test this question through two experiments. Experiment 1 investigated the suppression mechanisms by changing the colors of singletons, the behavioral results showed that when the singleton color changed across trials, reaction times (RTs) were significantly faster on singleton-present trials than those on singleton-absent trials, and probe recall accuracy was greater for the letter in the neutral distractor than that for the letter in the singleton distractors. The suppression effect is consisted with the second-order feature suppression models based on the local discontinuities within specific color dimension. In experiment 2, the association between color and value was firstly established through training, then it was explored whether the value-associated singleton could be suppressed. We found that RTs were faster only in the presence of unrewarded distractor compare with the absence of distractor condition; probe letter recall accuracy for the letter in the neutral distractor was increased than those for letters inside rewarded and unrewarded distractors, and accuracy for the letter inside unrewarded distractors was the lowest. These results showed that the value-associated singletons could be suppressed actively, and the amount of suppression was modulated by value. These findings have important implications for understanding the attentional inhibition of reward-related stimuli and reducing their interference in clinical, educational and work fields.

Keywords: active suppression, value association, attentional capture

不同特征空间下注意负荷和时间结构对预测运动估计的影响

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摘要 在预测运动 (prediction motion, PM) 任务中, 人们判断被遮挡的移动物体的当前位置。越来越多的证据表明, 大脑具有一个通用的速率控制模块, 可以对位置、数字等变化动态心理模拟。以往研究表明注意负荷、刺激运动路径的时间结构(可见路径与被遮挡路径的比值)会对估计位置的 PM 产生影响。然而, 注意负荷和该时间结构与估计 PM 之间的关系尚未得到充分研究。此外, 研究者认为不同特征空间(位置和数字)下个体估计 PM 的表现相似。因此, 本研究采用双任务范式, 通过两个实验探讨了不同特征空间下注意负荷对不同时间结构的 PM 估计的影响。实验1采用2(低负荷, 高负荷)×3(时间结构为0.5, 1, 1.5)的两因素被试内实验

设计,探讨了在位置空间下,注意负荷和时间结构对PM估计的影响。因变量指标为PM估计的均方根误差(Root-mean-squared error, RMSE)、相对偏差BIAS、变量误差(Variable error, VE)。20名在校大学生参与了该实验。实验2探讨了数字空间下,注意负荷对不同时间结构PM估计的影响,其中任务间通过刺激运动速度“百分比/秒”来匹配,其他同实验1,25名在校大学生参与了该实验。采用重复测量方差分析对数据进行分析。实验1结果表明,对于RMSE,注意负荷的主效应显著($p = 0.009$),注意负荷与时间结构交互作用显著($p = 0.007$)。进一步简单效应分析发现,时间结构为0.5 ($p = 0.04$)和1.5 ($p = 0.001$)时,注意负荷对PM估计影响差异显著,时间结构为1时差异不显著($p = 0.29$)。对于VE和BIAS的分析发现,被试估计PM的准确性与其估计敏感性有关。实验2结果表明,对于RMSE,注意负荷的主效应显著($p = 0.047$),注意负荷和时间结构交互作用边缘显著($p = 0.095$)。进一步简单效应分析发现,时间结构为0.5 ($p = 0.019$)和1.5 ($p = 0.038$)时,注意负荷对PM估计影响差异显著,时间结构为1时差异不显著($p = 0.644$)。对于VE和BIAS的分析发现,被试估计PM的准确性与其估计偏差有关。本研究发现遮挡时间为1~2s时,个体会利用时间信息进行PM估计,注意负荷对不同维度下的时间估计影响机制存在差异。

关键词 预测运动,特征空间,注意负荷,时间结构

The Influence of Attentional Load and Temporal Structure on The Estimation of Prediction Motion in Different Feature Spaces

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Abstract: In the prediction motion (PM) task, people judge the current position of a moving object that is occluded. More and more evidence show that the brain has a universal rate control module that can simulate dynamic mental changes such as position and numbers. Previous studies have shown that attention load and the temporal structure of the stimulating motion path (the ratio of the visible path to the occluded path) will affect the estimated position of PM. However, note that the relationship between load and this temporal structure and estimated PM has not been fully studied. In addition, the researchers believe that the performance of individual estimated PM under different feature spaces (location and number) is similar. Therefore, this study adopts the dual-task paradigm and explores the influence of attentional load on the PM estimation of different temporal structures in different feature spaces through two experiments. Experiment 1 uses a two-factor in-subject experimental design of 2 (low load, high load) $\times$ 3 (temporal structure 0.5, 1, 1.5) to explore the influence of attention to load and temporal structure on PM estimation in the location space. The dependent variable indicators are the root-mean-squared error (RMSE), relative deviation BIAS, and variable error (VE) of PM estimation. Twenty college students participated in the experiment. Experiment 2 explored the influence of attentional load on PM estimation of different temporal structures in the digital space, among which tasks were matched by stimulating the movement speed "percent/sec". The others were the same as Experiment 1, and 25 college students participated in the experiment. Repeated measures analysis of variance was used to analyze the data. The results of Experiment 1 show that for RMSE, the main effect of attention load is significant ($p = 0.009$), and the interaction between attention load and temporal structure is significant ($p = 0.007$). Further simple effect analysis found that when the temporal structure is 0.5 ($p = 0.04$) and 1.5 ($p = 0.001$), the effect of attention load on PM estimation is significantly different, and when the temporal structure is 1, the difference is not significant ($p = 0.29$). The analysis of VE and BIAS found that the accuracy of participants' estimation of PM is related to their estimation sensitivity. The results of experiment 2 show that for RMSE, the main effect of attention load is significant ($p = 0.047$), and the interaction between attention load and temporal structure is marginally significant ($p = 0.095$). Further simple analysis of the effects found that when the temporal structure is 0.5 ($p = 0.019$) and 1.5 ($p = 0.038$), the effect of attention load on PM estimation is significant, but when the temporal structure is 1, the difference is not significant ($p = 0.644$). The analysis of VE and BIAS found that the accuracy of participants' estimation of PM is related to their estimation bias. This study found that when the occlusion time is 1~2s, the

individual will use the time information to estimate the PM, paying attention to the difference in the impact mechanism of the load on the time estimation in different dimensions.

Keywords: Prediction motion, Feature space, Attention load, Temporal structure

不同分散程度下多目标追踪的内外源线索特征突显效应

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摘要 多目标追踪研究关注动态场景中的信息加工, 是探究同时追踪多个目标的容量有限性注意加工机制的经典范式。以往研究大多关注追踪阶段物体特征对多目标追踪绩效的影响, 而线索阶段的目标物体位置以及线索提示方式如何影响多目标追踪绩效, 目前还尚无定论。因此, 本研究目的在于从目标位置和特征突显效应两个角度揭示线索阶段对多目标追踪的影响机制。本研究基于经典多目标追踪范式, 招募 48 名大学生被试 (男性 24 名, 女性 24 名, 18-25 岁), 采用 2*2 被试内实验设计, 以线索提示方式 (内源性线索-目标整体颜色变红; 外源性线索-目标外围处套上红色圆环) 和目标分散程度 (分散、集中) 为自变量, 以多目标追踪准确率为因变量。结果表明: 1) 线索提示方式主效应显著, 内源性线索提示追踪绩效优于外源性线索提示; 2) 分散程度的主效应显著, 目标集中的追踪绩效优于目标分散; 3) 线索提示和分散程度的交互作用显著, 在目标分布集中时, 外源性线索追踪绩效优于内源性线索; 在目标分布分散时, 内源性线索追踪绩效优于外源性线索。基于此, 本研究得出如下结论, 在线索阶段目标位置的分散程度以及线索提示的特征突显均会对多目标追踪绩效产生影响。也就是说, 多目标追踪的线索阶段目标物体位置信息以及表面特征信息得到了进一步加工, 这在一定程度上支持了客体档案理论, 也为复杂视觉条件下的目标刺激呈现方式的设计提供了重要依据。

关键词 多目标追踪, 内外源线索, 特征突显效应, 分散程度

Feature salience effect of endogenous and exogenous cues in multiple object tracking with different degrees of dispersion

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Abstract: Multiple object tracking(MOT) research focuses on information processing in dynamic scenes. It is a classic paradigm to study attention mechanisms with limited capacity that track multiple objects simultaneously. Previous studies have focused on the influence of object features in the tracking stage on the performance of MOT, but how the location of the objects and cueing mode affect the performance of MOT has not been determined. Therefore, this study aimed to explore the influence of cueing stage on MOT from the perspectives of target location and feature salience effect. In this study, 48 subjects (male 24, female 24, 18-25 years old) were recruited using the classic MOT paradigm. A 2*2 within-subjects design was used, cueing mode (endogenous cue-the overall color of the target turned red; exogenous cues -the target was surrounded by a red ring) and the degree of dispersion (dispersion and concentration) of the target were independent variables, and the accuracy of MOT was the dependent variable. The results show as follows: 1) the main effect of cueing mode is significant, and the tracking performance of endogenous cueing mode is better than that of exogenous cueing mode; 2) The main effect of dispersion degree is significant, and the tracking performance of target concentration is better than that of target dispersion; 3) The interaction between cueing mode and dispersion degree is significant. When the target distribution is concentrated, the performance of exogenous cue tracking is better than that of endogenous cue tracking. When the target distribution is dispersed, the performance of endogenous cue tracking is better than that of exogenous cue tracking. Conclusion: It shows that the dispersion degree of target location and the feature salience of cueing mode have

influence on MOT. It shows that the location information and surface feature information of the targets are processed in the MOT cue stage, which supports the object archive theory partly and provides an important basis for the design of target stimulus presentation with complex visual conditions.

Keywords: multiple object tracking, endogenous and exogenous cue, feature salience effect, degree of dispersion

视觉拥挤和整体知觉共享一个注意机制吗？

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摘要 在外周视野内, 当一个物体被其他相似物体包围时, 对该物体的识别会变得更加困难, 这种现象被称为视觉拥挤, 它反映了视觉注意的局限性。幸运的是, 产生拥挤的机制同时可能促进整体知觉, 以弥补有限的注意力。有充分证据表明, 注意可能在拥挤的产生中发挥重要作用(He et al., 1996), 并调节拥挤(Albonico et al., 2018; Dakin et al., 2009; Freeman & Pelli, 2007; Scolari, Kohnen, Barton, & Awh, 2007; Yeshurun & Rashal, 2010)。然而, 整体知觉是否需要注意仍存在不少争议(Oriet & Brand 2013; Jackson-Nielsen, Cohen, & Pitts, 2017)。鉴于注意在拥挤和整体知觉中的作用, 本研究通过后线索(以降低目标的注意分辨率)和前线索(以提高目标的注意分辨率)来操纵视觉注意, 以考察拥挤和整体知觉是否共享一个注意机制。实验刺激由 7 条不同朝向的线条组成, 被试需根据提示判断所有线条的整体朝向或中心线条的朝向。在实验 1 中, 在刺激消失后通过后线索提示被试需要完成整体朝向判断任务或中心单个线条的朝向判断任务。通过与基线条件(事先告知被试仅需要完成两个任务中的一个)的对比发现, 无论是在强拥挤还是弱拥挤条件下, 降低对目标的注意分辨率都会同时损害拥挤和整体知觉的表现。实验 2 考察了对中心目标位置的预提示对视觉拥挤和整体知觉的影响。结果表明, 在强拥挤条件下, 提高目标的注意分辨率能够同时提高拥挤和整体知觉的表现; 而在弱拥挤条件下, 提高目标的注意分辨率虽也能提高拥挤的表现, 但却会损害整体知觉的表现。本研究的结果综合表明, 视觉拥挤和整体知觉可能在某些层面上具有共同的注意机制。

关键词 视觉拥挤, 整体知觉, 注意, 前线索, 后线索

Do visual crowding and ensemble perception share a common attentional mechanism?

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Abstract: An object will be more difficult to recognize when this object is surrounded by other similar objects in the visual periphery, which is called visual crowding, reflecting limitations of visual attention. Fortunately, the mechanism generating crowding may simultaneously facilitate ensemble perception, which can compensate for the limited attentional capacity. It is well documented that attention plays a critical role in the generation of crowding (He et al., 1996) and modulates crowding (Albonico et al., 2018; Dakin et al., 2009; Freeman & Pelli, 2007; Scolari, Kohnen, Barton, & Awh, 2007; Yeshurun & Rashal, 2010). However, it is still much debated whether ensemble perception requires attention (Oriet & Brand 2013; Jackson-Nielsen, Cohen, & Pitts, 2017). In terms of the role of attention in crowding and ensemble perception, our study manipulated visual attention by postcueing (so as to decrease attentional resolution of the target) and precueing (so as to increase attentional resolution of the target) to test whether crowding and ensemble perception share a common attentional mechanism. The stimulus consisted of 7 bars with different orientations and participants were instructed to judge the ensemble orientation of all bars or the orientation of a crowded bar based on the cue. In experiment 1, participants needed to complete the task of the judgement of ensemble orientation or the judgement of central individual orientation through a postcue after the stimulus disappeared. Compared with the base case (in which participants were told to complete only one of the two tasks in advance), we found that decreasing attentional resolution of the target harmed the performance of both crowding and ensemble perception, whether the crowding condition was strong or weak. Experiment 2 investigated

the influence of precueing to the target location on visual crowding and ensemble perception. The results showed that in strong-crowding condition, increasing attentional resolution of the target enhanced the performance of both crowding and ensemble perception; in weak-crowding condition, increasing attentional resolution of the target harmed the performance of ensemble perception, though it also enhanced the performance of crowding. Taken together, our results indicate that visual crowding and ensemble perception may share a common attentional mechanism at some levels.

Keywords: visual crowding, ensemble perception, attention, precue, postcue

基于特征关系的奖赏驱动注意效应

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摘要 奖赏关联的视觉刺激能够吸引注意, 并且这种注意效应独立于任务目标和刺激属性驱动的注意。然而, 这种奖赏驱动的关注效应是来源于刺激的特征值(如红色), 还是来源于在不同情境中刺激的特征关系(如相对更红的颜色)还尚不明确。为探讨这两种可能的假设, 本研究采用了奇异刺激搜索范式, 在红色到黄色的连续维度上选取了五种颜色(红色、红橙色、橙色、黄橙色、黄色)。在实验一的训练阶段, 让被试建立起颜色与奖赏之间的联结(如红色高奖赏, 黄色低奖赏); 在测试阶段, 保持奖赏关联刺激的特征值不变, 通过操控刺激的特征关系(如橙色相对于黄色刺激更红, 相对于红色刺激更红), 考察奖赏驱动的关注是否受到特征关系的影响。结果发现, 相较于和低奖赏匹配的特征关系(如更黄的颜色条件: 橙色在红色中), 与高奖赏匹配的特征关系(如更红的颜色条件: 橙色在黄色中)的注意效应更强。实验二采用了同样的训练和测试任务, 并进一步操控使得奖赏关联刺激的特征值与其所对应的特征关系相反(如黄橙色刺激, 其特征值更接近黄色, 但呈现在黄色刺激中, 其特征关系为更红)。结果发现, 相较于和高奖赏关联特征值相近的刺激(如红橙色), 与高奖赏关联特征关系匹配的刺激(如黄橙色在黄色刺激中)所引发的注意效应更强。综合两个实验的结果表明, 奖赏驱动的关注效应来源于特定情境中刺激的特征关系, 且这种效应强于由刺激特征值本身驱动的关注效应。该研究结果挑战了当前对于奖赏学习通过调控特征值的显著性影响选择性注意的理解, 表明了奖赏学习调控注意效应的新机制。

关键词 奖赏驱动的关注, 特征关系, 特征值

Reward-driven Attention Based on Feature Relationship

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Abstract: Reward-associated stimuli attract attention, independent of goal-driven attention and stimulus-driven attention. However, it remains unclear whether the reward-driven attentional effect is achieved through the feature value (e.g., red), or the feature relationship among stimuli (e.g., redder stimulus). To explore these two possible hypotheses, we adopted a singleton search paradigm and selected five colors (red, red-orange, orange, yellow-orange, and yellow) from a red-to-yellow continuum. In Experiment 1, during the training session, participants were asked to establish the association between color and reward (e.g., red with high reward, yellow with low reward). In the test session, we kept the feature value constant, while varied the feature relationship of reward-associated stimuli (e.g., an orange stimulus is redder among yellow stimuli, but it is yellower in red stimuli), to examine whether reward-driven attention is influenced by feature relationship. Our results show that, reward-driven attentional effect is stronger when the feature relationship (e.g., an orange stimulus is redder among yellow stimuli) matches the high-reward association (e.g., red), as compared to the condition where the feature relationship matches the low-reward association. In Experiment 2, using the same training and test task, we rendered the feature value to conflict with the feature relationship of reward-associated stimuli (e.g., a yellow-orange stimulus has a feature value similar to yellow, but its feature relationship is redder among yellow stimuli). Our results show that, reward-driven attentional effect is stronger when the feature relationship (e.g., a yellow-orange stimulus is redder among yellow stimuli) matches the

high-reward association (e.g., red), as compared to the condition when the feature value is similar to the high-reward association (e.g., a red-orange stimulus). Combined results from these two experiments, we show that reward-driven attention effect is achieved through the feature relationship, and the influence of feature relationship could be stronger than that of feature value. Our results challenge the prevailing view that reward biases selective attention by altering the salience of feature value and indicate a new mechanism underlying reward-driven attention.

Keywords: reward-driven attention, feature relationship, feature value

整体-局部范式下的数字 SNARC 效应

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摘要 研究者们发现无论采用大小比较任务还是奇偶判断任务, 小数与左方位相关联, 大数与右方位相关联, 并将该现象命名为空间数字联合反应编码(Spatial Numerical Association of Response Codes)效应, 简称 SNARC 效应。关于 SNARC 效应的机制问题, 至今尚存争议——视觉空间编码理论强调该效应发生在早期编码阶段, 言语空间编码理论强调该效应发生在反应选择阶段。本研究拟为两理论之争提供实验证据。采用整体与局部范式, 将数字和具有明确空间特性的箭头进行结合, 构建了一种复合刺激——由数字组成的箭头, 并将其作为实验材料, 在实验一中采用数字大小比较任务(与 5 比较), 在实验二中采用箭头方向判断任务, 实验设计均为 2[数字: 小数(1/2), 大数(8/9)]×2(箭头方向: 左, 右)×2(反应手: 左手, 右手)的三因素完全被试内设计。因变量为反应时。被试为山东省某大学 36 名(女 26 名)全日制本科生。结果显示: 在数字大小比较任务中, 箭头方向和反应手的交互作用显著, SNARC 效应不显著; 在箭头方向判断任务中, SNARC 效应显著(且仅出现在箭头方向向右时), 箭头方向和反应手的交互作用不显著。在数字大小比较任务中, 当个体对数字组成的箭头进行刺激表征时, 整体加工优势显现, 即箭头表征影响了数字表征过程, 个体仅激活了任务所要求的数字大小信息以便做出正确反应, 但并未激活心理数字线(the mental number line, MNL)上数字的空间位置信息, 因此未出现 SNARC 效应, 这说明刺激表征阶段对 SNARC 效应具有重要作用; 在箭头方向判断任务中, 数字的大小比较过程是在无意识状态下进行的自动化加工, 资源更为充足, 同时, 由于任务为判断箭头方向, 数字和箭头在反应选择阶段竞争资源, 而相比左箭头, 个体又对右箭头反应更快, 消耗资源更少, 因此, 仅在箭头方向向右时表现出 SNARC 效应, 这说明反应选择阶段对 SNARC 效应也具有重要作用。综上所述, 本研究发现数字的视觉空间编码和言语空间编码在 SNARC 效应的出现中均起到重要作用。未来研究可考虑进一步丰富实验材料和实验任务, 探讨早期编码阶段和反应选择阶段对 SNARC 效应的作用。

关键词 整体-局部范式, 数字加工, SNARC 效应

The SNARC effect under global and local paradigms

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Abstract: Researchers have found that whether in a magnitude comparison task or in a parity judgment task, shorter reaction time was obtained for small numbers responded to with the left key than with the right key, conversely, large numbers were responded to preferentially with the right key. They referred to this phenomenon as the spatial-numerical association of response codes (SNARC) effect. There are mainly two different theories explaining this phenomenon—the visuo-spatial coding account emphasizes the importance of the early coding stage while the verbal-spatial coding account emphasizes the response selection stage in the presence of SNARC effect. The study provided further experiment proofs for the theoretical dispute. Combining numbers with arrows by global and local paradigms, a compound stimulus—arrows made up with numbers was designed as experimental materials. Thirty-six undergraduates (26 females, all right handed) from a university in Shandong Province participated in the study after signing an informed consent. They were asked to judge whether the number is larger or smaller than 5 in experiment1 and judge whether the arrow is left or right in experiment2. The three factors complete within-subject design, 2 [number: the small (1/2), the large (8/9)]×2 (arrow direction: left, right)×2 (response hand: the left, the right), was

made in both experiments. Dependent variable was reaction time. The result indicated that there was significant interaction effect between arrow direction and response hand in the magnitude comparison task. The interaction between number and response hand reached significance (only when right-arrow) in arrow direction judgement task, which suggested that the SNARC effect occurred. In the magnitude comparison task, when representing arrows made up with numbers, the strengthen of global processing influenced number representation in the mental number line, which caused the absence of SNARC effect. It demonstrated that the early coding stage was necessary for the presence of SNARC effect. In the arrow direction judgement task, the numerical value was automatically activated in unawareness level with enough recourse, which profits the SNARC effect. But why barely to right-arrows? The task was judging arrow directions which led to the competition between numbers and arrows in the response selection stage and shorter reaction time was obtained to right-arrows which consumed less recourse than left-arrows, consequently, the SNARC effect only occurred when processing right-arrows. It showed that the response selection stage played an essential role in the performance of SNARC effect. Overall, the study found that both the visuo-spatial coding and the verbal-spatial coding were important in the presence of the SNARC effect. Further researches could explore the role of the early coding stage and the response selection stage in the SNARC effect by enriching experimental materials and tasks.

Keywords: global and local paradigms, digital processing, SNARC effect

不同情绪效价对表象生成的影响：一项眼动研究

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摘 要 关于情绪与表象之间具有特殊联系已经在实验心理学和临床心理学中较为常见。彼德·郎提出的情绪表象生物信息理论假设认为情绪刺激的心理表象激活了重叠的储存信息的联想网络在现实中刺激的实际体验被激活。目前已有研究证明心理表象具有引发情绪反应的能力, 情绪对心理认知活动的影响具有普遍性。由此, 情绪也会影响表象生成过程, 那么不同情绪效价是如何影响心理表象生成过程? 眼动在表象生成过程中扮演功能性角色, 本研究通过三个实验探讨不同情绪效价对表象生成过程中的眼动影响。采用标准化表象生成范式, 使用 3X3 的网格图为材料, 依据情绪二分法将情绪效价划分为积极情绪和消极情绪。实验一为自然状态下的表象生成过程中的眼动行为并记录其眼动指标。实验二为积极情绪启动条件下对表象生成过程的眼动影响并记录其眼动指标。实验三为消极情绪启动条件下对表象生成过程的眼动影响并记录其眼动指标。通过比较三个实验的眼动数据, 预计结果发现, 不同情绪效价会使表象生成过程产生不同规律性的眼动分化, 积极情绪与消极情绪对表象生成过程也会产生不同的眼动行为, 进一步加强情绪与表象之间的关系。

关键词 表象生成, 情绪, 眼动追踪技术

The influence of different emotional valences on the generation of representations: an eye movement study

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Abstract: The special connection between emotion and appearance has become more common in experimental psychology and clinical psychology. Peter• Lang's bioinformatics theory of emotional imagery hypothesizes that the

psychological imagery of emotional stimuli activates the overlapping associative network of stored information to activate the actual experience of the stimulus in reality. At present, studies have proved that mental imagery has the ability to trigger emotional reactions, and the influence of emotions on mental cognitive activities is universal. Therefore, emotions will also affect the process of image generation, so how does different emotional valence affect the process of mental image generation? Eye movement plays a functional role in the process of image generation. This study uses three experiments to explore the influence of different emotional valence on the process of image generation. Using the standardized representation generation paradigm, using 3X3 grid graphs as materials, the emotional valence is divided into positive emotions and negative emotions according to the emotional dichotomy. Experiment 1 is the eye movement behavior in the process of appearance generation in the natural state and record its eye movement index. Experiment 2 is the influence of eye movement on the process of image generation under the condition of positive emotions and recording its eye movement indicators. Experiment 3 is about the influence of negative emotion on the eye movement of the process of image generation and recording its eye movement indicators. By comparing the eye movement data of the three experiments, it is expected that the results show that different emotional valences will cause different regular eye movement differentiations in the image generation process, and positive emotions and negative emotions will also produce different eye movement behaviors in the image generation process. Further strengthen the relationship between emotion and appearance.

Keywords: image generation, emotion, eye tracking technology

面孔左侧偏爱的异族效应：来自高加索被试的证据

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摘要 左侧偏爱效应是面孔知觉领域中稳定的知觉专家化效应。相比于右半边面孔，人们对面孔的识别更依赖于左半边面孔传递的信息。在多种任务中，如身份识别任务，性别/表情判断，年龄预估和审美偏好任务等，都存在稳定的面孔左侧偏爱效应。研究表明，我们对面孔材料的熟悉性/经验会影响我们对面孔左侧偏爱的选择，例如，在人脸（对于被试来说是更多经验的面孔）和猴脸（对于被试来说是更少经验的面孔）的研究中，发现被试对人脸的左侧偏爱强于猴脸。对比成人脸（更多经验的面孔）与婴儿脸（更少经验的面孔）等研究中，也发现了熟悉性对左侧偏爱调制的结果。本研究对面孔经验的一个重要维度，即异族面孔是如何调制左侧偏爱进行探讨。本研究招募了 65 名高加索被试，使用高加索面孔和亚洲面孔材料，要求被试完成身份相似性判断的合成面孔任务。研究结果表明，高加索被试仅在正立的本族面孔上有显著的左侧偏爱效应；另外，面孔的倒置降低了面孔左侧偏爱效应，这与以往的研究结果相同。重要的是，研究表明，被试在异族面孔上未发现左侧偏爱效应，说明面孔的左侧偏爱效应是种族特异的。总之，本研究通过对不熟悉异族面孔如何调制左侧偏爱效应进行研究，比较清楚地揭示面孔加工中的左侧偏爱效应与异族效应是相对独立的加工过程。

关键词 左侧偏爱，面孔经验，异族面孔

The other-race face processing modulates the left-side bias

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Abstract: The left-side bias (LSB) effect is thought to be a stable marker of perceptual expertise in face perception. People rely more heavily on the information conveyed by the left-side of faces as compared to the right-side. The

LSB has been robustly observed in many tasks, for instance, facial identity recognition, gender/emotion judgement, age and attractiveness evaluation. Previous studies showed that the LSB may be affected by the familiarity or experience with the face stimuli. For example, in studies with faces of human adults (more experience) and monkeys (less experience), adult human participants showed a larger LSB for human than monkey faces. Further, similar findings show familiarity/experience modulations of the LSB with human adult and infant's faces. Our study aimed to extend the LSB to another face experience dimension, namely own/other-race. Therefore, we presented 65 Caucasian participants with Caucasian and Asian faces, asking participants to complete a chimeric face task with identity similarity judgments. Caucasian participants showed a significant LSB only for own race upright faces, and face inversion decreased the LSB, which is consistent with previous studies. More important, there was no LSB for other-race faces. This indicates that the LSB is specific to own-race faces. In conclusion, we investigate how unfamiliar/less experience other-race faces modulate the left-side bias effect in this study, and clearly reveal that it's relatively independent processing between the left-side bias effect and the other-race effect.

Keywords: left-side bias effect, face experience, other-race face processing

体重与情绪表达的跨类别适应

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摘要 准确的理解他人的面部表情有助于社会交往。先前的研究表明,面部所呈现出的体重信息(超重、瘦或健康体重)作为一种重要的社会线索,会影响对面部表情的情绪感知(例如,超重的脸可能更容易被认为具有积极情绪)。然而,面部表情和体重是否可以共享共同的神经基质在很大程度上仍然是未知的。为了解决这个问题,我们在这里使用了跨类别适应范式。视觉适应被称为心理物理学的微电极。实验 1a (n = 20) 的每个试次,首先呈现一个适应刺激(例如,瘦的人脸)5000 毫秒,然后是呈现 50 毫秒的噪声掩蔽,然后再呈现模糊情绪的测试脸 200 毫秒。在出现问号后,被试需要通过按左箭头键或右箭头键来表明情绪模糊的测试脸是高兴还是生气。结果表明,与瘦脸相比,在暴露于超重的脸后情绪模糊的脸更容易被感知为愤怒。为了研究适应脸的轮廓是否影响被试随后做出的情绪判断,在实验 1b (n = 20) 中,我们使用了与实验 1a 中相应适应刺激大小相同的圆形适应刺激。结果,未能观察到跨类别的适应,表明实验 1a 的结果并非源自面部刺激的轮廓。为了进一步研究在无意识层面呈现适应刺激时是否仍会观察到跨类别适应,我们在实验 2 (n = 29) 中使用了连续闪光抑制 (CFS) 范式。实验二的主要实验包括三种适应条件(即三种试验)。在抑制试验中,将适应刺激(例如,瘦的人脸)呈现给一只眼睛(适应眼),将高对比度动态噪声呈现给另一只眼睛(测试眼)。适应期持续 4000 毫秒,在适应过程中,参与者被要求通过按键盘上的 Z 键和 C 键(如果他们能看到)来判断适应刺激的位置。适应后,一个模糊的 250 毫秒的测试脸被呈现给测试眼,位于十字的对侧(例如,如果适应刺激出现在十字的左侧,则测试脸将出现在十字右侧)。当噪声掩码出现时,参与者被要求通过按向左或向右箭头键做出强制选择来指示测试刺激是高兴还是生气。在完全优势试验中,也会呈现给一只眼睛一个适应刺激,但另一只眼睛出现了一个与适应刺激大小相同的灰色椭圆。通过这种方式,适应刺激将在意识层面呈现,类似于实验 1a。在基线试验中,其程序与抑制试验相同,只是没有适应刺激。此外,还进行了实验 2 的控制实验。实验过程与主实验中的抑制试验相同,只是没有呈现测试刺激,并且在噪声掩蔽期间指示参与者不管看到与否都要通过按左箭头键或右箭头键指示适应刺激是瘦的还是胖的。结果表明,对于完全优势实验(即有意识的试次),仍然观察到跨类别适应;然而,对于抑制试验(即无意识的试次),体重和情绪表达之间没有跨类别的适应。总之,我们首次提供证据证明体重和情绪之间的跨类别适应存在于意识层面,表明体重和情绪可能具有共享的神经机制。

关键词 适应, 跨类别适应, 体重, 表情, 情绪

Cross-category adaptation between body weight and emotional expressions

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Abstract: Exactly understanding other facial emotional expressions facilitates social interactions. Previous studies have shown that body weight of facial stimuli (overweight, thin or healthy weight), as an important social cue, can bias emotion perception of facial expressions (e.g., an overweight face may be more frequently perceived as having positive emotions). However, whether body weight of faces and facial expressions could share common neural substrates remains largely unknown. To address this issue, here we used a cross-category adaptation paradigm. Visual adaptation is referred to as the psychophysicist's microelectrode. In each trial of Experiment 1a (n = 20), an adaptor (e.g., a thin face) was firstly presented for 5000-ms, followed by a noise mask lasting for 50-ms, and then a test face with ambiguous emotion appeared for 200-ms. After a question mark appeared, participants needed to indicate whether the ambiguous test face was happy or angry by pressing the left or right arrow key. The results showed that an ambiguous emotion face was more easily perceived as angry after being exposed to overweight faces, compared with thin weight faces. To investigate whether the shape of the adapting face influenced participants' subsequent emotional judgments, in Experiment 1b (n = 20) we used the circle adaptors with same sizes as the corresponding adaptors in Experiment 1a. As a result, the cross-category adaptation failed to be observed, indicating that the findings of Experiment 1 did not originate from the shape of facial stimuli. To further investigate whether the cross-category adaptation would be still observed when adaptors were presented at the unconscious level, we used the continuous flash suppression (CFS) paradigm in Experiment 2 (n = 29). The main experiment of Experiment 2 included three adaptation conditions (i.e., three types of trials). On suppression trials, an adaptor (e.g., face with a thin body weight) was presented to one eye (adapted eye) and a high-contrast dynamic noise to the other eye (test eye). The adaptation period lasted for 4000-ms, and during adaptation participants were instructed to make a judgment about the position of the adapting stimulus via pressing Z and C on the keyboard if they saw it. After adaptation, an ambiguous 250-ms test face was presented to the test eye on the opposite side of cross (e.g., if the adaptor appeared at the left of the cross, test face would appear at the right). When a noise mask appeared, participants were required to make a forced choice to indicate whether the test stimulus was happy or angry through pressing the left or right arrow key. On full dominance trials, an adaptor was also presented to one eye but a gray ellipse with the same size as the adaptor was present to the opposite eye. In this way, the adaptor would be presented at the conscious level, similar as that in Experiment 1a. On baseline trials, the procedure was the same as the suppression trials except that there was no adaptor. In addition, a control experiment of Experiment 2 was conducted. The experimental procedure was the same as the suppression trials in the main experiment, except that no test faces were presented and during the noise mask participants were instructed to indicate whether the adaptor was thin or overweight through pressing left arrow key or right arrow key regardless of seeing it or not. The results showed that, for the full dominance trials (i.e., conscious trials), the cross-category adaptation was still observed; however, for the suppression trials (i.e., unconscious trials) there was no cross-category adaptation between body weight and emotional expressions. In summary, we provided first evidence that the cross-category adaptation between body weight and emotion existed at the conscious level, indicating that weight and emotion might have a shared neural mechanism.

Keywords: adaptation, cross-category adaptation, body weight, expression, emotion

提取诱发遗忘：抑制与干扰

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摘要 提取诱发遗忘是在对信息进行回忆时, 与目标信息相关联的信息提取失败回忆受损的一种的遗忘现象。然而对提取诱发遗忘现象的解释普遍存在两种不同的理论。抑制理论, 提取诱发遗忘现象是由于在根据某一具体线索对目标信息进行回忆提取时, 对与该线索相关的信息的抑制而产生的。在线索被呈现时, 与该线索有关的信息会同时被启动, 因此为了能够顺利的提取目标信息, 避免其他相关信息的相互竞争和干扰, 就会对相关信息进行抑制, 抑制会减少相关信息对目标信息提取的影响。另一方面抑制理论认为提取诱发遗忘不受项目之间、线索之间或项目于线索之间的关联改变的影响, 只是因为关联项目被抑制而引起提取诱发遗忘现象。干扰说来源于干扰反应竞争理论, 认为在对项目信息进行提取练习时, 加强了线索与项目之间的关联, 相反, 没有进行提取练习的项目与线索之间的联系就被干扰, 甚至出现阻断。即在提取练习时 Rp+项目得到了加强, 而 Rp-项目则没有被强化, 且可能由于这种加强反而阻碍了 Rp-项目的提取, 对 Rp-项目产生干扰导致 Rp-项目的提取回忆成绩低于 Nrp 项目。干扰说认为提取诱发遗忘效应不必产生抑制作用, 提取线索与项目信息之间的链接减弱或被阻碍就能产生提取诱发遗忘现象。本文根据抑制理论提出的提取诱发遗忘的属性: 提取依赖性、强度独立性、干扰依赖性以及线索独立性四个方面对提取诱发遗忘的两个理论进行讨论。随后总结出两种理论在不同场景及背景下可能都对提取诱发遗忘现象产生影响, 两个理论解释可能是共存的, 并在遗忘研究的基础之上探讨两个理论各自解释了不同层面对于提取诱发遗忘的影响。

关键词 提取诱发遗忘, 抑制, 干扰

Retrieval-induced forgetting: Inhibition and Interference

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Abstract: Retrieval-induced forgetting refers to a forgetting phenomenon that when recalling information, the information related to the target information fails to be extracted and memory is impaired. However, there are two different theories to explain the oblivion caused by Retrieval. According to the inhibition theory, the phenomenon of Retrieval induced forgetting is caused by the inhibition of the information related to a specific clue when recalling and extracting the target information. When the clue is presented, the information related to the clue will also be activated at the same time. Therefore, in order to extract the target information smoothly and avoid the competition and interference of other related information, the related information will be suppressed and the influence of the related information on the target information Retrieval will be reduced. On the other hand, inhibition theory holds that Retrieval-induced forgetting is not affected by the change of items, clues or items associations among clues, but only because related items are inhibited. The interference theory comes from the interference response competition theory, and it is considered that the connection between clues and projects is strengthened when extracting project information. On the contrary, the connection between items and clues without Retrieval exercises will be interfered or even blocked. That is to say, Rp+ projects have been strengthened, but Rp-projects have not been strengthened, which may hinder the Retrieval of Rp-projects and interfere with Rp-projects, resulting in the recall score of Rp- projects being lower than that of Nrp project. According to the interference theory, the Retrieval-induced forgetting effect does not have to be inhibited, and the link between the Retrieval clue and the item information is weakened or blocked, which can lead to the Retrieval-induced forgetting phenomenon. According to the inhibition theory, two theories of forgetting induced by Retrieval are discussed: Retrieval dependence, strength independence, interference dependence and clue independence. Then, it is concluded that the two theories may have an impact on Retrieval-induced

forgetting phenomenon in different scenes and backgrounds, and the two theories may coexist. Based on forgetting research, it is discussed that the two theories explain the influence of different levels on Retrieval-induced forgetting.

Keywords: Retrieval-induced forgetting, Inhibition, Interference

阳性经颅直流电刺激顶叶皮层对任务转换的增强效应研究

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摘要 转换能力 (shifting ability) 是人们日常生活中较为常用的认知能力之一, 能够有效预测个体的学术成就、社会经济地位和身体健康等, 对个体进行多任务操作具有重要意义。近年来, 研究者们尝试将经颅直流电刺激技术 (Transcranial direct current stimulation, tDCS) 运用于任务转换能力增强效应研究中去。然而, 现有研究主要集中在对前额叶皮层 (F3/F4) 进行考察, 少有研究分析 tDCS 刺激其他皮层 (顶叶皮层) 对任务转换能力的增强效应。鉴于影像学研究表明任务转换过程与顶叶皮层关系密切, 当前研究以顶叶皮层为刺激脑区, 考察阳性 tDCS 刺激顶叶皮层在可预测和不可预测任务转换中的增强效应。当前研究共招募 36 名健康年轻被试, 将其随机分为左侧阳性刺激组、右侧阳性刺激组和伪刺激组, 采用强度为 1.5mA 的阳性 tDCS 刺激被试的顶叶皮层 (P3/P4) 20 分钟。刺激结束后, 移除仪器并要求被试完成可预测和不可预测转换任务, 任务顺序效应在被试间进行平衡。研究结果发现阳性刺激顶叶皮层不会对个体的混合任务正确率和混合代价产生显著影响。但是, 值得注意的是当前研究发现了转换代价上的组别和任务可预测性交互作用显著, 即在可预测任务转换中, 右侧阳性刺激组的可预测转换任务转换代价显著高于伪刺激组。同时, 在不可预测任务转换中, 未发现左侧或者右侧阳性刺激组与伪刺激组之间存在显著差异。上述研究结果表明阳性 tDCS 激活右侧顶叶皮层会损害可预测任务转换的转换能力, 证明了右侧顶叶皮层参与了任务转换的主动加工过程, 暗示其与外源性调节过程关系不明显。

关键词 任务转换, 经颅直流电刺激, 顶叶皮层

Task-switching enhancement by anodal transcranial direct current stimulation over parietal cortex

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Abstract: Shifting ability is one of the most commonly used cognitive abilities in daily life. It can effectively predict academic achievement, socioeconomic status, and physical health, and is meaningful to multitasking operation. Recently, researchers have used transcranial direct current stimulation (tDCS) to study task-switching enhancement. However, it's mainly focused on the prefrontal cortex (F3/F4), and few have analyzed the task-switching enhancement by stimulating other cortex (parietal cortex). Since imaging studies have shown that the task-switching process is closely related to the parietal cortex, the current study would examine the task-switching enhancement by active tDCS over the parietal cortex in both predictable and unpredictable switching tasks. 36 participants were recruited and randomly divided into three tDCS groups (including LA, RA, and sham). The parietal cortex (P3/P4) was stimulated with 1.5mA for 20 minutes. After the stimulation, the instrument was removed and the participants were asked to complete both predictable and unpredictable tasks. The task order was balanced among the participants. Results showed that no significant effect was found on the mixed task accuracy and mixing cost. However, it is worth noting that the current study found a significant interaction between the tDCS group and the task predictability on the switching cost. In the predictable task switching, the switching cost of the LA group was significantly higher than the sham group. At the same time, no significant difference was found in unpredictable task

switching. These results indicate that active tDCS over the right parietal cortex can impair the predictable task-switching ability, prove that the right parietal cortex is involved in the active process of task switching, and suggest that it is not significantly related to exogenous regulation.

Keywords: task switching; transcranial direct current stimulation; parietal cortex

映射通路数量对隐喻加工影响的 ERP 研究

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摘 要 隐喻加工是源域到目标域映射的认知加工过程。不同的隐喻具有不同程度的映射难度, 这可能与映射路径的数量有关。隐喻生涯理论将隐喻划分为新颖隐喻, 传统隐喻和死隐喻。鉴于不同新颖性隐喻的加工的特点不同, 实验 1 采用 4 (新颖隐喻、传统隐喻、直接语义) × 2 (多重映射通路、单一映射通路) 被试内设计, 通过词汇的语义判断的 ERP 任务考察了映射路径数量对新颖隐喻和传统隐喻加工的影响。实验 2 同样采用 4 (新颖隐喻、传统隐喻、直接语义) × 2 (多重映射通路、单一映射通路) 被试内设计, 通过成对图片联想的 ERP 任务从表象加工层面对实验 1 的结果进行验证。实验结果表明, 映射通路影响隐喻加工的时间进程。单一映射通路隐喻在任务中的反应时间较短, 并在头皮前方、中部和顶部诱发更多的负 N400 和 LPC。多映射通路隐喻反应时较长, 在头皮顶部又发更多较正的 N400 和 LPC。实验 1 和实验 2 的结果总体上支持了单一映射通路隐喻的加工更加高效。这些结果表明, 在加工中期, 单个映射隐喻需要更多的认知资源来完成语义整合, 而在加工后期, 多个映射隐喻需要更多的认知资源来完成语义选择。总之, 单一映射通路隐喻比多重映射隐喻更容易被加工, 且不同映射通路数量的新隐喻的加工机制明显具有显著差异。

关键词 新颖隐喻, 映射通路数量, 事件相关电位

An ERP Study on the Effect of the Number of Mapping Path on Metaphor Processing

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Abstract: Metaphor processing is a cognitive process of mapping from source domain to target domain. Different metaphors have different degrees of mapping difficulty, which may be related to the number of mapping paths. Metaphor career theory divides metaphor into novel metaphor, traditional metaphor and dead metaphor. The present study focused on the influence of the number of mapping path on novel metaphor processing. In an ERP experiment, a semantic judgment task was performed. The results showed that the response time of single-mapping- metaphor in the task was shorter, and it induced more negative N400 and LPC in front, middle and top of the scalp. These results suggest that in the middle stage of processing, single mapping metaphor requires more cognitive resources to complete semantic integration, while more cognitive resources were required by multiple-mapping-metaphor to complete semantic selection in the late stage. In general, single-mapping- metaphor was easier to process than multiple-mapping-metaphor and the processing mechanism of novel metaphors with different number of mapping path was obviously different.

Keywords: novel metaphor, mapping path, event-related potential

反馈间隔影响反馈加工的脑电研究

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摘 要 在生活中, 人们需要使用反馈信息指导行为以适应外界环境, 而反馈要想有效, 就必须在某一行为反应结束和反馈开始之间有一个延迟。反馈间隔是指学习者作出反应到接收反馈之间的时间间隔。近年来, 研究者发现, 不同的反馈间隔对反馈加工存在影响。反馈间隔过长或过短都不利于反馈加工。但已有研究尚

未发现激活反馈加工过程所需的最短反馈间隔时间,也不清楚反馈间隔间细微的变化是否也会影响反馈加工。因此,本研究试图探讨激活反馈加工过程所需的最短反馈间隔,以及随反馈间隔的变化,反馈加工过程的变化趋势。在前人研究基础上,本研究以反馈相关负波(feedback related negativity, FRN)为指标,采用时间估计任务,设置反馈间隔为 0ms、100ms、200ms、300ms,探讨 FRN 的波幅随反馈间隔变化的趋势。研究结果发现,在反馈加工过程中,即使反馈间隔为 0ms 时,学习者也可以产生对反馈结果的预期,但 200ms 反馈间隔条件下与 300ms 反馈间隔条件下诱发的 FRN 显著负于 0ms 条件下。此外,为弥补传统的时域 ERP 方法只能分析相位锁定成分的缺陷,除分析 FRN 原始波的平均波幅外,数据分析中增加了时频分析(time-frequency domains analyses)。研究结果发现, delta 能量、beta-gamma 能量对反馈效价和反馈间隔均不敏感。但 theta 能量对反馈效价有敏感的趋势,负反馈条件下 theta 能量更大。同时, theta 能量也对反馈间隔敏感, 200ms、300ms 条件下的 theta 能量显著大于 0ms 条件下的 theta 能量。以上结果表明,学习者做出行为反应后,尽管在极短的时间内就可能产生对反馈结果的预期,但还是需要一定的时间发展对反馈结果的预期,以及学习反馈信息,为后续的行为调整做准备。短时间的反馈间隔可能并不利于注意—处理奖励—调整行为—记忆巩固这一大脑整合过程的较好运行。

关键词 反馈相关负波, 反馈间隔, 反馈加工, 时频分析

The effect of feedback interval on feedback processing: An ERP research

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Abstract: In order to guide behavior to adapt to the external environment, people use and rely on feedback information. For feedback to be effective, there must be a delay between the end of a behavioral response and the beginning of feedback. Feedback interval means the duration between initiation of behavior and the appearance of feedback stimulus. In recent years, researchers have found that different feedback intervals have an impact on feedback processing. If the feedback interval is long, learners cannot combine behavioral responses with feedback results, which is not conducive to subsequent behavior adjustment. If the feedback interval is too short, if the learner does not have enough time to expect the feedback result, it is also not conducive to feedback processing. However, no studies have found what is the shortest feedback interval required to activate the feedback processing process, and it is unclear whether subtle changes between the feedback intervals will also affect the feedback processing. This paper attempts to explore the shortest feedback interval required to activate the feedback processing process, and the change trend of the feedback processing process as the feedback interval changes. Based on previous studies, this study uses feedback related negativity (FRN) as an indicator and adopted the time estimation task and set the feedback intervals as 0ms, 100ms, 200ms and 300ms to explore the trend of FRN amplitude changing with the feedback interval. The results of the study showed that in the process of active learning, even if the feedback interval is 0 ms, learners also can produce the result of the feedback of expectations, but under the condition of 200 ms、300ms feedback intervals induced FRN significant loss to 0 ms conditions. In addition, in order to make up for the defect that the traditional time-domain ERP method can only analyze the phase-locked component, in addition to analyzing the average amplitude of the FRN original wave, time-frequency domains analyses are added to the data analysis. The research found that delta power and beta-gamma power are not sensitive to feedback valence and feedback interval. However, the theta power has a tendency to be sensitive to the feedback valence, and the theta power is larger under the condition of negative feedback. And it is sensitive to the feedback interval. The theta power under 200ms and 300ms is significantly greater than the theta power under 0 ms. In summary, this study concludes that after the learner makes a behavioral response, although the feedback result may be expected in a very short period of time, it still takes some time to develop the expectation of the feedback result and learn the feedback information to prepare for subsequent behavior adjustment. The short feedback interval may not be conducive to the attention — processing-reward — adjusted-behavior — memory consolidation of the brain integration process.

Keywords: feedback related negativity, feedback interval, feedback processing, time-frequency domains analyses

感觉记忆可能支持视觉标记机制：来自时间特性的证据

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摘要 我们所处的世界每时每刻都会传递出海量的视觉信息, 为了能够有效地处理与我们当前任务更相关的信息, 人类发展出了视觉注意的选择机制。大量的研究发现, 记忆系统在视觉选择过程中扮演了很重要的角色, 记忆的加入可以帮助人类提升选择性注意的分配效率。然而, 过往的研究往往更关注视觉工作记忆在视觉选择中的作用, 但近来的研究却发现, 工作记忆不能解释很多相关的现象。因此, 本研究通过视觉标记现象, 探索记忆系统在该现象中表现出的时间特性, 来挖掘感觉记忆系统 (iconic memory) 或脆弱的短时记忆系统 (fragile visual short-term memory) 在视觉选择过程中可能发挥的作用。视觉标记现象是指, 在一个视觉搜索任务中, 如果先呈现一部分干扰子, 再呈现另一部分干扰子和目标, 那么视觉搜索的效率会显著提升, 该现象也被称为预览效应。作为一种依赖时间线索的视觉选择机制, 该过程必然需要记忆的支持, 且已有研究发现了工作记忆无法完全解释视觉标记机制。因此, 视觉标记机制能够帮助我们探究参与视觉选择的其他记忆系统。实验 1 和实验 2 的结果显示, 视觉标记现象中, 对旧刺激的抑制信号可以保持 600-1000 毫秒, 这样的时间特性与感觉记忆很相符, 而与工作记忆或是脆弱的短时记忆系统不符合。实验 3 的结果进一步显示, 对旧刺激的抑制信号可以通过对旧刺激间隔性的短暂 (80 毫秒) 重复呈现而不断激活, 从而使得抑制信号的保持时间长于 1500 毫秒。前人研究显示, 80 毫秒的呈现时间不足以建立视觉标记中对旧刺激的抑制信号, 因此该现象说明对旧刺激的抑制信号可以在不重新建立的情况下被不断激活, 这样的特性同样与感觉记忆很相符。三个实验对结果显示, 感觉记忆可能支持视觉标记机制。本研究的结果不仅拓展了我们对视觉选择与记忆系统的关系的认识, 还使我们对感觉记忆的认知功能有了新的理解。

关键词 视觉选择, 视觉标记机制, 感觉记忆, 预览效应, 视觉信息处理

Visual marking may be supported by iconic memory: Evidence from the temporal property of visual marking

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Abstract: The world around us is full of visual information. Visual selection is the mechanism that enables us to attend to the most relevant information of the current task. Lots of studies indicated that visual memory (i.e., temporal buffer for visual information) should be supportive for visual selection. However, previous studies mostly focused on the role of working memory in visual selection, while several findings seems hard to be explained in terms of working memory. In the present study, we examined the potential role of iconic memory and/or fragile visual short-term memory in visual selection, by investigating the temporal properties of visual marking. The visual marking mechanism refers a phenomenon that the efficiency of visual search can be improved by showing a subset of distractors as a preview before the display containing the target (such improvement is also labelled the preview benefit). As a time-based selective mechanism, memory is necessarily involved in the visual marking mechanism. Also, working memory does not appear to be sufficient to explain the visual marking. Thus, we decided to rely on the visual marking mechanism to explore the supporting memory system of visual selection. Experiment 1 and 2 suggested that, after the old stimuli disappear, the effect of visual marking can persist more than 600 ms but less than 1000 ms, the duration of which is consistent with the life time of iconic memory. Experiment 3 further showed that the effect of visual marking can be extended to more than 1500 ms by repeated brief presentation (80 ms) of the old stimuli (previous works have shown that 80 ms presentation of old stimuli is not enough for visual marking to work). The present results are consistent with the idea that iconic memory may support visual marking. These findings not only extend our knowledge of the memory system underlying visual selection, but also shed new light on the function

of iconic memory.

Keywords: Visual selection, Visual marking, Iconic memory, Preview effect, Visual information processing

认知负载、注意范围对认知控制的影响-基于分层漂移扩散模型的证据

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摘要 认知控制被认为是一种积极主动的高级认知过程，受注意、记忆等因素影响。前人有关认知负载、注意范围是否共同影响认知控制的结论存在分歧，也许认知控制任务的类型起重要作用。当前研究采用 Stroop 任务以排除认知控制加工对空间选择性注意的依赖，操控工作记忆的负载水平和注意范围，以考察认知负载、注意范围对认知控制的影响。实验采用双任务范式要求被试记忆颜色的同时判断汉字（“大”或“小”）的字体大小，通过分析被试的反应时间和基于 HDDM(分层漂移扩散模型)的信号累积过程区分认知负载和注意范围对 Stroop 一致性效应的影响。实验结果表明：在反应时上，认知负载和 Stroop 一致性的主效应显著，Stroop 效应与认知负载及与注意范围均未产生交互作用；HDDM 的模型拟合良好，数据结果则表明，注意范围影响了认知控制的反应标准和非决策时间，而认知负载却干扰了认知控制的证据累积速度。本研究的结果显示，认知负载和注意范围分别对认知控制的不同加工过程起作用。当前研究首次采用 HDDM 方法，对一直存在争议的认知负载与认知控制是否共享同一认知资源提供了一种可能的解释，即随着认知负载的增加，认知控制任务的冲突解决速度受到了一定程度的影响。同时也为注意范围如何影响认知控制提供了微弱的证据。

关键词 认知控制，注意范围，认知负载，HDDM，Stroop 任务

Effects of cognitive load and attentional zoom on cognitive control: Evidence from a Hierarchical Drift Diffusion Model

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Abstract: Cognitive control is considered to be an active high-level cognitive process, which is influenced by factors such as attention and memory. Previous studies on whether cognitive load and attentional zoom work together to affect cognitive control are not conclusive. It may be that the task type of cognitive control plays an important role. In the present study, the Stroop task was used to avoid the dependence of cognitive control processing on spatial selective attention. Additionally, the load level and attentional zoom of the working memory task were also manipulated, to investigate the effects of cognitive load and attentional zoom on cognitive control. In the experiment, the dual-task paradigm was used and participants were required to remember colors and judge the font size of Chinese characters ("Big" or "Small"). The reaction times and signal accumulation processes based on HDDM (Hierarchical Drift Diffusion Model) were analyzed to detect the effects of cognitive load and attentional zoom on the Stroop consistency effect. On the measurement of response time, the results showed that the main effects of cognitive load and Stroop congruency were significant and that Stroop congruency did not interact with cognitive load nor with attentional zoom. The HDDM fitted well. The results showed that attentional zoom affected the response criteria and non-decision time of cognitive control on one side. On the other side, cognitive load interfered with the speed of evidence accumulation for cognitive control. The results of this study indicated that cognitive load and attentional zoom play an important part in different processes of cognitive control. The present study initially utilized the HDDM to provide a possible explanation for whether cognitive load and cognitive control share the same cognitive resources. Specifically, with the increase of cognitive load, the speed of conflict resolution of cognitive control tasks was affected to some extent. It also provides weak evidence for how attentional zoom affects cognitive control.

Keywords: cognitive control, attentional zoom, cognitive load, HDDM, Stroop task

分心物突显程度、与目标物距离和语言提示

对 5~6 岁儿童视觉空间注意的影响

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摘要 在儿童早期, 注意对其它各领域的发展有重要影响。本研究采用视觉搜索范式, 通过两个实验考察分心物突显程度、与目标物距离和语言提示对 5~6 岁儿童视觉空间注意的影响。实验 1 采用 2 (分心物突显程度: 低/高) × 2 (分心物与目标距离: 近/远) 两因素被试内实验设计, 探究分心物突显程度对 5~6 岁儿童视觉空间注意的影响, 以及局部注意干扰效应。实验 2 采用 3 (提示内容: 空间提示/客体提示/特征提示) × 2 (提示方式: 直接提示/间接提示) × 2 (分心物与目标距离: 近/远) 三因素被试内实验设计, 进一步探究提示内容和提示方式对 5~6 岁儿童视觉空间注意的影响。结果发现, 与分心物突显程度低的条件相比, 当分心物突显程度高时, 被试对目标判断的反应时显著更长, 在正确率上两者差异不显著; 分心物与目标距离近时, 对目标判断的正确率显著更低, 反应时差异不显著, 显示存在局部注意干扰效应 (实验 1)。直接提示下儿童的视觉空间注意要优于间接提示; 基于空间提示的效果要优于特征提示和客体提示; 并且在有提示下, 局部注意干扰效应消失 (实验 2)。可见, 来自分心物的突显程度、与目标物距离和语言提示均会影响 5~6 岁儿童的视觉空间注意, 体现了自下而上和自上而下加工对于儿童视觉注意的影响。

关键词 分心物突显程度, 局部干扰效应, 提示, 视觉空间注意

Effects of distractor salience, distance from objects and verbal cues on visual spatial attention in 5-6 year old children

Abstract: In the early childhood, attention have important effects on the development of other fields. This research adopted visual search paradigm to investigate the effects of distraction salience, distance from objects and verbal cues on visual spatial attention in children aged 5-6 years through two experiment. Experiment 1 used a 2 (distractor salience, low VS high) x 2 (distance between distractor and target, near VS far) within-subject design to explore the effect of distractor salience on visual spatial attention of 5-6 year old children, as well as localized attention interference. Experiment 2 used a 3 (cue content, space VS object VS feature) x 2 (cue mode, direct VS indirect) x 2 (distance between distractor and target, near VS far) within-subject design to further explore the effects of cue content and cue mode on visual spatial attention of 5-6 year old children. The results showed that compared with the condition of low distractor salience, when the distractor salience was high, the participants' response time to target judgment was significantly longer, and there was no significant difference in accuracy between the two conditions. When the distractor is close to the target, the accuracy of target judgment is significantly lower, and the difference of response time is not significant, indicating the presence of local attentional interference effect (experiment 1). Children's visual spatial attention under direct cues is better than under indirect cues. The effect of spatial cue is better than feature cue and object cue. In addition, the local attentional interference effect disappeared when there was a cue (experiment 2). It can be seen that the salience of the distractors, the distance from the target objects and the verbal cues all affect the visual spatial attention of children aged 5-6, which reflects the impact of bottom-up and top-down processing on children's visual attention.

Keywords: distractor salience, local attention interference effect, cue, visual spatial attention

5.5“工业心理专业委员会”分组展贴报告

大连市上班族的通勤时间对职业幸福感的影响

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摘 要 大连市是一个以旅游业为主的城市，大连城市的市中心是以两个商业广场为中心点的城市，多个商业中心的城市容易造成车辆拥堵，本身人口流量大的特点，会使大连市的出行者相对比较困难。对于很多长时间居住在大连市区的人来说，通勤距离成为了很多人选择工作的重要原因。但是由于经济的发展，城市中心的房屋价格提升、市区内公司规模有限等因素，企业办公地点逐渐迁移，通勤时间带来的职业幸福感的问题越来越多。本研究采用 1989 年经 Roznowski 修订的工作描述指数量表对 114 名大连市出行者的职业幸福感进行调查，对有效数据进行独立样本 T 检验，结果显示，通勤时间短的员工和通勤时间长的员工之间的职业幸福感测试存在显著差异， $t(112) = 8.239$, $P < 0.05$ 。具体而言，通勤时间能够影响员工的职业幸福感，通勤时间长的员工其职业幸福感更低。此外，在工作描述指数量表的 5 个维度中，通勤时间对工作岗位的满意度、对上司满意度、对同事满意度均有显著影响，均表现为通勤时间的增长，其满意度就低。这既与“不患寡而患不均”这样的传统思想有关，又与现代经济学中的时间成本有关。这个结论给了很多企业一些关于员工通勤方面的建议，比如通勤车的设置、员工公寓的设置等等，通过缩短通勤时间来提升员工的职业幸福感，从而为企业、为社会创造出更多更优质的产值。

关键词 上班族，职业幸福感，通勤时间

The Influence of Commuting Time on Occupational Well-being of White-collar Workers in Dalian

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Abstract: Dalian is a city with tourism as the main city. The center of Dalian city is a city with two commercial squares as the center. Cities with multiple commercial centers are easy to cause traffic congestion. The characteristics of large population flow in itself will make it relatively difficult for Dalian to travel. For people who have lived in Dalian city for a long time, commuting distance has become an important reason why many people choose to work. However, due to the development of economy, the housing prices in urban centers have increased, and the office locations of enterprises have gradually moved. The problems of occupational well-being brought by commuting time are more and more. In this study, the job description index revised by roznowski in 1989 was used to investigate the occupational well-being of 114 travelers in Dalian. The independent sample t-test was conducted on the valid data. The results showed that there was a significant difference in the occupational well-being between the employees with short commuting time and those with long commuting time, $t(112) = 8.239$, $P < 0.05$. In other words, commuting time can affect employees' occupational well-being, and employees with long commuting time have lower occupational well-being. In addition, in the five dimensions of the job description index, commuting time has a significant impact on job satisfaction, supervisor satisfaction and colleague satisfaction, all of which show that the increase of commuting time leads to low satisfaction. This is not only related to the traditional idea of "not suffering from oligopoly, but also to the time cost in modern economics.". This conclusion gives a lot of enterprises some suggestions on employees' commuting, such as the setting of commuter cars, the setting of employees' apartments and so on. By shortening the commuting time, employees' occupational well-being can be improved, so as to create more and better output value for enterprises and society.

Keywords: White-collar Worker, Career Happiness, Commuting Time

工作家庭冲突与中小学校长工作投入：一个有调节的中介模型

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摘要 随着积极心理学的发展，工作投入受到积极组织行为学和职业健康领域学者们的广泛关注。一些研究揭示工作家庭冲突对个体的行为和态度具有重要影响，但较少有研究探讨工作家庭冲突对工作投入的影响。本研究主要探讨工作满意度在工作家庭冲突和工作投入关系中是否存在中介作用以及组织承诺是否调节这一中介效应。采用工作家庭冲突问卷、工作满意度问卷、组织承诺问卷和工作投入问卷对 358 名中小学校长进行调查。结果发现：(1) 工作家庭冲突对中小学校长工作满意度 ($\beta = -0.15, t = -3.80, p < 0.001$) 和工作投入 ($\beta = -0.31, t = -5.46, p < 0.001$) 均存在显著地负向预测作用，而工作满意度对工作投入存在显著地正向预测作用 ($\beta = 0.59, t = 8.06, p < 0.001$)；(2) 工作满意度在工作家庭冲突与工作投入关系中存在部分中介作用 (间接效应 = $-0.09, 95\% CI = [-0.32, -0.12]$)；(3) 组织承诺在工作满意度和工作投入关系中调节效应显著 ($\beta = -0.32, p < 0.01, 95\% CI = [-0.53, -0.10]$)，具体表现为在高低组织承诺条件下，工作满意度对工作投入均存在显著地预测作用 ($b_{simple slope} = 0.36, t = 3.98, p < 0.001$; $b_{simple slope} = 0.68, t = 7.26, p < 0.001$)。这表明工作家庭冲突能直接影响中小学校长们的工作投入，也能通过工作满意度对其产生间接地影响，且这一关系在不同组织承诺水平下有所不同，随着组织承诺水平的增加，工作投入水平也会增加。本研究有助于更好地理解工作家庭冲突对工作投入的影响，也为提升中小学校长工作投入奠定了理论基础。

关键词 工作家庭冲突，工作投入，工作满意度，组织承诺，中小学校长

The Work-family Conflict and Work Engagement of Primary and Secondary School Principal: A Moderated Mediation Model

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Abstract: With the development of positive psychology, work engagement has received widespread attention from researchers in the fields of positive organizational behavior and occupational health. Some studies revealed that work-family conflict have an important impact on individual behaviors and attitudes, but little research has studied the impact of work-family conflict on work engagement. The present study examined whether job satisfaction mediated the relation work-family conflict and work engagement, and whether the mediating effect was moderated by organizational commitment. 358 primary and secondary school principals was surveyed by using the work-family conflict scale, job satisfaction scale, organizational commitment scale, and work engagement scale. The results found that: (1) the working-family conflict had a significantly and negatively predictive effect on the job satisfaction ($\beta = -0.15, t = -3.80, p < 0.001$) and work engagement ($\beta = -0.31, t = -5.46, p < 0.001$) of primary and secondary school principals, while the job satisfaction had a significantly and positively predictive effect on the work engagement ($\beta = 0.59, t = 8.06, p < 0.001$); (2) job satisfaction plays an mediation role in the relationship between working-family conflict and work engagement of primary and secondary school principals (indirect effect = $-0.09, 95\% CI = [-0.32, -0.12]$); (3) the moderating effect of organizational commitment in the relationship between job satisfaction and work engagement was significant ($\beta = -0.32, p < 0.01, 95\% CI = [-0.53, -0.10]$), especially the relationship between family job satisfaction and work engagement was significant for primary and secondary school principal with high and low organizational commitment ($b_{simple slope} = 0.36, t = 3.98, p < 0.001$; $b_{simple slope} = 0.68, t = 7.26, p < 0.001$). This indicates that work-family conflict can directly affect the work engagement of primary and secondary school principals, and can also indirectly affect them through job satisfaction. Moreover, this relationship varies with different levels of

organizational commitment, which the increasing of organizational commitment level, the level of work engagement will also increase. This study helps to better understand the impact of work-family conflict on work engagement, and lays a theoretical foundation for improving the work engagement of primary and secondary school principals.

Keywords: work-family conflict, work engagement, job satisfaction, organizational commitment, primary and secondary school principal

飞行员计划延续失误的心理机制、影响因素与预防措施

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摘要 事故调查显示, 由飞行员人为因素导致的事故占整个飞行事故的 78.6%, 其中 56.5% 的事故与飞行员决策失误有关。计划延续失误(plan continuation errors, PCEs)作为一种典型的飞行员决策失误类型, 是指飞行员未根据实时情境变化及时调整已不安全的原飞行计划, 仍然按原计划持续飞行的现象, 通常发生在天气相关决策情境中, 表现为飞行员无意或有意地采用目视飞行规则操纵飞机进入仪表气象条件。这种情况下, 飞行员因缺乏对地平面的视觉参考信息, 瞬间失去对飞机状态控制的心理模型和认知技能, 从而造成灾难性后果。本研究通过回顾和梳理已有飞行员计划延续失误的文献, 分别从情境评估、决策框架和认知偏差三个角度对计划延续失误的心理机制进行了阐述和解释。其中, 情境评估机制认为计划延续失误主要源于飞行员在飞行过程中完全没有意识到恶劣的天气状况, 或者没有准确诊断天气变化及其严重程度; 决策框架机制认为计划延续失误是由飞行员的期望构建所致, 到达目的地的强烈期望导致飞行员低估了天气的恶劣程度; 认知偏差机制认为计划延续失误主要源于锚定偏差、证实性偏差、结果偏差等影响了飞行员对天气信息加工的准确性。此外, 本研究还概括出计划延续失误的内部(包括飞行经验、人格和情绪)和外部(包括天气雷达显示系统、飞行环境、组织和社会压力)影响因素, 并总结归纳出可以通过加强飞行员天气相关训练, 改良仪表和自动化设计两种措施来预防计划延续失误的发生。最后指出了飞行员计划延续失误在未来研究的方向, 包括深入探究计划延续失误的发生机制, 开展飞行员天气线索利用特征的研究, 开发更加全面的预防措施等方面。

关键词 航空安全, 计划延续失误, 心理机制, 飞行员

The psychological mechanism, influencing factors and preventive measures of pilots' plan continuation errors

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Abstract: The accident investigation revealed that accidents caused by pilots' human factors accounted for 78.6% of the total flight accidents, and 56.5% of the accidents were related to pilot errors in decision-making. Plan continuation errors (PCEs), as a typical type of pilot decision-making errors, refer to the phenomenon that the pilots fail to adjust the unsafe original flight plan in time according to real-time situation changes, and continue to fly according to the original plan. This usually occurs in weather-related decision-making situations, it is manifested as pilots unintentionally or intentionally use visual flight rules to control the aircraft into instrument weather conditions. In this case, the pilot loses the mental model and cognitive skills to control the aircraft's state due to lack of visual reference information on the ground plane, causing catastrophic consequences. By reviewing and sorting out the literature of existing pilots' plan continuation errors, this study elaborated and explained the psychological mechanism of plan continuation errors from the perspectives of situation assessment, decision-making framework and cognitive bias. Among them, the situation assessment mechanism believes that the plan continuation errors are mainly caused by the pilots not being aware of severe weather conditions during the flight, or failing to accurately

diagnose the weather changes and their severity; the decision-making framework mechanism believes that the plan continuation errors are constructed by the pilots' expectations. As a result, the strong expectation of reaching the destination led the pilots to underestimate the severity of the weather. The cognitive bias mechanism believes that the plan continuation errors are mainly due to anchoring bias, confirmation bias, and outcome bias, which affect the accuracy of the pilot's weather information processing. In addition, this study also summarizes the internal (including flight experience, personality and emotions) and external (including weather radar display system, flight environment, organizational and social pressure) influencing factors of plan continuation errors, and concludes that it can be achieved by strengthening pilot weather-relevant training, improved instrument and automatic design two measures to prevent the occurrence of plan continuation errors. Finally, it pointed out the direction of future research on pilots' plan continuation errors, including in-depth exploration of the mechanism of plan continuation errors, research on the characteristics of pilots' weather clue utilization, and development of more comprehensive preventive measures.

Keywords: aviation safety, plan continuation errors, psychological mechanism, pilots

听觉任务类型与飞行经验对飞行员情境意识的影响 ——基于眼动的证据

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摘 要 情境意识是个体对动态环境信息的感知、理解以及对未来状态的预测。视觉信息对情境意识的维持至关重要, 但飞行员常需要同时处理视觉和听觉两种任务, 听觉任务输入在一定程度上影响其认知处理过程。工作记忆是保障飞行员维持良好情境意识的重要认知功能。有研究者认为, 工作记忆对情境意识的影响方向和程度受经验的调节。然而, 不同听觉任务引起的认知负荷对情境意识的影响效果及飞行经验在其中的作用尚未明确。本研究的目的在于探讨听觉任务类型与飞行经验对飞行员情境意识的影响及作用机制。本实验招募 17 名航线飞行员与 17 名大四飞行学员, 采用 2 (听觉任务类型: 听觉工作记忆任务 vs. 听觉计算任务) × 2 (飞行经验: 专家 vs. 新手) 混合设计。被试完成两次模拟定向飞行任务, 并在飞行过程中完成听觉 2-back 任务与听觉计算任务。以冻结探测方法采集被试模拟飞行任务的情境意识得分, 同时采集眼动数据 (任务相关兴趣区的平均注视时间、平均注视率和眼动熵) 作为因变量指标。结果表明: (1) 在情境意识得分方面, 听觉任务类型和飞行经验的主效应与交互效应均显著, 新手飞行员在听觉 2-back 任务下情境意识得分显著小于听觉计算任务下得分。(2) 在眼动指标方面, 飞行经验对眼动熵的主效应显著, 听觉任务类型与飞行经验对任务相关兴趣区的平均注视时间、注视率的主效应与交互效应均显著, 新手飞行员在听觉 2-back 任务下对任务相关兴趣区的平均注视时间、注视率显著低于听觉计算任务下的表现。因此, 本研究得出如下结论: 视听双任务条件下, 听觉工作记忆负荷对新手飞行员情境意识的损害比一般听觉认知负荷的损害更严重; 专家飞行员比新手的视觉扫描模式更有规律性; 由听觉任务引起的工作记忆负荷对新手飞行员的视觉注意产生负面影响, 降低情境意识。本研究结论拓展了双任务条件下情境意识相关理论, 并为飞行员维持良好情境意识的训练提供了科学依据。

关键词 情境意识, 听觉任务类型, 飞行经验, 眼动

The Effect of Auditory Task Type and Flight Experience on Pilots' Situation Awareness——An Eye-movement Study

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Abstract: Situation awareness is defined as the individual's perception and comprehension of dynamic environmental information and the projection of the future state. Visual information is crucial to the maintenance of situation

awareness, pilots often need to handle both visual and auditory tasks at the same time, and the input of auditory tasks affect their cognitive processing to a certain extent. Working memory is an important cognitive function to guarantee pilot maintain good situation awareness. Some researchers purposed that the direction and degree of the effects of working memory on situation awareness are mediated by experience. However, the effect of cognitive load caused by different auditory tasks on situation awareness and the role of flight experience in this process are still not clear. The purpose of this study was to investigate the effects of different auditory task type and flight experience on pilots' situation awareness and the mechanism. Methods: This experiment recruited 17 airline pilots and 17 senior pilot cadets, and used 2 (auditory task type: auditory working memory task vs. auditory calculating task) $\times$ 2 (flight experience: expert vs. novice) mixed design. Participants completed two simulated directional flight tasks, and completed auditory 2-back task and auditory calculating task during the flight. The freezing probe technique was used to collect participants' situation awareness scores in simulated flight tasks, and eye movement data (average fixation time of the task-related AOIs, average fixation rate of the task-related AOIs, and entropy) were collected as dependent variables. The results show that: (1) In terms of situation awareness score, the main effects and interaction effects of auditory task type and flight experience were significant. The situation awareness score of novice pilots in auditory 2-back task was significantly lower than that of auditory calculating task. (2) In terms of eye movement indicators, the main effect of flight experience on entropy was significant; the main effects and interaction effects of auditory task type and flight experience on average fixation time and average fixation rate of the task-related AOIs were significant. The average fixation time and fixation rate of novice pilots on the task-related AOIs in auditory 2-back task were significantly lower than those in auditory calculating task. Therefore, this study concluded that: the damage of auditory working memory load to novice pilots' situation awareness is more serious than that of general auditory cognitive load in audio-visual dual task condition; the visual scanning pattern of expert pilots is more regular than that of novice pilots; the working memory load caused by auditory task negatively affect the visual attention of novice pilots and reduce situation awareness. The conclusions of this study expand the relevant theories of situation awareness in dual-task conditions, and provide scientific bases for pilots training to maintain good situation awareness.

Keywords: Situation awareness, Auditory task type, Flight experience, Eye movement

真实型领导如何影响工作绩效和组织公民行为：心理资本的中介作用

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摘要 随着我国医疗卫生行业的不断发展, 人们对于医疗服务的需求不断提高, 医院的中层领导作为承上启下的关键人物, 对于发挥公立医院的医疗服务功能以及各部门的统筹协调都产生了举足轻重的影响。Luthans和Avolio在总结积极心理学和积极组织行为学基础上提出的真实型领导理论, 即真实型领导是一种把领导者的积极心理能力与高度发展的组织情境结合起来发挥作用的过程, 对员工工作绩效和组织公民行为都有正向影响。本研究则以真实型领导理论作为理论基础, 选取了青岛市6家公立医院的362名员工作为被试, 采用调查问卷法来揭示真实型领导行为、心理资本、工作绩效和组织公民行为之间的关系。结果表明: (1) 真实型领导与心理资本呈显著正相关($\beta=0.402$, $p<0.001$)。 (2) 真实型领导、心理资本与员工工作绩效呈显著正相关($\beta=0.412$, $p<0.001$; $\beta=0.179$, $p<0.001$)。 (3) 真实型领导、心理资本与员工组织公民行为呈显著正相关($\beta=0.444$, $p<0.001$; $\beta=0.524$, $p<0.001$)。 (4) 心理资本在真实型领导和员工工作绩效间起中介作用。 (5) 心理资本在真实型领导和员工组织公民行为间起中介作用。首先, 在理论上, 本研究验证了真实型领导能够影响员工的工作绩效以及组织公民行为, 并探明了其作用机制。其次, 在实践中, 对对公立医院的管理实践工作具有一定的指导意义。并且指出在未来研究中应采用纵横交叉式和领导-员工配对评价的研究方法, 以验证因果关系和避免社会赞许性偏见。

关键词 真实型领导, 心理资本, 工作绩效, 组织公民行为

The Influence of Authentic Leadership on Job Performance and Organizational Citizenship Behavior: The Mediating Effect of Psychological Capital

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Abstract: With the continuous development of China's medical and health industry, people's demand for medical services is constantly improving. As a key link between the preceding and the following, the middle-level leaders of hospitals have exerted a decisive influence on the development of the medical service function of public hospitals and the integration and coordination of various departments. On the basis of summarizing positive psychology and positive organizational behavior, Luthans and Avolio put forward the theory of authentic leadership, that is, authentic leadership is a process that combines the positive psychological ability of leaders with highly developed organizational situations, and has a positive impact on employee performance and organizational citizenship behavior. Based on the theory of authentic leadership, this study selected 362 employees from 6 public hospitals in Qingdao as subjects, and adopted the questionnaire method to reveal the relationship between authentic leadership behavior, psychological capital, job performance and organizational citizenship behavior. The results show that: (1) there is a significant positive correlation between authentic leadership and psychological capital ($\beta=0.402$, $p<0.001$). (2) Authentic leadership and psychological capital are positively correlated with employee performance ($\beta=0.412$, $p<0.001$; $\beta=0.179$, $p<0.001$). (3) Authentic leadership, psychological capital and organizational citizenship behavior are positively correlated ($\beta=0.444$, $p<0.001$; $\beta=0.524$, $p<0.001$). (4) Psychological capital plays a mediating role between authentic leadership and employee performance. (5) Psychological capital plays a mediating role between authentic leadership and organizational citizenship behavior. First of all, theoretically, this study verifies that real leadership can affect employees' job performance and organizational citizenship behavior, and explores its mechanism of action. Secondly, in practice, it has certain guiding significance to the management practice of public hospitals. It also points out that cross-sectional and leader-employee pairing evaluation should be adopted in future studies to verify the causal relationship and avoid social desirability bias.

Keywords: authentic leadership, psychological capital, job performance, organizational citizenship behavior

顾客言语侵犯如何影响服务人员离职倾向及工作倦怠——组织氛围和心理资本的作用

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摘要 近年来,随着我国经济增长快速,占比最多的第三产业-服务行业得到了大众的关注,如何改善服务人员的消极感受,缓解职业倦怠的状况是有关服务行业的研究热点。本研究立足于资源守恒理论(Conservation of Resources Theory, COR),当个体的内在心理资源不足以消化其所面对的压力时,外界的因素同样可以帮助员工解决其负性的情绪,从而减少负性行为的发生概率。顾客对服务人员的言语态度对其离职倾向和工作倦怠程度具有一定的影响。本研究以345位销售业服务人员为被试,考察了组织氛围和心理资本在顾客言语侵犯与销售人员的离职倾向及工作倦怠的影响关系中的调节作用。结果表明:(1)顾客言语侵犯对销售人员离职倾向和工作倦怠存在显著的正向相关作用($\beta=0.139$, $p<0.01$; $\beta=0.134$, $p<0.01$);(2)组织氛围对顾客言语侵犯和销售人员的离职倾向及工作倦怠之间的关系具有负向调节作用;(3)心理资本对顾客言语侵犯和销售人员的离职倾向之间的关系具有负向调节作用。首先,理论上,本文创新性地探究了顾客言语侵犯对服务人员离职倾向以及工作倦怠的影响,并探明了其作用机制。其次,在实践上,本文对于服务行业的长久发展提供了一定的指导借鉴意义。

关键词 言语侵犯, 离职倾向, 工作倦怠, 组织氛围, 心理资本

The influence of customer's verbal abuse on turnover intention and job burnout of sales service staff ——the adjustment of organizational atmosphere and psychological capital

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Abstract: In recent years, with the rapid economic growth in China, the service industry, which accounts for the largest proportion of the tertiary industry, has attracted the attention of the public. How to improve the negative feelings of service personnel and alleviate the situation of job burnout has become a hot research topic in the service industry. This study is based on the Conservation of Resources Theory (COR). When an individual's internal psychological Resources are not enough to digest the pressure they are facing, external factors can also help employees solve their negative emotions, so as to reduce the probability of negative behaviors. The verbal attitude of customers towards service personnel has a certain influence on their turnover intention and job burnout. This study investigated the moderating effect of organizational atmosphere and psychological capital on the relationship between customer verbal aggression and turnover intention and job burnout of sales staff with 345 sales service personnel as subjects. The results showed that : (1) there was a significant positive correlation between customer verbal aggression on turnover intention and job burnout of sales staff ($\beta=0.139$, $p<0.01$); (2) Organizational atmosphere has a negative regulating effect on the relationship between verbal aggression of customers, turnover intention of sales staff and job burnout; (3) Psychological capital has a negative regulating effect on the relationship between verbal aggression of customers and turnover intention of sales staff. Firstly, theoretically, this paper creatively explores the impact of customer speech aggression on the turnover intention and job burnout of service personnel, and explores the mechanism of action. Secondly, in practice, this paper provides some guidance for the long-term development of the service industry.

Keywords: verbal aggression, turnover intention, job burnout, organizational atmosphere, psychological capital

意义建构对飞行员安全合规性的影响 ——心理授权与安全态度的链式中介效应

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摘要 随着智能化技术的发展与应用, 航空事故逐渐由人为因素主导, 作为航空活动的主体, 飞行员的安全行为与航空安全密切相关。Griffin 与 Neal (2000) 基于 Borman 和 Motowidlo 的二维工作绩效模型, 将安全行为 (Safety Behavior) 分为安全参与 (Safety Participation) 与安全合规性 (Safety Compliance)。其中, 安全合规性包含深层合规性 (Deep Compliance) 与表层合规性 (surface compliance), 是指根据组织完成任务 (即安全规则和程序) 的正式安全要求而执行的行为。已有研究表明, 安全态度与心理授权对安全行为具有正向预测作用, 且安全态度与心理授权存在相关性, 心理授权的工作意义和工作自主性维度是安全态度的影响因素。此外, 意义构建理论 (Sense-Making Theory) 表明, 意义构建允许个人建构和设计自身时空运动的内部 (即认知) 和外部 (即程序) 行为, 为个体行为提供合理解释, 将个体行为与工作的知识、规范与要求紧密联系, 通过改变个体态度, 从而提高个体的自我价值感与效能感, 增强个体对工作意义与工作自主性的认识, 再根据行为动力理论与计划行为理论, 由内部动机变量 (如心理授权) 和社会认知变量 (如态度) 来改变安全行为的模式。因此, 以飞行员为被试, 探讨与航空安全、安全行为相关的意义建构对深层安全合规性和表层安全合规性的影响, 及心理授权与安全态度的链式中介作用, 有助于理解飞行员的不安全行为与设计有关安全教育或行为干预的具体方案。基于已有研究的基础, 考虑到飞行员的内隐安全态度与外显安全态度的分离性已经被证明且两者呈现正相关, 故采用飞行员适用的飞行管理态度问卷 (FMAQ 2.0) 或内隐联想测验 (晏碧华, 2015) 等标准化测验, 编制或修订意义建构量表、安全合规性量表 (Xiaowen Hu 等, 2020)

与心理授权量表（李超平等，2006）等适用于飞行员群体的量表，将有助于检验意义建构、心理授权、安全态度影响安全合规性的路径模型。最后，结合访谈法与问卷调查法进行考察，以期证明心理授权和安全态度在意义建构与安全合规性之间的链式中介作用，以及心理授权和安全态度在意义建构与安全合规性之间的中介作用。

关键词 安全合规性，意义建构，心理授权，安全态度，链式中介模型

The influence of sense-making on pilot safety compliance: the chain mediating effect of psychological empowerment and safety attitude

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Abstract: With the development and application of intelligent technology, aviation accidents are gradually dominated by human factors. As the main body of aviation activities, the safety behavior of pilots is closely related to aviation safety. Griffin and Neal (2000) divided safety behavior into safety participation and safety compliance based on Borman and Motowidlo's two-dimensional work performance model. Among them, safety compliance includes deep compliance and surface compliance, which refers to the behavior performed according to the formal safety requirements of the organization to complete tasks (i.e. safety rules and procedures). Previous studies have shown that safety attitude and psychological empowerment have a positive predictive effect on safety behavior, and there is a correlation between safety attitude and psychological empowerment. The work meaning dimension and work self-determination dimension of psychological empowerment are the influencing factors of safety attitude. In addition, sense-making theory shows that sense-making allows individuals to construct and design their own internal (i.e. cognitive) and external (i.e. procedural) behaviors of space-time movement. Sense-making provides a reasonable interpretation of individual behavior and closely connects individual behavior with the knowledge, norms and requirements of work. By changing the individual attitude, sense-making improves the individual's sense of self-worth and self-efficacy, and enhances the individual's understanding of work meaning and work self-determination. Then, according to behavioral dynamics theory and planned behavior theory, sense-making can change the mode of safe behavior through internal motivation variables (such as psychological empowerment) and social cognitive variables (such as attitude). Therefore, taking pilots as subjects, this paper discusses the impact of sense-making related to aviation safety and safety behavior on deep safety compliance and surface safety compliance, and the chain intermediary role of psychological authorization and safety attitude. This will help to understand the unsafe behavior of pilots and design specific programs related to safety education or behavior intervention. Based on the existing research, considering that the separation of pilots' implicit safety attitude and explicit safety attitude has been proved, and there is a positive correlation between them. Therefore, adopting standardized tests such as flight management attitude questionnaire (FMAQ 2.0) or implicit association test (Yan Bihua et al., 2015) applicable to pilots and compiling or revising scales applicable to pilot groups such as sense-making scale, safety compliance scale (Xiaowen Hu et al., 2020) and psychological empowerment scale (Li Chaoping et al., 2006) will help to test the path model of sense-making, psychological empowerment and safety attitude affecting safety compliance. Finally, combined with interview and questionnaire survey, this paper aims to prove the chain intermediary role of psychological empowerment and safety attitude between sense-making and safety compliance, as well as the intermediary role of safety attitude between sense-making and safety compliance, and the intermediary role of psychological empowerment between sense-making and safety compliance.

Keywords: Safety compliance, Sense-making, Psychological empowerment, Safety attitude, The chain mediating effect

父母教养行为对青少年领导力涌现的影响

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摘要 领导力涌现是指在一个没有正式领导的群体内部, 个体对其他成员所表现出的领导力的感知过程, 领导力的涌现是个体表现出有效领导力的前提。已有研究表明较高的领导者自我效能感和领导动机能促进领导力涌现, 但是相关研究的对象以成人为主, 关于青(少)年领导力的研究则非常稀少。本研究从领导力终生发展的角度切入, 欲探讨负性教养行为, 尤其是父母心理控制对青(少)年领导力涌现影响的机制。

由于关于青少年领导力发展的研究较少, 相关理论缺乏, 同时, 为了获得更多源有效的数据, 研究采用混合研究方法中的探索性时序设计, 实施了三个子研究。研究一为质性研究, 研究者依据制定的访谈提纲对30名16-20岁的高中生和大学生进行深入访谈, 旨在探究影响青(少)年领导力涌现的典型负性教养行为以及这一过程中的影响因素及机制。研究二为实验室研究, 目的在于验证质性研究的结果。实验招募50名初、高中生为被试, 分为6个小组完成6~10人规模的无领导小组讨论任务, 根据任务表现评估被试的领导力涌现水平, 并用问卷测量被试的父母心理控制、观点采择、基本心理需求(自主维度)、领导动机和领导者自我效能感五个变量。研究三为现场研究, 在线发放600份调查问卷以重复研究二的结果。对研究一的访谈数据进行编码分析, 结果发现父母心理控制有损青(少)年三种基本心理需求的满足, 同时影响青(少)年领导他人的愿望和承担领导角色的自信心, 在不同父母心理控制水平下成长的青少年, 其担任领导角色的情况有所差别。部分青(少)年对父母教养行为的理解缓解了父母心理控制带来的影响。研究二的结果与研究一基本耦合, 验证了质性研究的发现。研究三重复验证已有结果, 加强了理论模型的生态效度。研究表明, 父母心理控制会降低青(少)年自主需求的满足, 通过降低领导动机或领导者自我效能感从而抑制领导力涌现, 青(少)年观点采择能力较高时, 领导力涌现水平更高。本研究从领导力终生发展的角度拓展了领导力领域的研究, 同时研究所采用的混合研究方法则从方法论的角度丰富了有关领导力的研究。

关键词 父母教养行为, 基本心理需求, 观点采择, 领导力涌现

Influence of parenting behaviors on youth leadership emergence

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Abstract: Leadership emergence, which is a prerequisite for individuals to show effective leadership, refers to the process of perception of leadership by others displayed by team members in a leaderless group. Based on previous research, leadership emergence will be promoted when individuals have a high sense of self-efficacy and strong motivation to lead. The subjects of related research are mainly adults, while research on youth leadership has been scarce. This research stands on the perspective of leader development across the lifespan, in order to explore the mechanism by which negative parenting behaviors influence the leadership emergence in youth. Due to the lack of research on youth leadership development and the lack of relevant theories, and in order to obtain more valid data from multiple sources, this research adopted the exploratory sequential design in the Mixed-methods and three sub-studies were conducted. Study 1 is a qualitative study. Aiming to explore the typical negative parenting behaviors that influence the leadership emergence in youth and the factors and mechanisms in this process, researchers conducted in-depth interviews with 30 high school and college students aged between 16 and 20 according to the interview outline formulated before. Study 2 is a laboratory study, aimed at verifying the results of Study 1. 50 junior high and high school students were recruited as subjects, divided into six groups to complete leaderless group discussion scaled 6 to 10 people. The level of leadership emergence of the subjects was assessed by the task performance. Five variables including parental psychological control, perspective-taking, basic psychological needs (Autonomy dimension), motivation to lead and leader self-efficacy were measured by questionnaires. Study 3 is a field research, and 600 questionnaires were distributed online to replicate the results of Study 2. Coding and analysis of the interview data of Study 1 showed that parental psychological control damages the satisfaction of the three basic psychological needs of youth, and at the same time affects youth's desire to lead others and self-confidence in

assuming leadership roles. Youth who grew up under different levels of parental psychological control have different situation in assuming leadership roles. Some adolescent's and teenagers' understanding of their parents' parenting behaviors alleviates the negative influence of parental psychological control. The results of Study 2 and Study 1 were coupled, verifying the findings of the qualitative study. Study 3 repeatedly verified the existing results and strengthened the ecological validity of the theoretical model. The research showed that parental psychological control will reduce the satisfaction of autonomy needs of adolescents and teenagers, and will inhibit the leadership emergence by reducing motivation to lead or leadership self-efficacy. Adolescents and teenagers who are more capable in perspective-taking own higher level of leadership emergence. This research expands the leadership research from the leader lifelong development perspective, and also contributed to leadership research from a methodological perspective by adopting mixed-methods.

Keywords: parenting behavior, basic psychological needs, perspective taking, leadership emergence

求同还是存异？领导-员工认知风格匹配对员工组织公民行为的影响

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摘要 随着现代企业组织结构的扁平化，领导力的发挥从自上而下的单向输出，逐渐转变为领导员工间的双向互动过程。在此背景下，领导-员工匹配得到了众多研究者的关注。就员工的组织公民行为而言，领导-员工认知风格的匹配是其重要的前因变量，然而何种匹配方式能最有效地推动员工做出组织公民行为，研究尚未形成统一结论。从理论角度出发，由于组织公民行为的既要求员工发挥自主性，又强调员工对组织的顺从，组织内直觉型和分析型认知风格的共存有助于平衡二者之间的关系，进而推动组织公民行为的产生；但部分实证研究却表明，领导员工认知风格的一致性可以正向预测员工的组织公民行为。基于领导-下属交换发展模型，尝试厘清四种领导-员工认知风格组合对员工下属组织公民行为的影响，以及信任的中介作用。采用多源问卷调查方法，得到华东地区 10 制造企业 223 名员工及其直接主管的配对数据，运用 Spss 20.0 和 Mplus 7，结合二次多项式回归分析、响应面分析和 Bootstrap 方法构建中介模型。研究结果表明（1）领导-下属认知风格一致性匹配程度越高，下属越倾向于表现出组织公民行为；（2）在领导-下属认知风格一致性时，领导直觉型-下属直觉型匹配对下属的组织公民行为的正向影响强于领导分析型-下属分析型；（3）在领导-下属认知风格互补时，领导分析型-下属直觉型对下属的组织公民行为的负向影响强于领导直觉型-下属分析型；（4）下属对领导的信任在领导-下属认知风格匹配和组织公民行为之间具有中介作用。研究结果加深了对领导员工匹配与组织公民行为之间关系的理解，对现代企业的管理实践提供了指导。

关键词 认知风格，领导-下属匹配，组织公民行为，信任

Identical or Complementary? The Influence of Leader-Member Cognitive Style Fit on Organizational Citizenship

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Abstract: The fit between leader and employee's cognitive styles is a vital antecedent variable of organizational citizenship. However, there has not been a consensus on what type of fit is most effective in promoting employees' organizational citizenship. Since organizational citizenship requires both employees' autonomy and compliance, the coexistence of intuitive and analytical cognitive styles within an organization could promote organizational citizenship behavior. However, empirical studies suggest that the consistency of leader-employee cognitive styles positively predicts employee organizational citizenship behavior. Based on the leader-member exchange development model, this study attempts to clarify these contradictory results and explore the effects of four leader-employee

cognitive style combinations on organizational citizenship. We used A multi-source questionnaire method to obtain paired data from 223 employees and their direct supervisors in 10 manufacturing companies in East China. The results indicated that (1) the higher the leader-member cognitive style congruence match, the more employees exhibit organizational citizenship; (2) when the leader-employee cognitive style is congruent in intuitive, the highest citizenship shows. (3) the units of intuitive leader with analytic members are better than an analytic leader with intuitive members (4) trust mediates the relationship between leader-member cognitive style congruence fit and organizational citizenship.

Keywords: Cognitive styles, Leader-member fit, Organizational citizenship, Trust

女性一线服务人员外表社会压力对工作投入的影响： 自我客体化的中介作用和自我同一性的调节作用

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摘要 当下无论是现实生活中，还是网络媒体中，人们对于身体形象的讨论不休不止，尤其是针对女性形象。不可否认，优秀的外貌条件有利于成为良好的第一印象的加分项，对人际交往、工作学习等产生有利影响。但是反观当下现实与媒体网络，人们对于身材外貌过度关注，“形象绑架”产生了严重不良后果：演员明星等定义了你的穿衣风格；大众媒体定义了你以瘦为美的身材追求；服装、化妆品等广告定义了你的消费观；“你的身材，藏着你的自律，出卖了你的生活层次”、“美体身高体重对照表”诸如此类的大流量文章所宣称的观点成为了你的信条。在这种氛围下，人们潜移默化的将外界定义的理想型内化为自己的身体自我的一部分，形成自我客体化。人们过分关注自己的身材和外貌特征，会导致个体的内部感知迟钝，降低个体工作和学习的高度投入状态（即心流），侵占个体有限的注意认知资源；当与理想外表比较时，就容易引发焦虑、自卑、身体羞耻等负面情绪，破坏个体积极的情绪状态；也对身体健康产生影响，如无节制节食、盲目整形、甚至抑郁等。当前多数研究均集中于外表社会压力、自我客体化对女性身体满意度或饮食障碍的消极影响，很少关注它们对组织中员工工作表现的影响，基于这一思考，本研究以对外外表有较高要求的行业（如彩妆、服装、服务业销售行业）等女性一线工作人员为对象，探讨外表社会压力、自我客体化、自我同一性对工作投入的影响。方法：采用对外表的社会文化态度问卷($\alpha=0.906$)、客体化身体意识量表($\alpha=0.965$)、同一性风格问卷($\alpha=0.820$)、工作投入问卷($\alpha=0.953$)作为研究工具，对彩妆、服装、服务业销售行业 400 名女性一线服务人员进行调查。结果：外表社会压力对工作投入呈显著的负相关。自我客体化与工作投入呈显著的负相关。自我客体化在外表社会压力和工作投入间起中介作用。自我同一性在外表社会压力和工作投入间起调节作用，外表社会压力对工作投入的负面影响随同一性程度的升高而降低。结论：揭示了自我客体化在外表社会压力和工作投入间起中介作用/同一性在外表社会压力和工作投入间起调节作用的内在机制。

关键词 女性一线服务人员，外表社会压力，自我客体化，自我同一性，工作投入

The Influence of Female Frontline Services Employees' Social Pressure of Apperence on Work Engagement: The Mediating Effect of Self-objectification and the Moderating Effect of Slef-identity

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Abstract: Whether in real life or online media, people have endless discussions about body image, especially the image of women. It is undeniable that excellent appearance conditions are conducive to becoming a plus point for a good first impression, and have a beneficial impact on interpersonal communication, work and study. However, in contrast to the current reality and media networks, people pay too much attention to the appearance of the body, and the "image kidnapping" has produced serious adverse consequences: actors and stars define your style of dressing; mass media define your pursuit of thinness for beauty; clothing, Advertisements such as cosmetics define your view

of consumption; "Your figure hides your self-discipline, betrays your level of life", "Body Height and Weight Comparison Table" and the views declared by high-traffic articles have become your creed. . In this atmosphere, people subtly internalize the ideals defined by the outside world as part of their physical self, forming self-objectification. When people habitually observe and pay much attention to their own body and appearance characteristics, which will cause the individual's internal perception to be slow and reduce the individual's work and study state of high engagement (namely flow), seize the attention of the individual limited cognitive resources. When people compare them with the external defined perfect type, it is easy to trigger negative emotions such as anxiety, low self-esteem, body shame, etc., destruct individual's positive emotional state. This also has an impact on physical health, such as uncontrolled dieting, blind plastic surgery, and even depression. Most current researches focus on the negative effects of the social pressure of appearance and self-objectification, and seldom pay attention to the impact of the social pressure of appearance and self-objectification on the work engagement in the organization. Based on this point, this study focuses on female frontline services employees (e.g., cosmetics, clothing, services industry) in the organization to explore the influence of the social pressure of appearance, self-objectification, self-identity style, on work engagement. Methods: Using 400 female frontline services employees as a sample, using The sociocultural attitudes towards appearance scale($\alpha=0.906$), self-objectification questionnaires ($\alpha=0.965$), Identity Style Inventory ($\alpha=0.820$), Utrecht work engagement questionnaires ($\alpha=0.953$) as research tools. Results: The social pressure of appearance has a significant negative correlation with work engagement. The social pressure of appearance has a significant negative correlation with Self-objectification. Self-objectification has a significant negative correlation with work engagement. Self-objectification has a mediating effect on the relationship between the social pressure of appearance and work engagement. The relationship between the social pressure of appearance and work engagement is moderated by self-identity, and the level of the negative impacts which the social pressure of appearance caused to work engagement decreases with the increase of employees' level of self-identity. Conclusion: It reveals the mediating effect of self-objectification between the social pressure of appearance and work engagement, and the moderating effect of self-identity between the social pressure of appearance and work engagement.

Keywords: female frontline services employees, the social pressure of appearance, self-objectification, self-identity, work engagement

5.6“医学心理专业委员会”分组展贴报告

边缘性人格障碍者在负性情绪加工任务中的杏仁核功能特征

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摘要 研究背景: 边缘性人格障碍 (Borderline Personality Disorder, BPD) 是一种以高情感反应与低情绪调节能力等为主要表现的严重精神疾病。现有的神经影像学研究表明, 大脑额叶-边缘系统的功能异常与情绪紊乱密切相关, 而杏仁核则是该系统中负责情绪加工与调控的关键脑区。因此, 本研究拟分析 BPD 患者在负性情绪加工任务下的杏仁核功能异常特征, 阐明杏仁核在 BPD 情绪加工与调节紊乱中的神经病理机制。**方法:** 36 名符合入组标准与排除标准的未服药 BPD 患者与 36 名在性别、年龄、教育水平与 BPD 患者相匹配的健康对照者均完成了结构磁共振与情绪加工任务 (匹配情绪面孔) 中的功能磁共振扫描。所有被试也完成了系列心理评估量表与访谈, 包括状态特质焦虑量表、流调中心用抑郁量表与简明韦氏成人智力量表。采用基于 Matlab 平台的 DPARSF 与 SPM 工具包对 MRI 数据进行处理与分析: (1) 定位所有被试在情绪加工任务下左右杏仁核的最大激活点。(2) 比较 BPD 组与 HC 组在负性情绪加工任务下脑区间的功能激活差异。(3) 分别选取左右杏仁核的最大激活坐标为球心, 以 6mm 为半径的球形范围为感兴趣区, 采用心理-生理交互作用分析方法计算任务态功能连接 (task state-Functional Connectivity, taskFC) 值, 比较 taskFC 值的组间差异。**结果:** (1) 与基线状态 (匹配形状) 相比, 所有被试在完成负性情绪面孔匹配时, 双侧杏仁核、前额叶与枕叶的激活强度均显著增强 ($p < 0.05$, FWE 体素水平校正)。(2) 在执行情绪加工任务时, BPD 组的右侧杏仁核、海马、海马旁回、后扣带回、楔前叶以及左侧海马旁回、梭状回的激活强度均较 HC 组显著增强 ($p_{\text{uncorr}} < 0.001$, $p_{\text{FWE-corr}} < 0.05$)。(3) 与 HC 组相比, BPD 组右侧杏仁核至同侧额上回与对侧中扣带回的 taskFC 值增强 ($p_{\text{uncorr}} < 0.005$), 且 BPD 组左侧杏仁核至同侧额上回的 taskFC 值降低 ($p_{\text{uncorr}} < 0.005$)。**结论:** 在负性情绪加工任务中, BPD 患者的杏仁核表现出异常激活且与特定脑区表现出异常的功能连接, 共同提示 BPD 患者在执行负性情绪时杏仁核存在功能异常, 且这种异常的功能模式可能是 BPD 情绪加工与调节异常的神经病理机制。

关键词 边缘性人格障碍, 情绪加工任务, 杏仁核, 任务态, 心理生理交互作用

Functional Characteristics of Amygdala during Negative Emotion Processing in Patients with Borderline Personality Disorder

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Abstract: Background: Borderline Personality Disorder (BPD) is a serious mental illness characterized by high emotional response and poor emotion regulation ability. Previous neuroimaging studies have shown that abnormal functions of the prefrontal and limbic system were closely related to emotion dysregulation, in which the amygdala is a key brain region responsible for emotional processing and regulation. Hence, this study was aimed to examine the abnormal functional characteristics of amygdala of BPD patients during negative emotion processing task, and clarify the neuropathological mechanism of amygdala in the impaired emotion processing and regulation of BPD. **Method:** Thirty-six drug-naïve BPD patients and 36 gender-, age-, and education- matched Healthy Controls (HCs) completed

the structural Magnetic Resonance Imaging (sMRI) and the functional MRI during emotional processing task (matching emotional faces) scans. In addition, all participants completed a series of psychological assessment scales and interviews, including State-Trait Anxiety Inventory (STAI), Center for Epidemiologic Studies Depression Scale (CES-D), and Wechsler Adult Intelligence Scale - Revised China (WAIS-RC). Data processing and analysis were performed with DPARSF and SPM toolboxes based on Matlab platform: (1) Locating the maximum activation point of bilateral amygdala caused by emotional processing task in all participants. (2) Comparing the group differences in activation of brain regions during matching negative face. (3) Selecting the maximum activation coordinates of bilateral amygdala as the centers of sphere, and spherical regions of interest (ROIs) were defined with a radius of 6mm. Psycho-Physiological Interaction (PPI) analyses were performed to examine the task state functional connectivity (taskFC) value, and the differences in taskFC between two groups were compared. **Results:** (1) In all participants, the bilateral amygdala, prefrontal lobe, and occipital lobe were significantly activated during emotional processing task compared with baseline task (matching shape; $p < 0.05$, voxel-level FWE corrected). (2) During the emotional processing task, the activation of right amygdala, hippocampus, parahippocampal gyrus, posterior cingulate gyrus, precuneus, left parahippocampal gyrus and fusiform gyrus was significantly enhanced in the BPD group compared with the HC group ($p_{\text{uncorr}} < 0.001$, $p_{\text{FWE-corr}} < 0.05$). (3) Compared with the HC group, the BPD group showed enhanced taskFC values of right amygdala to ipsilateral superior frontal gyrus and contralateral middle cingulate cortex ($p_{\text{uncorr}} < 0.005$), and decreased taskFC value of left amygdala to ipsilateral superior frontal gyrus ($p_{\text{uncorr}} < 0.005$). **Conclusions:** The amygdala of BPD patients showed abnormal activation and abnormal functional connection with specific brain regions during negative emotion processing, which indicate the functional abnormalities of amygdala in BPD patients may be the neuropathological mechanism underlying the abnormal emotional processing and regulation of BPD.

Keywords: Borderline personality disorder, Emotional processing task, Amygdala, Task state, Psycho-physiological interaction

共情和医学生学习倦怠的关系：心理弹性的中介作用和家庭社会经济地位的调节作用

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摘要 **目的** 医学生的学习倦怠问题日益凸显, 共情可以对学习倦怠起到良好的预测作用。本研究旨在探讨共情对医学生学习倦怠的影响以及心理弹性在其中的中介作用和家庭社会经济地位在其中的调节作用。**方法** 以云南省 552 名医科类大学生为研究对象, 采用问卷法对其共情、学习倦怠、心理弹性和家庭社会经济地位进行调查。**结果** (1) 共情能够显著负向预测医学生学习倦怠; (2) 心理弹性在医学生共情和学习倦怠的关系中起中介作用; (3) 心理弹性在医学生共情和学习倦怠之间的中介作用受到家庭社会经济地位的调节, 在低家庭社会经济地位背景下, 心理弹性的中介作用不显著。**结论** 研究结果支持医学生共情和学习倦怠的关系是一个有调节的中介模型, 这对于制定医科类大学生学习倦怠的干预和预防措施具有重要意义。

关键词 共情, 学习倦怠, 心理弹性, 家庭社会经济地位, 医学生

Relationship between Empathy and Learning Burnout of Medical College Students: The Mediating Role of Subject Well-being and the Moderating Role of Resilience

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Abstract: Objective The problem of learning burnout of medical students is becoming prominent, and empathy can play a good predictive role in learning burnout. The present study aimed to investigate the relationship between empathy and learning burnout, as well as the mediation effect of resilience and the moderation effect of Family Socioeconomic Status (FSES) in this relation. **Methods** A random sample of 552 college students from a key medical university in Yunnan Province was investigated using the Basic Empathy Scale, Learning Burnout Scale, Connor-Davidson Resilience Scale and Family Socio-economic Status Questionnaire. All the measures showed good reliability and validity in the present study. Data were analyzed using SPSS 23.0 and the SPSS macro-PROCESS. **Results** indicated that: (1) empathy negatively and significantly predicted learning burnout; (2) resilience partially mediated the relationship between empathy and learning burnout; and (3) the intermediary role of resilience between medical students' empathy and learning burnout is moderated by FSES with the indirect effect being more potent in children with high FSES than in children with low FSES. **Conclusion** These findings highlight the mediating role of resilience and the moderating role of FSES in the effect of empathy on learning burnout of medical college students. It may contribute to a better understanding of the effect of empathy. Moreover, it can also provide constructive suggestions for protecting and improve resilience of medical college students.

Keywords: empathy, learning burnout, resilience. family socioeconomic status, medical college students

儿童期起病 1 型糖尿病患者的认知功能与脑影像特征

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摘要 研究目的: 1 型糖尿病 (Type 1 diabetes mellitus, T1DM) 是糖尿病的一种特殊类型, 多于儿童期(<18 岁)起病。目前有研究对 1 型糖尿病患者认知功能进行了探讨, 但研究结果存在不一致性, 且认知功能损伤的神经机制也不清楚。本研究试图通过检测儿童期起病的 1 型糖尿病成年患者的认知功能与脑功能特征, 以了解儿童期 1 型糖尿病患者是否存在认知损伤与脑功能异常; 并通过分析脑功能特征及其与患者认知功能受损的关系, 来探讨 1 型糖尿病患者认知功能损伤的神经机制。**研究方法:** 30 名儿童期起病的 1 型糖尿病患者和 28 名健康对照进行了韦氏智力测验、韦氏记忆测验、威斯康辛卡片分类测验 (WSCT)、持续注意反应任务 (SART) 等神经心理测验, 并接受了功能核磁共振扫描。比较两组被试在智力、记忆功能、执行功能与持续注意等认知功能的差异, 采用低频振幅的方法 (ALFF) 对两组被试的静息态数据进行分析, 探讨 1 型糖尿病患者在静息状态下大脑神经元自发活动特征, 并进一步分析患者静息态脑功能改变与其认知功能损伤的关系。**研究结果:** 儿童期起病的 1 型糖尿病成年患者在智商测验得分、言语听觉记忆测验得分、视觉图形记忆测验得分、WSCT 总错误和持续错误得分均显著低于健康对照组, SART 误按数显著多于健康对照组 ($p < 0.05$)。同时患者存在静息态脑功能的异常, 主要表现为在左侧中央前回、左侧中央后回、左侧脑岛、左侧顶叶缘上回的 ALFF 值显著增高; 在右侧基底核 (壳核)、右侧脑岛、右侧颞上回、左右侧小脑后叶的 ALFF 值显著降低。通过相关分析发现 1 型糖尿病患者的右侧脑岛与颞上回这一区域 ALFF 值与言语听觉记忆-延时呈显著正相关 ($r = 0.422, p = 0.040$), 左侧小脑 ALFF 值与 SART 测验反应时呈显著负相关 ($r = -0.473, p = 0.020$)。**结论:** 儿童期起病的 1 型糖尿病患者在成年后存在认知功能的损伤与脑功能异常, 这些脑功能的异常可能是认知功

能损伤的神经病理学基础。

关键词 认知功能, 1 型糖尿病, 静息态功能磁共振成像, 低频振幅

Cognitive function and neuroimaging characteristics in patients with childhood onset type 1 diabetes

Abstract: Objective: Type 1 diabetes mellitus (T1DM) is a chronic metabolic condition characterized by a lifelong dependence on exogenous insulin that occurs predominantly in children and adolescents. The central nervous system is a major organ system affected in type 1 diabetes. In this study, we used cognitive assessment and neuroimaging to examine brain function in patients with type 1 diabetes mellitus. **Methods:** A total of 30 adults with childhood onset type 1 diabetes mellitus, 28 healthy controls participated in the study. The study evaluated the differences between the two groups in terms of cognitive function, IQ, memory, attention, information processing speed and executive function. Resting-state functional MRI (rs-fMRI) data were obtained using a 3-T Siemens Magnetom Trio scanner. ALFF analysis was used to detect neural spontaneous activity and the between-group differences in ALFF values were compared. And to analyze the relationship between the ALFF values and cognitive impairment in patients with type 1 diabetes mellitus. **Results:** Adult patients with childhood onset type 1 diabetes mellitus were significantly lower scores than the healthy controls in terms of IQ, the digit span test, picture completion test, block design test, verbal memory, visual memory, SART, and WCST ($p < 0.05$). Adults with childhood onset type 1 diabetes mellitus have the abnormality of ALFF values. The ALFF values in the left precentral gyrus, the left postcentral gyrus, the left insula, and the left supramarginal gyrus were significantly higher than those in the healthy control group, and the ALFF values of the basal ganglia (putman nucleus), the right insula, the right superior temporal gyrus, and the cerebellar posterior lobe were significantly lower than those in the healthy control group. And through correlation analysis, it was found that the abnormality of ALFF values in these brain regions were associated with impaired cognitive function in patients with type 1 diabetes mellitus. The ALFF values in the the right insula and the right superior temporal gyrus was positively related to the verbal memory scores ($r = 0.422, p = 0.040$), the left cerebellar posterior lobe was negatively related to the response time of SART ($r = -0.473, p = 0.020$). **Conclusions:** Compared with healthy controls, adult patients with type 1 diabetes mellitus in childhood have cognitive impairment and functional abnormalities. The functional abnormalities in these brain regions may be the neuropathology of cognitive deficits in patients with type 1 diabetes mellitus.

Keywords: Cognitive functions, Type 1 diabetes mellitus, Resting-state functional MRI (rs-fMRI), Amplitude of low frequency fluctuation (ALFF)

童年创伤与抑郁：左侧颞下回-楔前叶功能连接改变的中介作用

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摘要 目的: 童年创伤 (Childhood trauma, CT) 已被证明是抑郁症 (Major depressive disorder, MDD) 的重要风险因素。然而 CT 在 MDD 发生发展中的具体作用及其神经机制尚不清楚。本研究的目的是在 MDD 患者及健康被试 (Healthy controls, HC) 中, 探索童年创伤相关的静息态脑自发活动和功能连接 (Functional connectivity, FC) 特征, 并明确其在 CT 和抑郁关系间的作用。 **方法:** 本研究纳入性别、年龄及言语智商上均匹配的四组被试: 有 CT 的 MDD 患者 (n=91)、无 CT 的 MDD 患者 (n=32)、有 CT 的 HC (n=33) 以及无 CT 的 HC (n=46)。所有被试完成贝克抑郁量表、状态特质焦虑问卷、压力知觉量表评估以及静息态功能磁共振扫描。采用 2 (CT: 有/无) × 2 (诊断: MDD/HC) 析因设计, 探索低频振幅 (ALFF) 值存在 CT 主效应及 CT 和诊断交互效应的脑区, 并将其作为感兴趣区 (ROI) 进行基于种子点的全脑 FC, 探索 FC 存在

CT 主效应或 CT 和诊断交互效应的脑区。对有显著差异脑区的 FC 值与临床症状之间进行偏相关分析及中介效应检验,来探讨 CT 影响抑郁的潜在神经机制。以上统计分析均控制人口学变量,在涉及 CT 的影响时,将压力知觉作为额外的控制变量。**结果:** ALFF 值存在 CT 主效应的脑区为左侧颞下回 (FWE 校正, $p<0.05$, 39 体素)。FC 分析显示左侧颞下回与双侧楔前叶的 FC 存在童年创伤与诊断的交互效应 (FWE 校正, $p<0.05$, 50 体素);简单效应分析表明,CT 使得 MDD 患者左侧颞下回-楔前叶 FC 减弱,但在 HC 中,CT 则使得该 FC 增强。偏相关性分析及中介效应检验显示,在 MDD 中,左侧颞下回-楔前叶 FC 值与抑郁得分显著相关 ($r=-0.30$, $p=0.001$),且 FC 完全中介情感忽视和抑郁水平的关系 ($\beta=0.10$, 95% CI: 0.03-0.29);在 HC 中,左侧颞下回-楔前叶 FC 值与特质焦虑得分显著相关 ($r=0.38$, $p=0.001$),FC 完全中介性虐待与特质焦虑的关系 ($\beta=0.09$, 95% CI: 0.07-1.02)。**结论:** 相比于无 CT 的被试,有 CT 的被试左侧颞下回脑自发活动减弱,然而 CT 相关的左侧颞下回-楔前叶的 FC 异常改变在 MDD 患者和 HC 中的表现不同。左侧颞下回脑自发活动及其与楔前叶功能连接异常改变可能在童年创伤影响抑郁症发生发展的机制中产生重要影响。

关键词 童年创伤, 抑郁症, 左侧颞下回, 楔前叶, 功能连接

Childhood Trauma and Depression: the mediation role of altered left inferior temporal gyrus–precuneus functional connectivity

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Abstract: Purpose: Childhood trauma (CT) has been proven to be a high-risk factor for major depressive disorder (MDD), but the specific role of CT in the occurrence and development of MDD and its neural mechanisms are still unclear. The purpose of this study is to explore the characteristics of resting state brain spontaneous activity and functional connectivity (FC) related to CT in MDD patients and healthy controls (HC), and to clarify its role in the relationship between childhood trauma and depression. **Methods:** Four age, gender, verbal IQ matched groups of subjects were included in this study: MDD patients with CT ($n=91$), MDD patients without CT ($n=32$), HC with CT ($n=33$), and HC without CT ($n=46$). All subjects completed clinical assessments including Beck Depression Inventory (BDI), Spielberger State-Trait Anxiety Inventory (STAI), and Perceived Stress Scale (PSS), as well as resting-state functional magnetic resonance scan. 2 (CT: yes / no) $\times$ 2 (MDD / HC) factorial design was used to explore the brain regions of the main effect of CT and / or the effect of MDD diagnosis-by-CT interactions on the low-frequency amplitude (ALFF) value. Then, the regions showed altered ALFF value related to CT were chosen as regions of interest (ROIs) for whole brain FC analysis to explore the brain areas where the main effect of CT or the effect of MDD diagnosis-by-CT interactions on seed-based FC existed. Finally, the partial correlation analyses between altered FC values related to CT and the clinical symptoms were performed, and the mediation tests were further carried out to explore the potential neural mechanism of the effect of childhood trauma on depression. Age, gender, and verbal IQ were controlled in all steps. The recent stress level (PSS) was additionally controlled when investigating the effects involving CT. **Results:** The left inferior temporal gyrus (left ITG) was detected as the region of the main effect of CT on ALFF value (FWE corrected, $p<0.05$, voxel size = 39). Thus, left ITG was chosen as the region of interest (ROI) to perform the seed-to voxel FC. For FC based on left ITG seed, there was significant effect of MDD diagnosis-by-CT interactions was observed in bilateral precuneus (FWE corrected, $p<0.05$, voxel size = 50). Simple effect analysis shows that in MDD patient group, CT weakened the left ITG-precuneus FC, but in HC group, CT could enhance the FC between left ITG and bilateral precuneus. Partial correlation analyses and mediation tests showed that in MDD group, the left ITG-precuneus FC value was significantly correlated with the BDI score ($r = -0.30$, $p = 0.001$), and FC completely mediates the relationship between emotional neglect and depression level ($\beta = 0.10$, 95% CI: 0.03 to 0.29); in HC group, left ITG-precuneus FC value is significantly correlated with trait anxiety (r

= 0.38, $p = 0.001$), FC completely mediates the relationship between sexual abuse and trait anxiety ($\beta = 0.09$, 95% CI: 0.07 to 1.02). **Conclusion:** Independent of MDD diagnosis, participants with CT indicated decreased spontaneous brain activity (ALFF) in the left inferior temporal gyrus. However, the effect of CT on altered FCs of the left ITG-precuneus are different in MDD group and HC group. The altered spontaneous activity of the left inferior temporal gyrus and its FC with the precuneus may play an important role in the mechanism of the effect of childhood trauma on depression.

Keywords: Childhood Trauma, Major Depressive Disorder, Left inferior temporal gyrus, Precuneus, Functional Connectivity

医学生情绪调节自我效能感与负性情绪的关系： 人际适应与自我接纳的链式中介作用

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摘要 医学生是未来的医务工作者, 不仅要面临专业知识和技能的不断累积, 还要面对由学业、人际、社会环境等带来的各种负性情绪的调节与管理, 做到临危不乱、真诚沟通, 方能在日后承担起拯救生命的重要职责。然而, 近年来医学生的焦虑、抑郁水平居高不下, 得分高于全国大学生常模, 因此, 深入探讨医学生的负性情绪水平具有重要的现实意义。**目的:** 探索医学生情绪调节自我效能感、人际适应、自我接纳与负性情绪之间的关系。**方法:** 采用人际适应性量表、情绪调节自我效能感量表、自我接纳量表和抑郁-焦虑-压力量表简体中文版对 539 名医学生进行问卷调查。**结果:** ①情绪调节自我效能感、人际适应性与自我接纳两两呈显著正相关, 但与负性情绪呈显著负相关; ②中介模型检验显示, 人际适应和自我接纳的间接效应的 Bootstrap 95%置信区间均不包含 0, 说明人际适应和自我接纳是情绪调节自我效能感影响负性情绪的中介变量, 总的中介效应值为-0.33, 占总效应(-0.39)的 84.62%。具体来看, 由三条路径组成: 第一, 情绪调节自我效能感→人际适应→负性情绪组成的间接效应(效应值-0.22); 第二, 情绪调节自我效能感→人际适应→自我接纳→负性情绪组成的间接效应(效应值-0.06); 第三, 情绪调节自我效能感→自我接纳→负性情绪组成的间接效应(效应值-0.05)。**结论:** 情绪调节自我效能感分别通过人际适应、自我接纳的中介作用及人际适应与自我接纳的链式中介作用间接影响医学生的负性情绪。

关键词 医学生, 人际适应, 负性情绪, 情绪调节自我效能感, 自我接纳

Relationship between Emotional Self-efficacy and negative emotion of medical students: Chain Mediating Effect of interpersonal

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Abstract: Medical students are future medical workers. They should not only face the accumulation of professional knowledge and skills, but also face the adjustment and management of various negative emotions brought by academic, interpersonal and social environment, so that they can take on the important responsibility of saving lives in the future. However, in recent years, the level of anxiety and depression of medical students remains high, and their scores are higher than the national norm of college students. Therefore, it is of great practical significance to explore the negative emotion level of medical students in depth. Objective: To explore the relationship between emotional self-efficacy, interpersonal adaptation, self-acceptance and negative emotions of medical students. Methods: A questionnaire survey was conducted among 539 medical students with Interpersonal Adaptability Scale, Emotional

Self-efficacy Scale, Self-acceptance Scale and Depression-Anxiety-Stress Scale. Results: ① Emotional self-efficacy and interpersonal adaptability were positively correlated with self-acceptance, but negatively correlated with negative emotions; ② Mediating model test shows that the Bootstrap 95% confidence interval of indirect effects of interpersonal adaptation and self-acceptance does not contain 0, which indicates that interpersonal adaptation and self-acceptance are mediating variables of emotion regulating self-efficacy affecting negative emotions, and the total mediating effect value is -0.33, accounting for 84.62% of the total effect (-0.39). Specifically, it consists of three paths: first, the indirect effect of emotion regulating self-efficacy → interpersonal adaptation → negative emotion composition (effect value-0.22); Second, emotion regulates the indirect effect of self-efficacy → interpersonal adaptation → self-acceptance → negative emotion composition (effect value-0.06); Thirdly, emotion regulates the indirect effect of self-efficacy → self-acceptance → negative emotion composition (effect value -0.05). Conclusion: Emotion-regulated self-efficacy indirectly affects the negative emotions of medical students through the mediation of interpersonal adaptation and self-acceptance and the chain mediation of interpersonal adaptation and self-acceptance.

Keywords: Medical students, Interpersonal adaptation, Negative emotion, Emotion regulating self-efficacy, Self acceptance

新冠疫情期医护人员心理应激、社会支持与职业倦怠：有调节的中介模型

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摘要 背景: 当前研究发现, 应激与职业倦怠呈显著正相关, 但其作用机制尚不清楚。本研究旨在探讨新冠疫情期间心理应激对医护人员职业倦怠的影响, 以及创伤后应激障碍在两者之间的中介作用和社会支持的调节作用。方法: 以新型冠状病毒公共卫生事件和医学为研究基础, 550 名医护人员为研究对象, 以电子问卷的形式向各医院的医护人员发放问卷。本研究以创伤后应激障碍作为中介变量, 以社会支持作为调节变量。利用 spss24.0 统计软件对数据进行统计分析, 建立并检验中介效应模型, 采用偏差修正百分位 bootstrap 方法对所有回归进行系数检验。结果: PTSD 部分中介了应激对职业倦怠的影响[间接效应=0.016, 95%可信区间(CI)=0.010, 0.023], 中介效应占总效应的 24%。间接效应受社会支持的影响($\beta=0.045$, $P<0.001$), 且在社会支持水平较低的医护人员中调节效应更为显著。结论: 社会支持调节了创伤后应激障碍对应激和职业倦怠之间关系的间接影响。在新冠疫情期间, 减少心理应激对医护人员的影响, 增强医护人员的社会支持感, 有利于减轻医护人员的职业倦怠, 提高医护人员的心理健康水平, 改善服务质量。

关键词 新冠疫情, 医护人员, 心理应激, 社会支持, 职业倦怠

Psychological stress, social support, and job burnout of medical staff during the COVID-19 pandemic period: a moderated mediation model

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Abstract: Background: Current research has found that stress is substantially positively correlated with job burnout, but its mechanism of action is unclear. This study aims to explore the impact of psychological stress on the job burnout of the medical staff during the COVID-19 epidemic, as well as the mediating role of PTSD between the two and the moderating role of social support. Methods: Based on the new coronavirus public health incident and medicine, with medical staff at the research object, 550 questionnaires were distributed to medical staff in various hospitals in the form of electronic questionnaires. This study uses PTSD as the mediating variable, and social support as the moderating variable. Use spss24.0 statistical software to perform statistical analysis on the data, establish and test the mediating effect model, and use the deviation-corrected percentile bootstrap method to test all regression coefficients. Results: PTSD partially mediates the effect of stress on job burnout [indirect effect=0.016, 95%

confidence interval (CI)=0.010, 0.023], and the mediation effect accounts for 24% of the total effect. The indirect effect is affected by social support ($\beta=0.045$, $P<0.001$), and is more significant among medical staff with lower levels of social support. Conclusion: Social support moderates the indirect effects of post-traumatic stress disorder on the relationship between stress and job burnout. During the COVID-19 epidemic time, reducing the impact of adverse psychological stress on medical workers and enhancing their sense of social support are conducive to reducing their job burnout, improving their mental health and improving service quality.

Keywords: COVID-19, medical staff, psychological stress, social support, job burnout

与“气”隔绝：社会隔离、孤独感与中国中老年人肺功能的前瞻性关联

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摘要 目的: 迄今为止, 考察社会关系和老年人肺功能关联的研究仍然较少, 且被试大都局限于慢性肺部疾病患者。本研究拟在中国一般中老年人群中, 探究社会隔离和孤独感与肺功能的纵向关联。**方法:** 研究基于中国健康与养老追踪调查 (China Health and Retirement Longitudinal Study, CHARLS)。本研究使用了 2011、2013 和 2015 年三波的数据, 分析样本限定为 45 周岁以上人群。最终有 11055 名被试 (平均年龄=58.59 岁, SD=9.31; 女性: 53.6%) 完成全部测量进入分析。肺功能使用最大呼气流量 (peak expiratory flow, PEF) 进行测量。本研究使用多层次线性混合增长模型考察了社会隔离、孤独感和中老年人肺功能的前瞻性关联。**结果:** 在调整了一系列协变量之后, 社会隔离 ($B=-4.27$, $p=0.002$) 而非孤独感 ($B=-3.73$, $p=0.113$) 与最大呼气流量显著负相关。社会隔离与时间变量之间存在显著的交互作用 ($B=-1.17$, $p=0.004$)。**结论:** 本研究发现, 在一般中国中老年人群中, 社会隔离而不是孤独感显著预测了最大呼气流量的下降。社会隔离程度越高, 个体的最大呼气流量随时间下降的越快。研究结果提示, 通过增加社会连接, 降低社会隔离, 有可能改善中老年人的肺功能。

关键词 社会隔离, 孤独感, 肺功能, 最大呼气流量

Isolated from the air: the prospective association between social isolation, loneliness and lung function among Chinese general middle-aged and older adults

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Abstract: Background: Quite a few studies have evaluated the impact of social relationships on lung function, and most of them are limited in patients with chronic lung diseases. The purpose of this study was to examine the relationships of social isolation and loneliness, both individually and simultaneously, on lung function among general Chinese middle-aged and older adults. **Methods:** This study used data from the China Health and Retirement Longitudinal Study (CHARLS). Analyses were conducted with data from three waves (2011, 2013, and 2015) and were restricted to those respondents aged 45 and older. Finally, 11,055 individuals [mean age (SD)=58.59 (9.34); female, 53.6%] were included in analysis. Lung function was assessed by peak expiratory flow (PEF). Two-level

linear mixed growth models were used to evaluate the longitudinal association between social isolation, loneliness and PEF. **Results:** Social isolation ($B=-4.27, p=0.002$), rather than loneliness ($B=-3.73, p=0.113$) was significantly associated with PEF after adjusted for multiple confounding factors. Moreover, a significant interaction between time and social isolation was found ($B=-1.17, p=0.004$). **Conclusions:** This longitudinal study found that increased social isolation, rather than increased loneliness was significantly associated with reduced PEF among general middle-aged and older adults in China. Participants with a higher level of social isolation experienced a faster decrease in PEF over time. Efforts to reduce isolation may have substantial benefits in terms of lung function among middle-aged and older adults in China.

Keywords: social isolation, loneliness, lung function, peak expiratory flow

动物 PTSD 模型中母婴分离诱导的组蛋白乙酰化与 BDNF 程序性突触改变相关

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摘要 母婴分离 (maternal separation, MS) 会导致脑部长期的表观遗传变化, 并增加成年后对创伤性事件的脆弱性, 脆弱性的增加可能具有性别差异性。至今, 尚不清楚 MS 和随后的成人创伤后应激障碍 (Post-traumatic stress disorder, PTSD) 是否对表观遗传修饰有影响。在这项工作中, 我们研究了海马 (hippocampus, HIP) 的表观遗传变化和脑源性神经营养因子 (brain-derived neurotrophic factor, BDNF) 的表达, 以确定 BDNF 是否在因早期 MS 导致的 PTSD 风险中发挥作用。分离大鼠子代 (PND2~PND14 3 h/d 或 6 h/d)。待幼崽长大成年 (PND80), 进行单次延长应激 (single prolonged stress, SPS) 处理。我们发现, 大鼠在 SPS 处理后出现了情绪和记忆的体征改变以及 BDNF 总 mRNA 和蛋白水平的降低。这些变化与组蛋白修饰相关, 如 H3K9ac 水平降低和 HDAC2 水平升高。此外, 在海马 CA1 和 CA3 区域的突触结构中也发现了类似的趋势。在一些测试中, 经历过 MS3h 的雄性大鼠比只经历 PTSD 的大鼠表现更好, 但是在雌性中没有发现这种效果。我们的数据表明, 经历 MS (6h/d, PND1~21) 的雌性大鼠背景关联型恐惧记忆形成减少, 降低了雌性患 PTSD 的风险, 我们发现雄性大鼠 MS6h-PTSD 组的 CA1 区和 MS3h-PTSD 组的 CA3 区突触间隙相对雌性大鼠的更宽。此外, 与雄性大鼠相比, 雌性 MS6h-PTSD 组大鼠在 CA1 中的 PSD 区域明显增厚。这体现了明显的性别差异性。这些结果支持了该观点, 即雌性啮齿动物在慢性应激后神经重塑模式的表现与雄性不同, 这意味着在突触可塑性调节方面雌性可能比雄性能更好地适应应激。这些结果表明, 暴露于二次创伤后大鼠的反应有显著的性别差异。出生后经历 MS 和随后的 PTSD (经 SPS 诱发) 可能会影响海马 BDNF 表达的变化, 从而导致突触的病理改变。进一步的相关研究表明, 这种变化可能受到组蛋白修饰的调控, 并与行为学表型相关。HIP 中组蛋白乙酰化改变可能成为有价值的 PTSD 生物标志物或创伤暴露后精神症状的有效指标。此外, 也可能具有作为治疗靶点或评估 PTSD 治疗疗效的指标的价值。

关键词 母婴分离, 创伤后应激障碍, 脑源性神经营养因子, 组蛋白乙酰化, 突触可塑性

Maternal separation-induced histone acetylation correlates with BDNF-programmed synaptic changes in an animal model of PTSD

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Abstract: Maternal separation (MS) causes long-lasting epigenetic changes in the brain and increases vulnerability to traumatic events in adulthood in a manner that may be sex-specific. To date, it has been unclear whether MS and

subsequent adult post-traumatic stress disorder (PTSD) have an effect on epigenetic modifications. In this work, we studied epigenetic changes in the hippocampus (HIP) and the expression of BDNF to determine whether BDNF plays a role in determining risk of PTSD due to MS in early life. Rat offspring were separated from their dams (3 h/d or 6 h/d from PND2~PND14). Pups were treated with a single prolonged stress (SPS) procedure when they reached adulthood (PND80). We found that rats had symptomatic changes in mood and memory as well as reduced levels of total BDNF mRNA and protein after SPS treatment. These changes were correlated with histone modification, as reflected by decreased H3K9ac levels and increased HDAC2 levels. Moreover, similar trends were found in the synaptic structure of the CA1 and CA3 region of HIP. Male rats with MS3h showed better performance on some tests than rats treated with PTSD alone, however this effect was not found in females. Our data suggested that female rats that experienced MS(6h/d, PND1~21), had reduced formation of contextual fear memory and less risk of PTSD in females. We found that the synaptic cleft of male rats was wider in the MS6h-PTSD group on CA1 and in the MS3h-PTSD group on CA3 relative to with female rats. Further, compared with male rats, female rats in the MS6h-PTSD group had a significantly thickened PSD area in CA1, suggesting significant gender specificity. These results support the idea that female rodents do not show the same pattern of neural remodeling after chronic stress as do males, which means females may be better than males at adapting to the challenge of stress in regulating synaptic plasticity. These results suggested that postnatal MS and subsequent PTSD (induced by the SPS procedure) might affect changes in BDNF expression in the HIP, resulting in pathological changes at synapses. Further correlation studies suggested that this change may be modulated by histone modifications and related to behavioral phenotypes. Altered histone acetylation in the HIP may be a valuable biomarker of PTSD or an indicator of mental overload after trauma exposure. Further, this may have value as a therapeutic target or as an index for evaluating the efficacy of PTSD treatments.

Keywords: Maternal separation (MS), Post-traumatic stress disorder (PTSD), Brain-derived neurotrophic factor (BDNF), Histone acetylation, Synaptic plasticity

病耻感在维持性血液透析患者 D 型人格与抑郁症状之间的中介作用

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摘要 目的 维持性血液透析患者在长期的治疗过程中, 由皮肤色素沉着、呼吸伴有氨臭味等改变, 以及经济负担沉重、社会功能丧失等一系列问题引发的病耻感, 将给患者带来巨大的精神负担, 增加焦虑、抑郁等症状的发生风险。D 型人格特征是消极情绪与社交抑制相互作用的结果, 该人格特征下的血透患者由于消极情绪的长期存在, 以及在社会交往中的压抑与回避, 其病耻感易感性可能更高, 抑郁症状可能更加严重。本研究旨在调查维持性血液透析患者的病耻感现状及抑郁症状的严重程度, 探讨维持性血液透析患者的 D 型人格, 病耻感及抑郁症状之间的关系, 并进一步分析病耻感在 D 型人格与抑郁症状之间的中介效应。方法 采用便利抽样法, 选取济南市某两所三级甲等医院 93 名维持性血液透析患者为研究对象, 使用 D 型人格量表 (DS-14)、社会影响量表(SIS)及病人健康问卷(PHQ-9)对其进行问卷调查, 采用 Person 相关分析及 Process 宏插件分析 D 型人格、病耻感与抑郁症状的关系。结果 48.4%的血透患者存在抑郁症状。患者的病耻感总分为 64.95 ± 12.46 分。相关性分析结果显示, 血透患者 D 型人格倾向与其病耻感水平及抑郁症状呈显著正相关 ($r=0.399, p<0.001$; $r=0.638, p<0.001$), 患者病耻感越高, 其抑郁症状越严重 ($r=0.602, p<0.001$)。中介效应分析结果显示, 病耻感在血透患者的 D 型人格与抑郁症状之间存在显著的部分中介作用 ($\beta=0.099$, 95%CI [0.042, 0.167])。结论 维持性血液透析患者的病耻感水平及抑郁症状不容乐观。血透患者的 D 型人格倾向可直接促进其抑郁症状的产生, 也可通过提高自身病耻感水平间接增加抑郁症状。

关键词 维持性血液透析, D 型人格, 病耻感, 抑郁症状

Mediating role of stigma on the relationship between type D personality and depression symptoms among maintenance hemodialysis patients

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Abstract: Objectives During long-term treatment with maintenance hemodialysis (MHD), patients may experience high level of stigma caused by a series of problems, including skin pigmentation, the uremic fetor, heavy economic burdens, social dysfunction, etc. These problems also place a great mental burden, which can lead to depression symptoms for MHD patients. Type D personality trait stems from interactions between negative affectivity and social inhibition. Because of the tendency to experience a high level of negative affectivity and social inhibition, MHD patients with type D personality may have higher susceptibility to stigma which in turn increase exposure to depressive symptoms. This study aimed to investigate the current state of stigma and depression symptoms, and explore the mediating role of stigma between type D personality and depression symptoms in MHD patients. **Methods** A total of 93 MHD patients from 3A hospital in Jinan were recruited through convenience sampling to complete Type D Scale-14 (DS-14), Social Impact Scale (SIS) and Patient Health Questionnaire-9 (PHQ-9). **Results** 48.4% of patients have depression symptoms. The total score on SIS of MHD patients is 64.95 ± 12.46 . Correlational analyses revealed that higher type D personality was significantly and positively associated with stigma and depression symptoms, respectively ($r=0.399, p<0.001$; $r=0.638, p<0.001$). There was also a significant positive association between stigma and depression symptoms in MHD patients ($r=0.602, p<0.001$). Bootstrapping analyses using the PROCESS macro showed that stigma significantly and partially mediated the relationships between type D personality and depression symptoms ($\beta=0.099$, 95%CI [0.042,0.167]). **Conclusions** MHD patients have obvious stigma and serious depression symptoms. Type D personality had a direct positive impact on depression symptoms, and it also had an indirect positive effect on depression symptoms through stigma.

Keywords: maintenance hemodialysis, type D personality, stigma, depression symptoms

分裂型特质与生活满意度的关系：特质焦虑和心智游移的中介作用

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摘要 目的：既往研究发现分裂型特质与特质焦虑、心智游移、生活满意度之间存在密切联系，但分裂型特质与生活满意度之间关系的心理机制尚不清楚。本研究试图探讨分裂型特质与生活满意度的关系及特质焦虑和心智游移在这两个变量之间的中介作用。方法：通过分裂型人格问卷在约 1000 名大学生中筛选出 102 名高分裂型特质个体和 104 名低分裂型特质个体，被试填写了生活满意度量表、特质焦虑量表、心智游移问卷。结果：1) 独立样本 t 检验结果表明生活满意度，特质焦虑和心智游移在高低分裂型特质组别上存在显著差异，高分裂型特质组的特质焦虑总分、心智游移总分均显著高于低分裂型特质组，生活满意度得分显著低于低分裂型特质组。2) 回归分析结果显示分裂型特质组、特质焦虑总分、心智游移总分对生活满意度总分有显著负向预测作用。3) 中介分析表明，特质焦虑和心智游移分别在分裂型特质与生活满意度之间起中介作用；特质焦虑和心智游移在分裂型特质与生活满意度之间起链式中介作用。结论：分裂型特质、特质焦虑和心智游移是低生活满意度的风险因素。特质焦虑和心智游移在分裂型特质和生活满意度之间起中介作用，并且具有链式中介效应。该结果对于提高分裂型特质个体生活满意度有一定的启示意义。

关键词 分裂型特质、特质焦虑、心智游移、生活满意度，中介效应

Schizotypal traits and satisfaction with life among Chinese young adults: the mediating effect of trait-anxiety and mind-wandering

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Abstract: Objective: The psychological mechanisms underlying the relationship between schizotypal traits and satisfaction with life are not well understood. This study investigated the association between schizotypal traits and satisfaction with life, and explored the mediating role of trait-anxiety and mind-wandering in the relationship between those two variables in a sample of Chinese young adults. **Methods:** One-hundred and two individuals with high schizotypal traits and 104 individuals with low schizotypal traits were screened from about 1000 university students using the Schizotypal Personality Questionnaire. They completed a series of questionnaires including the Satisfaction with Life Scale, Trait Anxiety Inventory, and Mind Wandering Questionnaire. **Results:** 1) The high schizotypal trait group showed higher trait anxiety and mind-wandering frequency, and lower satisfaction with life than the low schizotypal trait group. 2) High schizotypal trait group, trait anxiety total score, and mind-wandering total score negatively predicted the satisfaction with life total score. 3) The mediation analysis showed that all indirect effect paths in the mediation models were significant. First, trait anxiety mediated the relationship between schizotypal trait group and satisfaction with life. Second, mind-wandering mediated the relationship between schizotypal trait group and satisfaction with life. Third, trait anxiety and mind-wandering mediated the relationship between schizotypal trait group and satisfaction with life. **Conclusions:** Schizotypal traits, trait-anxiety and mind-wandering are risk factors for low satisfaction with life. The influence of schizotypal traits on satisfaction with life was mainly mediated by the combination of trait-anxiety and mind-wandering. This study has implications for improving life satisfaction in individuals with schizotypal traits.

Keywords: Schizotypal traits, Trait anxiety, Mind-wandering, Satisfaction with life, Mediation effect

良性家族性肌阵挛癫痫的小脑解剖连接异常

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摘要 小脑功能障碍在良性成人家族性肌阵挛癫痫(BAFME)的发病机制中起着关键作用。然而,BAFME在小脑的神经病理通路机制尚不清楚。因此,本研究对一个BAFME家系的病史和电生理检查进行了深入的调查,并对其小脑的结构连接异常进行了研究。本研究通过对11名FCMTE患者和15名健康对照组进行DTI扫描并提取小脑解剖网络。使用统一肌阵挛评分量表(UMRS)和Fahn-Tolosa-Marin评估肌阵挛和震颤的严重程度;使用追踪测试A部分和B部分(TMTA、TMTB)数字符号测试(DST)和语言流畅性测试(VFT)评估执行和注意功能。结果表明:BAFME患者的VFT和DST评分显著低于健康对照组($p=0.019$; $p=0.048$),而TMTA和TMTB评分则无显著性差异($p=0.399$; $p=0.169$)。BAFME患者的8个连接在排列试验校正后与健康对照组有显著差异。与对照组相比,BAFME患者left cerebellum crus I至right cerebellum crus II和right Cerebellum VIII的连接减少, right cerebellum crus I至left cerebellum crus II和right cerebellum IV和right cerebellum V的连接减少, left cerebellum VI至right cerebellum crus I和right cerebellum II的连接减少,从right cerebellum VI到蚓部IV、V和VI。right cerebellum crus II至left cerebellum crus I的连接($p=0.0043$, $R=0.54$)和left cerebellum VI的连接($p=0.0058$, $R=0.62$)与DST呈显著正相关。从left cerebellum VI到right cerebellum crus I的连接与VFT呈显著正相关($p=0.0007$, $R=0.62$)。right cerebellum VI与蚓VI的连接与FTRS呈负相关($p=0.0023$, $R=-0.81$)。与对照组相比,BAFME患者小脑内8个解剖连接强度显著降低,认知和运动功能下降。这些发现可能为BAFME的病理生理学提供新的认识,并解释BAFME患者的认知和运动障碍。

关键词 良性家族性肌阵挛性癫痫，弥散张量成像，解剖连接，连接减少，小脑

Cerebellar anatomical connection dysfunction in benign adult familial myoclonic epilepsy

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Abstract: Cerebellar dysfunction plays a key role in the pathogenesis of benign adult familial myoclonic epilepsy (BAFME). However, the mechanism of neuropathological pathway of BAFME in cerebellum is unclear. Therefore, the history and electrophysiological examination of a BAFME family were deeply investigated, and the connectivity dysfunction of cerebellum was studied. In this study, 11 patients with FCMTE and 15 healthy controls were scanned by DTI and the cerebellar anatomical network was extracted. The severity of myoclonus and tremor was assessed using the unified myoclonus score scale (UMRS) and Fahn Tolosa Marin; Executive and attentional functions were assessed using tracking tests Part A and part B (TMTA、TMTB), digital symbol test (DST) and language fluency test (VFT). The results showed that the scores of VFT and DST in BAFME patients were significantly lower than those in healthy controls ($P = 0.019$; $P = 0.048$), but there was no significant difference between TMTA and TMTB scores ($P = 0.399$; $p=0.169$). The 8 connections of BAFME patients were significantly different from those of healthy controls after alignment test correction. Compared with the controls, BAFME patients showed decreased connectivity in connections from left cerebellum crus I to right cerebellum crus II and right Cerebellum VIII, from right cerebellum crus I to left cerebellum crus II and right cerebellum IV and V, from left cerebellum VI to right cerebellum crus I and II, from right cerebellum VI to vermis IV, V and VI. The connections from the right cerebellum crus II to the left cerebellum crus I ($p = 0.0043$, $R = 0.54$, Pierson correlation) and left cerebellum VI ($p = 0.0058$, $R = 0.62$, Pierson correlation) showed significantly positive correlation with DST. The connection from the left cerebellum VI to the right cerebellum crus I exhibited significantly positive correlation with VFT ($p = 0.0007$, $R = 0.62$, Pierson correlation). The connection from the right cerebellum VI to the vermis VI was negatively correlated with FTRS ($p = 0.0023$, $R = -0.81$, Pierson correlation). Compared with the control group, the connectivity of 8 anatomical connections in the cerebellum of BAFME patients decreased significantly, and the cognitive and motor functions decreased. These findings may provide a new understanding of the pathophysiology of BAFME and explain the cognitive and motor disorders in patients with BAFME.

Keywords: Benign adult familial myoclonic epilepsy, Diffusion tensor imaging, Anatomical connections, Decreased connectivity, Cerebellum

5.7“生理心理专业委员会”分组展贴报告

睡眠剥夺早期对大脑执行功能的影响：一项 ERP 研究

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摘要 背景：完全睡眠剥夺（total sleep deprivation, TSD）会导致认知功能的损害，其中受影响最为严重的是大脑执行功能。目前对于睡眠剥夺早期阶段影响大脑执行功能的相关神经心理生理证据依然比较欠缺。

目的：探讨大脑执行功能在 12h TSD 条件下是否就已经出现了异常。**方法：**以 16 名健康的男性青年受试者为研究对象，分别在正常静息状态下和 12h TSD 后进行 Go/Nogo 任务测试。测试共分为两个组块，在第一个组块下，受试者需要对“向左”的箭头，即 Go 刺激作出反应，并按下键盘上的“左键”，对 Nogo 刺激（“向右”箭头）不作反应。第二个组块用相反的刺激类型作为平衡测验（Go：向右；Nogo：向左）。在整个测验中，要求受试者在保证正确的前提下尽快作出反应。采集测验的行为学数据（反应时和正确率）并同步记录受试者的脑电图（EEG）数据。受试者于第一天晚上 20 时来到实验室并进行正常睡眠，第二天早上 8 时（剥夺 0h）进行 Go/Nogo 的 ERP 测试，将其结果作为基线，随后开始 24h 睡眠剥夺试验。在当晚 20 时（剥夺 12h）进行第二次 Go/Nogo 任务的 ERP 测试。选用重复测量方差分析的统计方法探讨 12h TSD 后行为学指标和脑电指标是否存在明显变化。**结果：**与正常静息状态下相比，12h TSD 后 Go 刺激的反应时缩短[(293.75s)vs.(287.01s)] ($t=1.710$, $p=0.103$)，其反应正确率下降[(94.18%) vs. (91.60%)] ($t=1.755$, $p=0.095$)。对 P2 波幅与潜伏期的统计分析发现，Go-P2 的潜伏期测量时间的主效应无统计学意义 ($F_{(1, 25)}=0.306$, $p=0.585$)，其波幅在测量时间的主效应上有统计学意义，在测量时间水平上，Go-P2 波幅与基线值相比，在 12h TSD 后波幅下降 ($F_{(1, 25)}=6.335$, $p<0.05$)；Nogo-P2 的波幅与潜伏期在测量时间的主效应均有统计学意义，在测量时间水平上，Nogo-P2 波幅与基线值相比，12h TSD 后下降 ($F_{(1, 25)}=6.043$, $p<0.05$)，潜伏期与基线值相比，12h 后延长 ($F_{(1, 25)}=8.210$, $p<0.01$)。**结论：**大脑执行功能在睡眠剥夺 12h 后就已经下降，主要表现为 ERP 中的 P2 成分受损，尤其是 Go/Nogo 任务中的 Nogo-P2 波幅的下降。研究表明 P2 是反映执行控制功能影响的敏感指标，是观察睡眠剥夺影响认知功能的重要窗口。

关键词 睡眠剥夺，执行功能，Go/Nogo，事件相关电位，P2

Effects of early sleep deprivation on executive function of the brain: an ERP study

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Abstract: Background: Total sleep deprivation (TSD) will cause cognitive impairment, in which the executive function of the brain is the most seriously affected. However, the evidence for the neuropsychophysiological effects of early sleep deprivation on executive function remains scant. **Objective:** This study aimed to investigate whether the executive function of the brain is impaired after 12 hours TSD (12h TSD). **Methods:** 16 healthy young males were tested by Go/Nogo task in normal resting state and after 12h TSD. The test was divided into two blocks. In the first block, the participants were asked to respond to the “left” arrow, the Go stimulus, and to press the “left” button on the keyboard, but not to the Nogo stimulus (the “right” arrow). The second block used the opposite stimulus type as a balance test (Go: “right”; Nogo: “Left”). Throughout the test, the participants were asked to respond as quickly as possible to ensure correctness. Behavioural data (response time and accuracy) were collected and EEG data were recorded simultaneously. The participants came to the laboratory at 20:00 PM on the first day and had a normal sleep. At 8:00 AM on the second day, the event-related potential (ERP) test of Go/Nogo task was performed as a baseline value (deprivation 0h), and then the 24h SD test was officially started. The second ERP test of Go/Nogo task was performed at 20:00 PM on the second day (deprivation 12h). The statistical method of repeated measurement analysis

of variance was used to investigate whether there were significant changes in behavioral indicators and EEG indicators after 12h TSD. **Results:** Compared to the normal resting state, the response time of Go stimulus after 12h TSD was shortened [(293.75s) vs. (287.01s)] ($t=1.710, p=0.103$), and the response accuracy was decreased [(94.18%) vs. (91.60%)] ($t=1.755, p=0.095$). The statistical analysis of P2 amplitude and latency showed that the main effects of Go-P2 amplitude was statistically significant while the main effect of Go-P2 latency was not statistically significant ($F_{(1,25)}=0.306, p=0.585$). At the measured time level, the amplitude of Go-P2 amplitude decreased after 12h TSD compared to the baseline value ($F_{(1,25)}=6.335, p<0.05$). The main effect of Nogo-P2 amplitude and latency were statistically significant. At the measurement time level, the amplitude of Nogo-P2 decreased after 12h TSD compared to the baseline value ($F_{(1,25)}=6.043, p<0.05$), and the latency was prolonged after 12h TSD compared to the baseline value ($F_{(1,25)}=8.210, p<0.01$). **Conclusion:** Executive function of the brain declines after 12h SD mainly manifested by impaired P2 components, especially the decrease of Nogo-P2 amplitude in Go/Nogo task. Study has shown that P2 is a sensitive indicator reflecting the influence of executive control function and it is also an important window to observe the effects of sleep deprivation on cognitive function.

Keywords: sleep deprivation, executive function, Go/Nogo, event-related potential, P2

自闭症谱系障碍感觉认知加工时空特征分析：系统综述

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摘要 自闭症谱系障碍(ASD)是一类以社交能力障碍、重复性行为以及对外界刺激的不当反应为特征的精神疾病。研究表明, ASD 患者对感觉通道信息的统合、加工和解释是存在困难的。因此, 本系统综述的目的是通过检索近年来流行使用脑电图(EEG)和功能磁共振(fMRI)研究 ASD 患者听觉、视觉和触觉的文章, 探究 ASD 患者感觉加工的时空特征, 从而为更深入的 ASD 神经机制研究提供理论支持。本文采用系统综述的方法, 从 Pubmed、PsycINFO、EBSCO 系列和 Web of science (SCIE/SSCI/BP 数据库)进行文献检索。结果: 从 583 篇文献中确定了符合纳入标准的 135 篇高相关性文献作为综述依据。按本综述的探究角度将入选的 135 篇文献大体分为三类: 描述 ASD 发生发展的时间特征、空间特征和时空特征。具体来说, 所有研究中涉及指标数据随时间变化的研究, 如事件相关电位(ERP)研究、长期随访研究等, 分长时、短时两种归入时间特征中, 共 67 篇; 涉及指标数据具有空间特异性的研究, 如 fMRI 研究中不同脑区激活、连接性类研究, 归入空间特征中, 共 58 篇。时空特征研究为指标数据既与时间相关, 又具有空间特异性, 如短时空研究: ERP-fMRI 联合研究; 或长时空研究: 长期随访的 fMRI 研究, 纳入时空特征中, 共 10 篇。结论: 到目前为止关于 ASD 感觉通道异常的研究仍未得出一致性的结论。ASD 感觉通道的异常与脑内的时空变化异常、脑神经网络受损密切相关, 且 ASD 感觉通道信息加工存在神经系统水平上的时间和空间异常, 呈现出 ASD 独特的时空特征。然而, 目前关于 ASD 神经机制的理解仍处于该疾病研究的初期阶段, 还有一系列的问题需要进一步澄清。比如 ASD 个体在感觉加工通道中的 ERP 成分异常与脑区激活和脑区之间的功能连接异常之间是否存在因果关系等。因此, 进一步从感觉综合的时空特征分析上开展自闭症的系列研究是必要的, 围绕 ASD 的神经网络演变特征, 从时空角度深入探究 ASD 患者异常的感觉加工模式, 使用多模态和纵向研究以确定 ASD 神经网络的时空动态变化, 有利于我们系统地观测 ASD 的发生机制和发展状况, 并为未来 ASD 神经生理机制研究提供新思路。

关键词 自闭症, 感觉, 事件相关电位, 功能磁共振成像, 时空特征

Spatiotemporal characteristics of sensory cognitive processing in autism spectrum disorders: A systematic review

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Abstract: Autism spectrum disorder (ASD) is a kind of mental illness characterized by social disorder, repetitive

behavior, and inappropriate response to external stimuli. Previous studies have shown that ASD patients have difficulty in integrating, processing, and interpreting sensory information. Therefore, the purpose of our systematic review is to retrieve studies that used electroencephalogram (EEG) and functional magnetic resonance imaging (fMRI) as the key technology for assessing the auditory, visual, and tactile aspects of ASD patients, and to explore the Spatiotemporal characteristics of sensory processing of ASD patients, so as to provide theoretical support for further research on neural mechanism of ASD. We used the method of systematic review to search studies from PubMed, PsychINFO, EBSCO series, and Web of Science (SCIE/SSCI/BP database). Results: 583 papers were excluded after screening according to the above criteria, and 135 suitable papers with high correlation were selected as the basis for review. 135 studies were divided into three categories: describing the temporal, spatial, and spatiotemporal characteristics of the occurrence and development of ASD. Specifically, all studies involving changes in index data over time, such as the ERP studies, the long-term follow-up studies, etc., were classified into two temporal characteristics, long-term and short-term, totaling 67 articles. Studies involving the spatial specificity of index data, such as the fMRI studies of activation and connectivity of different brain areas, were classified as having spatial characteristics, totaling 58 articles. Spatiotemporal characteristics are indicators of both temporal and spatial specificity, such as short-term studies, for example, ERP and fMRI studies, or long-term studies, for example, follow-up fMRI studies, totaling 10 articles. Conclusion: Up to now, there is no consistent conclusion about atypical sensory channels of ASD patients, which are closely related to the temporal and spatial abnormalities in the brain. Moreover, these abnormalities are demonstrated in processing sensory information at the level of the neural system, mainly in the brain neural networks, showing the unique temporal and spatial characteristics of ASD. However, the current findings of the neural mechanism of ASD are still in the early stage, and a series of questions need to be further answered. For example, is there a causal relationship between abnormal ERP components in sensory processing channels and abnormal brain activation and functional connectivity between brain areas in individuals with ASD? Therefore, it is necessary to further carry out a series of studies on autism and the spatiotemporal characteristics of sensory synthesis. Based on the evolutionary characteristics of the neural network of ASD patients, we should explore the abnormal sensory processing patterns in ASD patients from the perspective of time and space, and use multimodal and vertical research to determine the spatiotemporal dynamic changes of the ASD neural network. It is helpful for us to observe the mechanism and development of ASD, and to provide new ideas for future research on the neurophysiological mechanism of ASD.

Keywords: autism, sensation, event-related potential, functional magnetic resonance imaging, spatiotemporal characteristics

睡眠剥夺影响静息态大脑苍白球功能连接的 fMRI 研究

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摘要 背景: 睡眠剥夺在现代生活中较为常见, 会损害个体的认知功能, 这与相关大脑神经网络的功能连接被扰乱密切相关。本研究探讨个体在经历 36 小时的睡眠剥夺后, 静息状态下基底神经节中苍白球功能连接性的变化。方法: 30 名健康男性受试者 (年龄 25.9 ± 2.3 岁) 参与了这项自身前后对照的 36 小时睡眠剥夺研究。受试者共进行 2 次磁共振成像扫描 (EPI 序列, 扫描参数: TE=30ms, TR=2000ms, FOV=256*256mm, 层厚=5mm, 间隔=1mm, 反转角=90°, 矩阵=64*64, 20 层), 一次在觉醒期间 (基线扫描), 另一次在 36 小时的睡眠剥夺后。两次 fMRI 扫描之间间隔 3 周, 均在同一时间 (20:00) 进行。扫描顺序在受试者之间进行平衡。结果: 以苍白球为种子点, 经全脑静息态功能连接分析发现, 在 36 小时的睡眠剥夺后, 受试者左苍白球与右侧枕叶皮层、枕叶梭状回右侧及左侧颞叶皮层之间的功能连接下降, 而右苍白球与右侧颞叶之间的功能连接下降 ($p < 0.001$)。在任何显著集群 ($k > 20$) 中, 睡眠剥夺后苍白球没有表现出比清醒状态时更强

的连接性。讨论：以往研究表明基底神经节，特别是苍白球，在注意控制、无关信息的过滤等过程中起重要作用。本研究发现在 36 小时的睡眠剥夺后，苍白球与枕叶及颞叶的部分区域间的功能连接降低。而枕叶与颞叶作为主要的视觉及听觉皮层，对个体视觉及听觉信息的初级加工有着极其重要的作用。因此，我们猜测苍白球与枕叶及颞叶部分区域间功能连接性异常是睡眠剥夺后个体警觉性、视听信息整合等初级认知功能异常的原因之一。结论：36 小时的睡眠剥夺导致了苍白球与枕叶及颞叶的部分区域间的功能连接降低，这为睡眠缺失后个体的部分初级认知功能受损提供了可能的大脑影像学基础。

关键词 睡眠剥夺，苍白球，基底神经节，功能连接，功能磁共振成像

Sleep deprivation affects the resting-state functional connectivity of globus pallidus: an fMRI study

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Abstract: Backgrounds: Sleep deprivation is common in modern society leading to deterioration of cognition, which is closely related to the disruption of functional connectivity of the relevant brain neural networks. Our aim is to investigate changes of the resting-state functional connectivity of globus pallidus in the basal ganglia after 36 hours of sleep deprivation. Methods: 30 healthy male subjects (mean age 25.9 ± 2.3 years) participated in this self-controlled 36-hour sleep deprivation experiment. The subject underwent 2 fMRI scans (EPI Sequence: TE = 30 ms, TR = 2000 ms, FOV=256*256mm, slice thickness = 5 mm, slice gap = 1 mm, flip angle = 90°, matrix = 64*64, 20 oblique slices), one at awakening (baseline scan) and the other after 36 hours of sleep deprivation. The interval between the two fMRI scans was 3 weeks. Both scans were performed at the same time (20:00). The sequence was balanced between the subjects. Results: Globus pallidus was defined as seed region for the resting-state functional connectivity analysis. We found that: after 36 hours of sleep deprivation, the left globus pallidus showed decreased functional connectivity with the right occipital cortex, occipital fusiform gyrus right, temporal occipital fusiform cortex right and left planum temporale; the right globus pallidus showed decreased functional connectivity with right temporal gyrus ($p < 0.001$). In any significant cluster ($k > 20$), the globus pallidus after sleep deprivation showed no greater connectivity than when awake. Discussion: Previous studies have shown that basal ganglia, especially the globus pallidus, plays an important role in attention control and filtering of irrelevant information. This study found that after 36 hours of sleep deprivation, functional connectivity between the globus pallidus and regions of the occipital and temporal cortex were decreased. As the main visual and auditory cortex, the occipital cortex and temporal cortex are critical to the primary processing of visual and auditory information. Therefore, we suppose that abnormal functional connectivity between the globus pallidus and regions of the occipital and temporal cortex is one of the reasons for the decreased primary cognitive function such as alertness and audio-visual information integration after sleep deprivation. Conclusion: 36 hours of sleep deprivation resulted in decreased functional connectivity between regions of the globus pallidus and regions of the occipital and temporal cortex, which provided a possible brain imaging basis for the individual's deterioration of the primary cognitive function after sleep loss.

Keywords: sleep deprivation, globus pallidus, basal ganglia, functional connectivity, functional magnetic resonance imaging

完全睡眠剥夺对静息态壳核功能连接的影响

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摘要 背景：完全睡眠剥夺（total sleep deprivation, TSD）会导致个体运动控制功能受损。目前对于睡眠剥夺条件下壳核的神经认知功能研究较少，对于其生理心理机制了解不足。本研究探讨 36 小时完全睡眠剥夺后

壳核功能连接模式的改变。**方法:** 30 名受试者参与了本项自身对照试验研究。受试者分别在正常觉醒状态 and 36 小时急性睡眠缺失后采集功能影像学数据。以壳核作为种子区分析正常觉醒状态和急性睡眠缺失后的静息态大脑功能连接。**结果:** 与正常觉醒状态相比, TSD 后的受试者左壳核与双侧中央前回及中央后回的功能连接减弱; 与双侧颞上回、颞中回功能连接减弱; 与右侧缘上回连接增强。对于右侧壳核, TSD 后与双侧中央前回及中央后回功能连接减弱; 与右侧颞上回、颞中回功能连接减弱, 但右侧壳核未发现功能连接的显著增强。**讨论:** 壳核作为纹状体的一个重要结构是皮层下灰质最重要的核团之一, 与皮质运动区有解剖学联系, 在运动控制功能中发挥着重要作用。通过比较因睡眠缺失而引起的壳核连接性变化, 我们发现壳核和中央前回部分区域之间的功能连接性降低。中央前回是躯体的运动中枢, 因此与正常觉醒情况下相比, 受试者在 TSD 后壳核和中央区前回功能连接降低可能反映了 TSD 后基底神经节的运动调节功能与皮质运动区功能的分离, 导致了个体随意运动功能受损。同时, 壳核和中央后回部分区域之间的功能连接性也降低, 可能与 TSD 后个体感觉性降低有关。结果还发现壳核与颞上回、颞中回深层区域功能连接降低, 此功能连接的降低可能影响个体学习记忆功能, 进而导致个体运动信号加工整合受阻, 由此推测 TSD 后壳核功能连接模式变化与视觉控制、精细运动控制有关。另外, 结果中左壳核与右侧缘上回功能连接性的增强, 还需进一步研究探索。**结论:** TSD 损害了个体躯体运动控制功能, 与壳核同中央前回、中央后回、颞叶等区域的功能连接减弱有关。**关键词** 睡眠剥夺, 躯体运动控制, 壳核, 静息态, 功能连接

Effects of total sleep deprivation on resting state functional connectivity of putamen

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Abstract: Background: Total sleep deprivation (TSD) can lead to impaired motor control in individuals. At present, there are few studies on the neurocognitive function of the putamen under sleep deprivation, and the understanding of its physiological and psychological mechanisms is insufficient. Our study investigated the changes in functional connectivity patterns in the putamen after 36 hours of TSD. **Methods:** Thirty subjects were recruited to our self-controlled study. Functional imaging data were collected after normal awakening and 36 hours of acute sleep deprivation. The putamen was used as the seed area to analyze resting state brain functional connectivity after normal awakening and TSD. **Results:** Compared with the normal state of awakening, we found decreased functional connectivity between the left putamen and bilateral precentral gyrus, bilateral postcentral gyrus, bilateral superior temporal gyrus and bilateral middle temporal gyrus. We also found the increased connectivity between the left putamen and the right supramarginal gyrus after TSD. For the right putamen, the functional connectivity with bilateral precentral gyrus and postcentral gyrus decreased after TSD; the functional connectivity with the right superior temporal gyrus and middle temporal gyrus was decreased, but no significant increase of the functional connectivity was found. **Discussion:** Putamen as an key structure in the striatum is one of the most important nuclei in subcortical gray matter. It has anatomical relationship with cortical motor areas and plays an indispensable role in motor control function. By comparing the changes in putamen connectivity caused by TSD, we found that functional connectivity between the putamen and parts of the precentral gyrus was decreased. The precentral gyrus is the motor center of the body, so the decreased functional connectivity between the putamen and the precentral gyrus in subjects after TSD may reflect the functional separation of basal ganglia from cortical motor area after TSD, resulting in impaired voluntary motor function in individuals compared with normal arousal. At the same time, functional connectivity between the putamen and parts of the postcentral gyrus was also decreased, possibly related to the decreased individual sensitivity after TSD. The results also showed that the functional connectivity between the putamen and the deep regions of the superior and middle temporal gyrus was decreased, which may affect the individual's learning and memory function, and then lead to the hindrance of the integration of individual motor signal processing. Therefore, it is speculated that the change of putamen functional connectivity pattern after TSD is related to visual motor alertness control and fine motor control. In addition, the increase of functional connectivity

between the left putamen and the right supramarginal gyrus in the results needs further study and exploration.

Conclusion: TSD impairs the individual's somatic motor control function, which is related to the decreased functional connectivity between the putamen and regions such as the precentral gyrus, the postcentral gyrus, and the temporal lobe.

Keywords: sleep deprivation, motor control, putamen, resting state, functional connectivity

睡眠剥夺对视警觉网络功能连接的影响

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摘要 背景: 睡眠为人类正常生活所必需, 但随着科技进步和社会发展, 越来越多的人因持续工作、熬夜而出现了主动或被动失眠, 从而导致睡眠剥夺 (sleep deprivation, SD)。研究表明, SD 会降低人类大脑对视警觉信息的认知加工。由于视觉是个体接受外界刺激的重要感官通道, 其认知加工功能受损会严重影响个体的日常生活。但迄今为止, 对于视警觉网络是如何受到 SD 影响仍鲜有研究。**目的:** 本研究旨在从大脑有效功能连接和静息状态网络 (resting state networks, RSN) 两方面的改变入手, 分析 SD 对视警觉网络功能连接的影响, 旨在为了解 SD 后大脑的视警觉加工神经机制提供试验依据。**方法:** 34 名健康受试者自愿参与 36h-SD 试验, 并在 SD 前后分别采集静息态脑电数据。通过孤立有效相关 (isolated effective coherence, iCoh) 和功能独立成分分析 (functional independent components analysis, fICA) 两种方法, 分析 SD 后视警觉网络的功能连接变化, 主要包括双侧舌回 (BA18)、双侧楔叶 (BA18)、双侧枕叶 (BA19)、双侧梭状回 (BA19) 等, 并分析个体 RSN 活动在 SD 后的变化, 从而评估 SD 后视警觉网络有效功能连接活动的变化, 以探索 SD 对个体视警觉功能的影响。**结果:** iCoh 分析结果显示, 在 alpha 频段, 睡眠剥夺导致右侧舌回 (BA18) 到右侧枕上回 (BA19) 的功能连接下降; 同时, fICA 结果显示, 在静息状态下, 睡眠剥夺后的个体枕叶 alpha 振荡减弱, 尤其体现在楔叶 (BA19) 和枕上回 (BA19)。**结论:** SD 改变了视警觉网络的有效功能连接活动, 影响个体的视警觉信息加工过程, 这可能与损害视警觉皮层中枢, 尤其是右侧舌回同右侧枕上回的信息交互密切相关。

关键词 视警觉, 睡眠剥夺, 脑电图, 功能连接, 静息状态网络

Effects of sleep deprivation on functional connectivity of visual vigilance network

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Abstract: Background: Sleep is a necessity in the normal life of human beings, but with the technology advance and social development, a growing number of people suffer from active or passive insomnia due to continuous work and staying up late, which leads to sleep deprivation (SD). Studies have shown that SD can reduce the cognitive processing of visual vigilance information in human brain. As visual sense is an important sensory channel to receive external stimuli, its cognitive processing function is impaired, which will seriously affect individual's daily life. But so far, there is little research on how the visual vigilance network is affected. **Objective:** The purpose of this study is to analyze the effect of SD on the functional connectivity of visual vigilance network from the changes of brain effective functional connectivity and resting state networks (RSN), so as to provide an experimental basis for understanding the neural mechanism of visual vigilance processing after SD. **Methods:** 34 healthy subjects participated in the 36h-SD trial voluntarily, and the resting state EEG data were collected before and after SD. Two methods, isolated effective correlation (iCoh) and functional independent component analysis (fICA), were used to analyze the changes of functional connectivity in visual vigilance network after SD, mainly including bilateral lingual gyrus (BA18), bilateral cuneus (BA18), bilateral superior occipital gyrus (BA19), bilateral fusiform gyrus (BA19), etc., and to analyze the changes of RSN activity after SD, in order to evaluate the changes of effective functional

connectivity of visual vigilance network after SD, so as to explore the effect of SD on individual visual vigilance function. **Results:** iCoh analysis demonstrated that in the alpha band, sleep deprivation caused a decrease in the functional connectivity from the right lingual gyrus (BA18) to the right superior occipital gyrus (BA19); at the same time, the fICA results showed that in the resting state, occipital lobe alpha oscillations were weakened after sleep deprivation, especially in the cuneus (BA19) and superior occipital gyrus (BA19). **Conclusion:** SD changes the effective functional connectivity of visual vigilance network and affects the visual vigilance information processing of individuals, which may be closely related to the damage of visual vigilance cortex, especially the information interaction between right lingual gyrus and right superior occipital gyrus.

Keywords: visual vigilance sensory, sleep deprivation, electroencephalogram, functional connectivity, resting state networks

36 小时睡眠剥夺影响躯体感觉的脑功能连接分析

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摘要 背景: 睡眠剥夺 (sleep deprivation, SD) 会导致躯体感觉功能受损, 进而影响个体行为。躯体感觉与个体的注意、警觉等认知行为密切相关, 但是目前针对 SD 影响个体躯体感觉功能的神经生理学机制还鲜有研究。目的: 探讨 SD 后与躯体感觉相关的神经环路功能连接模式的变化特征。方法: 30 名健康男性 (年龄 25.9 ± 2.3 岁) 受试者参与了本项自身对照试验研究。分别在正常觉醒状态和 36h-SD 后采集受试者的功能影像学数据。以尾状核为种子区分析两种状态下静息态脑功能连接的变化。结果: 与静息觉醒状态相比, SD 后受试者左侧尾状核同双侧顶叶中央后回、颞下回左前分区和左后分区的功能连接性均显著降低; 而受试者左侧尾状核同顶叶缘上回右前庭区域的功能连接显著增强。右侧尾状核无连接性的显著变化。

讨论: 尾状核是躯体感觉传导的重要脑区, 而中央后回在刺激的辨别、视觉信息的处理、空间信息的定位过程中发挥重要作用, 因此 SD 后尾状核同中央后回的功能连接下降反映了受试者躯体感觉功能在 SD 后受到损害, 这会在一定程度上影响个体对于危险的感知。颞下回与视觉关联加工有关, 尾状核同颞下回功能连接的下降, 反映了 SD 后受试者对视觉信息的认知加工功能受损。由于缘上回与空间辨别功能有关, 尾状核与缘上回的功能连接增强, 可能与个体空间辨别能力的代偿性强化有关。以上结果表明, 受试者的躯体感觉相关认知加工在 36h-SD 后受损。结论: SD 损害了受试者的躯体感觉认知加工功能, 与尾状核同中央后回等脑区的功能连接变化有关。

关键词 睡眠剥夺, 躯体感觉, 尾状核, 中央后回, 功能核磁共振成像

Brain functional connectivity analysis of 36 hours sleep deprivation affecting somatosensory function

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Abstract: Background: Sleep deprivation (SD) can lead to the impairment of somatosensory function, and then affect individual behavior. Somatosensory is closely related to cognitive behaviors such as attention and alertness. However, there are few studies on the neurophysiological mechanism of SD affecting individual somatosensory function. Purpose: To investigate the changes of functional connectivity patterns of neural circuits related to somatosensory function after SD. Methods: Thirty healthy male subjects (age 25.9 ± 2.3 years) participated in this self-control study. Functional imaging data of subjects were collected after 36h-SD and normal wakefulness. The caudate nucleus was used as seed region to analyze the changes of brain functional connectivity in resting state. Results: Compared with the resting state, the functional connectivity of the left caudate nucleus to the bilateral parietal gyrus, left anterior and left posterior regions of inferior temporal gyrus were significantly decreased after SD, while the functional connectivity between the left caudate nucleus and the right vestibular region of the superior parietal lobe marginal

gyrus was significantly enhanced. There was no significant change of connectivity in the right caudate nucleus. Discussion: Caudate nucleus is an important brain region of somatosensory conduction, and the postcentral gyrus plays an important role in the process of stimulus discrimination, visual information processing and spatial information positioning. Therefore, the functional connectivity between caudate nucleus and postcentral gyrus is decreased, which reflects that the somatosensory function of subjects is impaired after SD, which will affect the individual's perception of danger to a certain extent. The inferior temporal gyrus is related to visual processing, the decrease of functional connectivity between caudate nucleus and inferior temporal gyrus reflects that the cognitive processing function of visual information is impaired after SD. Because the superior marginal gyrus is related to spatial discrimination, the functional connectivity between caudate nucleus and superior marginal gyrus is enhanced, which may be related to the compensatory enhancement of individual spatial discrimination ability. These results indicate that the cognitive processing related to somatosensory is impaired after 36h-SD. Conclusion: SD impairs the somatosensory and cognitive processing function of subjects, which is related to the functional connectivity between caudate nucleus and postcentral gyrus.

Keywords: sleep deprivation, somatosensory, caudate nucleus, postcentral gyrus, functional magnetic resonance imaging

恢复性睡眠对完全睡眠剥夺后受损工作记忆的改善作用： 视觉事件相关电位研究

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摘要 睡眠问题俨然已成为威胁大众身心健康的一个核心问题。睡眠缺失会损害个体认知功能，进而严重影响人们正常的工作生活。工作记忆在个体众多复杂认知活动中扮演着重要的角色。因此寻找有效干预措施来对抗睡眠缺失对工作记忆的负面影响十分有必要。有研究表明咖啡因等药物能有效地维持工作表现和警觉性，但其对高级认知功能的恢复作用却是十分有限的，且在长期睡眠不足的情况下，使用咖啡因可能会带来恢复成本。恢复性睡眠是指在睡眠剥夺后给予短时间的充分睡眠，其作为一种非药理学的恢复策略，已有不少研究探讨了其对因睡眠剥夺而受损的功能存在的恢复作用。但恢复性睡眠对于因睡眠剥夺而受损的工作记忆是否存在恢复作用，以及8小时时长的恢复性睡眠能对受损的认知功能恢复到何种程度，还需要进一步研究。本研究主要通过事件相关电位分析技术，探讨8小时恢复性睡眠对36小时完全睡眠剥夺后受损的工作记忆的恢复性作用。经筛选入组的16名健康男性受试者参与本次试验，受试者分别在36小时完全睡眠剥夺前后和8h恢复性睡眠后接受2-back工作记忆任务，并在完成任务的同时记录事件相关电位。结果显示与基线状态相比，36小时完全睡眠剥夺后，个体的工作记忆能力显著受损，与工作记忆相关的N2-P3成分呈现低幅慢波特征。在8小时恢复性睡眠后，受试者完成工作记忆任务时的N2波潜伏期显著减少，P3波波幅显著增大，潜伏期显著减少。研究结果表明因36h睡眠剥夺受损的工作记忆能力可以在8h恢复性睡眠中得到恢复。恢复性睡眠的作用可能集中在对持续性注意、警觉性的恢复，这一作用可能发生在恢复性睡眠过程中占主导地位慢波睡眠阶段，但这种恢复作用是有限的，并不能使反工作记忆能力恢复到基线水平。

关键词 睡眠剥夺，工作记忆，事件相关电位，恢复性睡眠

The restorative effects of recovery sleep on impaired working memory after total sleep deprivation: evidence from a visual event related potentials

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Abstract: Considering the well-known detrimental effects of sleep deprivation (SD) on cognitive function and quality of life, sleep disturbances represent a major physical and mental health issue. Because working memory plays an

important role in many complex cognitive processes, it is necessary to identify strategies that can effectively counteract the negative effects of SD on working memory. Although caffeine and other drugs can effectively maintain work performance and alertness, their effects on high-level cognitive functions are quite limited, and the use of caffeine may be associated with recovery costs in individuals with long-term sleep deficiency. Recovery sleep (RS) refers to a short period of adequate sleep that follows SD, representing a potential non-pharmacological strategy for combating the effects of SD on cognitive function. Nevertheless, the amount of sleep required to restore cognitive function following extended wakefulness remains unclear. In the present study, we utilized event-related potentials (ERPs) to investigate the restorative effect of 8 h of recovery sleep (RS) on working memory impairments induced by continuous 36 hours awake. We analyzed data from 16 healthy male participants. All participants completed a 2-back working memory task before and after 36 h of total sleep deprivation (TSD) and after 8 h of RS. Electroencephalography (EEG) data were recorded during the task. Results: N2 and P3 components related to working memory exhibited low-amplitude slow-wave characteristics following 36 h of TSD. Significant decreases in the latency of the N2 component were observed after 8 h of RS. RS also induced significant increases in the amplitude of the P3 component, along with significant decreases in P3 latency. Conclusions: Eight hours of RS attenuated decreases in working memory performance caused by 36 h of TSD. However, the effects of RS appear to be limited, the affected working memory capacity failed to reverse after 8 h of RS.

Keywords: sleep deprivation, working memory, recovery sleep, event-related potential

数学归纳推理中晚期正成分区分规则识别和规则确认：一项 ERP 研究

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摘要 归纳推理是智力的核心组成部分，是从特定实例中提取新知识的过程。一项典型的归纳推理任务，数字序列完形，经常在各种智力测验中使用。数字序列完形任务，如“12 14 16 18”，要求识别数字规则并应用它们来确定答案，可分为规则获得和规则应用两个阶段。因此，数字规则通常根据规则的应用或外推法评估数列来识别。为探索规则识别的相关认知神经基础，本研究在数字归纳推理任务前使用不同线索提示：无线索（如“2，4，6”或“2，4，7”，这样可以防止被试在第三个数字前猜测到规则）、部分线索（例如“2 4 6”的“+”或“2 4 7”的“++”）和完全线索（例如“2 4 6”的“+2”或“2 4 7”的“++2”）。被试首先被要求识别前三个数字中的隐藏规则，然后确定第四个数字是否与规则一致。根据已有线索和对应数字，无线索条件在第三个数字识别规则；部分线索条件可在第二个数字识别规则，在第三个数字确认规则；完全线索条件下的数字均在确认线索提示是否正确。与该系列中三个数字相关的事件相关电位结果显示，在第二个数字上，部分线索条件比完全线索条件下诱发出更大的中心顶叶晚期正成分（LPC）；在第三个数字上，在无线索条件下比在部分和完全线索条件下诱发了更大的 LPC。因此，研究结果反映了 LPC 区分规则提取和规则确认的神经活动。

关键词 归纳推理，规则识别，数字序列，LPC

Late positive components distinguish rule identification from rule confirmation in numerical inductive reasoning: an ERP study

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Abstract: Inductive reasoning, the central component of intelligence, is the process of abstracting new knowledge from specific instances. A typical inductive reasoning task, the number series completion is constantly used in various intelligence tests. The number series completion, such as “12 14 16 18”, requires one identifying the numerical rules and apply them to determine the answer and can be divided into rule acquisition and rule application phases. Thus, numerical rules are usually identified by evaluating the series according to the application of a rule or extrapolation. To explore the neural correlates of rule identification, this study used a numerical inductive reasoning task with

different cues before number triplets: no-cue (e.g., “*” for “2 4 6” or “*” for “2 4 7”, it will prevent the participants speculating the rule before the third number), partial-cue (e.g., “+” for “2 4 6” or “++” for “2 4 7”) and complete-cue (e.g., “+2” for “2 4 6” or “++2” for “2 4 7”). Participants were first asked to identify hidden rules within the first three numbers and then to determine whether for the fourth number was consistent with the rules. According to the existing cues and the corresponding number, the rules in the no-cue condition would be identified in the positions of the third number; the rules in the partial-cue condition could be identified by integrating the cues and first two numbers and later confirmed by the second number, as well as all the numbers of complete-cue were confirmed whether the clue is right. The event-related potential (ERP) results locked to the three numbers showed that for the second number position, a larger centroparietal late positive components (LPC) was elicited by the partial-cue condition than in the complete-cue condition; for the third number position, a larger LPC was elicited by the no-cue condition than in the partial-and complete-cue conditions. Therefore, this study revealed that the LPC differentiates the activation of rule abstraction from that of rule confirmation.

Keywords: inductive reasoning, rule identification, number series, late positive component

5.8“体育运动心理专业委员会”分组展贴报告

体育锻炼对初中生手机依赖的影响——心理韧性和锻炼自我效能感的中介效应

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摘要 目的: 探究初中生体育锻炼对手机依赖的影响机制, 考察心理韧性和锻炼自我效能感的中介效应, 以期通过科学适宜的体育锻炼干预初中生的手机依赖。**方法:** 采用体育锻炼问卷、心理韧性量表、锻炼自我效能感量表、手机依赖量表对 882 名初中生进行调查, 通过 Amos 构建结构方程模型对数据进行拟合。**结果:** 在性别上, 初中男生的在体育锻炼、心理韧性、锻炼自我效能感方面的得分较高, 初中女生在手机依赖上的得分略高。本文将年龄、性别、年级作为控制变量, 对其他变量进行标准化处理。初中生体育参与对手机依赖有负向预测作用 ($R^2=0.011$, $F=3.329$, $\beta=-0.107$, $P=0.003$); 也可以显著正向预测心理韧性 ($R^2=0.017$, $F=5.081$, $\beta=0.118$, $P=0.001$); 当初中生体育参与和心理韧性同时进入回归方程后, 体育锻炼能显著正向的预测锻炼自我效能感 ($\beta=0.098$, $P=0.007$)。当初中生体育锻炼、心理韧性、锻炼自我效能感同时预测手机依赖时, 体育锻炼具有显著的负向预测作用 ($\beta=-0.063$, $P=0.043$), 心理韧性和锻炼自我效能感分别有显著的负向预测作用 ($\beta=-0.314$, $P=0.000$; $\beta=-0.336$, $P=0.000$)。其中, 心理韧性的中介效应占比为 34.6%, 锻炼自我效能感的中介效应占比为 30.8%。**结论:** 体育锻炼、心理韧性和锻炼自我效能三者之间呈现正相关; 体育锻炼、心理韧性、锻炼自我效能感均与初中生手机依赖之间存在显著负相关。体育锻炼可以直接预测初中生手机依赖; 也可以通过心理韧性和锻炼自我效能感的链式中介作用来预测初中生的手机依赖。体育教师要引导学生积极参与集体性运动, 使学生在运动中获得成功体验, 提高学生的锻炼自我效能感, 提高学生心理韧性水平, 使学生通过体育锻炼调控自身情绪, 释放心理压力, 最终降低初中生手机依赖行为。

关键词 初中生, 体育锻炼, 心理韧性, 锻炼自我效能感, 手机依赖

The effect of physical exercise on mobile phone dependence of junior high school students: the mediating effect of mental toughness and exercise self-efficacy

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Abstract: Objective: To explore the influence mechanism of physical exercise of junior high school students on mobile phone dependence, and to investigate the mediating effect of mental toughness and exercise self-efficacy, with a view to intervening the mobile phone dependence of junior high school students through scientific and appropriate physical exercise. **Methods:** A survey was conducted on 882 junior high school students using physical exercise questionnaire, mental toughness scale, exercise self-efficacy scale, and mobile phone dependence scale, and the data was fitted with a structural equation model constructed by Amos. **Results:** In terms of gender, junior high school boys scored higher on physical exercise, mental toughness, and exercise self-efficacy, while junior high school girls scored slightly higher on mobile phone dependence. This article takes age, gender, and grade as control variables, and standardizes other variables. Sports participation of junior high school students has a negative predictive effect on mobile phone dependence ($R^2=0.011$, $F=3.329$, $\beta=-0.107$, $P=0.003$); it can also significantly positively predict mental toughness ($R^2=0.017$, $F=5.081$, $\beta=0.118$, $P=0.001$); when middle school students' physical participation and mental toughness entered the regression equation at the same time, physical exercise can significantly and positively predict exercise self-efficacy ($\beta=0.098$, $P=0.007$). When junior high school students' physical exercise, mental toughness, and exercise self-efficacy also predicted mobile phone dependence, physical exercise had a significant negative predictive effect ($\beta=-0.063$, $P=0.043$), and mental toughness and exercise self-efficacy were significant respectively Negative prediction effect ($\beta=-0.314$, $P=0.000$; $\beta=-0.336$, $P=0.000$). Among them, the mediating effect of mental toughness accounted for 34.6%, and the mediating effect of exercise self-efficacy accounted for 30.8%. **Conclusion:** Physical exercise, mental toughness and exercise self-efficacy are positively correlated; physical exercise, mental toughness, exercise self-efficacy are all significantly negatively correlated with mobile phone dependence of junior high school students. Physical exercise can directly predict the mobile phone dependence of junior high school students; it can also predict the mobile phone dependence of junior high school students through the intermediary effect of mental toughness and exercise self-efficacy. Physical education teachers should guide students to actively participate in collective sports, so that students can have a successful experience in sports, improve their self-efficacy in exercise, improve their mental toughness, and enable students to regulate their emotions through physical exercise, release psychological pressure, and ultimately reduce junior high school Mobile phone dependent behavior.

Keywords: junior high school students, physical exercise, mental toughness, exercise self-efficacy, mobile phone dependence

不同工具熟悉度群体的空间注意分配差异：基于乒乓球和羽毛球运动

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摘要 目的: 空间注意分配是指通过关注视觉场景的某个位置, 让我们有选择地处理信息, 优先处理信息的某些方面, 而忽略其他方面的过程。以往的研究表明握持工具的手因对该工具的熟悉度不同, 会对其附近空间的注意分配产生影响。由于乒乓球和羽毛球实际运动中务必使用球拍工具才能进行, 前人的研究往往忽视了球拍的存在及其熟悉度对注意分配影响, 生态学效度较低。因此本研究的目的是探讨对于乒乓球拍拥有

不同熟悉度乒乓球和羽毛球运动员群体,握持乒乓球拍时对其空间注意分配的影响。**方法:**招募了各 18 名乒乓球($M=21.4$, $SD=1.8$)和羽毛球($M=20.9$, $SD=1.3$)右利手国家二级运动员,进行空间线索提示任务。实验任务中的正中央有一个十字注视点,其左右两侧各有一个正方形方框,线索的提示体现为以任意一个方框的边框变亮加粗。有效线索条件下,目标会随后出现在有线索提示的方框中;无效线索条件则相反。实验中要求所有被试握持乒乓球拍,并分别放置到任务中距离右方框等距的两个位置。本研究采用 2(被试群体:乒乓球运动员,羽毛球运动员) $\times$ 2(线索有效性:有效,无效) $\times$ 2(目标位置:左,右) $\times$ 手位置(中间,右边)的四因素混合实验设计。**结果:**进行重复测量方差分析后发现,目标位置主效应显著, $F(1,34)=13.840$, $p=.001$, $\eta_p^2=.289$; 线索有效性主效应显著, $F(1,34)=92.485$, $p<.001$, $\eta_p^2=.731$; 目标位置和群体交互作用显著, $F(1,34)=4.868$, $p=.034$, $\eta_p^2=.125$; 目标位置和线索有效性交互作用显著, $F(1,34)=8.998$, $p=.005$, $\eta_p^2=.209$ 。对目标位置和群体的交互作用进行事后检验发现,乒乓球运动员对于右目标的反应时快于左目标($p<.001$),而羽毛球运动员左右目标反应时无显著差异($p=.292$)。对目标位置和线索有效性的交互作用进行事后检验发现,无效线索条件下,右目标的反应时快于左目标($p=.001$);而有效线索条件下,左右目标的反应时无显著差异($p=.135$)。**结论:** 1.在握持乒乓拍条件下,乒乓球运动员对离球拍工具较近的右侧空间的注意分配较多,而这在羽毛球群体中没有发现。2.无效线索条件更能表现出右侧空间的注意分配优势。

关键词 空间注意分配,工具熟悉度,乒乓球,羽毛球

The difference of different group with tool familiarity in allocation of spatial attention: basing on table tennis and badminton sport

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Abstract: Purpose: Allocation of spatial attention refers to focusing on a certain location of the visual scene, attention allows us to selectively process information, prioritizing some aspects of information while ignoring others. Previous studies have shown that due to the different familiarity of the hand holding the tool, the attention allocation of the space around the tool will be affected. Racket tools must be used in the actual sports of table tennis and badminton, but previous studies have often ignored the effects of racket existence and familiarity on attention allocation, so the ecological validity is low. Therefore, the purpose of this study was to investigate the influence of holding table tennis racket on spatial attention allocation among players with different familiarity levels of this racket. **Method:** 18 table tennis ($M=21.4$, $SD=1.8$) and badminton ($M=20.9$, $SD=1.3$) right-handed national level 2 athletes were recruited to participate covert-orienting paradigm. There was a cross fixation point, which two square boxes present on both left and right side, in the center of task, and the clue was indicated by the brightening and bolding of the border of any box. Under the condition of valid clues, the target will subsequently appear in the box with clues, and the invalid cue condition is the opposite. In the experiment, all subjects were required to hold table tennis racket and place them in two positions equidistant from the right square box in the task. In this study, a four-factor mixed experimental design of 2(groups: table tennis athletes, badminton athletes) $\times$ 2(validity: valid, invalid) $\times$ 2(target position: left, right) $\times$ hand position (middle, right) was adopted. **Result:** After repeated measures ANOVA, it was found that the main effect of target position was significant, $F(1,34)=13.840$, $p=.001$, $\eta_p^2=.289$. Effect of validity was significant, $F(1,34)=92.485$, $p<.001$, $\eta_p^2=.731$. Interaction between group and target position was significant, $F(1,34)=4.868$, $p=.034$, $\eta_p^2=.125$. And interaction of validity and target position was significant, $F(1,34)=8.998$, $p=.005$, $\eta_p^2=.209$. After post-hoc of the interaction between the target position and the group, we found that the response time of the table tennis athletes group to the right target was faster than the left target($p<.001$), while there is no significant effect in badminton athletes group. After another post-hoc of the interaction between the target position and the validity, we found that the response time of the right target was faster than the left target under the

condition of invalid cue. **Conclusion:**1. Under the condition of holding table tennis racket, table tennis athletes perform allocation of spatial attention higher in right space near the racket, while we didn't find the same effect in badminton group. 2. All the participant perform attention allocation better in the right space under the condition of invalid cue than valid cues.

Keywords: allocation of spatial attention, tool familiarity, table tennis, badminton

自我相关信息在篮球运动决策中的优势效应：来自 ERP 的证据

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摘要 在运动竞赛场景中, 运动员需借助视觉搜索或选择性注意捕获、加工信息, 同时避免和排除无关信息的干扰, 进而做出有效决策。研究发现, 在一般的视觉搜索任务中, 自我相关信息存在知觉优势效应, 能自动吸引个体的注意。那么, 当运动场景中的信息与自我高度相关时会对个体的运动决策产生怎样的影响? 本研究采用双任务范式, 使用事件相关电位技术, 选取某大学二级及以上水平篮球运动员 17 人 (年龄 22.65 ± 2.32 岁、运动年限 10.53 ± 2.90 年)、爱好者 11 人 (23.18 ± 3.74 岁), 考察自己姓名、朋友姓名及陌生人姓名对篮球运动决策的影响。行为结果显示, 在决策反应时上, 自我相关信息主效应边缘显著 ($F_{(2, 22)} = 2.84, p = .069, \eta_p^2 = 0.11$), 呈现陌生人姓名时的决策反应时快于呈现自己姓名和朋友姓名信息; 运动水平主效应不显著; 两者交互作用显著 ($F_{(2, 22)} = 3.77, p = .03, \eta_p^2 = 0.14$), 简单效应分析发现, 对于篮球运动员, 自己姓名下的决策反应时和朋友姓名下差异不显著, 自己姓名下的决策反应时显著长于陌生人姓名下的决策反应时, 朋友姓名下的决策反应时与陌生人姓名下的决策反应时差异不显著; 对于篮球爱好者, 不同姓名信息下的决策反应时差异不显著。在决策正确率上, 只发现了自我相关信息和运动水平的交互作用边缘显著 ($F_{(2, 22)} = 2.94, p = .06, \eta_p^2 = 0.11$), 简单效应分析发现, 对于篮球运动员, 呈现自己姓名时的决策正确率显著高于朋友姓名时的正确率, 显著高于陌生人姓名信息, 朋友姓名下的决策正确率与陌生人姓名下的决策正确率差异不显著; 对于篮球爱好者, 三种姓名信息下的决策正确率差异不显著。ERP 结果发现, 大脑前额区和中央区在自己姓名和朋友姓名信息条件下进行决策可诱发出更大的 N1 波幅, 且运动员的 P2 平均波幅显著大于爱好者。在晚期阶段 (350~420ms), 大脑左侧前额区在自己姓名和朋友姓名信息条件决策时诱发出更大的 N400 平均波幅。在 550~650ms 阶段, 运动员 LPP 平均波幅显著大于爱好者。由此, 自我相关信息影响运动决策的认知加工, 存在知觉优势效应, 且运动水平越高对决策信息简单特征定义的能力越强。

关键词 自我相关信息, 运动决策, 篮球运动员, 双任务范式, ERP

Perceptual Advantage Effect of Self-related Information in Basketball Decision-making: Evidence from ERP

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Abstract: In sports competition situations, athletes need to use visual search or selective attention to capture and process information and at the same time need to avoid and eliminate distractions, and then make effective decisions. So, how does the information in the sports scene have a high correlation with the self? This study adopted the dual-task paradigm and ERP, The participants were 17 basketball athletes and 11 college students from a university in China. To explore the effect of self-name, friend-name and unfamiliar-name on basketball decision-making. The behavior results show that the main effects of self-related information is margin significant in response time of decision making, the response time when presenting the unfamiliar-name is faster than presenting the self-name and friend-name; and the main effect of skill level is not significant; and the interaction between the two variables is significant in the decision response time, simple effect analysis found that for basketball players, the difference between the decision response under self-name and the friend-name is not significant, the decision response under self-name is significantly longer than that under unfamiliar-name, and the difference between the decision response

under friend-name and unfamiliar-name is not significant; for basketball amateur, the difference in decision-making response under different name information is not significant. The main effect of self-related information and group are not significant, and the interaction between the two is significant in the decision accuracy. Simple effect analysis found that for basketball players, the decision accuracy under self-name is significantly higher than that under friend-name, unfamiliar-name, and the difference between the decision accuracy under friend-name and unfamiliar-name is not significant; for basketball amateur, the difference in decision accuracy under different name information is not significant. The ERP results show that, when decision-making under the condition of self-name and friend-name information, the brain's prefrontal area and central area can induce a larger N1 amplitude, and the average P2 amplitude of athletes is significantly larger than that of amateur. In the late stage (350~420ms), when decision-making under the condition of self-name and friend-name information, the average amplitude of N400 induced by the left frontal area of the brain is significantly greater than the unfamiliar-name, while the average amplitude of the N400 induced by the right prefrontal area of brain is significantly smaller than the unfamiliar-name. During the period of 550~650ms, the average amplitude of LPP of athletes is significantly larger than that of amateur. The ability of decision-making in sports are impacted by self-related information, there is a perceptual advantage effect, and the higher the level of sports, the stronger the ability to define simple features of decision information.

Keywords: self-related information, decision-making in sport, basketball athletes, dual-task paradigm, ERP

锻炼的心理效益的安慰剂效应：一项元分析

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摘要 目的：由于目前人们对锻炼对心理健康的影响寄予了很高的期望，很难检验锻炼干预本身对心理的影响。因此，本研究旨在通过元分析方法评估实验诱发的期望带来的安慰剂效应。方法：利用 EBSCO、ProQuest、ScienceDirect 等数据库，检索从各数据库建库开始至 2020 年 3 月 21 日前发表的文献，为了排除受试者对不同种类、不同强度的锻炼抱有不一致的结果预期，本研究将纳入采用“期望修正”设计的研究，“期望修正”设计旨在使用情境或行为线索来引起或增强某种结果将会发生的信念，即对受试者的期望进行操纵的锻炼干预研究进行元分析，评估积极期望引起的安慰剂效应。纳入的研究中，实验组和对照组应进行相同类型、时间、强度的锻炼干预。共纳入 6 项研究。采用 RevMan5.3 进行元分析，通过比较实验组（提供关于锻炼的心理益处的信息）与对照组（不提供锻炼的心理益处相关信息）锻炼后情绪的改善情况，估计锻炼干预实验中实验诱发的期望对情绪的影响，探究锻炼改善情绪的机制。结果：与对照组相比，实验诱导的期望能够显著提升锻炼后的积极情绪，其合并效应量为小效应量（SMD=0.36，95%CI：0.16~0.57）。结论：对锻炼结果持有积极期望的个体运动后的情绪提升存在安慰剂效应，尤其是在短时、中低强度的有氧运动中，个体的情绪更容易受预期影响。

关键词 安慰剂效应，锻炼干预，锻炼，期望，元分析

Placebo effect on the psychological benefits of exercise:

A meta-analysis

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Abstract: Objective: Because of the high expectations placed on the effect of exercise on mental health, it is difficult to verify the effect of exercise intervention on the psychological components. This study aims to estimate the placebo effect of experimentally-induced expectations through meta-analysis. Methods: Articles published before 21 March 2020 were located using EBSCO, ProQuest, ScienceDirect, and other databases. In order to rule out that subjects have incompletely consistent outcome expectations for different types and different intensities of exercises, this study

will include studies that adopt an "expectation modification" design. The "expectation modification" design aims to use situational or behavioral cues to cause or to strengthen the belief that a certain result will occur, that is, to conduct a meta-analysis of an exercise intervention study that manipulates the expectations of the subjects to assess the placebo effect caused by positive expectations. A total of 6 studies were included. RevMan5.3 was used for meta-analysis. Evaluating the size of the placebo effect, and exploring the mechanism of emotional improvement after exercise by comparing the improvement of the emotion between the experimental group (providing information about the psychological benefits of sports) and the control group (not providing information about the psychological benefits of sports) after exercise. Results: Compared with the control group, the experimentally-induced expectation had a significant effect on the improvement of positive emotions after exercise (SMD = 0.36, 95% CI: 0.16 ~ 0.57). Conclusion: There is a placebo effect in participants who have positive expectations for exercise. Especially in a short-term, light or moderate intensity aerobic exercise, the experience of exercise is more likely to be affected by the expectation.

Keywords: placebo effect, exercise intervention, exercise; expectation, meta-analysis

正念训练对业余篮球运动员认知控制和心理状态的影响和预测

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摘 要 正念训练是以接受为基础的一种心理行为训练方法, 近年来广受大众关注, 并开始在竞技运动领域兴起。但由于各派正念训练方法纷杂、适用范围不同, 在应用上常引发争议。本研究旨在探究针对亚洲运动员的“正念—接受—觉悟—投入 (MAIC)”正念训练对业余篮球运动员的认知控制和心理状态的影响, 以及正念不同成分的影响作用。

本研究采用 2(组别:干预组和对照组)×2(时间:前测和后测)的混合实验设计, 组别为被试间变量, 时间为被试内变量。选取北京某体育大学的 24 名大学生业余篮球运动员 (其中男性 11 名, 平均年龄 20.5 ± 2.7 岁) 作为实验参与者, 依照《运动员正念训练手册》对干预组进行为期 7 周的 MAIC 正念训练。在干预前后对两组实验参与者进行测量, 认知控制评估采用 Stroop 测验程序, 评估量表采用五因素正念量表 (FFMQ)、接纳与行动问卷 (AAQ-2) 和竞赛状态焦虑问卷 (CSAI-2)。对数据进行重复测量方差分析和多元回归分析, 分别探究正念训练对业余篮球运动员认知控制和心理状态的干预效果以及对干预效果有贡献的正念成分。

重复测量方差分析结果显示, 在五因素正念量表中的“觉知的行动”“不判断”“不行动”维度及其总分、接纳与行动问卷以及竞赛状态焦虑问卷中的“状态自信心”维度中, 时间和组别交互作用均显著; 分层回归结果表明, 五因素正念量表中的“观察”和“不判断”能够显著地正向预测 Stroop 正确率 ($\beta = 0.005, t = 2.856, p < 0.05$; $\beta = 0.004, t = 2.969, p < 0.05$), “不行动”能够显著地负向预测 Stroop 正确率 ($\beta = -0.012, t = -4.592, p < 0.01$)。

结论: MAIC 正念训练能够提高大学生业余篮球运动员的正念水平, 减少对经验的回避, 并提升状态自信心水平。此外, 正念五因素中的“观察”“不判断”和“不行动”维度对于认知控制有预测作用。本研究结果提示, MAIC 正念训练可被用于改善业余篮球运动员认知控制和心理状态。本研究有助于解释正念训练在业余篮球运动员表现中的作用及机制。

关键词 正念训练, 运动员, 认知控制, 心理状态

The Effect and Prediction of Mindfulness Training on Cognitive Control and Mental State of Amateur Basketball Players

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Abstract: Mindfulness training is a psychological behavior training method based on accepting, which has attracted wide public attention and begun to rise in the field of competitive sports in recent years. However, due to the diverse application scope of different mindfulness training methods, their application is often controversial. The purpose of this study was to explore the influence of Mindfulness-Acceptance-Insight-Commitment (MAIC) on the cognitive control and mental state of amateur basketball players, as well as the influence of different components of mindfulness. This study adopted a mixed experimental design of 2(groups: intervention group vs. control group) × 2(time: pre-test vs. post-test) with groups as between-subjects factors and time as within-subjects factors. A total of 24 undergraduate amateur basketball players (11 males, $M_{age} = 20.5 \pm 2.7$ years) from a Sport university in Beijing participated in the experiment. The intervention group received 7 weeks of MAIC mindfulness training according to the Athlete's Mindfulness Training Manual. Participants in both groups were measured before and after the intervention. Cognitive control was assessed using the Stroop test. Three scales are used in this study, including Five Facet Mindfulness Questionnaire (FFMQ), The Acceptance and Action Questionnaire (AAQ-2) and Competitive State Activity Inventory-2(CSAI-2). Repeated measures ANOVA and multiple regression analysis were carried out to explore the intervention effect of mindfulness training on the cognitive control and mental state of amateur basketball players and the mindfulness components contributing to the intervention effect. The results of ANOVA showed that interactions between time and group were significant in the dimensions of “acting with awareness”, “nonjudging of inner experiences” and “nonreaction to inner experiences” and the total score of FFMQ, as well as in the AAQ-2, and in the dimensions of “state confidence” in the CSAI-2. Hierarchical regression results showed that “observing” and “nonjudging of inner experiences” in the FFMQ significantly positively predicted Stroop accuracy ($\beta = 0.005$, $t = 2.856$, $p < 0.05$; $\beta = 0.004$, $t = 2.969$, $p < 0.05$), while “nonreaction to inner experiences” significantly negatively predicted Stroop accuracy ($\beta = -0.012$, $t = -4.592$, $p < 0.01$). Conclusion: MAIC can improve the mindfulness level of college amateur basketball players, reduce their avoidance of experience, and improve the level of state confidence. In addition, the dimensions of “observing”, “nonjudging of inner experiences” and “nonreaction to inner experiences” in the FFMQ can predict cognitive control. The results of this study suggest that MAIC mindfulness training can be used to improve the cognitive control and mental state of amateur basketball players. This study helps to explain the role and mechanism of mindfulness training in the performance of amateur basketball players.

Keywords: Mindfulness training, Athletes, Cognitive control, Mental state

外周视角在运动表现中的应用

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摘要 外周视觉可以弥补注意凝视转换带来的代价, 同时实现对多个位置信息的监控, 提高运动表现。个体在日常生活中充分地利用了外周视觉的优势, 如在保持姿势平衡时、动作捕捉及汽车驾驶领域等。在时间高度受限制的赛场上, 场景时刻处于动态变化, 需要运动员根据情境变化转移注意, 这种注意的转移可以是公开的(迅速扫视到新位置), 也可以是隐蔽的(凝视保持稳定但注意力重新分配), 后者多依赖外周视觉。本文梳理了近几年外周视觉在体育运动领域中的测量方法、范式及不同范式的结合等发现, 研究者通常使用手眼协调测试、韦恩电脑扫视固定器、周边视觉测试、维也纳测试系统、有用视野范式、注意窗口范式及将

外周视觉与多目标追踪任务、移动窗口任务相结合,探讨专家与新手运动员外周视觉的差异。结果发现外周视觉在运动领域中发挥着重要的作用,运动场景复杂多变且时间高度受限,如果仅使用中央凹视觉,对目标进行凝视,增加了扫视行为所带来的代价,反而不利于运动表现。且专家与新手的外周视觉能力有差异,专家型运动员好于新手及非运动员。但是上述研究方法多采用基础实验材料测量运动员的外周视觉能力,脱离了真实的运动场景。此外,关于运动员外周视觉的神经生物基础研究较少。未来可结合虚拟现实等技术创新真实的运动场景,将外周视觉范式与眼动、脑电、脑磁图等相结合,多模态下探讨其机制;同时也可开展提高外周视觉的注意训练。

关键词 外周视觉, 运动表现, 注意

Application of Peripheral Vision in Sports Performance

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Abstract: Peripheral vision can make up for the cost of attentional gaze conversion, while monitoring multiple location information to improve sports performance. Individuals make full use of the advantages of peripheral vision in their daily lives, such as maintaining posture balance, motion capture, and car driving. In a stadium where time is highly restricted and constantly changing, requiring athletes to shift their attention according to the changes in the situation. The attention shift can be public (sweeping to a new position quickly) or hidden (the gaze remains stable but attention redistribution), the latter mostly rely on peripheral vision. This article combines through the measurement methods, paradigms and combinations of different paradigms in the field of sports in recent years. Researchers usually use Eye-hand coordination test, Wayne Computerized Saccadic Fixator, Peripheral Vision Test, Vienna test system, Useful field of view paradigm, Attention window paradigm and the combination of peripheral vision with multi-target tracking tasks and moving window tasks to explore the differences in peripheral vision between expert and novice athletes. It turns out that peripheral vision plays an important role in the field of sports. The sports scenes are complex and changeable and the time is highly limited, if only foveal vision is used to stare at the target, the cost of saccadic behavior is increased, which is not conducive to athletic performance. Moreover, the peripheral visual ability of experts and novices is different, which indicates expert athletes have better peripheral vision ability than novices and non-athletes. However, aboved research methods mentioned mostly use basic experimental materials to measure the peripheral visual ability of athletes, which are out of the real sports scene. In addition, there are few neurobiological studies on the peripheral vision of athletes. In the future, virtual reality and other technologies can be combined to create real sports scenes, and peripheral vision paradigms can be combined with eye movements, EEG and MEG to explored the neurobiological mechanism under multi-modality. At the same time, attention training to improve peripheral vision can also be carried out.

Keywords: peripheral vision, sports performance, attention

基于声音的反馈对运动表现的影响

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摘要 虽然视觉模型在掌握新的运动姿势方面很有用,但没有明确的证据表明它们在优化已形成运动图式的动作执行中的优势。听觉模型,即再现特定动作的声音序列,被证明比视觉模型更有效地促进对精确定时动作的识别、记忆和再现,鉴于此,前人研究了听觉模型在优化运动员动作执行、促进运动表现方面的作用。

运动员在执行动作前,听取自己表现最佳时的动作声音序列(又称离线反馈),可以提高后继动作执行的稳定性和运动成绩,且这一提高效果,不仅是即时的,经过两个月的训练,在撤销干预一段时间后,提高效果仍保持。此外,研究者还探讨了实时发声(real-time feedback)对动作表现的影响(即在线反馈),即

在动作执行过程中，即时将动作执行产生的声音以某种合成音传递给运动员，运动员据此随时调整自己的动作执行或节奏。这被证明在赛艇、跨栏、高尔夫等项目中可以提高运动成绩。

事件编码理论（TEC）解释了听觉反馈对运动表现的这一促进作用，在动作形成过程中，听觉与行动共享一个共同的表征系统，当听到与动作相关的声音时，会预先激活动作相关（时间）特征的编码，这些代码将有更高的概率用于运动规划，从而促进具有与感知声音相同时间特征的动作的产生。这一解释得到了功能磁共振研究的支持，当参与者在听稍后需要其进行演奏的曲目时，其运动区(辅助运动区、运动前皮质和小脑)神经元被激活；当运动员当被动倾听熟悉的运动声音时，他们在参与动作规划的脑区(辅助运动区、中央前回和中央后回、额下回和顶叶)表现出激活。

基于声音的反馈可以优化已形成的技术动作，且主要体现在闭环性、计时性运动项目，难点是要克服反馈依靠，从根本上优化动作。未来研究一方面可以继续探索听觉反馈的剂量效应和长期效果；另一方面可以尝试将离线反馈与在线反馈结合，以寻求更佳的干预方法。

关键词 在线反馈，离线反馈，运动表现，事件编码理论

The Effect of Audio-based Feedback on Motor Performance

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Abstract: While visual models are useful in the acquisition of new motor gestures, there is no clear evidence of their effectiveness in optimizing the execution of movements whose motor schemata are already developed. The auditory model such as sequences of sounds reproducing the timing of a given movement, are more effective than visual ones in promoting the identification, the memorization and the reproduction of precisely timed movements. In view of this, previous studies focused on the role of auditory models in optimizing athletes' action execution and promoting sports performance.

Before performing an action, the athletes listen to the sound sequence of his best performance (also known as offline feedback), which can improve the stability of subsequent action execution and sports performance, and the improvement is not immediate. After two months of training, after withdrawing the intervention for a period of time, the improvement effect is still maintained. The researchers also explored the effect of real-time feedback on action performance (online feedback), which is, in the process of action execution, the sound generated by action execution is transmitted to athletes in a certain kind of synthetic sonification, so that the athletes can adjust their action execution or rhythm at any time. It has been proved that can improve performance in rowing, hurdles, golf and other sports.

The theory of Event coding (TEC) explains the role of auditory feedback in optimizing motor performance. In the process of action formation, perception and action share a common representational system. When hearing action related sounds, the encoding of action related (temporal) features will be pre-activated. The pre-activated codes will have a higher probability of being used in motion planning, so as to promote the production of movements with the same temporal features of the perceived sound. This explanation received support from fMRI studies. Indeed, participants were registered activation in motor regions (supplementary motor area, mid-premotor cortex, and cerebellum) while they were listening to rhythms to be later reproduced by tapping. Moreover, the athletes were registered activation in areas involved in action planning (supplementary motor area, pre- and postcentral gyri, inferior frontal gyrus, and parietal operculum) when they were passively listening to familiar sport sounds.

The audio-based feedback can optimize the formed technical actions, which is mainly reflected in the closed-loop and timing sports. The difficulty is to overcome the feedback dependence and fundamentally optimize the action. The future studies, on one hand, can continue to explore the dose effect and long-term effect of audio-based feedback; on the other hand, can try to combine offline feedback with online feedback to seek better intervention

methods.

Keywords: Online feedback, offline feedback, motor performance, the theory of event coding

团体心理辅导对青少年乒乓球运动员应激水平的干预研究

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摘要 运动员的应激已成为国内外学者普遍关注的焦点问题之一。运动员在激烈的竞争环境中要应对各种挑战,属于高应激性人群。过度的应激是负面的心理因素,运动员在高应激状态下容易出现焦虑、紧张,影响心理健康、训练和比赛状态。乒乓球运动由于需要在短时间内高强度的注意力集中,因此对植物神经系统有很高的要求。有研究表明影响高水平乒乓球运动员状态性自信心的主要因素就是心理应激,因此乒乓球运动员合理对应激对于保持良好的心理健康状况和维持积极的行为表现至关重要。研究目的:本研究从运动员常见的应激源出发,设计并验证针对性的团体心理辅导方案对降低青少年乒乓球运动员的应激水平的有效性。方法:选取某省队乒乓球男子运动员21人,平均年龄为 14.9 ± 2.87 ,分为干预组10人,接受为期八周,每周一次的团体心理辅导干预;对照组11人,不接受团体心理辅导干预。使用《运动员应激量表》在干预前、干预后测量运动员的应激水平。结果:干预后,干预组与对照组在人际关系、运动损伤、比赛失利、日常生活遭遇上得分存在显著差异($p<0.05$);干预组人际关系、日常生活遭遇显著下降($p<0.05$),运动损伤、比赛失利、环境因素和内外压力上的得分无显著差异($p>0.05$);对照组干预前后在应激各分量表得分上无显著差异($p>0.05$)。结论:团体心理辅导能够降低青少年乒乓球运动员的人际关系、日常生活遭遇应激水平。**关键词** 应激,乒乓球运动员,团体心理辅导

The Intervening Effect of Group Counseling On Stress Level Of Young Table Tennis Players

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Abstract: The stress of athletes has become one of the focus issues of domestic and foreign scholars. Athletes have to deal with various challenges in a fiercely competitive environment and belong to a highly stressed group. Excessive stress is a negative psychological factor. High stress can cause anxiety and tension, which affect their mental health, training and competition status. Because table tennis requires high-intensity concentration in a short period of time, it places high demands on the autonomic nervous system. Studies have shown that the main factor that affects self-confidence of high-level table tennis players is psychological stress. Therefore, a reasonable response to stress for table tennis players is essential for maintaining good mental health and maintaining positive behaviors. Research purpose: This study designed and verified the effectiveness of targeted group psychological counseling intervention in reducing the stress level of young table tennis players from the common stressors of athletes. Method: A selection of 21 male table tennis players from a provincial team, with an average age of 14.9 ± 2.87 , were divided into an intervention group of 10 and received an eight-week group psychological counseling intervention once a week; 11 people in the control group did not receive group psychology Counseling intervention. Use the "Athlete Stress Scale" to measure the athlete's stress level before and after the intervention. Results: After the intervention, the intervention group and the control group had significant differences in the scores of interpersonal relations, sports injuries, competitive failures, and daily life experiences ($p<0.05$); the intervention group's interpersonal relations and daily life experiences decreased significantly ($p<0.05$). There were no significant differences in the scores of sports injuries, competitive failures, environmental factors, and internal and external pressures ($p>0.05$); the control group had no significant differences in the scores of the stress subscales before and after intervention ($p>0.05$). Conclusion: Group psychological counseling can reduce the interpersonal relationship and daily life stress levels of young table tennis players.

Keywords: stress, table tennis athletes, group counseling

人机同步视角下的运动员合作行为影响及其神经基础研究

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摘要 研究目的: 很多体育项目需要双人合作完成比赛竞争, 运动员间的社会认知交互机理成为了当前运动认知神经科学的热点问题。人际同步是指两个及两个以上的人, 其行为表现在时间上的重合现象。人际同步不仅仅局限于行为同步, 还包括在神经、生理和情感等层面上的同步, 具体是指在社会互动过程中, 个体与个体间或个体与群体间出现的情绪、行为和神经反应等方面高度协调一致的现象。大量研究证实, 人际同步能够促进个体间的一致性行为, 在同步条件下, 内侧前额叶的激活程度与被试主观评定的亲近感相关联, 内侧前额叶激活越强, 被试感受到的亲近感越多, 增加被试间的合作行为。但也有研究认为人际同步仅仅是一种“模仿行为”, 是不同的个体间行为在节奏和时间尺度上的协调性。体育运动为要求既要求镜像神经元系统(动作表征)也需要心理网络(情感认知)的参与, 为人际同步的功能研究提供了一个天然平台, 因此, 本研究采用基于脑电的超扫描技术, 利用体感游戏这一高生态效度的自然交互情境中, 通过运动员间合作条件下的神经活动一致性模式的异同, 从脑际视角探索运动合作的神经机制。**研究方法:** 选取国内某体育大学双人羽毛球二级及以上运动员 20 组, 平均年龄 (25.467 ± 4.912 岁), 平均运动年限 (11.071 ± 3.912 年), 所有参与者都神经健康, 右利手, 视力或矫正视力正常。网球合作任务选取的视频素材来自 2012 年世锦赛比赛。用 kinovea 软件截取比赛中的动作视频(时间为 3 秒), 应用 Movavi Video Suite 2020 工具箱进行视频像素编辑, 共截取 120 视频素材, 由 2 名具有丰富经验的羽毛球的国家一级运动员(平均年龄 21.5, 平均运动年限 8.2)对初步截取的视频进行评价与筛选, 出两种具有代表性的视频素材, 不同难度各 40 个视频, 采用 2(难度[高、低]) $\times$ 2(分组[同步高、同步低])的混合实验设计, 因变量为决策一致性、判断正确率。被试被要求佩戴 VR 眼镜, 在两个组块内分别对视频中的羽毛球落点进行判断, 最后用于正式实验的视频 160 个。正式实验指导语: 要求被试观看 3 秒钟的比赛视频, 假设你和你的队友是视频中的运动员, 请为你们的决策做出选择, 羽毛球落点区域前左、前中、前右、后左、后中、后右六个分区。视频随机呈现, 记录被试的决策正确率和反应时, 一致选项数量。EEG 数据采集使用 Neuroscan SynAmps 放大器, 采用 64 导的 10-20 标准的双电极帽同步采集。脑电信号经 0.05~100Hz 带通滤波器放大, 采样率为 500Hz, 所有导联阻抗均保持在 5k Ω 以下。使用 eeglab17.0 采用 ICA 法去除带有眼动、心电或其他运动伪迹。计算了每个 trials 的信号源和相位同步值, 并将其平均化。实验中将动作任务阶段和静息状态两个状态下的相干性的差值界定为任务关联的相干性, 并将这一相干性进行 Fisher z 转换。对于计算得到的相干性, 进行独立样本 t 检验。如果相干性显著高于 0, 则表示该探测通道存在脑间同步。由于进行了多重比较, 对 t 检验结果做错误发现率法(False discovery rate; FDR)校正。**研究结果:** 行为分析结果表明, 高难度条件下同步高组的决策一致性显著高于同步低 ($t_{(59)}=1.35, P<0.05$), 低难度条件下无显著差异。从波幅和相位两个角度发现, 只有在高难度下脑际幅度一致性会有显著差异, 具体表现在 theta、alpha 和 beta 频段的不同空间模式上。研究结论: (1) 脑际同步会影响到运动员间的合作行为; (2) 任务难度在人际同步对合作行为的影响中发挥调解作用, 高难度任务对运动员间的脑际同步要求更高。这些发现对介绍合作过程的时间动态特征上的差异提供了新实验证据, 展示了基于自然情境超扫描技术的脑际视角神经科学研究方法的潜力。

关键词 人际同步, 错误发现率法, 合作行为, 超扫描技术

Interpersonal synchronization perspective on the influence of athletes' cooperative behavior and its neural basis

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Abstract: Purpose of the study: Many sports require two-person cooperation to complete competition, and the mechanism of social cognitive interaction between athletes has become a hot issue in current sports cognitive neuroscience. Interpersonal synchronization refers to the phenomenon of temporal overlap in the behavioral performance of two and more people. Interpersonal synchronization is not only limited to behavioral synchronization, but also includes synchronization at the neural, physiological and emotional levels, specifically, a high degree of coherence in emotional, behavioral and neural responses between individuals and individuals or between individuals and groups during social interactions. Numerous studies have confirmed that interpersonal synchronization can promote coherent behavior among individuals, and under synchronization conditions, the degree of medial prefrontal activation correlates with subjects' subjective ratings of closeness; the stronger the medial prefrontal activation, the more closeness subjects feel, increasing inter-subject cooperative behavior. However, it has also been suggested that interpersonal synchrony is simply a "mimicry", a coordination of behaviors between individuals on a rhythmic and temporal scale. Therefore, the present study used EEG-based ultrascan technology to explore the neural mechanisms of interpersonal synchronization from an intercerebral perspective by using a natural interaction context with high ecological validity, the somatic game, and the similarities and differences in neural activity coherence patterns under cooperative conditions among athletes. perspective to explore the neural mechanisms of motor cooperation.

Methods: Twenty groups of two-player badminton players of level 2 and above from a domestic sports university were selected, with a mean age (25.467 ± 4.912 years) and mean years of sport (11.071 ± 3.912 years), and all participants were neurologically healthy, right-handed and with normal vision or corrected vision. The video footage selected for the tennis cooperative task was taken from the 2012 World Championships matches. A total of 120 video clips were intercepted using kinovea software to capture video of the action in the tournament (3 seconds in duration), and the Movavi Video Suite 2020 toolbox was applied to edit the video pixels. 2 national-level players with extensive experience in badminton (mean age 21.5, mean years of sport 8.2) evaluated and screened the preliminary intercepted videos. Out of two representative video clips, 40 videos of each different difficulty, a mixed experimental design of 2 (difficulty [high, low]) $\times$ 2 (grouping [synchronized high, synchronized low]) was used, and the dependent variables were decision consistency, and correct judgment rate. Subjects were asked to wear VR glasses and judge the badminton drop in the video within each of the two group blocks, and the final 160 videos used in the formal experiment. Formal experiment guideline: subjects were asked to watch a 3-second video of the match, assuming you and your teammates were the athletes in the video, please make a choice for your decision, badminton landing point area front left, front center, front right, back left, back center, back right six partitions. The video was presented randomly and the number of consistent options was recorded when subjects made correct decisions and responses. eeg data were acquired using a Neuroscan SynAmps amplifier with a 64-conductance 10-20 standard dual electrode cap synchronized acquisition. EEG signals were amplified by a 0.05-100 Hz band-pass filter with a sampling rate of 500 Hz, and all lead impedances were kept below 5 k Ω . The ICA method with eye movement, ECG or other motion artifacts was removed using eeglab17.0. The signal source and phase synchronization values were calculated for each trials and averaged. The difference between the coherence in the two states of action task phase and resting state was defined as the task-associated coherence, and this coherence was Fisher z-transformed. For the calculated coherence, an independent samples t-test was performed. If the coherence was significantly higher than 0, it indicated the presence of interbrain synchronization for that detection channel. Because multiple comparisons were performed, the t-test results were corrected for the false discovery rate (FDR) method. **Results:** The results of the behavioral analysis showed that the decision consistency was significantly higher in the high-synchrony group than in the low-synchrony

group in the high difficulty condition ($t(59)=1.35, p<0.05$), with no significant difference in the low difficulty condition. Significant differences in interbrain amplitude consistency were found from both wave amplitude and phase perspectives only at high difficulty, as evidenced by different spatial patterns in the theta, alpha, and beta frequency bands. It was concluded that (1) interbrain synchronization affects cooperative behavior among athletes and (2) task difficulty plays a mediating role in the effect of interpersonal synchronization on cooperative behavior, with high difficulty tasks requiring higher interbrain synchronization among athletes. These findings provide new experimental evidence for introducing differences in the temporal dynamic characteristics of cooperative processes, demonstrating the potential of a neuroscientific approach to interbrain perspective based on naturalistic contextual hypercanning techniques.

Keywords: Interpersonal synchronization, False discovery rate method; Cooperative behavior, Hyperscan technique

运动员运动特质自信对竞赛状态焦虑的影响：意志力的中介作用

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摘要 目的: 运动员在面临比赛时的紧张焦虑体验, 会对其心态调整和比赛发挥产生影响。而运动员的自信水平和意志品质作为个体的重要特质, 能够支撑他们应对应激状态。因此准确把控影响运动员焦虑的因素, 才能有效理解运动员的认知及生理反应并进行干预。**方法:** 本研究对 557 名运动员进行了调查, 涵盖了体能主导类和技能主导类的 26 个运动项目, 最终纳入分析的有效数据共 475 份。本研究首先对不同运动等级、不同运动项群运动员在运动特质自信和竞赛状态焦虑上的差异进行了分析, 其次探究意志力在运动特质自信影响竞赛状态焦虑上是否存在中介作用, 最后采用判别分析探究能够影响运动员竞赛状态焦虑的因素, 从而依据多维焦虑理论和所得判别公式对运动员实际的焦虑状态进行干预。**结果:** (1) 不同等级运动员在运动特质自信和竞赛状态焦虑上都有显著差异, 健将级、国际健将级和一级运动员的运动特质自信显著高于二级运动员, 相反, 一级和二级运动员在认知状态焦虑、躯体状态焦虑上显著高于健将级、国际健将级运动员; 不同运动项群运动员在运动特质自信和竞赛状态焦虑上也有显著差异, 体能主导类运动员的运动特质自信和状态自信心显著高于技能主导类运动员, 技能主导类运动中, 格斗对抗性和隔网对抗性运动员的躯体状态焦虑显著高于其他运动项群运动员。(2) 运动特质自信程度高的运动员表现出较低的认知状态焦虑和躯体状态焦虑, 且意志力存在显著的中介作用。具体而言, 对于认知状态焦虑来说, 意志力的果断性、自控力、自信心维度存在显著的中介作用, 对于躯体状态焦虑来说, 意志力的果断性、自信心维度存在显著的中介作用, 对于状态自信心来说, 意志力的果断性、清晰度维度存在显著的中介作用。**结论:** 无论从特质自信还是状态焦虑来看, 健将级运动员都比运动等级较低的运动员有更大的优势以应对日常训练和比赛。此外, 运动特质自信对竞赛状态焦虑有显著影响, 其中运动员的意志力起到了部分中介作用。

关键词 竞赛状态焦虑, 意志力, 运动特质自信, 运动等级, 运动项群

The Influence of Athlete's Sports Traits Self-confidence on Competition State Anxiety: The mediating role of willpower

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Abstract: Objective: The nervous anxiety experience of athletes in the face of competition will affect their mentality adjustment and competition. As an important trait of individual, athletes' confidence level and willpower can support them to deal with stress state. Therefore, to accurately control the factors affecting athletes' anxiety can effectively understand the cognitive and physiological responses of athletes so that we can intervene. **Methods:** In this study, we investigated 557 athletes, covering 26 sports of physical ability leading classes and skill leading classes. Firstly, we

analyzed the differences between athletes of different sports grades and different sports item groups in sports traits self-confidence and competition state anxiety, then we explored whether willpower play an intermediary role in the influence of sports traits self-confidence on competition state anxiety. Finally, discriminant analysis was used to explore the factors that can affect the anxiety of athletes' competition state, so as to intervene the actual anxiety state of athletes according to the multidimensional anxiety theory and the obtained discriminant formula. **Results:** (1) There were significant differences in sports trait self-confidence and competition state anxiety among athletes of different grades. Athletes of general level, international general level and first class were significantly more confident than those of second class athletes. On the contrary, first and second class athletes were significantly higher in cognitive state anxiety and physical state anxiety than those of general level and international general level athletes; There were also significant differences in sports trait self-confidence and competition state anxiety among athletes in different sports item groups. The sports trait self-confidence and state self-confidence of athletes in physical ability leading classes were significantly higher than that of skill leading classes. In the skill leading classes sports, the physical state anxiety of combat adversarial and anti-network athletes was significantly higher than that of other sports group athletes. (2) Athletes with high self-confidence showed low cognitive state anxiety and physical state anxiety, and willpower played a significant intermediary effect. Specifically, for cognitive state anxiety, the decisive, self-control, self-confidence dimension of willpower had a significant intermediary role, for physical state anxiety, the decisive and self-confidence dimension of willpower had a significant intermediary role, for state self-confidence, The decisive and clear dimension of willpower had a significant intermediary role. **Conclusions:** From the point of view of trait self-confidence and state anxiety, athletes of general level had more advantages than athletes with lower sports level to cope with daily training and competition. In addition, sports traits self-confidence had a significant impact on competition state anxiety, in which athletes' willpower played a part of the intermediary role.

Keywords: competition state anxiety, willpower, sports traits self-confidence, sports level, sports item group

体育活动对青少年社会适应的影响：链式中介模型及性别差异

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摘要 为了调查体育活动对青少年社会适应的影响, 使用体育活动等级量表(PARS-3), 主观锻炼体验量表(SEES)中的锻炼体验幸福感维度, 身体自我描述问卷(PSDQ)中的身体自尊维度和青少年社会适应状况评估问卷(ASAAS)中的自我肯定、亲社会倾向、行事效率、积极应对四个维度, 对 460 名中学生进行问卷调查, 有效数据 453 份(男 227 份, 女 226 份), 有效率 98.48%。结果发现, Harman 单因子检验法证明本研究不存在严重共同方法偏差。男生在体育活动量和锻炼体验幸福感上得分明显高于女生。不同水平的体育活动对青少年的锻炼体验幸福感($F=11.481, p=0.000$)、身体自尊($F=6.070, p=0.003$)、社会适应($F=5.991, p=0.003$)存在显著差异。多重比较发现: 高水平体育活动青少年的锻炼体验幸福感、身体自尊和社会适应显著高于低水平体育活动青少年的情况。由体育活动、锻炼体验幸福感、身体自尊、社会适应构成的链式中介模型拟合良好: $\chi^2/df=1.917$, $CFI=0.987$, $TLI=0.979$, $RMSEA=0.045$, $SRMR=0.023$ 。检验锻炼体验幸福感和身体自尊的中介效应跨性别的一致性发现, 男生模型拟合指标为: $\chi^2/df=1.410$, $CFI=0.990$, $TLI=0.983$, $RMSEA=0.042$, $SRMR=0.034$; 女生模型拟合指标为: $\chi^2/df=1.520$, $CFI=0.984$, $TLI=0.974$, $RMSEA=0.048$, $SRMR=0.030$ 。跨组比较发现, 模型在锻炼体验幸福感和社会适应上的各项指标拟合良好, 且各模型两两间拟合指数差异 ΔTLI 和 ΔCFI 均 <0.01 , 但是在身体自尊上存在着拟合不良的情况, 表示该中介模型因为身体自尊的性别差异在不同性别中的应用上存在区别。基于上述结果本研究得出结论: 青少年在体育活动、锻炼体验幸福感上存在性别差异, 体育活动对身体自尊的影响存在性别差异。体育活动可正向预测青少年社会适应, 体育活动量越高, 青少年社会适应越好。体育活动、锻炼体验幸福感、身体自尊、社会适应构成的多重中介模型成立, 体育活动通过增加青少年的锻炼体验幸福感和身体自尊促进其社会适应。中学学校教育应当重视体育课和体育活动为中学生带来的心理效益。

关键词 体育活动, 社会适应, 锻炼体验幸福感, 身体自尊, 青少年

The effect of physical activity on adolescent social adjustment: A serial mediation model and gender differences

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Abstract: To investigate the effect of physical activity on adolescents' social adjustment, Physical Activity Rating Scale (PARS-3), the exercise experienced well-being dimension of the Subjective Exercise Experience Scale (SEES), the body esteem dimension of the Physical Self-Description Questionnaire (PSDQ), and the four dimensions (self affirmation, pro-social tendency, acting efficiency, and active coping) of the Adolescent Social Adjustment Assessment Questionnaire (ASAAS) were used. The questionnaire was administered to 460 secondary school students, with 453 valid data (227 males and 226 females) and an effective rate of 98.48%. The results found that the Harman one-way test proved that there was no serious common method bias in this study. Boys scored significantly higher than girls on the amount of physical activity and exercise experienced well-being. There were significant differences between different levels of physical activity on adolescents' exercise experienced well-being ($F=11.481$, $p=0.000$), body esteem ($F=6.070$, $p=0.003$), and social adjustment ($F=5.991$, $p=0.003$). Multiple comparisons revealed that exercise experienced well-being, body esteem, and social adjustment were significantly higher among adolescents with high levels of physical activity than among those with low levels of physical activity. The chain mediation model consisting of physical activity, exercise experienced well-being, body esteem, and social adjustment fitted well: $\chi^2/df=1.917$, $CFI=0.987$, $TLI=0.979$, $RMSEA=0.045$, and $SRMR=0.023$. Testing the consistency of the mediation effects of exercise experienced well-being and body esteem across genders revealed that the model fit indicators for boys were $\chi^2/df=1.410$, $CFI=0.990$, $TLI=0.983$, $RMSEA=0.042$, $SRMR=0.034$; for female students, the model fit indicators were: $\chi^2/df=1.520$, $CFI=0.984$, $TLI=0.974$, $RMSEA=0.048$, $SRMR=0.030$. Cross-group comparison revealed that the model The models fit well on the indicators of exercise experienced well-being and social adjustment, and the difference in fit indices between the two models ΔTLI and ΔCFI were <0.01 , but there was a poor fit on body self-esteem, indicating that the mediated model differed in its application across genders because of gender differences in body esteem. Based on the above results this study concludes that there are gender differences in adolescents' physical activity, exercise experienced well-being, and gender differences in the effect of physical activity on body esteem. Physical activity positively predicted adolescents' social adjustment, and the higher the amount of physical activity, the better the adolescents' social adjustment. The multiple mediation model consisting of physical activity, exercise experienced well-being, body esteem, and social adjustment was established, and physical activity promoted adolescents' social adjustment by increasing their exercise experienced well-being and body esteem. Secondary school education should emphasize the psychological benefits of physical activity for secondary school students.

Keywords: Physical Activity; Social adjustment; Exercise Experience Well-being; Body Esteem; Adolescents

足球动态决策中无模型策略和基于模型策略选择的 ERP 研究

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摘要 动态决策 (Dynamic Decision Making, DDM) 指由一序列相互关联的决策组成的, 当前决策受之前决策结果和之后决策选项影响的连续性决策过程。动态决策作为决策研究的重要组成及新近发展趋势已在一些领域进行了探索性研究。虽然运动员决策行为的连续性、动态性契合动态决策的基本特征, 但以往的运动决策研究多限于考察运动员一次性、静态的决策表现, 而较少从动态决策角度开展运动领域的决策研究。本研究拟以动态决策理论为基础, 采用动态决策研究经典的马尔可夫两步决策任务范式, 以及结合足球传球情景改编的足球动态决策任务, 运用 ERP 技术, 尝试探讨足球传球动态决策中的决策策略选择及其神经机制, 以

及决策策略选择与运动员认知控制类型的关系。

本实验采用 2(运动水平: 足球专项大学生、普通大学生)×2(决策任务: 马尔科夫两步决策任务、足球动态决策任务)混合实验设计, 探究足球专项大学生与普通大学生在经典动态决策任务与足球传球动态决策任务中的决策策略选择差异及其神经机制。17 名足球专项大学生和 17 名普通大学生参与本实验。结果表明, 决策任务、运动水平在 model-free 得分上主效应及交互作用均不显著; 在 model-based 得分上, 两者主效应不显著, 但交互作用显著。运动水平在足球决策任务的正确率上主效应显著, 且决策策略的选择与决策正确率之间呈显著正相关。P300 波幅上, 决策任务和电极点交互作用显著; 在 FRN 波幅上, 电极点主效应显著, 决策任务和电极点的交互作用显著。

研究得出以下结论: (1) 足球专项大学生在进行足球动态决策过程中会更多使用习惯导向的 model-free 决策策略, 且会产生较好的决策结果。(2) P300 反映出足球专项大学生在足球动态决策中对意外事件更敏感, 支持足球专项大学生在足球动态决策时 model-free 决策策略占优势; FRN 反映出在足球动态决策中足球专项大学生比普通大学生对奖励更敏感, 支持足球专项大学生比普通大学生更多使用 model-based 决策策略。

关键词 动态决策, model-free 策略, model-based 策略, 运动决策, 足球

An ERP Research on Mode-Free and Model-Based Strategies in Football Dynamic Decision-Making

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Abstract: Dynamic Decision Making (DDM) refers to a series of interrelated decisions which the current decision is affected by the results of the previous decisions and the options of the subsequent decisions. As an important part of decision-making research, dynamic decision-making has been widely studied in many fields. Although athletes' decision-making process is continuous and dynamic, previous researches on sports decision-making are mostly limited to examining the athletes' one-time and static decision-making performance. Therefore, it is of great significance to introduce the dynamic field into the sports area. Based on the dynamic decision theory, this research used the classic Markov two-step decision task paradigm, the football passing decision task and ERP technology to explore the strategic selection of football passing dynamic decision-making and its neural mechanism. Moreover, it revealed the relationship between athletes' dynamic decision-making selections and their cognitive control types.

This study used a 2 (level of football ability: Football player, ordinary university student) ×2 (tasks type of decision-making: Markov two-step decision task, Football dynamic decision task) mixed research design to explore the difference of the decision-making strategies between football players and ordinary college students in both classic dynamic decision-making tasks and the football passing dynamic decision-making tasks. Their corresponding EEG analysis was conducted simultaneously. 17 football players and 17 ordinary college students were invited to participate in this study. Tasks and levels of sports have no significant different on model-free, but they have a significant interaction on model-based. The decision-making accuracy of football task has a significant difference between different level of participants, and decision-making strategies selection related positively with decision-making accuracy. Tasks and electrode points have a significant difference on P300. Electrode points have a significant difference on FRN, and there is an interaction between tasks and electrode points on FRN.

The conclusions of this research are as follows: (1) Football players prefer model-free decision-making strategy in football dynamic decision-making task, which will lead to better results than using model-based strategy. (2) P300 reflects that football players are more sensitive to unpredictable events in football dynamic decision-making task, which indicates that the model-free decision-making strategy is more dominant than model-based strategy for football players; additionally; FRN reflects that football players are more sensitive to awards than ordinary students in football dynamic decision-making task, which demonstrates that football players are more likely to use model-based strategy than ordinary college students.

Keywords: dynamic decision-making, model-free, model-based, decision-making in sport, football

12 周有氧运动对肥胖大学生工作记忆能力及其身体自尊的影响

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摘要 目的: 探讨 12 周中等强度有氧运动对肥胖大学生工作记忆能力及其身体自尊的影响, 同时降低肥胖大学生 BMI (Body Mass Index) 指数, 提高其体质健康。方法: 招募 BMI 指数在 28 以上的肥胖大学生 80 名, 随机分为 2 组: 肥胖对照组 (OC, n=40), 肥胖运动组 (OE, n=40)。所有被试于正式实验前完成体成分 (Body composition)、再记忆任务 (recognition memory task) 测试以及 PSPP 身体自尊量表, 进而每四周测一次。有氧运动干预共计 12 周, 每周 3 次, 每次 50min, 运动强度为 55%-69% 最大心率。体成分测试用于监测被试体重、BMI 指数、脂肪率等指标变化; 再记忆任务记录被试任务的正确率和反应时, PSPP 身体自尊量表用于反映肥胖被试在干预前后对自我运动技能、身体状况、身体吸引力以及身体素质等 4 个维度的心理感知。结果: (1) 于正式试验开始前, OC 组和 OE 组在 BMI 指数、再记忆任务结果正确率、反应时以及身体自尊感知等指标上无显著性差异; (2) 与 OC 组相比, 随运动周期的增长 OE 组被试体重显著降低 ($P<0.01$), BMI 指数降低 ($P<0.05$), 再记忆任务结果正确率提高 ($P<0.05$); 在 PSPP 身体自尊量表自我感知评价中, OE 组被试在身体状况、身体吸引力、身体素质等 3 个维度上自尊感有所提高。结论: (1) BMI 指数与认知相关的工作记忆功能呈负相关; (2) 12 周有氧运动可以提高肥胖运动组被试的身体自尊, 主要体现在身体状况、身体吸引力、身体素质等 3 个维度 (3) 12 周有氧运动可以改善肥胖大学生的工作记忆能力, 同时笔者在研究中发现, 虽然 OE 组被试随运动周期的增长 BMI 指数持续下降, 但是其再记忆任务结果正确率变化较小, 因此, 运动降低 BMI 指数从而改善肥胖个体工作记忆能力的作用机制需要进一步探讨。

关键词 有氧运动, 肥胖, 工作记忆, 身体自尊

Effect of 12-week Aerobic Exercise on the Working Memory of Obese University Students

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Abstract: Objective: This research aims to analyze how 12-week aerobic exercise of moderate intensity would influence the working memory of obese university students, and how it would reduce their BMI (Body Mass Index) and improve their physical health. **Methods:** 80 volunteers whose BMI were above 28 were randomly divided into two groups: the obesity control group (OC, n=40) and the obesity exercise group (OE, n=40). All the subjects had completed body composition test and recognition memory task before the formal experiment. OC group also took the body composition test and recognition memory task after every 4-week exercise done by the OE group. The aerobic exercise intervention last for 12 weeks, three times a week, 50 minutes each time, and the exercise intensity should be 55%-69% of the maximal heart rate. The body composition test is to measure the weight, BMI and body fat rate of the subjects; the recognition memory task is to record the accuracy and response time when the subjects perform the task. **Results:** (1) Before the formal experiment, there was no significant difference in BMI, accuracy and response time of recognition memory task between OC group and OE group. (2) Compared with those of OC group, the subjects of OE group had their weight decreased ($P<0.01$), their BMI decreased ($P<0.05$), and the accuracy of recognition memory task increased ($P<0.05$) as the exercise period extended. **Conclusion:** (1) There is a negative correlation between BMI and working memory related to recognition. (2) The 12-week aerobic exercise can improve the obese university students' working memory. Also, though the OE group had their BMI steadily decreased as the exercise period extended, their accuracy of recognition memory task only changed a little. Therefore, how exercise decreases BMI and then improves the obese individual's working memory still needs to be discussed in the future.

Keywords: Aerobic Exercise, Obese, Working Memory, Physical body-esteem

运动干预改善肥胖动物模型认知功能障碍及其机生理制探索

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摘要 肥胖已成为全球性的健康问题, 是多种中枢神经系统疾病发生发展的危险因素之一。运动在降低神经系统疾病的患病风险中发挥重要作用, 如阿尔兹海默症以及帕金森病等。然而, 运动是否能够改善认知功能的研究尚且缺乏。目的: 探究运动对于肥胖小鼠认知功能障碍的影响。方法: 选用 4 周龄雄性 C57BL/6Cnc 小鼠, 构建高脂高糖肥胖模型, 以跑台运动实验对小鼠进行中等强度的训练, 采用酶联反应吸附实验测定血清中炎症因子水平, 并通过行为学实验探究运动对于肥胖引起的小鼠认知功能障碍的影响。结果: 研究发现高脂高糖饮食诱导的肥胖小鼠血清中炎症因子水平上升, 而中等强度运动会降低肥胖小鼠血清中的炎症因子水平, 包括白介素 1 β , 肿瘤坏死因子 α 以及白介素 6。高脂高糖饮食诱导的肥胖小鼠出现认知功能障碍, 而中等强度的训练可以明显增加肥胖小鼠在新物体识别实验中对新物体的探究时间, 以及增加肥胖小鼠在三箱社交实验中与陌生鼠的交流时间。结论: 采取适当强度的训练可以改善肥胖患者的认知功能, 其机制可能是通过降低机体炎症反应发挥作用, 这为肥胖伴随认知功能障碍患者的运动治疗提供了理论支持。

关键词 运动, 肥胖, 认知, 运动治疗

Exercise intervention to improve cognitive dysfunction in obesity model mice and its physiological mechanism

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Abstract: Background: Obesity has become a global health problem, and has been proven to be one of the risk factors for a variety of central nervous system diseases. Exercise plays an important role in reducing the risk of neurological diseases, such as Alzheimer's disease and Parkinson's disease. However, research on whether exercise can improve cognitive function is still lacking. Objective: To explore the effect of exercise on cognitive dysfunction induced by high fat high fructose diet. Methods: A mouse model fed with high fat high fructose diet was used to conduct moderate-intensity training on the treadmill exercise experiment, behavioral experiments were used to explore the effect of exercise on cognitive dysfunction caused by obesity in mice, and the enzyme-linked immunosorbent adsorption experiment was used to determine the level of inflammatory factors in serum. Results: The study found that serum levels of inflammatory factors including interleukin-1 β , tumor necrosis factor- α , and interleukin-6 in obese mice induced by a high fat high fructose diet increased, while moderate-intensity exercise reduced the levels of inflammatory factors in obese mice. Moreover, obese mice induced by high fat high fructose diet have cognitive dysfunction. Moderate-intensity training can significantly increase the time for obese mice to explore new objects in novel object recognition test, and increase the interaction time with stranger mouse 2 in three-chamber interaction test. Conclusion: Exercise with appropriate intensity can improve the cognitive function of obese mice. The possible mechanism may be that appropriate exercise reduces inflammatory response. These provide evidence for the exercise therapy for obese patients with cognitive dysfunction.

Keywords: Exercise, obesity, cognition, exercise therapy

“体悟”在武术教学中的价值研究

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摘要 2017年，中共中央办公厅、国务院办公厅印发《关于实施中华优秀传统文化传承发展工程的意见》。改文件的颁布，标志着我国把中华优秀传统文化传承开始提上日程。中国武术作为中华优秀传统文化的重要组成部分，其传承和发展一直受到国家和社会的关注。

武术教学中的“体悟”法就是指在武术教学中，通过各种方法和手段，引导学生进行由外及内、由身体到心理的逻辑推理式学习，从而加深学生对武术知识、武术技能、武术理论、武术价值的理解，培养学生自主学习的能力、思维能力、创新能力等为目的的教学活动。

本文采取文献资料法、比较研究法、田野调查法、逻辑法等方法，以文化学、社会学、教育学等学科的相关知识为理论基础，将传统武术传承中的“体悟”教学方法引入武术教学中。研究发现：第一，“体悟”产生于农耕文明，具有浓郁的民族文化色彩，是建立在中国古代“身心合一”的哲学基础上的，属于一种整体性思维认知。它注重的是从外在的身体感知逐步过渡到内在的心理感知，因此，它是一种由外及内的心理感知过程。第二，通过学习者长时间的进行身体直觉的感知（年复一年的练拳习武），过渡到内在的直觉体悟的思维认知。它是武术教学传承的必要环节和学习途径之一，也是认识中国武术文化的重要方式之一。第三，作为教学形态之一的“体悟”教学方式，它能够传承武术文化基因，并深度符合武术教学改革的需要，是一种建立在中国传统“修身”文化基础上的一种古老的教学理念。其目的是促进广大学生对民族文化的传承和身心全方位的发展。第四，“体悟”教学包括学生主体性参与、合理情景创造、个体化的价值三个方面因素。主体性参与包括行为、情感和思维的参与。合理化情形是保障体悟教学的外部条件。个体化的价值是指体悟教学的过程是一个学生们从外及内，从个体到团体的一种寻求个体新生命，实现个体价值的过程。因此，武术“体悟”教学其过程包括认知、体认、领悟、内省这几个步骤。

关键词 体悟，武术，教学，价值

Research on the Value of "Understand" in Wushu Teaching

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Abstract: Jiangxi University of Traditional Chinese Medicine, Nanchang 330000, China In 2017, the General Offices of the CPC Central Committee and the State Council issued the Opinions on implementing the Project to Inherit and Develop China's Fine Traditional Culture. The issuance of the reform document marks the beginning of China's agenda to carry forward the fine traditional Chinese culture. As an important part of Chinese excellent culture, Chinese wushu has been concerned by the state and society for its inheritance and development.

The "connect" in the martial arts teaching method is refers to in the martial arts teaching, through a variety of ways and means to guide students from outside and inside, from physical to psychological logic reasoning, learning, to deepen students' knowledge of martial arts, martial arts skills, martial arts, martial arts theory value understanding, cultivate students' autonomous learning ability, thinking ability, innovation ability and so on for the purpose of teaching activities.

This paper adopts the methods of literature review, comparative research, field investigation, logic method and so on. Based on the relevant knowledge of culture, sociology, pedagogy and other disciplines as the theoretical basis, this paper introduces the "understanding" teaching method of traditional martial arts inheritance into the teaching of martial arts. The findings are as follows: first, "comprehension" originated from agricultural civilization, has a strong national cultural color, and is based on the ancient Chinese philosophy of "unity of body and mind". It is a kind of holistic thinking cognition. It focuses on the gradual transition from external physical perception to internal psychological perception, so it is a psychological perception process from the outside to the inside. Second, through a long time of physical intuition perception (year after year of practicing martial arts), learners transition to internal intuitive understanding of thinking cognition. It is a necessary link and one of the learning ways of wushu teaching inheritance, and also one of the important ways to understand Chinese wushu culture. Thirdly, as one of the teaching

forms, the teaching method of "understanding" can inherit the cultural genes of wushu and meet the needs of wushu teaching reform in depth. It is an ancient teaching idea based on the traditional Chinese culture of "cultivating one's moral character". Its purpose is to promote the majority of students on the inheritance of national culture and all-round physical and mental development. Fourth, the teaching of "understanding" includes three factors: students' subjective participation, reasonable scene creation and individual value. Subjective participation includes the participation of behavior, emotion and thinking. Rationalization is the external condition to guarantee the teaching of comprehension. The value of individuation means that the process of understanding teaching is a process in which students seek for new life of individuals and realize individual value from outside and inside, from individuals to groups. Therefore, the process of wushu "understanding" teaching includes cognition, cognition, comprehension and introspection.

Keywords: Understand, martial arts, teaching, value

注意偏向训练结合脑干预技术改善羽球初学过程中的注意捕获现象

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摘要 研究目的: 以往研究表明, 注意偏向训练有助于提升个体的注意品质, 而该训练是否能够减少注意捕获现象的证据并不是很充足。本研究结合羽毛球运动学习过程并利用脑干预技术, 探究注意偏向训练是否有助于改善羽毛球运动初学过程中的注意捕获现象, 同时考察脑干预技术能否提高注意偏向训练的效率, 并利用 ERP 技术得出注意捕获现象的相关脑机制。研究方法: 采用注意偏向训练作为干预手段, 脑干预技术为自变量之一, 对羽毛球运动初学者进行周期性的干预, 考察注意偏向训练结合脑干预对于羽毛球运动初学过程中注意捕获现象的影响。研究结果: 实验 1 采用常规注意偏向训练 (点探测任务、视觉搜索任务) 对羽毛球初学者进行 8 周的干预, 发现实验组的注意捕获现象显著低于对照组。实验 2 在进行注意偏向训练的同时结合脑干预技术, 对羽毛球初学者进行 8 周干预, 结合脑干预技术的实验组注意捕获现象显著低于未结合脑干预的实验组和对照组。实验 3 在运动成绩实验中, 表现为结合脑干预实验组优于未结合脑干预实验组, 且二者皆优于对照组。这些结果表明: (1) 为期 8 周的注意偏向训练可以显著降低羽毛球运动初学过程中的注意捕获现象, 提高运动学习效率; (2) 为期 8 周结合脑干预技术的注意偏向训练相比常规注意偏向训练其效率更高; 对改善注意捕获现象的积极影响高于单一常规注意偏向训练。(3) 注意捕获现象可直接影响羽毛球运动初学过程中的运动表现; (4) ERP 结果中, 结合脑干预实验组的 N2pc 与 SPCN 波幅显著高于未结合脑干预实验组。

关键词 注意偏向训练, 注意捕获, 脑干预, 羽毛球学习

Attention training combined with brain intervention to reduce the attention captured while in badminton learning

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Abstract: Object: Previous studies have shown that attention training could help to improve the individual's attention quality. But, the evidence for whether this training can reduce attention capture is not very sufficient. This study combines the learning process of badminton and uses brain intervention techniques to investigate whether attention training has a positive impact on attention-captured phenomena in badminton learning, and use brain intervention techniques to improve the efficiency of attention training, finally get the brain mechanism of this process through ERP technology. Method: Take attention training as the intervention method and brain intervention technology as one of the independent variables, periodic interventions for badminton beginners, survey the effects of attention training brain intervention techniques on attention-captured phenomena in badminton learning. Result: Experiment 1 uses

conventional attention training---including dot-probetask and visual search task---to intervention for badminton beginners. The results showed that the attention-captured phenomenon in the experimental group was significantly lower than in the control group. Experiment 2 added brain intervention on the basis of the previous experiment it was found that individuals who received brain intervention performed better than those who did not. Experiment 3 examined everyone's sports performance, and the results of the experimental group were better than those of the control group. Conclusion: 8 weeks of attention training can reduce attention-captured phenomena in badminton learning and improve learning efficiency. Attention training with brain intervention technology is more efficient. Attention-captured phenomena could directly affect the performance of badminton learning. In the ERP results, the amplitude of N2pc and SPCN in the experimental group with brain intervention was significantly higher than that in the experimental group without brain intervention.

Keywords: attention training, attention-captured, brain intervention, badminton learning

不同运动方式对 CUMS 大鼠抑郁行为的影响

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摘要 目的: 通过大鼠行为学变化(糖水偏爱实验、饲料消耗量)和血清 5-羟色胺(5-HT)水平来反应抑郁程度与运动干预效果, 探讨不同运动方式对慢性不可预知性温和刺激(CUMS)抑郁大鼠行为的影响。**方法:** 将 24 只 CUMS 大鼠随机分为 3 组, 包括抑郁强迫游泳运动组(有氧运动组), 抑郁负重攀爬垂梯运动组(抗阻运动组), 抑郁对照组, 并选取 8 只正常大鼠为空白对照组。所有实验组进行 8 周运动后, 记录大鼠的糖水偏爱指数、饲料消耗量和血清中 5-HT 浓度, 并使用 SPSS 25.0 进行单因素方差分析。**结果:** 1) 抑郁强迫游泳实验组与抑郁负重攀爬垂梯实验组的糖水偏爱指数明显高于抑郁对照组 ($P<0.05$), 但低于空白对照组 ($P<0.05$), 且抑郁强迫游泳实验组的糖水偏爱指数显著高于抑郁负重攀爬垂梯实验组 ($P<0.05$)。2) 抑郁强迫游泳实验组的饲料消耗量高于抑郁对照组 ($P<0.05$), 低于空白对照组 ($P<0.05$), 但抑郁负重攀爬垂梯实验组与抑郁对照组的饲料消耗量差距不明显 ($P>0.05$), 且抑郁负重攀爬垂梯实验组的饲料消耗量低于抑郁强迫游泳实验组。3) 大鼠中血清 5-HT 浓度显示, 抑郁强迫游泳实验组与抑郁负重攀爬垂梯实验组血清 5-HT 浓度高于抑郁对照组 ($P<0.05$), 但低于空白对照组 ($P<0.05$)。且抑郁负重攀爬垂梯实验组的血清 5-HT 浓度低于抑郁强迫游泳实验组, 但与抑郁强迫游泳实验组结果不具有显著差异 ($P>0.05$)。**结论:** 1) 不同运动方式(游泳运动与负重攀爬垂梯运动)都能在一定程度上改善 CUMS 大鼠中糖水偏爱指数降低的情况, 但不能完全改善, 且游泳运动改善效果显著优于负重攀爬垂梯运动 2) 游泳运动能在一定程度上改善 CUMS 大鼠中饲料消耗量减少的情况, 但不能完全改善, 而负重攀爬垂梯运动几乎没有起到上述作用。3) 不同运动方式(游泳运动与负重攀爬垂梯运动)都能在一定程度上改善 CUMS 大鼠中血清 5-HT 浓度降低的情况, 但不能完全改善, 且两者无显著差异。4) 综上, 本文认为不同运动均可改善 CUMS 大鼠的抑郁症状, 但游泳运动对 CUMS 大鼠的抗抑郁作用优于负重攀爬垂梯运动。

关键词 CUMS 大鼠, 抑郁, 运动

Effects of different exercise styles on depressive behavior of CUMS rats

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Abstract: Objective: The behavioral changes of rats (sugar water preference experiment, feed consumption) and serum 5-hydroxytryptamine (5-HT) level were used to reflect the degree of depression and the effect of exercise intervention, and to investigate the effects of different exercise modes on depressive behavior in rats with the chronic unpredictable mild stimulus (CUMS). **Methods:** 24 CUMS rats were randomly divided into 3 groups, including

depression forced swimming exercise group (aerobic exercise group), depression weight-bearing climbing ladder exercise group (resistance exercise group), depression control group, and eight normal rats were selected as the blank control group. After 8 weeks of exercise in all experimental groups, the sugar water preference index, feed consumption and serum 5-HT concentration of rats were recorded, and SPSS 25.0 was used for a one-way analysis of variance. **Results:** 1) The sugar water preference index of the depression forced swimming experimental group and the depression weight-bearing climbing ladder experimental group was significantly higher than that of the depression control group ($P<0.05$), but lower than the blank control group ($P<0.05$), and the sugar water preference index of depression forced swimming experimental group was significantly higher than that of the depression weight-bearing climbing ladder experimental group ($P<0.05$). 2) The feed consumption of the depression forced swimming experimental group was higher than that of the depression control group ($P<0.05$) and lower than the blank control group ($P<0.05$), there was no significant difference in feed consumption between the depressed group and the depressed control group ($P>0.05$), and the feed consumption of the depression weight-bearing climbing ladder experiment group was lower than that of the depression forced swimming experiment group. 3) The serum 5-HT concentration in rats showed that the serum 5-HT concentration of the depression forced swimming experimental group and the depression weight-bearing climbing ladder experimental group was higher than the depression control group ($P<0.05$), but lower than the blank control group ($P<0.05$). And, the serum 5-HT concentration of the depression weight-bearing climbing ladder experimental group was lower than that of the depression-forced swimming experimental group, but there was no significant difference from the depression forced swimming experimental group ($P>0.05$). **Conclusion:** 1) Different exercise modes (swimming exercise and weight-bearing ladder exercise) can improve the decrease of sugar water preference index in CUMS rats to some extent, but not completely, and the improvement effect of swimming exercise was significantly better than that of weight-bearing climbing ladder exercise. 2) Swimming can improve the reduction of feed consumption in CUMS rats to a certain extent, but it cannot be completely improved, while weight-bearing climbing ladder exercise hardly plays the above role. 3) Different exercise methods (swimming exercise and weight-bearing climbing exercise) can improve the reduction of serum 5-HT concentration in CUMS rats to a certain extent, but cannot completely improve, and there is no significant difference between the two. 4) In summary, this article believes that different exercises can improve the depressive symptoms of CUMS rats, but the antidepressant effect of swimming exercise on CUMS rats is better than that of weight-bearing climbing exercise.

Keywords: CUMS rats, depression, exercise

核心力量训练和下肢力量训练对自我控制能力的影响

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摘要 自我控制是自我的知、情、意成份中“意”这个成份的核心, 是执行功能的重要体现, 是个体适应社会的前提。对于自我控制能力的提高, 国内外研究多关注于有氧运动的效益, 日益受人们重视的核心力量运动的效益却少有研究。目的: 本研究基于自我控制的力量模型, 探讨 2 周的核心力量训练和下肢力量训练对自我控制能力的影响, 以及一般自我效能感的中介作用。方法: 招募无规律锻炼习惯的女性大学生 30 名, 将其随机分配到核心力量训练组、下肢力量训练组和解数学题组, 在 2 周内进行 7 次任务干预, 每次任务间隔至少 1 天。在 2 周内记录被试自我控制能力(自我控制失败数)的变化, 同时在干预任务当天测量一般自我效能感。结果: (1) 以干预方式和 7 个测量时间点(第 1、3、5、7、9、11、13 天)为自变量, 以自我控制能力为因变量进行重复测量剖面图分析, 结果显示, 测量时间点的主效应显著 [$F(6,18) = 5.110, p < .05$, 偏 $\eta^2 = .630$], 干预方式主效应不显著, 测量时间点和干预方式的交互作用不显著, 表明 2 周的力量训练不可以提高自我控制能力, 核心力量训练和下肢力量训练对自我控制能力的影响没有差别。(2) 对比干预前后个体的一般自我效能感, 结果显示第 1 天到第 13 天, 核心力量训练组的一般自我效能感显著提高 [$t = 3.143, p = .012$],

下肢组和解数学题组的一般自我效能感在干预前后无显著差异,表明核心力量训练能提高一般自我效能感。
(3)对核心力量训练组的一般自我效能感和自我控制能力的改变量进行相关分析,结果显示两者相关不显著,表明一般自我效能感在核心力量训练和自我控制能力之间不起中介作用。结论:力量训练不能提高自我控制能力,核心力量训练和下肢力量训练对自我控制能力的影响无差别。核心力量训练能提高一般自我效能感,但核心力量训练并不通过提高一般自我效能感而提高自我控制能力。

关键词 自我控制能力,核心力量训练,下肢力量训练,一般自我效能感

The Influence of Core Strength Training and Lower Limb Strength Training on Self-control Ability

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Abstract: Self-control is the core of "meaning" in cognition, emotion and volition, an important embodiment of executive function and a prerequisite for individuals to adapt to society. For the improvement of self-control, domestic and foreign researches mostly focus on the benefits of aerobic exercise, while the benefits of core strength exercise, which is increasingly valued by people, are rarely studied. Objective: Based on the strength model of self-control, this study explored the influence of two weeks' core strength training and lower limb strength training on self-control, and the mediating effect of general self-efficacy. Methods: 30 female college students with irregular exercise habits were recruited and randomly assigned to the core strength training group, the lower limb strength training group and the math problem solving group. Seven task interventions were conducted within 2 weeks, and each task interval was at least one day. The change of self-control ability (number of self-control failures) was recorded within 2 weeks, and the general self-efficacy was measured on the day of intervention task. Results: (1) Repeated measurement profile analysis was carried out with intervention mode and 7 measurement time points (days 1, 3, 5, 7, 9, 11 and 13) as independent variables and self-control ability as dependent variable. The results showed that the main effect of measurement time points was significant [$F(6,18) = 5.110, p < .05$, partial $\eta^2 = .630$]. (2) Comparing the general self-efficacy of individuals before and after intervention, the results showed that the general self-efficacy of core strength training group increased significantly from the first day to the thirteenth day [$t = 3.143, p = .012$], while there was no significant difference between lower limb group and math problem solving group before and after intervention, indicating that core strength training can improve the general self-efficacy. (3) The correlation between the general self-efficacy and self-control ability in the core strength training group is analyzed, and the results show that there is no significant correlation between them, which indicates that the general self-efficacy does not play an intermediary role between core strength training and self-control ability. Conclusion: Strength training can not improve self-control, and there is no difference between core strength training and lower limb strength training. Core strength training can improve general self-efficacy, but core strength training does not improve self-control ability by improving general self-efficacy.

Keywords: Self-control ability, Core strength training, Lower limb strength training, General self-efficacy

不同持续时间的羽毛球运动对吸烟成瘾者执行功能的影响：来自行为和 ERP 研究的证据

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摘要 执行功能是一个高级的认知过程,可以调节和控制其他的认知过程,使个体产生协调、有序和有目的的行为。执行功能主要包括抑制、刷新和转换3个子功能。研究发现,长期吸烟者会损伤其大脑的执行功能,并且受损后的成瘾个体无法正确做出计划、决策,进行自我调整等,难以控制强迫性的寻求。**目的:**本

研究探求不同持续时间的羽毛球运动对吸烟成瘾者执行功能各个子成分的影响，为运动辅助成瘾治疗的机制研究提供理论依据。**方法：**研究采用混合设计，选取 60 名久坐吸烟成瘾者，将其随机分为实验组和对照组，实验组主要内容为羽毛球运动项目、中等强度、每次 10min、20min、30 min 的运动干预，对照组在相同时间进行常规的学习生活。分别使用 Flanker 任务、n-back 任务、More-odd shifting 任务同时采用事件相关电位技术（ERP）进行全面评价一次不同持续时间的羽毛球运动前后各组吸烟成瘾者执行功能的抑制、刷新和转换 3 个子功能的变化。**结果：**对所收集的数据进行重复测量方差分析，相对于不运动组，中等强度羽毛球运动可以提高吸烟成瘾者的执行功能（抑制、转换、刷新）具有显著性影响($P < 0.01$)，但不同持续时间的运动对吸烟成瘾者执行功能的影响具有差异性。具体行为指标表现为：在抑制功能方面，30min 运动组、20min 运动组 10min 运动组 > 对照组；在转换功能方面，30min 运动组 > 20min 运动组、10min 运动组 > 对照组；在刷新功能方面，10min 运动组 > 20min 运动组 > 30min 运动组。脑电指标表现为：N2、P3 波幅、潜伏期具有显著差异，其中不同持续时间羽毛球运动组在 N2 波幅、潜伏期存在显著性，P3 的波幅、潜伏期不存在显著差异。**结论：**中等强度羽毛球运动可以提高吸烟成瘾者的执行功能，但效果与运动持续时间有关；30min 羽毛球运动对吸烟成瘾者执行功能改善效果最好。

关键词 有氧运动，执行功能，吸烟成瘾者，事件相关电位

Effect of badminton at different duration on the functioning of smoking addicts: evidence from behavior and ERP studies

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Abstract: Executive function is an advanced cognitive process that can regulate and control other cognitive processes, enabling individuals to produce coordinated, orderly, and purposeful behavior. Execution functions mainly include suppressing, refreshing, and converting 3 sub-functions. The study found that long-term smokers will damage the performance function of their brain, and damaged addicted individuals can not make correct plans, decisions, self-adjustment, etc., so it is difficult to control compulsive seeking. Objective: To explore the influence of badminton with different duration on the various subcomponents of smoking addicts and provide theoretical basis for the mechanism of sports-assisted addiction therapy. Methods: Study acquisition With mixed design, 60 sedentary smoking addicts were selected and randomly divided into experimental group and control group. The main contents of the experimental group were badminton sports, moderate intensity and 10min, 20min, 30 min per time. The control group conducted routine study and life at the same time. Flanker, n-back and More-odd shifting tasks comprehensively evaluate the inhibition, refresh and rotation of smoking addicts before and after a different duration of badminton using both and event-related potential technology (ERP) Change for 3 subfunction changes. Results: Repeated measurement variance analysis of the data collected can improve the execution function (inhibition, conversion, refresh) compared to the nonexercise group ($P < 0.01$), but the influence of different duration on the execution function of smoking addicts is different. Specific behavior indicators are: in terms of inhibition function, 30min movement group, 20min movement group 10min movement group > control group; in terms of conversion function, 30min movement group > 20min movement group, 10min sports group > Control group; in refresh function, 10min sports group > 20min sports group > 30min sports group. The EEG index showed: N2, P3 amplitude and latency period varied significantly, where badminton groups were significant in N2 amplitude and incubation period, and no wave amplitude and incubation period of P3. Conclusion: Moderate intensity badminton can improve the execution function of smoking addicts, but the effect is related to the exercise duration; 30min badminton improves the best effect of smoking addicts.

Keywords: aerobic exercise, performing functions, smoking addict, event-related potentials

篮球运动员多目标追踪功能网络连接更高效：一项独立成分分析研究

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摘要 本研究采用行为测量和磁共振成像技术, 使用独立成分分析方法, 比较专业篮球运动员和非运动员在多目标追踪任务中背侧注意网络和默认网络的功能连接模式的差异, 探讨长期运动技能训练对多目标追踪任务中大脑功能网络连接强度的影响。实验选取 23 名专业篮球运动员和 24 名年龄和教育年限相匹配的非运动员, 所有被试在完成追踪三个目标的多目标追踪任务的同时使用磁共振成像扫描大脑活动, 采用独立成分分析对篮球运动员和非运动员在多目标追踪任务中的功能网络连接进行比较分析, 将功能网络连接分析得到的差异显著的脑区作为模板, 提取每个被试相应成分中每个模板的时间序列, 以此时间序列与多目标追踪正确率进行皮尔逊相关分析。行为分析结果发现, 运动组的追踪正确率显著高于对照组。独立成分分析和相关分析结果发现, 与非运动员相比, 篮球运动员在多目标追踪任务中, 背侧注意网络的双侧额眼区、顶上小叶/顶内沟的功能连接强度有显著的降低, 且背侧注意网络核心脑区双侧额眼区和右侧顶上小叶/顶内沟的功能连接强度与追踪正确率存在显著负相关, 表明长期运动训练可能使任务正网络的组织更加集中、协调、高效, 从而使运动训练中所获得的认知技能迁移到一般认知领域; 运动组默认网络前部的右侧内侧额上回和双侧前扣带回的功能连接强度增强, 且默认网络核心脑区右侧内侧额上回和双侧前扣带回的功能连接与追踪正确率存在显著正相关, 反映了篮球运动员在完成多目标追踪任务时比非运动员需要更少的外部注意, 体现了任务加工的自动化过程。这些结果表明运动员可能在执行迁移的认知任务时具有更高的神经效率。

关键词 背侧注意网络, 默认网络, 多目标追踪, 独立成分分析

Efficient functional network connectivity in basketball players during multiple object tracking: An independent component analysis

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Abstract: Although previous studies have shown that cognitive skills trained in sports can transfer to performance on general cognitive abilities, it remains unclear how long-term sports training influences functional connectivity within task-positive networks and default mode network during a transferred cognitive task. The aim of the present study was to examine differences in functional network connectivity between basketball players and non-athletes during a multiple object tracking (MOT) task. Blood oxygenation-level dependent (BOLD) functional MRI (fMRI) was performed in 23 basketball players and 24 age- and education-matched control subjects during an MOT task. Group independent component analysis (ICA) was used to analyze the fMRI data. Task fMRI data were decomposed into distinct spatial independent components (ICs) and associated time courses, and dorsal attention network (DAN) and default mode network (DMN) were selected for further analysis of functional connectivity. Results showed that, as compared to non-athletes, athletes had significantly higher scores on the MOT task and showed decreased functional network connectivity of regions within the DAN, suggesting that an automation process was being used to complete the task. Athletes also showed increased functional connectivity within DMN, indicative of effortless processing. Finally, we found that MOT performance was negatively correlated with functional connectivity of core areas in DAN, and positively correlated with functional connectivity of core areas in DMN. This study contributes to our understanding of the neural correlates underlying the transfer of enhanced abilities trained in sports to the general cognitive domain.

Keywords: dorsal attention network, default mode network, multiple object tracking, independent component analysis

高水平篮球运动员多目标追踪能力的脑功能和结构特征

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摘要 我们前期的研究发现, 与非运动员相比, 高水平篮球运动员具有更好的多目标追踪正确率, 然而尚不清楚这种更好的注意能力与静息态功能连接之间的关系, 以及这种功能可塑性是否有其结构基础。本研究招募 28 名高水平篮球运动员和 30 名非运动员, 所有被试完成追踪 2 个、3 个和 4 个目标的多目标追踪任务, 随后扫描大脑静息态功能像和结构像, 以前期研究发现的连接存在组间差异的脑区作为感兴趣区, 比较高水平篮球运动员和非运动员在静息状态下每个感兴趣区与全脑体素的功能连接, 探讨高水平篮球运动员和非运动员大脑静息态功能连接的差异及其与行为表现的相关, 并考察了高水平篮球运动员与非运动员大脑灰质体积的差异及其与行为表现的关系。静息态功能连接分析结果发现, 与非运动员相比, 篮球运动员右侧顶上小叶/顶内沟与右侧背外侧前额叶、双侧前扣带回与左侧颞中回/角回均表现出显著增强的功能连接, 且右侧顶上小叶/顶内沟与右侧背外侧前额叶的功能连接与追踪 4 个目标的正确率存在显著的正相关, 可能反映了篮球运动员更好的注意和执行功能整合能力; 右侧内侧额上回与左侧小脑后叶表现出显著降低的功能连接, 且功能连接强度与追踪 4 个目标的正确率呈显著的负相关, 可能反映了默认网络与运动相关的小脑的分离程度更大, 两者的有效分离可能可以减少篮球运动中对运动执行的干扰, 以保证运动动作的精确性。基于体素的形态学分析发现, 篮球运动员双侧海马旁回/梭状回、双侧中央后回以及顶上小叶/顶内沟的灰质体积显著大于非运动员组, 相关分析发现右侧中央后回的体积与追踪 4 个目标的正确率存在显著正相关, 左侧顶上小叶/顶内沟的体积与追踪 3 个目标的正确率存在显著的正相关, 表明篮球运动员可能经过长期篮球训练而具有更出色的感知和动作执行以及注意能力。本研究的结果表明高水平篮球运动员更好的注意能力与静息态功能连接和结构变化有关。

关键词 多目标追踪, 静息态功能连接, 灰质体积, 篮球运动员

Brain functional and structural characteristics of multiple object tracking in high-level basketball players

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Abstract: Our previous study have found that, compared with non-athletes, high-level basketball players showed better multiple object tracking (MOT) accuracies. However, the relationships between this better attentional ability and resting state functional connectivity as well as structural changes need further investigation. Twenty-eight high-level basketball players and 30 non-athletes were recruited to complete an MOT task with 2, 3, and 4 targets. Resting-state functional connectivity was used to compare functional connectivity patterns in basketball players and non-athletes, and the brain regions found in our previous study were regarded as regions of interest. Voxel-based morphometry (VBM) were used to investigate training-induced gray matter changes in basketball players. Results showed that, as compared to non-athletes, athletes had significantly higher functional connectivity between right superior parietal lobule/intraparietal sulcus (SPL/IPS) and right dorsal lateral prefrontal cortex (DLPFC), and between bilateral anterior angular cortex and left middle temporal gyrus/angular gyrus. We also found lower functional connectivity between right medial superior frontal gyrus (mSFG) and left cerebellum in athletes. MOT performance was positively correlated with functional connectivity between right SPL/IPS and right DLPFC, and negatively correlated with functional connectivity between right mSFG and left cerebellum. These results may reflect a better attention and executive function integration ability in basketball players. VBM analysis found significantly increased gray matter volume in basketball players, especially in the bilateral parahippocampal gyrus/fusiform, bilateral postcentral gyrus, and the left SPL. MOT performance was positively correlated with grey matter volume in right postcentral gyrus and left SPL. We speculate that the brain changes of the basketball players may reflect their extraordinary ability to estimate the direction of their movements, their speed of execution, and their identification of

their own and surrounding objects' locations.

Keywords: multiple object tracking, resting state functional connectivity, gray matter volume, basketball player

大学生自我身体形象对体育锻炼的影响-自尊的中介作用

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摘要 目的: 自我身体形象是每个人对自己身体的看法和评价。当今社会中, 对自我身体形象的关注越来越成为人们参与各项身体活动的动机。本文主要研究大学生自我身体形象对体育锻炼参与的影响以及自尊对其所发挥的中介作用。**方法:** 采用多维度自我身体形象关系问卷、体育锻炼等级量表、自尊量表、基本情况调查问卷对 402 名大学生(男 144 人, 女 258 人)进行调查, 考查大学生自我身体形象与体育锻炼之间的关系并检验自尊的中介效应。**结果:** (1)被调查大学生参加体育锻炼的时间、频率、强度均处于中等偏低水平。(2)自我身体形象与体育锻炼之间呈显著正相关($r=0.205, p<0.001$); 自尊与体育锻炼之间呈显著正相关($r=0.338, p<0.001$); 自我身体形象与自尊之间呈显著正相关($r=0.239, p<0.001$), 即自我身体形象、体育锻炼、自尊两两之间关系密切。(3)自我身体形象对自尊的预测作用显著($\beta=0.018, p<0.001$); 自尊对体育锻炼的预测作用显著($\beta=0.353, p<0.001$); 自我身体形象对体育锻炼预测作用显著($\beta=0.11, p<0.001$), 由于依次检验相关系数均显著, 经中介效应检验可知在自我身体形象与体育锻炼的影响中, 自尊起着部分中介效应。结论: 由于自尊在大学生自我身体形象与体育锻炼之间的影响中起着部分中介作用, 因此, 在提高大学生体育锻炼水平时, 不仅要从小学生的自我身体形象出发, 也要提高大学生的自尊水平。本研究从自我形象的角度为大学学生的体育锻炼提供相关的理论依据和指导, 有助于促进大学生参与和保持体育锻炼。

关键词 大学生, 自我身体形象, 体育锻炼, 自尊, 中介作用

The influence of self-image on Physical Exercise in College Students - The Mediating effect of Self-esteem

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Abstract: Purpose: Body image is how each person views and evaluates his or her own body. In today's society, more and more attention to self body image has become the motivation for people to participate in various physical activities. This paper mainly studies the influence of self-image on physical exercise participation and the mediating effect of self-esteem on college students. **Methods:** 402 college students (144 male and 258 female) were investigated by using the multi-dimensional self body image questionnaire, physical exercise rating scale, self-esteem scale and basic information questionnaire. **Results :** (1) the time, frequency and intensity of participating in physical exercise were all at the low level. (2) There was a significant positive correlation between body image and physical exercise ($r=0.205, P<0.001$). There was a significant positive correlation between self-esteem and physical exercise ($r=0.338, P<0.001$). There was a significant positive correlation between self-body image and self-esteem ($r=0.239, p<0.001$), that is, there was a close relationship between self-body image, physical exercise and self-esteem. (3) Self-body image had a significant effect on self-esteem ($\beta=0.018, P<0.001$). Self-esteem had a significant predictive effect on physical exercise ($\beta=0.353, P<0.001$). The self-image had a significant effect on the prediction of physical exercise ($\beta=0.11, P<0.001$). Since the correlation coefficients were all significant in turn, the mediating effect test showed that self-esteem played a part in the influence of self-image and physical exercise. **Conclusion:** Since

self-esteem plays a mediating role in the influence between the self-image and physical exercise of college students, it is not only necessary to start from the self-image of college students, but also to improve the self-esteem of college students. This study provides theoretical basis and guidance for college students' physical exercise from the perspective of self-image, which is helpful to promote college students' participation in and maintenance of physical exercise.

Keywords: College students, Self-body image, Physical exercise, Self-esteem, Intermediary role

新冠疫情下青少年乐商与生活满意感的关系： 体育活动和心理资本的多重中介作用

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摘 要 《“健康中国 2030”规划纲要》中明确将“提高全民健康素养”作为“健康中国 2030”建设工作的重要举措。“青年兴则国兴，青年强则国强”，青少年身心健康素养的提升是“健康中国”国家战略的重要环节。心理健康不仅是没有心理疾病，还包括生活满意感等积极心理健康状态的拥有。因此生活满意感是疫情期间衡量青少年心理健康状态变化的一个重要指标。乐商界定为人乐观的能力，既包括一个人乐观水平的高低，也包括个体从所经历的消极事件中获取积极成分(或力量)的能力，以及影响或感染他人的能力。个体的乐观能力和积极心理品质有着密切的关系，高乐商的青少年能更多地体验到积极情绪从而收获幸福。参与体育活动有利于改善青少年的负性情绪体验，改善心理健康水平，因此体育活动是积累心理资本、提升生活满意感的有效途径。本研究认为体育活动和心理资本在乐商与生活满意感关系中发挥重要作用。为了更清晰地解释其中的影响机制，以陕西、甘肃、河北、河南等地初一至高三年级的 517 名青少年为研究对象，采用《中小学生乐商问卷》、《体育活动等级量表》、《积极心理资本问卷》以及《生活满意感量表》进行问卷调查。结果发现：（1）疫情下青少年生活满意感显著低于常模($t=-9.71, p<0.001$)；（2）学习压力比较大的学生生活满意感显著低于学习压力中等和学习压力较小学生的生活满意感($F=-14.18, p<0.001$)；（3）乐商可以通过心理资本的中介作用影响生活满意感，95% 的置信区间为[0.08, 0.24]；（4）体育活动、心理资本在乐商预测生活满意感中起多重中介作用，95% 的置信区间为[0.003, 0.02]。本研究验证了体育活动和心理资本在乐商与生活满意感间的多重中介作用，为后续的理论研究和青少年心理健康教育工作实践提供了建议：在特殊时期应该引导青少年保持乐观信念，鼓励青少年开展体育活动对抗不良情绪从而提高心理健康水平。

关键词 青少年，乐商，生活满意感，体育活动，心理资本

The Roles of Physical Activity and Psychological Capital in the Relationship between Optimistic Intelligence Quotient and Life Satisfaction among Adolescents under the COVID-19

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Abstract: In the "Healthy China 2030", "improving the health literacy of the whole population" is clearly stated as an important initiative in the construction of "Healthy China 2030". The improvement of physical and mental health literacy of young people is an important part of the national strategy of "Healthy China". Mental health is not only the absence of mental illness, but also the possession of a positive mental health state such as life satisfaction. Therefore, life satisfaction is an important indicator to measure the change of adolescents' mental health status during the COVID-19. Optimistic intelligence quotient (OQ) is defined as the ability to be optimistic, both in terms of the level of one's optimism and the individual's ability to derive positive components (or strength) from the negative events experienced, as well as the ability to influence or infect others. There is a close relationship between an individual's ability to be optimistic and positive psychological qualities, and adolescents with high OQ experience more positive emotions and thus reap happiness. Participation in physical activity is conducive to improving adolescents' negative

emotional experiences and mental health, so physical activity is an effective way to accumulate psychological capital and enhance life satisfaction. This study consider that physical activity and psychological capital play an important role in the relationship between OQ and life satisfaction. In order to explain the influence mechanism more clearly, a sample of 517 middle school students was recruited in the study to complete the Primary and secondary school students optimistic intelligence quotient questionnaire, the Physical Activity Rating Scale, the Positive Psychological Capital Questionnaire, and the Satisfaction with Life Scale. The results found that (1) life satisfaction of adolescents under COVID-19 was significantly lower than the norm ($t=-9.71, p<0.001$); (2) life satisfaction of students with higher academic stress was significantly lower than that of students with moderate and lower academic stress ($F=-14.18, p<0.001$); (3) optimistic intelligence quotient could influence life satisfaction through the mediating effect of psychological capital, 95% confidence interval was [0.08, 0.24]; (4) physical activity and psychological capital play multiple mediating effects between optimistic intelligence quotient and life satisfaction, 95% confidence intervals of [0.003, 0.02]. This study verified the multiple mediating roles of physical activity and psychological capital in the relationship between OQ and life satisfaction, also provided suggestions for subsequent theoretical research and adolescent mental health education practice: adolescents should be guided to maintain optimistic beliefs during special times, and encouraged to engage in physical activities to combat bad emotions and thus improve their mental health.

Keywords: adolescents, optimistic intelligence quotient, life satisfaction, physical activity, psychological capital

自我谈话在不同运动项目中的评价与应用

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摘 要 自我谈话 (self-talk) 指人们对自己大声或无声、自然地或策略性地说的, 去激励、指导、反应、评价事件或行动的话, 是体育运动领域常见的心理干预方式。在运动领域, 自我谈话被认为是提高运动表现和心理状态的关键因素, 是运动心理学领域的重要研究主题。根据自我谈话的策略 (strategic) 特点, 研究者将自我谈话划分为动机性自我谈话和指导性自我谈话; 根据自我谈话的内容和效价特点, 可分为积极性自我谈话和消极性自我谈话; 根据自动化的特点, 自我谈话被分为了非导向性自我谈话和目标导向性自我谈话, 并且后续的研究将目标导向性自我谈话进行了进一步的细分。

自我谈话对运动成绩的提高作用已经在运动员与教练员之中得到了广泛的认可, 但其效果在不同运动项目中不一致, 甚至有相反的结果, 这可能与运动项目的复杂程度和认知资源的占用程度有关。因此, 本文对自我谈话在不同运动项目的应用进行了总结。在网球运动中, 动机性自我谈话和指导性自我谈话均能提高新手的发球水平, 但受到压力水平的调节; 在高尔夫运动中, 动机性、积极性自我谈话对高尔夫推杆任务的影响更积极; 88%的马拉松跑者在运动过程中会使用自我谈话, 其中 43.06%的精英运动员会使用专注于身体的联想性自我谈话; 在篮球运动中, 精英运动员使用指导性自我谈话提高了罚篮的准确性, 降低了动作协调变异性; 在足球运动中, 积极性自我谈话和动机性自我谈话对运动员更有益。所以需要结合不同运动项目以及运动员自身心理状态、运动水平与不同的运动阶段, 合理运用自我谈话以提高运动成绩。最后本文对未来的研究方向提出了展望: (1) 建立系统的分类框架, 帮助选取最优自我谈话方式, 进行最有效的干预; (2) 扩大精英运动员的被试量, 考察专家与新手在自我谈话使用上的差别; (3) 将竞赛情境与长期干预相结合, 提高研究的外部效度; (4) 结合多种方法探讨自我谈话的内在机制, 对自我谈话行为发生的脑机制进行研究。

关键词 自我谈话, 运动表现, 心理技能

Evaluation and application of self-talk in different sports

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Abstract: Self-talk refers to what people say loudly or silently, naturally or strategically to themselves, to motivate, guide, respond, evaluate events or actions, it's a common psychological intervention method in sport psychology. In

the field of sports, self-talk is considered to be a key factor in improving athletic performance and psychological status, and it's an important research topic in sport psychology. According to the strategic characteristics of self-talk, researchers divide self-talk into motivational self-talk and instructional self-talk; according to the content and valence characteristics of self-talk, it can be divided into positive self-talk and negative self-talk; according to the characteristics of automation, self-talk is divided into undirected self-talk and goal-directed self-talk, and subsequent studies further subdivided goal-directed self-talk.

The effect of self-talk on the improvement of sports performance has been widely recognized among athletes and coaches, but its effect has not been unified in different sports, and there are even counter results, which may be related to the complexity of sports and the occupancy of cognitive resources. Therefore, this paper summarizes the application of self-talk in different sports. In tennis, both motivational self-talk and instructive self-talk can improve the serving level of novices, but they are moderated by the level of pressure; in golf, motivational self-talk and positive self-talk has a more positive impact on the golf putter task; 88% of marathon runners use self-talk during the exercise, of which 43.06% of elite athletes use self-talk that associated with body to keep focused; in basketball, elite athletes use instructional self-talk to improve the accuracy of free throw, reduce the movement coordination variability; in football, positive self-talk and motivational self-talk are more beneficial to athletes. Therefore, it is necessary to use self-talk correctly in combination with different sports, psychological state of athletes, sport levels and different stages of sports to improve sports performance. Finally, this paper puts forward prospects for future research directions: (1) Establishing a systematic classification framework to select the best way of self-talk and conduct the most effective intervention; (2) Expanding the number of elite athletes to examine the differences in the use of self-talk between experts and novices; (3) Combining competition situations with long-term intervention to improve the external validity; (4) Use variety of methods to explore the intrinsic mechanism of self-talk and explore the brain mechanism of self-talk.

Keywords: self-talk, athletic performance, psychological skill

短时有氧运动影响抑制功能的安慰剂效应

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摘要 为考察短时中等强度的有氧运动影响抑制功能的安慰剂效应, 探讨安慰剂效应在动态时间进程中的作用, 本研究随机选取 104 名大学生进行 10min 中等强度的有氧运动, 采用 2(干预类型: 有安慰剂干预、无安慰剂干预)×3(测量时间点: 运动后恢复静息心率即刻、运动后休息 10min 时、运动后休息 20min 时)的组间设计, 将被试随机分为 6 组, 每个被试接受前测、后测共两次测量抑制功能的 Stroop 任务, Stroop 任务成绩由 Psychopy 线上程序收集, 获得有效数据 90 份。二因素组间设计的方差分析显示: (1)干预类型主效应显著, 有安慰剂干预组抑制功能的提高量大于无安慰剂干预组; (2)测量时间点主效应不显著, 在不同时间点测量的抑制功能无显著差异; (3)干预类型×测量时间点交互作用显著, 运动后恢复静息心率即刻时, 无安慰剂干预组的抑制功能提高量大于有安慰剂干预组。运动后休息 20min 时, 有安慰剂干预组的抑制功能提高量大于无安慰剂干预组。结论: 随着测量时间点的延长, 安慰剂效应的作用逐渐显现, 预期启动的安慰剂效应能影响认知效益的改善, 通过诱发期望启动安慰剂效应进行非运动因素干预同样是提高抑制功能的有效手段。

关键词 安慰剂效应, 抑制功能, 短时有氧运动, Stroop 任务

追求健康目标中自我调节与解释水平的匹配效应

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摘要 **目的:** 追求健康目标过程中的自我调节根据是否存在动机冲突分为自我控制与行为执行。针对不同的自我调节给予不同的解释水平指导会提高个体解决问题的能力。个体在面对不同自我调节情境时是否表现

出自我调节与解释水平的匹配效应，即自我控制与高解释水平，行为执行与低解释水平相匹配。**方法：**本研究招募 130 名实验参与者，从时间距离（实验 1）、可能性（实验 2）和原因手段任务（实验 3）3 种解释水平操控方式探讨自我调节与解释水平是否确有匹配效应。三个实验均为两因素被试内设计，自变量为自我调节（自我控制 vs. 行为执行）以及解释水平（高解释水平 vs. 低解释水平），因变量为知觉到的解释水平的有用程度以及对不同解释水平的偏好。通过描述自我控制和行为执行情境评估个体是否识别到高、低解释水平对追求健康目标的不同作用。**结果：**3 个实验都表明参与者能够区分自我控制和行为执行情境。实验 1 只发现了行为执行情境与低解释水平的匹配关系，实验 2 中自我调节与解释水平之间并没有表现出明显的匹配效应；但实验 3 中不仅发现了行为执行情境与低解释水平的匹配，也检测到了自我控制与高解释水平之间的匹配。综上所述，个体在面对不同的自我调节情境表现出了与高、低解释水平的匹配关系，但个体对这一匹配关系的认识具有一定的局限性，原因手段任务更便于这种匹配关系的认识。

关键词 自我调节，解释水平，目标追求

The matching effect of self-regulation and construal level in pursuing health goals

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Abstract: Self-regulation in the process of pursuing health goals can be divided into self-control and behavioral execution according to whether there is a conflict of motivation. Giving different construal level for different self-regulation will improve the individual's ability to solve problems. Whether the individual shows the matching effect of self-regulation and construal level when facing different self-regulation situations, that is, self-control and high explanation level, behavior execution and low explanation level match. **Methods:** This study recruited 130 participants, and explored whether self-regulation and construal level actually have a matching effect from three construal levels: time distance (experiment 1), possibility (experiment 2) and cause means task (experiment 3). The three experiments are designed within a two-factor subject. The independent variables are self-regulation (self-control vs. behavioral execution) and construal level (high construal level vs. low construal level), and the dependent variable is the perceived usefulness of the explanatory level and preferences for different levels of interpretation. By describing self-control and behavioral execution situations, assess whether the individual recognizes the different effects of high and low construal levels on the pursuit of health goals. **Results:** All three experiments showed that participants were able to distinguish between self-control and behavioral execution situations. Experiment 1 only found the matching relationship between behavior execution context and low construal level. Experiment 2 did not show a significant matching effect between self-regulation and construal level; but in Experiment 3, not only the matching relationship between behavior execution context and construal level was found. A match between self-control and low construal levels was also detected. To sum up, individuals have shown matching relationships with high and low construal levels in different self-regulation situations, but individuals' understanding of this matching relationship has certain limitations, and the cause-means task is more convenient for awareness of relationship.

Keywords: self-regulation, construal level, goal pursuit

非侵入性脑刺激技术在运动认知研究中的应用

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摘要 非侵入性脑刺激技术包括经颅磁刺激技术（transcranial magnetic stimulation, TMS）和经颅直流电刺

激技术 (transcranial direct current stimulation, tDCS), 目前已经被广泛用于心理学研究中。本文总结了非侵入性脑刺激技术在运动认知中的研究现状, 分析了其中研究的不足, 并提出了未来的研究方向。经颅直流电刺激对于注意力有一定的促进作用, 刺激脑区主要为背外侧前额叶皮层 (DLPFC) 和顶叶皮层 (PC)。对于工作记忆, 经颅直流电刺激能够提高工作记忆的容量, 刺激脑区主要为前额叶皮层 (PFC) 和后顶叶皮层 (PPC)。对于动态视觉追踪, 非侵入性脑刺激结果存在一定的争议, 问题集中在电刺激顶叶皮层 (PC) 促进还是损害多目标追踪的成绩。不过可以肯定的是非侵入性脑刺激会对多目标追踪造成显著影响, 但这种影响的方向还需要进一步考虑。非侵入性脑刺激对于动作学习具有一定的改善作用, 表现为对动作技能学习的更快, 保持的更久。刺激的脑区域主要为小脑 (cerebellum) 和初级运动皮层 (M1)。非侵入性脑刺激运用在风险决策、跨期决策、社会决策的研究比较多, 但在运动决策领域研究比较少, 而运动决策的神经机制是值得探讨的问题, 这提示运动心理学研究者在今后研究中可以尝试运用此方法以揭示运动决策的神经机制。展望: 非侵入性脑刺激技术的优势在于可以揭示行为与神经活动的因果关系, 运动心理学家可以在此技术的基础上结合脑电、近红外、功能性磁共振等技术以揭示运动认知的神经机制。

关键词 TDCS, TMS, 运动认知, 多目标追踪

Application of non-invasive brain stimulation techniques in motor cognition research

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Abstract: Non-invasive brain stimulation techniques, including transcranial magnetic stimulation (TMS) and transcranial direct current stimulation (TDCS), have been widely used in psychological research. This paper summarizes the research status of non-invasive brain stimulation technology in motor cognition, analyzes the shortcomings of the research, and puts forward the future research direction. Transcranial direct current stimulation (TDCS) has a certain promotion effect on attention, stimulating brain areas mainly include dorsolateral prefrontal cortex (DLPFC) and parietal cortex (PC). For working memory, transcranial direct current stimulation (TDCS) can improve the capacity of working memory, stimulating brain areas mainly including prefrontal cortex (PFC) and posterior parietal cortex (PPC). For dynamic visual tracking, there is some controversy about the results of non-invasive brain stimulation, which focuses on whether the electrical stimulation of the parietal cortex (PC) promotes or damages the performance of multi-objective tracking. It is certain that non-invasive brain stimulation has a significant effect on multi-target tracking, but the direction of this effect needs further consideration. Non-invasive brain stimulation has a certain improvement effect on motor learning, which is manifested as faster learning of motor skills and longer retention. The stimulated brain regions were mainly cerebellum and primary motor cortex (M1). Non-invasive brain stimulation is widely used in risk decision-making, intertemporal decision-making and social decision-making, but there are few researches in motor decision-making. The neural mechanism of motor decision-making is worth exploring, which suggests that the researchers of sports psychologists may try to use this method to reveal the neural mechanism of motor decision-making in future studies. Prospect: The advantage of non-invasive brain stimulation technology is that it can reveal the causal relationship between behavior and neural activity. Based on this technology, sports psychologists can combine EEG, fNIRS, fMRI and other technologies to reveal the neural mechanism of motor cognition.

Keywords: TDCS, TMS, Motor cognition, Multiple objective tracking

青少年运动员意志品质的团体心理辅导干预效果验证

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摘要 对于青少年运动员,运动心理学研究的目标已不满足于对其训练和比赛中心理问题的应对,而是从积极心理学出发,致力于激发和培养他们的积极的心理品质,促进其良好心理品质形成和心理健康发展。本研究基于积极心理学视域,设计一套以青少年运动员为对象,以提高其意志品质为目的的团体心理干预方案,为青少年运动员的心理辅导和积极心理品质(意志品质)培养提供具体的操作文本。以北京市体育学校青少年运动员为研究对象,采用实验组和控制组前后测的实验设计,实验组、控制组各24人,实验组平均年龄 15.25 ± 1.20 岁;控制组平均年龄 16.08 ± 0.89 岁。对实验组被试进行为期三个半月,每周一次,每次90分钟形式多种的团体心理辅导(包括主题活动、课后家庭作业和由微信公众号制作的课后读本)干预;采用殷小川等编制的《青少年意志品质问卷》对实验组和控制组被试在团体心理辅导干预前、后意志品质进行测量,并结合对教练员和运动员的访谈,评估团体心理辅导干预效果。研究结果发现:(1)实验前两组被试的意志品质总分及各维度得分均不存在显著性差异,实验组和控制组的被试具有同质性。(2)后测结果表明:实验组的被试在坚韧性、自制力、独立性和自觉性维度得分显著高于控制组($p < 0.05$)。(3)实验组被试干预前后意志品质的总得分及三个维度上的得分都有明显的提高($p < 0.05$),仅在独立性维度上没有显著变化($p > 0.05$)。(4)控制组被试干预前后,在意志品质总得分和各维度得分上没有显著性提高($p > 0.05$)。由此得出结论:以积极心理学为基础,内容涉及积极认知、积极情绪、积极应对、积极行为等方面的团体心理辅导干预方案,对提高青少年运动员意志品质具有实效性。

关键词 青少年运动员,意志品质,团体心理辅导,干预效果

Verification of the effect of group psychological guidance intervention on the will-power of adolescence athletes

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Abstract: For adolescence athletes, the goal of sports psychology research is not satisfied with coping with their psychological problems in training and competition, but from the perspective of positive psychology, it is committed to stimulating and cultivating their positive psychological quality, promote the formation of good psychological quality and the development of mental health. Based on the perspective of positive psychology, this study designed a group psychological intervention program aiming at improving adolescence athletes' will-power, which provides specific operation text for psychological guidance and positive psychological quality (will-power) training of adolescence athletes. Taking the adolescence athletes of Beijing sports school as the research object, the experimental group and the control group had 24 people in each group. The average age of the experimental group was 15.25 ± 1.20 years old, and that of the control group was 16.08 ± 0.89 years old. The subjects in the experimental group was given a variety of group psychological guidance (including thematic activities, after-school homework and after-school reading by WeChat official account) intervention for three and a half months, once a week for 90 minutes; by using the Adolescent Will-power Questionnaire compiled by Yin Xiaochuan and others, the will-power of the subjects in the experimental group and the control group before and after the group psychological guidance intervention was measured, and the effect of group psychological guidance intervention was also evaluated by interviewing coaches and athletes. The results showed that: (1) Before the experiment, there was no significant

difference in the total score of will-power and the scores of each dimension between the subjects in two groups. The subjects in the experimental group and the control group were homogeneous. (2) The results of the post-test showed that the scores of resilience, self-control, independence and consciousness of the subjects in the experimental group were significantly higher than those of the control group ($P < 0.05$). (3) Before and after the intervention, the total score and three dimensions scores of the subjects in the experimental group were significantly improved ($P < 0.05$), but there was no significant change in the independence dimension ($P > 0.05$). (4) Before and after the intervention, there was no significant improvement in the total score of will-power and the scores of each dimension of the subjects in the control group ($P > 0.05$). It is concluded that: Based on positive psychology, the group psychological guidance intervention program involving positive cognition, positive emotion, positive response and positive behavior is effective in improving the will-power of adolescence athletes.

Keywords: adolescence athletes, will-power, group psychological guidance, intervention effect

压力下否定形式自我谈话对射击任务中注意控制的影响

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摘 要 自我谈话是运动员在赛场上常用的心理调节方式，优秀运动员在训练和比赛中会更多地使用自我谈话。然而，并不是所有自我谈话都有益于运动中的自我控制与动作表现，否定形式自我谈话可能引起与意愿相反的自我控制逆效应。前人对运动中注意控制逆效应的研究多局限于控制过程中出现的效应，而在思维抑制领域中，逆效应可分为即时增强效应和反弹效应，前者发生在个体思维抑制的过程中，后者则在个体思维抑制之后出现。本研究采用虚拟现实与眼动相结合的技术，监测参与者在虚拟现实射击任务中注意的变化，不仅探究使用否定形式自我谈话是否会引起注意控制的即时增强效应，更进一步探索注意控制中的反弹效应。

研究参与者共 72 名普通大学生，使用三因素混合实验设计，组内自变量为测量次序（基线、干预、干预停止），组间自变量为压力设置（有、无）和自我谈话（否定、肯定），其中否定形式自我谈话的内容为“别盯靶子”，相对应的肯定形式自我谈话的内容为“精力回收”。因变量为完成射击任务时注视的眼动指标：对靶子的注视次数百分比、注视总持续时间百分比以及平均注视持续时间。结果显示：有压力的情境中，进行肯定自我谈话干预的参与者对靶子的注视减少了（对运动表现有利），而使用否定自我谈话的参与者对靶子的注视增加了（对运动表现不利）；无压力设置的情境中，肯定自我谈话与否定自我谈话组对靶子的注视均减少了。这提示，压力下否定的自我谈话将引起注意控制的即时增强效应。结果还显示，不受压力设置的影响，在干预停止后，曾使用否定自我谈话的参与者再次进行射击时比基线测试时更多地注视靶子（对运动表现不利），说明注意控制中也存在反弹效应，且不受压力的调节。

综上，本研究提示，否定形式自我谈话将引起注意控制的即时增强效应与反弹效应，其中即时增强效应仅在压力情境中出现，反弹效应则不受压力的影响。

关键词 自我谈话，自我控制，逆效应，压力

Influence of Negation-formed Self-talk under pressure on attention control in shooting task

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Abstract: Self-talk is a common way of psychological adjustment for athletes on the field. Elite athletes will use self-talk more often in training and competition. However, not all self-talk is beneficial to self-control and motor performance in sports, and negation-formed self-talk may cause the ironic effect of self-control that is contrary to the intention. Previous studies on the ironic effect of attention control in sports are mostly limited to the effect occurring in the process of control. In the field of thought suppression, the ironic effect can be divided into immediate

enhancement effect and rebound effect, in which immediate enhancement effect occurs in the process of individual thought suppression, while rebound effect appears after individual thought suppression. In this study, a combination of virtual reality and eye movement technology was used to monitor the changes of participants' attention in the virtual reality shooting task, not only to explore whether using negation-formed self-talk will cause immediate enhancement effect of attention control, but also to further explore the rebound effect of attention control.

A total of 72 college students participated in the study, using a three-factor mixed experimental design. The within-subject variable was the measurement order (baseline, intervention, and cessation of intervention), and the between-subject variables were stress setting (presence or absence) and self-talk (negation, affirmation). The content of negation-formed self-talk was "don't look at the target", and the content of corresponding affirmative self-talk was "energy retract". The dependent variable was the eye movement index of fixation when completing the shooting task: the fixation count (%), the total fixation duration (%) and the average fixation duration (s). The results showed that in the stressful setting, the participants who had the affirmative self-talk intervention focused less on the target, while the participants who had the negation-formed self-talk focused more on the target. In the stress-free setting, both the affirmative self-talk and negation-formed self-talk groups focused less on the target. This suggests that negation-formed self-talk under pressure will cause immediate enhancement effect of attention control. The results also showed that, independent of the stress setting, participants who had used the negation-formed self-talk focused more at the target when shooting again after the intervention had stopped than taking the baseline test, suggesting that there is a rebound effect in attention control that is not regulated by stress.

To sum up, this study suggests that negation-formed self-talk will cause immediate enhancement effect and rebound effect of attention control, in which immediate enhancement effect only appears in stress situation, while rebound effect is not affected by stress.

Keywords: Self-talk, self-control, ironic effect, stress

虚拟现实技术下的青少年足球运动员多目标追踪表现特征

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摘要 近年来, 已有研究表明在成年运动员中, 运动员的运动水平和运动年限与其多目标追踪表现有一定的联系, 尤其是在同场对抗性的集体项目中, 多目标追踪表现对运动员在场上的发挥具有重要的作用。有研究显示虚拟现实技术场景下的多目标追踪能力的提高可以影响运动员场上对视觉信息的处理, 提高足球运动员的传球决策准确性。本研究旨在通过多目标追踪范式结合虚拟现实技术, 比较 12 岁至 18 岁青少年足球运动员的多目标追踪表现, 探讨青少年足球运动员多目标追踪表现特征。实验参与者来自北京某体育大学附属实验中学 12 岁至 18 岁的男子足球运动员, 分为 12 岁, 13 岁, 14 岁, 15 岁, 16 岁, 17 岁, 18 岁, 7 个年龄组, 共计 404 人, 以虚拟现实技术下的多目标追踪速度阈值, 包括极值, 平均阈值, 和最后四次阈值作为因变量指标。研究发现: (1) 在虚拟现实技术场景下, 12 岁至 18 岁青少年足球运动员的多目标追踪表现会随着年龄的增长而提高。进一步成对比较发现, 追踪速度阈值在 12 岁和 13 岁年龄段提高的幅度要高于 14 岁、15 岁、16 岁、17 岁, 18 岁。(2) 12 岁至 18 岁青少年足球运动员极值提高的幅度要大于平均阈值, 平均阈值要大于最后四次阈值。上述研究结果表明, 在虚拟现实技术场景中, 青少年足球运动员的多目标追踪能力表现出了随着年龄的增长而提高的特征, 并且 12 岁, 13 岁是多目标追踪表现提高较为敏感的年龄阶段, 相较于其他年龄组别的足球运动员, 该年龄阶段运动员的多目标追踪表现提高的幅度更大。另外, 追踪速度阈值的极值与平均阈值和最后四次阈值相比, 提高幅度更为显著, 说明极值与运动员的年龄关系更为密切。

关键词 足球, 青少年, 多目标追踪, 虚拟现实

Multi-target tracking performance characteristics of young football players under virtual reality technology

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Abstract: In recent years, studies have shown that among adult athletes, the athletes' sports level and years are related to their multi-objective tracking performance, especially in the antagonistic collective events in the same field. Studies have shown that the improvement of multi-target tracking ability in virtual reality technology can affect the processing of visual information on the field and improve the accuracy of soccer players' passing decisions. The purpose of this study is to compare the multi-target tracking performance of young football players aged from 12 to 18 by using the multi-target tracking paradigm and virtual reality technology, and to explore the characteristics of multi-target tracking performance of young football players. The experimental participants were 404 male soccer players aged 12 to 18 from an experimental middle school affiliated to a sports university in Beijing. They were divided into 12 years old, 13 years old, 14 years old, 15 years old, 16 years old, 17 years old, and 18 years old. The multi-target tracking speed thresholds under virtual reality technology, including extreme value, average threshold and the last four thresholds, were used as dependent variables. The findings are as follows: (1) In the virtual reality scene, the multi-target tracking performance of young football players aged 12 to 18 will increase with age. Furthermore, it is found that the threshold of tracking speed is higher at 12 and 13 years old than at 14, 15, 16, 17 and 18 years old. (2) The extreme value of 12-to 18-year-old young football players increased more than the average threshold, and the average threshold was greater than the last four thresholds. The above research results show that, in the virtual reality technology scene, the multi-target tracking ability of young football players shows the characteristics of increasing with age, and 12 years old and 13 years old are the more sensitive age stages for improving the multi-target tracking performance. Compared with football players of other age groups, the multi-target tracking performance of young football players in this age stage has a greater improvement. In addition, compared with the average threshold and the last four thresholds, the extreme value of tracking speed threshold has a more significant increase, which shows that the extreme value is more closely related to the age of athletes.

Keywords: Football, teenagers, multi-target tracking, virtual reality

足球裁判决策研究综述：心理影响因素及训练方法

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摘要 目的: 在比赛中, 足球裁判常常需要克服由于生理、心理和环境变化所带来的影响, 才能在不同情境中快速准确地做出判决。以往的研究多侧重于生理因素带来的影响, 而心理因素对足球裁判决策的影响也是不容忽视的。因此, 本研究对足球裁判决策的心理影响因素及心理训练方法的一系列相关研究结果进行了梳理和总结。方法: 本文以“soccer referee/football referee”和“decision/decisions/decision making/judge/judging”为关键词, 从 Web of Science (核心数据库) 和 EBSCO (PsycINFO, SPORTDiscus with Full Text, Psychology and Behavioral Sciences Collection) 中进行文献检索。结果: 从 344 篇文献中筛选出 91 篇有关研究纳入分析, 主要从足球裁判决策的自身心理特点、外部因素、训练方法三个方面来进行综述。在自身心理特点的影响方面, 裁判任职之前在足球领域的间接经验会影响决策表现。此外, 视觉能力、视觉搜索策略、领域特定技能和情绪控制能力都对主裁决策有影响。对助理裁判来说, 决策影响因素更多地体现在对闪光滞后效应的处理上而非视觉搜索策略上。在外部因素方面, 最初判罚标准、球队分数差、球队或球员名声、现场观众数量、球场噪音和主客场等外部环境因素都会通过影响裁判对比赛形势的认知, 进而影响决策。在决策训练方面, 目前主要是表象训练和视频模拟训练, 后者又分为动画模拟训练、真实视频模拟训练和虚拟现实 3D 模拟训练。展望: 首先, 目前多采用领域通用的测量方法来探究裁判心理的因素, 未来研究可以开发更多针对足球主裁

和助理裁判的测量方法。其次，现在开发的训练方法主要集中于助理裁判的越位判决，未来可以拓展更多应用场景的训练。最后，目前的研究多为相关研究，而缺少对背后心理、神经作用机制的探索，未来研究可以弥补这方面的不足。

关键词 决策，足球裁判，心理特点，心理训练

Review of Football Referee Decision Making: Psychological Factors and Training Methods

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Abstract: **Objects:** football referees often need to overcome the impact of physiological, psychological, environmental changes to make a series of fast and accurate decisions in dynamic situations. Previous studies focused mostly on physiological factors, while psychological factors on the decision-making of football referees can not be ignored. Therefore, the current study combs the results of a series of studies on the psychological factors and psychological training methods of football referee decision-making. **Method:** with "soccer reference/football reference" and "decision/decisions/decision making/judge/judging" as keywords, literature retrieval was conducted from Web of Science (Core Database) and EBSCO (PsycINFO, SPORTDiscus with Full Text, Psychology and Behavioral Sciences Collection). **Results:** From 344 pieces of literature, 91 papers were included in the analysis, which mainly summarized the psychological characteristics, external factors, and training methods of football referee decision-making. In terms of psychological characteristics, the referee's indirect experience in football before taking office will affect the performance of decision-making. For referees, visual skills, visual scan patterns, domain-specific skills, and emotion control ability all influence the decision-making process. For assistant referees, the decision-making factors are more reflected in handling the flash-lag effect than in visual scan patterns. In terms of external factors, external environmental factors, such as the initial penalty standard, team score, team or player reputation, the number of crowds, crowd noise, and home advantage will affect the referee's cognition of the game, therefore affect the decision-making process. In the aspect of decision-making training, there are mainly imagery training and video simulation training. The latter is divided into animation simulation training, real-situation video simulation training, and virtual reality 3D simulation training. **Prospects:** First of all, current research mostly used general measurements to explore the psychological factors of referees. In the future, more measurements specifically designed for football referees and assistant referees can be developed. Secondly, the training methods developed now mainly focus on the offside judgment of assistant referees, which can be expanded to more application scenarios in the future. Finally, most of the current research discovered the correlation between psychological factors and decision, but a lack of explanation of the underlying psychological and neural mechanism. Future research can make up for this deficiency.

Keywords: decision making, football referee, psychological characteristics, psychological training

身体活动对时空隐喻表征的影响

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摘要 时空隐喻是一种借用空间概念来表示时间概念的概念隐喻, 例如“上午”, “后天”等。Clark(1973)提出在前后轴上表征时间运动时有两种时间运动视角的时空隐喻表征方式: 自我动和时间动。自我动将自己当作主动的个体, 主动地向未来移动; 时间动将自己当作被动的个体, 等待未来向自己移动。本研究关注两个科学问题, 首先以往研究发现在头脑中构建不同方向的运动会影响时空隐喻的两种表征(Boroditsky, 2000;

Boroditsky, Ramsca & Frank, 2001), 本研究借鉴前人的周三会议问题(McGlone & Harding, 1998)、心情图问题(直观的时空隐喻图示表征)(Zheng et al., 2019)和飞船图问题(转化为空间维度上的时空隐喻图示表征)(Loeffler et al., 2017)作为两种时间运动视角选择的指标, 从而探究真实的身体活动是否会影响时空隐喻的不同表征。其中, 身体活动会影响情绪(张国礼等人, 2019), 且情绪对时空隐喻表征有影响(Zheng et al., 2019), 因此本研究将情绪作为控制变量。第二, 时距知觉是对时间长短的估计, 在其他因素的影响下, 个体在主观上可能感受到时距知觉压缩或扩张。以往研究发现身体活动会影响时距知觉(刘瑞光, 黄希庭, 1999), 时距知觉判断会结合时间和空间的信息(Casasanto, 2005), 因此本研究采用 1 分钟时距判断任务, 探究时距知觉与时空隐喻表征之间是否存在相关。

本研究通过设置在跑步机上的运动方向, 将被试随机分配到前进组、后退组和静止组, 结果表明周三会议问题和飞船图问题的检测有效性较差, 对于大学生群体来说从语言习惯上更倾向于选择自我动的视角, 无法有效区分两种时空隐喻表征。但采用直观的时空隐喻图示表征的心情图问题能有效区分不同身体运动方向条件下的两种时空隐喻表征。本研究发现: (1)真实的身体活动会影响时空隐喻的不同表征, 前进组相较于后退组和静止组更能激发出自我动的视角; (2)虽然消极情绪在实验过程中减弱, 但通过协变量分析发现其变化不影响身体活动引起的时空隐喻表征变化, 因此本研究可以排除情绪在其中的影响, 进一步证明身体活动会直接影响时空隐喻的不同表征; (3)时空隐喻表征与时距知觉之间不存在显著相关。

关键词 时空隐喻, 身体活动, 时距知觉, 具身认知, 情绪

The Influence of Physical Activity on the Space-Time Metaphor

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Abstract: Space-time metaphor is a conceptual metaphor that borrows the space concept to represent the time concept, such as "Shang Wu"(Morning)(The character of "Shang" denotes "up") and "Hou Tian"(The day after tomorrow)(The character of "Hou" denotes "back"). Clark (1973) proposed that there are two ways representing the temporal motion perspective of space-time metaphor on the front—rear axis: ego-moving and time-moving. In ego-moving condition, people treat themselves as active individuals, and actively move towards the future; In time-moving condition, people treat themselves as passively individuals, waiting for the future to move towards us. This research focused on two scientific issues. First of all, previous studies have found that constructing different orientation of physical activities in the mind can affect two representations of space-time metaphor (Boroditsky, 2000; Boroditsky, Ramsca & Frank, 2001). Our research drew on the previous question, the Wednesday Meeting question (McGlone & Harding, 1998), the Mood Schema question (visualized representation of space-time metaphor) (Zheng et al., 2019) and the Spaceship Map question (spatial dimension of space-time metaphor) (Loeffler et al., 2017), as indicators for the representation of two temporal motion perspectives, so as to explore whether the real physical activity will affect different representations of space-time metaphor. Among them, physical activity affects emotion (Zhang et al., 2019), and emotion have an impact on the space-time metaphor (Zheng et al., 2019), so our experiment took emotion as control variables. Second, time perception is an estimation of the duration length. Under the influence of other factors, the compression and expansion of time perception may be subjectively perceived. Previous studies have found that physical activity affects time perception (Ruiguang Liu, Xiting Huang, 1999), and the information of time and space is combined during time perception (Casasanto, 2005), so our experiment used 1-minute time interval judgment task to explore whether there was a tight correlation between the time perception and the space-time metaphor.

In this study, the participants were randomly assigned to the group of forward, backward or stationary by setting the direction of movement on the treadmill. The results showed that the Wednesday meeting question and the Spaceship schema question was less effective, which cannot effectively distinguish the two choices of temporal motion perspectives, because the college students were more inclined to choose the ego-moving from their language customs. However, the Mood Schema question in which a visualized representation of space-time metaphor could

effectively distinguish the selection methods of temporal motion perspective under different body motion directions. This study suggested that: (1) Real physical activity will affect different representations of space-time metaphor, the forward group more generate the perspective of ego-moving than other two groups; (2) The negative emotion was weakened during the experiment. Through covariance analysis suggests that the negative emotion did not affects the changes of space-time metaphor representation which caused by physical activity. Thus the influence of emotion can be excluded and further prove that real physical activity can affect different representations of space-time metaphor; (3) There is no correlation between space-time metaphor representation and time perception.

Keywords: The Space-Time Metaphor, Physical Activity, Time Perception, Embodied Cognition, Mood

状态焦虑对篮球运动员自我-他人决策的影响 ——执行功能的调节作用

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摘要 目的: 对于篮球运动员而言,“自我决策”(在自己持球时做出传球、投篮、突破的决策)与“预期他人决策”(在并未持球的空手跑位阶段,预测队友会做出怎样的决策),都存在于比赛之中,通过预期他人决策,篮球运动员能够决定自己在赛场上的下一个动作,来与持球队友之间形成配合,使战术能够流畅运转,从而提高进攻成功率或二次进攻概率。目前有关运动领域自我-他人决策的研究相对较少,但已有研究表明,情绪是影响预期他人决策的重要因素;执行功能会对运动决策结果产生重要影响。**方法:**以CBA联赛参赛队员和篮球专项运动员为研究参与者,在实验一中采用2(决策角色:自我决策/预期他人决策,组内)×2(运动水平:高水平/一般水平,组间)混合设计;在实验二中采用2(状态焦虑水平:高/低状态焦虑,组间)×2(决策角色:自我决策/预期他人决策,组内)×2(执行功能:高/低执行功能)混合设计,以决策正确率/反应时/一致率为因变量,通过自编篮球运动自我-他人决策测试系统和焦虑诱发范式,及色-词 Stroop 任务、More-odd shifting 任务和 2-back 任务,验证篮球运动中自我-他人决策差异的存在,状态焦虑对篮球运动员自我-他人决策的影响,以及执行功能在篮球运动员状态焦虑与自我-他人决策关系中的调节作用。**结果与结论:**(1)篮球运动中存在着自我-他人决策差异,预期队友决策比自我决策反应速度慢。抑制功能在这一过程中起调节作用,低抑制功能削弱了这一效应。(2)高状态焦虑不利于正确决策,刷新功能在这一过程中起调节作用,高状态焦虑下,低刷新功能不利于参与者进行自我决策,高刷新功能不利于参与者进行预期他人(预期队友)决策。(3)高运动水平和低状态焦虑水平可以使篮球运动员更准确地判断队友的决策选择。**关键词** 自我-他人决策,预期他人决策,状态焦虑,执行功能,篮球

Impact of State Anxiety on Basketball Players' Self-Other Decision Making--Moderating Role of Executive Function

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Abstract: Objective: For basketball player, "self-decision" (in his holding the ball, decide whether he is passing, shooting, or a breakthrough), and "predicting other' s decision" (in his own did not take the ball, just on the pitch while they are running, predict teammates will make what decisions), all exists in the game, through the predicted others decisions, basketball player can decide their next action on the pitch, and holding the team formed between cooperate, make tactical can smooth operation, so as to improve the success rate of attack or secondary attack probability. At present, there are relatively few studies on self-others decision-making in the field of sports, but existing studies have shown that emotion is an important factor affecting the decision of others. Executive function has an important influence on the result of motion decision. **Methods:** This study used basketball as the study object, used CBA league players and second class basketball players, through two experiments, to study the relationship

between self - others decision-making in basketball players, the impact of state anxiety on basketball players' self-other decision making, and the moderating role of executive function. The first experiment used 2 (movement level: high level and average) x 2 (decision-making role: self decision, predicting other' s decision) of the mix design of experiment. The second experiment used 2 (state anxiety level: high /low state anxiety) x 2 (decision-making role: self decision / predicting other' s decision) x 2 (executive function: high /low executive function) of the mix design of experiment. The dependent variables are decision accuracy, decision response time and decision consistency rate. The experiment used self-made basketball self-others decision testing system and anxiety-inducing paradigm, as well as color-word Stroop task, More-odd shifting task and 2-back task. **Result and Conclusion:** (1) there is a self-others decision-making difference in basketball, and the reaction speed of predicting teammates' decision is slower than that of self-decision-making. Inhibition function play a moderating role in the influence of decision-making role on reaction time, and low inhibition function weakens this difference. (2) the level of state anxiety is not conducive to correct decision-making, and the updating function plays a regulating role in this process, with the increase of state anxiety, the low refresh function is not conducive to the self-decision-making of the participants, while the high updating function is not conducive to the predicted decision-making of teammates. (3) high level of sports and low level of state anxiety are conducive to improving the accuracy of basketball players' prediction of teammates' decisions.

Keywords: Self-other decision making, Predicting other' s decision, State anxiety, Executive function, Basketball

出发反应时认知干预训练对青少年游泳运动员出发表现的影响

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摘要 出发反应时是运动员取得优异成绩的重要影响因素,特别是在短距离项目中,出发反应时快 0.01 秒便能抢占先机(宋耀伟, 2019)。对出发反应时所涉及到的心理和认知机制的探究是提高运动员出发反应表现的基础。青少年时期是进行针对性训练的关键时期,该年龄阶段的人群对于视听刺激的感知精度以及反应准确率逐渐提高(Chen et al., 2007)。本研究将反应时范式与游泳运动相结合,探索不同通道信号刺激认知干预训练对青少年运动员出发反应时的影响。为传统的出发反应训练提供了一种与心理学进行结合的新思路和新方法。

研究参与者选取 59 名济南市游泳队青少年运动员(平均年龄 9.5 岁)。按照其比赛出发主要依赖的信号刺激类别,分为 3 个干预组:听觉组(18 人)、视听组(13 人)、视觉组(14 人)以及 1 个对照组(14 人)。将简单反应时范式与游泳比赛出发信号进行结合,生成 3 种干预训练程序,进行 4 周(总计 60 分钟)出发反应认知干预训练。以听觉干预程序为例:屏幕呈现 500ms 的注视点后,出现刺激 S1“Take your marks!”,在 1-2.5s 区间内的随机间隔后,呈现刺激 S2“滴”(模拟比赛出发信号声音),研究对象听到刺激 S2 时,尽快按下空格键做出反应。对照组仅跟随教练进行日常游泳训练。干预前、后对所有研究参与者分别进行跳水出发反应时的前测和后测,每次测试跳三次出发并取平均值。使用 SPSS 23.0 分析前、后测的出发反应时变化。

研究结果表明该认知干预训练对出发反应时表现具有显著的改善作用。具体表现在:(1)所有干预组的后测反应时均显著低于前测反应时($F(1,55)=28.92$, $p<.001$, $\eta^2=.345$)。(2)干预训练结束后,视觉组($p<.001$)、视听组($p<.05$)与听觉组($p<.001$)的反应时前、后测均具有显著差异,对照组前、后测数据差异不显著。由此可见,不仅是肌肉、爆发力训练,对青少年运动员进行认知反应训练也是非常必要的,可以帮助游泳运动员在青训初期建立出发反应优势,形成较为稳定的出发反应。

关键词 出发反应时, 视听通道, 认知训练

The effect of cognitive intervention training of starting reaction time on the starting performance of young swimmers

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Abstract: Starting reaction time is an important factor for athletes to achieve excellent results, especially in short distance events 0.01 seconds faster starting reaction time can better seize the opportunity(Song, 2019). To explore the psychological and cognitive mechanisms involved in starting reaction is the basis of improving athletes' starting reaction performance. Adolescence is the key period for targeted training, and the perception accuracy and response accuracy of audio-visual stimulation are gradually improved (Chen et al., 2007). This study combined the response time paradigm with swimming exercise to explore the effect of cognitive intervention training on young athletes' starting response time. The study provides a new idea and method combined with psychology for the traditional starting reaction training.

59 young swimmers of Jinan swimming team (average age 9.5 years old) participated in the study. They were divided into three intervention groups: auditory group (18), audio-visual group (13), visual group (14) and one control group (14). The simple reaction time paradigm was combined with the starting signal of swimming contest to generate three kinds of intervention training procedures, and the cognitive intervention training of starting reaction was carried out for 4 weeks (60 minutes in total). Take the auditory intervention program as an example: after 500 ms of fixation on the screen, S1 "Take your marks!" appears, arising a random interval of 1-2.5 seconds, and then S2 "Di"(simulating the start signal sound of the swimming contest) appears. When the participants hearing S2, they should press the space bar as soon as possible to respond. The control group only followed the coach for daily swimming training. Before and after the intervention, all the participants received the pretest and posttest of starting reaction time of diving, jumped three times for each test and took the average value. SPSS 23.0 was used to analyze the changes of starting reaction time of pretest and posttest.

The result showed that the cognitive intervention training could significantly improve the performance of starting reaction time. The specific manifestations were as follows:(1)The posttest reaction time of all intervention groups was significantly lower than the pretest reaction time($F(1,55)=28.92$, $p<.001$, $\eta^2=.345$). (2)After the intervention training, there were significant differences in the pretest and posttest of starting reaction time between the visual group($p<.001$), the audio-visual group($p<.05$)and the auditory group($p<.001$), but there was no significant difference in the pretest and posttest data of the control group. It can be seen that it is not only muscle and explosive force training, but also cognitive reaction training for young athletes, which can help swimmers establish starting reaction advantages and form a more stable starting reaction in the early stage of youth training.

Keywords: starting reaction time, audio-visual modality, cognitive training

竞赛状态焦虑对自由投篮准确率的影响

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摘要 本研究旨在检验由比分差距引发的竞赛状态焦虑(强度与方向)对自由投篮任务准确率的影响。选取了院级和校级篮球运动员 167 名, 其中男 89 名, 女 78 名。采用 2×2 的混合实验设计, 自变量为分数高下(领先 vs 落后)和分数悬殊的程度(大 vs 小), 其中, 分数悬殊程度为组间自变量, 因变量为自由投篮准确率前后测差值, 前测为无情境操纵自由投篮。另外, 设置特质焦虑水平和竞赛状态焦虑前测水平为协变量。首先对实验情境进行操控检查, 结果显示: 比分的操纵成功诱发了参与者的竞赛状态焦虑, 并在强度上呈现小分差落后>小分差领先>大分差落后>大分差领先的趋势。2×2 重复测量方差分析结果显示: 1) 分数高下

主效应显著 ($F=5.746, p=0.020, \beta^2=0.084$), 相比领先组, 落后组投篮准确率差值更大; 2) 分数悬殊程度主效应显著 ($F=35.962, p<0.001, \beta^2=0.363$), 相比大分差组, 小分差组投篮准确率差值更大; 3) 分数高下与分数悬殊程度交互作用不显著。相关分析结果显示: 竞赛状态焦虑方向与自由投篮准确率差值之间相关系数 $r=0.171, \alpha=0.166$, 表明竞赛状态焦虑方向与自由投篮准确率间存在正相关趋势, 相关程度较低, 且结果不显著。总结而言, 方差分析结果支持了, 比分差距诱发的竞赛状态焦虑强度越大, 自由投篮准确率越低; 相关分析结果显示, 比分差距诱发的竞赛状态焦虑方向对投篮准确率的影响不明显。本研究提示我们, 竞赛状态焦虑对自由投篮准确率的影响需要从强度和方向两个方面分别探索。

关键词 竞赛状态焦虑强度, 竞赛状态焦虑方向, 准确率, 比分差距

The Influence of Competitive State Anxiety on the Accuracy of Free Throw

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Abstract: This study aimed to examine the influence of competitive state anxiety (intensity and direction) induced by a score manipulation on the accuracy of free throw. 167 basketball players were selected, including 89 males and 78 females. A 2×2 mixed experimental design was adopted. The independent variables were the score comparison (leading vs lagging) and the degree of score disparity (large vs small). The dependent variable was the accuracy rate gap between pretest and post-test of free throw, and the pretest was the free throw without manipulation. In addition, trait anxiety and the pretest of competitive state anxiety scale served as co-variables. First of all, manipulation check results showed a successful manipulation of competitive state anxiety. The trend is that small lagging > small leading > large lagging > large leading. The results of 2×2 repeated measure ANOVA analysis showed that: 1) The main effect of high score was significant ($F=5.746, P=0.020, \beta^2=0.084$), showing that the accuracy of the lagging group was poorer than that of the leading group. 2) The main effect of score disparity was significant ($F=35.962, P<0.001, \beta^2=0.363$). Compared with the large score difference group, the accuracy in the small score difference group was poorer. 3) There was no significant interaction between score comparison and score disparity. The results of correlation analysis showed that the correlation coefficient $r=0.171, \alpha=0.166$ between the direction of competitive state anxiety and the throwing accuracy, indicating that there is a positive correlation between the direction of competitive state anxiety and the throwing accuracy, but the correlation is weak. In conclusion, the results of variance analysis supported that a higher level of competitive state anxiety intensity caused a lower rate of the throwing accuracy; The correlation analysis results did not show a significant effect of the direction of competitive state anxiety on the throwing accuracy. It is suggested that the influence of competitive state anxiety on the throwing accuracy should be explored from two aspects, namely intensity and direction.

Keywords: intensity of competitive state anxiety, direction of competitive state anxiety, accuracy rate, score difference

先验信息对乒乓球运动员预判的影响

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摘要 在竞技运动比赛中, 教练员会在赛前统计对手行为的倾向性并告知运动员, 运动员就能得到先验信息。这种先验信息对运动员预判有重要的作用。前人研究发现, 大多数从事开放性运动项目的运动员在有先验信息的条件下预判正确率更高。但是先验信息对乒乓球运动员预判的影响的关键时间点和对预判准确性提高的效果却鲜有研究涉及。基于此, 本研究旨在探讨先验信息对乒乓球运动员落点预判影响的关键时间点及其是否提高运动员预判正确率。实验一探究先验信息影响运动员预判的关键时间点。21 名乒乓球运动员参与

本实验，他们均为二级及以上水平运动员。实验采用 2 先验信息（有、无） $\times$ 3 截至时间点（击球前 100ms、击球瞬间、击球后 100ms）被试内设计。因变量为被试按键的偏向性。实验时向被试呈现乒乓球发球视频，4 种落点视频随机呈现，视频播放后要求被试判断乒乓球落点。研究表明，乒乓球运动员在乒乓球落点判断中会受到先验信息的影响，关键时间点为球与球拍接触瞬间。表现为在一开始运动信息缺乏时先验信息对运动员落点预判有较大影响，随着时间的推移，先验信息对运动员落点预判的影响越来越小，在球与球拍接触后 100ms 先验信息对预判的影响不显著。实验二探究先验信息对乒乓球运动员预判正确率的影响，实验采用 2 先验信息（有、无） $\times$ 2 截至时间点（击球前 100ms、击球瞬间）被试内设计。因变量为正确率。实验时向被试呈现乒乓球发球视频，右前落点呈现的概率为 40%，其余落点视频随机呈现，视频播放后要求被试判断乒乓球落点。研究表明，先验信息能提高运动员判断准确率，特别是在击球瞬间时的判断。综上所述，先验信息会影响乒乓球运动员落点预判，特别是在球与球拍接触前。这种影响在球与球拍接触时能显著提高运动员的预判正确率。

关键词 动作预判，先验信息，乒乓球运动员

Effect of prior cues on action anticipation in table tennis players

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Abstract: In competitive sports games, coaches count the probability of the opponent's actions and inform the athletes before the game, and the athletes can get a priori information. So, athletes can get a priori cues. Prior cues play an important role in action prediction. Previous studies have found that most athletes in open sports have a higher rate of correct prediction when a priori information is available. However, few studies have addressed the key timing of the effect of a priori information on the prediction of table tennis players and the effect on the improvement of prediction accuracy. The purpose of this study is to investigate the key timing of the effect of a priori information on table tennis players' prediction of the drop point and whether it improves the correct prediction rate of the players.

Experiment 1 explored the key timing at which a priori information affects a player's prediction. 21 table tennis players, all of whom were at Level 2 and above, participated in this experiment. The experiment used a 2 a priori information (yes, no) $\times$ 3 as of time points (100 ms before the hit, instant of hit, and 100 ms after the hit) within-subjects design. The dependent variable was the bias of the subject's keystroke. A video of a table tennis serve was presented to subjects during the experiment, and four drop point videos were presented randomly, and subjects were asked to judge the drop point of the table tennis ball after the video was played. The results showed that table tennis players are influenced by a priori information in the judgment of ping pong ball drop, and the key time point is the moment of contact between the ball and the paddle. The effect of a priori information on players' landing point prediction at the beginning when the motion information was lacking was greater, and the effect of a priori information on players' landing point prediction became less and less as time went on, and the effect of a priori information on prediction was not significant 100 ms after the contact between the ball and the paddle.

Experiment 2 explored the effect of a priori information on the correct rate of pre-determination of table tennis players, and the experiment used a 2 a priori information (yes, no) $\times$ 2 as of time point (100ms before the stroke, instant of the stroke) within-subjects design. The dependent variable was the correctness rate. The subjects were presented with a video of a ping pong ball serve, with a 40% probability of the right front drop being presented and the rest of the drop being presented randomly, and the subjects were asked to judge the drop of the ping pong ball after the video was played. The results of the study showed that a priori information could improve the judgment accuracy of the players, especially at the moment of hitting the ball. In summary, a priori information affects table tennis players' landing point prediction, especially before the ball makes contact with the paddle. This influence can significantly improve the correctness of players' prediction when the ball makes contact with the paddle.

Keywords: movement prediction, priori cues, table tennis players

乒乓球运动员不同意识水平下的语义启动研究

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摘要 运动训练对认知加工具有促进作用, 这一观点在意识及无意识层面都已得到相关研究的证实。但前人研究多聚焦于探讨专家与新手的认知水平差异, 却鲜有关注运动员本身在意识与无意识这两种意识水平状态下的认知差异。此外, 前人研究多集中于探讨较低水平的知觉加工, 关于知觉更高层次的信息加工过程如语义和概念分析仍有待探究。基于此, 本研究选取 20 名 2 级及以上水平的乒乓球专业运动员为实验对象, 采用掩蔽语义启动范式探讨不同意识水平对乒乓球运动员语义启动的影响。本研究为 2×2 的被试内设计。其中, 自变量一为启动条件, 本研究通过控制启动刺激的呈现时间将启动条件分为阈下和阈上两种水平; 自变量二为启动刺激与目标刺激反应的一致性, 有反应一致和不一致两种水平。因变量为反应时。结果显示, 启动条件主效应不显著, 启动刺激与目标刺激的反应一致性主效应显著。启动条件与反应一致性的交互作用显著。在对交互作用进行简单效应分析, 结果发现, 与阈下启动条件相比, 乒乓球运动员在阈上启动条件中, 表现出更为显著的启动效应, 即运动员在启动刺激与目标刺激所属种类范畴一致的条件下的反应时要显著快于所属种类范畴不一致的条件。此外, 通过对两种启动条件下乒乓球运动员语义加工的启动量进行 t 检验发现, 乒乓球运动员在阈上启动条件下的启动量要显著大于在阈下启动条件的启动量。研究结论: (1) 乒乓球运动员的无意识知觉加工可以达到语义加工水平; (2) 无论在阈上还是阈下启动条件下, 乒乓球运动员都出现了明显的语义启动效应; (3) 乒乓球运动员在阈上启动条件中表现出更好的语义启动效果, 但运动员在阈下启动条件下的平均反应速度更快。

关键词 乒乓球运动员, 语义启动, 阈上, 阈下

Research on Semantic Priming of Table Tennis Players at Different Consciousness Levels

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Abstract: Motor training has a boost to cognitive processing, which has been confirmed by studies at both the conscious and unconscious levels. However, previous studies mostly focused on the cognitive level differences between experts and novices, but seldom paid attention to the cognitive differences of the athletes themselves in the two states of consciousness and unconsciousness. In addition, previous studies have mostly focused on the lower level of perceptual processing, and the higher level of perceptual information processing such as semantic and conceptual analysis remains to be explored. Based on this, this study selected 20 professional table tennis players of level 2 and above as experimental subjects, and used the masked semantic priming paradigm to explore the influence of different consciousness levels on the semantic priming of table tennis players. This study is a 2 × 2 in subject design. Among them, the first independent variable is the priming condition. This study divides the priming conditions into subliminal and supraliminal levels by controlling the presentation time of the prime. The second independent variable is the consistency between the response of priming stimulus and target stimulus, which has two levels: consistent response and inconsistent response. And the dependent variable is reaction time. The results show that the main effect of priming condition is not significant, and the response consistency of prime and target stimulus is significant. The interaction between priming conditions and response consistency is significant. In a simple effect analysis of the interaction, the results show that compared with the subliminal priming condition, the table tennis player shows a more significant priming effect in the supraliminal priming condition, that is, the athletes react significantly faster under the condition that the prime and the target belong to the same category than in different category. In addition, through the t-test of the priming amount of semantic processing of table tennis players under the two priming conditions, it is found that the priming capacity of table tennis players under the supraliminal priming condition is significantly greater than that under the subliminal priming condition. Conclusions: (1) The

unconscious perception processing of table tennis players can reach the level of semantic processing (2) Under both supraliminal and subliminal priming conditions, table tennis players have obvious semantic priming effects (3) Table tennis players show a better semantic priming effect in the supraliminal priming condition, but the average reaction speed of the athletes in subliminal priming condition is faster.

Keywords: table tennis player, semantic priming, subliminal, supraliminal

中超足球球迷的愤怒表达及影响因素研究 ——以广州赛区为例

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摘要 激烈的对抗和比赛结果的不可预测性容易激发球迷的高唤醒水平。近年来,个别球队的表现不尽人意,裁判误判现象的出现使得球迷愤怒情绪的宣泄现象频发。不仅影响比赛的顺利进行,还会导致体育攻击或暴力事件,也在一定程度上造成危害。为正确引导球迷合理表达愤怒情绪,本研究以此为切入点,以2021中国超级联赛广州赛区(其中老牌球队球迷具有代表性)为例,探究中超足球球迷愤怒表达及其影响因素。本研究旨在探究中超球迷愤怒表达的类型及表现,明确愤怒表达的影响因素,减少因为不当的愤怒表达所造成的财产损失与人身危害。首先通过文献研究法收集资料,梳理文献。了解愤怒表达的相关理论研究的进展,明确中超足球球迷愤怒表达及影响因素的研究主题;其次通过质性研究法,先利用观察法了解球迷愤怒表达的方式,明确球迷愤怒表达的类型和具体表现,并确定下一步访谈的访谈对象;然后通过问卷调查法,调查中超足球球迷愤怒表达的现状并分析其差异性;再次通过深度访谈法,对文献资料进行整理与帕累托分析,深入探讨球迷愤怒表达的影响因素。最后,总结研究结果,在前期研究的基础上提出中超足球球迷愤怒表达的应对策略。研究结论如下:(1)通过扎根理论编码,分析出中超球迷愤怒表达有三种类型:愤怒外投、愤怒内投和愤怒控制。愤怒外投包括行为愤怒表达和言语愤怒表达;愤怒控制包括控制愤怒思想和控制愤怒行为;愤怒内投包括拒绝交流和拒绝合作这两个范畴。(2)中超球迷愤怒表达整体偏向愤怒内投和愤怒控制。其中不同性别对中超足球球迷在愤怒表达三个维度上均不存在显著性差异;不同年龄中超足球球迷愤怒表达在愤怒控制维度上存在显著性差异;不同职业中超球迷在三个维度上均存在显著性差异。(3)影响中超足球球迷愤怒表达的因素中,其中主要影响因素为球员表现不佳、教练安排不妥和裁判偏哨;次要影响因素为比赛输赢;一般影响因素为球员恶意犯规、球员不积极、球迷煽动、个人情绪、天气环境和球赛不精彩等。(4)根据中超球迷愤怒表达的类型及影响因素,有针对性地提出有效策略:在国家层面,通过法律威慑来杜绝不良行为的发生;在球迷层面,在管理自身情绪方面,要加强愤怒情绪的控制训练;在俱乐部层面,要宣传积极的中超足球文化。

关键词 中超球迷, 愤怒表达, 愤怒内投, 愤怒外投, 愤怒控制

A Study on the Angry Expression of CSL Fans and Its Influencing Factors——Take Guangzhou Aompetition Area as an Example

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Abstract: Heavy confrontation and unpredictability of game results easily lead to high wake-up levels for fans. In recent years, the performance of individual teams is unsatisfactory, and the phenomenon of referee misjudgment has made the phenomenon of fan anger vent out frequently. Not only affects the smooth progress of the game, but also leads to sports attacks or violence, but also to a certain extent. In order to correctly guide the fans to reasonably express their anger emotions, this study takes this as the starting point, taking the 2021 Chinese Super League Guangzhou Division (which is representative of the old team fans) as an example, to explore the anger expression of the Chinese Super League football fans and its influencing factors. This study aims to explore the anger of Chinese Super League fans Type and performance of expression, clarify the influencing factors of anger expression, and

reduce the property loss and personal harm caused by improper expression of anger. First, the data is collected through the literature research method, and the literature is sorted out. Understand the relevant theory and research progress of anger expression, clarify the theme of anger expression and influencing factors; secondly, clarify the type and performance of anger expression of the fans; then investigate the current situation of CSL fans and analyze the differences; again through deep The degree interview method, compiled the literature and analyzed Pareto, and deeply discussed the influencing factors of fan anger expression. Finally, summarize the research results and propose the response strategy of CSL football fans.

The conclusions are as follows:

(1) Through rooted theory coding, we analyze three types of anger expression of CSL fans: anger casting, anger injection and anger control. Angry investment includes anger and verbal anger; anger control includes control of anger thoughts and the denial of communication and cooperation.

(2) Chinese Super League fans angrily expressed the overall bias towards anger in the internal investment and anger control. Among them, there is no significant

difference in anger expression, significant difference in anger control dimension of different ages, and significant difference in all three aspects of different professions.

(3) Among the factors that affect the anger expression of CSL fans, the main factors are poor performance, improper coaching arrangement and partial referee sentinel; the minor factors are the game; generally the factors are malicious foul, player inactive, fan agitation, personal mood, weather environment and poor game, etc.

(4) According to the type and influencing factors of CSL football fans, the effective strategy is put forward: prevent the legal deterrent at the national level, strengthen the training to control the management of anger, and promote the positive CSL football culture at the club level.

Keywords: CSL fans, Angry expression, Angry inside, Angry outside, Angry control

大学生网球运动员视觉选择反应的行为优势及 ERP 特征

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摘要 目的: 由于我国网球赛事不断的增多, 如何提高运动员的网球竞技水平, 已经成为一个热门话题。而视觉选择在运动员击球过程中起着至关重要的作用。本研究采用记录技术, 比较不同网球水平的大学生在完成视觉选择反应任务的行为及其脑神经活动水平的差异, 以揭示大学生网球运动员其注意、选择反应的优势及其可能的神经机制, 不仅可以丰富相关的运动认知理论内涵, 而且为网球教学中, 能够有效指导学生快速搜索有效信息提供方法学上的指导。

方法: 运用专家—新手研究范式, 选取沈阳体育学院网球二级及以上 10 名大学生为专家组(男 6 名, 女 4 名, 平均年龄 22.5 ± 2.01 岁); 沈阳体育学院体育教育专业网球普修 10 名大学生为新手组(男女各 5 名, 平均年龄 19.7 ± 1.06 岁)采用事件相关电位(ERP)记录技术, 采集大学生完成视觉选择反应任务时的行为和脑电数据。ERP 实验中的刺激材料根据 Type Token 模型来绘制, 视觉选择反应任务要求被试根据图片中的圆与横线是否相切于右上方(45°)或左上方(315°)来进行按键反应。如有在右上方有相切的图片出现, 则按"j"键, 如有在左上方(45°)有相切的图片出现, 则按"i"键, 如若在其他位置有相切的图片则不做反应。

结果: 行为结果显示, 不同组别的准确率差异不显著($P > 0.05$), 反应时差异显著($P < 0.05$), 表现为专家组平均反应时明显短于新手组。ERP 结果显示: 不同组别的大学生诱发的 P2、P3 峰波幅差异显著($P < 0.05$)、P3 峰潜伏期差异显著($P < 0.05$), 表现为专家组诱发的 P2 峰波幅高于新手组, P3 峰波幅低于新手组, 且 P3 潜伏期明显短于新手组。

结论:

(1) 在选择反应任务中, 与网球普修大学生相比, 大学生网球运动员进行视觉选择反应时, 具有反应速度快的行为优势。

(2) 大学生网球运动员在注意觉察阶段的 ERP 特征表明, 注意指向具有较强的抑制非目标刺激能力。在选择反应阶段的 ERP 特征表明, 靶刺激诱发的特征属性的注意活动较早, 消耗的心理运算资源较少。

关键词 大学生网球运动员, 视觉, 选择反应, 行为优势, ERP 特征

Behavioral Advantages and ERP Characteristics of Visual Selection Response of College Tennis Players

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Abstract: Purpose: Because of the increasing number of tennis tournaments in China, how to improve the level of tennis competition of athletes has become a hot topic. Visual selection plays a vital role in the player's batting. This study uses recording technology to compare the behavior of college students at different tennis levels in completing visual selection reaction tasks and the differences in their level of brain neural activity, so as to reveal the advantages of college tennis players' attention, choice of reaction and their possible neural mechanisms, which can not only enrich the relevant theoretical connotation of sports cognition, but also provide methodological guidance for students to search for effective information quickly in tennis teaching.

Methods: Using the expert-novice research paradigm, 10 college students from shenyang Sports College tennis level II and above were selected as expert groups (6 males, 4 women, with an average age of 22.5 ± 2.01 age); Shenyang Sports College Sports Education Professional Tennis 10 college students for the novice group (5 men and women, average age 19.7 ± 1.06 age) using event-related potential (ERP) recording technology, collecting college students to complete the visual selection response tasks of behavior and ERP data. The stimulation material in the ERP experiment is drawn according to the Type Token model, and the visual selection response task requires the subject to perform a key reaction based on whether the circle and horizontal line in the picture are tangent to the upper right (45 degrees) or the upper left (315 degrees). If there is a tangent picture in the upper right, press the "j" key, if there is a tangent picture in the upper left (45 degrees), press the "f" key, if there is a tangent picture in other places do not react.

Results: The behavioral results showed that the difference in accuracy between different groups was not significant ($P > 0.05$), and the difference in reaction was significant ($P < 0.05$), which showed that the average response of the expert group was significantly shorter than that of the novice group. ERP results show that the difference of P2 and P3 peak amplitude induced by different groups of college students is significant ($P < 0.05$), and the incubation period of P3 peak is significantly different ($P < 0.05$), which is shown that the P2 peak amplitude induced by the expert group is higher than that of novice group, P3 peak amplitude is lower than that of novice group, and the incubation period of P3 is significantly shorter than that of novice group.

Conclusion: In the selection of reaction tasks, compared with tennis students, college tennis players have the behavior advantage of fast reaction speed when they react to visual selection. The ERP characteristics of college tennis players in the attention awareness stage show that attention points to a strong ability to suppress non-target stimulation. The ERP characteristics in the selection reaction stage show that the attention activity of the characteristic attribute induced by target stimulation is earlier and the psychological computing resources are consumed less.

Keywords: college tennis players, vision, choice reaction, behavioral advantage, ERP characterist

类比在运动技能学习中的作用及其影响因素

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摘要 为了克服在现实情境下学习者使用传统内隐学习方法所习得的运动技能表现低于使用外显学习的情况, Liao 和 Masters (2001) 使用类比的方式提供指导, 发现类比学习不仅具有内隐学习的特征且与外显学习条件下的运动表现无显著差异, 可以作为一种更为有效的内隐学习方法在现实中使用。类比学习 (analogy learning) 是将所要学习的运动技能的整体知识和规则整合成一个更容易理解的单一的生物学隐喻。在运动技能学习的过程中, 相比于使用外显学习的参与者, 使用类比学习的参与者能够在压力情境下、干扰情境下和高复杂决策条件下保持运动表现的稳定, 但其学习效果也会受学习者运动水平, 认知因素以及指导内容的影响。类比学习影响运动表现的认知机制可能存在以下几种解释。第一, 类比学习将运动技能规则整合到一个个的组块中, 使学习者自动化地执行动作, 减少了工作记忆的负荷, 从而保持运动表现的稳定。但由于类比学习领域中现有研究范式的限制, 即外显指导语数量和类比指导语数量上的不匹配, 难以消除指导语数量对工作记忆的影响, 因此以往研究可能夸大了工作记忆在类比学习中的作用。第二, 类比条件下的学习者更易使用外部注意焦点从而降低运动规则的再投资, 提高运动表现的稳定。同时相比于外显学习, 再投资的降低可以减少工作记忆的负荷, 从而进一步促进运动表现的稳定。此外, 现有研究存在指导语数量不匹配, 指导语提供方式生态效度低、指导内容编写方法及评价标准缺乏标准化以及所研究运动类型差异较大难以横向对比的局限, 可能存在歪曲和夸大类比学习对运动技能学习的作用。因此, 未来研究可以从平衡指导语数量, 改变指导语提供方式, 指导语编写评价标准化以及运动任务选取等方面继续深入研究。同时, 现有对类比学习的内在机制的讨论大多以行为数据作为推测依据, 缺少真正的神经机制数据, 因此未来可以使用 EEG, fNIRS 等技术探究类比学习状态下学习者的脑区激活, 对类比学习的神经机制进一步探索。

关键词 类比学习, 运动技能学习, 注意力焦点, 组块理论, 再投资理论

The Effect of Analogy in Motor Skill Learning and Its Influential Factors

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Abstract: In order to overcome the situation that traditional implicit learners consistently showed a lower level of performance than those explicitly learners in real situations. Liao and Masters (2001) used analogy instructions and found that analogy learning not only is implicit in nature and has the characteristic of implicit learning, but also has no significant difference in performance with explicit learning, which can be used as a more effective implicit learning method in reality. Analogy learning is a simple biomechanical metaphor which is easier to understand by integrating the complex rule structure of the motor skills. In the process of motor skill learning, performance induced by analogy instructions is more robust than induced by explicit instructions under pressure, distracting situation and high-complexity decision-making condition. However, the effect of analogy learning would also be affected by individual motor level, cognitive factors and instruction's content. The cognitive mechanism that how analogy learning affects performance may be explained in the following ways. First, large amounts of the motor rules are organized into a single representative chunk, which increases the automaticity of the movement, reduces the load of working memory, and thus maintains the stability of performance. However, due to the limitation of research paradigms in analogy learning that the imbalance of instruction's quantity between explicit and analogy motor learning, it is difficult to eliminate the effect of instruction's quantity on working memory. Therefore, previous studies may have exaggerated the effect of working memory in analogy learning. Secondly, analogy learners are more likely to use external focus of attention to reduce the reinvestment, and improve the stability of performance. Meanwhile, compared with explicit learning, low reinvestment can reduce the load of working memory, which can further promote the performance stability. In addition, previous studies exist some limitations that misrepresent real-world

settings, such as imbalance of instructions quantity, the provision of instructions with low ecological validity, lack of standardization of the compilation and evaluation criteria of the instructions, and large differences in the types of sports tasks that makes it difficult to compare performance horizontally. Therefore, further research can be carried out from such aspects to balance the number of instructions, change the way of instruction provision, standardize the compilation and evaluation of instructions, and focus on selecting exercise tasks. Furthermore, the existing theories on the internal mechanism of analogy learning are mostly based on behavioral research results without neural mechanism results. Therefore, EEG, fNIRS and other technologies can be used to explore the activation of brain regions of participants in further research and the neural mechanism of analogy learning.

Keywords: analogy learning, motor skill learning, focus of attention, chunking theory, reinvestment theory

体育锻炼对拖延行为关系及生理机制研究展望

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摘要 拖延行为是指个体在没有明确理由的情况下,不自觉地延迟预定行动的非适应性行为,即便个体可以预测拖延带来的不利结果,但依旧推迟完成任务。体育锻炼可以促使机体分泌多种物质,能够增强体质、缓解压力、舒缓情绪,在《“健康中国 2030”规划纲要》的提倡下,越来越多的运动热已经成为一种潮流,更多的人参与到各种运动当中。通过对国内外相关研究文献进行分析,分析体育锻炼对拖延行为的影响效应,归纳体育锻炼影响拖延行为的作用路径,发现:1、体育锻炼对大学生学习拖延有显著的负向预测作用。2、体育锻炼可以通过不同的中介作用对学习拖延产生间接影响,可通过时间管理倾向、自我控制的中介路径进行影响。3、研究显示:拖延与海马旁回(PHG)和眶额叶的灰质体积呈正相关,而与额中回(MFG)和额下回(IGF)的灰质体积呈负相关;在动物和人类模型中,体育锻炼对海马旁功能有广泛的影响,海马旁回神经兴奋性增加,灰质/白质增加。因此,在未来的研究中可增加体育锻炼对睡眠拖延、学业拖延等的研究,以及开展对拖延行为认知机制及神经基础方面研究。

关键词 体育锻炼, 拖延行为, 海马旁回, 神经机制

Prospects of the relationship between physical exercise and procrastination behavior and its physiological mechanism

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Abstract: Procrastination behavior refers to the non-adaptive behavior that an individual unconsciously delays a predetermined action without a clear reason. Even though an individual can predict the adverse results of procrastination, he still delays the completion of the task. Physical exercise can promote the body to secrete a variety of substances, can enhance physical fitness, relieve stress, relieve mood, under the "Healthy China 2030" planning outline, more and more exercise fever has become a trend, more and more people participate in a variety of sports. Based on the analysis of relevant research literature at home and abroad, this paper analyzes the effect of physical exercise on procrastination behavior, and concludes the action path of physical exercise on procrastination behavior. It is found that :1. Physical exercise has a significant negative prediction effect on college students' learning procrastination. 2. Physical exercise can indirectly affect learning procrastination through different mediating effects, and it can be influenced by the mediating paths of time management inclination and self-control. 3. Studies showed that procrastination was positively correlated with the volume of gray matter in the parahippocampus gyrus (PHG) and orbitofrontal lobe, but negatively correlated with the volume of gray matter in the middle frontal gyrus (MFG) and inferior frontal gyrus (IGF). In animal and human models, physical exercise has a broad effect on

parahippocampal function, with increased nerve excitability in the parahippocampal gyrus and increased gray/white matter. Therefore, in the future, the research on the effect of physical exercise on sleep delay and school delay should be added, and the cognitive mechanism and neural basis of procrastination behavior should be carried out.

Keywords: Physical exercise, procrastination behavior, parahippocampal gyrus, neural mechanisms

运动提升抗脑力疲劳能力的相关机制研究进展与展望

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摘要 目的:通过分析整合脑力疲劳的发生机制,并结合运动锻炼的调控作用,系统地整理运动锻炼提升机体抗脑疲劳的可能性机制。**方法:**通过 Pubmed 和 ScienceDirect 等网站中搜索关键"exercise"、"mental fatigue"、"neurotrophic factors"、"HPA axis"、"immune system"、"BDNF"等,分析相关文献,综述脑力疲劳发生机制以及运动锻炼提升机体抗脑疲劳的可能性机制。**结果:**脑力疲劳发生机制:(1)脑内腺苷瞬变,腺苷转运调节神经活动,通过 A1 受体抑制多巴胺释放;(2)多巴胺的失衡导致整个智力系统紊乱,抑制系统被激活;(3)皮层-皮层下中枢给予下丘脑信号,交感神经-副交感神经失衡,HPA 功能紊乱,海马接收 HPA 负反馈加剧扣带回的多巴胺系统紊乱;(4)额叶自上而下加工失衡和错误负波的增多加剧多巴胺系统的失衡;(5)脑 ATP 浓度下降,糖原作为大脑主要供能物质含量显著减少,五羟色胺浓度升高,对中枢神经系统产生了保护性抑制作用。运动改善脑功能机制:(1)运动塑造大脑。增加前额叶皮质、海马等相关脑区皮质厚度,神经发生增多,相关神经回路的连接增强;相关脑区功能激活水平提高,加强脑区之间的连接。(2)运动增加神经营养因子。运动促进 BDNF、VEGF 和 IGF-1 的含量增加,增加海马体神经发生。(3)运动平衡神经递质分泌。运动产生内源性大麻素和内啡肽改变神经递质的释放,影响奖赏、认知控制等高级认知环路的功能。(4)运动增强自主神经系统调控。运动促进皮质醇水平出现下降,进而导致 CRH mRNA 的表达量和血清中 ACTH 水平下降,从而优化 HPA 的功能。(5)运动提高脑代谢。乳酸既可作为能源底物,也可作为信号分子促进突触可塑相关信号的激活,进而提高认知能力。(6)运动提升脑抗炎抗氧化。运动后过氧化氢酶活性和 ROS 水平降低,亚硝酸盐水平增加,白细胞介素 4 水平增加,后神经元特异性烯醇化酶的水平下降。**结论:**(1)运动能通过脑可塑性、免疫系统、能量代谢、自主神经直接或间接提升抗脑疲劳能力;(2)未来研究可结合 HIIT、身心训练、正念瑜伽等不同形式运动,探究不同运动与脑抗疲劳能力的关系。

关键词 脑力疲劳, 运动锻炼, 中枢神经系统, 神经营养因子, 脑可塑性

Research Progress and Prospects of the Mechanisms For Exercises Improving Mental Fatigue Resistance Ability

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Abstract: Objective: By analyzing and integrating the mechanism of mental fatigue, combined with the regulation of exercise exercise, systematically sort out the possible mechanisms of exercise exercise to improve the body's anti-brain fatigue. **Methods:** Search for the key "exercise", "mental fatigue", "neurotrophic factors", "HPA axis", "immune system", "BDNF", etc. through websites such as Pubmed and ScienceDirect, analyze relevant literature, and summarize the mechanism of mental fatigue and Physical exercise enhances the possible mechanism of the body's anti-brain fatigue. **Results:** The mechanism of mental fatigue: (1) adenosine transient in the brain, adenosine transport regulates neural activity, and inhibits the release of dopamine through A1 receptors; (2) the imbalance of dopamine leads to the disorder of the entire mental system and the inhibitory system is activated; (3) The cortex-subcortical center gives hypothalamic signals, sympathetic-parasympathetic nerve imbalance, HPA dysfunction, and the

hippocampus receives HPA negative feedback to aggravate the dopamine system disorder of the cingulate gyrus; (4) Top-down processing imbalance and errors in the frontal lobe The increase of negative waves aggravates the imbalance of the dopamine system; (5) The concentration of brain ATP decreases, the content of glycogen as the main energy supply substance of the brain is significantly reduced, and the concentration of serotonin increases, which has a protective inhibitory effect on the central nervous system. Exercise improves brain function mechanism: (1) Exercise shapes the brain. Increase the cortical thickness of the prefrontal cortex, hippocampus and other related brain areas, increase neurogenesis, and strengthen the connection of related neural circuits; increase the level of functional activation of related brain areas, and strengthen the connections between brain areas. (2) Exercise increases neurotrophic factors. Exercise promotes the increase of BDNF, VEGF and IGF-1 content and increases hippocampal neurogenesis. (3) Exercise balance neurotransmitter secretion. Exercise produces endocannabinoids and endorphins to change the release of neurotransmitters and affect the functions of higher cognitive circuits such as rewards and cognitive control. (4) Exercise enhances the regulation of the autonomic nervous system. Exercise promotes a decline in cortisol levels, which in turn leads to a decline in CRH mRNA expression and serum ACTH levels, thereby optimizing the function of HPA. (5) Exercise improves brain metabolism. Lactic acid can be used not only as an energy substrate, but also as a signal molecule to promote the activation of synaptic plasticity-related signals, thereby improving cognitive ability. (6) Exercise improves brain anti-inflammatory and anti-oxidation. After exercise, catalase activity and ROS levels decrease, nitrite levels increase, interleukin 4 levels increase, and post-neuron-specific enolase levels decrease. **Conclusion:** (1) Exercise can directly or indirectly improve the ability to resist brain fatigue through brain plasticity, immune system, energy metabolism, and autonomic nerves. (2) Future research can combine HIIT, physical and mental training, mindfulness yoga and other different forms of exercise to explore the relationship between different exercises and brain fatigue resistance.

Keywords: mental fatigue, exercise, central nervous system, neurotrophic factors, brain plasticity

运动员动作预期结果加工的行为与神经活动特点

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摘 要 乒乓球项目中, 正确快速的预判使运动员有更好的绩效表现, 但预期结果与实际结果不一致时, 如球在飞行时擦网, 落点方向突然改变, 运动员仍可以在最终决策前, 调整身体反应, 应对意外事件。此时预期的结果加工如何进行尚不清楚。以往研究集中在预期结果与实际结果完全不一致(如预期落点在左半台, 实际落点在右半台)或完全一致(预期与实际落点在相同半台)两种条件下。而在实际运动场景中, 落点预判不仅是左右两个方向, 随着球的轨迹逐渐完整, 预期落点可能从左半台缩小为左 1/3 台, 逐渐确定。那么预期落点与实际落点的差异不同时预期结果的加工是否不同呢? 本研究从此问题出发, 探究运动员在不同差异距离下预期结果加工的行为与神经活动特点。本实验将球桌水平方向 7 等分(左至右 1-7), 要求运动员进行此 7 个方向的发球, 将发球视频从球-拍接触瞬间断开为前后两部分, 之后重新组合, 以此设置根据身体动作得到的预期落点与实际落点不同的差异。进一步测试参与者是否发现落点不同以及之后的应对。记录数据: 正确率、反应时间、Theta 能量值。结果显示, 随着预期与实际落点差异增大, 运动员对两者差异识别的正确率增大; 预期与实际落点差异距离超过 1/2 球台(如预期落点在 1 区, 实际落点在 5、6、7 区), 反应时间增长; 做出预期结果之后, 随着实际结果的呈现, Theta 能量值逐渐增大; 差异距离大于 1/2 球台时, Theta 能量值大于差异距离小于或等于半台 ($P < .05$)。研究结论: 乒乓球运动员能根据已有知识经验, 监控预期结果与实际结果, 保证决策准确性; 采取不同策略应对不同差异, 差异距离大于 1/2 球台时, 激活 Theta 振荡, 调配认知资源以应对预期外事件。

关键词 预期结果加工, 应对策略, Theta 振荡

The Characteristics of Athletes' Behavior and Neural Activity on the Processing of Predicted Response-Outcome

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Abstract: The better performance of table tennis athletes depends on correct and rapid prediction. However, when the predicted outcome is not consistent with the observed outcome, for example, when the ball suddenly changes the direction of the landing point due to the wiping of the net during flight, the athletes can adjust the physical movements to deal with the unexpected event before the final decision. At this time it is not clear how the predicted response-outcome will proceed. Previous researches focused on two conditions: the predicted outcome was completely inconsistent with the observed outcome (such as, the predicted landing point was in the left half of the station, while the observed landing point was in the right half of the station) or completely consistent (landed on the same half of the station). In the actual motion scene, the prediction is not only about the left and right directions. As the trajectory of the ball is gradually complete, the range of the predicted falling point shrinks and becomes more and more accurate. Does the difference in the distance between the predicted landing point and the observed landing point affect the process of predicted response-outcome? Based on this problem, this study explored characteristics of athletes' behavior and neural activity on the processing of predicted response-outcome. In this experiment, the horizontal direction of the table is divided into 7 equal parts (1 to 7 from left to right), and the athlete was required to serve in these 7 directions. The serving videos were divided into two parts from the ball-racket contact moment, and then were recombined to obtain the different distance between the predicted and the observed landing point. Experiment tasks were to ask the subjects to determine whether the drops were different and to press the number key corresponding to the observed drops. The accuracy, response time and Theta power values were recorded. The results show that with the increase of the difference between predicted and observed landing points, the accuracy of athletes' recognition of the difference between them increases. When the predicted distance from the observed landing point exceeds 1 / 2 of the table (for example, the predicted landing point is in part 1 and the observed landing point is in parts 5, 6 and 7), the response time of athletes increases. After the athletes made the prediction, Theta power gradually increased with the presentation of the observed outcomes; When the difference distance is greater than 1/2 table, Theta power is greater than the difference distance is less than or equal to half table ($P_s < .05$). Research conclusion: athletes can monitor the predicted and observed outcomes according to their existing knowledge and experience, so as to ensure the accuracy of decision-making. They adopt different strategies to deal with different distances. When the distance is greater than 1 / 2 of the table, they activate Theta oscillation and allocate cognitive resources to deal with unexpected events.

Keywords: Predicted Response-Outcome, Response strategy, Theta oscillation

大学生绿色锻炼的情绪效益研究

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摘要 绿色锻炼是指人类在大自然环境中进行的身体锻炼，包括在有绿色植物的环境中或在自然环境中进行行走、慢跑、快跑、骑行等运动。随着人类生活水平的提高，越来越多的人开始重视绿色锻炼。而现如今，国内对于绿色锻炼这样一种新型运动方式的研究起步较晚。以往的研究证明，与非绿色锻炼相比，绿色锻炼更有益于健康。本研究立足于现有的研究成果，以大学生为主要研究对象进行调查。目的：比较在这两个不同的锻炼环境下其情绪状态是否有差异并分析情绪状态的主要影响因素，进一步探讨绿色锻炼对其情绪状态的影响及其内心理机制。方法：采用由 McaNair 等人在 1971 年编制的简明心境量表 (poriflor Mood Saets, POMS)，该量表用以测量被试的心境状态的得分，即对个体在紧张、愤怒、慌乱、抑郁、疲劳、精力、自尊这七个维度上的得分进行相加减以计算总分，用该量表对 365 名在校大学生进行问卷调查，所得数据均用 spss

进行统计学分析处理。结果：（1）非绿色锻炼相比，绿色锻炼对心境状态的七个维度均有积极影响。（2）进行中等强度运动量的绿色锻炼更有助于提高心境状态。因此，本研究得出结论：与非绿色锻炼相比，绿色锻炼更有助于大学生改善心境、调节情绪。

关键词 绿色锻炼，体育锻炼，情绪效益，心境状态，大学生

Study on the emotional benefits of green exercise for college students

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Abstract: Green exercise refers to human physical exercise in the natural environment, including walking, jogging, fast running, cycling and other sports in the environment with green plants or in the natural environment. With the improvement of human living standard, more and more people begin to pay attention to green exercise. At present, the research on green exercise, a new type of exercise, started late in China. Previous studies have shown that green exercise is better for your health than non-green exercise. This study is based on the existing research results, with college students as the main object of investigation. Objective: To investigate the effect of green exercise on their emotional state and its internal psychological mechanism by comparing the differences of their emotional state in two different exercise environments and analyzing the main influencing factors of their emotional state. Methods: Using the Poriflor Mood Saets (POMS) compiled by McaNair et al in 1971, which is used to measure the Mood state score of the subjects, In other words, the scores of individuals in the seven dimensions of stress, anger, panic, depression, fatigue, energy and self-esteem were added and subtracted to calculate the total score. This scale was used to conduct a questionnaire survey on 365 college students, and the data obtained were statistically analyzed and processed with SPSS. Results : (1) compared with non-green exercise, green exercise had positive effects on seven dimensions of mood state. (2) Moderate intensity green exercise is more beneficial to improve mood state. Therefore, this study concluded that compared with non-green exercise, green exercise is more helpful to improve the mood and regulate the mood of college students.

Keywords: Green exercise, Physical exercise, Emotional benefit, State of mind, College students

大学生心理健康素养与体育锻炼的关系研究

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摘要 **目的** 测评大学生的心理健康素养水平，探索心理健康素养与体育锻炼的关系，为心理健康素养与体育锻炼的研究提供数据支持，扩展体育锻炼与心理健康素养的相关研究，提高大学生心理健康素养水平，促进其身心和谐发展。**方法** 采用心理健康素养问卷和体育锻炼等级量表，对高校 750 名大学生进行调查，通过相关分析、方差分析以及回归分析，揭示心理健康素养与体育锻炼的关系。**结果** （1）大学生心理健康素养水平较低，且在性别、年级方面上不存在显著性差异，在学校、专业方面上存在显著性差异；（2）大学生体育锻炼水平较低，且在性别、年级、学校与专业方面上均具有显著性差异；（3）通过相关分析发现，心理健康素养与体育锻炼呈正相关关系；（4）通过方差分析以及回归分析发现，体育锻炼能够对心理健康素养产生影响，其中体育锻炼强度对维护心理健康的行为和技能、维护心理健康的态度、应对心理疾病态度、心理健康的知识和观念、应对心理疾病的行为和技能、心理疾病的知识和观念均具有显著性影响。体育锻炼时间与体育锻炼频率对心理健康素养水平的心理疾病的知识和观念不具有显著性影响，但对维护心理健康的行为和技能、维护心理健康的态度、应对心理疾病态度、心理健康的知识和观念、应对心理疾病的行为和技能具有显著性影响。**结论** 心理健康素养与体育锻炼具有相关性，并且体育锻炼量以及强度、时间、频率都能对心理健康素养产生影响，由此构建心理健康素养与体育锻炼关系的回归方程 $y=2.719+(-0.018\times\text{体育锻炼强度})+(0.061\times\text{体育锻炼时间})+(0.012\times\text{体育锻炼频率})$ ，通过提高大学生的体育锻炼水平可以促进其心理健康素养水平的提升。

关键词 大学生，心理健康素养，体育锻炼

A Study on the Relationship between Mental Health Literacy and Physical Exercise Quality of College Students

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Abstract: Objective Assess the level of mental health literacy of college students, explore the relationship between mental health quality and physical exercise, provide data support for the research of mental health literacy and physical exercise, expand the research related to physical exercise and mental health literacy, improve the level of college students' mental health quality, and promote the harmonious development of their body and mind. **Methods** Using the mental health literacy questionnaire and physical exercise grade scale, 750 college students were investigated, and it revealed the relationship between mental health literacy and physical exercise through relevant analysis, variance analysis and regression analysis. **Results** 1. College students' mental health literacy level was relatively low, and there were no significant differences in gender and grade, but there were significant differences in school and major. 2. College students' physical exercise level was relatively low, and there were significant differences in gender, grade, school and major. 3. Through correlation analysis, it had found that there was a positive correlation between mental health literacy and physical exercise. 4. Through the analysis of variance and regression analysis, it had found that physical exercise could have an impact on mental health literacy, in which the intensity of physical exercise had an impact on the behavior and skills of maintaining mental health, the attitude of maintaining mental health, the attitude of coping with mental diseases, the knowledge and concept of mental health, the behavior and skills of coping with mental diseases. The knowledge and concept of mental illness had a significant impact. Physical exercise time and physical exercise frequency had no significant impact on the knowledge and concept of mental illness of mental health literacy level, but had a significant impact on the behavior and skills of maintaining mental health, the attitude of maintaining mental health, the attitude of coping with mental illness, the knowledge and concept of mental health, and the behavior and skills of coping with mental illness. **Conclusion** There is a correlation between mental health literacy and physical exercise, mental health literacy is affected by the amount of physical exercise, intensity, time and frequency, therefore, the regression equation of the relationship between mental health literacy and physical exercise is constructed, $y = 2.719 + (-0.018 \times \text{Physical exercise intensity}) + (0.061 \times \text{Physical exercise time}) + (0.012 \times \text{Physical exercise frequency})$, improving college students' physical exercise level can promote the improvement of their mental health literacy level.

Keywords: College students, Mental health literacy, Physical exercise

高校女大学生体育锻炼认知观念的研究

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摘要 高校操场永远不缺起舞翩翩、花枝招展的女大学生,但这些女大学生都是去操场上运动的嘛?如果是她们对体育锻炼的认知是什么?认知是否正确?为了女大学生对体育锻炼有正确的认知观念和体育锻炼时获得更好的健康效益。本研究采用文献资料法、问卷调查法、数理统计法等研究方法对高校15名女大学生进行一对一深度访谈,去了解女大学生体育锻炼的认知观念。研究表明:(1)女大学生体育锻炼认知观念是指女大学生在体育锻炼过程中因受个体差异、内外部环境的影响导致不同的看法和想法。其中,合理的认知观念包括符合逻辑、有证据支持、合乎现实、正确认识体育锻炼的效益;不合理的认知观念包括:缺乏证据、夸大负面影响、不切实际、不符合逻辑的。(2)女大学生体育锻炼合理的认知观念特征包括:全面性、相对性、符合现实性、符合逻辑性;女大学生体育锻炼不合理认知观念特征包括:概括化、绝对化、经验性、两级思维。(3)影响女大学生体育锻炼的主要因素为:生活习惯、同伴影响、重视程度、学校要求。次要因素为:运动经历。一般因素为:生活压力、家庭观念。(4)通过构建高校女大学生体育锻炼认知观念理论模型,可

以看出体育锻炼认知观念的影响因素会导致不同的体育锻炼认知观念，合理的认知观念会导致合理的体育锻炼行为，不合理的认知观念会导致不合理的体育锻炼行为。

关键词 女大学生，体育锻炼，认知观念

Research on Cognitive Concepts of Physical Exercises of Female University Students

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Abstract: Especially in the hot summer evening, there are many people sitting on the lawn and chatting, walking, exercising, etc. on the college campus track and field. Male students' sports may be real sports. This study does not pay too much attention to boys, but how many female students are really sports? Most girls are sitting on the lawn of the playground and chatting, or just walking on the track without exercise load, and the proportion of exercises that actually participate in running, playing, etc. even with a little exercise load is very small. By analyzing the cognitive concept of physical exercise of female college students, we can obtain better health benefits for female college students' physical exercise. In this study, one-on-one in-depth interviews were conducted with 15 female college students in universities using literature data method, questionnaire survey method, mathematical statistics method and other research methods. The research results show that: (1) Female college students' physical exercise cognitive concept refers to the different opinions and ideas of female college students due to individual differences and internal and external environment influences during physical exercise. Among them, reasonable cognitive concepts include logical, evidence-supported, realistic, and correct understanding of the benefits of physical exercise. Unreasonable cognitive concepts include: lack of evidence, exaggerated negative effects, unrealistic, and illogical. (2) The characteristics of reasonable cognitive concepts of female college students' physical exercise include: comprehensiveness, relativity, conformity to reality, and logicity: Female college students' irrational cognitive concepts of physical exercise include: generalization, absoluteness, experience, Two-level thinking. (3) The main factors that affect the physical exercise of female college students are: living habits, peer influence, degree of importance, and school requirements. The secondary factor is: sports experience. The general factors are: life pressure, family values. (4) By constructing a theoretical model of physical exercise cognitive concepts for female college students, it can be seen that the influencing factors of physical exercise cognitive concepts will lead to different physical exercise cognitive concepts, and reasonable cognitive concepts will lead to reasonable physical exercise behaviors. Unreasonable cognitive concepts can lead to unreasonable physical exercise behaviors.

Keywords: female college students, physical exercise, cognitive concept

高强度间歇运动对高低心肺功能大学生转换功能影响的时程效应：来自 fNIRS 的证据

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摘要 研究目的：执行功能是指个体在完成复杂认知任务时，对各种基本认知过程进行协调和控制的高级认知过程，包括抑制功能、刷新功能和转换功能。其中，转换功能是个体执行复杂任务时操作或心理定势间的来回转换，对个体调节行为和情绪的能力具有重要作用。研究发现，高强度间歇运动（HIIE）对转换功能具有改善作用，且在运动后可以延迟一段时间，但 HIIE 对转换功能影响的时程效应结论不一致。此外，心肺功能水平与执行功能水平存在相关关系，心肺功能可以调节急性运动对执行功能的影响。因此，本研究将结合 fNIRS 技术，进一步探究 HIIE 对高低心肺功能大学生转换功能影响的时程效应。

研究方法：选取 75 名 18-22 岁的大学生为研究对象，采用 2(高强度间歇运动干预：有、无)×2(心肺功

能水平：高、低）×5（施测时间：实验前、运动后即刻、运动后 0.5h、运动后 1h、运动后 24h）的混合实验设计。因变量：正确率和反应时指标、氧合血红蛋白浓度变化值；自变量：有无运动干预、心肺功能水平、施测时间。有无运动干预和心肺功能水平为组间变量，施测时间为组内变量。在实验前、运动后即刻、运动后 0.5h、运动后 1h、运动后 24h，被试进行转换功能任务测试，并使用 fNIRS 同步测量大脑的血液动力学变化，从行为学和神经学两个层面综合分析 HIIE 对高低心肺功能大学生转换功能影响的时程效应。

研究结果：（1）行为学结果表明：在正确率上，运动干预主效应显著 $F(1, 73)=17.93, p<0.01, \eta^2=0.27$ ，HIIE 组的正确率显著高于静息组。在反应时上，运动干预主效应显著 $F(1, 73)=32.29, p<0.01, \eta^2=0.40$ ，HIIE 组的反应时显著低于静息组；心肺功能主效应显著 $F(1, 73)=5.38, p<0.01, \eta^2=0.16$ ，高心肺组的反应时显著低于低心肺组；施测时间主效应显著 $F(4, 70)=13.72, p<0.01, \eta^2=0.55$ ，反应时随着 HIIE 干预进程呈现下降的趋势；运动干预×心肺功能交互效应显著 $F(1, 73)=6.07, p<0.05, \eta^2=0.16$ ，高、低心肺功能大学生在进行 HIIE 干预后反应时显著低于静息组；施测时间×运动干预交互效应显著 $F(4, 70)=11.34, p<0.01, \eta^2=0.50$ ，HIIE 组在运动后即刻、运动后 0.5h、运动后 1h、运动后 24h 的反应时显著低于运动前。

（2）fNIRS 结果表明：在 ch7、ch8、ch9、ch14、ch15、ch16、ch17、ch20、ch21、ch22 中运动干预主效应显著（ $p<0.05$ ），HIIE 组在背外侧前额叶皮质、腹外侧前额叶皮质、额极区的激活水平显著高于静息组；在 ch6、ch14 中心肺功能主效应显著（ $p<0.05$ ），高心肺组在额极区的激活水平显著高于低心肺组。

研究结论：

（1）高心肺功能大学生的转换功能优于低心肺功能大学生。

（2）高强度间歇运动可以改善高低心肺功能大学生的转换功能，并且高强度间歇运动对大学生转换功能的改善作用在行为学效益上可以持续到运动后二十四小时。

关键词 高强度间歇运动，心肺功能，大学生，转换功能，时程效应，fNIRS

The time course efficiency of high intensity intermittent exercise on switch function of College students with different cardiorespiratory fitness: Evidence from fNIRS

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Abstract: Objective: Executive function refers to the higher cognitive processes that coordinate and control various basic cognitive processes when individuals perform complex cognitive tasks, including inhibition, refreshment, and conversion functions. The switching function is a back-and-forth transition back and forth operationally or mentally between stereotypes when individuals perform complex tasks, which plays a vital role in individuals' ability to regulate behavior and emotions. It was found that high-intensity intermittent exercise (HIIE) has an ameliorative effect on switching function and can be delayed for some time after exercise, but the findings on the time-course effect of HIIE on switching function are inconsistent. Furthermore, there is a correlation between the level of cardiorespiratory fitness and the level of executive function, and cardiorespiratory fitness can modulate the effects of acute exercise on executive function. Therefore, the present study will further investigate the time-course effect of HIIE on the effect of a conversion function in high and low cardiorespiratory fitness college students in combination with the fNIRS.

Methods: Seventy-five college students aged 18-22 years were selected for the study, and a mixed experimental design of 2 (high-intensity intermittent exercise intervention: yes, no) × 2 (cardiorespiratory fitness level: high, low) × 5 (administration time: pre-experimental, immediate post-exercise, half-hour post-exercise, one-hour post-exercise, and twenty-four hours post-exercise) was used. Dependent variables: correct rate and response time indicators, change in oxyhemoglobin concentration values; independent variables: presence or absence of exercise intervention, cardiorespiratory fitness level, and administration time. The presence or absence of exercise intervention and

cardiorespiratory fitness level were between-group variables, and the time of administration was a within-group variable. Before the experiment, immediately after exercise, half an hour after exercise, one hour after exercise, and twenty-four hours after exercise, subjects were tested on a conversion function task, and hemodynamic changes in the brain were measured simultaneously using the fNIRS device to analyze the time-course effects of the effects of HIIE on conversion function in high and low cardiorespiratory fitness college students at both behavioral and neurological levels in a comprehensive manner.

Results:

(1) Behavioral results showed that the main effect of the exercise intervention was significant in terms of correctness, $F(1, 73)=17.93$, $p<0.01$, $\eta^2=0.27$, and the HIIE group had a significantly higher correctness rate than the resting group. On response time, the exercise intervention main effect was significant, $F(1,73)=32.29$, $p<0.01$, $\eta^2=0.40$, with the HIIE group having a significantly lower response time than the resting group; the main cardiorespiratory effect was significant $F(1,73)=5.38$, $p<0.01$, $\eta^2=0.16$, with the high cardiorespiratory group having a significantly lower response time than the low cardiorespiratory group; and the administration time main effect was significant, $F(4, 70)=13.72$, $p<0.01$, $\eta^2=0.55$, with a decreasing trend of reaction time with the HIIE intervention process; The exercise intervention $\times$ cardiorespiratory function interaction effect was significant $F(1, 73)=6.07$, $p<0.05$, $\eta^2=0.16$, with high and low cardiorespiratory function college students having significantly faster reaction times than the resting group after the HIIE intervention; The administration time $\times$ exercise intervention interaction effect was significant $F(4,70)=11.34$, $p<0.01$, $\eta^2=0.50$, with the HIIE group having significantly faster reaction times immediately after exercise, half an hour after exercise, one hour after exercise, and twenty-four hours after exercise.

(2) The fNIRS results showed that the main effect of exercise intervention was significant ($p<0.05$) in ch7, ch8, ch9, ch14, ch15, ch16, ch17, ch20, ch21, ch22, and the activation levels in the dorsolateral prefrontal cortex, ventral lateral prefrontal cortex, and frontopolar area were significantly higher in the HIIE group than in the resting group; in ch6, ch14 the main effect of cardiorespiratory function was significant ($p<0.05$), and the activation level in the frontopolar region was significantly higher in the high cardiorespiratory group than in the low cardiorespiratory group.

Conclusions:

(1) High cardiorespiratory college students have better conversion function than low cardiorespiratory college students.

(2) High-intensity intermittent exercise improved the conversion function of high and low cardiorespiratory college students, and the improvement of conversion function by high-intensity intermittent exercise lasted up to twenty-four hours after exercise in terms of behavioral benefits.

Keywords: High-intensity intermittent exercise, Cardiorespiratory fitness, College students, Switch function, Time-course effect, fNIRS

8 周健美运动对年轻成年人自尊的影响研究

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摘要 目的: 健美运动近年来逐渐为社会大众所熟悉, 它指通过徒手或利用各种器械, 依据一定的科学方法和个人特点, 以促进身体和心理双重健康的运动。然而, 先前的研究多集中于健美运动对于个体身体的塑造, 而较少的突出其对于个体心理健康的作用。因此, 本研究通过八周系统性的健美运动干预, 来探索其对于年轻成年人的个体心理自尊的作用。**方法:** 31 名无健美运动经验的年轻成年人 (平均年龄: 20.64 岁) 被随机分成实验组 (15 人) 与对照组 (16 人)。实验组每周进行三次训练干预, 每次训练安排 6 个覆盖全身肌群的动作, 每个动作各进行 6 组; 对照组进行相应的动态拉伸动作干预。在八周干预前后, 分别测量被试的身体围度、身体成分以及力量素质, 并使用中文修订版罗森伯格自尊量表 (RSES) 以及一般自我效能感量表 (GSES) 对被试的自尊与自我效能感前后水平的变化进行衡量。随后对所有的数据进行 2×2 重复测量方差分

析。**结果:**在个体自尊上,我们的结果表明,相比于对照组,通过8周健美运动可以有效的提升实验组的个体自尊水平($P=0.000$, $\eta^2=0.52$)。进一步的相关分析表明,8周健美运动带来的体重的减轻($r=0.42$)以及力量素质的提升($r=0.43$)是促进实验组自尊水平提升的积极因素。其次,我们的结果表明个体的一般自我效能感水平不受8周健美运动的影响。**结论:**通过系统性的长期健美运动干预,可以有效改善个体的身体围度以及力量素质,并进一步的提升个体的自尊水平,促进个体的身体和心理的共同健康。

关键词 健美运动,8周干预,个体自尊

Research on the Effect of Eight-week Bodybuilding Exercise on Self-esteem of Young Adult

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Abstract: Purpose: Bodybuilding exercises have gradually become familiar to the public in recent years, which refers to exercises that promote physical and mental health by using bare hands or using various equipment, based on specific scientific methods and personal characteristics. However, previous studies have mostly focused on the shaping of individual bodies by bodybuilding exercises, and have less emphasized its effects on individual mental health. Therefore, this study explored its effect on the individual psychological self-esteem of young adults through eight weeks of systematic bodybuilding intervention. **Methods:** 31 young adults (mean age: 20.64 years old) without bodybuilding experience were randomly divided into an experimental group (15 person) and a control group (16 person). The experimental group performed training interventions three times a week, and each training was arranged with 6 exercises covering the whole body muscles, each of which was performed in 6 groups; the control group received corresponding dynamic stretching interventions. Before and after the eight-week intervention, the subjects' body circumference, body composition and strength quality were measured, meanwhile, the Chinese revision of the Rosenberger Self-Esteem Scale (RSES) and General Self-Efficacy Scale (GSES) were used to measure the level of self-esteem and self-efficacy. Then, all the data were analyzed with 2×2 repeated measures analysis of variance. **Results:** In terms of individual self-esteem, our results showed that, compared with the control group, 8 weeks of bodybuilding exercise can effectively improve the individual self-esteem level of the experimental group ($P=0.000$, $\eta_p^2=0.52$). Further correlation analysis showed that the weight loss ($r=0.42$) and the improvement of strength quality ($r=0.43$) brought about by the 8-week bodybuilding exercise were the positive factors that promoted the improvement of the self-esteem level of the experimental group. Second, our results show that the individual's general self-efficacy level is not affected by the 8-week bodybuilding exercise. **Conclusion:** Through systematic and long-term bodybuilding intervention, the individual's body circumference and strength quality can be effectively improved, and the individual's self-esteem level can be further improved, and the individual's physical and mental health can be promoted together.

Keywords: bodybuilding, 8-week intervention, self-esteem

大学生社会支持与锻炼行为的关系及其链式中介效应研究

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摘要 在全民健身战略和迈向体育强国的大背景下,体育锻炼已经成为人们生活的一部分内容。而大学生作为社会未来发展主力,其体育锻炼意识及锻炼行为在日后都将对社会的体育事业发展产生巨大影响,故研究大学生体育锻炼行为的影响因素以及如何能更好促进大学生体育锻炼行为,具有十分重要的意义。本研究目的是研究大学生的社会支持与锻炼行为之间的关系,揭示锻炼自我效能、锻炼动机在其中的内在作用机制,为促进大学生锻炼提出建议。研究主要采用问卷法,使用《体育活动等级量表(PARS-3)》、《社会支持评定

量表》、《锻炼自我效能量表》和《锻炼动机量表（MPAM-R）》对沈阳体育学院 233 名学生进行调查，其中体育专业 116 名，非体育专业 117 名。结果表明：（1）社会支持、锻炼自我效能、锻炼动机与锻炼行为两两之间均显著正相关；（2）大学生社会支持对锻炼行为的直接效应和间接效应均显著。直接效应的效应量为 0.07。间接效应包含了三条路径：通过锻炼自我效能感的中介作用，效应量为 0.80，通过锻炼动机的中介作用，效应量为 0.07；通过锻炼自我效能感到锻炼动机的链式中介作用，效应量为 0.06。结论：当从外部给予大学生社会支持将提升内部锻炼自我效能感和锻炼动机，从而能加强锻炼行为，这是促进锻炼行为可行性较高的外因转化内因的手段。同时在探讨大学生社会支持对锻炼行为的影响时，不能只重视锻炼自我效能和锻炼动机的单独作用，更应该关注锻炼自我效能和锻炼动机的双重作用，并且锻炼自我效能和锻炼动机间还具有一定的顺序性，动机的作用需要通过提升自我效能激发，才能对大学生锻炼行为产生重要影响。研究验证和说明了大学生社会支持、锻炼自我效能、锻炼动机和锻炼行为关系密切，揭示了锻炼自我效能与锻炼动机在社会支持对锻炼行为的影响过程中的机制，有助于深入理解大学生锻炼行为，丰富和发展现有的锻炼理论，为后续更好促进大学生进行锻炼行为提供了一定的理论基础。

关键词 社会支持，锻炼自我效能，锻炼动机，锻炼行为，链式中介

The relationship between College Students' social support and exercise behavior: and its chain mediating effect

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Abstract: Under the background of the national fitness strategy and moving towards a sports power, physical exercise has become a part of people's life. As the main force of social development in the future, college students' physical exercise consciousness and exercise behavior will have a great impact on the development of social sports in the future. Therefore, it is of great significance to study the influencing factors of College Students' physical exercise behavior and how to better promote college students' physical exercise behavior. The purpose of this study is to study the relationship between College Students' social support and exercise behavior, reveal the internal mechanism of exercise self-efficacy and exercise motivation, and put forward suggestions for promoting college students' exercise. Using the questionnaire method, 233 students of Shenyang Institute of physical education were investigated by using the sports activity rating scale (PARS-3), social support evaluation scale, exercise self-efficacy scale and Exercise Motivation Scale (mpam-r), including 116 sports majors and 117 non sports majors. The results show that: (1) there is a significant positive correlation between social support, exercise self-efficacy, exercise motivation and exercise behavior (2) The direct and indirect effects of College Students' social support on exercise behavior are significant. The effect amount of direct effect is 0.07. The indirect effect includes three paths: through the mediating effect of exercise self-efficacy, the effect amount is 0.80, through the mediating effect of exercise motivation, the effect amount is 0.07, and through the chain mediating effect of exercise self-efficacy, the effect amount is 0.06. Conclusion: when giving social support to college students from the outside, it will improve the internal exercise self-efficacy and exercise motivation, so as to strengthen exercise behavior, which is a means to promote the transformation of external causes into internal causes with high feasibility of exercise behavior. At the same time, when discussing the impact of College Students' social support on exercise behavior, we should not only pay attention to the separate role of exercise self-efficacy and exercise motivation, but also pay attention to the dual role of exercise self-efficacy and exercise motivation, and there is a certain order between exercise self-efficacy and exercise motivation. The role of motivation needs to be stimulated by improving self-efficacy, Can have an important impact on College Students' exercise behavior. The research verifies and explains the close relationship between College Students' social support, exercise self-efficacy, exercise motivation and exercise behavior, and reveals the mechanism of exercise self-efficacy and exercise motivation in the influence process of social support on exercise behavior, which is helpful to deeply understand college students' exercise behavior and enrich and develop the existing exercise theory, It provides a theoretical basis for the follow-up to better promote college students' exercise behavior.

Keywords: social support, exercise self-efficacy, exercise motivation, exercise behavior, chain intermediary

开放式运动和封闭式运动大学生视觉空间工作记忆的特征研究-来自 fNIRS 的证据

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摘要 研究目的: 视觉空间工作记忆 (VSWM) 是工作记忆的重要组成部分之一, 对工作记忆具有非常重要的影响。已有证据表明运动能够促进工作记忆的发展, 但有研究发现开放式和封闭式运动会对工作记忆产生不同程度的影响。而 VSWM 作为另一种重要的认知功能, 是否也会受到不同运动类别的影响, 其结论尚不一致。因此本研究将结合 fNIRS 技术, 探究开放式和封闭式运动项目大学生 VSWM 的特征差异。

研究方法: 为探究长期进行开放式和封闭式专项运动的大学生 VSWM 的特征及内在脑神经生理机制, 采用组间实验设计, 因变量: 正确率、反应时指标和含氧血红蛋白浓度变化值, 自变量: 不同组别。在校园内选取 81 名被试参与本实验, 使用《PAQ-A》和《锻炼方式问卷》对他们的运动项目和运动强度进行调查和筛选, 将他们分为三组: 开放式运动组 27 名 (入选标准: 在校进行羽毛球、乒乓球等专项运动, 并且在过去 6 个月中, 每周进行三次、每次 90 分钟相关专项运动训练的被试); 封闭式运动组 27 名 (入选标准: 在校进行 100 米、200 米等专项运动, 并且在过去 6 个月中, 每周进行三次、每次 90 分钟相关专项运动训练的被试); 无运动组 27 名 (入选标准为非体育专业学生, 并且在过去的 6 个月中, 无固定的运动锻炼习惯, 并且排除开放式专项运动和封闭式专项运动的被试)。本研究采用视觉空间工作记忆任务 (VWMT) 对被试的视觉空间工作记忆进行测量, 运用 E-prime3.0 软件编制实验程序, 收集被试视 VWMT 的正确率和反应时数据, 同时利用 fNIRS 设备实时监测被试脑区不同通道的神经生理活动。采用单因素方差分析分别对行为学数据和近红外数据进行处理。

研究结果:

(1) 在 VWMT 任务的反应时上, 不同运动类别主效应显著 ($F=58.49, p=0.000<0.05$), 其中开放式运动组的反应时显著快于封闭式运动组和无运动组。在 VWMT 任务的正确率上, 不同运动类别主效应不显著 ($F=0.22, p=0.802>0.05$)。

(2) 在 fNIRS 测量含氧血红蛋白浓度的 β 值结果显示, 开放式运动组和封闭式运动组在进行 VWMT 任务时背外侧前额叶和额极区得到明显激活, 在 Ch2、Ch3、Ch5、Ch6、Ch9、Ch10、Ch13、Ch18、Ch21 中不同运动类别的主效应均显著, 在 Ch5、Ch6、Ch9、Ch13、Ch18、Ch21 中封闭式运动组的激活水平显著高于无运动组; 在 Ch2、Ch3、Ch10 中开放式运动组的激活水平显著高于封闭式运动组和无运动组。

研究结论:

进行开放式和封闭式运动的大学生在视觉空间工作记忆能力上比不运动的大学生表现更好, 并且进行开放式运动大学生在视觉空间工作记忆能力的可塑性上表现出更多的优势。

关键词 大学生, fNIRS, 视觉空间工作记忆, 开放式运动, 封闭式运动

Characterization of visuospatial working memory in open- and closed-motion college students-evidence from fNIRS

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Abstract: Objective: Visuospatial working memory (VSWM) is one of the critical components of working memory and significantly impacts working memory. Exercise has been shown to promote the development of working memory, but some studies have found that open-, and closed-motion exercises can affect working memory to different degrees. The findings on whether VSWM, another crucial cognitive function, is also influenced by different

exercise categories are inconsistent. Therefore, this study will investigate the differences in the characteristics of VSWM between college students in open and closed sports programs in conjunction with the fNIRS.

Methods: To investigate the characteristics and intrinsic brain neurophysiological mechanisms of VSWM in college students who performed open and closed specific sports for a long time, a between-groups experimental design was used with dependent variables: correct rate, reaction time index, and oxygenated hemoglobin concentration change values, and independent variables: different groups. Eighty-one subjects were selected on campus to participate in this experiment, and their exercise programs and exercise intensities were investigated and screened using the PAQ-A and the Exercise Pattern Questionnaire. They were divided into three groups: 27 in the open exercise group (inclusion criteria: subjects who performed particular sports such as badminton and table tennis at school, and who performed relevant special sports training three times a week for 90 minutes each time in the past 6 months (27 subjects who played 100m, 200m, etc. at school, and had been training for 90 minutes three times a week for the past 6 months); 27 subjects in the no-sport group (27 subjects who were not majoring in physical education and had no regular exercise habits in the past 6 months, and who were excluded from the open and closed sports groups). (subjects with open and closed sports were excluded). In this study, the visuospatial working memory task (VWMT) was used to measure the subjects' visuospatial working memory. E-prime 3.0 software was used to prepare the experimental program and collect the correct rate and reaction time data of the subjects' visual VWMT, while the fNIRS device was used to monitor the neurophysiological activities of different channels in the subjects' brain regions in real-time. One-way ANOVA was used to process the behavioral and NIR data separately.

Results:

(1) On the reaction time of the VWMT task, the main effect of different motor categories was significant ($F=58.49, p=0.000<0.05$), with the open motor group having a significantly faster reaction time than the closed motor and no motor groups. On the correctness of the VWMT task, the main effect of different motor categories was not significant ($F=0.22, p=0.802>0.05$).

(2) The results of β -values of oxygenated hemoglobin concentration measured at fNIRS showed that the open and closed motor groups were significantly activated in the dorsolateral prefrontal and frontopolar regions during the VWMT task. The main effects of different motor categories were significant in Ch2, Ch3, Ch5, Ch6, Ch9, Ch10, Ch13, Ch18, and Ch21, and in Ch5, Ch6, Ch9, Ch13, Ch18, Ch21 in the closed exercise group were significantly more activated than the no-exercise group; in Ch2, Ch3, Ch10 in the open exercise group were significantly more activated than the closed exercise and no-exercise groups.

Conclusions:

College students who performed open and closed exercises performed better than those who did not exercise in visuospatial working memory capacity, and college students who performed open exercises showed more plasticity in visuospatial working memory capacity.

Keywords: College students, fNIRS, visual-spatial working memory, open exercise, closed exercise

5.9“学校心理专业委员会”分组展贴报告

课程思政与大学生心理健康：文化自信的中介作用

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摘 要 一直以来，国家高度重视大学生心理健康工作。研究表明，高校德育在提升大学生文化认同、维护大学生心理健康方面起着重要作用。因此，从德育开展的视角出发，探索提升大学生心理健康水平的德育路径显得尤为重要。课程思政是高校德育落实“立德树人”根本任务，以社会主义核心价值观教育为核心内容，构建全员全过程全方位的大学生思想政治教育体系的综合性教育理念。本研究以大学生为研究对象，研究一

探索了课程思政的内涵与结构,并编制了用以测评课程思政开展情况的问卷,研究二以 578 名大学生为被试,采用自编问卷,探讨了课程思政开展情况与大学生心理健康的关系,以及文化自信的中介作用。研究一结果显示:(1)问卷的内部一致性系数为 0.96,在验证性因素分析中, $\chi^2/df=3.44$,RMSEA=0.07,CFI=0.91,NFI=0.87,IFI=0.91,问卷拟合指标良好;(2)女生对课程思政的评价显著高于男生($t=-2.66, p<0.01$),高年级的评价显著高于低年级($F=19.46, p<0.001$),文科生的评价显著高于理科生($F=7.32, p<0.01$),党员的评价显著高于非党员($t=3.47, p<0.01$)。研究二结果显示:(1)课程思政、文化自信和心理健康间两两存在显著相关,大学生对课程思政的评价显著正向预测大学生的幸福感,而且显著负向预测大学生的焦虑和抑郁。文化自信部分中介课程思政与幸福感的关系(effect = 0.20, 95%CI = [0.12, 0.31]),而且文化自信在课程思政与焦虑抑郁之间起部分中介作用(effect = -0.29, 95%CI = [-0.49, -0.15])。据此,得出以下结论:(1)用以测评高校课程思政开展情况的问卷由思政课程、专业课程、通识课程、实践课程及校园文化五个维度构成,具有较好的信效度,可作为测评高校德育开展情况的参考工具。(2)不同性别、年级、专业和政治面貌的大学生在课程思政的评价上存在显著性差异。(3)课程思政的开展能够提高大学生的心理健康水平,这一影响是以文化自信为中介发生的。本研究为测评高校课程思政的开展情况提供了可靠的测量工具,为推进课程思政改革,拓宽大学生文化自信教育路径,提升大学生心理健康水平提供了借鉴。

关键词 课程思政, 文化自信, 心理健康, 大学生

Curriculum ideology and college students' mental health: the mediating role of cultural confidence

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Abstract: For a long time, our country attaches great importance to the mental health of college students. The research shows that moral education plays an important role in enhancing the cultural identity and maintaining the mental health of college students. Therefore, from the perspective of moral education, it is particularly important to explore the path of moral education to improve the mental health of college students. Curriculum ideology is a comprehensive educational concept, which is the fundamental task of moral education in universities. It is an educational concept to construct an all-round ideological and political education system for college students in the whole process with the education of socialist core values as the core content. Taking college students as the research object, the first study explored the connotation and structure of curriculum ideology, and designed a questionnaire to test the development of curriculum ideology. In the second study, 578 college students were selected as subjects, and the self-compiled questionnaire was used to explore the relationship between the development of curriculum ideology and college students' mental health, as well as the mediating effect of cultural confidence. The results of the first study showed that: (1) the internal consistency coefficient of the questionnaire was 0.96. In the confirmative factor analysis, $\chi^2/df=3.44$, RMSEA=0.07, CFI=0.91, NFI=0.87, IFI=0.91, and the fitting index was well. (2) Female students' evaluation of curriculum ideology is significantly higher than that of male students ($t=-2.66, p<0.01$). The evaluation of higher grades on curriculum ideology was significantly higher than that of lower grades ($F=19.46, p<0.001$). The evaluation of liberal arts students on curriculum ideology was significantly higher than that of science students ($F=7.32, p<0.01$). The evaluation of party members on curriculum ideology was significantly higher than that of non-party members ($t=3.47, p<0.01$). The results of the second study showed that: (1) there was a significant correlation between curriculum ideology, cultural confidence and mental health. The development of curriculum ideology significantly positively predicted the happiness of college students, and negatively predicted the anxiety and depression of college students. Cultural confidence partially mediated the relationship between curriculum ideology and happiness (effect = 0.20, 95%CI = [0.12, 0.31]), and cultural confidence played a partial mediating role between curriculum ideology and anxiety and depression (effect = -0.29, 95%CI = [-0.49, -0.15]). Therefore, the following conclusions could be drawn: (1) the curriculum ideology questionnaire is composed of five dimensions: ideological

and political courses, professional courses, general courses, practical courses and campus culture. It has good reliability and validity and can be used as a tool to evaluate the development of moral education in colleges. (2) There are significant differences in the evaluation curriculum ideology among college students of different genders, grades, majors and political status. (3) The development of curriculum ideology can improve the mental health of college students, which is mediated by cultural confidence. This study provides a reliable measuring tool for evaluating the development of curriculum ideology, and provides reference for promoting the reform of curriculum ideology, broadening the educational path of college students' cultural confidence, and improving their mental health.

Keywords: curriculum ideology, cultural confidence, mental health, college students

认知重评能力对大学生主观幸福感的影响：一个有调节的中介模型

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摘 要 探讨认知重评能力和主观幸福感的关系，以及生命意义感在二者关系间的中介作用和家庭社会经济地位对这一中介作用的调节作用。选取平均年龄为 20.30 岁的 503 名大学生被试，采用情绪调节问卷、主观幸福感受量表、中文生命意义感量表和客观社会经济地位问卷进行检验。结果显示（1）认知重评能力显著正向预测主观幸福感；（2）生命意义感在认知重评能力和主观幸福感之间起到部分中介作用；（3）认知重评能力经由生命意义感影响主观幸福感的中介作用受到家庭社会经济地位的调节。具体而言，生命意义感的中介作用只存在于高家庭社会经济地位的个体中，而在低家庭社会经济地位的个体中不存在上述中介作用。

关键词 认知重评能力，主观幸福感，生命意义感，家庭社会经济地位

The Relationship between Cognitive Reevaluation Ability and Subjective Well-being: A Moderated Mediation Model

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Abstract: To explore the relationship between cognitive reevaluation ability and subjective well-being, the mediating role of the meaning in life and the moderating effect of social economic status on the mediating process, Emotion Regulation Questionnaire (ERQ), the Subjective Well-being (SWB), the Meaning in life Questionnaire of China (C-MLQ) and the Questionnaire of Socioeconomic were completed among 503 college students. The results indicated that: (1) cognitive reevaluation ability predicted subjective well-being; (2) the meaning in life played a partially mediated role in the relationship between cognitive reevaluation ability and subjective well-being; (3) social economic status moderated the mediation effect of the meaning in life on the relationship between cognitive reevaluation ability and subjective well-being. Specifically, the mediation effect of the meaning in life was only found in high social economic status individuals, but not in low self-esteem ones.

Keywords: cognitive reevaluation ability, subjective well-being, the meaning in life, social economic status

青少年欺凌受害与创伤后应激障碍的关系：一个有调节的中介模型

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摘 要 校园欺凌是一种特殊类型的攻击行为，欺凌受害者可能会反复和持续性地遭受到身体、言语、关系以及网络等形式的欺凌，从而出现严重的身心损害。受欺凌经历是一种创伤经历，能够引发青少年一系列的消极心理结果，如焦虑不安、易受惊吓、闪回受害情境等，甚至出现睡眠障碍、出汗头晕等生理反应，表现出创伤后应激障碍（PTSD）症状。此外，受欺凌经历也会通过降低青少年的安全感来引发其产生 PTSD。根据破碎世界假设，受欺凌经历可能会破坏青少年原有对于自我、他人和世界的稳定信念，导致其认为自我是没有价值的、他人是不值得信赖的、世界是不可控制的，从而降低了青少年的安全感，进而促发了 PTSD 的

出现。不过,由于男生和女生在认知和应对方式上存在差异,他们对于受欺凌经历的敏感性也可能不同,因而性别可能在上述中介中起调节作用,当前较少有研究对此进行过深入探讨。基于此,本研究采用特拉华欺凌受害量表、修订后的 DSM-5 的 PTSD 核查表、安全感量表等对安徽省 4853 名高中生进行了问卷调查,并利用结构方程模型来检验中介和调节作用。研究发现:欺凌受害可以直接正向预测创伤后应激障碍($\beta = 0.35, p < 0.001$);在加入安全感这一中介变量后,欺凌受害对创伤后应激障碍的直接路径系数仍旧显著($\beta = 0.14, p < 0.001$),且安全感在欺凌受害与 PTSD 之间的中介效应显著 [β (95% CI) = 0.21 (0.18~0.23), $p < 0.001$]。性别调节了欺凌受害与安全感以及欺凌受害与 PTSD 之间的关系;与男生相比,女生的欺凌受害对其安全感和 PTSD 的影响程度更大。这些结果说明了,欺凌受害不仅会直接导致青少年产生 PTSD,也会通过降低其安全感进一步导致 PTSD;女生对于受欺凌经历的敏感性比男生更强,出现低安全感和高 PTSD 的倾向性更高。

关键词 欺凌受害, 创伤后应激障碍, 安全感, 性别差异, 青少年

The Relation between Bullying Victimization and Posttraumatic Stress Disorder in Adolescents: A Moderated Mediation Model

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Abstract: School bullying is a special type of aggressive behavior. The victims of bullying may experience physical, verbal, relational, and cyber bullying repeatedly and continuously, resulting in serious physical and mental harms. The experience of being bullied is a traumatic experience, which may cause a series of negative psychological results of adolescents, such as anxiety, susceptibility to fright, flashback to the injured situation. Adolescents even appear sleep disorder, sweating, dizziness and other physiological reactions, showing the symptoms of post-traumatic stress disorder (PTSD). In addition, the experience of being bullied can also trigger PTSD through reducing their sense of safety. According to the shattered assumptions, the experience of being bullied may destroy the adolescents' original stable beliefs about themselves, others and the world, leading them to feel that the self is worthless, others are not trustworthy, and the world is uncontrollable, thus reducing the sense of safety of adolescents and promoting the emergence of PTSD. However, due to the differences in cognition and coping styles between boys and girls, their sensitivity to bullying victimization may be different. Therefore, gender may play a moderating role in the above mediating effect. However, few studies have conducted in-depth discussions on this, based on this, this study used the Delaware bullying victimization scale, modified DSM-5 PTSD checklist and sense of safety scale to investigate 4853 senior high school students in Anhui Province, and used the structural equation model to test the mediation and moderation effects. The results showed that: bullying victimization had direct and positive effect on PTSD ($\beta = 0.35, p < 0.001$); after adding the variable of sense of safety, the direct path coefficient of bullying victimization to PTSD was still significant ($\beta = 0.14, p < 0.001$), and the mediating effect of sense of safety between bullying victimization and PTSD was significant [β (95% CI) = 0.21 (0.18 ~ 0.23), $p < 0.001$]. Gender moderated the relation between bullying victimization and sense of safety, and the relation between bullying victimization and PTSD; compared with boys, bullying victimization in girls had a greater effect on their sense of safety and PTSD. These results show that bullying victimization can not only lead to PTSD in adolescents directly, but also lead to PTSD through reducing their sense of safety; girls are more sensitive to the experience of being bullied than boys, and are more prone to low level of sense of safety and high level of PTSD.

Keywords: bullying victimization, PTSD, sense of safety, gender difference, adolescents

团体模式下班级心理委员共情能力培训的效果研究

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摘要 班级心理委员是学校危机预警干预中的重要一环,是宣传心理健康知识的得力助手。对班级心理委

员的胜任力培训有助于拓宽心理健康教育的视角。虽然我国高校普遍都设置班级心理委员一职，也有对心理委员有做相应的培训，但缺少具有针对性能力培训。共情能力是心理委员与本班同学建立良好的人际关系的基础，也是心理委员顺利开展心理工作的必备技能。本研究的目的在于探讨团体心理辅导模式下对班级心理委员共情能力培训的效果研究。团体辅导设计方案围绕观点取代、同情关怀、幻想力、身心忧患四个维度进行团辅设计，共分为六个单元。方法：采用方便抽取法抽取 28 位班级心理委员，其中女生 16 名，占比 57.2%；男生 12 名，占比 42.8%。随机分配为对照组 14 名和实验组各 14 名。对照组不接受任何处理；实验组进行为期 12 个课时，共 6 个单元的共情能力团体辅导培训。两组前后均采用杰弗逊的共情量表（IRI-C）进行测量。研究结束后对对照组进行与实验组相同的团辅辅导培训。研究结果：干预前两组共情能力差异无统计学意义（ $p>0.05$ ），具有可比性。对照组前后共情能力差异分数并无明显差异（ $p>0.05$ ）；实验组前后差异性显著（ $p<0.05$ ）；具体而言，在身心忧患维度上差异显著（ $p<0.001$ ），在其他维度上不具有统计学意义。结论：共情能力团体心理辅导培训对班级心理委员的共情能力的提升有一定的积极效果，具有良好的实效性，可以作为提高班级心理委员胜任力的方式之一。

关键词 共情能力，心理委员，团体辅导

Research on the Effect of Empathy Training for Class Psychological Committed Members in Group Mode

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Abstract: Class psychological committee members are an important part of the school's crisis warning intervention. They are a powerful assistant to promote mental health knowledge for classmates. Competency training for class psychological committee members can help university to broaden the perspective of mental health education. Although colleges and universities in our country generally set up the position of class psychological committee, and has done some corresponding training, but there is a lack of targeted ability training. Empathy is the basis ability for the psychological committee to establish a good interpersonal relationship with the classmates, and it is also an essential skill for the psychological committee to carry out psychological work smoothly. The purpose of this study is to explore the effect of empathy training for class psychological committee members under the group psychological counseling model. The group counseling design is divided into six units based on the four dimensions of viewpoint substitution: sympathy and care, fantasy, and physical and mental distress. A convenient sampling method was used to select 28 class psychological committee members, of which 16 were girls, accounting for 57.2%, and 12 were boys, accounting for 42.8%. They were randomly assigned to 14 in the control group and 14 in the experimental group. The control group did not receive any treatment; the experimental group received 12 class hours and a total of 6 units of empathy group counseling training. Both groups were measured by Jefferson's Empathy Scale (IRI-C). After the study, the control group was given the same group counseling training as the experimental group. Before the intervention, there was no statistically significant difference in empathy between the two groups ($p>0.05$), so they were comparable. There is no significant difference in empathy scores before and after the control group ($p>0.05$). The difference between before and after the experimental group is significant ($p<0.05$); specifically, there is a significant difference in the dimensions of physical and mental distress ($p<0.001$). But in other dimensions, there is not statistically significant. The empathy ability group psychological counseling training has a certain positive effect on the improvement of the empathy ability of the class psychological committee members. It has good practical results and can be used as one of the ways to improve the competence of the class psychological committee members.

Keywords: empathy, psychological commissar, group counseling

家庭社会经济地位和大学生学习倦怠的关系：主观幸福感的中介作用和心理弹性的调节作用

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摘要 **目的** 家庭社会经济地位是影响大学生学习倦怠的重要因素; 本研究旨在探讨家庭社会经济地位和学习倦怠的关系以及主观幸福感在其中的中介作用和心理弹性在其中的调节作用。**方法** 以云南省 550 名大学生为研究对象, 采用问卷法对其家庭社会经济地位、学习倦怠、主观幸福感和心理弹性进行调查。**结果** (1) 在控制性别和年龄后, 家庭社会经济地位能够显著负向预测学习倦怠; (2) 主观幸福感在家庭社会经济地位和学习倦怠的关系中起中介作用; (3) 家庭社会经济地位对学习倦怠的直接作用和主观幸福感在二者关系中的中介作用均会受到心理弹性的调节; 低心理弹性个体的学习倦怠水平随家庭社会经济地位的降低而显著提高, 高心理弹性个体的学习倦怠水平随主观幸福感的提高而显著降低。**结论** 研究结果支持家庭社会经济地位和学习倦怠的关系是一个有调节的中介模型, 这对于制定大学生学习倦怠的干预和预防措施具有重要意义。**关键词** 家庭社会经济地位, 学习倦怠, 主观幸福感, 心理弹性

Relationship between Family Socioeconomic Status and Learning Burnout of College Students: The Mediating Role of Subject Well-being and the Moderating Role of Resilience

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Abstract: *jective* Learning burnout affects the positive development of College Students. The present study aimed to investigate the relationship between Family Socioeconomic Status (FSMS) and learning burnout, as well as the mediation effect of subject well-being and the moderation effect of resilience in this relation. **Methods** 550 Chinese college students from Yunnan completed a questionnaire measuring the research variables in this study. **Results** indicated that: (1) after controlling for participants' gender and age, FSMS negatively and significantly predicted learning burnout; (2) subject well-being partially mediated the relationship between FSMS and learning burnout; and (3) the direct effect of FSMS on learning burnout and the mediation effect of subject well-being were moderated by resilience. The level of learning burnout of individuals with low resilience increased significantly with the decrease of FSMS, and the level of learning burnout of individuals with high resilience decreased significantly with the increase of subjective well-being. **Conclusion** The present findings support the moderated mediation model underlying the relationship between FSMS and learning burnout. This also has significant implications for formulating prevention and intervention measures on learning burnout among college students.

Keywords: family socioeconomic status, learning burnout, subject well-being, resilience

青少年校园欺凌与自杀意念的关系：父母关爱和情绪应对方式的中介作用

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摘要 校园欺凌是指在校中故意、重复的伤害他人的身体、心理或情感的攻击性行为。情绪应对是指在应激条件下, 个体着重对问题作出情绪反应以减轻焦虑, 个体采取的情绪应对方式直接影响其对刺激情境的处理方式。青少年自杀已经成为社会广泛关注和重视的公共卫生问题, 尤其在受过校园欺凌的青少年中自杀行为更为常见。所以探讨校园欺凌、父母关爱、情绪应对方式和自杀意念之间的关系尤为重要。研究一为实验研究, 被试是 300 名初中学生, 结果表明, 在不同情境 (欺凌/非欺凌) 的启动下, 被试自杀意念存在显著差异, 进一步研究表明父母关爱的中介作用显著。研究二采用父母关爱问卷、中学生应对方式量表和自杀意

量表对来自山西师范大学附近曾受过校园欺凌事件的 150 名初二学生, 结果发现, 校园被欺凌经历直接影响自杀意念, 且存在三条间接路径: 通过父母关爱的单独中介作用影响自杀意念; 通过情绪应对方式的单独中介作用影响自杀意念; 通过父母关爱和情绪应对方式的链式中介作用影响自杀意念。研究结果也表明情绪应对方式确实是导致自杀意念产生的危险预测因子, 可以对青少年进行思想教育, 转变其应对方式, 同时父母应增加对孩子心理和情感层面的关注和接纳, 减少欺凌经历对其的影响。本研究通过了解青少年校园欺凌经历对自杀意念的影响, 有助于预防以及减少青少年自杀行为。

关键词 青少年, 校园欺凌, 自杀意念, 父母关爱, 情绪应对

The relationship between adolescent bullying and suicidal ideation: The mediating effect of parental care and emotional coping style

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Abstract: School bullying refers to intentional and repeated aggressive behavior that hurts others physically, psychologically or emotionally on campus. Emotional coping means that under stress condition, an individual focuses on making emotional response to problems to reduce anxiety, and the emotional coping style an individual adopts directly affects the way he or she handles the stimulus situation. Adolescent suicide has become a public health problem which is widely concerned and emphasized by the society, especially among the adolescents who have been bullied at school. Therefore, it is particularly important to explore the relationship between school bullying, parental care, emotional coping styles and suicidal ideation. Study 1 was an experimental study, involving 300 junior high school students. The results showed that under different situations (bullying/non-bullying) initiation, there were significant differences in suicidal ideation among the participants, and further studies showed that parental care had a significant mediating effect. Study with parents care questionnaire, coping style scale for middle school students and suicide ideation scale from shanxi normal university has been bullying near 150 teenager students, found that the campus bullying experience directly affect the suicidal ideation, and three indirect paths: by parents care alone intermediary role influencing suicidal ideation; Influencing suicidal ideation through the separate mediating effect of emotional coping style; Suicidal ideation is influenced by a chain of parental care and emotional coping styles. The research results also show that emotional coping style is indeed a risk predictor of suicidal ideation, and adolescents can be educated to change their coping style. At the same time, parents should pay more attention to and accept their children psychologically and emotionally, and reduce the impact of bullying experience on them. By understanding the impact of bullying experience on suicidal ideation, this study is helpful to prevent and reduce suicidal behaviors among adolescents.

Keywords: teenagers, School bullying, Suicidal ideation, Parental care, Emotional response

条件性恐惧提取消退的性别差异

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摘要 近半个世纪以来, 记忆再巩固理论不断发展, 认为即便是已经巩固的记忆在检索过程中也会被重新激活, 并暂时地回到不稳定的状态中。基于这一理解, 研究者们提出了条件性恐惧提取消退范式, 即在成功习得条件刺激(CS)和非条件刺激(US)之间的配对规律后, 通过单个 CS 提取使得原有记忆去稳定, 随后进行传统消退训练。这一范式在部分研究中得以验证, 即能够有效地削弱非适应性恐惧记忆表达。然而, 一些研究得出了不同的实验结论, 即该范式未能抑制恐惧复发。对于研究结果不一致的原因, 目前的研究主要聚焦于记忆条件和提取条件等方面的边界条件, 如预期错误、记忆的新旧程度、记忆强度和提取强度等。性别差异作为个体差异性的重要变量, 是边界条件研究中的一个影响因素。研究者在传统消退范式中得出了女性“易习得、难消退”的结论, 但在提取消退范式的研究中仍然比较少见关于性别差异的探索。因此, 本研究将性别作

为关键变量，几何图形作为条件刺激，腕部电击作为非条件刺激，皮肤电反应为恐惧反应指标，探究提取消退范式在恐惧消退效果上是否存在性别差异。结果表明，提取消退范式在恐惧的自发恢复方面无性别差异，所有被试都成功抑制了恐惧的自发恢复。在恐惧重建测试中性别差异显著，其中男性出现恐惧重建效应，女性反之。此外，传统消退范式在恐惧自发恢复和重建测试中均存在性别差异，其中女性出现恐惧的自发恢复和泛化，男性抑制了恐惧的自发恢复但出现了恐惧重建效应。本研究证明了提取消退范式在消退效果上存在性别差异，其中女性的恐惧消退效果最佳；同时证实了提取消退范式的整体消退效果优于传统消退范式。综上，对于女性而言，提取消退范式是一种行之有效的干预方式。这一研究有利于进一步验证提取消退范式的有效性，并有助于澄清其作用对象和范围，为男性和女性患者提供更加个性化的治疗方案，提高临床实用性和治疗有效性。

关键词 条件性恐惧，恐惧消退，提取消退，性别差异

Gender difference in retrieval-extinction of conditioned fear memory

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Abstract: For nearly half a century, the memory reconsolidation theory has been continuously developed, which believed that even memories that have been consolidated will be reactivated during the retrieval process and temporarily return to an unstable state. Based on this understanding, the researchers proposed the retrieval-extinction paradigm. That is, after successfully learning the pairing rule between a conditioned stimulus (CS) and unconditioned stimulus (US), the original memory was un-stabilized by presenting a single CS, and then traditional extinction training is performed. This paradigm has been proven in some studies to weaken the expression of non-adaptive fear memory effectively.

However, other studies have reached different results, indicating that this paradigm failed to suppress the recurrence of fear. According to this, current research mainly focused on the boundary conditions of memory conditions and retrieval conditions to explain the difference between studies, such as prediction error, acquisition time, the intensity of acquisition, and individual differences. Gender difference, as an essential variable of individual differences, is an influential factor in the study of boundary conditions. In the standard extinction paradigm, reaches have concluded that women easily acquire fear memory but are difficult to extinct than men. However, it is relatively rare to explore gender differences in the research of the retrieval-extinction paradigm. Therefore, this study considered gender as a variable, using geometric figures as CS, wrist electric shock as the US, and skin conductance response as an indicator of fear response to explore whether there is a gender difference in the effect of the fear extinction.

The results showed no gender difference in the spontaneous fear recovery of the retrieval-extinction paradigm because all subjects successfully suppressed the spontaneous fear recovery. Nevertheless, there was a significant gender difference in the reinstatement test, in which men showed increased SCR, whereas women did not show any increased SCR. Besides, there were gender differences in the spontaneous fear recovery and reinstatement test of the standard extinction paradigm. After training by this paradigm, women showed increased SCR in spontaneously fear recovery and a tendency to fear generalization. In contrast, men show suppressed spontaneous fear recovery but showed increased SCR in the reinstatement test.

Our study proved that there was a gender difference in the extinction effect of the retrieval-extinction paradigm (women showed the best extinction effect), and verified that the extinction effect of the retrieval-extinction paradigm was better than the standard extinction paradigm. According to the results, we could demonstrate that, especially for women, the retrieval-extinction paradigm is an effective intervention method. It will be beneficial to verify further evidence about the effectiveness of the retrieval-extinction paradigm, clarify the object and scope of the retrieval-extinction paradigm in clinical applications. Our study suggests that the retrieval-extinction paradigm in clinical transformation needs to provide more personalized treatment plans for male and female patients, which

improves clinical applicability and treatment effectiveness.

Keywords: conditioned fear, fear extinction, retrieval-extinction, gender difference

毕业生就业压力与心理健康的关系：有调节的中介效应

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摘要 当下大学生心理危机事件发生频繁,心理健康素质有待不断强化,对毕业生而言会面临就业、考研等压力,其心理健康状况形势日益严峻。已有研究表明,就业压力能够预测个体的心理健康水平,但两者之间的具体作用机制还需进一步探讨。本研究将考察心理弹性在就业压力和心理健康之间的中介作用及主动性人格对上述中介路径的调节作用。采用就业压力量表、心理弹性量表、主动性人格量表和症状自评量表(SCL-90)对2348名毕业生进行问卷调查。有调节的中介模型检验结果显示:(1)就业压力与心理弹性、主动性人格呈显著负相关($r=-0.280, p<0.01$; $r=0.240, p<0.01$),与SCL-90得分呈显著正相关($r=0.495, p<0.01$)。 (2)就业压力对SCL-90得分具有显著的正向预测作用($\beta=0.32, t=27.58, p<0.001$),且当放入中介变量后,就业压力对SCL-90的预测作用依然显著($\beta=0.29, t=24.54, p<0.001$),其中介效应为0.03,占总效应的9.38%。即心理弹性在就业压力和SCL-90之间起部分中介作用,就业压力不仅直接影响毕业生心理健康,还能够通过心理弹性间接影响心理健康。 (3)主动性人格对“就业压力→心理弹性→SCL-90”的直接路径进行调节。即与低主动性人格相比,高主动性人格下就业压力对SCL-90的正向预测效应减少。研究证明心理弹性和主动性人格能够有效减少就业压力对学生心理健康的作用,这对促进大学生心理健康水平提供了一定的理论指导。

关键词 就业压力, 主动性人格, 心理健康

The Relationship between Employment Stress and Mental Health of Graduates: Moderated Mediating Effect

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Abstract: At present, the psychological crisis of college students occurs frequently, and the mental health quality needs to be continuously strengthened. For graduates, they will face the pressure of employment and postgraduate entrance examination, and their mental health situation is increasingly serious. Existing studies have shown that employment stress can predict individual mental health level, but the specific mechanism between the two needs to be further explored. Employment stress scale, mental resilience Scale, proactive personality Scale and Symptom Self-rating Scale (SCL-90) were used to investigate 2348 graduates. The results of moderated mediation model test showed that: (1) employment stress was negatively correlated with mental resilience and proactive personality ($r=-0.280, p<0.01$; $r=0.240, p<0.01$), was significantly positively correlated with SCL-90 score ($r=0.495, p<0.01$). (2) Employment pressure had a significant positive predictive effect on SCL-90 score ($\beta=0.32, t=27.58, p<0.001$), and employment pressure still had a significant predictive effect on SCL-90 score ($\beta=0.29, t=24.54, p<0.001$). The mediating effect was 0.03, accounting for 9.38% of the total effect. In other words, psychological resilience plays a partial mediating role between employment stress and SCL-90. Employment stress not only directly affects graduates' mental health, but also indirectly affects graduates' mental health through psychological resilience. (3) Proactive personality adjusts the direct path of "employment pressure→mental resilience→SCL-90". That is, compared with low proactive personality, the positive prediction effect of employment pressure on SCL-90 is reduced under high proactive personality. The study proves that mental resilience and proactive personality can effectively reduce the effect of employment pressure on students' mental health, which provides certain theoretical guidance for promoting the mental health level of college students.

Keywords: Employment stress, Proactive personality, Mental health

寄宿制高中生领悟社会支持对学习投入的影响：自尊的中介作用及感恩的调节效应

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摘要 学习投入是学生学习心理积极面的重要指标，是学生获得学业成功的关键。本研究从积极心理学视角出发，旨在考察外部环境（社会支持）与寄宿制高中生的学习投入的关系，及其内在作用机制——自尊的中介作用和感恩的调节效应。本研究采用领悟社会支持量表、自尊量表、感恩量表和学习投入问卷对于 384 名 15-19 岁寄宿制高中生（其中男生 188 名，女生 196 名）进行研究，结果表明：（1）寄宿制高中生的领悟社会支持、自尊、感恩和学习投入之间两两存在显著的正相关；（2）采用 Bootstrap 法进行有调节的中介模型检验，结果表明自尊在寄宿制高中生领悟社会支持与其学习投入之间起着部分中介作用，领悟社会支持对于学习投入既有直接影响，又能通过自尊对于学习投入产生间接影响；（3）感恩对自尊的中介作用存在调节效应，具体为感恩调节了“领悟社会支持→自尊→学习投入”这一中介过程的前半路径。因此，寄宿制高中生对其学习投入的影响存在一个有调节的中介模型。研究对提升寄宿制高中生学习投入程度并指导相关理论研究具有参考价值。

关键词 寄宿制高中生，领悟社会支持，学习投入，自尊，感恩

The Relationship between Perceived Social Support and Learning Engagement in the Boarding High School Students: The Mediating Effect of Self-esteem and The Moderating Effect of Gratitude

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Abstract: Learning engagement is an important indicator of students' positive psychology in learning and the key to students' academic success. From the perspective of positive psychology, this research aims to investigate the relationship between social support and boarding high school students' learning engagement, and its internal mechanism—the mediating effect of self-esteem and the moderating effect of gratitude. This study used the Perceived Social Support Scale, Self-esteem Scale, Gratitude Scale, and Learning Engagement Questionnaire to study 384 boarding high school students aged 15-19 (male=188, female=196). The results show that: (1) There is a significant positive correlation between boarding high school students' perceived social support, self-esteem, gratitude, and learning engagement; (2) Bootstrap method is used to conduct a moderated mediation model test, and the results show that self-esteem played a partial mediating role between perceived social support and learning engagement. It is understood that social support has a direct impact on learning engagement, but also has an indirect impact on learning engagement through self-esteem; (3) The mediating role of self-esteem is moderated by gratitude, and the gratitude moderates the first process of perceived social support→ self-esteem→ learning engagement. Therefore, the influence of boarding high school students on their learning engagement has a moderated mediation model. The research has reference value for improving the learning engagement of boarding high school students and guiding relevant theoretical research.

Keywords: Boarding high school students, Perceived social support, Learning engagement, Self-esteem, Gratitude

大学新生心理弹性和生活适应的关系研究

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摘要 高中生脱离原有生活环境，从紧张有序的学习环境进入大学松弛自由的环境后，容易产生适应不良的情况，从而导致长时间不能有效融入新的环境，难以顺利开始新的生活和学习，在这一过程心理弹性是一种应对环境变化的关键因素。心理弹性是个体一系列能力在动态交互作用下，在个体遭遇挫折和不幸时能迅速恢复和良性应对的过程。在对其他群体的研究表明，心理弹性可以显著影响生活适应，但对大学新生群体研究较少，且当前研究多为横向研究。

研究使用生活适应量表和心理弹性量表，对大学新生进行三次追踪，每次追踪间隔两个月，经整理最终收集有效被试 886 人。采用双因子模型检验，发现研究 CFI 和 TLI 分别增加了 0.02 和 0.03，SRMR 减小了 0.01、RMSEA 增加了 0.02，即对加入方法因子后，模型没有显著变好，表明共同方法偏差不明显。相关在 0.46~0.73 之间，且验证性因子分析，信效度均达到可接受标准，随后进行的生活适应量表和心理弹性量表纵向等值性检验表明，均在时间上具有相同的意义和潜在结构关系。交叉滞后模型分析发现，T1 的心理弹性可以显著正向预测 T2 生活适应（ $\beta=0.12$ ， $p<0.001$ ），T2 的心理弹性可以显著正向预测 T3 生活适应（ $\beta=0.13$ ， $p<0.001$ ）；T1 的生活适应可以显著正向预测 T2 心理弹性（ $\beta=0.10$ ， $p<0.001$ ），T2 的生活适应可以显著正向预测 T3 心理弹性（ $\beta=0.09$ ， $p<0.001$ ）。心理弹性的一阶标准化自回归系数为 0.61、0.74，；生活适应的一阶标准化自回归系数为 0.54、0.68，，两量表的自回归系数相差不大。从交叉滞后回归系数来看，两个方向的交叉滞后回归系数均显著，推断心理弹性和生活适应之间存在相互影响关系；高程度的心理弹性可能会使个体有较高的生活适应，而高程度的生活适应可能会使个体有高的心理弹性。研究表明大学新生心理弹性和生活适应存在相互影响的因果关系，因此在后续研究中，可以通过提升大学新生的心理弹性，以促进其生活适应水平。

关键词 大学新生，心理弹性，生活适应，交叉滞后

Study on the Relationship between Resilience and Life Adaptation of College Freshmen

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Abstract: After high school students break away from the original living environment, and enter the relaxed and free atmosphere of college, they are prone to maladaptation. As a result, it is difficult to integrate into the new environment and start a new life and study smoothly. In this process, resilience is a key to cope with environment change. Resilience is a process in which individuals can quickly recover and cope with setbacks and misfortune under the dynamic interaction of a series of ability. Previous studies have shown that resilience can significantly influence life adaptation, but there are few studies on freshmen group, and most of are horizontal studies.

Life Adaptation Scale and Resilience Scale were used to track freshmen for three times, each tracking interval of two months, and finally collected 886 effective questionnaires after sorting. The two-factor model test showed that CFI and TLI increased by 0.02 and 0.03, SRMR decreased by 0.01 and RMSEA increased by 0.02. it indicates that after adding method factors, the model did not significantly better, in other words, the common method bias was not obvious. The correlation between the variables was between 0.46 and 0.73, and confirmatory analysis, reliability and validity reached the accepted standard. The longitudinal equivalence test of life adaptation scale and resilience scale showed that both of them had same significance and potential structure in time. Cross-lag model analysis showed that T2 resilience could significantly positively predict T2 life adaptation ($\beta=0.12$, $P < 0.001$), and T2 resilience could significantly positively predict T3 life adaptation ($\beta=0.13$, $P < 0.001$). Life adaptation in T1 could significantly positively predict resilience in T2 ($\beta=0.10$, $P < 0.001$), and life adaptation in T2 could significantly positively predict resilience in T3 ($\beta=0.09$, $P < 0.001$). The first order normalized autoregressive coefficients of resilience were 0.61 and 0.74. The first-order standardized autoregressive coefficients of life adaptation are 0.54 and 0.68, and there is little

difference in the autoregressive coefficients between the two scales. From the cross-lag regression coefficients, the both directions were significant, it can be inferred that there is an interactive relationship between resilience and life adaptation. In other words, a high degree of resilience may lead to a high level of life adaptation, while a high degree of adaptation may lead to a high level of resilience. This study shows that there is a causal relationship between the resilience of college freshmen and their life adaptation. Therefore, the resilience of college freshmen can be improved to promote their life adaptation in the follow-up research.

Keywords: College freshmen, Resilience, Life adaptation, Cross-lagged regression

乡镇中学心理健康教育工作的现状及对策研究 ——以浙江省 S 镇 T 中学为例

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摘 要 为了解当前乡镇地区的心理健康教育工作现状, 做好乡镇地区中学的心理健康教育和心理支持, 推动中国青少年健康成长。本研究对浙江省 S 镇 T 中学的 24 个班随机选取 48 名学生与本校德育处两名教师进行了连续两学期, 每学期一次的个别式访谈研究。发现该中学学生心理健康问题较为严重, 其中一个班 50 名学生就有 11 名学生出现自残现象。通过进一步的晤谈, 发现乡镇心理健康教育工作主要存在如下问题: (一) 成绩为第一绩效评估模式下的学校与教师重视程度不够 (二) 教师专业化水平不够: 主要表现为学校心理咨询师缺乏伦理知识与专业培训, 心理教师缺乏科学体系的青少年教育知识 (三) 家校合作明显脱节, 心理健康理念的共识性薄弱 (四) 心理普查工作存在缺陷 (五) “不健康”的课堂教育以及家长的成绩焦虑 (六) 心理健康教育学科化严重

指出我们应该在以下方面有所改进, 推动乡镇中学儿童的解放与心理健康成长。(一) 加强学校心理普查, 增加普查次数, 建议至少一学期两次, 多使用科学自查量表, 如 SCI-90 等 (二) 加强家园合作, 让家长了解相关心理健康知识, 做到家园一致性, 转变家长的成绩焦虑 (三) 对全体教师先进行心理健康教育培训, 使课堂教育更“健康” (四) 提升教师专业化水平, 对学校心理咨询师提供连续受训和连续督导的机会, 提升其伦理共识或可向校外正规且具有胜任力的相关机构购买学生心理咨询服务。

希望通过本研究能够对我国其他乡镇中学心理健康教育工作起到参考和启发意义。

关键词 乡镇中学, 心理健康教育工作, 问题, 对策研究

Study on the Problems and Countermeasures of Psychological Health Education in Township Middle Schools——Take T Middle School in S Town, Zhejiang Province as an example

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Abstract: In order to understand the current situation of mental health education in rural areas, we will provide mental health education and psychological support for middle schools in rural areas and promote the healthy growth of Chinese youth. In this study, 48 students from 24 classes of T Middle School in S Town, Zhejiang Province were randomly selected and two teachers from the Moral Education Department of the school conducted an individual interview study for two consecutive semesters, once every semester. It was found that the mental health problems of the students in this middle school were more serious. Among the 50 students in one of the classes, 11 students suffered self-harm. Through further interviews, it was discovered that the mental health education work in towns and villages mainly has the following problems: (1) Schools and teachers under the performance evaluation model under the academic performance first (2) Insufficient professionalism of teachers: mainly manifested as the lack of ethical knowledge and professional training of school counselors, and the lack of scientific system of youth education

knowledge for psychological teachers(3) The home-school cooperation is obviously out of touch, and the consensus on mental health concepts is weak(4) Defects in student psychological assessment(5) "Unhealthy" classroom education and parents' anxiety about their children's academic performance(6) The disciplinaryization of mental health education is serious.

It is pointed out that we should make improvements in the following areas to promote the liberation and mental health of children in township middle schools.(1) Strengthen students' psychological universal assessment, increase the frequency of assessment, it is recommended to use at least twice a semester, and use more scientific self-examination scales, such as SCL-90 and so on(2) Strengthen homeland cooperation, let parents understand relevant mental health knowledge, achieve homeland consistency, and change parents' anxiety about their children's academic performance(3) Conduct mental health education and training for all teachers first to make classroom education more "healthy"(4) Improve the professionalism of teachers, provide continuous training and continuous supervision opportunities for school counselors, and enhance their ethical consensus or we can purchase student psychological counseling services from a formal and competent institution outside the school.

Hope that this research can provide reference and enlightenment for the mental health education of other rural middle schools in our country.

Keywords: Township Middle Schools, Psychological Health Education, Problems, Countermeasure research

领悟社会支持对留守中学生抑郁的影响：一个条件过程模型

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摘要 留守儿童是我国一个人数众多的弱势群体，长期与父母处在分离状态会导致留守儿童家庭功能的弱化，进而导致各种情绪和情感问题，尤其是较高的抑郁水平。根据抑郁的人际关系理论，高质量的人际关系能有效降低个体抑郁的风险，如领悟社会支持水平高的中学生会更多地采取积极应对，从而减少负性情绪的产生。然而，也并非所有领悟社会支持水平低或较少采取积极应对的个体都会表现出抑郁症状，二者的关系可能受其他因素，如性别的调节。鉴于以往关于留守中学生领悟社会支持、积极应对与性别之间交互作用的研究相对匮乏，本研究将建立一个条件过程模型，探究领悟社会支持对抑郁的影响以及积极应对的中介作用和性别的调节作用。研究被试为 729 名留守中学生($M=14.95$; $SD=1.58$)，男生占 55.6%。结果表明：领悟社会支持不仅可以直接负向预测抑郁($\beta=-0.32$, 95% $CI=-0.39\sim-0.24$)，也可以通过积极应对负向预测抑郁，同时该中介路径后半段在不同性别条件下 Bootstrap 置信区间的显著性存在差异($\beta_{\text{女}}=-0.09$, 95% $CI=-0.14\sim-0.04$; $\beta_{\text{男}}=-0.03$, 95% $CI=-0.08\sim0.02$)，表明性别可能在积极应对对抑郁的影响中起调节作用。简单斜率检验表明，在女生群体中，随着积极应对的增加，抑郁表现出明显的下降趋势($\beta=-0.34$, $t=-6.42$, $p<0.001$)；而在男生群体中，随着积极应对的增加，抑郁的下降趋势变缓($\beta=-0.21$, $t=-4.28$, $p<0.001$)。研究结果支持并拓展了抑郁的保护性因素及性别差异的理论观点。基于本研究结果，在学校心理健康教育工作中，帮助留守中学生提高对社会支持的领悟能力，制定积极应对培养训练方案并加以实施，尤其对女生而言提高其积极应对能力是减轻留守中学生抑郁情绪的重要途径。

关键词 抑郁，领悟社会支持，积极应对，性别差异，留守中学生

Perceived Social Support and Depression in left-behind middle school Students: A Conditional Process Analysis

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Abstract: Left-behind children are a large number of vulnerable groups in our country. Being separated from their parents for a long time will lead to the weakening of the left-behind children's family functions, which will lead to various emotions and affection problems, especially high levels of depression. According to the theory of depressed

interpersonal relationships, High-quality interpersonal relationships can effectively reduce the risk of individual depression. For example, middle school students with high levels of perceived social support will take more positive coping to reduce the generation of negative emotions. However, not all individuals who have a low level of perceived social support or who take less active responses will show symptoms of depression. The relationship between the two may be moderated by other factors, such as gender. In view of the relative lack of previous studies on the interaction between left-behind middle school students' perception of social support, positive coping, and gender. This study will establish a conditional process model to explore the impact of perceived social support on depression, the mediating role of positive coping, and the moderating role of gender. The study participants were 729 left-behind middle school students ($M = 14.95$; $SD = 1.58$), with male students accounting for 55.6%. The results show that perceived social support can not only directly predict depression negatively ($\beta = -0.32$, 95% $CI = -0.39 \sim -0.24$), but also indirectly predict depression through positive coping. At the same time, the second half of the mediation path has different significance in the Bootstrap confidence interval under different gender conditions ($\beta_{\text{female}} = -0.09$, 95% $CI = -0.14 \sim -0.04$; $\beta_{\text{male}} = -0.03$, 95% $CI = -0.08 \sim 0.02$), indicating that gender may play a moderating role in positive coping with the impact on depression. The simple slope test shows that in the female group, with the increase of positive coping, depression shows a significant downward trend ($\beta = -0.34$, $t = -6.42$, $p < 0.001$). While in the male group, with positive coping increase, the downward trend of depression becomes slower ($\beta = -0.21$, $t = -4.28$, $p < 0.001$). The research results support and expand the theoretical viewpoints of protective factors for depression and gender differences. Based on the present study, to reduce the risk of left-behind middle school students' depression, it is extremely important to improve their ability to perceived social support, formulating and implementing a positive coping style training program. It is useful to help them improve their positive coping ability, especially for girls.

Keywords: Depression, Perceived social support, Positive coping, Gender differences, Left-behind middle school students

错失恐惧对中学生学业拖延的影响：有调节的中介模型

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摘要 青少年的学业拖延现象一直是普遍存在的，这不仅会滋生消极情绪，更严重影响了他们的学业成绩和未来发展。以往有研究发现错失恐惧与拖延呈正相关，由错失恐惧引发的问题行为可能会造成精力分散，从而加剧拖延，但关于错失恐惧对学业拖延的影响机制还未有太多探究。前人依据时间折扣理论认为，人们使用社交媒体时间越长，频率越高，则拖延程度越严重，许多研究也发现自我控制与拖延关系密切，所以推测自我控制会调节社交媒体使用对拖延的影响。同时大量研究表明，基于自我决定理论，个体的错失恐惧水平越高，其问题性社交媒体使用就越严重。因此本研究探讨错失恐惧与学业拖延之间的关系，并提出一个有调节的中介模型，考察问题性移动社交媒体使用的中介效应和自我控制的调节效应。研究采用问卷调查的方式，对 500 名中学生进行施测，测量工具包括错失恐惧量表、问题性移动社交媒体使用量表、自我控制量表、中学生学业拖延量表。结果表明：（1）错失恐惧显著正向预测学业拖延。（2）错失恐惧会增加青少年的问题性移动社交媒体使用，进而增加学业拖延，即问题性移动社交媒体使用在错失恐惧与学业拖延之间起着中介作用。（3）错失恐惧通过问题性移动社交媒体使用对学业拖延行为的间接影响会受自我控制的调节，表现为在自我控制水平低的个体中，这种效应更为显著。综上所述，问题性移动社交媒体使用是错失恐惧与中学生学业拖延的重要中介机制，且对中学生学业拖延的影响受自我控制的调节。因此，本研究不仅有助于揭示青少年学业拖延的潜在作用机制，而且启示我们，在开展针对中学生学业拖延的措施时，我们可以从环境和个体两方面综合考虑，既要降低完成任务与翻阅手机之间即时价值的差距，将翻阅手机的成本提高，比如关机或者将手机放到远离学习地点的地方，使他们不能过度使用移动社交媒体，同时也要从他们个人身上下手，提高自我控制的能力。

关键词 学业拖延，错失恐惧，问题性移动社交媒体使用，自我控制

The Influence of Fear of Missing on Academic Procrastination of Middle School Students: A Moderated Mediation Model

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Abstract: The phenomenon of adolescents' academic delays has always been widespread, which not only breeds negative emotions, but also seriously affects their academic performance and future development. Previous studies have found that there is a positive correlation between the fear of missing out and procrastination. Problem behaviors caused by the fear of missing out may cause distractions and aggravate procrastination. However, there has not been much research on the mechanism of the impact of the fear of missing out on academic procrastination. Based on the time discount theory, predecessors believed that the longer people use social media and the higher the frequency, the more serious the procrastination. Many studies have also found that self-control is closely related to procrastination, so it is speculated that self-control will regulate the influence of social media use on procrastination. At the same time, a large number of studies have shown that based on the theory of self-determination, the higher the individual's fear of missing out, the more serious their problematic social media use. Therefore, this study explores the relationship between the fear of missing out and academic procrastination, and proposes a moderated mediation model to examine the mediating effect of problematic mobile social media use and the moderating effect of self-control. The study used a questionnaire survey to test 500 middle school students. The measurement tools include the Fear of Missing Scale, the Problematic Mobile Social Media Use Scale, the Self-Control Scale, and the Academic Procrastination Scale for Middle School Students. The results show that: (1) Fear of missing out significantly positively predicts academic procrastination. (2) The fear of missing out will increase the use of problematic mobile social media among young people, which in turn increases academic procrastination. That is, the use of problematic mobile social media plays an intermediary role between the fear of missing out and academic procrastination. (3) The indirect influence of the fear of missing out on academic procrastination through the use of problematic mobile social media will be regulated by self-control, and this effect is more pronounced in individuals with low levels of self-control. To sum up, problematic mobile social media use is an important intermediary mechanism between the fear of missing out and the academic procrastination of middle school students, and the influence of middle school students' academic procrastination is regulated by self-control. Therefore, this research not only helps to reveal the potential mechanism of adolescents' academic procrastination, but also enlightens us that when implementing measures against middle school students' academic procrastination, we can consider both the environment and the individual in a comprehensive manner. The real-time value gap between mobile phones will increase the cost of flipping through mobile phones, such as turning off the phone or placing the phone far away from the place of study, so that they cannot overuse mobile social media. At the same time, they must also start from their own hands to improve self-control ability.

Keywords: academic procrastination, fear of missing out, problematic mobile social media use, self-control

中小学教师非工作时间连通行为对工作重塑的影响： 心理脱离的中介作用

葛文静

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摘 要 随着新通信技术的发展和普及, 人民的生活和工作发生了巨大变化, 便携式移动办公系统应运而生。因此, 员工可以自由选择何时何地除办公室以外的任何地方工作。非工作时间连通行为(work connectivity behavior after-hour, WCBA)成为各行业中的普遍现象, 即员工在非工作时间使用便携式无线设备工作或与工作相关的同事接触。非工作时间连通行为无形中延长了教师们的工作时间, 探究中小学教师非工作时间连通行为作为前因变量所带来的影响, 具有重要的实践意义。本研究基于个体的能动性视角和努力-恢复模型, 采用

非工作时间的工作性通信工具使用行为量表、工作心理脱离量表和工作重塑量表对贵州省 1164 名中小学教师进行问卷调查,探究非工作时间连通行为带来的积极影响。结果发现中小学教师非工作时间连通行为、心理脱离和工作重塑间两两显著相关;非工作时间连通行为正向预测中小学教师的工作重塑;心理脱离在中小学教师非工作时间连通行为与工作重塑之间起部分中介作用。综上,中小学教师适度的非工作时间连通行为有助于其进行工作重塑,产生积极影响。此外,还应关注中小学教师的心理脱离水平,良好的心理脱离有助于教师们工作重塑。

关键词 中小学教师,非工作时间连通行为,心理脱离,工作重塑

The Influence of Work Connectivity Behavior After-hours on Job Crafting among Elementary and Secondary School Teachers: The Mediating Role of Psychological Detachment

Abstract: With the development and popularization of new communication technology, great changes have taken place in people's life and work, and portable mobile office system arises at the right moment. As a result, employees are free to choose when and where to work anywhere other than the office. Work connectivity behavior after-hours (WCBA), in which employees use portable wireless devices to work or interact with work-related colleagues outside of work hours, has become a common phenomenon in many industries. It is of great practical significance to explore the influence of work connectivity behavior after-hours of primary and secondary school teachers as an antecedent variable. In this study, 1164 primary and secondary school teachers in Guizhou Province were surveyed using the Work Connectivity Behavior After-hours Scale, Psychological Detachment Scale as well as Job Crafting Scale based on the individual initiative perspective and the Effort-Recovery Model to explore the positive effects of work connectivity behavior after-hours. The results showed that there was a significant correlation among the work connectivity behavior after-hours, psychological detachment and job crafting of teachers in primary and secondary schools. The work connectivity behavior after-hours positively predicted the job crafting of primary and secondary school teachers. The psychological detachment had a partial mediating effect on the relationship between work connectivity behavior after-hours and job crafting of primary and secondary school teachers. In conclusion, moderate work connectivity behavior after-hours of primary and secondary school teachers is conducive to their job crafting and has a positive impact. In addition, attention should also be paid to the level of psychological detachment of primary and secondary school teachers, a good psychological detachment will help teachers to improve their level of job crafting.

Keywords: Primary and secondary school teacher, Work connectivity behavior after-hours, Psychological detachment, Job crafting

疫情期间大学生网络学习态度与控制感对学习倦怠的影响: 自我决定动机的中介作用

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摘要 新型冠状病毒肺炎的突然爆发,使得学生无法正常返校,只能通过网络进行线上学习。学习方式的突然改变可能对学生的心理健康产生极大影响。学习倦怠是在大学生群体中普遍存在的现象,也是影响学生心理健康的重要因素。本研究通过对计划行为理论和自我决定理论进行整合,以网络学习态度、主观规范和知觉行为控制为自变量,自我决定动机为中介变量,学习倦怠为因变量,建立结构方程模型,探讨疫情期间大学生网络学习态度、主观规范、知觉行为控制、自我决定动机与学习倦怠的关系。研究采用学习态度量表、主观规范量表、学业控制感量表、大学生学习动机量表、大学生学习倦怠调查量表,在 2020 学年春季学期中对 431 名高校学生以网络问卷形式实施调查。结果显示:(1)大学生网络学习态度、主观规范、知觉行为控制与自我决定动机两两之间均呈显著正相关,四者与学习倦怠均呈显著负相关。(2)网络学习态度($\beta=-0.54$,

$P < 0.001$)、知觉行为控制 ($\beta = -1.03, P < 0.001$) 和自我决定动机 ($\beta = -0.59, P < 0.001$) 均对学习倦怠有直接负向影响作用。(3) 自我决定动机在网络学习态度与学习倦怠(中介效应 10.87%), 以及知觉行为控制与学习倦怠(中介效应 48.53%) 之间均起部分中介作用。研究表明, 大学生网络学习态度和知觉行为控制既可以直接影响学习倦怠, 也可以通过自我决定动机间接影响学习倦怠。说明, 计划行为理论的认知变量与自我决定动机相结合的整合理论可以有效解释网络学习情境下大学生学习倦怠的影响因素。研究提示, 可以通过提高大学生对网络学习态度的积极性、学习控制感以及激发其内在学习动机, 降低大学生在网络学习情境下的学习倦怠水平。

关键词 网络学习, 计划行为理论, 自我决定理论, 学习倦怠

The impact of college students' online learning attitude and sense of control on learning burnout during the epidemic: The mediating effect of the self-determination motivation

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Abstract: The sudden outbreak of COVID-19 has left students unable to go back to school normally. Students can only study online through the Internet. The abrupt change in the way of study may have a great influence on the students' mental health. Learning burnout is a common phenomenon among college students, and it is also an important variable that affects students' mental health. This study integrating the theory of planned behavior and the self-determination theory to explore the relationship between online learning attitude, subjective norm, perceived behavior control, self-determination motivation and learning burnout of college students in the context of online learning. The structural equation model was established with online learning attitude, subjective norm and perceptual behavior control as independent variables, self-determined motivation as an intermediary variable and learning burnout as a dependent variable. The study using the Learning Attitude Scale, the Subjective Norm Scale, the Academic Control Scale, the Motivation Scale for College Students and the Learning Burnout Inventory of College Students, surveyed 431 college students by online questionnaire in the spring semester of 2020 academic year. The results show that: (1) Online learning attitude, subjective norm, perceived behavior control and self-determination motivation are significantly and positively correlated with each other, and they are all negatively correlated with learning burnout. (2) Online learning attitude ($\beta = -0.54, P < 0.001$), perceived behavior control ($\beta = -1.03, P < 0.001$) and self-determination motivation ($\beta = -0.59, P < 0.001$) all have a direct negative effect on learning burnout. (3) Self-determination motivation plays a partial mediating effect between online learning attitude and learning burnout (the mediating effect is 10.87%) as well as between perceived behavior control and learning burnout (the mediating effect is 48.53%). Studies show that online learning attitude and perceived behavior control have direct effects on learning burnout, and indirect effects through self-determination motivation. It testifies that the integration theory of self-determination motivation and cognitive variables of the theory of planned behavior can effectively explain the factors of college students' learning burnout. The study suggests that the level of learning burnout can be reduced by improving the students' enthusiasm to online learning, the sense of learning control and the intrinsic motivation of study.

Keywords: online learning, theory of planned behavior, self-determination theory, learning burnout

特质性敬畏与大学生环境意识的关系：普遍性自我的中介作用

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摘要 环境意识是人们对客观存在的生态环境的主观反映, 其核心为对生态环境问题的认识、态度和行为取向(俞继山, 2001)。良好的环境意识能够增进人们的环保行为。随着环境问题日益受到人们的关注, 环

境意识的重要性、影响因素以及如何提高环境意识也成为人们关注和研究的重点。敬畏被定义为一种情感，当人们无法将面临的巨大刺激同化进自己已有的认知结构时，就会产生这种特殊体验。已有研究表明敬畏对增强环境保护主义有积极作用（Huanhuan Zhao et al.,2018）。根据自我建构的相关理论（Shiota et al.,2007）可知，不同的特质性情绪在自我建构的描述中有不同的表现，不同类型的自我建构也会个体的环境意识产生影响，因此，我们尝试以大学生为研究对象，考察特质性敬畏、普遍性自我和环境意识的关系。

采用特质性敬畏量表、中国版环境关心量表（CNEP）和普遍性自我测验对 348 名大学生被试进行调查，旨在探讨特质性敬畏和环境意识的关系以及普遍性自我在两者间的中介作用。结果发现：（1）被试在中国版环境关心量表上的平均得分为 39，标准差为 5.2，处于中上等水平；性别在环境意识上的得分存在显著差异（ $t = -5.56, p < 0.001$ ）， $d = 0.60$ ，处于中等范畴。（2）相关分析结果表明，特质性敬畏与普遍性自我（ $r = 0.36, p < 0.01$ ）、环境意识（ $r = 0.33, p < 0.01$ ）之间均存在显著的正相关，普遍性自我和环境意识之间也存在显著正相关（ $r = 0.36, p < 0.01$ ）；（3）回归分析结果显示，特质性敬畏对环境意识有显著的正向预测作用（ $\beta = 0.31, p < 0.01, R^2 = 0.11$ ），特质性敬畏显著正向预测普遍性自我（ $\beta = 0.29, p < 0.01, R^2 = 0.13$ ），Bootstrap 检验结果发现，普遍性自我能部分中介特质性敬畏和环境意识之间的关系（ $\beta = 0.22, LLCI = 0.12, ULCI = 0.31$ ）。结论：特质性敬畏对环境意识有正向的预测作用，普遍性自我在特质性敬畏与环境意识中起中介作用。

关键词 特质性敬畏，环境意识，普遍性自我，中介效应

Relationship Between Trait Awe and College Students' Environmental Consciousness: Mediating Effect of Universal Self

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Abstract: With the increasing concern of environmental issues, the importance of environmental awareness, influencing factors and how to improve environmental awareness have become the focus of attention and research (Jishan Yu, 2001). Yu Jishan's scholars define environmental awareness as people's subjective reflection of the objective ecological environment, and its core is the understanding, attitude and behavior orientation of ecological environment problems. As a part of people's cognition, environmental awareness can influence people's behavior, adjust people's understanding of the relationship between man and environment, and guide people to implement environmental protection behavior. Awe is defined as an emotion. When people can't assimilate the great stimulus they face into their existing cognitive structure, this special experience will come into being. Studies have shown that awe has a positive effect on enhancing environmental protectionism (Huanhuan Zhao et al., 2018). In addition, different trait emotions have different performances in the description of self-construction, and different types of self-construction will also have an impact on individual environmental awareness, so we assume that universal self plays a key role in predicting environmental awareness.

348 college students were investigated with trait awe scale, Chinese new environmental paradigm (CNEP) scale and universal self-test, in order to explore the relationship between trait awe and environmental awareness and the intermediary role of universal self between them. Results: (1) the results showed that the average score on the CNEP scale was 39, and the standard deviation was 5.2, at the upper-middle level. There were significant differences in the scores of gender in environmental awareness ($t(348) = -5.56, p < .001$), and the effect size (SE) $d = 0.60$ was in the middle range. (2) The results of correlation analysis showed that there was a significant positive correlation between trait awe and universal self ($r = 0.36, p < 0.01$) and environmental awareness ($r = 0.33, p < .01$). There was also a significant positive correlation between universal self and environmental awareness ($r = 0.36, p < .01$). (3) Regression analysis results showed that trait awe had a significant positive predictive effect on environmental awareness ($\beta = 0.31, p < 0.01, R^2 = 0.11$), and trait awe significantly positively predicted universal self ($\beta = 0.29, p < 0.01, R^2 = 0.13$). Bootstrap test results found that universal self-energy partly mediated the relationship between trait awe and environmental awareness ($\beta = 0.22, LLCI = 0.12, ULCI = 0.31$). Conclusion: Trait awe has a positive predictive effect on environmental awareness, and universal self plays an intermediary role in trait awe and

environmental awareness.

Keywords: trait awe, environmental awareness, universal self, mediation effect

网络社会排斥对青少年社交焦虑的影响： 反刍思维的中介作用和拒绝敏感性的调节作用

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摘要 社会排斥是指被个体或群体拒绝接纳或忽视的现象, 是人们社会交往中普遍存在的消极事件。网络社会排斥是现实社会排斥在网络交往环境中的延伸, 是指在非面对面的电子媒介互动中, 个体在可接受的时间范围内未得到预期的交流和认可, 并觉知到自身被忽视或拒绝的现象。根据反应方式理论, 人们在遭遇生活事件时可能会采取不同的应对方式, 反刍思维就是这些应对方式中比较负性的一种, 个体对消极情绪或压力事件的反复思考导致了个体情绪状态的变化。些持续性的反刍思维会造成青少年人际需要缺失, 安全感得不到满足, 最终促使产生社交焦虑。对于拒绝敏感性高个体而言, 在人际关系被拒绝或忽视后, 会加重反刍思维。同样, 拒绝敏感性高的个体, 在面对人际关系缺失时更容易加剧个体社交焦虑。因此, 本研究主要探讨网络社会排斥、反刍思维、拒绝敏感性和社交焦虑四者的关系。选取哈尔滨市 600 名青少年, 使用网络社会排斥量表、反刍思维量表、拒绝敏感性量表和社交焦虑量表进行调查。研究结果显示: (1) 网络社会排斥正向预测青少年社交焦虑; (2) 反刍思维在网络社会排斥与青少年社交焦虑之间起中介作用; (3) 拒绝敏感性在网络社会排斥与青少年社交焦虑间起调节作用; 具体而言, 拒绝敏感性水平高时, 网络社会排斥能显著地正向的预测社交焦虑, 而拒绝敏感性水平低时网络社会排斥对社交焦虑的预测作用不显著。(4) 拒绝敏感性在网络社会排斥与反刍思维间起调节作用; 具体而言, 拒绝敏感性水平高时, 网络社会排斥能显著地正向的预测反刍思维, 而拒绝敏感性水平低时网络社会排斥对反刍思维的预测作用不显著。结论: 网络社会排斥通过反刍思维的中介作用影响青少年社交焦虑, 这一中介作用受到拒绝敏感性的调节。

关键词 网络社会排斥, 反刍思维, 拒绝敏感性, 社交焦虑

The effect of cyber-ostracism on social anxiety in adolescents: The mediating effect of ruminative responses and the moderating effect of rejection sensitivity

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Abstract: Ostracism refers to the phenomenon of being rejected or ignored by individuals or groups. It is a common negative event in people's social interactions. cyber-ostracism is an extension of the actual ostracism in the network communication environment. It refers to the phenomenon that in non-face-to-face electronic media interaction, individuals fail to get the expected communication and recognition within an acceptable time limit and realize that they are ignored or rejected. According to the theory of response style, people may adopt different coping styles when they encounter life events. ruminative responses is one of the negative coping styles. The repeated thinking of individuals on negative emotions or stressful events leads to the change of their emotional state. Persistent rumination can lead to a lack of interpersonal needs, a lack of security, and eventually social anxiety. For individuals with high rejection sensitivity, rumination will be aggravated after interpersonal relationship is rejected or ignored. Similarly, individuals with high rejection sensitivity are more likely to aggravate individual social anxiety in the face of lack of interpersonal relationship. Therefore, this study mainly discusses the relationship between cyber-ostracism, ruminative responses, rejection sensitivity and social anxiety. In this study 600 adolescents in Harbin were investigated with cyber-ostracism Scale, ruminative responses Scale, rejection sensitivity scale and social anxiety Scale. The results show that:(1) Cyber-ostracism positively predicts social anxiety among adolescents;(2) Ruminative responses plays a mediating role between cyber-ostracism and social anxiety of teenagers;(3) Rejection sensitivity

plays a moderating role between cyber-ostracism and social anxiety of adolescents; To be specific, when the rejection sensitivity level is high, the cyber-ostracism can significantly predict social anxiety positively, but not at low levels.(4) Rejection sensitivity plays a moderating role between cyber-ostracism and ruminative responses; To be specific, when the rejection sensitivity level is high, cyber-ostracism can significantly predict ruminative responses, but not at low levels. Conclusion: Cyber-ostracism affects social anxiety in adolescents through the mediating effect of ruminative responses, which is moderated by rejection sensitivity.

Keywords: cyber-ostracism, social anxiety, ruminative responses, rejection sensitivity

教师创新支持与创造力的关系：独立自我建构和创造性人格的中介作用

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摘要 创新是社会发展的动力, 21 世纪的竞争归根到底是人才的竞争。提高创造力, 关键是人才的培养, 为此我国启动了“珠峰计划”, 旨在培养基础学科拔尖人才。为探讨教师创新支持对创造力的影响以及自我建构的中介作用, 基于 Amabile 的创造性构成要素理论, 个体因素在情景因素对创造性的影响中起着中介桥梁的作用。本研究采用问卷法, 使用教师创新支持行为量表、威廉斯创造性倾向量表和独立自我建构量表以及托兰斯创造性思维测验, 以 1145 名拔尖学生和普通学生为被试, 旨在探讨教师创新支持对创造性的影响及其作用机制。结果发现: (1) 女生在创造性思维流畅性上显著优于男生, 在灵活性和独创性上则无显著性别差异。(2) 拔尖学生在创造性思维的三个指标上均显著高于普通学生。(3) 学生类型和年级在创造力流畅性和独创性上交交互作用显著。流畅性表现上, 在拔尖学生中, 大三学生显著高于大一和大二学生, 而在普通学生中, 大一学生显著高于大二和大三学生。独创性表现上, 拔尖学生和普通学生在大一时没有差异, 但在大二和大三上, 拔尖学生得分显著高于普通学生。(4) 独立自我建构和创造性人格在教师创新支持和创造力关系中起完全链式中介作用, 且模型稳定, 不受性别、年级和学生类型的影响。本研究表明, 教师创新支持对创造力有间接作用。

关键词 教师创新支持, 自我建构, 创造性人格, 创造性思维

The Relationship Between Teacher Creative Support and Creative Thinking: The Mediating of Independent Self-Constraint and Creative Personality

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Abstract: Creativity is the driving force of social development. The competition in the 21st century is ultimately the competition of talents. The key to improving creativity is the cultivation of talents. For this reason, China launched the "Everest Project", which aims to cultivate top-notch personnel in basic disciplines. To explore the effects of teacher creative support on creativity and the mediating effect of independent self-construal, based on Amabile's Componential theory of creativity, individual factors act as an intermediary bridge in the influence of situational factors on creativity. This study uses a questionnaire method, using the Teacher Creativity-Supportive Behavior Scale, the Williams Creative Personality Scale, the Independent Self-Constraint Scale, and the Torrance test of creative

thinking, 1145 top-notch and ordinary students in university were surveyed to explore the effect of teacher creative support on creativity and its mechanism. The results found: (1) Girls scored significantly higher than boys in creative thinking fluency, but there is no significant difference in flexibility and originality. (2) Top-notch students scored significantly higher than ordinary students in the three indicators of creative thinking. (3) There was an interaction effect between different student types and grades in creativity fluency and originality. In terms of fluency, among top-notch students, juniors were significantly higher than freshmen and sophomores, while among ordinary students, freshmen were significantly higher than sophomores and juniors. In terms of originality, there was no difference between top-notch students and ordinary students in the freshman year, but in sophomore and junior year, the top-notch students scored significantly higher than ordinary students. (4) Independent self-construal and creative personality played a complete chain mediating role in the relationship between teacher creative support and creativity, and the model is stable, independent of gender, grade, and student type. This study suggested that teacher creative support had an indirect effect on creativity.

Keywords: teacher creativity support, self-construal, creative personality, creative thinking

特殊教育教师的残疾态度及其情境效应研究

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摘要 基于教育公平和全纳教育理念, 所有儿童都应该进入学校接受高质量、适宜、平等的教育和服务。特殊儿童也不例外, 他们也有进入学校接受适合他们自身特点, 高质量教育的权利, 特殊教育发展与社会文明发展、人权保护以及社会公平的实现紧密相关。特殊教育教师作为特殊教育的中坚力量, 他们对残疾儿童的态度是特殊教育成功的重要条件, 为了解特教教师对其教育对象即残疾儿童的态度以及情境对特教教师残疾态度的影响, 研究采用 AMP 情感错误归因范式, 通过 E-prime 实验来对特教教师的残疾态度和残疾内隐态度的情境效应两方面做了研究。特教教师残疾态度研究选取西北某市 38 名特教教师为研究对象, 其中特教机构 14 名, 特教学校 24 名, 且以前不曾参与过类似实验(根据被试自我报告)。研究发现: 特教教师在外显残疾态度中对残疾儿童和健全儿童持有一致积极的态度($t=1.26, p=0.24$), 但是在内隐残疾态度上却对残疾儿童和健全儿童表现出不一致的态度, 具体表现在对健全儿童的态度要显著积极于残疾儿童($t=-12.292, p<0.001$)。基于情感错误归因基本理论——人们在一定情境中产生的认知或关于事物的思维会随着情境或其他客观条件的变化而变化, 研究设置了道德情境、能力情境和中性情境来探讨残疾内隐态度的情境效应。通过招募具有 1 年以上特教经验且还在职的 51 名特教教师参与实验, 剔除掉 2 名反应完全相同的数据, 最后道德组 16 人, 能力组 18 人, 中性刺激组 15 人; 男性 5 人, 女性 44 人。结果发现残疾内隐态度的情境启动主效应极其显著($F(2,42)=14.123, p<0.000$), 特教教师在道德情境启动下对残疾儿童的态度要比在能力启动下更为积极, 并且道德启动下对残疾儿童态度积极性要显著高于对健全人态度评分; 能力情境对残疾儿童内隐态度有一定影响, 能力启动情境下残疾儿童内隐态度评分显著高于中性启动下的得分。

关键词 特殊教育教师, 残疾态度, 情境效应

A study on the disability attitude and situational effects of special education teachers

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Abstract: Based on the concept of educational equity and inclusive education, all children should attend schools for high-quality, appropriate and equal education and services. Special children are no exception, they also have the right to enter schools to receive their own characteristics, quality education, special education development and social civilization development, human rights protection and the realization of social equity. As the backbone of special education, their attitude towards children with disabilities is an important condition for the success of special

education, in order to understand the attitude of special education teachers towards their educational object, namely, the disabled child and the impact of the situation on the disability attitude of special education teachers, the study of AMP emotional error attribution paradigm, through the E-prime experiment to the special education teachers' disability attitude and the situational effect of the implicit attitude of disability. The study on the disability attitude of special education teachers selected 38 special education teachers in a city in northwest China as the study object, of which 14 were special education institutions and 24 were special education schools, and had not participated in similar experiments before (according to the self-report of the subjects). The study found that special teachers had a consistent and positive attitude towards children and able children in the external attitude of disability ($t=1.26$, $p=0.24$), but showed inconsistent attitude towards children with disabilities and able children in implicit disability, as shown in a significantly positive attitude towards healthy children ($t=-12.292$, $p < 0.001$). Based on the basic theory of attribution of emotional error-- the cognition or thinking about things that people produce in a certain situation will change with the change of the situation or other objective conditions, and the study sets up the moral situation, the ability situation and the neutral situation to explore the situational effect of the implicit attitude of disability. By recruiting 51 special education teachers with more than one year of experience and serving, 2 of the same response data were eliminated, and finally 16 in the ethics group, 18 in the capacity group, 15 in the neutral stimulus group, 5 men and 44 women. The results showed that the main effect of situational initiation of the implicit attitude of disability was extremely significant ($F(2,42)=14.123$, $p < 0.000$), the attitude towards children with disabilities under the initiation of moral situation was more positive than that of the disabled children under the ability to start, and the attitude of disabled children under moral initiation was significantly higher than that of the able-bodied; The ability situation has some influence on the implicit attitude of the disabled child, and the implicit attitude score of the disabled child under the ability start-up situation is significantly higher than that of the neutral start-up.

Keywords: special education teachers, attitudes to disability, effect of situation

重大突发事件中青少年心理援助的三阶段 4R 系统模型

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摘 要 重大灾难发生后, 青少年易受伤害且心理健康需求易被物质救援所掩盖。系统、全面、专业、动态、联动的心理援助机制, 可满足青少年灾后的心理健康需求, 减轻有害影响并促进心理重建。但我国灾后心理援助尚处初级阶段, 未达到上述要求, 更无针对青少年的系统扶助方案。希斯危急管理的 4R 模型 (Readiness、Response、Recovery、Reduction) 涵盖了危机预防、发生、发展、结束的多阶段、多策略的全面且系统的管理目标和方向, 为解决问题提供了较好的指导原则和具体的实施目标。本文参照该模型, 并结合重大灾难中心身援助的内在要求, 细化青少年心理援助模型各部分要求, 并提出事前预警、事发监测与事后跟踪三阶段相衔接的工作模式。事前预警指学校-心理服务站-精神卫生中心构成的三级预警系统, 以解决不同等级的心理问题。事发监测指围绕心理急救-预防心理障碍-多学科介入心理咨询-开展系统的心理治疗阶段-心理援助跟踪监控等组成的五级分层动态监测系统, 追踪事件当事人 (特别是危机预警人员) 身心状态, 实现对个体与群体心理健康状态精准测量和动态监测, 按需对接心理服务, 及时给予咨询和治疗服务, 必要时给予药物治疗。事后跟踪指由个人-家庭-班级-学校-社会构成的五级心理重建跟踪系统, 可以与动态监测系统中的三、四、五级人群建立有效衔接, 并为一般青少年提供跟踪服务。为有效推动模型以及工作模式的运转, 提出运用信息、智能以及网络技术研发多元服务、协同管理的手机移动心理健康服务信息化云平台。该平台包括标准、专家智库服务以及心理健康自助互助等三个平台。标准平台又包括基础信息、管理服务、测评、大数据分析、危机预警与干预等系统。该平台将教育系统、社会单位、公务员系统以及基层社区纳入同一管理平台, 从而实现学校家庭社会共育, 实现部门间的信息共享, 提高服务的覆盖率、针对性, 提高协同合作的即时性和效能

性, 实现优质心理健康教育资源互融、互通及共享, 保障专业性, 并推进“互联网+健康医疗”服务新模式。

关键词 危机管理, 心理援助, 危机干预, 青少年

A three-stage 4R system model for adolescent psychological assistance in major emergencies

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Abstract: After major disasters, adolescents are vulnerable and their mental health needs are easily covered by material relief. The systematic, comprehensive, professional, dynamic, and linkage psychological assistance mechanism can meet the psychological health needs of adolescents after disasters, reduce the harmful effects and promote psychological reconstruction. However, China's post-disaster psychological assistance is still in its primary stage, which does not meet the above requirements, and there is no systematic assistance program for teenagers. The 4R model (Readiness, Response, Recovery, and Reduction) of health crisis management covers the comprehensive and systematic management goals and directions of crisis prevention, occurrence, development, and end, and provides better guiding principles and specific implementation goals for solving problems. Referring to this model and combining it with the inherent requirements of physical assistance in major disasters, this paper refines the requirements of each part of the psychological assistance model for adolescents and puts forward a working model of linking three stages: pre-warning, incident monitoring, and post-event tracking. Pre-warning refers to a three-level early warning system consisting of schools, psychological service stations, and mental health centers to solve psychological problems of different levels. Incident monitoring refers to a five-level hierarchical dynamic monitoring system consisting of psychological first aid-psychological barrier prevention-multidisciplinary psychological counseling-systematic psychotherapy stage-psychological assistance tracking and monitoring, etc., which tracks the physical and mental state of the parties involved in the incident (especially the crisis early warning personnel), realizes accurate measurement and dynamic monitoring of the mental health state of individuals and groups, and connects psychological services as needed, giving timely consultation and treatment services, and giving medication when necessary. After-the-fact tracking refers to a five-level psychological reconstruction tracking system consisting of individual-family-class-school-society, which can effectively connect with the third, fourth, and fifth-level people in the dynamic monitoring system and provide tracking services for general teenagers. In order to effectively promote the operation of the model and working mode, an information cloud platform for mobile mental health services with multiple services and collaborative management is proposed by using information, intelligence, and network technology. The platform includes three platforms: standard platform, expert service platform, and mental health self-help platform. The standard platform also includes basic information systems, management services systems, evaluation systems, big data analysis systems, crisis early warning systems, and intervention systems. The platform integrates the education system, social units, civil servants, and grass-roots communities into the same management platform, to realize the co-education of school, family, and society, realize the information sharing among departments, improve the coverage and pertinence of services, improve the immediacy and effectiveness of collaborative cooperation, realize the mutual integration, exchange, and sharing of high-quality mental health education resources, guarantee professionalism, and promote the new service model of "Internet + Health Care".

Keywords: Crisis management; Psychological assistance; Crisis intervention; adolescents

农村隔代抚养留守儿童心理健康影响的质性研究 ——基于焦点团体访谈

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摘要 长久以来，我国的家庭教育基本都是由父母承担的，父母拥有家庭教育的责任和义务，掌握家庭教育的主导权，特别是在青春发育期这一心理发展的关键时期，父母对孩子的心理健康成长起着至关重要的作用。然而，近年来随着农村剩余劳动力的不断增多，外出打工或经商的人也越来越多，有的家庭夫妻双双外出打工，他们当中有的将子女带在身边，而更多的是将自己子女留在家里，由孩子的祖父母、外祖父母照管。隔代长辈便成为孩子的抚养人，挑起了教育孙辈的担子，产生了农村留守儿童家庭教育以隔代教育为主的现象。

本研究主要采用质性研究方法，通过与当地农村学校老师沟通，让其推荐班里符合条件（隔代抚养下的留守初中生）且愿意参与访谈的学生作为参与者。在开始正式的焦点团体访谈之前，研究者进行了四次预访谈，确定了以“隔代抚养”和“初中生的心理健康”为焦点的两组访谈提纲。焦点访谈由研究者主持，每次团体小组成员为4-8人，对整个访谈过程进行录音结合手写记录，其后将其全部转成文字资料，借助Nvivo软件进行分析，通过反复的阅读、编码以及归纳直至主题达到饱和后停止访谈数据收集。

本研究共进行了11次焦点团体访谈，抽取了67名学生参与访谈，最终提取4大主题，19个亚主题，将祖辈抚养下孙辈的心理体验提炼出2大主题：积极体验与负性体验，其中包括幸福、自由、情感支持、言语杂碎、缺乏理解、缺少包容和思想固化7个亚主题；将孙辈的心理健康状况提炼出5大主题：学习、自我、人际、适应、情绪，其中包括学习满足感、自我评价、社会评价、人际支持、异性交往、亲社会行为、情绪稳定性等12个亚主题。

关键词 隔代抚养，留守儿童，初中生，焦点团体，质性研究

A qualitative study on the impact of intergenerational rearing on the mental health of left behind children in rural areas ——Based on focus group interview

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Abstract: For a long time, family education in China is basically undertaken by parents. Parents have the responsibility and obligation of family education and master the leading power of family education, especially in the critical period of psychological development, youth, parents play a vital role in the healthy growth of children's psychology. However, in recent years, with the continuous increase of rural surplus labor force, more and more people go out to work or do business. Some couples go out to work. Some of them take their children with them, and more of them leave their children at home under the care of their grandparents. The next generation elders become the caregivers of children and shoulder the burden of educating their grandchildren, resulting in the phenomenon that the family education of rural left behind children is mainly based on the next generation education.

This study mainly uses qualitative research methods, through communication with local rural school teachers, to make them recommend students who meet the conditions in the class (left behind junior middle school students raised by other generations) and are willing to participate in the interview as participants. Before the formal focus group interview, the researcher conducted four pre interviews and determined two groups of interview outlines focusing on "inter generational rearing" and "mental health of junior middle school students". The focus interview was presided over by the researcher, with 4-8 group members each time. The whole interview process was recorded and handwritten, and then all of them were converted into text materials for analysis with the help of NVivo software. The interview data collection was stopped after the theme reached saturation through repeated reading, coding and induction.

In this study, a total of 11 focus group interviews were conducted, and 67 students were selected to participate in the interviews. Finally, four themes and 19 sub themes were extracted to extract the psychological experience of grandchildren raised by grandparents into two themes: positive experience and negative experience, including seven sub themes: happiness, freedom, emotional support, speech clutter, lack of understanding, lack of tolerance and ideological solidification; The mental health status of grandchildren is extracted into five themes: learning, self, interpersonal, adaptation and emotion, including 12 sub themes such as learning satisfaction, self-evaluation, social evaluation, interpersonal support, heterosexual communication, prosocial behavior and emotional stability.

Keywords: intergenerational rearing, left behind children, junior high school students, focus group, qualitative research

父母抑郁与师生关系对青少年受欺负的影响：自尊的中介作用

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摘要 校园欺凌一直是社会和研究者关注的重点，其对儿童青少年的身心健康具有持续的消极影响，探究校园欺凌（尤其是受欺负）的形成机制对于预防和干预政策的制定具有重要意义。已有研究表明，父母抑郁是影响青少年发展的重要因素，但鲜有研究考察其对青少年受欺负的影响。此外，生态系统理论指出，家庭和学校作为影响青少年适应与发展的两个重要微观系统，父母抑郁和师生关系可能会交互影响青少年的受欺负。良好的师生关系可能会缓解父母抑郁对青少年产生的消极影响（压力缓冲模型：The Stress-Buffering Model）；但是，当父母的消极作用较高时，教师可能无法为青少年提供有效的帮助，从而加重父母抑郁的消极影响（反压力缓冲模型：The Reverse Stress-Buffering Model）。此外，远端的环境因素往往通过近端因素（如青少年自尊）对个体产生影响，因此，自尊可能在其中起到中介作用。基于此，本研究主要探讨父母抑郁与师生关系对青少年受欺负的影响，以及青少年自尊的中介作用。

本研究以陕西省 904 名初中生（57%男生； $M_{age} = 12.73$ ， $SD = 0.43$ ）及其父母（62%母亲； $M_{age} = 40.14$ ， $SD = 5.36$ ）为研究对象，通过问卷法进行为期 3 年的 3 次追踪调查。结构方程模型的结果发现：（1）T1 教师支持与冲突均能显著调节 T1 父母抑郁对 T3 青少年受欺负的直接影响，即当教师支持较低、冲突较高时，T1 父母抑郁显著增加 T3 青少年受欺负，而当教师支持较高、冲突较低时，两者之间的预测关系不显著。这说明良好的师生关系起到了一定的保护作用，支持了压力缓冲模型的观点。（2）教师支持可以显著调节 T1 父母抑郁对 T3 青少年受欺负的间接影响，具体而言，当教师支持水平较高时，T1 父母抑郁能降低 T2 青少年自尊进而增加 T3 受欺负，而当教师支持较低时，T1 父母抑郁反而增加 T2 青少年自尊，降低 T3 受欺负。这说明教师支持不但没有起到缓冲作用，反而加重了父母抑郁对自尊的消极影响，支持了反压力缓冲模型的观点。（3）教师冲突对间接路径的调节作用不显著。本研究表明父母抑郁和师生关系均是影响青少年受欺负的重要环境因素，且可以通过青少年自尊产生影响，这为科学认识和有效干预校园欺凌提供了理论依据。

关键词 抑郁，受欺负，压力缓冲，反压力缓冲，青少年

The Effects of Parental Depression and Teacher-student Relationships on Adolescent Victimization: The Mediating Role of Self-esteem

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Abstract: School bullying was always the focus of the societies and researchers, and it has a continuous negative impact on the physical and mental health of children and adolescents. Therefore, it is of great significance to explore

the underlying mechanism of school bullying (especially victimization). Ecosystem Theory points out that parents and teachers are important others that affect adolescent adaptation and development, and may have a significant impact on adolescent victimization. However, few studies have examined the interaction effects of parental depression and teacher-student relationships. The Stress-Buffering Model indicates that good teacher-student relationships may alleviate the negative effects of parental depression on adolescents. However, when parental depression was higher, teachers may not be able to provide effective help to adolescents, thus exacerbating the negative effects of parental depression (The Reverse Stress-Buffering Model). In addition, distal environmental factors tend to influence adolescents through proximal factors (such as adolescent self-esteem), so self-esteem might play a mediating role. Accordingly, this study explored the influence of parental depression and teacher-student relationship on adolescent victimization, as well as the mediating role of adolescent self-esteem.

A total of 904 junior high school students (57% male; $M_{age} = 12.73$, $SD = 0.43$) and their parents (62% of mothers; $M_{age} = 40.14$, $SD = 5.36$) completed questionnaires at three-time points, one year apart. Structural equation model results revealed that: (1) both teacher support and conflict could moderate the direct effect of T1 parents depression on T3 adolescent depression, namely when teacher support was lower or conflict was higher, T1 parents depression would significantly increase T3 adolescent depression, but when the teacher support was higher and conflict is lower, the predict relations was no longer significant. It indicates that good teacher-student relationships play a protective role, which supports the Stress Buffer Model. (2) Teacher support also significantly moderated the indirect effect of T1 parents depression on T3 adolescent victimization via self-esteem, namely when the teacher support level was higher, T1 parental depression could decrease T2 adolescent self-esteem, which further increased T3 victimization, but when teacher support was lower, T1 parents depression could increase T2 adolescent self-esteem, thereby lowering T3 victimization. It suggests that teacher support does not play a buffer role, but aggravates the negative impact of parental depression on self-esteem, which supports the The Reverse stress-buffering Model. (3) The moderating effect of teacher conflict on indirect path was not significant. The results showed that both parental depression and teacher-student relationship were important environmental factors affecting adolescent victimization, and they could be influenced by adolescents' self-esteem, which provided a theoretical basis for scientific understanding and effective intervention in school bullying.

Keywords: parental depression, peer victimization, The Stress-Buffering Model, The Reverse Stress-Buffering Model, Chinese adolescents

正念与青少年的自我边界的关系及干预研究

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摘 要 已有研究证实, 清晰的自我边界有利于个体拥有健康的人际关系, 良好的自尊水平以及安全感; 反之不良的边界会引发个体的抑郁、焦虑、依赖, 甚至产生身体疾病; 同时自我边界与共情、依恋类型、以及自我的觉知等有关。国内目前缺乏对自我边界测量的工具, 故本研究引进并修订国外边界保护量表(the Boundary Protection Scale-14, BPS-14), 在此基础上, 研究从正念对自我边界的影响角度出发, 探究正念水平与自我边界的关系, 并对自我边界较为模糊的青少年进行正念干预, 帮助其形成清晰灵活的边界。研究一从贵州省三所高中随机选取了 2100 名青少年为被试, 填写边界保护量表(BPS-14)和正念注意觉知量表(MAAS)。结果发现: (1)中文版 BPS-14 具有良好的信效度; (2)自我边界程度与正念水平呈显著负相关, 即边界分数越高, 个体的边界越模糊, 其正念水平越低。研究二为帮助个体形成清晰的自我边界, 开展连续 8 周的正念团辅训练。随机选取研究一中自我边界得分在前 10% 中的 32 名同学, 其中 16 名同学为实验组, 即参与正念团辅训练的干预活动, 另外 16 名同学作为控制组接受非正念训练团辅活动。结果发现: 实验组被试的自我边界分数有了显著下降, 即自我边界更加清晰; 而与之进行的对照组, 边界分数没有显著变化。本研究发现: 中文版 BPS-14 可以作为测量青少年边界薄弱程度的适宜工具; 青少年的正念水平对自我边界程度有显著影响; 通过正念团辅训练可以有效提高青少年自我觉知水平, 建立清晰的自我边界, 从而进一步推动青少年积极的发展。

关键词 自我边界, 信效度, 正念, 干预

Research on the Relationship between Mindfulness and Adolescents' Self-Boundary and Intervention

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Abstract: Studies have confirmed that a clear self-boundary is conducive to healthy interpersonal relationships, a good level of self-esteem, and a sense of security; on the contrary, a poor boundary can cause depression, anxiety, dependence, and even physical illness; at the same time, self-boundary is related to empathy, attachment type, and self-awareness. There is currently a lack of tools for self-boundary measurement in China, so this study introduces and revises the Boundary Protection Scale-14 (BPS-14) from abroad. On this basis, the research starts from the perspective of the influence of mindfulness on self-boundary. Explore the relationship between the level of mindfulness and self-boundary, and conduct mindfulness interventions for teenagers with fuzzy self-boundaries to help them form a clear and flexible boundary. In the first study, 2100 adolescents were randomly selected from three high schools in Guizhou Province to fill in the Boundary Protection Scale (BPS-14) and the Mindfulness Attention Scale (MAAS). The results showed that: (1) the Chinese version of BPS-14 has good reliability and validity; (2) the degree of self-boundary is significantly negatively correlated with the level of mindfulness, The higher the boundary score, that is, the more blurred the boundaries of individuals, the lower the level of their mindfulness. The second study is to help individuals form a clear self-boundary, and carry out 8 consecutive weeks of mindfulness group training. Randomly select 32 students who scored in the top 10% of self-boundary in Study 1, 16 of them are in the experimental group, that is, they participate in the intervention activities of mindfulness training, and the other 16 students are used as the control group to receive non-mindfulness training. The result found that the self-boundary score of subjects in the experimental group has decreased significantly, that is, the self-boundary is clearer; while for the control group, there is no significant change in the boundary score. This study found that the Chinese version of BPS-14 can be used as a suitable tool to measure the thickness of adolescents' boundaries; the level of mindfulness of adolescents has a significant impact on the degree of self-boundary; through mindfulness group training can effectively improve the self-awareness level of young people, establish a clear self-boundary, and further promote the positive development of young people.

Keywords: Self-boundary, Reliability and validity, Mindfulness, Intervention

学校联结对初中生生命意义感的影响：有调节的中介效应

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摘要 生命意义感是美好生活的重要成分, 与个体的主观幸福感、身心健康密切相关。初中阶段是青少年发展生命意义感的关键时期, 较高水平的生命意义感有助于减少初中生抑郁、焦虑等消极的心理健康问题。因此, 研究生命意义感的影响因素及其内在机制, 对于初中生的身心健康成长具有重要意义。

学校联结能够正向预测生命意义感, 但尚未明确学校联结是“如何”影响生命意义感的。学校联结水平较高的青少年会主动内化社会规范, 更可能表现出亲社会行为。亲社会行为作为一种利他行为, 能够使个体体验到自我效能感和价值感, 获得基本心理需要的满足, 从而提升生命意义感。根据生态系统理论, 环境对个体的影响可能会因为个体特质不同而产生差异。自尊是自我价值的情感体验, 是个体重要的特质。高自尊的人有积极的自我价值, 产生更高的生命意义感。学校联结作为社会支持的一种, 会显著影响中学生的自尊水平。依据自尊的缓冲器假设, 高自尊的缓冲功能可以提升个体的调节能力。由此推测, 亲社会行为可能在学校联结与生命意义感的关系中起中介作用, 自尊则具有调节效应。

本研究旨在探究学校联结与初中生生命意义感的关系, 以及亲社会行为和自尊在其中的作用。采用学校

联结量表、青少年亲社会倾向量表、自尊量表和生命意义感量表对广东省两所中学的 1027 名初中生进行调查。结果显示：（1）生命意义感与学校联结、亲社会行为呈显著正相关（ $r=0.397, 0.369$ ）；（2）学校联结正向预测初中生生命意义感（ $\beta=0.397$ ），且亲社会行为在其中起中介作用；（3）自尊调节了学校联结通过亲社会行为对生命意义感中介模型的前半段路径，即相比于低自尊的初中生（ $\beta=0.334, t=9.039, p<0.001$ ），高自尊的初中生更容易受到学校联结对亲社会行为的积极影响（ $\beta=0.548, t=12.263, p<0.001$ ）。研究结果揭示了学校联结对初中生生命意义感的作用机制，进一步验证了学校联结对初中生发展的重要性，启示学校要重视学校联结的建立，提升学生自尊感，培养学生的亲社会行为，从而提升初中生的生命意义感。

关键词 生命意义感，学校联结，亲社会行为，自尊

The Influence of School Connectedness on Junior High School Students' Meaning in Life: Moderated Mediating Effect

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Abstract: Meaning in life plays a vital part in a better life, and is closely related to individual's subjective well-being and physical and mental health. It is an important period for adolescents to develop their meaning in life in the junior high school. A higher level of meaning in life helps to reduce the depression, anxiety and other mental health problems of adolescents. Therefore, it is significant for students' physical and mental health to explore the factors and internal mechanisms of meaning in life.

School connectedness can positively predict meaning in life, but it is not yet clear how it works. Adolescents with a higher level of school connectedness will proactively internalize social norms, and they are more likely to show prosocial behavior. As a kind of altruistic behavior, prosocial behavior enables individual to experience self-efficacy and a sense of value, and gains the satisfaction of basic psychological needs, thereby enhancing one's meaning in life. According to the ecosystem theory, the effect of the environment on an individual may be different due to diverse characteristics of the individual. Self-esteem is an emotional experience of self-worth and an essential characteristic of an individual. People with high self-esteem have positive self-worth and higher level of meaning in life. As a kind of social support, school connectedness significantly affects the self-esteem of junior high school students. Based on the buffer hypothesis of self-esteem, the buffer function of high-level self-esteem can improve one's adjusting ability. Thus, it could be known that prosocial behavior would mediate the relationship between school connectedness and meaning in life, while self-esteem plays a moderating role.

The present research aimed to examine the relationship between school connectedness and meaning in life of junior high school students, and the effect of prosocial behavior and self-esteem. A survey of 1027 junior high school students in two middle schools in Guangdong Province was conducted using School Connectedness Scale, Adolescent Prosocial Tendency Scale, Self-esteem Scale and Meaning in Life Scale. The results showed that: (1) School connectedness was positively correlated with meaning in life and prosocial behavior ($r=0.397, 0.369$); (2) School connectedness positively predicted meaning in life of students ($\beta=0.397$), and prosocial behavior played a mediating role in it; (3) Self-esteem moderated the relationship between school connectedness and prosocial behavior. Specifically, compared with low self-esteem students ($\beta=0.334, t=9.039, p<0.001$), students with higher self-esteem were more likely to engage in prosocial behavior affected by school connectedness ($\beta=0.548, t=12.263, p<0.001$). The findings revealed a mechanism of school connectedness on meaning in life of students, and further verified the importance of school connectedness to the development of junior high school students. To enhance meaning in life of junior high school students, school should attach importance to the establishment of school connectedness, enhance students' self-esteem and cultivate students' prosocial behavior.

Keywords: meaning in life, school connectedness, prosocial behavior, self-esteem

公办园和民办园幼儿教师职业压力现状调查研究

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摘要 目的: 近年来, 我国学前教育领域发生着巨大变革, 教师承受的外在与内在压力不断增强, 因此国内对幼儿教师心理健康的关注度也越来越高。有研究表明职业压力会对幼儿教师的职业幸福感产生影响, 且不同性质幼儿园教师的职业压力具有一定的差别。因此, 本研究采用问卷法以探讨不同性质的幼儿园教师职业压力的特点, 为后续的实证研究奠定基础。**方法:** 本研究使用杨廷忠修订的《幼儿教师压力量表》(CPSS), 并在已有研究基础上自编问卷《幼儿教师职业压力调查问卷》, 随机选取 98 名幼儿教师进行预测试, 对自编问卷进行探索性因素分析, 确定施测问卷。随后对北京市海淀区 1623 名幼儿教师进行正式测试, 其中公办园教师 1041 名, 民办园教师 582 名, 分析幼儿教师职业压力的特点。**结果:** 探索性因素分析结果表明, 《幼儿教师职业压力调查问卷》具有较好的信效度, 五个维度分别为幼儿园管理与个人职业发展、家庭生活、人际关系、班级管理和社会评价; T 检验结果表明, 公办园幼儿教师的职业压力分数总体上高于民办园教师, 且公办园教师在五个维度的得分上均高于民办园教师; 方差分析结果显示, 公办园教师在年龄($F(2,1621)=9.06, P<0.001$)、教龄($F(3,1620)=9.41, P<0.001$)和班级角色($F(3, 1620)=3.68, P<0.05$)三个特征变量上的压力分数均显著高于民办园教师。

关键词 公办园, 民办园, 幼儿教师, 职业压力

Investigation and Research on the Occupational Pressure of Preschool Teachers in Public and Private Schools

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Abstract: Purpose: Recently, great changes have taken place in the field of preschool education in our country, teachers are under external and internal pressure. Therefore, the government is paying more and more attention to the mental health of kindergarten teachers. Studies have shown that occupational stress will affect the well-being of kindergarten teachers, and the occupational stress of kindergarten teachers in different natures has certain differences. The purpose of this study uses questionnaire to explore the characteristics of occupational stress between different preschool teachers, and lays the foundation for subsequent empirical research. **Methods:** The Preschool Teacher Stress Scale (CPSS) and self-made questionnaire "Preschool Teachers' Occupational Stress Questionnaire" were used to test. 98 preschool teachers were randomly selected for pre-testing. Subsequently, a formal test was conducted on 1623 kindergarten teachers in Haidian District, Beijing, including 1041 public kindergarten teachers and 582 private kindergarten teachers, to analyze the characteristics of the occupational pressure. **Results:** The result of exploratory factor analysis showed that the "Questionnaire of Preschool Teachers' Occupational Stress" had good reliability and validity, and it was divided into five dimensions: kindergarten management and personal professional development, family life, interpersonal relationship, class management and social evaluation; T test analysis showed that the occupational pressure of public kindergarten teachers is generally higher than that of private kindergarten teachers, and the scores of public kindergarten teachers are higher than those of private kindergarten teachers in all five dimensions. Besides, the pressure of public kindergarten teachers was significantly higher than that of private kindergarten teachers on age ($F(2,1620)=9.06, P<0.001$), working years ($F(3,1620)=9.41, P<0.001$) and class role ($F(3,1620)=3.68, P<0.05$).

Keywords: public kindergarten, private kindergarten, preschool teachers, Occupational stress

父母特定生涯行为对大学生职业决策困难的影响： 生涯适应力的作用

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摘要 本研究探讨了父母特定生涯行为、生涯适应力和职业决策困难之间的关系，并在此基础上，探讨生涯适应力在其中发挥的中介作用，为高校生涯辅导提供一定的理论参考。

通过使用父母特定生涯行为量表、大学生生涯适应力量表和职业决策困难量表等测量工具，在珠海某职业决策困难高校选取了有效被试 215 名，考察大学生感知到的父母特定生涯行为、生涯适应力和职业决策困难的现状和特点，并进一步探讨了父母特定生涯行为中的父母支持、父母干涉、父母漠视与生涯适应力、职业决策困难之间的关系，得出以下结论：（1）父母特定生涯行为中的父母支持在家庭所在地、父亲受教育程度和母亲受教育程度中存在显著差异。（2）大学生的职业决策困难与父母支持呈负相关关系，与父母干涉、父母漠视呈正相关关系，与生涯适应力呈负相关关系；大学生的生涯适应力与父母支持呈正相关关系，与父母漠视呈负相关关系，与父母干涉的关系未显著。（3）父母支持负向预测职业决策困难；父母干涉、父母漠视正向预测职业决策困难。（4）生涯适应力在父母支持和职业决策困难中发挥中介效应作用。

关键词 父母特定生涯行为，生涯适应力，大学生

The Influence of Career-Specific Parental Behaviors to Decision-Making Difficulties of College Students: the role of Career Adaptability

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Abstract: On the basis of discussing the relationship between Career-Specific Parental Behaviors, Career Adaptability and Decision-Making Difficulties, the present study continued to discuss the mediating role played by Career Adaptability, which could provide theoretical reference for career education in colleges. Involving 215 college students in a university in Zhuhai as participants, the present study focused on the investigation of the present situation and characteristics of the Career-Specific Parental Behaviors, Career Adaptability as well as Decision-Making Difficulties among college students, which were based on three questionnaires: Career-Specific Parental Behaviors Scale, Career Decision-Making Difficulties Questionnaire and Career Adaptability Scale. Also, a further discussion of the relationship among the three dimensions of Career-Specific Parental Behaviors (support, interference, lack of engagement), Career Adaptability and Decision-Making Difficulties had been developed. Result suggested that: (1) The Parental Support of Career-Specific Parental Behaviors was significantly differed in the location of the family and in the educational level of the parents. (2) The Decision-Making Difficulties of college students had negative correlation with Parental Support as well as Career Adaptability, but associated positively with Parental Interference and Parental Lack of Engagement; The Career Adaptability of college students associated positively with Parental Support and associated negatively with Parental Lack of Engagement, with no significant correlation with Parental Interference. (3) Parental Support negatively predicted Decision-Making Difficulties; Parental Interference and Parental lack of engagement positively predicted Decision-Making Difficulties. (4) Career Adaptability played an intermediary role between Parental Support and Decision-Making Difficulties.

Keywords: Career-Specific Parental Behaviors, Decision-Making Difficulties, Career Adaptability, College Students

心理健康教育教师的专业化发展道路

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摘要 我国心理健康教育的总目标是提高全体学生的心理素质, 培养他们积极乐观、健康向上的心理品质, 充分开发他们的心理潜能, 促进学生身心和谐可持续发展, 为他们健康成长和幸福生活奠定基础。这个目标的达成, 心理健康教育教师的工作不容忽视, 他们的专业化发展成为当前心理健康工作的重点内容。本研究以访谈的方式了解到我国 H 省在职心理健康教育教师的工作现状, 包括归属部门、工作职责, 和学校老师、学生、家长之间的认知差异和冲突以及个人的职业发展晋升道路等一系列问题, 深刻揭示了广泛背景下心理健康教育教师的尴尬处境和发展困境。将 H 省心理健康教育教师的一般性和普遍性特征进行抽象, 塑造一个具有广泛代表性的中小学心理健康教育教师——J 老师。J 老师以心理健康教育教师的身份招聘进入了 H 省某中等学校任专职心理健康教育教师, 之后接触学校相关行政和管理工作, 看似工作晋升很顺利, 可在工作中时常遇到“老师还是咨询师——怎样坚持心理咨询的伦理原则”、“副科老师还是副科中的副科老师——怎样应对周围人对心理健康教育教师的不了解甚至误解”、“行政类人员还是专业人员——怎样选择职业发展道路”等困扰, 并由此带来角色模糊、定位不明、归属感不强、工作任务繁杂等问题, 在心理健康教育教师的实际工作中, 他们的专业化发展道路走得很艰难。J 老师的经历和困惑, 也为心理健康教育教师这一职业的发展提出了更多的挑战和思考。

关键词 心理健康教育教师, 咨询, 教学, 行政管理, 专业化

The Professional Development of Mental Health Education Teachers

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Abstract: The overall goal of our country's mental health education is to improve the psychological quality of all students, cultivate their positive and optimistic, healthy and progressive psychological qualities, fully develop their psychological potential, promote the harmonious and sustainable development of students' body and mind, and lay the foundation for their healthy growth and happy life. The importance of mental health education teachers' work is more prominent. Defining the position of mental health education teachers and resolving their role conflicts in the work is a meaningful thing. Ms. J is a full-time mental health education teacher. After two years of employment, she was assigned much more administrative and management work and has been promoted as secretary of the school youth league committee recently. Her job promotion seems going smoothly. Still she often faces role conflict at work, "teacher or psychological consultant-how to adhere to the Ethical principles of Psychological counseling, "minor subject teacher or minor minor subject teacher-how to deal with the misunderstanding of the role of mental health education teacher", "Administrator or Professionals-How to choose a career development path". Those role conflicts rise to a lot of problems. The experience and confusion of Teacher J reminds us that more study should be explored to the career development of mental health education teachers.

Keywords: Mental health education teachers, counseling, teaching, administrative management, specialization

青少年离家出走成因分析的质性研究

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摘要 **目的:** 探索青少年离家出走的心理原因, 为采取干预措施提供理论依据。**方法:** 本研究采用质的研究范式, 通过目的性抽样, 在赣州某中学选取了 16 名初中生作为研究对象, 深入个案的家庭和学校进行观察和访谈, 获得了大量的一手资料。将获取的资料进行整理和分析, 并结合相关文献和研究理论对个案心理感受和生活环境进行了描述和分析。**结果:** 研究表明: 青少年选择离家出走, 存在诸多方面的因素, 主要包括

家庭、个人、学校和社会这四个方面。家庭因素包括家庭不良气氛、家庭角色、家庭不当的教养方式和不宜家庭教育观念、不当的亲子互动等。学校因素方面,主要包括人际关系、教材教法、学校管理、学业等方面。社会因素方面则涉及不良帮派、不正当娱乐场所和大众传媒等。个人因素则指青少年个人的情绪感受,研究发现离家出走青少年主要会感受到被拒绝以及被虐待的感受。基于青少年离家出走的成因分析,本研究从离家出走青少年的家庭层面、学校层面、社会层面以及个人层面提出了相应的对策和建议。**结论:** 青少年离家出走行为受到家庭、学校、社会、个人共四个方面因素的影响,结合这些影响因素对青少年离家出走行为进行积极的干预和控制。

关键词 成因分析, 离家出走, 青少年, 质性研究

A qualitative study on the causes of teenagers running away from home

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Abstract: Objective: To explore the psychological causes of teenagers running away from home and provide theoretical basis for intervention measures. **Methods:** This study adopts the qualitative research paradigm, selects 16 junior middle school students in a middle school in Ganzhou as the research object through purposeful sampling, goes deep into the family and School of the case, observes and interviews, and obtains a large number of first-hand data. The obtained data are sorted and analyzed, and the psychological feeling and living environment of the case are described and analyzed combined with relevant literature and research theory. **Results:** the research shows that there are many factors for teenagers to choose to run away from home, mainly including family, individual, school and society. Family factors include bad family atmosphere, family role, improper family rearing style, unsuitable family education concept, improper parent-child interaction and so on. School factors mainly include interpersonal relationships, teaching materials and methods, school management, studies and so on. Social factors include bad gangs, improper entertainment places and mass media. Personal factors refer to teenagers' personal emotional feelings. The study found that teenagers who run away from home mainly feel rejected and abused. Based on the analysis of the causes of teenagers running away from home, this study puts forward corresponding countermeasures and suggestions from the family level, school level, social level and personal level. **Conclusion:** adolescent runaway behavior is affected by four factors: family, school, society and individual. Combined with these factors, we can actively intervene and control adolescent runaway behavior.

Keywords: cause analysis, running away from home, teenagers, qualitative research

青少年离家出走问题研究——基于依恋理论视角

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摘要 目的: 开展对青少年离家出走问题研究, 深入了解其现状及原因, 为他们的情感发展和健康成长提供理论支撑。**方法:** 本文采取深度访谈法和观察法等调查与搜集资料的方法, 对赣州市某中学的 16 名离家出走青少年及其家庭等进行无结构式访谈, 了解他们离家出走的现状、家庭相处模式以及童年经历等, 运用依恋理论分析离家出走的青少年的依恋类型以及青少年离家出走是如何造成的。**结果:** 研究得出: 具有离家出走行为的青少年更多地表现为强迫性自立型以及夸大型。父母作为青少年的初级依恋对象, 由于亲子分离过早、亲子沟通不足, 造成父母家庭角色与责任的缺位, 难以建立和维持良好的亲子关系, 影响依恋关系的建立。**结论:** 总结与反思依恋理论微观视角下对青少年离家出走问题研究的不足, 从依恋理论的视角对此问题的解决提出一些建议。

关键词 离家出走, 青少年, 依恋理论

A study on the problem of teenagers running away from home ——from the perspective of attachment theory

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Abstract: **Objective:** To study the problem of teenagers running away from home, deeply understand its current situation and causes, and provide theoretical support for their emotional development and healthy growth. **Methods:** using the methods of in-depth interview and observation, this paper conducted unstructured interviews with 16 runaway teenagers and their families in a middle school in Ganzhou to understand their current situation, family relationship mode and childhood experience, The attachment theory is used to analyze the attachment types of teenagers who run away from home and how teenagers run away from home. **Results:** the study showed that adolescents with runaway behavior were more compulsive self-reliance and exaggeration. Parents, as the primary attachment objects of teenagers, due to premature parent-child separation and insufficient parent-child communication, resulting in the absence of parents' family roles and responsibilities, it is difficult to establish and maintain a good parent-child relationship, which affects the establishment of attachment relationship. **Conclusion:** summarize and reflect on the shortcomings of the research on the problem of teenagers running away from home from the micro perspective of attachment theory, and put forward some suggestions to solve this problem from the perspective of attachment theory.

Keywords: running away from home, teenagers, attachment theory

5.10“心理测量专业委员会”分组展贴报告

基于广义非线性潜变量模型的民航空乘人员安全绩效建模 ——兼与传统潜变量模型对比分析

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摘 要 安全是民航产业发展的重要基础和前提。作为民航安全最直接、最重要的组成部分, 客舱安全是确保飞行安全的重要基础。空乘人员作为客舱执勤的机组人员, 职责主要在于维护飞行安全, 其工作行为和安全绩效水平对于客舱安全的实现具有重要意义。空乘人员的安全绩效不仅具有个体差异, 还会受到情境因素的影响。因此, 本研究旨在以人格特质为研究取向, 探讨主动性人格与空乘人员安全绩效的关系, 并考查安全氛围在其中的作用。目前, 相关研究一般以变量间的线性协方差结构为假定前提, 采用传统潜变量等方法进行数据分析和处理。然而, 现实中各变量间可能存在复杂的非线性相关。因此, 采用传统潜变量分析方法可能会在一定程度上降低模型的可靠性与准确性。而广义潜变量模型是一种比传统潜变量模型更加“灵活”的模型, 其中允许潜变量非线性项的存在。鉴于这一优势, 本研究试图以民航空乘人员安全绩效为例, 对比广义非线性潜变量模型和传统潜变量模型的优劣。本研究以通过主动性人格量表、安全氛围量表和安全绩效量表对中国南方航空公司的 650 名空乘人员进行的调查结果为例, 构建了主动性人格、安全氛围与空乘人员安全绩效之间关系的传统调节潜变量模型。作为对比, 本研究分别使用多项式函数和 logit 函数作为广义潜变量模型的非线性连接函数, 构建了非线性的调节广义潜变量模型。采用对数似然函数值、赤池信息量准则(AIC)、贝叶斯信息量准则(BIC)、似然比检验和二维边际的拟合效果作为模型拟合效果的检验指标。研究结果显示, 模型的拟合效果为三次多项式函数的广义潜变量模型 > logit 广义潜变量模型 > 二次多项式函数的广义潜变量模型 > 传统调节潜变量模型。相信随着非线性潜变量模型的深入研究, 通过对潜变量之间非线性效应的深入分析, 这类模型可为制定提高民航空乘人员安全绩效的干预方案提供更加可靠的数据支撑。

关键词 安全绩效, 广义潜变量模型, 非线性, 空乘人员

Modeling the Safety Performance of Civil Aviation Flight Attendants Based on Generalized Nonlinear Latent Variable Model ——Comparative analysis with traditional latent variable model

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Abstract: Safety is an important foundation and prerequisite for the development of the civil aviation industry. As the most direct and important part of civil aviation safety, cabin safety is an important foundation for ensuring flight safety. As the cabin crew on duty, flight attendants are mainly responsible for maintaining flight safety. Their work behavior and safety performance are of great significance to the realization of cabin safety. The safety performance of flight attendants not only has individual differences, but is also affected by situational factors. Therefore, this research aims to take the personality traits as the research orientation, explore the relationship between proactive personality and flight attendant safety performance, and examine the role of safety climate in it. At present, related research generally assumes the linear covariance structure between variables, and uses methods such as traditional latent variables for data analysis and processing. However, in reality, there may be complex nonlinear correlations between variables. Therefore, the use of traditional latent variable analysis methods may reduce the reliability and accuracy of the model. In contrast, the generalized latent variable model is a more "flexible" model than the traditional latent variable model, which allows the existence of non-linear terms of the latent variable. In view of this advantage, this research attempts to take the safety performance of flight attendant as an example to compare the advantages and disadvantages of the generalized nonlinear latent variable model and the traditional latent variable model. This study takes the survey results of 650 flight attendants of China Southern Airlines through the Proactive Personality Scale, Safety Climate Scale and Safety Performance Scale as examples, and constructs a relationship between the proactive personality, safety atmosphere and flight attendant safety performance using the traditional moderating latent variable model. As a comparison, this study used polynomial function and logit function as the nonlinear connection function of the generalized latent variable model, and constructed a nonlinear adjusted generalized latent variable model. The log-likelihood function value, Akaike information criterion (AIC), Bayesian information criterion (BIC), likelihood ratio test and two-dimensional marginal fitting effect are used as the test indicators of model fitting effect. The research results show that the fitting effect of the model is generalized latent variable model of cubic polynomial function> generalized latent variable model of logit> generalized latent variable model of quadratic polynomial function> traditional regulated latent variable model. It is believed that with the in-depth study of nonlinear latent variable models and the in-depth analysis of nonlinear effects between latent variables, such models can provide more reliable data support for the formulation of intervention programs to improve the safety performance of civil aviation flight attendants.

Keywords: Safety performance, Generalized latent variable model, Nonlinear, Flight attendant

结构方程模型在心理学研究中的应用(2000-2020) ——基于 CiteSpace 的可视化分析

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摘要 本文以 Web of Science 核心合集数据库为数据源, 采用 CiteSpace 软件, 对 2000 年-2020 年之间将结构方程模型用于心理学研究中的 12268 篇文献进行了信息可视化分析, 绘制了相应的知识图谱。结果表明:

(1) 将结构方程模型应用于心理学研究中的文献数量随着年份变化呈现快速增长的趋势,大量文献出现于2005年之后。(2) Morin、Marsh 和 Neumann 是统计范围内发文数量最多的三位作者,但从整体来看大多数研究者之间的合作较少。(3) 该领域的发文量排名前5的国家是美国(4941)、中国(1153)、英国(1003)、澳大利亚(900)和加拿大(791),而中国的发文量与美国相比还有较大的差距;并且中国的中心性与其余四个国家相比也较低。(4) 在结构方程模型应用于心理学研究的知识演进过程中,有11篇文献起到了关键作用,是重要的知识基础;被引量高的文献基本都是结构方程模型方法的专著和期刊文章,Principles and practice of structural equation modelling(3rd ed.) (即结构方程建模的原理与实践·第三版)是其中最为重要的著作。另外,有5篇有较高中心性的文献是关键节点,在该领域的发展中起到了纽带的作用。(5) 从研究内容来看,structural equation modeling 出现频次最高,depression、validity、mental health、fit index 等词汇也出现次数较多。该领域的研究热点主要包括结构方程模型及相关内容的研究、结构方程模型在异常心理学中的应用和结构方程模型在其他心理学研究中的应用。结构方程模型在心理学研究中的应用越来越广泛,本文的研究结果对于深入了解结构方程模型应用于心理学研究中的知识基础和演化关系具有一定价值,也期望能为相应的研究与实践提供更多参考。

关键词 结构方程模型, 心理学, 知识图谱, 可视化分析, 文献计量

Application of Structural Equation Modeling in Psychological Research (2000-2020)——Visual analysis based on CiteSpace

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Abstract: Using the core collection database of Web of Science as the data source and CiteSpace software, the study utilized information visualization analysis on 12,268 articles that applied structural equation modeling to psychological research between 2000 and 2020, and drew corresponding knowledge atlas. Results: (1) The number of literatures that adapted structural equation modeling to psychological research showed a trend of rapid increase with the change of years, and a multitude of literatures appeared after 2005. (2) Morin, Marsh, and Neumann were the three authors with the largest number of articles, but overall, there was less collaboration among most researchers. (3) The United States (4941), China (1153), The United Kingdom (1003), Australia (900) and Canada (791) ranked the top 5 countries in terms of the number of published papers in this field, while there was still a large gap between China and the United States in terms of the number of published articles; the centrality of China was low compared with the other four countries at the same time. (4) In the process of knowledge evolution of the application of structural equation model that applied in psychological research, 11 articles played a key role, and these were an important knowledge foundation. The literatures with high citation frequency were mainly monographs and journal articles on structural equation modeling, and Principles and practice of structural equation modeling (3rd Ed.) was the most important work. In addition, there were five literatures with high centrality, which were the key nodes and played a well-functioning role in the development of this field. (5) From the perspective of research content, structural equation modeling had the highest frequency, while depression, validity, mental health, and fit index were also higher frequency words. The research hotspots in this field mainly included the study of structural equation model and related contents, the application of structural equation model in abnormal psychology and the application of structural equation model in other psychology research. The application of structural equation modeling in psychological research is more and more extensive, and the results of this study are of certain value for further understanding of the knowledge base and evolutionary relationship of structural equation modeling in psychological research. Furthermore, it is also expected to provide more references for the corresponding research and practice.

Keywords: Structural Equation Modeling, Psychology, Knowledge Atlas, Visual Analysis, Bibliometrics

统计功效在因子模型中的应用

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摘要 统计功效是指某检验能够正确地拒绝一个错误的虚无假设的能力，常用 $1-\beta$ 表示。在实际测量中，研究者往往会通过扩大样本量来提高统计检验力，以求获得更可靠的结果。研究表明，在使用 ML 估计时，容易产生较高的不收敛和不适当解比率，参数估计存在边际偏差，衰减标准误，虚假卡方值及基于卡方的 I 型错误比率，以及非正态进一步提高基于卡方的 I 型错误的比率。尽管小样本会出现诸多问题，但过度追求样本的绝对数量意义并不大，从时间和物质成本角度出发，有必要从统计功效角度入手，考察适宜样本量。当前实验中通过统计功效考察样本量较多，已成为必不可少的一步，但在测量中还考虑较少，因此研究拟从因子模型入手，通过统计功效来考察样本量，以期能从统计功效角度进一步找到适宜样本量，节省人力物力。研究采用认知失败量表，并根据作者问卷编制的因子载荷值为依据，进行蒙特卡洛模拟。根据前人研究，统计功效达到 0.8 的标准为：参数及标准误偏差不得超过 10%，对于所要分析参数的标准估计偏差不得超过 5%，覆盖率在 0.91~0.98 之间。研究考察样本量分别设置为 50、100、300、600、900、1200，模拟样本量设置为 10000，重点检验因子载荷和一阶因子间相关是否达到统计功效标准。结果表明，当样本量为 50 时，因子载荷估计偏差均 d 于 5%，一阶因子间相关估计偏差比例达到 6.09%，超过 5% 的标准，且覆盖率低于 0.91，因此未达到 0.8 的统计功效；当样本量为 100 时，因子载荷估计偏差均低于 5%，一阶因子间相关估计偏差比例在 0.25%~4.42% 之间，均小于 5%，且覆盖率在 0.93~0.95 之间，均高于 0.91。而其余样本量均达到标准。综上所述，在使用认知失败量表进行施测时，样本量达到 100 即达到了统计功效，可以进行有效分析。后续研究可以考察多个变量时的样本量，以及进一步扩展到结构方程模型中，统计功效和样本量的应用。

关键词 统计功效，认知失败，蒙特卡洛模拟，因子模型，样本量

Application of Statistical Power in Factor Model

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Abstract: Statistical power is the ability which can test to correctly reject a false null hypothesis, often expressed as $1-\beta$. In the actual statistical measurement, researchers often improve statistical power by expanding the simple size in order to obtain more reliable results. Studies shows that when ML estimation is used, it is easy to generate many problems, such as: high rates of nonconvergence and inappropriate solution, marginal bias of parameter estimation, attenuation error, false chi-square value and type I error rate based on chi-square, and non-normal conditions further increase the rate of type I error based on chi-square. Although there are many problems in small sample, it is not significant to over-pursue the absolute number of samples. From the perspective of time and material cost, it's necessary to investigate the appropriate sample size from statistical power. In current experience, it has become an essential step to investigate the statistical power, but it is still less considered in measurement. Therefore, the study intends to start from the factor model and investigate the sample size through the statistical power, in order to further find the appropriate sample size and save manpower and material resources. The cognitive failure scale was used in this study, and Monte Carlo simulation was conducted based on the factor loading values developed by author's questionnaire. According to previous study, the criteria for statistical power to reach 0.8: the deviation of parameters and standard error is no more than 10%; the deviation of standard estimation of the parameters to be analyzed is no more than 5%; and then the coverage rate is between 0.91 and 0.98. The study investigated the sample size of 50, 100, 300, 600, 900, 1200, and the simulated sample size of 10000, and focus on testing whether the factor loading and the correlation between the first-factor reached the statistical power standard. The results show that when sample size is 50, the error of factor loading estimation is less than 5%, and the error ratio of correlation estimation among first-order factors reached 6.09%, importantly, the coverage rate was less than 0.91. Therefore, it didn't reach the statistical power of 0.8. When sample size is 100, the error of factor loading estimation was all lower than 5%, the error ratio of correlation among first-order factors ranged from 0.25% to 4.42%, and the coverage rate ranged from

0.93 to 0.95. In the same way, the rest of samples were up to standard. In conclusion, the statistical power is achieved when the sample size reaches 100, which indicates that the cognitive failure scale can be used for effective analysis. Subsequent studies can examine the sample size in the case of multiple variables, and future extend to structural equation models, and the application of statistical power.

Keywords: Statistical power, Cognitive failure, Monte Carlo simulation, Factor model, Sample size

正念注意意识量表在中国吸毒人群中的心理测量学特征

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摘要 目的: 检验正念注意意识量表 (Mindful Attention Awareness Scale, MAAS) 在中国吸毒人群中的适用性和推广性。该量表由 Brown 等人于 2003 年研发, 可用于评估无冥想经验个体的正念水平。MAAS 在各个国家和地区的使用中表现出了混乱的心理测量学结果, 且在国内针对吸毒群体的研究中应用并不广泛, 因而有必要对其中文译本的测量学性能进行验证, 扩展关于原版及其简化 MAAS 的现有结构认识。**方法:** 采用正念注意意识量表 (MAAS)、罗森伯格自尊量表 (RSES) 和 10 项反刍思维量表 (RRS-10) 对贵州省某戒毒中心 437 名吸毒人员进行调查。其中 203 名在 3 个月后再次填写 MAAS 量表, 以评估量表的重测信度。运用验证性因子分析 (CFA) 考察以往研究中提出的九个有争议的模式以确定 MAAS 的最佳因子结构。**结果:** CFA 的各项拟合指标结果表明 MAAS-5 的单因子结构表现最好 ($\chi^2/df=1.32<3$, CFI=0.997, TLI=0.995, RMSEA=0.027, SRMR=0.015; 且每个题项因子负荷均大于 0.4)。信度检验结果表明, 内部一致性系数, 平均项目相关值及重测信度均令人满意 (Cronbach's $\alpha=0.79$, MIC=0.43, $r>0.3$, $p<0.001$)。对于效度, 本研究计算了 MAAS-5 与两个外部构念 (自尊、反刍) 之间的相关性 (均 $r>0.3$, $p<0.001$), 表明该量表具有良好的收敛和区分效度。**结论:** 目前的研究结果证实, 5 项正念注意意识量表 (MAAS-5) 在中国吸毒人员中具有良好的信度和效度, 可以有效测量他们的正念水平。

关键词 正念, 吸毒人员, 信度, 效度

What about the Mindful Attention Awareness Scale and the shortened versions among Chinese who use drug

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Abstract: Considering that different versions of the Mindful Attention Awareness Scale (MAAS) show confused results in psychometric characteristics. Based on the clinical importance of mindfulness to Chinese who use drug (CWUD), the purpose of this study is to investigate the reliability and validity of MAAS in CWUD, and to expand the existing understanding of the original and simplified scales. The MAAS, Rosenberg Self-esteem Scale (RSES) and 10-Item Ruminative Response Scale (RRS-10) were used to investigate 437 CWUD (57.0% female, mean age 39.81, SD = 9.05) in a drug treatment center in Guizhou Province, China. Among them, 203 students received the MAAS assessment again after 3 months to evaluate the test-retest reliability of the scale. Confirmatory factor analysis (CFA) was used to investigate nine the controversial models proposed in previous studies to determine the best factor structure of MAAS. The results of each fitting index showed that the single factor structure of MAAS-5 was the best ($\chi^2/df = 1.32 < 3$, CFI = .997, TLI = .995, RMSEA = .027, SRMR = .015; And the factor load of each item is greater than .4). The reliability coefficient was also satisfactory (Cronbach's $\alpha = .79$, MIC = .43, $r > .3$, $p < .001$). For validity, this study calculated the correlation between MAAS-5 and two external constructs (self-esteem, rumination), which showed that the scale had good convergence and discriminant validity (all $r > .3$, $ps < .001$). The results confirm that the five item MAAS (MAAS-5) has good reliability and validity in CWUD, and can effectively measure their

mindfulness level.

Keywords: Mindfulness, MAAS, CWUD, reliability, validity

不同文化背景下的人群对社会期待的心理差异 ——基于 ISSP 环境关心量表在台湾地区和英国的调查数据

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摘 要 背景: 国际社会调查项目 (International Social Survey Programme, ISSP) 是一个跨国合作调查项目, 它通过问卷的形式, 调查各个地区居民对社会公平、健康、环境等主题的态度。在全球环境治理的大背景下, 社会各界都在倡导环保观念, 加强人们对环境问题的意识程度。而不同文化导向下的群体对于社会期待的应答是存在差异的^[1]。以往研究从 ISSP 中提取了相应条目作为环境关心量表 (EC)^[2,3], 一般来说, EC 包含两个子量表 (见表 1): 人们对环保观点的一般性支持程度 (共 6 个条目); 人们对特定环境问题的意识程度 (共 5 个条目)。以往研究表明, 在个人主义和较宽松的文化背景下, 环境关心和环保行为的关系较强^[3], 即环境关心在个人主义文化背景下才能较好的预估环境保护行为^[4]。本研究旨在探讨集体与个人主义背景下, 在紧密与宽松的文化氛围中的人群对社会期待的心理反应。方法: 选取英国 (个人主义, 宽松氛围) 和台湾 (集体主义, 紧密氛围) 两个地区的调查结果作为研究对象。依据项目反应理论 (IRT), 对环境关心量表中的 11 个条目得分情况进行项目功能差异检验。其中, 对意识程度部分的 5 个条目进行反向计分, 处理后, 得分越高, 说明应答者对环境问题的意识程度更强。采用等级反应模型, 分析环境关心量表在两个地区中的测量是否具有恒等性。结果: (1) 环保观念的六个条目 (图 1): 每个条目在台湾地区样本中的区分度均小于英国, 其中 5 个条目的区分度在 0.65 以下, 且选项集中于 2 和 4, 各条目反映的信息量都低于 0.5。而在英国样本中, 除了 9c 这一条目的信息量和区分度较低, 其余条目信息量均在 0.5 及以上, 区分度在 1.2 以上。(2) 环境危险意识的五个条目 (图 2): 在台湾地区的样本中, 等级反应模型的第一阈值极低 (小于-3), 即只有意识非常低的台湾居民才可能选“根本没有危险”这一选项。结论: 总体而言, 该量表在英国有更好的区分度, 能够反应更多的信息量。在台湾地区, 问卷选项的设置没有能够涵盖环保观念和环境危险意识特质极低 (在正态分布曲线-3 以外) 的人群, 导致“根本没有危险”这一选项形同虚设。这一分析再次说明集体主义文化背景下的人, 更倾向于选择符合社会期待的选项。因此, 在全球性的研究中, 在跨文化的比较中, 我们不仅需要关注统计结果, 还应思考同一量表在不同地区的应用是否具有测量恒等性, 并依据不同地区的人群心理特质制定合适的调查问卷。

关键词 文化差异, 社会期待, 项目反应理论 (IRT)

Psychological differences towards social expectations among people from different cultural backgrounds——Survey data from Taiwan and the UK on an ISSP-based measure of environmental concern

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Abstract: Background: The International Social Survey Programme (ISSP) is a cross-national cooperative survey project. It surveys people's attitudes towards social equity, health, environment and other topics through questionnaire research. In the context of global environmental governance, all areas of society are advocating for environmental protection and strengthening people's awareness of environmental issues. People with different cultural orientations show differences regarding socially desirable responding in self-report measures [1]. Scholars have adopted items from the ISSP Environment module's questionnaire to develop measures of environmental concern [2,3]. A distinction has been made between two dimensions of EC and measured employing two subscales (see Table 1):

People's general support for environmental protection (pro-environmental views [PEV], six items) and people's awareness of specific environmental issues (environmental awareness [EA], five items). Previous studies have shown that relationship between environmental attitudes and pro-environmental behavior is stronger in individualist and loose cultures [3], that is, environmental concern is a better predictor of pro-environmental behavior in these cultural contexts [4]. Under the distinction of cultural individualism-collectivism and tightness-looseness, this study aimed to explore the psychological response to social expectations of individuals from different cultural contexts. Methods: The survey results in the UK (an individualist and loose culture) and Taiwan (a collectivist and tight culture) were selected as the research objects. An analysis of the 11 items of both subscales to measure EC (PEV and EA) was carried out using item response theory (IRT). The five items of EA were originally reverse-coded, and thus they were recoded so that higher scores indicated stronger awareness of the environmental problems. The IRT graded response model was used to study the extent to which the functioning of the measurement of EC was identical in the two regions. Results: (1) PEV (Figure 1): In Taiwan, the level of discrimination of all items was less than that in the UK, the discrimination of five items was less than 0.65, the participants' responses focused on 2 and 4, and the information of each item was less than 0.5. In Britain, except for item 9c, the information of the other items were 0.5 and above, and the discrimination was above 1.2. (2) EA (Figure 2): In Taiwan, the first threshold of the graded response model was very low (less than -3), that is, only those with very low awareness may choose the option of "not dangerous at all". Conclusion: In general, the scale had better discrimination and provided more information for the UK. In Taiwan, the questionnaire options did not cover the respondents with very low environmental attitudes and risk awareness (outside the normal distribution curve -3), and respondents were very unlikely to endorse the option "not dangerous at all". Thus, this may indicate that people from collectivist cultures would choose response options that meet social expectations. Consequently, when conducting global research and making cross-cultural comparisons, we should not only pay attention to the statistical results but also consider whether the same measure performs similarly across different regions, and also formulate appropriate questionnaires for the different regions under investigation.

Keywords: Cultural differences, social expectations, items response theory (IRT)

我国职业兴趣测验的开发与应用

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摘要 职业兴趣是兴趣在职业选择活动中的表现, 职业兴趣测验是一种对职业兴趣进行理性分析和应用探讨的有效方式, 讨论职业兴趣测验不仅对个人学习工作和事业发展具有积极意义, 而且对高校人才培养和社会人力资源管理有着显著的应用价值。本文从主要应用场景与需求、国内常见测评工具、现有工具存在的问题、开发需求与未来应用趋势四个方面讨论了我国职业兴趣测验的开发与应用。在应用场景与需求方面, 职业兴趣测验主要应用于高中自主选科、高考志愿填报、职业生涯规划、入岗就职和人力资源管理等多种场景。在国内常见测评工具方面, 本文以职业兴趣测验的发展进程为线索, 从心理测量角度对国内常见测量工具进行整理和概括。国内职业兴趣测验的研究开始较晚, 20 世纪 90 年代前以引进和修订国外 Holland 等人的职业兴趣测验为主, 意识到文化适应性问题后, 后期以研发本土化测验工具为主。现有工具存在的问题方面, 本文提出了信效度检验问题、测验编制问题、测验对象与用途问题、质与量的权衡问题。在开发需求与未来应用趋势方面, 本文独创性地提出职业兴趣测验的开发与应用需顺应革新趋势、细分趋势、综合趋势与毕生发展趋势。革新趋势是指以适应时代变化为目的而进行职业兴趣种类的横向拓展, 如结合人力资源社会保障部于 2020 年发布的 9 个新职业, 以更迭职业兴趣的维度; 细分趋势是指为已有特定职业兴趣的个体进一步提供更细致的职业内分类; 综合趋势是指将职业兴趣量表与职业价值观、职业性向、职业性格、职业自我效能感等其他职业量表结合, 以形成完整的、综合的职业评估体系; 毕生发展趋势是指构建出一套纵向职业兴趣测评工具, 包含中学生版、大学生版、求职版等纵向系列, 使用连贯性较强且统一的术语进行描述与预测, 以满足随年龄变化前后一致的测量需求。

关键词 职业兴趣, 职业兴趣测验, 信效度检验, 毕生发展

The Development and Application of Vocational Interest Assessment in China

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Abstract: Vocational interest is the expression of interest in vocational choice, and vocational interest assessment is an effective way to rationally analyze and apply vocational interest. Vocational interest assessment not only has the positive significance to the individual study and career development, but also has the remarkable application values to the talent cultivation and the social management. This paper discusses the development and application of vocational interest assessment in China from four aspects: main application scenarios, common assessment tools, problems of current tools, and future trends of assessment. Vocational interest assessment is applied in many scenarios, such as independent subject selection in high school, college major selection, career planning, and human resource management. Based on the development process of vocational interest assessment, this paper summarizes the common assessment tools in China from the perspective of psychological measurement. The original research on vocational interest assessment in China started late. Before the 1990s, Chinese researchers mainly introduced and revised the vocational interest scales of Holland. After realizing the problem of cultural adaptability, in the later stage, Chinese researchers developed domestic vocational interest scales. With regard to the problems of existing instruments, this paper puts forward the problems of reliability and validity tests, test construction, test objects and usage, and the tradeoff between quality and quantity. In terms of future trends, this paper proposes that the development and application of vocational interest assessment should follow the trends of innovation, subdivision, integration and lifelong development. The innovation trend refers to the horizontal expansion of vocational interest categories for the purpose of adapting to the changes of times. For example, utilizing from the nine new occupations released by the Ministry of Human Resources and Social Security in 2020, the dimension of vocational interest should be changed. The trend of subdivision refers to the further provision of more detailed intra-vocational classification for individuals with specific vocational interests. Integration trend represents the combination of vocational interest assessment with other vocational assessments like vocational values, vocational aptitudes, vocational personality and vocational self-efficacy to form a comprehensive vocational assessment system. Lifelong development trend refers to the establishment of a set of vocational interest assessment tools, including time longitudinal series such as middle school student edition, college student edition, job application edition and other longitudinal editions. All editions should use consistent and unified terms to describe and predict vocational interest, in order to meet the needs of consistent assessment with age.

Keywords: vocational interest, vocational interest assessment, reliability and validity tests, lifelong development

简式父母教养方式量表（PS-7）在中国幼儿父母群体的信效度检验和测量不变性

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摘要 目的:检验简式父母教养方式量表（The Brief Parenting Scale, PS-7）在中国幼儿父母群体中的适用性。PS-7 是由 Sai-fu Fung 等人在原版 30 题量表的基础上，进行简化研发的一种用于测量父母教养方式的自我报告工具，分为松懈和过度反应两个维度，共 7 个条目。量表采用 Likert7 级计分，得分越高表明家长越倾向于采用消极的教养方式。该量表在香港青少年父母群体中开发施测，与现有各种版本的父母教养方式量表相比，具有更好的因子结构和心理测量学特性。但该研究的结果目前是否能在中国各地得到复制仍不清楚，因此很有必要探讨该量表在中国其他群体的测量学特性。**方法:**用简式父母教养方式量表（PS-7）、父母自我效能感量表（PASEC-6）和焦虑抑郁压力量表（DASS-21）对 567 名来自贵州省的幼儿父母进行调查，用验证性因

素分析、信度分析、相关分析和测量不变性等方法探讨 PS-7 在中国幼儿父母群体中的适用性。**结果：**（1）依据验证性因素分析的模型检验指数，PS-7 具有稳定的双因子结构（CFI=0.97；TLI=0.95，RMSEA=0.05）。（2）PS-7 被证明具有良好的信度（Cronbach $\alpha > 0.70$ ）。（3）另外 PS-7 与 PASEC-6 和 DASS-21 有着较好的效标关联效度，其中与父母自我效能感呈显著负相关（ $r = 0.21, p < 0.001$ ），与焦虑抑郁压力呈显著正相关（ $r = 0.39, p < 0.001$ ）。（4）多组验证性因素分析结果显示，相邻嵌套模型的 Δ CFI、 Δ TLI 和 Δ RMSEA 均小于 0.01，证明严格的测量不变性在父亲和母亲之间成立。**结论：**简式父母教养方式量表在中国幼儿父母群体中具有良好的信效度和性别测量不变性，可以有效测量个体的教养方式水平。

关键词 教养方式，信效度，测量不变性

Reliability and validity test and measurement invariance of brief Parenting Scale (PS-7) for the parents of children

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Abstract: Objective: To test the applicability of brief parenting scale (PS-7) for the Chinese parents of children. PS-7 is a self-report tool developed by Sai-Fu Fung et al. on the basis of the original 30-item scale, which can be divided into two dimensions of laxness and overreactivity, with a total of 7 items. Responses are rated on a 7-point Likert-type scale, and the higher the score is, the more inclined parents are to adopt negative parenting styles. This scale has been developed and tested in parents of Hong Kong adolescents and has better factor structure and psychometric characteristics compared with existing versions of parental rearing style scales. However, it is not clear whether the results of this study can be replicated in China, so it is necessary to explore the measurement characteristics of this scale in other groups in China. **Methods:** The brief Parenting Scale (PS-7), Parental Self-Efficacy Scale (PASEC-6) and Depression Anxiety Stress Scale (DASS-21) were used to investigate 567 parents of children from Guizhou province. The applicability of PS-7 for the parents of children was investigated by confirmatory factor analysis, reliability analysis, correlation analysis and measurement invariance. **Results:** (1) According to the model test index of confirmatory factor analysis, the PS-7 have a stable two-factor structure (CFI=0.970; TLI=0.951, RMSEA=0.052). (2) PS-7 was proved to have good reliability (Cronbach $\alpha > 0.70$). (3) In addition, the PS-7 have better criterion correlation validity with PASEC-6 and DASS-21, was significantly negatively correlated with parental self-efficacy ($r = 0.211, p < 0.01$), significantly positive correlation with depression anxiety stress ($r = 0.386, p < 0.01$). (4) The results of multi-group confirmatory factor analysis showed that the values of Δ CFI, Δ TLI and Δ RMSEA in adjacent nested models were all less than 0.01, which proved that the strict measurement invariance was established between the father and the mother. **Conclusion:** The PS-7 has good reliability and validity and gender measurement invariance among Chinese parents of children, which can effectively measure the level of individual parenting style.

Keywords: Parenting, Reliability and validity, Measurement invariance

基于 CESD 纵向等值性检验的应激与抑郁交叉滞后研究

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摘要 目的：考察流调中心抑郁量表（Center for Epidemiologic Studies Depression, CESD）在不同时间下的测量等值性，并探究应激与抑郁的因果关系。**方法：**854 名大学生（236 名男性；618 名女性）完成评估抑郁水平的 CESD 和应激水平的日常社会和学业事件量表（General Social and Academic Hassles Scale, GSAHS），其中有 412 名大学生（97 名男性；315 名女性）间隔 4 周后第二次完成 CESD 和 GSAHS。采用验证性因素分

析检验两个时间点（T1、T2）的 CESD 四因子模型与数据的匹配程度以及纵向等值性。对 T1、T2 纵向数据采用交叉滞后分析，探究应激与抑郁之间的相互作用。**结果：**单组验证性因素分析结果表明，CESD 四因子结构在大学生样本中与数据拟合良好[初测 T1 样本：卡方与自由度比值（ χ^2/df ）=3.68、相对拟合指数（Comparative Fit Index, CFI）=0.92、塔克尔勒威斯指数(Tucker-Lewis index,TLI)=0.91、近似均方根误差(Root Mean Square Error of Approximation, RSMEA)=0.06、标准化均方根残差(Standardized Root Mean-square Residual, SRMR)=0.04；再测 T2 样本： χ^2/df =2.39、CFI=0.92、TLI=0.91、RSMEA=0.06、SRMR=0.05]。多组验证性因素分析结果显示，在形态等值检验中， χ^2/df =2.79、CFI=0.93、TLI=0.92、RSMEA=0.04、SRMR=0.05，每一步等值检验之间结果比较 ΔCFI 、 ΔTLI 均小于 0.01，且四个等值模型的 CFI、TLI 均大于 0.9，RMSEA 在 0.036~0.038 之间，SRMR 在 0.040~0.042 之间，即各模型的拟合指数均达到良好标准。交叉滞后结果显示，抑郁与应激在横向水平上具有一定的稳定性(T1: $r=0.35, p<0.001$, T2: $r=0.44, p<0.001$)，T1 的应激对 T2 的抑郁 ($\beta=0.93, p<0.001$) 和 T2 的应激 ($\beta=0.99, p<0.001$) 均有正向显著的预测作用，T1 的抑郁对 T2 的抑郁有显著的预测作用 ($\beta=0.13, p<0.05$)，但 T1 的抑郁对 T2 的应激无显著的预测作用。**结论：**流调中心抑郁量表具有跨时间的测量等值性，可用其得分变化来反映个体的抑郁水平变化情况。应激与抑郁之间存在单向预测关系，应激水平是导致抑郁的原因之一。

关键词 流调中心抑郁量表，时间等值，应激，抑郁，交叉滞后

Cross-lagged analysis of stress and depression based on longitudinal measurement invariance of CESD

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Abstract: Objective: To examine the Longitudinal measurement invariance of the Center for Epidemiologic Studies Depression(CESD) and the casual relationship between stress and depression. **Methods:** A total of 854 college students (Men=236, Women=618) completed the CESD and General Social and Academic Hassles Scale (GSAHS), among which 412 students (Men=97,Women=315) completed the CESD and GSAHS twice with 4-week interval.The confirmatory factor analyses were conducted to validate the four-factor structure of CESD and test its longitudinal measurement invariance. Cross-lagged analysis was used for T1 and T2 longitudinal data to explore the interaction between stress and depression. **Results:** The results of single group confirmatory factor analysis demonstrated that the four-factor model of CESD fit the data reasonably[Time 1: χ^2/df =3.68, Comparative Fit Index(CFI)=0.92,Tucker-Lewis index(TLI)=0.91,Root Mean Square Error of Approximation (RSMEA) =0.06, Standardized Root Mean-square Residual (RMR)=0.04. Time 2: χ^2/df =2.39、CFI=0.92、TLI=0.91、RSMEA=0.06、SRMR=0.05].The multi-group confirmatory factor analyses showed that the configural model provided evidence for configural invariance (χ^2/df =2.79, CFI=0.93, TLI=0.92, RSMEA=0.04, SRMR=0.05). Furthermore, the changes in CFI and TLI ($\Delta CFI, \Delta TLI < 0.01$) supported weak, strong and strict invariance of the CESD. The CESD demonstrated good measurement equivalence across time ,with all CFI and TLI greater than 0.9, RMSEA ranging from 0.036 to 0.038 and SRMR ranging from 0.040 to 0.042. The Cross-lagged analysis results showed that stress and depression were stable across time (T1: $r=0.35, p<0.001$, T2: $r=0.44, p<0.001$). Stress at T1 positively predicted depression ($\beta=0.93, p<0.001$) and stress($\beta=0.99, p<0.001$) at T2. Depression at T1 had a significant effect on depression at T2 ($\beta=0.13, p<0.05$), but couldn't predict stress at T2 significantly. **Conclusion:** The Center for Epidemiologic Studies Depression has longitudinal measurement invariance. There is a causal relationship between stress and depression, with stress predicting depression unidirectionally.

Keywords: Center for Epidemiologic Studies Depression, Longitudinal measurement invariance, stress, depression, Cross-lagged

变点分析法在异常反应行为侦测研究中的应用——基于反应时数据

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摘要 变点分析法(Change Point Analysis, CPA)是检测过程数据中异常数据的常用方法,近年来引入心理与教育测量领域,为测验人员了解考生的作答行为提供了一个新的视角。和其他方法相比,CPA可分别从考生水平和项目水平出发,准确地检测和标记出考生的异常反应行为和异常试题。反应时数据是测验数据的其中一种,由于它同时包含考生能力信息和项目信息,对于提高考生能力估计的精度与测验设计的优质性有很大的帮助。随着计算机测验与在线评估的普及,反应时数据的可用性也逐渐提升。因此,本研究以加速作答反应为例,阐述如何基于反应时数据、使用CPA检测测验中的异常反应行为。为模拟考生出现加速作答行为时的反应时数据,研究者构建了对数正态混合模型。使用似然比检验法与Wald检验法检测异常反应行为,通过蒙特卡洛模拟获得统计量的临界值。模拟和实证研究结果显示,两种检验方法的临界值几乎相同,不同测验长度上临界值也很接近;无论测试长短、变点的分布情况以及异常考生的比例如何,CPA方法不但能够很好的控制I类错误率,而且各条件下的检验力都在0.93以上;和基于作答数据的同类研究相比,检验力有了较大的提升,说明了反应时数据在检测异常反应研究上的优势。未来研究可结合作答数据与反应时数据共同进行检测,进一步提升CPA方法的效力。另外,CPA还可运用于其他异常反应行为和测验类型的检测。

关键词 变点分析法, 反应时, 加速作答

Application of Change Point Analysis of Response Time Data to Detect Aberrant Response Behavior

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Abstract: Change Point Analysis (CPA) is a common method to detect abnormal data in the process data and introduced to psychological and educational measurement in recent years. It provides a new perspective for the test staff to understand the examinee's response behavior. Compared with other methods, CPA can accurately detect and mark the examinee's abnormal behavior and abnormal items based on the examinee's level and item level respectively. Response time data is one of the test data. Because the data contains both the information of the examinee's ability and item, it is of great help to improve the accuracy of the candidate's ability estimation and the quality of the test design. And the popularity of computer based testing (CBT) for educational tests and online data collection for psychological assessments has dramatically expanded the availability of response time data. In this paper, we propose to use CPA to detect aberrant response behavior using response time data. And take test speededness as an example to illustrate how the CPA method can be used to detect aberrant behavior using item response time data. Response time under speededness was simulated using the log-normal mixed model for response time. Two test statistics, the Likelihood Ratio Test and Wald Test, were used to detect aberrant response behaviors. The critical values of the statistics were obtained by Monte Carlo simulation. Results of simulation and empirical study show that the critical values of statistics are almost the same, and don't differ much across different test lengths. The power is above 0.93 for every condition, regardless of the length of the test, the distribution of the change point, and the percentage of test takers affected by speededness, while keeping the type-I error rate well-controlled. The power is much higher than those reported in similar studies that were based on item response data. It therefore indicates that using response time information did improve power. Future researchers can combine response data with response time data to enhance its applicability and power. The CPA can also be applied to detect other aberrant behaviors on tests with polytomous items, as well as mixed-format tests which contain both dichotomous items and polytomous items.

Keywords: Change Point Analysis, Response Time, Test Speededness

中文版心理需求与平衡量表在青少年群体中的信效度检验

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摘要 以主观幸福感为框架的自我决定理论指出, 个体健康发展须满足基本心理需求: 即关系(relatedness)、能力(competence)以及自主(autonomy)三种需求。有研究发现心理需求的满足程度, 与个体的主观幸福感、孤独感、依恋类型以及自尊水平等有着密切关系。那么修订中文版心理需求与平衡量表, 一方面可以了解青少年这三种基本需求的发展现状, 另一方面可以为今后研究心理需求满足程度提供统一度量尺度。**目的:** 对中文版修订心理需求平衡测量量表(Balanced measure of psychological needs scale, BMPN)的信效度进行检验。**方法:** 采用方便取样的方式, 用中文版修订的心理需求量表(BMPN)测量 1800 名青少年, 回收有效问卷 1560 份; 以生活满意度量表(SWLS)、孤独感量表(ULS-8)和成人依恋量表(AAS)为校标, 计算校标关联效度; 并在 1 个月后进行其中 140 名进行重测。**结果:** 通过因子分析验证发现支持量表的三因素结构模型($\chi^2=346.61$ 、 $df=92$ 、 $CFI=0.90$ 、 $TLI=0.94$ 、 $RMSEA=0.06$ 、 $SRMR=0.04$); BMPN 中文版的关系、能力与自主的三个分量表的内部一致性信度分别为 0.68、0.70 和 0.70, 分半信度分别为 0.56、0.63、0.55, 重测信度分别为 0.67、0.71、0.64。BMPN 中文版的关系、能力、自主与青少年的生活满意度、亲近依赖维度之间存在显著性正相关, 而与青少年的孤独感、依恋焦虑维度存在显著性负相关。**结论:** 中文版 BMPN 具有良好的信效度, 可以作为测量我国青少年心理需求平衡程度的有效工具。

关键词 心理需求与平衡量表, 大学生, 信度, 效度

Reliability and Validity of Balanced Measure of Psychological Needs Scale in Adolescents (Chinese Version)

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Abstract: Self-determination theory based on subjective well-being points out that the healthy development of an individual must satisfy three basic psychological needs: relatedness, competence and autonomy. Studies have found that the degree of satisfaction of psychological needs is closely related to the individual's subjective well-being, loneliness, attachment type, and self-esteem level. Then the revision of the Chinese version of the psychological needs and balance scale can understand the development status of these three basic needs of adolescents on the one hand, and on the other hand it can provide a unified measurement scale for future research on the satisfaction degree of psychological needs. **Objective:** To test the reliability and validity of the Chinese version of the balanced measure of psychological needs scale (BMPN). **Methods:** A convenient sampling method was used to measure 1,800 adolescents with the revised Chinese version of the Psychological Needs Scale (BMPN), and 1,560 valid questionnaires were collected; Life Satisfaction Scale (SWLS), Loneliness Scale (ULS-8) and Adult Attachment Scale (AAS) served as the criteria-related validity instrument; 140 of them were retested one month later. **Results:** The three-factor structure model supporting the scale was found through factor analysis ($\chi^2=346.61$, $df=92$, $CFI=0.90$, $TLI=0.94$, $RMSEA=0.06$, $SRMR=0.04$); The internal consistency reliability of the three subscales of relatedness, competence, and autonomy of the Chinese version of BMPN are 0.68, 0.70, and 0.70 respectively, and the split-half reliability is 0.56, 0.63, and 0.55 respectively. The test reliability is 0.67, 0.71, 0.64 respectively. The relatedness, competence, and autonomy of the Chinese version of BMPN are significantly positively correlated with adolescents' life satisfaction and closeness dependence dimensions, while there are significant negative correlations with adolescents' loneliness and attachment anxiety dimensions. **Conclusion:** The Chinese version of BMPN has good reliability and validity, and can be used as an effective tool to measure the balance of the psychological needs of adolescents in China.

Keywords: Balanced Measure of Psychological Needs Scale, Adolescents, Reliability, Validity

空间关系判断情景交互测试的有效性：行为和 fNIRS 证据

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摘要 空间关系判断是一种典型的视觉空间认知加工能力，它在辨认物体、引导行为以及进行空间巡航过程中发挥着重要作用。过去空间关系判断实验材料多以坐标、点和线条构成，内容单一且无空间情境。本研究旨在构建具有一定情境性和交互性的空间关系判断测试，从而提升空间关系判断测试的有效性。研究一基于传统研究范式和测试工具构建情景交互式空间关系判断测试，包括类别关系和数量关系，共 24 个试次。招募 43 名被试（男性 17 名，女性 26 名，18-25 岁），完成空间关系判断传统测试、圣巴巴拉方向感量表测试以及变形物体识别测试，以检验情景交互式测试的可靠性和有效性。研究二招募 44 名民航飞行员、17 名飞行学员以及 56 名大学生被试，采用功能性近红外光谱技术（fNIRS）揭示了空间关系判断情景交互测试激活的脑区以及在空间关系判断能力上高低能力组的脑区激活程度差异。结果表明：（1）空间关系判断情景交互测试反应时与传统测试反应时、变形物体识别反应时呈显著正相关，与方向感测试得分呈显著负相关。说明情境测试具有较好的效标关联效度、结构效度与实证效度；（2）情景测试高分组在类别任务上显著激活了顶叶，在数量任务上显著激活了顶叶与颞叶，而低分组未显著激活相关脑区；飞行员、飞行学员与大学生被试在情景测试中的类别和数量任务激活脑区均存在显著差异，说明情景交互测试具有较好的区分效度。上述结果表明，空间关系判断情景交互测试具有较好的可靠性和有效性，可以作为空间关系判断能力的评估工具。

关键词 空间关系判断，飞行员，情景交互测试，评估

The Effectiveness of Situational Interactive Test of Spatial Relationship Judgment: Behavioral and fNIRS Evidence

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Abstract: Spatial relationship judgment is a typical visual spatial cognitive processing ability, which plays an important role in identifying objects, guiding behaviors and space cruising. In the past, the experimental materials used to judge spatial relations were composed of coordinates, points and lines, and the content was single and there was no spatial context. The purpose of this study is to construct a situational and interactive spatial relationship judgment test to improve the effectiveness of the test. The first study was based on the traditional research paradigm and testing tools to construct situational interactive spatial relationship judgment test, including category relationship and quantity relationship. 43 subjects (17 males, 26 females, 18-25 years old) were recruited to complete the traditional test of spatial relationship judgment, the Santa Barbara Sense of Direction Scale, and the Deformation Object Identification Test to test the reliability and validity of the situational interactive test. Study 2 recruited 44 pilot, 17 pilot students and 56 college students. Functional near-infrared spectroscopy (fNIRS) was used to reveal the differences in the activation of brain regions in spatial relationship judgment scenarios and in the ability of spatial relation judgment between high and low ability groups. The results show that: (1) There is a significant positive correlation between reaction time and traditional reaction time, and response time of deformation object recognition, and a significant negative correlation with direction sense test scores. The results indicate that the situational test has good correlation validity, construct validity and empirical validity. (2) High-score group significantly activated parietal lobe on category tasks, and parietal and temporal lobes on quantity tasks, while low-score group did not activate related brain regions. There were significant differences among pilots, pilots and college students in category and quantity of task activation areas, which indicated that the situational interactive test had good discriminative validity. The above results show that the situational interactive test of spatial relationship judgment has good reliability and validity, and can be used as an evaluation tool for spatial relation judgment ability.

Keywords: Spatial relationship judgment, Pilot, Situational interactive test, Evaluation

12 项一般健康问卷在社区老年人群中的适用性研究

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摘要 目的: 检验 12 项一般健康问卷 (12-Item General Health Questionnaire, GHQ-12) 在社区老年人群中的适用性。**方法:** 377 名社区老年人完成了 GHQ-12、老年抑郁量表 (Geriatric Depression Scale, GDS)、状态特质焦虑问卷 (State-Trait Anxiety Inventory, STAI)、心理弹性量表 (Connor-Davidson Resilience Scale, CD-RISC) 和认知情绪调节问卷 (Cognitive Emotion Regulation Scale, CERQ) 等系列量表。采用验证性因子分析考察 GHQ-12 单因子、两因子 (社会功能不足; 抑郁/焦虑) 和三因子 (社会功能不足; 抑郁/焦虑; 丧失自信) 模型与数据的拟合程度, 采用的拟合指标为相对拟合指数 (Comparative Fit Index, CFI); 塔克-刘易斯指数 (Tucker-Lewis Index, TLI); 近似均方根误差 (Root Mean Square Error of Approximation, RMSEA); 标准化残差均方根 (Standardized Root Mean Square Residual, SRMR)。基于拟合最佳的因子模型, 采用 Cronbach's α 和条目间平均相关系数 (Mean Inter-Item Correlation, M_{IC}) 检验 GHQ-12 及各因子的内部一致性信度, 计算 GHQ-12 与 GDS、SAI、TAI、CD-RISC 得分之间的皮尔逊相关系数评估 GHQ-12 聚合效度。以 GHQ-12 得分为因变量、CERQ 得分为自变量, 采用层次线性回归分析探究在控制人口统计学变量的影响后, 认知情绪调节策略对社区老年个体心理健康水平的预测作用进一步考察 GHQ-12 的适用性。**结果:** GHQ-12 的单因子模型未达到拟合标准 (CFI=0.664, TLI=0.589, RMSEA=0.130, SRMR=0.111), 两因子 (CFI=0.934, TLI=0.918, RMSEA=0.058, SRMR=0.049) 和三因子模型 (CFI=0.949, TLI=0.933, RMSEA=0.052, SRMR=0.047) 则均拟合良好, 且相比二因子模型, 三因子模型表现更优 ($\Delta\chi^2=16.605$, $\Delta df=2$, $p<0.001$)。在三因子结构中, 社会功能不足因子条目的负荷系数为 0.45~0.62, 抑郁/焦虑因子条目的负荷系数为 0.53~0.77, 丧失自信因子条目的负荷系数为 0.63~0.76。GHQ-12 的 Cronbach's α 系数为 0.77, 各因子的 Cronbach's α 系数为 0.65~0.74, GHQ-12 的 M_{IC} 系数为 0.22, 各因子的 M_{IC} 系数为 0.31~0.48。GHQ-12 与 GDS、SAI、TAI 得分均呈显著正相关 ($r=0.57\sim0.71$), 与 CD-RISC 得分则呈显著负相关 ($r=-0.60$)。回归分析结果显示, 适应性认知情绪调节策略 ($\beta=-0.38$) 与非适应性认知情绪调节策略 ($\beta=0.48$) 均能显著预测老年个体的心理健康。灾难化 ($\beta=0.41$)、积极重评 ($\beta=-0.24$) 和接受 ($\beta=-0.15$) 三种认知情绪调节策略预测作用显著。**结论:** GHQ-12 具有良好的信效度, 适用于社区老年人群的心理评估; GHQ-12 的三因子结构可较好反映老年人群的健康状态。

关键词 一般健康, 老年人, 信度, 效度

Applicability of 12-Item General Health Questionnaire in Chinese Community-Dwelling Elderly

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Abstract: Objective: To examine the applicability of the 12-Item General Health Questionnaire (GHQ-12) in Chinese community-dwelling elderly. **Method:** A total of 377 participants completed a series of questionnaires including GHQ-12, Geriatric Depression Scale (GDS), State-Trait Anxiety Inventory (STAI), Connor-Davidson Resilience Scale (CD-RISC), and Cognitive Emotion Regulation Scale (CERQ). The Confirmatory Factor Analysis was conducted to evaluate the goodness of fit of three models of GHQ-12: one-factor, two-factor (social dysfunction, depression/anxiety), and three-factor (social dysfunction, depression/anxiety, loss of confidence), with the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), the Root Mean Square Error of Approximation

(RMSEA), and the Standardized Root Mean Squared Residual (SRMR). Then based on the best-fitted model, Cronbach's α and M_{IC} were adopted to assess the internal consistency of GHQ-12, and the Pearson correlation coefficients between the scores of GHQ-12 and other variables (GDS, SAI, TAI, CD-RISC) were calculated to examine the convergent validity. To further test the applicability of GHQ-12, the hierarchical linear regression was applied to explore the predictive capability of cognitive emotion regulation on mental health status in the elderly. **Results:** The one-factor model failed to meet the psychometric standard (CFI=0.664, TLI=0.589, RMSEA=0.130, SRMR=0.111), while both the two-factor (CFI=0.934, TLI=0.918, RMSEA=0.058, SRMR=0.049) and three-factor (CFI=0.949, TLI=0.933, RMSEA=0.052, SRMR=0.047) models fitted the data well. Meanwhile, the three-factor model had better fit than the two-factor model ($\Delta\chi^2=16.605$, $\Delta df=2$, $p<0.001$). The factor loadings of all items of social dysfunction, depression/anxiety, and loss of confidence ranged from 0.45 to 0.62, 0.53 to 0.77, and 0.63 to 0.76, respectively. Cronbach's α was 0.77 for GHQ-12, and ranged from 0.65 to 0.74 for three factors. Meanwhile, M_{IC} was 0.22 for GHQ-12, and ranged from 0.31 to 0.48. Significantly positive correlations were observed among GHQ-12 and GDS/SAI/TAI ($r=0.57\sim0.71$), while a significantly negative correlation was found between GHQ-12 and CD-RISC ($r=-0.60$). The result of regression showed that adaptive ($\beta=-0.38$) and maladaptive ($\beta=0.48$) cognitive emotion regulation strategies significantly predicted the mental health status in elderly. There were significant predictive effects of three cognitive emotion regulation strategies on mental health status, namely catastrophizing ($\beta=0.41$), positive reappraisal ($\beta=-0.24$), and acceptance ($\beta=-0.15$). **Conclusion:** With good reliability and validity, the three-factor GHQ-12 has good applicability in assessing the mental health status in Chinese community-dwelling elderly.

Keywords: General Health, elderly, reliability, validity

节律类型与倒班工人抑郁的关系： 睡眠障碍的中介作用和感知社会支持的调节作用

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摘要 目的：先前研究表明，倒班工人的节律类型与抑郁之间存在明显关联，但其中的内在机制尚不清晰。本研究以纺织厂倒班工人为研究对象，考察其节律类型与抑郁的关系，并在此基础上探讨睡眠障碍在二者间的中介作用和感知社会支持在其中的调节作用。方法：本研究采用复合清晨型问卷（CMQ）、流调中心抑郁量表（CES-D）、睡眠障碍问卷（SDQ）和多维感知社会支持量表（MPSS）对 3902 名工人进行问卷调查，回收有效问卷 3833 份，有效率为 98.23%，剔除不存在倒班的工人后，共有 2924 名倒班工人的数据纳入数据分析。数据主要采用 SPSS 中 PROCESS 插件进行分析。结果：相关分析显示清晨-夜晚型、睡眠障碍、感知社会支持和抑郁均两两显著相关，有调节的中介分析表明：睡眠障碍在清晨-夜晚型和抑郁之前起部分中介作用，间接效应量为-0.04，95%的置信区间为[-0.05, -0.03]，中介效应占比 12.9%；睡眠障碍对抑郁的影响受到感知社会支持的调节（睡眠障碍*感知社会支持： $\beta=0.03$, $P<0.05$ ）。对于感知社会支持水平较低的个体，睡眠障碍对抑郁症状的预测作用更强（ $\beta_{\text{simple}}=0.28$, $p<0.01$ ），而较高的感知社会支持水平则能够缓冲睡眠障碍对抑郁的影响（ $\beta_{\text{simple}}=0.23$, $p<0.01$ ）。结论：节律类型与倒班工人的抑郁症状显著相关；睡眠障碍在节律类型与抑郁之间起到了部分中介作用；感知社会支持调节了睡眠障碍对抑郁的影响。因此，当倒班工人面临睡眠障碍时，较高的感知社会支持能缓解其抑郁症状。

关键词 昼夜节律，睡眠障碍，抑郁，感知社会支持

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Relationship between Rhythm type and Depression of Shift Workers: Mediating Effect of Sleep Disorder and Moderating Effect of perceived Social Support

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Abstract: Objective: Previous studies have shown that there is a significant association between shift workers' rhythm type and depression, but the underlying mechanism is not clear. In this study, shift workers in textile mills were used as subjects to investigate the relationship between rhythm types and depression, and to explore the mediating role of sleep disorders and the moderating role of perceived social support in the relationship. Methods: In this study, the Compound Morning Questionnaire (CMQ), the CES-D, the Sleep Disorders Questionnaire (SDQ) and the Multidimensional Perceived Social Support Questionnaire (MPSS) were used to investigate 3902 workers. 3833 valid questionnaires were collected, and the effective rate was 98.23%. Data on a total of 2,924 shift workers were included in the data analysis. The data is mainly analyzed by the Process plugin in SPSS. Results: Correlation analysis showed that morning-night type, sleep disorder, social support and depression were significantly correlated with each other. Moderated mediation analysis showed that sleep disorder played a partial mediating role before morning-night type and depression. The indirect effect size was -0.04, 95% confidence interval was [-0.05, -0.03], and the mediating effect accounted for 12.9%. The effect of sleep disorder on depression was moderated by perceived social support (sleep disorder * perceived social support: $\beta=0.03$, $P<0.05$). For individuals with lower perceived social support, sleep disturbance was a stronger predictor of depressive symptoms ($\beta_{\text{simple}}=0.28$, $p<0.01$), and higher perceived social support buffers the effect of sleep disturbance on depression ($\beta_{\text{simple}}=0.23$, $p<0.01$). Conclusion: Rhythm type is significantly related to depression symptoms in shift workers. Sleep disorders played a partial mediating role in the relationship between rhythm type and depression. Perceived social support moderated the effect of sleep disorders on depression. Thus, when shift workers faced with sleep disorders, higher perceived social support was associated with reduced depressive symptoms.

Keywords: circadian rhythm, sleep disorders, depression, perceived social support

基于题组模型的 CD-CAT 选题方法研究

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摘要 基于项目反应理论 (IRT) 开发的计算机自适应测验 (CAT) 能够大大地缩短答题者的作答时间, 并保有较高的测验精度。与传统的 CAT 相比, 认知诊断下的 CAT (CD-CAT) 能够提供答题者的更加丰富的诊断信息, 有利于开展针对性的补救教学设计。题组是指一组题目共享一个共同的刺激, 例如, 一篇阅读理解、一个图形、一个表格下包含了几个题目。题组任务更接近真实情况, 完成题组任务需要知识、技能、能力的整合, 因而, 能够提供更真实、丰富的信息。当前, 关于 CD-CAT 的研究大多假设题目之间是独立存在的, 即并未考虑题组设计的题目。本研究拟基于题组认知诊断模型探讨 CD-CAT 的实现技术, 一方面比较传统选题方法在题组 CD-CAT 的效果; 另一方面, 将曝光率控制方法和传统选题方法相结合, 进一步探讨了题组 CD-CAT 的题库曝光控制方法。模拟实验一考察了 5 个属性, 模拟被试 5000 人, 被试的属性模式服从均匀分布, 自变量包括: (1) 题组的大小设置为 3 和 6; (2) 选题方法包括 KL, PWKL, SHE, MPWKL; (3) 测验的长度设置为 8, 16 和 32。因变量为属性判准率和模式判准率。实验二在实验一的基础上比较了不同曝光率控制方法的效果, 因变量有属性判准率、模式判准率和题库安全性指标。总之, 本研究基于题组认知诊断模型探索题组 CD-CAT 的实现结果并进一步研究其题库曝光控制方法, 以期能够丰富题组 CD-CAT 的相关研究, 并寻找到存在题组的情况下同时兼顾测验精度和题库安全性的选题方法。

关键词 认知诊断, 题组, 计算机自适应测验

WAIC 和 LOO 方法在认知诊断模型拟合检验的应用研究

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摘要 认知诊断评估 (cognitive diagnostic assessment, CDA) 是用于测量或评价个体特定的知识结构和加工技能。而需要实现认知诊断评估, 需要借助一定的心理测量模型, 即认知诊断模型 (cognitive diagnosis model, CDM)。CDM 的有效应用依赖于所选模型是否拟合实际的数据, 这也直接决定诊断结果的准确性。在实际工作中, 测验相对拟合检验可以帮助实践者从已有模型中选择一个相对拟合最佳的模型, 从而保证数据分析结果的合理性与科学性。目前, 模型-资料拟合检验的研究多集中在 IRT 领域, 针对 CDM 的模型拟合研究仍不多。本文拟将 2 种完全贝叶斯方法 WAIC 和 LOO 应用于 CDM 模型拟合检验中, 并将这两个统计量与-2LL、AIC、BIC、DIC 进行比较, 探讨其在 CDM 拟合检验中的可行性及其效果, 为应用者在 CDM 的拟合检验方法上提供参考和方法学支持。本文采用 Monte Carlo 模拟实验方法进行研究, 研究 1 考察在不同样本容量 (三个水平, 分别是 500 人、1000 人和 2000 人)、生成模型 (DINA、DINO、RRUM、G-DINA)、测验长度 (两个水平, 分别是 30 题和 60 题)、及不同认知属性个数 (两个水平, 分别是 6 个和 8 个) 下各统计量的一类错误率和统计检验力; 研究 2 进一步比较了-2LL、AIC、BIC、DIC、WAIC 和 LOO 在不同错误类型 Q 矩阵实验条件下的效果。最后, 通过一个实证数据分析, 探讨了这些拟合统计量在实际数据分析的应用步骤和效果。本研究旨在探讨 WAIC 和 LOO 在 CDM 拟合检验中的可行性及其效果, 为实际工作中测验拟合检验统计量的选择提供借鉴。

关键词 认知诊断理论, 模型-资料拟合检验, WAIC, LOO

Research on the Application of WAIC and LOO Methods in Cognitive Diagnosis Model Fit Test

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Abstract: Cognitive Diagnostic Assessment (CDA) is used to measure or evaluate an individual's specific knowledge structure and processing skills. To achieve cognitive diagnosis assessment, a certain psychometric model is needed, namely the cognitive diagnosis model (CDM). The effective application of CDM depends on whether the selected model fits the real data, which directly determines the accuracy of the diagnosis result. In actual work, the relative fit test of testing can help practitioners choose a relatively best-fitting model from the existing models, so as to ensure the rationality and scientificity of the data analysis results. At present, the research of model-data fitting test is mostly concentrated in the field of IRT, and there are still not many researches on model fitting for CDM. This article intends to apply two complete Bayesian methods, WAIC and LOO, to the CDM model fit test, and compare these two statistics with -2LL, AIC, BIC, and DIC. To study the feasibility and effect of these two statistics in the CDM fit test, and provide reference and methodological support for the users in the CDM fit test method. In this paper, Monte Carlo simulation experiment method is used for research. Study 1 examines the Type I error rate and statistical test power of each statistic with different sample sizes (three levels, 500 people, 1000 people, and 2000 people), generative models (DINA, DINO, RRUM, G-DINA), Test length (two levels, 30 questions and 60 questions), and the number of different cognitive attributes (two levels, 6 and 8, respectively). Study 2 further compares the effects of -2LL, AIC, BIC, DIC, WAIC and LOO under different error type Q matrix experimental conditions. Finally, through an empirical data analysis, the application steps and effects of these fitting statistics in actual data analysis are discussed. This study aims to explore the feasibility and effect of WAIC and LOO in CDM fit test, and provide a reference for the selection of test fit test statistics in actual work.

Keywords: Cognitive Diagnosis Theory, Test of Model-Data Fit, WAIC, LOO

多分属性的非参诊断：20 种距离判别法的对比

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摘要 研究从非参数诊断方法可能更适于小样本课堂评估且相对于参数模型方法省略了复杂的参数估计过程的角度出发, 利用了 20 种常见的距离判别函数对多分属性进行诊断分类。通过模拟的两个分研究设置的五个自变量条件(样本量、测验质量、测验长度、属性水平数和属性个数)分别考察了影响非参数诊断方法判别多分属性判准率的情况以便对方法进行横向比较, 并且对同时达最高判准率的部分方法之间的内在联系进行了探讨, 未来也可以尝试对他们在实际中的应用场景进行跟进, 以探索他们之间更多细微的区别, 从而为后续研究者们或教育工作者们提供更加细致化的选择以及提高诊断分类的效率。整体来看, 结果表现为所有距离判别法在所有设置条件下判准率的变化趋势一致, 说明了多分属性的非参诊断分类稳健性较好。具体结果如下: (1) 多分属性的非参诊断分类几乎不受样本量的影响, 可用于小型诊断评估; (2) 随着测验质量的提高或降低, 非参诊断分类多分属性的判准率随之同方向的上升或下降; (3) 随着测验长度的提高或降低, 非参诊断分类多分属性的判准率也随之同方向的上升或下降; (4) 非参诊断分类多分属性的判准率却随着属性水平数的增加或减少而反方向的下降或上升; (5) 非参诊断分类多分属性的判准率同样随着属性个数的增加或减少而反方向的下降或上升; (6) 处于内在息息相关或不断完善关系的五种距离判别方法在所有设置条件下多分属性进行诊断分类的表现不相上下, 并同时达最高判准率。

关键词 多分属性, 非参数诊断方法, 距离判别函数, 课堂评估

Nonparametric diagnosis of multiple attributes: Comparison of 20 kinds of distance discrimination methods

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Abstract: From the point of view that non-parametric diagnostic methods may be more suitable for classroom assessment with small samples and that complex parameter estimation process is omitted compared with parametric model methods, several common distance discrimination functions are used to classify multiple attributes. By setting the conditions of the five independent variables in the two independent simulation studies (sample size attribute level, the quality of test and test length, and the number of attributes), the circumstances that affect the accuracy of nonparametric diagnostic methods in discriminating multiple attributes are investigated for horizontal comparison between the methods, and the intrinsic relationships between part of the methods who reach the highest accuracy are discussed in this paper at the same time. We can also try to follow up their application scenarios in order to explore more subtle differences between them in the future, so as to provide more elaborate choices and improve the efficiency of diagnostic classification for subsequent researchers or educators. On the whole, the results show that the accuracy of all distance discriminants has the consistent trend under all setting conditions, which indicated that the non-parameter diagnostic classification with multiple attributes had superior robustness. The specific results are as follows: (1) The non-reference diagnostic classification with multiple attribute is almost not affected by the sample size, and can be used for small diagnostic evaluation; (2) With the improvement or decrease of test quality, the accuracy rate of multiple attribute of non-reference diagnostic classification increased or decreased in the same direction; (3) With the increase or decrease of test length, the accuracy rate of multiple attribute of non-reference diagnostic classification also increased or decreased in the same direction; (4) The accuracy of multi-score attributes of non-parametric diagnostic classification decreased or increased with the increase or decrease of attribute levels in the adverse direction; (5) The accuracy rate of multi-score attributes of non-parametric diagnostic classification also decreases or increases with the increase or decrease of the number of attributes in the adverse direction; (6) The five distance discrimination methods which were in interrelated or continuous improvement relationships had similar

performance under all setting conditions, and reached the highest accuracy at the same time.

Keywords: multiple attributes, non-parametric diagnostic methods, distance discrimination functions, classroom assessment

中文版网络游戏障碍量表的项目反应理论分析

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摘要 本研究采用项目反应理论 (Item Response Theory; IRT) 对中文版网络游戏障碍量表 (Internet Gaming Disorder Scale; IGDS) 各项目进行分析评估, 为我国评估网络游戏障碍提供评价工具。采用现场问卷及电子问卷 (问卷星) 两种调查形式收集数据, 通过便利抽样法, 选取四川省泸州市、西昌市青少年及成人共 1555 名完成中文版 IGDS, 其中平均年龄为 18.18 ± 3.63 岁, 年龄范围为 11-30 岁。利用 R 语言对收集数据进行项目反应理论分析, 使用 Lavaan 工具包进行验证性因子分析检验单维性假设及局部独立性假设, 使用 Mokken 工具包检验单调性假设, 满足三假设后使用 Mirt 工具包对数据进行项目反应理论分析, 估计各项目的区分度参数 (a) 及难度参数 (b)。结果显示: 验证性因子分析显示 $RMSEA=0.023$; $CFI=0.997$; $NFI=0.993$; $IFI=0.997$; $Chi-Square/df=49.196/27$, 残差相关均小于 0.1, 满足单维性及局部独立性假设, 从 Moakken 工具包得出 rest-score graphs 显示单调递增, 满足单调性假设, 中文版 IGDS 可以应用项目反应理论进行项目分析。中文版 IGDS 各项目区分度参数 a 值介于 (1.37~2.999), 均大于 1.35, 满足中等到较好的区分度参数值; 难度参数 b 值介于 1.285~1.887 之间, 均在合理取值范围 (-4~4) 之间。其中, 项目 5“逃避”相对 IGDS 其他项目, 区分度及难度参数均为最低 (a=1.37, b=0.372)。研究结果表明, 中文版 IGDS 具有良好的区分度, 可有效区分和鉴别网络游戏障碍人群, 而其中“逃避”项目区分度参数及难度参数均相对较低, 可能降低量表的特异性。

关键词 网络游戏障碍, 网络游戏障碍量表, 项目反应理论

Item Response Theory Analysis of the Chinese version Internet Gaming Disorder Scale

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Abstract: This research used Item Response Theory (IRT) to analyze and evaluate each item of the Chinese version of the Internet Gaming Disorder Scale (IGDS), and provide an evaluation tool for my country to assess Internet Gaming Disorder. Two survey forms of on-site questionnaire and electronic questionnaire (wenjuanxing) were used to collect data. By convenience sampling method, a total of 1,555 teenagers and adults from Luzhou City and Xichang City, Sichuan Province were selected to complete the Chinese version of IGDS. The average age was 18.18 years old ($SD=3.63$), the age range was 11-30 years old. R was used to analyze the collected data, Lavaan package was used to test the unidimensionality hypothesis and local independence hypothesis by confirmatory factor analysis, Moakken package was used to test the monotonicity hypothesis. When the three hypotheses were met, Mirt package was used to analyze the data by item response theory, and the discrimination parameter (a) and difficulty parameter (b) of each item were estimated. The results showed that: confirmatory factor analysis showed that $RMSEA=0.023$; $CFI=0.997$; $NFI=0.993$; $IFI=0.997$; $Chi-Square/df=49.196/27$, residual correlations < 0.1, satisfying the assumptions of unidimensionality and local independence. The rest-score graphs from the Mokken package showed a monotonic increase and met the monotonic assumption. The Chinese version of IGDS could analyze data by Item Response

Theory. The discrimination parameter (a) of the Chinese IGDS for each item ranged from 1.37 to 2.999 and were all greater than 1.35, meeting the medium-good values. The difficulty parameter (b) ranged from 1.285 to 1.887, and all of them were in the reasonable range -4 to 4 . Compared with other IGDS items, item 5 "escape" has the lowest discrimination and difficulty parameters ($a=1.37$, $b=0.372$). The results showed that the Chinese version of IGDS has a good ability in distinction, which could effectively distinguish and identify the people with Internet Gaming Disorder. However, the item of "escape" has a relatively low values of discrimination parameter and difficulty parameter, which may reduce the specificity of the scale.

Keywords: Internet Gaming Disorder, Internet Gaming Disorder Scale, Item Response Theory

人格评估中考考虑社会称许效应的项目反应理论模型

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摘要 人格测量广泛应用于识别和描述个体的人格特征,接受心理治疗患者的异常人格评估以及进行员工选拔中。大多数人格测量是以自我报告形式进行,因此,社会称许效应可能是许多神经心理学、临床心理学、法医心理学和工业组织心理学领域的研究人员和实践者关注的问题。社会称许效应是一种倾向于给出让被试看起来不错的答案的反应偏差。目前,大多数研究者依旧采用传统的项目反应模型(IRT)模型(即单参数、双参数和三参数逻辑斯蒂模型)分析01计分的人格测量量表。传统IRT模型的一个问题是它们忽略了社会称许效应。因此,使用传统的IRT模型可能会低估位置参数,并且估计的被试参数是有偏的。为了解决这一问题,本研究提出了一种新的考虑社会称许效应的项目反应理论模型用于人格测量中,该模型基于社会称许效应的双加工机制:有偏检索过程和迁移过程。我们进行了蒙特卡洛模拟研究,将所提出的模型与忽略社会称许效应的传统IRT模型进行比较。模拟结果表明,该模型优于传统IRT模型。我们进行了实证研究,以说明所提出的模型的应用。最后,我们进行了实证研究,在实证研究中说明了新模型的应用,结果表明新模型更适合于实际数据。

关键词 人格测验,社会称许,项目反应理论模型

An Item Response Theory Model for Social Desirability Behavior in Personality assessments

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Abstract: Personality measures have been widely used in recognizing and describing individuals' personality features (Hojat, Erdmann, & Gonnella, 2013; Hampson, Goldberg, Vogt, & Dubanoski, 2006), assessing abnormal personality in patients who receive psychotherapy services (Morey, & Quigley, 2002; Lopez-Castroman, Galfalvy, Currier, Stanley, Blasco-Fontecilla, et al, 2012), and making a personnel selection (Ones, Dilchert, Viswesvaran, & Judge, 2007; Fisher, Milane, Sullivan, Tett, 2021). One characteristic of most personality assessments is that they require self-report, and thus social desirability (SD) may be a concern of many researchers and practitioners in the field of neuropsychology, medical psychology forensic psychology and industrial-organizational psychology. Socially desirable responding (SDR), a type of response bias, is a "tendency to give answers that make the respondent look good" (Delroy L. Paulhus, 1991). To investigate the quality of self-reported personality assessments with a binary scale, most researchers apply traditional item response model (IRT) models (i.e., the one-, the two- and three-parameter logistic models) (Chernyshenko, Stark, Chan, Drasgow, & Williams, 2001; Steven P. Reise & Waller,

1990; S. P. Reise & Waller, 2003; Waller, Thompson, & Wenk, 2000). One issue with the traditional IRT models is that they ignore SD. Therefore, these analyses may underestimate location parameters and generate biased estimates of person parameters (Leng, Huang, & Yao, 2020). To address this issue, this article develops a novel item response theory model considering social desirability for measuring personality traits, based on a dual-process mechanism of responses: biased retrieval process and transfer process. We conducted Monte Carlo simulation studies to compare the proposed model with the traditional IRT model that ignores social desirability. Simulation results showed the proposed model outperformed the conventional IRT models. Finally, an empirical study was used as an example to illustrate the application of the proposed model, which also indicated that the proposed model is more suitable for the real data.

Key words: personality assessments, socially desirable (SD), item response theory (IRT) model

基于 Rasch 模型的项目真分数估计：特质参数估计视角

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摘要 项目反应理论不仅得到了广泛的应用，而且还成为心理测量学的主流理论之一。近年来，一些研究将项目反应理论和经典测量理论的核心概念——项目真分数和项目反应函数联系起来，探讨了项目真分数点估计和区间估计的项目反应建模过程。若项目参数已知，只需估计特质参数便可获得项目真分数估计值。不同的估计方法在不同的测试条件下有不同的偏差和准确性，若选择了错误的估计方法，则会造成严重后果。因此，无偏估计对项目真分数估计非常重要。然而，以往研究并未从特质参数估计的角度来探讨项目真分数估计的性能。本文通过两个模拟研究，比较了加权似然估计 θ_WLE 和期望后验估计 θ_EAP 对项目真分数估计的影响。根据前人研究的推荐，本文采用的模型为 Rasch 模型。研究 1：特质水平的真值 θ 设定在 $[-3,3]$ 之间，每间隔 0.5 个步长模拟 1000 个被试，共计 13 个特质水平；测验长度分别为 5、10、15、20，每个测验长度下的项目难度 b 服从标准正态分布。根据上述条件生成 4 套测验和 13 个特质水平后，估计每个水平的被试在 4 套测验中的特质参数。之后，分别将特质参数估计值以及真值代入 Rasch 模型，求出相应的项目真分数估计值 $\hat{t}$ 与真值 t 。研究 2：测验长度分别为 5、10，每种测验长度下的项目难度 b 被固定为 0, ± 1 , ± 2 。其余条件与研究 1 一致。平均误差 (ME) 和均方根误差 (RMSE) 分别用于评价 $\hat{t}$ 的偏差和准确性。结果表明：(1) 与 θ_EAP 相比， θ_WLE 在大多数情况下减小了 $\hat{t}$ 的偏差，同时还让 $\hat{t}$ 的 RMSE 保持在可接受的范围内；(2) 项目难度 b 影响了两种估计方法的偏差水平。当 $b < 0$ 时，两者在低特质水平的偏差大于在高特质水平的偏差。当 $b > 0$ 时，则与 $b < 0$ 的情况相反；(3) 若特质水平离平均特质水平越远， θ_WLE 让 $\hat{t}$ RMSE 更小；否则， θ_EAP 让 $\hat{t}$ 的 RMSE 更小。(4) 与 θ_EAP 相比， θ_WLE 让 $\hat{t}$ 的性能更稳定，使 $\hat{t}$ 受测验条件的影响较小，总之， θ_WLE 更适合用于 Rasch 模型的项目真分数估计。

关键词 项目真分数，项目反应理论，Rasch 模型，特质参数估计

基于残差统计量的多级计分测验异常反应模式检测研究

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摘要 测验被广泛应用于教育和心理测量领域，测验中被试存在的异常作答行为会影响对其能力的评估。这部分异常的被试无法使用常规的方法进行分析，当务之急就是准确地将他们从正常群体中筛选出来。为了实现这一目标，研究者们通常会构建个人拟合统计量来检测被试的能力和作答反应模式之间是否拟合。本文提出了一种基于残差的个人拟合统计量 R ，该统计量既可适用于二分模型，也适用于多分模型。 R 统计量的构造基于实际作答和期望作答之间的加权残差。通过对加权残差进行累加，可以计算拟合优度，并将累加和与特定的临界值进行比较，以确定被试是否异常。考虑到多级计分项目的测验可以提供更多的信息，多分模型也在教育和心理测量学中得到更多的使用。本文主要讨论的是 R 统计量在多级 IRT 模型下对被试异常反应模式的检测能力。本文还详细介绍了一种现有的多级计分下个人拟合统计量 I_{zp} ，它具有出色的标准化形态和良好的检测性能。在研究一中，使用模拟实验来产生 R 统计量和 I_{zp} 的经验分布。 R 统计量是加权残差的累加，呈现

正偏态分布；当测验长度少于 80 个项目时， l_{zp} 则呈现负偏态分布。二者均不同于标准正态分布，所以需要根据一类错误率来设定临界值，用以区分被试的作答模式是否异常。在研究二中，模拟产生了不同测验长度条件下，具有不同异常行为类型（如作弊、幸运猜测、随机作答、粗心、创造性作答和混合型）的被试，并且使用检测率和曲线下面积来比较评价两种个人拟合统计量的性能。结果表明，当异常行为覆盖的项目数量较少或者异常行为类型为作弊或幸运猜测时， R 统计量相较于 l_{zp} 拥有更高的检测率。而当异常行为影响了较多项目时， l_{zp} 略好于 R 统计量。接着，我们分析了全国青少年健康纵向研究（1994-1995）的数据，来展现 R 统计量的检测能力。 R 统计量和 l_{zp} 的优势区间不同，因此在未来的个人拟合研究中可以将 R 统计量和 l_{zp} 相结合。在一定条件下， R 统计量拥有更高的检测率，特别是在作弊和幸运猜测行为发生时。考虑到低能力被试的作弊和猜测行为更受到相关研究的重视， R 统计量在今后的研究应用中具有一定的价值。

关键词 适应性测量，项目反应理论，残差拟合统计量，异常行为检测，多级计分项目反应模型

Detection of aberrant response patterns using a residual-based statistic in testing with polytomous items

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Abstract: Tests are widely used in educational measurement and psychometrics, and the examinee's aberrant response will affect the estimation of their ability. These examinees with aberrant response should not be treated with conventional methods, the important thing is to accurately screen them out of the normal group. To achieve this, a common method is to construct person-fit statistics to detect whether the response pattern fits their estimation ability. In this study, a residual-based person-fit statistic R was proposed, which can be applied to both dichotomous or polytomous IRT models. The construction of R is based on the weighted residual between the actual response and the expected response. By accumulating the weighted residuals, the goodness of fit can be calculated and compared with a specific critical value to determine whether an examinee is aberrant or not. Given that tests with the polytomous item can provide more information, polytomous models are being increasingly popular in educational measurement and psychometrics. The ability to detect aberrant response patterns under the polytomous IRT model of R statistic was mainly discussed in this article. An existing polytomous person-fit statistic l_{zp} was also introduced for its outstanding standardized form and superior power. In the first study, a simulation experiment is used to generate the empirical distribution of R statistic and l_{zp} . R statistic is an accumulation of weighted residuals, showing a positive skew distribution; l_{zp} shows a negative skew distribution when the test is less than 80 items. Both of them differ from the standard normal distribution, it is necessary to set critical value according to the type 1 error, using it to distinguish whether the respondent's response pattern is fitted. In the second study, examinees with different aberrant behaviors (e.g., Cheaters, Lucky guessers, Random respondents, Careless respondents, Creative respondents and Mixed) under different test length conditions were simulated, and the detection rate as well as area under curve (AUC) were used to compare the effectiveness of the two person-fit statistics. The results show that the R statistic has a better detection rate than l_{zp} when the aberrant behavior affects only a few items or the aberrant behavior is cheating or guessing. When the aberrant behavior covers plenty of items, l_{zp} is slightly better than R statistic. Then, in order to show the power of R statistic, an empirical study was also conducted by analyzing the data from the National Longitudinal Study of Adolescent Health (1994-1995). The optimize-range of R statistic and l_{zp} are different, so we may combine R statistic and l_{zp} in future person-fit studies. R statistic has a better detection rate under certain conditions compared to l_{zp} , especially when cheating and lucky guessing happened. Considering that cheating and guessing behaviors of low-ability examinees are more valued in many aberrant test behaviors, R statistics still have a certain value in research applications.

Keywords: appropriateness measurement, item response theory, residual-based person-fit statistic, aberrant detection, polytomous item response models

COVID 压力量表中文版的修订

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摘要 COVID 压力量表 (CSS) 是西方环境下评估与新冠肺炎 (COVID-19) 有关的压力和焦虑症状的有效工具, CSS 自开发以来, 作为一种综合性的测量工具, 已被广泛使用。但它并没有被应用到中国文化的语境中。因此, 本研究拟对 CSS 量表进行修订, 为我国研究与 COVID-19 有关的压力提供有效的测量工具。目的: 修订 CSS 中文版 (CSS-C), 探讨其在中国文化背景下的因子结构, 并检验其在中国青少年群体中的信效度。方法: 选取 2500 名在校中小學生进行初测, 回收有效问卷 2277 份用于探索性因子分析、验证性因子分析和信效度检验。两个月后随机抽取 1000 名学生进行重测。结果: 修订后的 CSS-C 由 31 个项目和 6 个因子构成, 在原量表的基础上, 对危险和污染的担忧维度进行了进一步划分, 分为了危险担忧维度和污染担忧维度两个维度。验证性因子分析表明模型拟合良好 ($\chi^2 = 1843.095^*$, $df = 419$, $CFI = .909$, $TLI = .900$, $RMSEA = .055$, $SRMR = .057$)。总量表及 6 个分量表内部一致性信度在 0.81-0.96 之间; 总量表及 6 个分量表与校标量表一般健康问卷 (GHQ-12; $p < .01$) 和焦虑量表 (GAD-7; $p < .01$) 均呈显著正相关, 该量表具有较好的校标关联效度; 最后纵向测量的不变性检验表明, 该量表 (CSS-C) 具有跨时间的测量不变性 ($\Delta TLI < 0.01$, $\Delta CFI < 0.01$)。结论: 修订后的 CSS-C 具有良好的心理学测量特性, 可以作为研究我国青少年群体在新冠肺炎疫情期间压力感知的有效工具。

关键词 COVID-19, CSS-C, 信度, 效度, 测量不变性

The Validation of a Chinese Version of the COVID Stress Scales

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Abstract: The COVID Stress Scale (CSS) is an efficient instrument to assess COVID-19-related stress and anxiety symptoms in Western contexts. Ever since its development, the CSS has been widely adopted as a comprehensive measurement. But it has not been applied in the context of Chinese culture. Therefore, this study intends to revise the CSS scale to provide an effective measurement tool for the study of stress related to COVID-19 in China. Objective: To revise the Chinese version of CSS (CSS-C) and explore its factor structure in the context of Chinese culture, as well as test its reliability and validity in Chinese adolescents. Methods: A total of 2500 primary and secondary school students were selected for the preliminary test, and 2277 valid questionnaires were collected for exploratory factor analysis, confirmatory factor analysis and reliability and validity test. Two months later, 1000 students were randomly selected for retest. Results: The revised CSS-C was composed of 31 items and 6 factors. Based on the original scale, the danger and contamination worry dimensions were further divided into two dimensions: danger fear dimension and contamination fear dimension. Confirmatory factor analysis showed that the model fitted well ($\chi^2 = 1843.095^*$, $df = 419$, $CFI = .909$, $TLI = .900$, $RMSEA = .055$, $SRMR = .057$). The internal consistency reliability of the total scale and six subscales ranged from 0.81 to 0.96; The total scale, six subscales and the General Health Questionnaire (GHQ-12; $p < 0.01$) and the Generalized Anxiety Disorder (GAD-7; $p < 0.01$) were significantly correlated. The scale has good calibration related validity; Finally, the invariance test of longitudinal measurement shows that CSS-C has the invariance of measurement across time ($\Delta TLI < 0.01$, $\Delta CFI < 0.01$). Conclusion: The revised CSS-C is a good tool for studying the stress perception of Chinese adolescence in the period of COVID-19. The revised CSS-C has good psychological measurement characteristics.

Keywords: COVID-19, CSS-C, reliability, validity, measurement invariance

信息量曲线双峰分布条件下基于 IRT 最小距离组卷方法比较

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摘要 在教育测量中, 探索能够生成多份高质量的平行测验的组卷方法成为了一个研究热点。当测试的信息量曲线相似时, 这些测试就被认为是平行测验。但是, 目前对组卷的研究主要针对题库与样卷的信息量曲线为正态分布或偏态分布开展, 但在测验实践中, 信息量的分布是多种多样的, 除了正态分布、偏态分布等单峰分布, 还有多峰分布。多峰分布中最常见的一种是双峰分布, 双峰分布由两个分布混合而成。据此, 本研究采用模拟研究, 探究在不同题库与样卷的信息量曲线分布(单峰, 双峰)下, 2种经典的基于 IRT 的组卷方法(参数最小距离法、信息量最小距离法)的表现。在模拟研究中, 设置两个分布的混合比例为 1:1, 难度参数的平均值互为相反数, 其他参数保持一致。通过操纵两个分布难度参数(0; 正负 0.5; 正负 1; 正负 1.5; 正负 2; 正负 2.5)改变题库与样卷的信息量曲线的分布, 探讨不同分布对常见的衡量组卷方法效果的参数距离(MD)、测验特征曲线(TCC)、测验信息曲线(TIC)三个指标的影响。主要研究结果如下: 对于 MD 指标, 在不同分布条件下, 参数最小距离法的偏差数值都较小; 两种方法的效果都随着题库与样卷的信息量曲线双峰特征的增强而减弱, 参数最小距离法受影响较小。对于 TCC 指标, 信息量最小距离法在题库与样卷的信息量曲线为单峰时效果优于参数最小距离法; 在题库与样卷的信息量曲线双峰特征明显时效果劣于参数最小距离法。两种方法的效果都随着题库与样卷的信息量曲线双峰特征的增强而减弱, 参数最小距离法受影响较小。对于 TIC 指标, 在不同分布条件下, 信息量最小距离法偏差数值都较小, 但其效果都随着题库与样卷的信息量曲线双峰特征的增强而减弱; 参数最小距离法受分布影响较小。

关键词 双峰分布, 最小距离组卷方法, 项目反应理论, 信息量曲线

Comparison of IRT minimum distance test assembly methods based on bimodal distribution of information curve

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Abstract: In educational measurement, exploring the method of generating multiple high-quality parallel tests has become a research hotspot. When the information curve of the tests are similar, these tests are considered to be parallel tests. However, the current research on test assembly mainly focuses on the normal or skewed distribution of the information curve of item pool and sample test. However, in test practice, the distribution of information is diverse, except for the normal distribution and the skewed distribution. There are multimodal distributions. The most common type of multimodal distribution is the bimodal distribution, which is a mixture of two distributions. Based on this, this research adopts simulation research to explore the two classic IRT-based test assembly methods' performance (parameter minimum distance method, information minimum distance) under different information curve distributions of item pool and sample test (single peak, double peak). In the simulation study, the mixing ratio of the two distributions is set to 1:1, the average value of the difficulty parameter is opposite to each other, and the other parameters remain the same. By manipulating two distribution difficulty parameters (0; plus-minus 0.5; plus-minus 1; plus-minus 1.5; plus-minus 2; plus-minus 2.5) to change the distribution of the information curve of item pool and sample test, and explore the influence of different distributions on parameter distance (MD), test characteristic curve (TCC), test information curve (TIC) three indicators. The main findings are as follows: For MD index, under different distribution conditions, the deviation value of the parameter minimum distance method is small; the effects of the two methods are weakened with the increase of the bimodal characteristic of the information curve of item pool and sample test. The parameter minimum distance method is subject to less affected. For the TCC index, the information minimum distance method is better than the parameter minimum distance method when the information curve of item pool and sample test is single-peak; the effect is worse than the parameter minimum

distance when the information curve of item pool and sample test has two peaks. The effects of the two methods are weakened with the enhancement of the bimodal characteristic of the information curve of item pool and sample test, and the parameter minimum distance method is less affected. For the TIC index, under different distribution conditions, the deviation value of the information minimum distance method is small, but its effect is weakened with the enhancement of the bimodal characteristic of the information curve of item pool and sample test; the parameter minimum distance method is less affected by the distribution.

Keywords: bimodal distribution, minimum distance test assembly methods, item response theory, information curve

在 rRUM 中检验项目功能差异对分类准确性的影响

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摘要 关于认知诊断模型(CDMs)的研究受到国内外研究者和应用者的广泛关注, 因为认知诊断模型有助于实现对个体认知发展实况(含优点与缺陷)的诊断评估, 以促进个体全面发展。确保 CDMs 正确使用和解释的一个重要步骤是了解项目功能差异(DIF)的影响。虽然在 CDMs 中检测 DIF 的方法已经确定, 但对 DIF 在多大程度上影响分类准确性的了解仍然是有限的。此前有研究基于 DINA 模型进行了探索, 以了解 DIF 如何影响分类准确性。CDMs 的好坏直接决定着诊断结果的可解释性、准确性及诊断的效率。为此, 国际上心理测量学者们开发了 60 多种认知诊断模型。因此, 基于其它模型, 探索 DIF 对分类准确性的影响也是十分必要的。CDMs 各具特点, 其中 rRUM 是目前被研究较多的认知诊断模型之一。与 DINA 模型相比, rRUM 能更深入细致探讨被试问题解决的加工过程; 同时有研究表明该模型具有较高的诊断正确率。当前, rRUM 模型被大多学者和实践运用者所推崇。本文在此基础上进行了拓展研究, 基于 rRUM, 了解不同量级和类型的 DIF 如何与 CDM 项目类型, 含有 DIF 项目的数量和样本大小相互作用, 从而影响属性和属性掌握模式级别的分类准确性。结果表明, 在大多数情况下, DIF 的量级对于属性级别的分类准确性影响较小, 对于属性掌握模式级别的分类准确性则有较大的负面影响。在简单结构项上存在 DIF 的条件对降低分类准确性具有最大的影响。

关键词 缩减的非补偿的重新参数化统一模型, 项目功能差异, 分类准确性

Examining the Impact of Differential Item Functioning on Classification Accuracy in rRUM

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Abstract: The research on cognitive diagnostic model (CDMs) has attracted extensive attention from researchers and users at home and abroad, because the cognitive diagnostic model helps to realize the diagnostic evaluation of individual cognitive development (including advantages and disadvantages), so as to promote the overall development of individuals. An important step to ensure appropriate uses and interpretations from CDMs is to understand the impact of differential item functioning (DIF). While methods of detecting DIF in CDMs have been identified, there is a limited understanding of the extent to which DIF affects classification accuracy. Previous studies have explored how DIF affects classification accuracy based on the DINA model. The quality of CDMs directly determines the interpretability, accuracy and efficiency of diagnostic results. To this end, more than 60 cognitive diagnostic models have been developed by international psychometric scholars. Therefore, it is necessary to explore the influence of DIF on classification accuracy based on other models. CDMs have their own characteristics, among which rRUM is one of the most studied cognitive diagnostic models. Compared with DINA model, rRUM can explore the processing process of problem solving in a more in-depth and detailed way. At the same time, studies show that this model has a high diagnostic accuracy. At present, rRUM model is highly respected by most scholars and practitioners. In this paper, an extended study is carried out based on rRUM to understand how different magnitudes and types of DIF interact with CDM item types and sample sizes to influence attribute- and profile-level

classification accuracy. The results suggest that attribute-level classification accuracy is robust to DIF of large magnitudes in most conditions, while profile-level classification accuracy is negatively influenced by the inclusion of DIF. Conditions of unequal group distributions and DIF located on simple structure items had the greatest effect in decreasing classification accuracy.

Keywords: rRUM, DIF, Classification Accuracy

攻击规范信念量表在中学生群体中的修订及应用

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摘要 攻击规范信念是个体对攻击行为可接受性的一种评价, 即攻击行为在多大程度上是可以接受的, 已有研究表明其能够显著预测攻击行为。青少年的攻击问题向来是心理学界和教育学界关注的焦点, 探究青少年攻击规范信念有利于深化公众对青少年攻击行为的认识, 为青少年心理健康教育工作提供理论依据, 降低攻击行为的产生频率。然而我国目前对攻击规范信念这一领域的关注较少, 且现有工具的测量范围不够全面。本研究采用整体取样的方法, 以 462 名中学生为被试, 对 Huesmann 等人编制的攻击规范信念量表 (NOBAGS) 进行本土化修订和初步应用, 旨在为攻击规范信念的研究提供有效的中文测评工具。研究首先对 NOBAGS 进行翻译, 编制了中文版初始量表, 然后对其进行项目分析、相关分析、因子分析、高阶因子分析和信效度检验, 并评估了正反向表述项目对效度的影响, 结果表明二阶两因子模型可以更好地解释量表的结构 ($\chi^2=392.623$, $df=183$, $\chi^2/df=2.145$, $RMSEA=0.071$, $TLI=0.933$, $CFI=0.941$), 最终形成了由 21 道题目组成的攻击规范信念量表, 可测量青少年对身体攻击、言语攻击和关系攻击行为的可接受程度。因素分析表明中文版规范信念量表具有良好的结构效度, 相关分析表明该量表具有良好的效标关联效度; 经检验, 该量表各维度及总量表的 Cronbach's α 系数介于 0.69~0.89 之间, Split-Half 系数均介于 0.60~0.81 之间, 具有良好的信度。与原 NOBAGS 量表相比, 中文版攻击规范信念量表增加了测量关系攻击规范信念的项目, 在内容上更加全面; 另外修订后的量表在原先的两因子之下又探索出五个一阶因子, 细化了攻击规范信念的类别结构。在对结果分析后发现, 我国中学生普遍较不认可攻击行为且对主动性攻击的认可程度较低, 男生的攻击规范信念水平普遍高于女生。本研究在量表修订的过程中做到了理论驱动与数据驱动并重, 最终建立了比较稳定且完整的量表结构模型, 但在取样、效标选取和应用等方面仍存在问题, 需要进一步探讨。

关键词 攻击规范信念, 量表修订, 中学生, 因子分析

The Revision and Application of Normative Beliefs about Aggression Scale Among Middle School Students

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Abstract: Normative beliefs are the evaluation of the acceptability of aggression, that is, the extent to which aggressive behavior is acceptable, studies had examined that it can significantly predict aggressive behavior. The problem of adolescent aggression has always been the focus of psychological and educational circles. Exploring the normative beliefs about aggression of adolescent is beneficial to deepen the public's understanding of adolescent aggression, provide theoretical basis for adolescent mental health education, and reduce the incidence of aggressive behavior. However, less attention has been paid to the field of normative beliefs about aggression in China, and the measurement range of existing tools is not comprehensive enough. The purpose of this study is to localize and preliminarily apply the Chinese version of Normative Beliefs about Aggression Scale (NOBAGS), which was compiled by Huesmann et al., among 462 Chinese students randomly selected from a middle school, so as to provide

an Chinese effective measuring tool for further research of normative beliefs about aggression. Firstly, the NOBAGS scale was translated and the Chinese version of the initial scale was compiled. Then, through item analysis, correlation analysis, factor analysis, high-order factor analysis, reliability and validity test, and item wording effect evaluation, one second-order two-factor model was proved to better explain the structure of the scale($\chi^2=392.623$, $df=183$, $\chi^2/df=2.145$, $RMSEA=0.071$, $TLI=0.933$, $CFI=0.941$). Finally, a 21-item normative beliefs about aggression scale was formed to measure the acceptability to physical aggression, verbal aggression and relational aggression. Factor analysis showed that the Chinese version of the Normative Beliefs about Aggression Scale had good structural validity; correlation analysis suggested that the scale had good criterion-related validity; the Cronbach's alpha coefficients of seven dimensions and the total scale range from 0.69 to 0.89, and the Split-Half coefficients range from 0.60 to 0.81, which shows that the scale has good reliability. Compared with the NOBAGS, the Chinese version of Normative Beliefs about Aggression Scale has more items to measure relational aggression normative beliefs, which is more comprehensive in content. In addition, five new first-order factors were explored based on the original two factors to refine the category structure of normative beliefs about aggression. The results showed that Chinese middle school students generally disapprove of aggressive behavior and have a low acceptability of proactive aggression. Besides, the level of normative beliefs about aggression of boys was generally higher than that of girls. In the process of the scale revision, equal attention to both theory and data driving was paid to establish a relatively stable and complete structure model of the scale. However, there are still problems in sampling, criterion selection and application, which need to be further discussed.

Keywords: normative beliefs about aggression, scale revision, middle school students, factor analysis

青少年自杀意念问卷在不同性别中的测量等值性

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摘要 自杀是世界范围内一个重大的公共卫生问题, 也是 15-19 岁青少年的第三大死因, 一直备受国内外研究者的关注。目前国内许多学者关注了青少年自杀意念的性别差异, 也比较了不同性别个体在 PANSI 得分上的差异。关于对农村初中生自杀意念的研究中发现女生自杀意念总分显著高于男生自杀意念总分; 也有研究者发现在非留守儿童中, 女生的消极自杀意念和积极自杀意念水平显著高于男生, 而在留守儿童中没有发现显著的性别差异(陆润豪等人, 2017)。而另有研究者发现小学高年级生自杀意念、大学生新生自杀意念在总分上不存在显著的性别差异。但是, 想要证明这些性别差异比较的结果是否有效, 在此之前应确定在青少年男生和女生群体中应用 PANSI 的测量等值性, 甄别研究结果显示的组间差异是实际存在的差异还是由于测量工具不等值而造成的虚假差异。因此, 本研究选取了 1004 名高中生 (包括 512 名女生、492 名男生) 进行施测, 对有效数据进行单组验证性因素分析和性别测量等值性检验。结果显示 PANSI 双因子结构模型在总体样本、女生样本与男生样本中拟合均良好, 同时跨性别的形态等值、弱等值、强等值及严格等值模型均成立。说明中文版自杀意念问卷的双因子结构在不同性别组间中具有测量等值性。本研究对 PANSI 中文版在青少年样本中进行了不同性别的测量等值性研究, 增加了中文版青少年自杀意念问卷的普遍适用性

关键词 自杀意念, 青少年, 测量等值

Measurement Invariance of the Chinese Revision of Positive and Negative Suicide Ideation in Different Genders

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Abstract: Suicide is a major public health problem worldwide and the third leading cause of death among 15-19 year olds. It has always attracted the attention of domestic and foreign researchers. At present, many domestic scholars have paid attention to the gender differences in suicidal ideation among young people and compared the differences

in PANSI scores of individuals of different genders. A study on the suicidal ideation of rural junior high school students found that the total score of suicide ideation of girls was significantly higher than that of boys; some researchers also found that among non-left-behind children, the level of negative suicide ideation and active suicide ideation of girls was significantly higher than that of boys. However, no significant gender differences were found among left-behind children. Another researcher found that there was no significant gender difference in the total scores of suicidal ideation between the upper grades of primary school students and the suicidal ideation of freshmen. However, in order to prove whether the results of the comparison of these gender differences are valid, before that, it is necessary to determine the equivalence of the measurement of PANSI in adolescent boys and girls, and to determine whether the differences between the groups shown by the screening study results are actual differences or due to measurements. False differences caused by unequal value of tools. Therefore, this study selected 1,004 high school students (including 512 girls and 492 boys) for the test, and performed a single-group confirmatory factor analysis and gender measurement equivalence test on the valid data. The results show that the PANSI two-factor structure model fits well in the overall sample, the female sample and the male sample, and the transgender morphological equivalent, weak equivalent, strong equivalent and strict equivalent models are all established. It shows that the two-factor structure of the Chinese version of the suicide ideation questionnaire has measurement equivalence among different gender groups. This study conducted a measurement equivalence study of different genders in the Chinese version of PANSI in a sample of adolescents, and increased the general applicability of the Chinese version of the Youth Suicide Ideation Questionnaire.

Keywords: Suicide Ideation; adolescent; measurement invariance

5.11“社会心理学专业委员会”分组展贴报告

新冠肺炎疫情期间普通民众社会支持的质性研究

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摘要 鼠年春节前后，新型冠状病毒肺炎（下称新冠肺炎）疫情席卷全国，让原本欢天喜地迎接春节的人们猝不及防，正常生活受到严重影响，心理受到重大挑战，对此，个体的社会支持系统显得极为重要。**目的：**为考察新冠肺炎疫情期间普通民众社会支持的来源、种类、影响和阻碍个体获得社会支持的因素，为实践中如何有效地在疫情期间帮助普通民众度过难关提供一定参考和启发。**方法：**运用质性研究方法，按照目的性抽样原则招募访谈对象，采用面对面半结构式访谈收集资料，通过扎根理论对资料进行开放式编码、轴心编码和核心编码三个级别的归纳分析。**结果：**疫情期间，普通民众的社会支持主要来源于朋友、亲人和政府，同时，不同职业的个体还会受到其职业相关领域的支持和帮助；在种类方面，有物资、服务等工具性支持，有关心、慰问等情感性支持，有交流、新闻等信息性支持，还有娱乐、游戏等陪伴性支持；影响方面，人们通过获得社会支持，积极情绪和信念增加，消极情绪减少，提升了与他人的关系亲密度，快速适应疫情带来的变化，帮助个体恢复生活状态；但是，由于外部环境、社会管理情况、负面消极言论、信息可信度、前期物资供应不足和一些自身因素等，会阻碍个体去获得社会支持。**结论：**在此次新冠肺炎疫情期间，普通民众社会支持的来源广泛、种类齐全、影响积极，但在获得上依然存在一些困难。如何高效利用社会支持资源、改善社会支持的提供方式、优化社会支持的结构、加强社会管理，为人民群众构建优质的社会支持网络是今后需要关注和思考的问题。

关键词 新型冠状病毒肺炎，普通民众，社会支持，质性研究

A qualitative study on the Social support of ordinary people during the epidemic of COVID-19

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Abstract: Around the Spring Festival of the Year of the Rat, the epidemic of COVID-19 (hereinafter referred to as COVID-19) swept the country, so that people who were originally happy to welcome the Spring Festival were caught off guard, seriously affected their normal life, and suffered major psychological challenges. Individual social support system is extremely important. **Objective:** The purpose of this study is to investigate the sources, types, influences and factors that hinder individuals' access to social support during the COVID-19 epidemic, and to provide some reference and inspiration for how to effectively help ordinary people tide over the difficulties during the epidemic. **Methods:** the qualitative research method was used, the interview subjects were recruited according to the purposeful sampling principle, and the data were collected by face-to-face semi-structured interview. through the rooted theory, the data were summarized and analyzed at three levels: Open coding, Axial coding and Selective coding. **Results:** during the epidemic, the social support of ordinary people mainly came from friends, relatives and the government. At the same time, individuals of different occupations also received support and help from their occupation-related fields; in terms of types, there were instrumental support such as materials and services, emotional support such as care and sympathy, information support such as communication and news, and accompanying support such as entertainment and games. In terms of impact, through social support, positive emotions and beliefs increase, negative emotions decrease, enhance the intimacy of relations with others, quickly adapt to the changes brought about by the epidemic, and help individuals restore their living conditions; however, due to the external environment, social management, negative comments, information credibility, insufficient early material supply and some self-factors, individuals will be prevented from obtaining social support. **Conclusion:** during the COVID-19 epidemic, the social support of ordinary people has a wide range of sources, variety and positive influence, but there are still some difficulties in obtaining it. How to make efficient use of social support resources, improve the way of providing social support, optimize the structure of social support, strengthen social management, and build a high-quality social support network for the broad masses of people is the issues that we need to pay attention to and think about in the future.

Keywords: COVID-19, Ordinary people, Social support, Qualitative research

动作视频游戏玩家的认知灵活性：被动消散还是主动准备

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摘要 现有关于动作视频游戏玩家认知灵活性的研究有限且没有得出一致的结果。这可能与研究中所使用的任务转换范式本身的不同有关, 任何会影响转换代价的因素, 如影响先前任务的被动消散过程以及当前任务的主动准备过程等因素, 可能是导致研究结果不一致的原因。目前为止, 尚未有研究同时考察被动消散因素和主动准备因素对玩家认知灵活性的影响。此外, 现有关于游戏成瘾玩家, 特别是动作游戏成瘾玩家(Internet gaming disorder, IGD) 认知灵活性的研究较少, 相较于动作视频游戏娱乐使用玩家(recreational game users, RGU), 成瘾玩家在认知灵活性上的表现会有何不同, 这一问题还有待进一步地探讨。基于此, 本研究设计了3个实验, 通过操纵任务间的干扰水平、任务内的线索提示有效性、反应-线索时间间隔(Response-Cue Interval, RCI)、线索-刺激时间间隔(Cue-Stimuli Interval, CSI)以及反应-刺激时间间隔(Response-Stimuli Interval, RSI), 比较了成瘾玩家、娱乐玩家和非玩家(non-gamers, NG), 系统考察了三组玩家的认知灵活性差异以及被动消散和主动准备在其中所起的作用。结果显示: (1) 实验1发现, 在低干扰的条件下, 任务类型、RCI以及CSI共同影响转换代价的组间差异, 具体表现为: 执行劣势任务时, 组间差异仅存在于只能进行被动消散且

消散时间较短的条件下（线索无效，CSI=100ms, RCI=100ms），此时 IGD 的转换代价显著小于 NG；执行优势任务时，IGD 和 RGU 比 NG 更小的转换代价出现在只能进行充足的主动准备条件下（线索有效，CSI=1000ms, RCI=100ms）；（2）实验 2 发现，在有线索提示的高干扰条件下，被动消散和主动准备时间不足的情况下（CSI=100ms, RCI=100ms），IGD 的转换代价显著大于 RGU，但延长主动准备时间后（CSI=1000ms, RCI=100ms），IGD 与 RGU 的组间差异消失，出现了 RGU 的转换代价小于 NG 的情况；（3）实验 3 发现，在无线索提示的高干扰条件下，当被动消散的时间足够长时（RSI=3000ms），IGD 的转换代价显著小于 RGU 和 NG。结论：IGD 更好的认知灵活性可能得益于转换代价的被动消散成分，RGU 更好的认知灵活性则可能得益于转换代价的主动准备成分。

关键词 动作视频游戏，网络游戏成瘾，认知灵活性，被动消散，主动准备

The Cognitive Flexibility of Action Video Game Players: Passive Dissipation or Active Preparation

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Abstract: A limited number of studies have examined the cognitive flexibility of action video game (AVG) players, however, results of AVG usage and cognitive flexibility did not reach a consensus. Factors that influenced the process of passive dissipation and active preparation may impact switching cost in AVG users; however, few studies have systematically examined the potential effects of these factors on switching costs among AVG users simultaneously. In addition, no research has investigated the cognitive flexibility of those with Internet gaming disorder (IGD) exclusively for AVG usage. In order to address these questions, we conducted three experiments by manipulating levels of cross-task interference, the validity of prompts, response–cue interval (RCI), cue–stimuli interval (CSI), and response–stimuli interval (RSI) to compare the group differences in cognitive flexibility among IGD users, recreational game users (RGU) and non-gamers (NG) and to investigate the roles of the process of passive dissipation and active preparation in group differences among these three groups. Results showed: (1) in Experiment 1, type of tasks, RCI and CSI were found to influence the group differences in switching cost among IGD, RGU, and NG under low cross-task interference condition. Specifically, when performing the inferior task, group difference only existed under short passive dissipation time condition (CSI=100ms, RCI=100ms, cue=invalid) and switching cost in IGD was smaller than in NG; when performing the superior task, IGD and RGU displayed smaller switching cost than NG when the active preparation time was long (CSI=1000ms, RCI=100ms, cue=valid); (2) in Experiment 2, under cued high cross-task interference condition, IGD displayed larger switching cost than RGU when the time of passive dissipation and time of active preparation were both short (CSI=100ms, RCI=100ms), however, when extend the active preparation time (CSI=1000ms, RCI=100ms), the group difference in switching cost between IGD and RGU was disappeared, meanwhile, a smaller switching cost in RGU than in NG was found; (3) in Experiment 3, under no cued high cross-task interference condition, IGD displayed smaller switching cost than RGU and NG when the passive dissipation was long enough (RSI=3000ms). Conclusion: the better ability in cognitive flexibility in IGD may benefit from the process of passive dissipation, and the better ability in cognitive flexibility in RGU may benefit from the process of active preparation.

Keywords: action video games, Internet gaming disorder, cognitive flexibility, passive dissipation, task preparation

元刻板印象激活机制：自动化还是控制性加工？

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摘要 元刻板印象是指个体关于外群体成员对其所属群体所持刻板印象的信念或看法。以往研究发现消极元刻板印象的激活会产生一系列的消极情绪和认知效应, 但关于消极元刻板印象激活的认知神经机制尚缺乏探索。本研究将以高校中的弱势群体——贫困大学生为被试, 首次借助 ERPs 技术, 采用经典 Stroop 颜色命名任务, 对消极元刻板印象激活的时间进程及其认知机制进行了探讨。实验通过让被试根据不同指导语写形容词的方式, 操纵了“消极元刻板印象激活组”和“控制组”两种条件, 以红绿颜色词为靶子, 字体颜色和字义关系构成一致和冲突两类靶子词, 记录了 37 名贫困大学生被试对靶子词进行颜色判别的行为反应和脑电 (ERPs)。结果发现: (1) 消极元刻板印象激活组比控制组诱发出更大的 P2、N2 和 EFP (early frontal positivity) 波幅, 表明在第一个阶段, 即 P2 和 N2 阶段, 消极元刻板印象激活表现出一种自动化加工特征; 在第二个阶段, 即 EFP 阶段, 表现出一种控制性加工特征。 (2) 相比控制组, 消极元刻板印象激活组在 300ms 左右的脑电波更正, 说明消极元刻板印象激活有自我加工优势效应。研究表明消极元刻板印象激活是一种双阶段加工模型, 且具有自我加工优势。

关键词 元刻板印象激活, 双阶段加工模型, 自动化加工, 控制性加工, ERPs

The Mechanism of MetaStereotype Activation: Automatic Process or Controlled Process?

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Abstract: Metastereotype refers to a person's beliefs regarding the stereotype that out-group members hold about their own group. The model of intergroup anxiety argues that negative metastereotype generates threat by creating negative expectations on the behavior of out-group members. Adopting priming Stroop paradigm, the present study aimed to investigate the pattern and the neural correlates of metastereotype activation by recording both behavioral and ERP data.

Thirty-seven young participants (20 female) were recruited in this study. All participants were asked to write some negative descriptive adjectives to evoke negative metastereotype or not based on different instructions. Afterwards, participants were randomly assigned to either the negative metastereotype activation condition or the controlled condition. This study was organized into a 2×2 design. The first factor was the group type, consisting of 2 levels, the second factor was the target type. In the experimental program, the target stimuli were color-words generally attributed to red or green, font-color and font-meaning words constituted congruent and incongruent situations. Each trial began with the presentation of a fixation cross presented for 500 ms and then the target word appeared for 200 ms until participants responded; randomly selected inter-trial intervals (ITI) between 600 and 800 ms separated next trial from the response. Participants had to indicate by pressing one of two buttons whether the targeted words' color and they were instructed to response as quickly as possible but avoid mistakes.

ERPs results indicated that the P2, N2 and EFP (early frontal positivity) amplitudes were significantly affected by the group types, that is to say, compared with the control group, the P2, N2 and EFP amplitudes in the negative metastereotype activation group were significantly more greater, which showed that negative metastereotype activation was a two-stage processing model. In the first stage, the P2 and N2 stage, is the preliminary processing of negative metastereotypes activation, showing the characteristics of an automatic process. In the second stage, the EFP stage, is the deep processing of negative metastereotypes activation, showing the characteristics of a controlled process. In addition, compared with the control group, the brain amplitudes around 300ms in the negative

metastereotype activation group were more positive, indicating that the negative metastereotype activation has a self-processing advantage effect.

These results suggest that the negative metastereotype activation is a two-stage process, and has the self-processing advantage effect. The two-stage processing model has important theoretical and social significance for further exploring the processing process of metastereotype activation.

Keywords: metastereotype activation, two-stage processing model, automatic process, controlled process, ERPs

矛盾性别歧视对亲密伴侣暴力容忍度和实施的影响： 关系因果定向的调节作用

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摘 要 近年来，多起家庭暴力事件在网络上被曝光，引发了社会对男女之间暴力行为的关注，这种暴力受到诸多因素的影响，国外研究指出矛盾性别歧视和亲密伴侣暴力之间是存在关系的，但国内并未有清晰的研究，我们的研究注重施暴者的个体差异，基于关系因果定向理论和个体不同的性别歧视类型对亲密伴侣暴力进行了探索，力图从可能影响暴力的内在因素来对亲密伴侣暴力的容忍和实施做出解释。本研究采用了矛盾性别歧视量表、相关情境刺激下对亲密伴侣间的身体、情绪暴力容忍度评分和实施倾向的测量、关系因果定向量表对 299 名被试进行了调查，通过题目筛选留下了曾经或现在有恋爱经历的 196 名有效被试，并通过数据分析考察了变量间的相关性，并建立了 4 个分层线性回归模型来考察关系因果定向在矛盾性别歧视和亲密伴侣暴力间的调节作用，结果发现：(1)矛盾性别歧视（包括敌意性别歧视和善意性别歧视）均正向预测亲密伴侣暴力容忍度及实施可能性。具体地，敌意性别歧视与亲密伴侣暴力（身体暴力和情绪暴力）容忍度($r = 0.21, p < 0.01$)和实施可能性($r = 0.24, p < 0.01$)显著正相关；善意性别歧视与亲密伴侣暴力实施可能性显著正相关($r = 0.20, p < 0.01$)，但与亲密伴侣暴力容忍度相关并不显著。(2)善意性别歧视和亲密伴侣暴力实施之间的关系受到关系因果定向的调节作用。自主取向的善意性别歧视个体实施亲密伴侣暴力的可能性更高($b = 0.003, t = 2.670, p < 0.01$)，控制取向的善意性别歧视个体实施亲密伴侣暴力的可能性更低($b = -0.002, t = -2.319, p < 0.05$)。这些研究结果对亲密伴侣暴力有了更好的解释，对建立积极的两性关系具有重要的意义，为建立一个性别平等、零暴力的社会提供了方向。

关键词 敌意性别歧视，善意性别歧视，关系因果定向，亲密伴侣暴力

Effects of ambivalent sexism on tolerance and perpetration of intimate partner violence: The moderating effect of relationship causality orientation

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Abstract: In recent years, many domestic violence incidents were exposed on the internet, sparked concerns about violence between men and women. This violence influenced by many factors. The foreign research points out that there is a relationship between ambivalent sexism and intimate partner violence, but did not have a clear study in China. Our study focuses on the individual differences of violent. Based on the theory of relationship causality orientation and different types of gender discrimination, we carried on the exploration to intimate partner violence. We tried to use internal factors of violence to explain for the tolerance and perpetration of intimate partner violence. This study adopted the Ambivalent Sexism Scale, the scene stimulation to measure the physical and emotional violence tolerance and tendency of perpetration, the Relationship Causality Orientation Scale to investigate 299 subjects. Our study left 196 valid participants who passed attention checks and had been in a relationship or marriage. We examined the correlation between the variables through the data analysis, and conducted four hierarchical regression models to examine the moderating effects, the results showed that: (1) Ambivalent sexism (including

hostile sexism and benevolent sexism) positively predicted the tolerance and possibility of perpetrating intimate partner violence. Specifically, hostile sexism was significantly positively correlated with the tolerance of intimate partner violence ($r = 0.21, p < 0.01$) and the likelihood of perpetration ($r = 0.24, p < 0.01$). There was a significant positive correlation between benevolent sexism and the perpetration of intimate partner violence ($r = 0.20, p < 0.01$), but no significant correlation with intimate partner violence tolerance. (2) The relationship between benevolent sexism and intimate partner violence is moderated by relationship causality orientation. Benevolent sexism individuals with autonomous orientation were more likely to perpetrate intimate partner violence ($b = 0.003, t = 2.670, p < 0.01$), while benevolent sexists with controlled orientation were less likely to perpetrate intimate partner violence ($b = -0.002, t = 2.319, p < 0.05$). These conclusions provide a better explanation for intimate partner violence and have important implications for building positive gender relationships and providing a direction for building a gender-equal, non-violent society.

Keywords: Hostile sexism, benevolent sexism, relationship causality orientation, intimate partner violence

强硬怼对还是自贬幽默：从差序格局看名人回应网络恶搞的效果

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摘要 名人遭遇网络恶搞后的不同回应方式能够影响公众对他们的喜欢。然而与名人不同人际关系距离的公众却可能由于对名人持不同的道德期望而进一步表现出对名人有差异的喜欢度。根据中国人的差序格局理论, 本研究通过三个递进式的子研究对比了在公众与名人的不同人际关系中, 当名人选择强硬式与自贬幽默式回应后, 公众对他们的喜欢度差异。研究1首先对比了两种回应方式的效果, 发现自贬幽默式回应更有利于名人获得公众的喜欢。研究2通过加入喜欢/不喜欢这一人际关系指标, 发现结果与研究1一致。研究3以情感距离更近的粉丝关系为界进一步收缩公众与名人之间的人际关系, 发现在粉丝关系中, 公众对名人的喜欢不受回应方式的影响, 但在非粉丝关系中, 自贬幽默式回应仍然更有效。这些结果对人们在互联网时代如何更好地应对网络暴力和维护自我形象具有重要意义。

关键词 网络恶搞, 网络暴力, 差序格局, 强硬式回应, 自贬幽默式回应

Tough Response or Self-Defeating Humor Responses: How celebrities respond to Online E'gao From the Perspective of Chaxugeju

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Abstract: The different response ways of celebrities after encountering online e'gao can influence individuals' preference for them. Yet individuals with different interpersonal relationship distance from celebrities may further show different preference for celebrities due to their different moral expectations for them. Based on the Chinese theory of Chaxugeju, present study compared the individuals' preference for celebrities in different interpersonal relationships between them after celebrities choose tough response and self-defeating humor response. Study 1 first compared the effect of two response ways on individuals' preference for celebrities and found that self-defeating humor response was more conducive. Study 2 added the like/dislike interpersonal relationship distance indicator and found that the relationship between response way and individuals' preference was consistent with study1. Study 3 further shrined interpersonal relationship distance between individuals and celebrities by using fan relationship as the boundary indicator, which is a closer emotional distance. It was found that in fans relationship, individuals' preference for celebrities was not affected by response way, but in non-fans relationship, self-defeating humor response was still more effective. These results are of great significance for people to better cope with cyber violence and maintain their self-image in the internet era.

Keywords: Chaxugeju, Cyber violence, Online E'gao, Self-defeating humor response, Tough response

“被社会排斥者的抱团取暖”—— 相似经历改变助人倾向，提升对相似经历者的助人意愿

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摘 要 人是社会性动物，有强烈的归属需要。被社会排斥或看到他人被排斥，个体会感受到心理痛苦。然而，当目睹他人遭受社会排斥时，并不是所有人都会伸出援手。在生活中，我们更容易见到“被社会排斥群体的抱团取暖”。因此，为探究相似社会排斥经历对助人行为的影响，本研究在实验室中操纵社会排斥情景，探究被社会排斥者的助人对象偏好，以及其助人行为强度。实验招募了 32 名大学生被试（ $M_{age}=20.77$ ， $SD_{age}=1.05$ ），将他们随机分配到排斥组或接纳组；并通过 Java 编制的网络抛球范式创设社会接纳与排斥情景：在抛球游戏中，排斥组被试仅在开始接到球；而接纳组被试接球几率与其他玩家相同。在一局游戏结束后，他们将观看另外九名玩家进行 3 局游戏，（每局游戏中玩家都被编为一至三号）并为他们分配参与费。三局游戏的社会情境分别是：（1）排斥情景：2 号玩家被 1、3 号玩家排斥，仅在游戏开始接到球（2）接纳情景：2 号玩家被 1、3 号玩家接纳，接球机会与另外两人一样多（3）接纳但有其他帮助需要：2 号玩家被 1、3 号玩家接纳，但有其他帮助需要。我们用分配给 3 个情景中 2 号玩家的金钱数衡量助人行为强度，结果发现：（1）相似经历的主效应显著：社会排斥组被试分给被排斥情景中 2 号玩家的钱数显著多于其他两个情景中的 2 号玩家；同时，相比于接纳组被试，排斥组被试分给被排斥的 2 号玩家更多的钱（2）社会排斥组被试分给两个接纳情景中 2 号玩家的钱数差异不显著，而接纳组分给情景三的钱数显著多余情景二。以上结果由两点原因造成：（1）相似经历会引发个体的自发共情反应，并激活相关情绪和心理痛苦，而帮助相似经历者可以减小个体的心理痛苦，因此他们更倾向于帮助相似经历者（2）接纳组由于缺乏相似经历和相关表征，难以正确感知被排斥者的情绪，尤其是排斥信息较模糊时，他们并未意识到他人遭受了社会排斥，也未感知到其心理痛苦。由此可见，相似经历会改变个体助人倾向，使个体更倾向于帮助相似经历者。

关键词 社会排斥，相似经历，心理痛苦，助人行为

"The social outcast huddled together"——Similar experiences change the propensity of helping behaviors and enhance the willingness to help others with similar experiences

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Abstract: People are social animals with a strong need to belong. Psychological distress occurs when an individual is socially excluded or sees others excluded. However, not everyone is willing to help others when they witness them being excluded. In daily life, it's prone to see the "social outcast bonding". Therefore, in order to explore the influence of similar social excluded experiences on helping behavior, social exclusion conditions were manipulated in the laboratory to explore the preference for helping others and the influence of their helping behavior on psychological distress. Thirty-two undergraduates were recruited ($M_{age}=20.77$, $SD_{age}=1.05$) and randomly assigned to either the excluded group or the accepted group. And through the network throwing paradigm compiled by Java to create the social exclusion situation: in the throwing game, the exclusion group only receive the ball in the beginning; while The accepted group had the same catch rate as the other players. After the game, they watched nine other players play three games (players in each game were numbered one to three) and allot fee for them. The three conditions are: (1) excluded condition: player 2 is excluded by player1 and player 3, only receive the ball at the beginning of the game (2) acceptance condition: player 2 is accepted by players a and 3, with the same opportunity to catch the ball (3) accepted but with other help need: player 2 is accepted, but has other help needed. We measured the intensity of helping behavior by the amount of money assigned to player 2 in the three conditions. The results showed

that: (1) The main effect of similar experiences was significant: the amount of money given to player 2 in the excluded condition by participants the social exclusion group was significantly higher than in the other two conditions; At the same time, compared with the accepted group, the rejected group gave more money to the excluded number 2 player. (2) There was no significant difference in the amount of money the social excluded group gave to the non-social excluded players, while the accepted group gave significantly more money to condition 3 than condition 2. These results caused by two reasons: (1) the similar experience will lead to individual responses of spontaneous empathy, and activate the related emotional and psychological pain, and help similar experience can reduce the individual psychological pain, bring positive emotional experience to the individual, so they are more inclined to help similar experience (2) acceptance group due to lack of experience and relevant similar characterization, difficult to correct perceptions are excluded, especially exclusive information is fuzzy, to suffer social exclusion, they did not realize that others did not perceive their psychological distress, so they didn't offer help. Therefore, It can be seen that similar experiences will change the individual's propensity to help others, making individuals more inclined to help others with similar experiences.

Keywords: social exclusion, similar experience, psychological pain, helping behavior

信念纠正中逆火效应的验证及其影响因素

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摘 要 态度改变是指个体在对事物已有态度的基础上发生一定的变化。态度的改变分为方向的变化和强度的改变: 方向的变化是指从赞成变为反对或者从反对变为赞成, 属于质的改变; 强度的改变则是指态度在原来的方向上变强或者变弱, 属于量的改变。逆火效应是指公众在接受信念纠正时, 原有的态度不仅没有被改变, 反而变得更坚定。逆火效应中, 态度的强度发生改变, 但态度的方向并没有发生改变。本研究关注中国大学生对不同类别、不同呈现方式的信息的态度改变过程中是否会出现逆火效应。实验一向 38 名被试呈现科学类、社会类和综合类三类不同的信息, 并且通过文字和视频两种方式对于被试原本的信念进行纠正。结果发现, 被试在接受与原态度相反的信念纠正信息后, 对于科学类、社会类、综合类三种类型的信息态度方向和强度都发生了改变, 视频和文字两种纠正方式的效果没有显著差异。实验二为了增加生态效度, 向 98 名被试依旧呈现三类信息, 然后以随机的顺序先后向被试呈现支持其信念的材料和不支持其信念的材料。结果发现, 被试在阅读两种材料后, 对于原有信息的态度方向和强度都发生了改变。两个实验结果都证明中国大学生群体在接受信念纠正后态度的强度和方向均发生了变化, 逆火效应没有出现。但是相较于科学类与综合类信息, 人们对于社会类信息会更倾向于坚持自己原有的态度 ($F(2,72) = 8.302, p = .001, \eta^2 = .199$; $F(2,186) = 3.835, p = .023, \eta^2 = .040$), 这可能是由于社会类信息与被试的生活联系更紧密, 被试会有更多自己的思考。

关键词 态度改变, 逆火效应, 信念纠正

Verification of backfire effect and its influence factors in the context of belief change

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Abstract: Attitude change refers to a change of individuals' attitude based on their existing attitude towards certain things. The change of attitude involves the change of direction and the change of intensity. The change of direction refers to the change from agree to disagree or from disagree to agree, which is a qualitative change. The change of intensity refers to the change of attitude intensity in the original direction, which is a change of quantity. The backfire

effect means that when the public accepts the correction of beliefs, the original attitude is not changed, but becomes firmer. Therefore, for backfire effect, the intensity of attitude changes while the direction doesn't. This project focuses on whether there will be backfire effect in the process of changing the attitude of Chinese college students towards different types of information which is presented in different ways. In the first experiment, 38 participants were presented with three different kinds of information which are scientific, social and synthetical information, and their original beliefs were changed through both text and video. The results showed that after receiving the information contrary to the original attitude, the direction and intensity of the three types of information attitudes were all changed, and there was no significant difference in the effect of video and text. To increase ecological validity, the second experiment presented 98 participants three types of information. Then participants were presented with materials supporting their beliefs and materials not supporting their beliefs in a random order. The results showed that both attitude direction and attitude intensity towards the original information changed after reading the two kinds of materials. Both results indicate that the intensity and direction of Chinese college students' attitude changed after they accepted the correction of beliefs, and the backfire effect did not appear. However, compared with scientific and synthetical information, people tend to stick to their original attitude towards social information ($F(2,72) = 8.302, p = .001, \eta^2 = .199$; $F(2,186) = 3.835, p = .023, \eta^2 = .040$). This conclusion may be since social information is more closely related to the participants' lives, so the participants have more thoughts of their own.

Keywords: attitude change, backfire effect, belief change

身体意象对整形行为的影响—— 自我效能感和状态焦虑的链式中介作用

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摘要 目的：本研究旨在对比整形个体和非整形个体的焦虑，自我效能感以及身体意象方面的差异，并探讨自我效能感和状态焦虑在整形患者身体意象和整形行为间的链式中介效应，进而更深一步探讨个体选择整形行为的内部作用机制，为整形患者心理护理提供理论指导。方法：筛选出郑州市某整形医院 190 例整形个体为实验组，另外，在年龄、文化程度、婚姻状况、职业等人口学变量进行匹配选取非整形个体 190 名为对照组，采用多维自我体像关系调查问卷(MBSRQ)、状态焦虑量表(S-AI)和一般自我效能感量表(GSES)分别对两组进行调查。结果显示：实验组和对照组在身体意象、状态焦虑和自我效能感上差异显著，实验组的焦虑得分显著高于对照组，身体意象和自我效能感得分显著低于对照组($t = -5.56, 6.61, -3.12, P_s < 0.01$)；身体意象、状态焦虑、自我效能感和整形行为两两之间均呈显著相关，相关系数分别为：-0.19、0.17、-0.28、-0.64、0.32、-0.16, ($P_s < 0.01$)；身体意象显著负向预测个体整形行为($OR = 0.57, P < 0.01$)；身体意象可以通过状态焦虑的中介作用间接影响个体的整形行为，中介效应值为-0.07；也可以通过自我效能感和状态焦虑的链式中介作用间接影响个体的整形行为，中介效应值为-0.09。结论：身体意象通过状态焦虑的单独中介作用以及自我效能感和状态焦虑的链式中介作用两条路径影响个体整形行为。

关键词 整形，焦虑，自我效能感，身体意象

The effect of body image on plastic surgery behavior: The chain mediating role of self-efficacy and state anxiety

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Abstract: Objective: The purpose of this study was to compare the differences in anxiety, self-efficacy and body image between plastic surgery and non-plastic surgery individuals, and to investigate the mediating effect of self-efficacy and state anxiety between body image and plastic surgery behavior in plastic surgery individuals, then further explore the internal mechanism of individual selection of plastic behavior, to provide theoretical guidance for

psychological nursing of plastic surgery patients. Methods: Select 190 plastic individuals one orthopedic hospital of zhengzhou city as the experimental group, in addition, in the age, culture level, marital status, occupation and other demographic variables and the experimental group matching, to select the non-plastic individual 190 as the control group, using the multidimensional self body sample relationship questionnaire, and state anxiety inventory and general self-efficacy scale investigation into two groups, respectively. The results showed that: (1) there were significant differences in body image, state anxiety and self-efficacy between the experimental group and the control group. The anxiety scores of the experimental group were significantly higher than that of the control group, and the body image and self-efficacy scores of the control group were significantly lower than that of the control group ($t = -5.56, 6.61, -3.12, PS < 0.01$). (2) Body image, state anxiety, self-efficacy and plastic surgery behavior were significantly correlated with the correlation coefficients of $-0.19, 0.17, -0.28, -0.64, 0.32, -0.16$, respectively ($PS < 0.01$). (3) Body image significantly negatively predicted individual plastic surgery behavior ($OR = 0.57, P < 0.01$); Body image can indirectly affect individuals' plastic behavior through the mediating effect of state anxiety, and the mediating effect value is -0.07 . It can also indirectly affect individuals' plastic behavior through the chain mediating effect of self-efficacy and state anxiety, and the mediating effect value is -0.09 . Conclusion: Body image affects individual plastic surgery behavior through the single mediating effect of state anxiety and the chain mediating effect of self-efficacy and state anxiety.

Keywords: Plastic, Body image, Self-efficacy, State anxiety

核电企业履行社会责任对公众接受度的影响

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摘要 核能是一种广受重视的清洁能源, 然而福岛核事故之后公众接受度低限制行业发展, 国内多个涉核项目搁浅。我国在核电建设方面非常强调核电企业的公众接受度, 并把它作为核电项目审批的重要指标。因此如何改善核电企业的公众接受度成为我国核电发展的一个重要环节。本研究从核电企业履行社会责任的角度探讨公众对核电的接受度, 首先以文献研究归纳公众接受度影响因素: 信任、公众认知、风险感知和收益感知, 提出假设: 公众对核电企业社会责任感知能够提升核电公众接受度。然后以秦山核电周边 211 名居民为研究对象, 整合并修正企业社会责任感知、信任、公众认知、风险感知、收益感知等已有量表, 分析企业社会责任感知对公众接受度的影响及作用路径。结果表明: (1) 我国公众对核电企业社会责任感知分为两个维度, 分别是法律责任感知、经济与道德责任感知; (2) 法律责任感知对核电公众接受度存在正向影响; 公众认知、恐慌风险感知和收益感知起部分中介作用。最后, 以嘉兴市周边(排除海盐县) 195 名居民为研究对象, 分三组观看核电企业不同社会责任的宣传视频或不观看视频, 以 ANOVA 分析比较了不同宣传内容对企业社会责任感知、公众接受度的影响, 结果表明: (1) 核电企业宣传其履行社会责任能够提升公众接受度 (2) 宣传企业社会责任的不同方面对提升公众接受度的效果并无显著差异。

关键词 核电, 公众接受度, 企业社会责任, 中介作用

Influence of Social Responsibility of Nuclear Power Companies on Public Acceptance

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Abstract: Nuclear energy is a kind of clean energy which is widely valued. However, after the Fukushima nuclear accident, low public acceptance limited the development of the industry, and several nuclear related projects in China were suspended. It's an important index of nuclear power project approval. This study explores the public's

acceptance of nuclear power from the perspective of social responsibility(CSR) of nuclear power corporates, firstly the influencing factors of public acceptance were summarized through literature research: trust, knowledge, risk perception and benefit perception, and the hypothesis was put forward: the perceivedCSR can improve public acceptance. Then, 211 residents around Qinshan Nuclear Power Station were taken as the research object, and existing scales such as CSR, trust, knowledge, risk perception and benefit perception were integrated and modified to analyze the influence and action path of perceivedCSR on public acceptance. The results show that : (1) The perceivedCSR of nuclear power companies in China is divided into two dimensions, legal responsibility, economic and moral responsibility, (2) The perceived legal responsibility has a positive effect on the public acceptance,, and this effect is realized through the partial mediating effect of knowledge, dread risk perception and benefit perception. Finally, 195 residents around Jiaxing were taken as the research object, who were divided to 3 groups and watch different videothat show CSR of nuclear companies, the comparison showed that: (1) publicity of nuclear companiesCSR can promote perceivedCSR and public acceptance, (2) There is no significant difference in the effect of promoting different aspects of CSR on public acceptance.

Keywords: Nuclear power, Public acceptance, Corporate Social Responsibility, Mediating effect

趋近还是回避？羞耻情绪的社会功能

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摘 要 羞耻是一种道德情绪，对个体的身心健康和社会性发展具有重要影响。目前关于羞耻情绪的结果有两类发现，多数学者认为羞耻是一种消极情绪，激发人们产生社交回避行为，例如躲藏、抑制社交或与他人疏离等；近年来研究发现羞耻情绪能够促进社交趋近行为，例如捐赠、合作等。以往研究多使用实验或问卷单独测量趋近或回避的一种，却忽视了被试自己对情境的选择。生活中个体在体验到某种情绪时，通常会自主选择合适的社交情境。除此之外，这些研究多是在西方文化背景下进行的，但羞耻情绪在中西方的表现及接纳程度并不相同。最后，西方学者的研究只涉及到能力不足羞耻，未考虑道德失范羞耻。基于此，本研究设计三个实验来探讨中国文化背景下羞耻情绪的社会功能。首先启动羞耻情绪，随后要求被试自主选择社交回避（独自进行货币分配决策）或社交趋近（与另一个人进行货币分配决策）情境。实验1采用自传回忆法考察启动羞耻情绪的个体对社交情境的选择。实验2采用 de Hooge 的“任务表现失败范式”诱导羞耻情绪，采用 2（情绪状态：羞耻、控制）× 2（他人知晓与否：知晓、不知晓）的被试间设计，探讨能力不足羞耻在他人知晓与否的情况下对社交情境的选择。实验3采用高学德的典型羞耻事件诱发羞耻情绪，研究设计同实验2，考察道德失范羞耻在他人知晓与否的情况下对社交情境的选择。实验结果均发现，无论是能力不足羞耻还是道德失范羞耻，也无论他人知晓与否，相比于社交回避，体验到羞耻情绪的个体更容易产生社交趋近行为。这一发现可能引导人们进一步认识羞耻情绪的社会功能，不再把羞耻看作是完全的消极情绪，而是作为一种自我意识的情感来调节个体与周围环境中其他人的关系。

关键词 羞耻情绪，社交趋近，社交回避

Approaching or withdrawing? The social function of shame emotion

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Abstract: Shame is a kind of moral emotion, which has an important influence on individual's physical and mental health and social development. At present, there are two kinds of findings about the results of shame. Most scholars think that shame is a negative emotion, which stimulates people to produce social avoidance behaviors, such as hiding, suppressing social interaction or alienating others; In recent years, it has been found that shame can promote social approaching behaviors, such as donation and cooperation. Previous studies used experiments or questionnaires to measure approach or avoidance alone, but ignored the subjects' choice of situations. In life, when individuals experience certain emotions, they usually choose suitable social situations independently. In addition, most of these

studies are conducted under the western cultural background, but the expression and acceptance of shame are different between China and the West. Finally, the research of western scholars only involves the shame of lack of ability, without considering the shame of moral anomie. Based on this, this study designed three experiments to explore the social function of shame in Chinese cultural background. First, the shame was primed, and then the subjects were asked to choose social withdraw (making money distribution decision alone) or social approach (making money distribution decision with another person). In experiment 1, autobiographical recall method was used to investigate the choice of social situations of individuals who started shame. In Experiment 2, de Hooze's "Task Performance Failure Paradigm" was used to induce shame, and a design of 2 (emotional state: shame and control) $\times$ 2 (whether others know or not: know or not) was adopted to explore the choice of social situations by shame of lack of ability when others know or not. Experiment 3 used Gao Xuede's typical shame events to induce shame, and the research design was the same as experiment 2, to investigate the choice of social situation by moral anomie shame whether others knew it or not. The experimental results show that, compared with social withdraw, individuals who experience shame are more likely to have social approaching behavior, whether they are ashamed of lack of ability or moral anomie, and whether others know it or not. This discovery may lead people to further understand the social function of shame, and no longer regard shame as a completely negative emotion, but as a self-conscious emotion to regulate the relationship between individuals and other people in the surrounding environment.

Keywords: shame, social approach, social withdraw

消极完美主义与大学生拖延：损耗敏感性的调节作用

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摘 要 拖延导致大量时间的浪费, 人们的工作学习效率为此遭受了许多不必要的损失。消极完美主义作为一种较为稳定的人格特质, 与拖延有着十分紧密的联系。研究表明, 消极完美主义与拖延显著正相关。前人研究表明, 消极完美主义对拖延的影响大部分都是通过中介或者调节方式进行, 自我控制与拖延的关系十分密切, 已有研究者探讨了自我控制在消极完美主义和拖延之间所起的作用。自我控制的力量模型认为, 自我控制是一种有限资源, 在消耗到一定程度后个体会进入自我损耗状态, 有研究者指出自我控制失败的根源在于自我损耗。传统的自我控制量表测量的是特质自我控制, 即自我控制资源总量, 而损耗敏感性这一概念旨在反映个体自我控制资源的消耗速度, 两者存在概念上的差异。为完善自我控制视角下, 消极完美主义对拖延的影响, 本研究从自我控制资源消耗速度方面入手, 假设消极完美主义对拖延的影响会受到损耗敏感性的调节。本研究采用 Frost 多维完美主义量表中的消极完美主义部分、损耗敏感性量表、非理性拖延量表, 对 411 名大学生进行调查。结果发现: (1) 消极完美主义与拖延呈显著正相关 ($r=0.28$, $p<0.01$), 损耗敏感性与拖延呈显著正相关 ($r=0.18$, $p<0.05$)。 (2) 损耗敏感性会对消极完美主义与拖延的关系中起到正调节作用。简单斜率检验表明, 损耗敏感性低时, 消极完美主义对拖延的影响不显著; 损耗敏感性高时, 消极完美主义对拖延有显著正向影响 ($B=0.36$, $p<0.001$)。本研究为前人研究做了补充, 说明不仅仅是自我控制资源的总量, 自我控制资源消耗速度也会影响消极完美主义对拖延的影响效果。

关键词 消极完美主义, 非理性拖延, 耗损敏感性, 调节

Negative perfectionism and Procrastination in College Students: The moderating effect of loss sensitivity

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Abstract: Procrastination leads to the waste of a lot of time, and people's work and study efficiency suffers a lot of unnecessary losses. As a relatively stable personality trait, negative perfectionism is closely related to procrastination. Studies have shown a significant positive correlation between negative perfectionism and procrastination. Previous

studies have shown that most of the influences of negative perfectionism on procrastination are mediated or regulated, and Some researchers have discussed the role of self-control in the relationship between negative perfectionism and procrastination. According to the strength model of self-control, self-control is a kind of limited resource. After a certain degree of consumption, individuals will enter into a state of ego-depletion. Some researchers have pointed out that the root cause of self-control failure lies in ego-depletion. The traditional self-control scale measures idiosyncrasies self-control, that is, the total amount of self-control resources, while the concept of loss sensitivity aims to reflect the consumption rate of individual self-control resources, and there is a conceptual difference between the two. In order to improve the influence of negative perfectionism on procrastination from the perspective of self-control, this study started from the aspect of self-control resource consumption speed and assumed that the influence of negative perfectionism on procrastination would be adjusted by loss sensitivity. In this study, the negative perfectionism, loss sensitivity and irrational procrastination scales of Frost Multidimensional Perfectionism Scale were used to investigate 411 college students. The results showed that :(1) negative perfectionism was positively correlated with procrastination ($r=0.28$, $p < 0.01$), while loss sensitivity was positively correlated with procrastination ($r=0.18$, $p < 0.05$). (2) Loss sensitivity plays a positive regulating role in the relationship between negative perfectionism and procrastination. The simple slope test shows that negative perfectionism has no significant effect on procrastination when loss sensitivity is low. When loss sensitivity is high, negative perfectionism has a significant positive effect on procrastination ($B=0.36$, $P < 0.001$). This study is a supplement to previous studies, indicating that self-control is not only about the total amount of resources, but also about the rate of resource consumption that affects the effect of negative perfectionism on procrastination.

Keywords: negative perfectionism, irrational procrastination, loss sensitivity, regulation

分析性认知风格对道德体感图谱的影响——基于随机森林算法

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摘要 体感图谱 (bodily sensation maps, BSMs) 被用来表达情绪体验的躯体感受。已有研究根据道德基础理论 (moral-foundations theory, MFT) 提出的五个道德问题 (关爱、公平、忠诚、权威和洁净), 绘制了不同道德问题相应的体感图谱, 证明了不同道德问题与特定身体区域的激活或失活有关, 与道德问题相应的体感图谱在政治倾向 (自由派和保守派) 方面存在显著差异。现有研究发现, 分析性认知风格 (Analytic cognitive style, ACS)、道德基础信念以及对政治和宗教团体的认同三者之间会相互影响, 低 ACS 的人在政治上倾向保守, 对具有约束力的道德基础 (洁净, 忠诚和权威) 更为认可。然而, 尚不清楚 ACS 对道德体感图谱的影响。本研究旨在探索不同 ACS 的被试在面对由道德基础理论提出的五个道德问题时, 体感图谱是否有区别, 以及使用随机森林 (random forest, RF) 分类器是否可以根据体感图谱数据区分不同 ACS 的群体。研究采用认知反应测试 (Cognitive Reflection Test, CRT) 将被试分为高、低 ACS 组, 再将各组被试随机分配到道德基础理论的 5 个道德问题条件下。通过向被试呈现相应违背道德场景的短视频, 要求被试报告其情绪体验强烈程度和感知到行为的错误严重程度, 并使用 emBODY 工具在两个 48954 像素轮廓上分别绘制其主观身体感觉激活和失活的体感图谱。研究基于体感图谱的特征变量, 分别对 5 种道德问题和不同 ACS 采用随机森林分类器进行分类数据建模。研究结果表明: 与道德问题相应的体感图谱在高、低 ACS 组之间存在显著差异, 不同道德问题条件下, 高、低 ACS 组的平均分类准确率均显著高于随机水平, 说明不同 ACS 的被试在不同道德问题条件下, 有着不同的躯体感受。因此, 本研究结论指出基于道德体感图谱建立的 ACS 预测模型具有良好的预测效果。

关键词 分析性认知风格, 道德基础理论, 体感图谱, 随机森林

The Influence of Analytical Cognitive Style on Moral Bodily Sensation Maps: Based on Random Forest Algorithm

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Abstract: Bodily sensation maps (BSMs) are used to express the somatic feelings of emotional experience. Based on the five moral issues (care, fairness, loyalty, authority, and purity) raised by moral-foundations theory (MFT), existing study has drawn up the corresponding bodily sensation maps of different moral issues. It proves that different moral issues are related to the activation or deactivation of specific body areas, and the bodily sensations maps corresponding to moral issues have significant differences in political tendencies (liberals and conservatives). Existing research has found that analytic cognitive style (ACS), fundamental moral beliefs, and identification with political and religious groups can influence each other. People with low ACS tend to be conservative in politics and have more recognized of binding moral foundations (purity, loyalty, and authority). However, it is not clear how ACS affects the moral bodily sensation maps. This study aimed to explore whether there were differences in the bodily sensation maps among the subjects of different ACS when facing the five moral issues raised by the moral foundation theory, and whether the random forest (RF) classifier could distinguish different levels of ACS groups based on bodily sensation maps' data. The study used the cognitive reflection test (CRT) to divide the subjects into two ACS groups (high and low), and then randomly assigned each group to the five moral issues conditions of the moral-foundations theory. Participants were asked to report the intensity of their emotional experience and their perceiving severity of wrong behaviors by watching short videos of violation moral scenes. Also they were asked to use the emBODY tool to draw the bodily sensation maps of the subjective body sensation activation and deactivation on the two 48954 pixel contours. Based on the characteristic variables of the bodily sensation maps, the research used random forest classifiers to model the classification data of 5 kinds of moral issues and different ACS groups. The results showed that: the bodily sensation maps corresponding to moral issues were significantly different between the high and low ACS groups. Under different moral issues, the average classification accuracy of the high and low ACS groups was significantly higher than the random level. It showed that the subjects of different ACS had different physical feelings under different moral issues conditions. Therefore, the conclusion of this study pointed out that the ACS prediction model based on the bodily sensation maps had a good prediction effect.

Keywords: moral-foundations theory, bodily sensation maps, cognitive style, random forest

敬畏感对助人行为的影响

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摘要 敬畏感是一种自我超越情绪,是在面对广阔、浩大或者超越我们认知范围的事物时所产生的一种情感体验。助人行为是人们自愿地关心他人并为他人提供帮助的行为,是社会所期待的一种良好道德行为。在情绪领域的研究中,情绪对个体认知和行为的影响越来越受到研究者的关注。作为一种由来已久的重要情绪体验,已有研究发现敬畏感能激发人的亲社会性行为,因而推测敬畏感在助人行为上也将存在积极的作用。本文通过问卷调查和情境启动实验,考察敬畏感对个体助人行为的影响。实验一以情绪为自变量,助人行为为因变量,以中性情绪为参照,考察敬畏感对助人行为的影响。实验二从个体的性格倾向出发探究敬畏感对助人行为的影响。实验三从受助者的特征角度展开,探究敬畏感对不同性别、不同年龄和不同经济状况的受助者的助人行为的影响。本研究得出以下几个结论:(1)敬畏感与助人行为存在正相关,且可以有效预测助人行为;(2)那些会经常感受到敬畏感的个体会表现出更多的助人行为;(3)受助者的性别、年龄和经济状况影响个体的助人行为,个体更倾向于帮助女性、年龄较大和较小及经济状况差的受助者;不同敬畏感水平的个体对不同性别、年龄和经济状况的受助者助人行为存在差异,敬畏感水平高的个体对不同性别、年龄和

经济状况的受助者助人行为不存在差异；而敬畏感水平低的个体更倾向于帮助女性、年龄较大和较小及经济状况差的受助者。

关键词 敬畏感，助人行为，影响

The Effect of Awe on Helping Behavior

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Abstract: Awe is a self-transcendence emotion, and awe is an emotional experience in the face of things that are vast, or beyond the scope of our cognition. As an expected good moral behavior, helping behavior refers to caring for others and providing help voluntarily. In the field of emotion research, people have a stronger interest in how emotion impact on individual cognition and behavior. The concept of awe has a long history and awe has been proved to benefit pro-social behavior. We think the positive effects of awe also exist in the field of helping behavior. The questionnaires and context-initiated experiments were conducted to explore the effect of awe on helping behavior. In Experiment 1, used emotion as independent variable, helping behavior as dependent variable and neutral emotion as reference to investigate the effect of awe on helping behavior. In Experiment 2, explores the effect of awe on helping behavior from the personality tendency of individuals. In Experiment 3, focused on the perspective of recipient characteristic aiming to explore the awe on helping behavior to the recipients with different gender, different ages and different economic conditions.

The conclusions are as follows:(1) The awe were significant positive correlation with helping behavior, and awe for helping behavior have positive prediction function. (2) People who easily feel awe in life will show more helping behavior. (3) The helping behavior is effected by the gender, ages and economic conditions of recipients. People are more inclined to help women, the elderly and children, the poor. With different levels of awe are different in helping recipients with d different gender, different ages and different economic conditions. The helping behavior has no difference for people with high awe, but people with low awe are more inclined to help women, the elderly and children, the poor.

Keywords: awe, helping behavior, effect

双重道德标准？权力感对道德判断的影响

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摘 要 权力作为社会结构的一种特征，会影响人们的心理权力感，从而以多种方式塑造行为结果。一般观点认为权力会腐蚀人们的道德观念。然而，从社会心理学理论的角度来看，权力可以增强或削弱道德行为，现有权力对道德判断的研究主要围绕道德判断主体权力感对其道德判断的影响。但是当他人被作为道德判断的目标时，目标他人的权力水平对被试道德判断是否产生影响，是否是人们道德“双标”的原因呢？一些研究发现人们对于高权力目标他人的违法行为的道德判断比对低权力者更加严苛。但也有研究发现，当目标个体在组织内有一般越轨行为时，如果目标个体是领导者，道德判断更加宽容。因此本研究旨在探究目标他人的权力水平对自然权力状态下被试道德判断的影响，以及操纵被试的权力水平后，目标他人权力水平对高低权利状态下个体道德判断的影响。实验一初步设置高低两个权力水平的目标他人，通过对道德两难和美德两种情景下他们的道德行为进行判断，考察被试感知到的行为主体的权力水平对其道德判断的影响方向。以中学生为被试，采用 MacArthur 量表和权力水平的描述材料，操纵被试间自变量（权力水平：高权力、低权力），设置高低权力水平行为主体的道德判断材料，以道德认知量表（MFT）得分高低作为被试道德判断差异的测量指标。预期结果：人们对高低权力行为主体的道德判断标准存在差异，在道德行为上，被试对高权力行为主体的道德判断更宽松；而在不道德行为上，被试对权力行为主体的道德判断更严厉。实验二在实验一的基础上进一步探索道德判断主体的权力水平对高低权力行为者道德判断的影响机制，采用 2（目标他人权力：高低）×2（被试权力：高低）被试间设计。自变量因变量的测量同实验一，被试权力状态的操纵采用情景回忆任务。

预期结果：不同权力水平个体对行为主体的道德判断标准存在差异，个体权力感在目标他人的权力水平对被试道德判断中起中介作用。

关键词 权力，权力感，道德判断，中学生

Double moral standards? The impact of the sense of power on moral judgment

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Abstract: As a feature of social structure, power can affect people's psychological sense of power, thus shaping the result of behavior in many ways. The conventional wisdom is that power corrupts people's moral values. However, from the perspective of social psychological theory, power can enhance or weaken moral behavior. The research of the existing power on the moral judgment mainly focuses on the influence of the moral judgment subject's sense of power on his moral judgment. But when others are regarded as the target of moral judgment, does the power level of the target others have an impact on the moral judgment of the subjects, and is it the reason for people's moral "double standard"? Some studies have found that people's moral judgments about the transgressions of high-power targets are more critical than those of low-power targets. However, other studies have found that when the target individual has general deviant behaviors in the organization, if the target individual is the leader, moral judgment is more tolerant. Therefore, this study aims to explore the influence of the power level of the target others on the moral judgment of the subjects in the state of natural power, as well as the influence of the power level of the target others on the moral judgment of the subjects in the state of high or low power after manipulating the power level of the subjects. In experiment 1, we set the target others with high and low power levels. By judging their moral behaviors under two situations of moral dilemma and virtue, we investigated the influence direction of the power level of the behavior subject perceived by the subjects on their moral judgments. Taking middle school students as the subjects, MacArthur scale and power level description materials were used to manipulate independent variables (power level: high power, low power) among the subjects, and moral judgment materials were set for subjects at high and low power levels. The score of moral cognition scale (MFT) was used as the measurement index for the difference in moral judgment of the subjects. Expected results: People's moral judgment standards of high and low power behavior subjects are different. In terms of moral behavior, subjects' moral judgment of high power behavior subjects is more relaxed. In the aspect of immoral behavior, the subjects' moral judgment on the subject of power behavior is more severe. On the basis of experiment 1, experiment 2 further explores the influence mechanism of the power level of moral judgment subjects on the moral judgment of high and low power actors. It adopts the design of 2 (power of target others: high and low) × 2 (power of subjects: high and low) among the subjects. The independent variable and dependent variable were measured in the same way as in experiment 1. The participants' power state was manipulated by recall a personally relevant event involving either high or low power. Expected results: There are differences in the moral judgment standards of individuals at different levels of power, and the sense of individual power plays an intermediary role in the moral judgment of the subjects at the level of power of the target others.

Keywords: power, sense of power, moral judgment, middle school student

民众社会心态与心理健康：人际交往倾向和希望感的作用

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摘要 民众社会心态是一段时间内弥散在整个社会或群体中一种宏观的社会心境状态，是党和国家在社会心理服务体系建设中重点关注的问题。心理健康是指个体心理活动过程内容完整、协调统一，个体具有良好

的社会功能, 它的提升有利于整体国民心理素质的提高, 进而助力实现“健康中国”目标。已有研究发现, 社会心态会影响人们的心理健康状况, 且希望感能增强积极社会心态的影响, 缓解消极社会心态, 促进个体的心理健康水平。但社会心态如何影响心理健康, 即二者间的内在机制还未厘清。为明确民众社会心态与心理健康间关系的内在机制, 本研究采用民众社会心态量表、心理健康量表、人际交往倾向量表及成人特质希望感量表, 调查了全国不同地区、年龄段和行业民众 605 份。结果表明: (1) 民众的社会心态对心理健康具有直接预测作用; (2) 人际交往倾向在民众社会心态与心理健康的关系间起中介作用; 希望感在民众社会心态与心理健康的关系间起中介作用; (3) “社会心态→心理健康”这一直接路径, 受到希望感的调节, 与低希望感被试相比, 社会心态对高希望感被试的心理健康水平正向预测作用更强。研究结果进一步揭示民众社会心态对心理健康的作用机制, 为提升国民心理健康水平, 提供理论依据。

关键词 社会心态, 心理健康, 人际交往倾向, 希望感

Social psychology and mental health: the role of interpersonal tendency and sense of hope

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Abstract: People's social mentality is a macroscopic social state of mind which disperses in the whole society or group in a period of time. It is a key concern of the party and the state in the construction of social psychological service system. Mental health means that the contents of individual psychological activities are complete, coordinated and unified, and individuals have good social functions. Its promotion is conducive to the improvement of the overall national psychological quality, and then help to achieve the goal of "healthy China". Existing studies have found that social mentality can affect people's mental health, and the sense of hope can enhance the impact of positive social mentality, alleviate negative social mentality, and promote individual's mental health. However, how social mentality affects mental health, namely, the internal mechanism between the two has not been clarified. In order to clarify the internal mechanism of the relationship between people's social mentality and mental health, this study used people's social mentality scale, mental health scale, interpersonal tendency scale and adult trait sense of hope scale to investigate 605 people from different regions, age groups and industries. The results showed that : (1) people's social mentality had a direct predictive effect on mental health; (2) Interpersonal communication tendency plays a mediating role in the relationship between social mentality and mental health; The sense of hope plays a mediating role in the relationship between social mentality and mental health; (3) The direct path of "social mentality → mental health" was moderated by the sense of hope. Compared with the participants with low sense of hope, the social mentality had a stronger positive effect on the mental health of the participants with high sense of hope. The results further reveal the mechanism of social mentality on mental health, and provide theoretical basis for improving national mental health.

Keywords: Social mentality, mental health, interpersonal tendency, sense of hope

助推绿色行为

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摘要 随着工业化的进程, 我国环境和资源形势日益严峻。绿色行为指组织或个体开展符合节能、环保和可持续发展理念的活动, 能有效缓解环境破坏和资源紧缺的现状, 比如绿色消费。绿色消费指消费者尽量减小其消费行为对环境造成的危害和破坏, 属于交易领域的道德选择。做出不同消费类型选择后的个体会有怎样的行为, 有两种不同的观点: 根据道德一致性理论, 当个体过去做了一件道德的事, 未来则更可能做出多的道德行为和少的不道德行为; 而绿色消费许可效应认为, 个体过去的绿色消费行为会允许自己在将来减少绿色选择, 甚至变得更自私, 根据道德自我调节理论, 非绿色消费也应该适用于这两种理论。是什么因素导

致了完全相反的行为？根据感知价值理论，感知价值是在交易过程中消费者对结果的主观感知，个体会通过感知到的得与失调整自己的后续行为。因此，本研究旨在考察消费过程中，产品环保价值感知如何影响个体消费后的行为选择，以及怎样助推消费后的绿色行为。研究一采用 2（消费类型：绿色/非绿色）×2（产品环保价值感知：高/低）组间设计。通过回忆任务操纵消费类型，采用 Longoni 等人的研究范式，在试完成剪纸游戏后，记录其垃圾分类处理情况。最后用 7 点李克特量表（“1 特别不环保”到“7 特别环保”）测量产品环保价值感知。预期结果：高产品价值感知下，绿色消费组绿色行为更多，非绿色消费组绿色行为更少；低产品价值感知下则相反。研究二采用现场实验。产品环保价值感知主观性强，易出现认知偏差，因此本实验结合生命周期成本,采用信息标签助推方法，客观量化产品环保价值。实验场所初步定在电器商店，为期两月，一月为一个周期（助推前/助推后），观察信息标签展示前后绿色产品消费情况（以绿色产品消费数量与总消费数量的比值作为衡量标准）。预期结果：使用信息标签后，绿色产品消费数量比例明显增加。

关键词 道德一致性，绿色消费许可效应，助推，信息标签

Nudge Green Behavior

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Abstract: As the process of industrialization, the situation of environment and resources in China increasingly severe. Green behavior refers to the activities carried out by organizations or individuals in line with the concepts of energy conservation, environmental protection and sustainable development, which can effectively alleviate the current situation of environmental damage and resource shortage, such as green consumption. Green consumption refers to the moral choice of consumers to minimize the harm and damage caused to the environment by their consumption behavior. How do individuals behave after making choices about different consumption types? There are two different views: according to the moral consistency theory, when an individual has done a moral thing in the past, he is more likely to do more moral things and less immoral things in the future; the licensing effect of green consumption suggests that individuals' past green consumption will allow them to make fewer green choices and even become more selfish in the future, according to the theory of moral self-regulation, non-green consumption should also apply to both theories. What causes the opposite behavior? According to the perceptive value theory, the perceptive value is the consumer's subjective perception of the result in the transaction process, and the individual will adjust his/her subsequent behavior through the perceived gain and loss. Therefore, the purpose of this study is to investigate how the perception of product environmental value affects the individual's behavior choice after consumption, and how to promote green behavior after consumption. Study 1 is going to adopt a 2(Consumption type: green/non-green)×2(Product environmental value perception: high/low) intergroup design. Manipulate consumption types through recall tasks, adopt the research paradigm of Longoni et al., after the participants finished the paper-cut game, the garbage classification and disposal was recorded. Finally, a 7-point Likert scale was used to measure the product's environmental value perception (from 1 'Extremely environmental unfriendly' to 7 'Extremely environmental friendly'). Expected results: With high product value perception, green consumption group had more green behaviors and non-green consumption group had less green behaviors; low product value perception is the opposite. Study 2 is going to adopt field experiment. Product environmental value perception is highly subjective and prone to cognitive bias, therefore, this study combines life cycle cost and adopts information label nudging method to objectively quantify the environmental value of products. The experimental place is initially set in the electrical appliance store for a period of two months, with a cycle of one month (before/after nudge). Observe the consumption of green products before and after the information label display (the ratio of the consumption of green products to the total consumption is taken as the measurement standard). Expected results: After the use of information labels, the proportion of green product consumption increased significantly.

Keywords: Moral consistency, Green consumption licensing effect, Nudge, Label information

更好的控制更少的损耗：促进聚焦通过增强目标信息加工 提高自我控制

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摘要 自我控制是冲突情境下的自我调节能力，即个体根据目标和任务的需要对自己的认知、情绪和行为做出适应性的调整与改变的能力，其同时包含着抑制自我控制（inhibitory self-control，即抑制目标无关的反应）和激发自我控制（initiatory self-control，即激发与目标相关的反应）。动机是影响自我控制的重要因素，然而人们在执行自我控制时存在着预防聚焦与促进聚焦两种相对独立的动机导向。已有研究发现，促进聚焦较预防聚焦下表现出自我控制的优势，即更好的自我控制效果却有更少的自我损耗。本研究将通过两个实验比较预防与促进聚焦下的抑制与激发自我控制的差异，以揭示调节聚焦影响自我控制的机制。实验1采用被试内 Block 随机设计，其中每个 Block 为一种调节聚焦。58 名被试均在预防与促进聚焦情境下根据颜色 Stroop 材料的任务线索执行颜色或词义识别的随机混合任务，结果发现促进聚焦较预防聚焦下有更好的任务成绩，表现在反应时更短，准确率更高；但同一任务类型下，预防与促进聚焦下的抑制干扰效应并无显著差异。实验2记录了20名被试在随机安排的预防聚焦、促进聚焦以及中性情境下执行颜色识别 go/no-go 任务的行为与脑电数据。结果发现：（1）预防与促进动机状态下，go 刺激的反应时、准确率以及脑电指标 N2 与 P3 的平均波幅上均无显著差异；（2）no-go 刺激的准确率也无显著差异，但与预防聚焦与中性条件相比，促进聚焦下的 N2 平均波幅更小，P3 平均波幅更大。因此本研究认为，与预防聚焦相比，促进聚焦下自我控制优势主要源于通过增强目标信息加工提升自我控制，而促进聚焦下的低认知冲突很可能是低自我损耗的原因。

关键词 自我控制，促进聚焦，预防聚焦

Better performance with less ego depletion: Promotion focus enhanced self-control by increasing goal related information process

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Abstract: Self-control is the mental capacity that people adaptively change and adjust their cognition, affection and behaviors according to the needs of goals and tasks, which contained inhibitory self-control and initiatory self-control. Motivation is an important factor affecting self-control. However, there are two relatively independent motivation orientations: prevention focus and promotion focus. Studies have found that people often had much better self-control performance in promotion focus than prevention focus. This study proposed that the variation in self-control between prevention and promotion focus was mainly due to initiatory self-control rather than inhibitory control, and then two experiments were conducted to test this hypothesis. Experiment 1 adopted the random design of the Block in the subject, in which each Block was a regulatory focus. All 58 subjects performed a randomly mixed task of color or word recognition according to the task cues of color Stroop material under the condition of prevention and promotion focus. The results showed that the task performance was better in promotion focus than prevention focus situation, presenting in shorter response time and higher accuracy. However, under the same task type, there was no significant difference in the inhibitory effect between prevention and promotion focus. Experiment 2 recorded the behavior and EEG data of 20 subjects who performed colour recognition in go/no-go tasks under randomly arranged prevention focus, promotion focus and neutral situation. The results showed that: (1) under prevention and promotion foci states, there were no significant difference in reaction time, accuracy rate and average amplitude in N2 and P3; (2) There were no significant difference in accuracy rate of no-go stimulus, but compared with the prevention focus and neutral condition, the average amplitude of N2 was smaller, and average amplitude of P3 was larger. Therefore, compared with prevention focus, this study proposed that the advantage of promotion focus is mainly due to the enhancement of self-control through the enhancement of target information processing, and the low cognitive conflict in promoting focusing is likely to be the reason for the low ego depletion.

Keywords: self-control, promotion focus, prevention focus

相对剥夺感对自我工具化的影响——一个有调节的中介模型

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摘要 社会不平等对人们的认知、行为有一定的影响, 本研究从客体化角度出发, 探究社会不平等对个体自我认知的影响, 关注个体相对剥夺感、自我工具化与地位关注之间的关系。自我工具化是个体内化第三方视角, 将自己看作对别人有用、能够帮助别人达到某种目的的工具和手段。本文提出, 当个体通过与参照群体进行比较, 感知到自身处于不利地位进而体验到愤怒和不满, 即个体感知到相对剥夺时, 个体的自我工具化水平会提高, 即相对剥夺感会增加个体对自身工具性价值的关注; 同时, 个体对地位的关注在相对剥夺感对自我工具化的影响中起中介作用。本文通过三个研究来验证假设: 研究1 (6787名被试) 表明个体相对剥夺感水平与自我工具化水平显著正相关; 研究2 (262名被试) 采用因果研究证明个体感知到相对剥夺会提高自我工具化水平; 研究3 (280名被试) 证明相对剥夺感对自我工具化的影响是通过地位关注实现的, 即个体的相对剥夺感越高, 对地位的关注提高, 进而提高自我工具化水平, 同时地位关注对自我工具化的影响受外在动机的调节, 具体表现为, 与外在动机水平低的个体相比, 外在动机水平高的个体高地位关注对高自我工具化倾向的预测作用更加显著。本研究旨在探究自我工具化的前因变量及其影响机制, 对于理解不平等的社会背景中个体对自我的认知与人际关系具有一定的理论和实践意义。

关键词 相对剥夺感, 自我工具化, 地位, 外在动机

The Effect of Relative Deprivation on Self-instrumentality: A Moderated Mediation Model

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Abstract: Social inequality has various impact on individuals' cognition and behavior. The present research aimed to examine the impact of social inequality on self-cognition from the perspective of objectification, and concerned the relations among individual relative deprivation (IRD), self-instrumentality, and status concern. Individuals internalize third-person perspective which they should be useful for achieving others goals and focus on their instrumentality for others is called self-instrumentality. We assumed that individuals who perceive higher relative deprivation would focus more on their instrumental values and status concern mediated the effect of relative deprivation on self-instrumentality. We conducted three studies to verify our hypotheses: (1) IRD was positively related to self-instrumentality (Study 1, N=6787); (2) IRD can positively predicted self-instrumentality (Study 2, N=262); (3) higher IRD increased self-instrumentality through increased status concern and the impact of status concern on self-instrumentality was moderated by external motivation, such that the association was especially prominent for individuals high in external motivation (Study 3, N=280). These findings explored the antecedents and influence mechanism of self-instrumentality and added to a better understanding of individuals' self-cognition and interpersonal relationship in the context of inequality.

Keywords: relative deprivation, self-instrumentality, status, external motivation

外表的社会规范对女性职业抱负的影响： 自我真实性和感知到的机会的序列中介作用

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摘要 女性的职业抱负对其个人的职业发展以及促进职场中性别平等的实现有重要作用。已有研究表明, 女性所处于的工作和家庭环境是影响其职业抱负水平的重要因素, 但目前尚未有研究探讨宏观环境 (例如社

会规范)对女性职业抱负的影响及其机制。外表的社会规范强调,在当今社会,外表吸引力是一个人的价值的体现和成功的必备条件,且与男性相比,社会对女性的外貌要求更加苛刻,女性本身也更易受到这一社会规范的影响,进而会倾向于把时间和精力放在提升外表吸引力上,并减少在职场上的追求和抱负。本研究旨在考察外表的社会规范和女性职业抱负的关系,并探讨自我真实性和感知到的机会在其中的中介作用。采用对外表的社会文化态度问卷、自我真实性量表、感知到的机会量表和职业抱负问卷,对349名大学生(227名女性,122名男性)进行调查。结果表明:(1)在女性被试中,外表的社会规范认同度、自我真实性以及感知到的机会与职业抱负呈显著负相关,自我真实性与感知到的机会呈显著正相关,而在男性被试中,外表的社会规范认同度与其职业抱负相关不显著;(2)在女性被试中,外表的社会规范能通过自我真实性和感知到的机会的序列中介作用间接负向预测职业抱负水平($\chi^2/df = 2.65, p = .10, CFI = .99, TLI = .93, RMSEA = .09$),而这一模型在男性被试中不成立。本研究结果揭示了外表的社会规范对女性职业抱负的影响及其作用机制,对理解女性的职业选择和个人发展有一定的启示意义。

关键词 外表的社会规范, 职业抱负, 自我真实性, 感知到的机会

The impact of social ideology on appearance on women's career aspiration: The serial mediating roles of self-authenticity and perceived opportunity

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Abstract: Women's career aspiration plays an important role in promoting their occupational development and achieving gender equality in the workplace. Previous literature has suggested that organizational and family environments are predictive of women's career aspiration. However, prior research has largely neglected the influences of the macro-level environment (i.e., socio-cultural environment) on women's career aspiration. Social ideology on appearance highlights that attractiveness is vital for getting ahead in today's culture, and if women fail to comply with this culturally prescription, they would experience more stigmatization than men. Consequentially, women are more concerned about their appearance than are men and thus decrease their career-related motivation. The present study aimed to examine the role of the societal ideology on appearance might play in influencing women's career aspiration. We predicted that perceived societal emphasis on physical appearance will decrease women's career aspiration through decreased authenticity and perceived opportunity. A total of 349 college students (227 females, 122 males) participated in the study. The results revealed that perceived societal emphasis on attractiveness negatively predicted women's authenticity, and authenticity positively predicted perception of opportunity, which in turn undermined their career aspiration ($\chi^2/df = 2.65, p = .10, CFI = .99, TLI = .93, RMSEA = .09$). However, this serial mediational model was not found in men. These findings suggest that socially prioritization of attractiveness can undermine women's strive for occupational prospects and add to a better understanding of women's growth and development.

Keywords: societal ideology on appearance, career aspiration, self-authenticity, perceived opportunity

异性偶像崇拜与浪漫关系: 一个有调节的中介模型

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摘要 目的: 本研究基于依恋理论和人格发展八阶段理论, 探讨异性偶像崇拜对浪漫关系的影响, 提出一个有调节的中介模型, 考察自我同一性的中介作用和依恋风格的调节作用。这种整合模型的研究有助于更全面地揭示偶像崇拜对浪漫关系的影响机制, 为促进浪漫关系质量提供建设性的建议。方法: 采用问卷法对277名崇拜异性流量明星且处于恋爱状况的青少年女生进行调查。研究工具包括偶像崇拜量表、亲密关系经

历量表、自我同一性量表和关系质量指数量表,各量表均具有良好的信度。采用 SPSS 24.0 和 SPSS 宏程序 PROCESS 3.4 进行数据分析。结果:理性偶像崇拜显著正向预测浪漫关系质量;理性偶像崇拜与依恋回避的交互项显著预测自我同一性中将来自我投入的愿望,自我同一性中将来自我投入的愿望显著正向预测浪漫关系质量。结论:(1)理性偶像崇拜显著正向预测浪漫关系质量;(2)自我同一性中对将来自我投入的愿望在理性偶像崇拜与浪漫关系质量之间起部分中介作用;(3)理性偶像崇拜经由将来自我投入愿望影响浪漫关系质量的中介作用受依恋回避的调节,上述中介效应只体现在低依恋回避的个体中。具体而言,对依恋回避水平较高的个体来说,将来自我投入的愿望在理性偶像崇拜和浪漫关系质量之间的中介效应不显著,理性偶像崇拜对将来自我投入的愿望的预测关系不显著;对依恋回避水平较低的个体来说,将来自我投入的愿望在理性偶像崇拜和浪漫关系质量之间起部分中介效应,理性偶像崇拜的提升伴随着自我同一性中将来自我投入愿望的降低,进而降低其浪漫关系质量。

关键词 偶像崇拜,浪漫关系质量,自我同一性,依恋回避

The Relationship between the Heterosexual Idolatry and the Quality of Romantic Relationship: A Moderated Mediation Model

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Abstract: Purpose: According to attachment theory and eight-stage theory of personality development, the present study constructed a moderated mediation model to investigate whether the desire for future self-devotion in self-identity mediated the relationship between rational idolatry and the quality of romantic relationship, and whether attachment avoidance moderated this mediation effect. The study of this integrated model is helpful to reveal the influence mechanism of idolatry on romantic relationship. Moreover, it can also provide constructive suggestions for promoting the quality of romantic relationships. Methods: 277 teenage girls were recruited to participate in this study. They completed the Scale of Celebrity Worship, Chinese Adaptation of the Experiences in Close Relationships Inventory Scale, the Self-identity Scale, and the Quality of Relationship Index. All the scales have good reliability. Data were analyzed using SPSS 24.0 and the SPSS macro PROCESS. Results: Rational idolatry significantly positively predicted the quality of romantic relationship; the interaction between rational idolatry and attachment avoidance significantly predicted the desire for future self-devotion in self-identity, and the desire for future self-devotion in self-identity positively predicted the quality of romantic relationship. Conclusion: (1) Rational idolatry significantly and positively predicted the quality of romantic relationship. (2) The desire for future self-devotion in self-identity played a partial mediating role between rational idolatry and the quality of romantic relationship. (3) Attachment avoidance moderated the first path of the mediated effect of the desire for future self-devotion in self-identity. To be more specific, the relationship between rational idolatry and the desire for future self-devotion in self-identity was marginally significant for teenage girls with low attachment avoidance. The promotion of rational idolatry is accompanied by the decrease of the desire for future self-devotion in self-identity, which in turn reduces the quality of romantic relationship. However, it became insignificant for those with high attachment avoidance.

Keywords: idolatry, romantic relationship quality, self-identity, attachment avoidance

心理距离对大学生二手商品购买意愿的影响：感知风险的调节作用

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摘要 近年来随着经济快速发展，资源浪费和环境问题变得日益突出，这对可持续发展提出了迫切的要求。而共享经济正是解决资源困境的有效方式，能够逐步改变人们随着收入增加而产生的铺张浪费行为，能够引导人们理性消费。从社会经济学角度来看，现在人们的闲置物品越来越多，不论是出售自己手里的闲置物品，还是用较低的价格买一些需要的二手商品，对交易双方来说都是一件有益的事情。二手商品尤其是图书等一些不易损耗的产品，在社会上不断的流通和反复的利用，极大地减少了资源的浪费，能最大限度的流通闲置物品，促进绿色循环发展。因此，本研究试图探讨心理距离对大学生二手商品购买意愿的影响，以及感知风险对二者关系的影响，尝试从心理距离的角度出发，考虑消费者感知风险的因素，讨论如何能有效地增加消费者对二手商品的购买意愿。在此基础上，本研究设计了三个情境实验，分别从心理距离的三个不同维度（时间距离、空间距离、社会距离）来研究其对大学生二手商品购买意愿的影响，以及感知风险在其中的调节作用。实验中使用《大学生感知风险调查问卷》对某高校 358 名学生进行施测：实验一 120 人、实验二 120 人、实验三 118 人，每组分别筛选出高低感知风险者各 30 人参加对应实验。结果表明：时间距离、空间距离以及社会距离三个维度均可显著正向预测二手商品购买意愿，而感知风险则可显著负向预测二手商品购买意愿；感知风险在远时间距离、远空间距离和远社会距离条件下均对二手商品购买意愿有显著的负向调节作用，而相反条件下则无显著影响。本研究结果说明了心理距离能显著正向预测大学生二手商品购买意愿；感知风险在心理距离对大学生二手商品购买意愿的影响中发挥调节作用，在远心理距离条件下，感知风险越低，大学生二手商品购买意愿越高。

关键词 心理距离，购买意愿，二手商品，感知风险

The influence of psychological distance on college students' second-hand goods purchase intention: the moderating effect of perceived risk

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Abstract: In recent years, with the rapid development of economy, resource waste and environmental problems have become increasingly prominent, which puts forward urgent requirements for sustainable development. The sharing economy is an effective way to solve the resource dilemma, which can gradually change people's extravagant and wasteful behavior with the increase of income and guide people to consume rationally. From the perspective of social economics, people now have more and more idle goods, whether it is selling idle goods in their own hands, or buying some needed second-hand goods at lower prices, which is a beneficial thing for both sides of the transaction. Second-hand goods, especially books and other products that are not easy to wear out, are constantly circulated and repeatedly used in the society, which greatly reduce the waste of resources, maximize the circulation of idle goods, and promote the development of green circulation. Therefore, this study attempts to explore the psychological distance influence on college students' second-hand goods purchase intention, and the influence of perceived risk on their relationship. It attempts to consider the factors of consumers' perceived risk from the perspective of psychological distance and discuss how to effectively increase consumers' willingness to buy second-hand goods. On this basis, this study designed three situational experiments to study the influence of psychological distance from three different dimensions (time distance, space distance and social distance) on college students' second-hand goods purchase intention and the moderating role of perceived risk. In the experiment, the questionnaire of perceived risk of College students was used to test 358 students in a university: 120 in experiment 1, 120 in experiment 2 and 118 in experiment 3. Each group selected 30 people with high perceived risk and 30 students with low perceived risk to participate in the corresponding experiment. The results show that time distance, space distance and social distance

can positively predict the purchase intention of second-hand goods, while perceived risk can negatively predict the purchase intention of second-hand goods. Perceived risk has a significant negative moderating effect on the purchase intention of second-hand goods under the conditions of long-time distance, long-space distance and long-distance society, but has no significant effect under the opposite conditions. The results of this study show that psychological distance can positively predict college students' second-hand goods purchase intention, and perceived risk plays a moderating role in the influence of psychological distance on college students' second-hand goods purchase intention. Under the condition of long psychological distance, the lower the perceived risk, the higher the college students' willingness to buy second-hand goods.

Keywords: psychological distance, purchase intention, second-hand goods, perceived risk

道德概念的净脏隐喻表征对道德判断的影响：自我与他人视角

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摘要 道德概念净脏隐喻是指人们借助具体的、有形的净脏始源域概念来表征抽象的、无形的道德目标域概念。生活中常见的“洁净近乎美德”，就是用洁净表达道德概念，“某人手脚不干净”，就是用肮脏来表征此人有偷窃类的不道德行为。研究表明，道德概念净脏隐喻具有心理现实性，即人们倾向于将道德与干净联结，不道德与肮脏联结，且道德概念的净脏隐喻表征会对道德判断产生一定的影响。综合以往文献发现，道德概念净脏隐喻对道德判断的影响主要是由净脏启动方式(想象、行为)不同以及自我与他人视角差异引起。基于此，本研究采用想象和行为两种不同的启动方式，考察自我与他人两种视角下的道德概念净脏隐喻对道德判断的影响。结果表明：(1) 想象启动下自我净脏和他人净脏均对道德两难故事判断有影响，且与他人洁净启动相比，自我洁净启动下被试对道德两难故事判断更为严苛；与他人肮脏启动相比，自我肮脏启动下被试对道德两难故事判断更为宽松；(2) 行为启动下自我净脏和他人净脏均对道德两难故事判断有影响，与他人洁净行为启动相比，自我洁净行为启动下被试对道德两难故事判断更为严苛；与他人肮脏行为相比，自我肮脏行为下被试对道德两难故事判断更为宽松。(3) 综合实验一和实验二发现，道德概念净脏隐喻对道德两难故事判断的影响存在自我想象与自我行为的差异，相比于想象自我洁净启动，行为自我洁净启动后道德两难故事判断更严苛；相比于想象自我肮脏启动，行为自我肮脏启动后道德两难故事判断更宽松。以上研究表明，想象启动与行为启动下自我净脏与道德概念均存在隐喻联结，道德概念净脏隐喻会影响道德判断且存在自我与他人视角差异。本研究有助于学校开展道德教育干预，减少或防止个体由于自我或他人差异视角带来的道德判断的偏颇。

关键词 概念隐喻，净脏，道德判断，自我，他人

The influence of metaphorical representation of moral concept on moral judgment: from the perspective of self and others

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Abstract: The clean and dirty metaphors of the moral concepts refers to the process that individuals can express abstract and intangible moral concepts with the help of a specific body clean and dirty source domain concept. In life, "cleanliness is close to virtue", which is using cleanliness to express moral concept, and "someone's hands and feet are not clean", which is using dirty to represent that person's immoral behavior of stealing. The research have also shown that the clean and dirty metaphors of the moral concepts not only have psychological reality, which is individuals tend to associate morality with clean, immorality with dirty, but also affects people's moral judgments. Previous research found that clean and dirty metaphors of the moral concepts would be influence on moral judgment, which is mainly caused by the different start-up ways of clean and dirty(imagination, behavior) and the different perspectives of self and others. Based on this, this study uses different priming of imagination and behavior to examine the influence of moral conceptual metaphor on moral judgment from the perspective of self and others. The

results show that: (1) the moral judgment is affected by both self-cleansing and others-cleansing metaphors under the imagination. Compared with imagining the clean of others, the self clean was more severe in judging moral dilemma stories, and compared with imagining the dirty of others, the self dirty was more relaxed in judging moral dilemma stories. (2) the moral judgment is affected by both self-cleansing and others-cleansing metaphors under the behavior. Compared with the initiation of cleansing behavior by others, the participants have more severe judgments on moral dilemmas under the initiation of self-cleansing behavior; compared with the dirty behavior of others, the self-dirty behavior is more relaxed on moral dilemmas; (3) a comprehensive comparison between experiment 1 and Experiment 2 found that the self-imaginary net initiation and self-behavioral net initiation are significant differences in moral dilemma. Compared with the self-clean imaginary priming, the moral judgment is more severe under the self-clean behavioral priming; compared with the self-dirty imaginary priming, the moral judgment is more relaxed under the self-clean behavioral priming.

In short, the metaphor of self-cleansing and other-cleansing have different effects on moral judgment. It supplements and enriches the theoretical research of the net viscera metaphor of moral concept, which helps to carry out activities such as physical cleansing experience and perception to improve individual moral judgment ability, and provides a basis for decision-making.

Keywords: conceptual metaphor, clean dirty, moral judgment, self, others

情绪智力与大学生亲社会行为：有调节的中介效应

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摘 要 亲社会行为是个体在社会交往过程中表现出来的帮助、合作、分享、安慰等一切有利于他人和社会和谐的行为趋向。外在的社会因素以及内在个体因素是影响亲社会行为的两大方面。情绪智力作为内在个体因素是监控自己及他人的情绪和情感, 识别利用这些信息指导自己的思想和行为的能力。已有研究表明, 情绪智力影响亲社会行为的产生, 但其影响的潜在机制并不明确。因此, 本研究采用《情绪智力量表》《亲社会行为倾向量表》《领悟社会支持量表》和《自尊量表》对 742 名大学生进行调查, 探讨情绪智力与亲社会行为之间的关系, 在此基础上构建一个有调节的中介效应模型, 检验社会支持在情绪智力与亲社会行为之间的中介作用, 以及自尊对上述中介路径的调节作用。结果发现: (1) 情绪智力对大学生亲社会行为具有显著的正向预测作用。(2) 中介效应检验表明, 社会支持在情绪智力与大学生亲社会行为之间具有部分中介作用。(3) 有调节的中介效应检验进一步表明, 情绪智力对亲社会行为的直接效应受到自尊的调节, 并且自尊调节了“情绪智力→社会支持→亲社会行为”的后半段, 即当大学生的自尊较高时, 社会支持对亲社会行为的促进作用增强。本研究依据亲社会行为理论、社会链连接理论和情绪智力理论, 考察了内外部因素对亲社会行为的联合作用, 补充了情绪智力促进亲社会行为的方式和条件, 有助于激发大学生亲社会行为, 构建和谐稳定社会。

关键词 情绪智力, 亲社会行为, 社会支持, 自尊, 有调节的中介

Emotional Intelligence and Prosocial Behavior in College Students: A Moderated Mediation Analysis

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Abstract: Prosocial behavior (PSB) refers to all behaviors that are favorable to others and conducive to social harmony, such as helping, cooperating, sharing, and comforting. External social factors and internal individual factors are two major aspects affecting prosocial behavior. Emotional intelligence (EI), as an internal individual factor, is the ability of individuals to monitor their own and others' emotions, and to identify and use this information to guide

their thoughts and behaviors. Previous studies have shown that emotional intelligence affects prosocial behavior, but the underlying mechanism is not clear. This study examines the relationship between emotional intelligence (EI) and prosocial behavior (PSB) and constructs a model for their interaction by examining the mediating effect of social support (SS) and the moderating effect of self-esteem (SE) in this relationship. A total of 742 college students completed a survey measuring the Emotional Intelligence Scale, Prosocial Tendencies Measurement Scale—Chinese Version, Perceived Social Support Scale, and Self-Esteem Scale. The results indicated that: (1) EI positively predicts PSB; (2) SS partially mediates the relationship between EI and PSB; and (3) SE moderates the direct effect of EI on PSB and the relationship between SS and PSB. That is, when the SE of college students is higher, the effect of SS in promoting PSB is enhanced. Based on the prosocial behavior theory, emotional intelligence theory, and social exchange theory, this study examines the combined effects of internal and external factors on prosocial behavior and supplements our understanding of the ways in and conditions under which emotional intelligence promotes prosocial behavior, which helps to stimulate the prosocial behavior of college students and therefore contributes to the building of a harmonious and stable society.

Keywords: emotional intelligence, prosocial behavior, social support, self-esteem, moderated mediation

社会等级对 McGurk 效应的影响

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摘 要 视听整合(audio-visual integration)是多感觉整合的一部分,是指将来自听觉通道和视觉通道的信息知觉为一个整体的能力。McGurk 效应是一种典型的视听语音整合现象,反映了视觉信息对听觉信息的影响。社会等级是一种重要的社会信息,影响着社会生活的方方面面,已有研究发现,人们对社会等级的加工是自动的,且社会等级影响注意分配。本研究从面孔社会信息角度出发,试图探究社会等级对 McGurk 效应的影响。研究采用 McGurk 整合范式,通过操纵个体的社会等级,考察社会等级信息对视听语音整合的影响。实验中使用的视频语音材料包括填充试次(视听一致)ga、ba、ka 和 pa 四个组合,和 McGurk 试次(视听不一致)的两种组合(组合 1:视觉 ga、听觉 ba;组合 2:视觉 pa、听觉 ka),共六种刺激组合。视频材料中说话者的社会等级通过高考成绩信息来操纵。告知被试,说话者可能具有高(成绩达到清华大学录取线)或低(成绩北京城市学院录取线)两种社会等级信息。所选被试高考分数介于两者之间(即中等等级)。被试的任务是进行语音识别并做相应的按键反应。任务结束后,被试需要对自我感知到的相对于他人的社会等级进行 7 点评分(1 代表处于劣势,7 代表处于优势)。因变量是不同条件下的 McGurk 效应发生率,即在 McGurk 试次上发生 McGurk 效应的比率,对严格(仅计算发生特定融合的试次)和宽松(计算所有语音刺激的错误识别次数)两种界定方式所得的结果均进行数据处理。结果显示:高、低社会等级组之间 McGurk 效应的发生率无显著差异,但随后的个体差异分析发现,在面对低社会等级的个体时,McGurk 效应的发生率和自我感知到的社会等级存在显著的负性相关,即自我感知到的社会等级越高,McGurk 效应发生率越低,面孔的视觉信息对听觉信息的影响更小。本研究结果可能反映了,个体在面对低社会等级时,自我感知到的社会等级越具有优势,越倾向于不关注他人面孔的视觉信息,使得其面孔信息的权重更低,而出现较小的 McGurk 效应。由于本研究缺乏直接测量的注意相关指标以明晰背后的机制,后续研究中可加入眼动追踪进一步探讨可能的心理机制。

关键词 社会等级, McGurk 效应, 视听整合, 自我感知社会等级

Influence of Social Status on McGurk Effect

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Abstract: Audio-visual integration is a part of multi-sensory integration, which refers to the ability to perceive auditory and visual information into an event. The McGurk effect is one of the most typical phenomenon reflecting the interaction between visual and auditory modalities. Social status is an important social information that affects all aspects of social life. Previous studies have found that social status can be automatically processed, and it also affects

the way of attention distribution. The aim of the present study was to explore the influence of social status on the audiovisual speech integration by using McGurk integration paradigm. There were six different audio-visual materials: four congruent videos acting as fillers(both visual and auditory syllables are “ga”, “ba”, “ka”, “pa”), two incongruent videos combinations(combination 1: visual “ga”, auditory “ba”; combination 2: visual “pa”, auditory “ka”) as McGurk trials. The social status of the audiovisual stimuli is manipulated by the score of College Entrance Examination. There were two different social information about the talker in the video given to the participants. Two talkers (a male and a female) who had high scores enough to get into Tsinghua University were presented as high status talkers, the other two talkers who had scores to get into Beijing City University were presented as low status talkers. All participants were in the middle status with a intermediate score between the talkers. Their task was to identify the syllable by pressing the button on the keyboard. In the end of the experiment, they needed to rate the social level they perceived relative to the others in a 7 Likert Scale (1 for disadvantage, 7 for advantage). The dependent variable was the McGurk effect, i.e., the proportion of McGurk responses occurring on the McGurk trials. The results from conservative definition (that is, only McGurk response is calculated) and liberal definition (including all type of wrong response) were both used in the data analysis. The results showed that there was no significant difference between high and low social status conditions. But the followed analysis of individual differences showed that, when facing low social status talkers, the McGurk effect and self-perceived social status had a significant negative correlation, suggesting that the higher the social level you think you are, the less likely it is to have the McGurk effect, the less influence of visual information on the auditory information processing. This study may reflect that when talking to lower position people, individuals tend to pay less attention to their facial information, which makes the facial information less weighted and leads to lower McGurk effect. However, the current study lack of direct measurement of attention-related indicators to clarify the underlying mechanism, eye tracking can be adopted to follow-up studies to further explore possible psychological mechanisms.

Keywords: social status, McGurk effect, audio-visual integration, self-perceived social status

网络游戏成瘾对睡眠的影响：焦虑、抑郁的中介机制

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摘要 网络游戏成瘾威胁着人们的身心健康，而良好的睡眠是一种维持身心健康的重要因素。睡眠可能因为网络游戏成瘾而受到影响，包括失眠，睡眠时间短和睡眠质量差等。而网络游戏成瘾也有可能因为引起焦虑和抑郁，进而影响到睡眠。由于网络游戏成瘾的个体长期使用电子产品，可能对脑机制造成损伤，另外，由于长期沉溺于非现实世界，可能对他们在现实中的人际关系起到负面作用，如亲密关系的疏离、人际冲突等，这样，他们就缺少了与其他人真实地交流的机会，缺少了现实社会的支持，这可能是导致他们焦虑与抑郁的原因之一。本研究的目的在于探寻焦虑、抑郁是否在网络游戏成瘾对睡眠的影响中扮演中介的角色。本研究采用 POGQ-SF 网络游戏成瘾量表、GA1D-7 广泛性焦虑障碍量表、PHQ-9 抑郁症筛查量表和匹兹堡睡眠质量指数量表和自编人口学问题对 339 名成年个体进行网络问卷调查，以此检验在网络游戏成瘾对睡眠的影响中，焦虑、抑郁的中介机制。研究结果表明，抑郁作为中介存在于网络游戏成瘾对睡眠的影响中，且在网络游戏成瘾对睡眠的影响中，焦虑和抑郁作为中介，最终以链式的形态对睡眠造成影响。

关键词 网络游戏成瘾，睡眠，焦虑，抑郁

社会排斥对大学生人际交往意愿的影响： 情绪和自我控制的链式中介作用

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摘 要 大量研究指出社会排斥会对个体的认知、情绪和行为等方面带来消极影响，但是社会排斥对人际交往意愿的影响却没有得到一致的结论。有研究者认为，被排斥者由于具有较高的威胁敏感性，在人际交往中常表现出社交退缩行为；另一些研究者认为，被排斥者为了弥补归属感会更渴望与他人建立联结。根据自我控制力量模型的观点，当过多的活动或消极情绪损耗了有限的自我控制资源时，个体在接下来需要自我控制的任務中会受到干扰。因此，本研究基于自我控制的力量模型，以 370 名大学生为研究对象，考察了社会排斥对人际交往意愿的影响，以及情绪和自我控制在其中的链式中介作用。其中，情绪采用积极情绪得分减去消极情绪得分计算得出。研究一的调查结果表明，社会排斥与情绪、自我控制和人际交往意愿均呈显著负相关，情绪与自我控制和人际交往意愿、自我控制和人际交往意愿呈显著正相关；社会排斥不仅对人际交往意愿有直接的负向预测作用，还能通过两种间接效应对人际交往意愿产生影响，即自我控制的单独中介作用以及情绪、自我控制的链式中介作用。研究二的实验结果表明，状态社会排斥与情绪和人际交往意愿呈显著负相关、与自我控制呈负相关但不显著，情绪与自我控制和人际交往意愿、自我控制和人际交往意愿呈显著正相关；状态社会排斥不仅对人际交往意愿有直接的负向预测作用，还能通过两种间接效应对人际交往意愿产生影响，即情绪的单独中介作用以及情绪、自我控制的链式中介作用。我们的研究发现，社会排斥可以负向预测大学生的人际交往意愿，同时，社会排斥可以通过自我控制的单独中介作用以及情绪、自我控制的链式中介起作用。但是在暂时启动的社会排斥条件下，状态社会排斥是通过情绪的单独中介作用以及情绪、自我控制的链式中介起作用的。

关键词 社会排斥，情绪，自我控制，人际交往意愿

Social Exclusion's effect on college students' Interpersonal Willingness: The chain mediating effect of Emotion and Self-control

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Abstract: Many studies have pointed out that social exclusion has negative effects on the individuals' cognitive, emotional, and behavioral aspects, but there are few consistent findings on the effects of social exclusion on interpersonal willingness. Some researchers argue that excluded individuals often exhibit social withdrawal behaviors during interpersonal interactions due to their high threat sensitivity. Others argue that excluded individuals may be more eager to connect with others in order to compensate for their sense of belonging. According to self-control strength model, when activities or negative affects deplete limited self-control resources, individuals are disturbed in the next tasks that require self-control. Therefore, based on the self-control strength model, we recruited 370 college students and examined the effects of social exclusion on interpersonal willingness and the mediating role of emotion and self-control. Where the emotion was calculated using the positive emotion score minus the negative emotion score. The findings of Study 1 indicated that social exclusion was significantly negatively related to emotion, self-control, and interpersonal willingness. Emotion was significantly positively related to self-control and interpersonal willingness. And self-control was significantly positively related to interpersonal willingness. Social exclusion not only had a direct negative predictive effect on interpersonal willingness, but also had an effect on

interpersonal willingness through two indirect effects, namely the separate mediating effect of self-control and the chain-mediated effect of emotion and self-control. The experimental results of Study 2 showed that state social exclusion was significantly negatively related to emotion and interpersonal willingness, negatively but not significantly related to self-control. Emotion was significantly positively related to self-control and interpersonal willingness, and self-control was significantly positively related to interpersonal willingness. State social exclusion not only had a direct negative predictive effect on interpersonal willingness, but also had an effect on interpersonal willingness through two indirect effects, namely the separate mediating effect of emotion and the chain mediating effect of emotion and self-control. Our findings suggest that social exclusion can not only directly negatively predict college students' interpersonal willingness, but also can work through the separate mediating effect of self-control and the chain-mediating effect of emotion and self-control. However, in the condition of temporarily social exclusion, state social exclusion works through the separate mediating role of emotion and the chain mediating role of emotion and self-control.

Keywords: Social exclusion, Emotion, Self-control, Interpersonal willingness

你愿意“晒”爱心吗？炫耀性捐赠的影响因素及后效

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摘要 炫耀性捐赠由炫耀性消费的概念演化而来, 指个人通过购买慈善商品并进行可见展示来表示对慈善事业的支持, 从而提升自我社会地位或获得公众认可的行为。在反消费主义盛行的当下, 存在利他性的炫耀性捐赠或可代替炫耀性消费成为更多人塑造良好社会形象的选择, 但目前缺少对其影响因素和作用后效的研究。基于高成本价值信号理论、自我补偿理论和自我验证理论, 本研究通过3个实验探究了与炫耀性捐赠相关的个体特质、影响炫耀性捐赠的情境因素以及旁观者对炫耀性捐赠行为的评价。研究1通过线上问卷探究什么样的个体更倾向于做出炫耀性捐赠行为, 结果发现: 诚实-谦逊水平更低, 自尊、自我监控和面子需要水平更高的个体更愿意进行炫耀性捐赠。研究2旨在探索不同自尊、收入水平的个体在不同社会比较情境下的炫耀性捐赠意愿, 采用回忆法让被试经历向上社会比较(vs. 无社会比较), 结果发现: 当个体有较高收入时, 高自尊者(vs. 低自尊者)更倾向于做出炫耀性捐赠, 以抵御向上社会比较带来的自我威胁并维护自尊, 符合自我补偿理论及自我验证理论。研究3旨在探究炫耀性捐赠行为的社会评价后效, 实验要求被试在浏览包含炫耀性捐赠动态/炫耀性消费动态/普通动态的朋友圈后对行为发出者进行评价, 结果发现: 相对于炫耀性消费, 炫耀性捐赠可以提升旁观者对行为主体热情特质的评价, 但对能力的评价没有显著差异, 该结果与炫耀性捐赠行为主体的预期不一致, 在高成本价值信号理论的基础上彰显了炫耀性捐赠的特殊后效。本研究从行为主体与旁观者两个视角、以本土化、情境化的实验设计探索了炫耀性捐赠的矛盾内涵及其心理动因, 丰富了对炫耀性捐赠这一现象的理解, 研究结果也有助于公益慈善机构采用更有效的宣传策略鼓励捐赠, 推动慈善事业良性发展。

关键词 炫耀性捐赠, 社会比较, 自尊

Are you willing to flaunt your compassion? Influencing factors and aftereffects of conspicuous donation behavior

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Abstract: Conspicuous donation behavior (CDB), which evolved from the concept of conspicuous consumption behavior (CCB), refers to individuals' behaviors of purchasing charitable goods and displaying them visibly to show their support for charities, in order to enhance their social status or gain public recognition. In the era of anti-consumerism, the altruistic attribute of CDB may make it a better choice over conspicuous consumption for individuals to establish a good social image. However, there was a lack of research on the influencing factors and

after-effects of CDB. Based on the costly signaling theory, self-compensation theory and self-verification theory, this study, consisting of three experiments, explored the relevant personal traits, situational factors of CDB and observers' evaluation of it. In Study 1, an online questionnaire was used to explore what kind of persons are more inclined to perform conspicuous donations. The results showed that individuals with lower level of honesty and humility were more willing to perform CDBs, as well as those with higher levels of self-esteem, self-monitoring and need of face. The purpose of study 2 was to explore the willingness to make CDBs under social comparison of individuals with different levels of self-esteem and income. Study 2 found that individuals with high (vs. low) income and self-esteem were more apt to perform CDBs after upward social comparison, which was consistent with self-compensation theory and self-verification theory. Study 3 mainly explored the after-effects of social evaluation of CDB. After browsing other's WeChat Moments containing CDB/CCB/ordinary contents (between-subject design), participants were asked to rate that person's warmth and competence. The results indicated that compared with CCB, CDB could improve observers' evaluation of warmth but not competence of the performer, which was inconsistent with the performers' expectation of CDB, and demonstrated a special after-effect of CDB on the basis of the costly signaling theory. In summary, this study explored the ambivalent connotation of CDB and its psychological motivation contextually from two perspectives (performers and observers). It had enriched the understanding of CDB, and could also helped the charities to utilize more effective strategies to encourage donations, promoting the benign development of the charitable cause.

Keywords: conspicuous donation behavior, social comparison, self-esteem

社会比较对消费者欺骗行为的影响：自我威胁的中介作用

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摘要 社会比较几乎无处不在，特定条件下的社会比较信息可能会威胁到自我，进而导致一系列消极后果。本文通过两个研究，从社会比较理论出发，探讨在消费情境中的社会比较信息对消费者欺骗行为的影响，并探究了自我威胁起到的中介作用。研究一检验比较对象的相关性和价格的差异性对消费者说谎意愿的影响，使用2（相关性：相关[朋友]、不相关[陌生人]）×2（差异性：大、小）的被试间设计，实验采用向上方向的社会比较。因变量通过问卷测量被试的撒谎动机，并测量被试感知到的自我威胁程度。研究一表明，在向上社会比较的情形下，当与比较对象相关且价格差异小时，被试感知到更多的自我威胁，进而表现出更多的撒谎意愿。相比之下，当价格差异大时，不管与朋友还是陌生人互动，被试的自我威胁感知和撒谎意愿均无显著差异。在研究一的基础上，研究二继续探索比较对象的相关性和信息性质对消费者说谎行为的影响。研究二采用差异性小的向上比较的客体为比较对象，采用2（比较对象的相关性：相关[朋友]、不相关[陌生人]）×2（信息性质：社会信息、客观信息）的被试间设计。因变量采用问卷测量被试撒谎的动机，并测量被试感知到的自我威胁程度。研究二表明，在比较方向为向上且价格差异较小的情况下，信息性质为社会性、比较对象为相关时，被试感知到的自我威胁越高，进而表现出更多的撒谎意愿；自我威胁起到了中介作用。综合以上结果，消费者似乎更愿意对他们认识的人撒谎，并且消费者倾向于将欺骗作为一种保护机制，以应对其构成自我威胁的社会信息。

关键词 社会比较，消费者，欺骗行为，自我威胁

The impact of social comparison on consumer deception: the mediating role of self-threat

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Abstract: Social comparison is almost everywhere. Social comparison information under specific conditions may threaten self, and then lead to a series of negative consequences. Through two studies, starting from the social

comparison theory, this paper discusses the impact of social comparison information on consumer deception in the consumption situation, and explores the intermediary role of self-threat. In Study 1, the influence of correlation and price difference of comparison objects on consumers' willingness to lie were tested using a 2 (relevance: relevant[friend] vs. irrelevant[stranger]) $\times$ 2 (discrepancy: small vs. large) between-subjects experimental design. The experiment adopts upward social comparison. The dependent variable measures the subjects' lying motivation through the questionnaire and the degree of self-threat they perceive. Study 1 shows that in the condition of upward social comparison, when it is related to the comparison object and the price difference is small, the subjects perceive more self-threats and show more willingness to lie. In contrast, when the price difference is large, no matter interacting with friends or strangers, the subjects' self-threat perception and lying intention have no significant difference. On the basis of study 1, study 2 continued to explore the impact of the relevance of the comparison object and the nature of information on consumers' lying behavior. In Study 2, the comparison object are small difference and upward comparison, using a 2 (relevance: relevant[friend] vs. irrelevant[stranger]) $\times$ 2 (information nature: social vs. objective) between-subjects experimental design. The dependent variable measures the subjects' lying motivation through the questionnaire and the degree of self-threat they perceive. Study 2 shows that when the comparison direction is upward and the price difference is small, when the nature of information is social and the comparison object is relevant, the subjects perceive higher self-threat and show more willingness to lie; Self threat plays a mediating role. Based on the above results, consumers seem to be more willing to lie to people they know, and consumers tend to take deception as a protective mechanism to deal with social information that poses a self-threat.

Keywords: social comparison, consumer, deception, self-threat

新冠疫情的两难困境下个体社会合作行为研究

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摘要 公共两难困境指社会利益跟个人利益发生冲突时, 个人需要在二者之间进行权衡取舍。2020 年新冠疫情初期, 我国口罩资源紧缺, 多地政府用一次性口罩向群众交换 N95 口罩以支援医疗前线, 人们的合作对抗击新冠有着重大意义。由于疫情带来的社会损失现象, 本研究从损失与收益情境出发, 探讨人们的合作行为在不同的公共两难困境中的差异, 相比于收益情境, 个体在损失情境的合作水平更低, 并且在两种公共两难困境中, 个体的合作水平有所差异。进一步地, 本研究通过权变价值观与合作倾向在死亡焦虑和合作水平中的中介作用解释个体的合作心理机制。实验采用 2 (情境类型: 收益情境, 损失情境) $\times$ 2 (社会困境类型: 公共资源两难, 公共物品两难) 的混合设计。其中, 情境类型为被试间变量, 公共两难类型为被试内变量。因变量为合作水平。合作水平用被试捐赠的 N95 口罩数量或个人保留的无用一次性口罩数量作为衡量指标。实验将以问卷形式呈现给 277 名被试。在损失情境中, 个人在公共物品两难中将个人损失 (无用一次性口罩) 投放给集体承担, 从而为个人带来利益; 而个人在公共资源中, 个人需要承担集体损失 (无用一次性口罩), 个人利益也因此受到损失。在收益情境中, 个人在公共物品两难中将个人利益 (N95 口罩) 捐赠一部分给集体, 个人利益将受到损失; 而在公共资源两难中, 个人可以从集体利益 (N95 口罩) 中拿走一部分, 为个人带来利益。另外研究采用量表测量被试的死亡焦虑、权变价值观与合作水平。结果发现: 损失-收益情境与公共两难的交互作用显著, 在损失情境下, 被试在公共资源困境中的合作水平显著高于在公共物品困境中的合作水平。在收益情境下, 被试在公共资源困境中的合作水平显著低于在公共物品困境中的合作水平。另外, 权变价值观与合作倾向对死亡焦虑和合作水平之间的影响起到中介作用。

关键词 公共两难困境, 社会合作, 死亡焦虑, 权变价值观, 新冠疫情

A study on individual social cooperation behavior under the dilemma of COVID-19

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Abstract: Public dilemmas refer to when social interests and personal interests conflict, the individual needs to make a trade-off between the two. In the early stage of COVID-19 in 2020, China faced a shortage of mask resources. Many local governments exchanged disposable masks for N95 masks with the public to support the medical front line. People's cooperation is of great significance to the fight against COVID-19. Due to the social loss caused by the epidemic, this study explores the differences of people's cooperative behaviors in various kinds of public dilemmas from the perspectives of loss and gain situations. Compared with gain situation, individuals in the loss situation have a lower level of cooperation, and individuals in the two kinds of public dilemmas have different levels of cooperation. Furthermore, the mediating effects of contingent values and cooperative tendency on death anxiety and cooperation level were explored to explain the mechanism of individual cooperative psychology. A mixed design of 2 (situation types: gain situation, loss situation) $\times$ 2 (social dilemma types: dilemma of public resources, dilemma of public goods) was adopted in the experiment. Among them, the situation type is the within-subject factor, and the common dilemma type is the between-subject factor. The dependent variable is the level of cooperation. Cooperation was measured by the number of N95 masks donated by participants or the number of disposable masks kept by individuals. The experiment was presented to 277 subjects in the form of a questionnaire. In the loss scenario, individuals in the public goods dilemma put personal loss (useless disposable masks) to the collective to bear, so they can gain benefits from group; In the public resources, individuals need to bear the collective loss (useless disposable masks), and their personal interests are also lost. In the income situation, when individuals donate part of their personal interests (N95 masks) to the collective in the public goods dilemma, their personal interests will be lost. In the dilemma of public resources, individuals can take a part from the collective interest (N95 masks) to bring personal benefit. In addition, a scale was used to measure death anxiety, contingent of self-worth and cooperation level. The results showed that the interaction between the loss-gain situation and the public dilemmas was significant. In the loss situation, the participants' cooperation level in the public resource dilemma was significantly higher than that in the public goods dilemma. In the reward situation, the participants' cooperation level in the public resource dilemma was significantly lower than that in the public goods dilemma. In addition, Contingency values and cooperation tendency played a mediating role in the relationship between death anxiety and cooperation level.

Keywords: Public Dilemma, Social Cooperation, Death Anxiety, Contingencies of Self-Worth, Coronavirus Pandemic

同伴在场和自尊对大学生亲社会冒险行为的影响

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摘要 亲社会冒险行为是大学生社会能力发展的重要方面, 指个体在亲社会情境下的冒险行为。不同于传统单一的亲社会行为或冒险行为, 亲社会冒险行为同时结合了亲社会性和冒险性的特点, 即在帮助他人的同时自身可能要承担一定风险, 其在日常生活中的典型表现为“舍己为人”。目前, 亲社会冒险行为的影响机制还有待深入探讨。本研究基于社会计量器理论和认知—情感理论, 通过两个行为实验探究同伴在场和自尊对大学生亲社会冒险行为的影响。实验 1 共收集了 66 份有效数据, 采用改编的赌博任务并模拟亲社会情境考察同伴在场对亲社会冒险行为的作用; 实验 2 共收集了 120 份有效数据, 首先采用 Rosenberg 的自尊量表对被试进行筛选和高低分组, 分为同伴在场—低自尊、同伴在场—高自尊、无同伴在场—低自尊和无同伴在场—高自尊 4 组, 并模拟亲社会情境, 使用改编的气球模拟风险任务同时考察同伴在场和自尊对亲社会冒险行为的作用。结果发现: (1) 实验 1 中, 在控制了性别、年龄、情绪状态和道德同一性后, 同伴在场组的亲社会冒险行为显著多于无同伴在场组($t(64) = -2.54, p < 0.05$, Cohen's $d = 0.62$)。 (2) 实验 2 中, 在控制了性别、年

龄、情绪状态和道德同一性后，自尊的主效应显著($F(1, 116) = 4.32, p < 0.05, \eta^2 = 0.04$)，二者的交互作用不显著。这些结果发现：同伴在场作为一种积极的社会线索，能够促使大学生做出更多的亲社会冒险行为，以获得同伴的赞许和接纳，提升自己的社会地位；此外，自尊对亲社会冒险行为的作用要强于同伴的作用，低自尊的大学生会做出更多的亲社会冒险行为以获得同伴的认可，从而提升自我价值感。本研究验证了同伴系统和个人系统对大学生亲社会冒险行为的作用，对于揭示大学生亲社会冒险行为的产生机制具有重要意义。

关键词 同伴在场，自尊，亲社会冒险行为，大学生

Effects of Peer Presence and Self-esteem on College Student Prosocial Risk-taking Behavior

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Abstract: Prosocial risk-taking behavior is an important aspect of the development of College Students' social ability, which refers to the risk-taking behavior of individuals in the prosocial situation. Different from the traditional single prosocial behavior or risk-taking behavior, prosocial risk-taking behavior combines the characteristics of prosocial and risk-taking at the same time, that is, it may have to take some risks while helping others. Its typical performance in daily life is "sacrificing oneself for others". At present, the influence mechanism of prosocial risk-taking behavior needs to be further discussed and explored. Based on social econometric theory and cognitive affective theory, this study explores the effects of peer presence and self-esteem on College Students' prosocial risk-taking behavior through two behavioral experiments. In Experiment 1, 66 valid data were collected, and the effect of peer presence on prosocial risk-taking behavior was investigated by using the adapted gambling task and simulating the prosocial situation; In Experiment 2, 120 valid data were collected. Firstly, Rosenberg's self-esteem scale was used to screen and group the subjects into four groups: peer presence low self-esteem group, peer presence high self-esteem group, no peer presence low self-esteem group and no peer presence high self-esteem group. Based on the simulated prosocial situation, the modified Balloon Analogue Risk Task was used to investigate the effects of peer presence and self-esteem on prosocial risk-taking behavior. The results showed that: (1) In Experiment 1, after controlling gender, age, emotional state and moral identity, the prosocial risk-taking behavior of the peer presence group was significantly more than that of the non peer presence group ($t(64) = -2.54, p < 0.05$, Cohen's $d = 0.62$). (2) In Experiment 2, after controlling gender, age, emotional state and moral identity, the main effect of self-esteem was significant ($F(1, 116) = 4.32, p < 0.05, \eta^2 = 0.04$), but the interaction between them was not significant. These results show that peer presence, as a positive social clue, can promote college students' prosocial risk-taking behavior, so as to obtain the praise and acceptance of peers and improve their social status; In addition, the effect of self-esteem on prosocial risk-taking behavior is stronger than that of peers. College students with low self-esteem show more prosocial risk-taking behavior to obtain the recognition of peers, so as to improve their sense of self-worth. This study verifies the effects of peer system and personal system on College Students' prosocial risk-taking behavior, which is of great significance to reveal the generation mechanism of College Students' prosocial risk-taking behavior.

Keywords: peer presence, self-esteem, prosocial risk-taking behavior, college student

AI 会说谎吗？AI 新纪元下引入 AI 进行中国人的从众心理研究：基于阿希从众研究的范式

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摘要 Asch 建立了一个基于简单的视知觉任务（从三条线段中选择一条和目标线段一样长的线段）的团体实验范式，用于检验当个体处在高度同质化的群体中时，能否保持判断的独立性。以往对 Asch 从众实验范式的检验通常使用人类构建团体情境，考虑到现实生活中人类与人工智能之间的信息共享和交互逐渐增加，人工智能将在提供重要的社会交互信息方面扮演重要角色。人工智能是否能够引发从众效应则涉及导致从众效应产生的机制问题。导致从众效应的机制有信息影响和规范影响两种，前者指个体出于获取完善信息的动机，倾向于认为群体提供的信息的可靠性高于个体提供的；而后者指个体出于防止被群体排斥、维持与群体成员正常互动的动机，倾向于按照群体的行为方式改变自己的行为。为验证当前时代背景下 Asch 从众实验范式引发的从众行为程度是否有所变化，以及在非人类的智能个体与人类混合的群体情境下，从众行为中信息影响和规范影响二者是否会产生竞争，本实验通过 4 名实验者同谋和 1 个由 python3.7 编写的虚假 AI 构建混合群体情境，以大学学生作为被试，验证其在线段长度识别任务中的从众表现。AI 可以按照预先设置好的材料展示顺序，对线段长度进行与人类实验者同谋一样效度的判断。实验试次按照主试同谋的答案被分为 4 个对照试次与 12 个关键试次。实验结果表明，从众效应显著 ($p < 0.001$)，即人们在 AI 背景下仍展现出明显的从众倾向。但可能由于时代背景和文化背景不同，从众行为的发生总数低于 Asch 的原实验。但至少发生一次从众行为的被试比例较 Asch 原实验显著上升，达到 94.44%；同时由于 AI 的表面效度不足和实验任务本身难度较低，AI 的存在可能未能显著独立引发对从众行为的信息影响，反对者数量越多所形成的规范影响仍显著地引起从众行为，人类群体主导的规范影响是导致本实验中被试从众行为的主要因素。

关键词 从众, AI, 信息影响, 规范影响, 重复研究

Could AI lie? Introducing AI for Chinese conformity psychological research: a paradigm based on the Asch conformity study.

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Abstract: Asch established a group experimental paradigm based on a simple visual perception task (selecting the line segment which was as long as the target line from three given lines) for testing whether individuals could maintain independence of judgment when they were in a highly homogeneous group. Previous replications of the Asch conformity paradigm have typically used humans to create group contexts. Given that the gradual increase in information sharing and interaction between humans and AI emerges in real life, AI will play an important role in providing important information about social interactions. Whether AI can trigger the conformity effect involves the mechanisms behind the conformity effect. There are two types of the mechanisms which are the information influence and the normative influence. The former refers to the tendency of individuals to perceive information provided by the highest reliable individuals in the group for the motive of obtaining perfect information, while the latter refers to the tendency of individuals to change their behavior in accordance with the group's behavior for the motive of preventing rejection by the group and maintaining normal interaction with group members. In order to verify whether the degree of conformity behaviors triggered by the Asch conformity paradigm changes in the current

era and whether the information influence and the normative influence in conformity behavior compete in the group context where non-human intelligent individuals are mixed with humans, we designed an experiment where a mixed group situation was created with four conspirators and a fake AI written in python 3.7 and university students were participating to verify their conformity performance in a line-segment length recognition task. The AI could judge the line-segment length with the same validity as human conspirators according to a pre-set order of material presentation. The experimental trials were divided into 4 control trials and 12 critical trials according to the answers of the conspirators. The results showed a significant conformity effect ($p < 0.001$) and there was still a significant phenomenon of conformity in the AI context. However, the total of conformity behaviors was lower than that of Asch's original study, probably due to the different times and cultural contexts. However, the proportion of subjects with at least one occurrence of conformity was significantly higher than Asch's original research, reaching 94.44%. Meanwhile, due to the possible lack of apparent validity of AI and the low difficulty of the experimental task itself, the presence of AI might have failed to significantly and independently trigger the informational influence on conformity behavior, and the normative influence caused by the higher number of opponents still significantly resulted conformity. And the human group-dominated normative influence was the main factor contributing to the conformity behavior in this experiment.

Keywords: Conformity, AI, Information influence, Normative influence, Replication study

主、客观社会经济地位对情绪调节策略的影响：自尊的中介作用

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摘要 近年来社会经济地位对情绪调节的影响受到学界的广泛关注，而不同的社会经济地位对情绪调节策略使用的影响尚不明晰。本研究分别从客观社会经济地位和主观社会经济地位两个角度，探讨社会经济地位对情绪调节策略的影响，以及自尊在二者关系中的中介作用。972 名被试参与了本研究，他们完成了客观和主观的社会经济地位调查、情绪调节策略以及自尊的调查。本研究采用结构方程模型探讨了主、客观社会经济地位对情绪调节策略的影响。结果发现：（1）客观社会经济地位越高的人，越可能采用正性情绪重视调节和正性情绪宣泄调节；（2）主观社会经济地位越高的人也越可能采用正性情绪重视调节和正性情绪宣泄调节策略；（3）主、客观社会经济地位越高的人自尊越强；（4）自尊在客观社会经济地位与正性情绪重视调节和正性情绪宣泄调节的关系中起部分中介作用；（5）自尊在主观社会经济地位对正性情绪重视调节的作用中起部分中介作用，在主观社会经济地位对正性情绪宣泄调节的作用中起完全中介作用。本研究发现了主、客观社会经济地位对情绪调节策略方式选取的影响的一致性，自尊解释了这一关系的机制，这一发现拓展了对主、客观社会经济地位与情绪调节之间关系的理解。

关键词 主观社会经济地位，客观社会经济地位，情绪调节策略，自尊

The Relationship Between Objective and Subjective Socioeconomic Status and Emotion Regulation Strategies: The Role of Self-esteem

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Abstract: The effects of socioeconomic status on the emotion regulation have attracted widespread attention in recent years. However, the relationship between socioeconomic status and the emotion regulation strategy remains unclear. In the present study, we explored the effects of objective socioeconomic status (SES) and subjective socioeconomic status (SSS) on the emotion regulation strategy, and the mediation of self-esteem, respectively. 972 participants completed the questionnaire of SES, the MacArthur Scale of subjective socioeconomic status, Rosenberg Self-Esteem Scale and Emotion Regulation Scale. Structural equation modeling was used to explore the relation between SES, SSS and emotion regulation strategy. The findings show that (1) SES was positively associated with the positive

emotion catharsis regulation and the positive emotion appreciate regulation; (2) SSS was also positively associated with the positive emotion catharsis regulation and the positive emotion appreciate regulation; (3) People with low socioeconomic status were associated with lower self-esteem; (4) The relation between SES and the positive emotion catharsis regulation and the positive emotion appreciate regulation were partially mediated by self-esteem; (5) The relation between SSS and the positive emotion appreciate regulation was partially mediated by self-esteem, while on the positive emotion catharsis regulation was fully mediated by self-esteem. The present study investigated the relation between SES and SSS on emotion regulation strategy, so as to compare their effects on emotion regulation strategy. This result developed the understanding of the relation between SES, SSS and emotion regulation strategies.

Keywords: subjective socioeconomic status, objective socioeconomic status, emotion regulation strategy, self-esteem

在沪大学生对于沪籍的内隐地域偏见及其改善方法研究

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摘要 内隐地域偏见隐性地影响着个体的就业、交友等日常生活, 甚至引发地域攻击等暴力行为。本研究对 54 名在沪大学生 (沪籍 18 名, 非沪籍 36 名) 的内隐地域偏见现象进行研究, 并使用文字情境启动和图片刺激启动来探索改善个体内隐偏见的方法。研究结果表明: (1) 非沪籍被试对沪籍角色面孔启动条件下的符号优美程度评分比非沪籍角色面孔启动条件下显著更高 ($p < 0.001$), 沪籍被试的评分则无显著差异; (2) 将沪籍和非沪籍学生面孔分别与正性、负性图片刺激联结后, 非沪籍被试对于沪籍角色面孔启动的符号优美程度评分与联结前相比显著提升 ($p < 0.001$), 同时发现, 沪籍被试在这一实验条件下首次产生了对沪籍角色与非沪籍角色的显著给分差异 ($p < 0.05$); (3) 在歧视文字材料启动后, 非沪籍被试对沪籍角色的打分较图片联结实验中的给分显著下降; (4) 在所有的实验条件下, 非沪籍被试对沪籍角色面孔启动下的符号优美程度评分都比非沪籍角色面孔启动条件下显著更高 ($p < 0.05$)。据此得出结论: (1) 非沪籍被试有着明显的外群体偏好, 这可能是由于他们已经在一定程度上融入了上海; (2) 在正/负性图片刺激启动的干预下, 被试对沪籍角色的偏好加深了, 证明了其有效性; (3) 在“上海人歧视外地人”文字材料启动的干预下, 非沪籍被试降低了对沪籍角色的偏好; (4) 内隐地域偏见确实存在跨情境的一致性。本研究首次对在沪大学生的内隐沪籍偏见进行研究, 展现了这一群体的内隐群体偏好, 以及刺激联结和情境启动改变内隐地域偏好的可能性。

关键词 内隐社会认知, 地域偏见, 正负性联结, 启动效应

Implicit regional prejudice of college students in Shanghai towards Shanghai nationality and the improvement methods

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Abstract: Implicit regional prejudice can affect individuals' daily life including employment and making friends, and can even lead to 'regional blackening' and other violent acts. Current study tested the implicit regional bias of 54 college students in Shanghai (18 Shanghaiese and 36 non-Shanghaiese), and used text context priming and picture stimulus priming to explore ways of improving implicit bias. The results show that: (1) the scores of non-Shanghaiese subjects give based on how beautiful they think the symbols primed by the face of a Shanghai character are significantly higher than those primed by faces of non-Shanghai character, but there is no significant difference among Shanghai subjects ($p < 0.001$); (2) after connecting the faces of Shanghai and non-Shanghai characters with positive and negative picture stimuli respectively, the scores that non-Shanghaiese subjects give to the level of

beauty of symbols primed by the Shanghai character's face was significantly higher than that before the connection ($p < 0.001$) ; Meanwhile, it is found that Shanghainese subjects give a significantly higher score to Shanghai character bound symbol for the first time in the current research ($p < 0.05$) ; (3) after the discrimination text priming materials are given, the score that non-Shanghainese subjects gave to Shanghai characters primed symbols is significantly lower than that in the picture connection experiment ($p < 0.05$) ; (4) the significant difference between the scores non-Shanghainese subjects giving to Shanghai and non-Shanghai character primed symbols exists among all the experiments. Here come the conclusions: (1) non-Shanghainese subjects have obvious external group preference, which may be because their long staying in Shanghai for study and have integrated into Shanghai to a certain extent; (2) under the intervention of positive / negative picture stimulation, the subjects' preference for the Shanghai character deepened; (3) under the intervention condition of "Shanghai people discriminating against outlanders", non-Shanghainese subjects reduced their preference to the Shanghai character and showed their aversion to regional discriminators; (4) there exists the consistency of implicit prejudice. This study is the first that taking Shanghai as an example to study the implicit regional bias of college students, showing the implicit region preference of such a group and the possible usage of stimulating connection and situational priming in changing the implicit preference.

Keywords: implicit social cognition, regional bias, positive and negative connection, priming effect

农村父母应对方式与亲子关系:心理弹性与年龄的调节中介模型

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摘 要 亲子关系是父母与子女以血缘和共同生活为基础的关系, 是家庭生态系统的重要组成部分, 是影响儿童发育的重要因素之一, 近年来引起了人们的广泛关注。有问题的亲子关系可能会导致儿童成长发展的不良后果, 如自我效能感低下, 在学校适应不良, 发生欺凌和被欺凌的情况。在以往的研究中发现应对方式对亲子关系有显著影响, 这些研究大多是以孩子为研究视角, 并没有探讨应对方式影响亲子关系背后的机制, 并且已有研究发现与城市地区相比, 农村地区的亲子关系更脆弱、更容易产生问题, 特别是农村留守家庭, 因为大量留守儿童的父亲、母亲或两者缺位。因此, 探究农村地区亲子关系的保护因素及相关机制具有重要意义。本研究的主要目的是通过一个有调节的中介模型, 在中国农村父母人群中探讨应对方式、心理弹性、年龄与亲子关系之间的关系。本研究招募了安徽省农村地区的 1224 名家长作为被试, 采用简易应对方式问卷 (CSCQ)、心理弹性量表 (CD-RISC) 和亲子关系自评量表进行数据收集。使用 Mackinnon (2008) 的四步程序检验中介效应, 并采用 Hayes PROCESS 宏程序分析有调节的中介模型。结果表明, 心理弹性在应对方式与亲子关系的关系中起部分中介作用。心理弹性的中介效应受年龄的调节。具体而言, 应对方式通过心理弹性影响亲子关系的路径会随着年龄的增长而增强。研究结果强调了应对方式对亲子关系的影响, 并通过揭示农村地区应对方式对亲子关系的影响机制, 丰富了以往文献的研究。本研究结果为农村亲子关系维护与改善的干预提供了理论依据。

关键词 亲子关系, 应对方式, 心理弹性, 调节中介模型, 农村父母

Coping style and parent-child relationship among Chinese parents from rural areas: A moderated mediation model of resilience and age

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Abstract: Parent-child relationship is the relationship between parents and children based on blood and common life. It is an important part of the family ecosystem and one of the important factors affecting the development of children. In recent years, it has attracted widespread attention. Problematic parent-child relationships can lead to adverse developmental outcomes for children, such as low self-efficacy, maladjustment in school, and bullying and being

bullied. Previous literature found that coping style significantly affects parent-child relationship. Most of the studies explored issue from the angle of children, and did not investigate the potential mechanisms underlying the association between coping style and parent-child relationship. Previous literature found parent-child relationship in rural areas, especially the rural left-behind family, are more fragile and prone to problems than those in urban areas due to a large number of left-behind children father, mother or both absence. Therefore, it is of great significance to explore the protective factors and related mechanisms of parent-child relationship in rural areas. The main purpose of this study was to explore the complex relationship between coping style, mental resilience, age and parent-child relationships in rural Chinese parents through a moderated mediation model. The present study employed a sample of 1224 parents from rural areas in Anhui province, China. The Simplified Coping Style Questionnaire (CSCQ), Connor-Davidson Resilience scale (CD-RISC) and Parent-child Relationship Self-rating scale were administrated to collect data. Mackinnon's (2008) four-step procedure was used to examine the mediation effect, and Hayes PROCESS macro was executed to analyze the moderated mediation model. The results indicated that resilience partially mediated the association between coping style and parent-child relationship among parents from rural areas. The mediating effect of resilience was moderated by age. Specifically, the relation between coping style and parent-child relationship via resilience would be strengthened with getting older. The results highlight the effect of coping style on parent-child relationship and extend the previous literature by uncovering the underlying mechanism in rural areas. The findings shed light on the interventions regarding the maintenance and improvement of parent-child relationship in rural areas.

Keywords: Parent-child relationships, coping styles, resilience, moderated mediation model, rural parents

信任违背对情绪灵活性的损害作用

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摘要 信任是个体基于对他人意图或行为的积极期望而自愿将自己重要资源交给对方处置的心理状态。当受托人没有满足委托人的积极期望时, 就会发生信任违背, 使委托人受到一系列的负面影响, 降低对对方信任度的评估。根据双加工模型, 自动加工和控制加工是个体决策, 健康行为和社会行为的基础。之前研究发现信任违背促进了对威胁刺激的自动加工, 表现为对威胁刺激的过度警觉和难以脱离的注意偏向特点; 并且研究也发现信任违背损害了控制加工, 表现为工作记忆刷新能力的受损。前人研究只是分别探讨了信任违背对两种加工过程的影响, 我们并不清楚是否信任违背同时增强了对负性刺激的自动加工和削弱了控制加工。情绪灵活性是执行功能的另一个关键组成部分, 相对积极情绪刺激, 焦虑或抑郁个体更难从负性刺激中转移出来。它与情绪调节密切相关, 对心理健康和可持续幸福至关重要。因此, 本研究的目的是探讨信任违背如何影响情绪灵活性, 它会帮助我们了解信任违背对自动加工和控制加工两者平衡的影响。其中信任游戏用于诱发信任违背, 情绪转换任务用于测量情感灵活性的能力。结果表明, 违背组的转换代价高于控制组, 但是转换代价在负性刺激和积极刺激之间没有显著差异。这些结果表明, 在加工情绪刺激时, 经历信任违背个体难以在该情绪刺激的情绪方面和非情绪方面进行灵活切换,而这种情绪灵活性的受损并不仅限于负性刺激。研究结果支持违反信任会损害执行功能, 这为信任修复提供了新的方向。在实践层面, 这项研究可以让我们更好地理解信任难以修复的机制。受损的情绪灵活性阻止了信任者改变他们的观点并使他们陷入恶性循环。因此, 信任修复可以提高个体处理情绪刺激的灵活性, 从而更好地从信任违背的痛苦中转移。在理论层面, 自动和控制过程两个系统之间的不平衡导致抑郁、焦虑以及冲动和成瘾行为, 信任违反阻碍了控制过程的情绪灵活性。这有助于我们更好地理解为什么那些经历信任违背的人会做出非理性的社会决策。

关键词 信任违背, 情绪灵活性, 双加工模型

The trust violation impairs the affective flexibility

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Abstract: Trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviors of another. When the trustee does not meet the positive expectations of the trustor, the trust violation occurs, causing the injured party to experience a range of negative affect and lower the level of trust between parties. Few research has explored the relationship between trust violation and executive functions, and has reported that trust violation harmed working memory updating. However, research about the impact of trust violation on affective flexibility, another key component of executive functions, is still lacking. Affective flexibility is closely related with emotion regulation, and crucial for mental health and sustainable well-being. Therefore, the examination of how trust violations impacts affective flexibility may provide insights into the psychological unhealthy caused by trust violation. Valence-specific in affective flexibility often refers to negative bias, which is the difficulty shifting from emotional aspects of negative material compared to emotional aspects of positive material. Research also suggest that trust violation promote negative attention bias. Thus, the present study aimed to investigate how trust violations influence affective flexibility, and whether this influence is valence-specific. The trust game was used to induced trust violation, and affective switching task was used to measure the ability of affective flexibility. The results showed that the switching cost was higher in the violation group than in the control group in processing affective material. However, these was no valence-specific shifting difficulties. Those results suggested that trust violations impaired the ability to flexibly switch between processing affective and non-affective qualities of affective stimuli. The findings support that trust violations impaired executive functions, which provide new directions for trust repair. At the practical level, the study can make us better understand the mechanisms why trust is hard to repair. The damaged affective flexibility prevents the trustors from changing their perspectives and traps them in a vicious circle. Therefore, trust repair can improve the flexibility of individuals to process emotional stimuli, so as to better transfer from the pain of trust violation. At the theoretical level, this study broadens ours understand of the influence of trust on cognition. From dual-process model, automatic and control processes the basis of social behavior. The imbalance between two systems contribute to the depression, anxiety and impulsive and addictive behaviors. Combined with the impaired working memory updating, the deficit in affective flexibility support that trust violation hindered the control process. This help us better understand why those people experiencing trust violation make irrational social decision. However, the influence of trust breach on automatic processing needs to be further explored and verified.

Keywords: Trust violations, Affective flexibility, dual-process

君子人格与网络不良行为：一个带调节的中介模型

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摘 要 君子型人格作为更适合中国人群特质的本土化人格理论，在很多领域都产生了广泛的积极影响。本研究从君子人格出发，尝试探讨其与人们在网络中不良行为的关系。网络不良行为是人们在一定匿名性质的网络中，进行的侵犯、欺凌和欺骗相关的行为。本研究在探讨君子人格和网络不良行为关系的基础上，研究了批判性思维在其中的中介作用，同时也分析了行为抑制在君子人格与批判性思维之间的调节作用。

本研究以互联网人群为研究对象，采用在线问卷调查的方法进行数据收集，为避免共同方法偏差分两次施测，施测时间间隔在 10 天以上。两次施测分别收集了被试的行为抑制、君子人格、批判性思维和网络行为情况数据。共收集有效样本数据 387 份，样本覆盖了省级市、地级市、乡镇、农村等各级城市，覆盖了 18 至 69 岁的各年龄段、各职业及收入水平的人群。

研究结果发现：（1）君子人格与个体的网络不良行为表现呈显著负相关，君子人格特质展现越明显，网络不良行为越少；（2）批判性思维在君子人格和网络不良行为之间起部分中介作用，即君子人格通过批判性思维，与网络不良行为呈现出负向相关；（3）行为抑制水平会调节君子人格与批判性思维之间的关系，具体表现为，当行为抑制水平较低时，君子人格与批判性思维呈显著的正相关关系；当行为抑制水平较高时，君子人格与批判性思维的无显著相关。本研究拓展了基于君子人格理论的实证研究，证实了君子人格对人们在具匿名性的网络上的行为，特别是不良行为也有影响，为互联网提升用户体验、优化网络环境提供了新的视角和实证支持。

关键词 网络不良行为，君子型人格，行为抑制水平，批判性思维

Junzi Personality and Problem Behavior on the Internet: A Moderated Mediation Model

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Abstract: As a localized personality theory which is more suitable for the characteristics of Chinese people, Junzi personality has exerted a wide range of positive influence in many fields. The purpose of this research is to explore the relationship between the Junzi personality and problem behavior on the Internet, which is defined as a kind of behavior related to aggression, bullying and deception in anonymous situation, and establish a mechanism model consisting of Junzi personality, problem behavior on the Internet, critical thinking and behavioral inhibition. In this research, 387 valid sample data were collected by online questionnaire survey. The test was carried out twice with an interval of 10 days or more. The data of Junzi personality, problem behavior on the Internet, critical thinking and behavioral inhibition were collected in the two tests. The results show that: (1) There is a significant negative correlation between the Junzi personality and problem behavior on the Internet. The more obvious the Junzi personality, the less problem behavior on the Internet. (2) Junzi personality is positively correlated with critical thinking, and critical thinking is negatively correlated with problem behavior on the Internet. Critical thinking plays an intermediary role between Junzi personality and problem behavior on Internet. (3) Behavior inhibition enhance the effect of Junzi personality on critical thinking. When the level of behavioral inhibition is low, there is a significant positive correlation between Junzi personality and critical thinking, while when the level of behavioral inhibition is high, there is no significant correlation. This study expands the empirical research based on the theory of Junzi personality, and proves that the Junzi personality also has an influence on problem behavior on the Internet. It provides a new perspective and empirical support for improving user experience and optimizing the Internet environment.

Keywords: Behavioral Inhibition, Critical Thinking, Junzi Personality, Problem Behavior on the Internet

压力知觉和消极应对方式对不公平感相关的道德决策的影响： 基于中国 COVID-19 疫情早期背景的网络调查

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摘要 COVID-19 大流行对人民生活造成巨大影响，受到医疗物资等资源短缺的限制，人们需要不断在不同群体的权利和需求之间做出判断和选择。突如其来的重大公共卫生事件往往会增加人们的焦虑感和压力水平，也会让人们更加关注热点问题并受其影响，进而改变很多决策行为。本研究旨在探讨 COVID-19 大流行期间，国内群众压力知觉和压力应对方式的总体情况，及其对道德两难困境的决策影响，尤其关注疫情相关的热点信息如何影响人们作出决策。2020 年 2 月 13 日至 2 月 23 日，777 名中国被试完成了在线问卷调查，包括 10 个项目的压力知觉量表（PSS-10）、特质应对方式问卷（TCSQ，分为积极应对和消极应对两个维度）和 8 个情境的道德决策问卷（基于本实验室前期研究）。为了检测热点话题对决策的影响，我们加入了道德

两难情境中被牺牲者的道德污点信息（包括疫情相关和疫情无关的因素）。采用皮尔逊相关分析和多层次模型分析数据，结果显示，女性和年轻人的压力知觉水平显著较高，且压力知觉高的个体积极应对方式水平较低，消极应对方式水平较高。仅在压力知觉较低时，消极应对方式仍能够正向预测经典道德困境中的功利主义倾向。此外，疫情相关的道德污点信息显著影响人们的道德判断，会使人们从道义性选择转向功利主义选择，或更快地选择功利主义。我们的结果验证了之前在实验室的发现，即消极应对方式越高的人越容易作出功利性道德选择，但较高的压力知觉消除了应对方式对道德两难判断的影响，说明社会压力所激发的“照料和结盟”模型同样可能会让人们更在意道义性选择的可能性。此外，在疫情突然暴发的社会背景下，人们往往更容易受到热点新闻的影响，在进行判断时更加容易受到主观情绪影响，更难保持理性思考，尤其是在涉及到社会公正相关的决策时。这个结果也提示我们，在突发重大公共卫生事件的早期，政府应该意识到社会舆情对群体情绪和决策的重要影响，尽量避免违反社会公平性的事件发生；此外也要相信大多数群众在应对压力时会采取更加积极和亲社会的方式。

关键词 压力知觉，道德决策，功利主义倾向，消极应对方式，不公平感

疫情之下集体主义对个体心理健康状态的影响： 一个有调节的中介模型

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摘 要 近几个月以来，国内新冠肺炎疫情新增病例的反复出现为民众造成了较大的心理压力与情绪困扰，对民众的心理健康产生了威胁。同时，在疫情期间我国人民展现出了强大的集体主义精神，为抗击疫情做出了卓越的贡献。集体主义是指一切从集体出发，个人是集体的份子，集体利益高于个人利益，强调个人对集体的忠诚和强烈的归属感。本研究拟构建一个有调节的中介模型，以检验当前疫情背景下情绪调节策略在集体主义与个体心理健康状态之间的中介作用以及自我同一性对上述中介路径的调节作用。采用疫情心理健康自评表、集体主义量表、Gross 情绪调节问卷、自我同一性地位量表进行研究，共回收 459 份有效问卷。在控制年龄后，采用条件过程分析探讨了集体主义、情绪调节策略与自我同一性对疫情个体心理健康状态的影响。结果显示：（1）情绪调节策略中的表达抑制手段在集体主义与疫情个体心理健康状态中抑郁之间起显著的完全中介作用（中介效应值为 0.0199, 95%CI=[0.0051, 0.0391]）；（2）表达抑制的中介作用受到自我同一性的调节，且自我同一性调节了中介过程的后半路径（调节效应值为-0.003, 95%CI=[-0.0060, -0.0003]），即自我同一性可以降低表达抑制对抑郁的影响。本研究与我国国情紧密结合，进一步验证了自我同一性的发展对公共卫生事件下民众心理健康的重要性，对当前疫情之下我国的疫情相关心理健康教育有着较好的启发意义。

关键词 集体主义，认知重评，疫情个体心理健康

The effect of collectivism on individual mental health status under epidemic conditions: A moderated mediation model

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Abstract: In recent months, the repeated emergence of new cases of COVID-19 in China has caused great psychological stress and emotional distress to the public which has threatened the public's mental health. At the same time, during the epidemic, the Chinese people showed a strong spirit of collectivism and have made outstanding contributions to the fight against the epidemic. Collectivism means that everything starts from the collective, the individual is a member of the collective, and the collective interest is higher than the individual interest. It emphasizes the loyalty and strong sense of belonging of the individual to the collective. This study intends to construct a moderated mediation model to examine the mediating role of emotion regulation strategies between collectivism and individual mental health status and the moderating role of self-identity on the above mediating

pathways under the current epidemic situation. A total of 459 valid questionnaires were collected by using Epidemic Mental Health Self-Rating Scale, Collectivism Scale, Gross Emotional Regulation Questionnaire and Self-Identity Status Scale. After controlling for age, the effects of collectivism, emotion regulation strategies and self-identity on mental health status of epidemic individuals were investigated by using conditional process analysis. The results showed that: (1) Expression inhibition in emotion regulation strategy played a significant complete mediating role in the relationship between collectivism and depression (mediating effect value was 0.0199, 95%CI=[0.0051, 0.0391]); (2) The mediating effect of expression inhibition was moderated by self-identity, and self-identity moderated the second half pathway of the mediating process (moderating effect value was -0.003, 95%CI=[-0.0060, -0.0003], that is, self-identity could reduce the influence of expression inhibition on depression. This study is closely related to China's national conditions, further verifies the importance of the development of self-identity to the public's mental health under public health events, and has a good inspiration significance for China's epidemic related mental health education under the current epidemic situation.

Keywords: Collectivism, Cognitive Reappraisal, self-identity

5.12“临床与咨询心理学专业委员会”分组展贴报告

中文版 COVID-19 恐怖症量表在疫情封校期间的信效度检验

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摘要 目的: 冠状恐怖症是一种由新型冠状病毒引起的过度恐惧症。为防止新冠疫情的蔓延, 学校复学后仍然采取封闭管理的形式, 社会活动的减少给学生的身心健康带来了巨大的挑战。COVID-19 恐怖症量表(C19P-S)是 Arpacı 等人于 2020 年研发的用于测量个体新冠恐怖症程度的工具, 由 20 个条目、四个维度组成, 目前 C19P-S 已在土耳其、美国、韩国和伊朗等进行验证。为丰富 C19P-S 在中国背景下的应用, 本研究旨在对中文版 COVID-19 恐怖症量表(C19P-S-C)的信度和因子结构进行检验, 并考察其跨性别、跨时间的测量等值性。**方法:** 在疫情封校期间, 对贵州省的初、高中学生进行问卷调查, 包括中文版 COVID-19 恐怖症量表(C19P-S-C)、一般健康问卷(GHQ-12)和广泛性焦虑障碍量表(GAD-7)。**结果:** 探索性因素分析的结果显示, 有 4 个条目跨负荷或负荷较低(<0.3), 因此排除这 4 个条目。验证性因素分析表明, 16 个条目的 C19P-S-C 四因素模型拟合数据较好($\chi^2=680.19$, $df=98$, $p<0.01$; $TLI=0.93$; $CFI=0.94$; $SRMR=0.05$; $RMSEA=0.07$), 表明排除 4 个条目之后的因子结构更加稳定。测量等值性的结果表明 C19P-S-C 的四因素结构在性别上是成立的, 且达到了因子协方差等值($\Delta CFI/\Delta TLI<0.01$)。此外, 测量等值性还表明 C19P-S-C 在 3 个月的时间间隔内的强等值成立($\Delta CFI/\Delta TLI<0.01$)。C19P-S-C 分别与 GHQ-12 和 GAD-7 显著相关($p<0.001$)。内部一致性的结果显示 Cronbach' α 系数为 0.88。**结论:** 支持 C19P-S-C 在中国青少年中的实用性。

关键词 新冠恐怖症, 性别等值, 纵向等值, 青少年

Reliability and validity of the Chinese version of COVID-19 Phobia Scale (C19P-S-C) during the period of COVID-19 school closure

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Abstract: During the Period of COVID-19 Closure School, a questionnaire survey was conducted among students in Guizhou Province, including the Chinese version of the COVID-19 Phobia Scale (C19P-S-C), General Health Questionnaire (GHQ-12) and Generalized anxiety disorder scale (GAD-7). Based on the exploratory factor analysis,

four items were excluded. The confirmatory factor analysis showed that the four-factor model fit data was well ($\chi^2=680.199$, $df=98$, $p<0.01$; TLI=0.93; CFI =0.94; SRMR=0.05; RMSEA=0.07). The measurement invariance showed that factorial Invariance is tenable across the gender (ΔCFI and ΔTLI both less than .01). Additionally, the C19P-S-C has strong longitudinal invariance over a 3-month interval. The C19P-S-C was significantly correlated with the GHQ-12 and the GAD-7 ($p<.001$), respectively. The Cronbach's alpha coefficients of the C19P-S-C was 0.88. The C19P-S-C is relatively reliable and effective in gender, supporting its practicability in Chinese adolescents.

Keywords: COVID-19 phobia, measurement invariance, longitudinal invariance, Chinese adolescents

抑郁症患者的绝望相关的脑白质基础

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摘要 绝望是导致抑郁患者产生持久心境低落以及较大自杀风险的重要影响因素。然而, 尚不清楚抑郁症患者绝望感相关的脑白质基础。本研究纳入 143 名经精神疾病诊断与统计手册诊断为抑郁症的患者 (其中, 男性: $N=46$, 年龄 = 38.28 ± 14.07 岁, 女性: $N=97$; 年龄 = 39.51 ± 12.39 岁) 作为病人组。为测量患者的脑白质体积, 我们扫描了所有被试的 T1 加权像并通过 VBM 处理, 获得了大脑白质体积。此外, 我们使用贝克绝望量表获得了抑郁患者的绝望感程度, 使用汉密尔顿焦虑量表获得了患者的焦虑程度, 以及使用汉密尔顿抑郁量表获得了患者的抑郁程度。基于体素水平的一般线性模型分析发现, 患者绝望感与大脑的楔前叶 (MNI 坐标: $x=14$, $y=-70$, $z=44$; 团块大小 = 207voxels)、角回 (MNI 坐标: $x=46$, $y=-32$, $z=14$; 团块大小 = 1009voxels)、颞上回处 (MNI 坐标: $x=50$, $y=-14$, $z=2$; 团块大小 = 333voxels) 的白质体积呈显著的负相关关系 (FDR 校正, $p<0.05$)。随后, 将患者的抑郁严重程度纳入到协变量中, 发现这些区域没有显著的改变。但是, 将患者伴随的焦虑严重程度纳入到协变量时, 颞上回白质与绝望感不存在显著关系。这说明, 颞上回区域对患者焦虑情绪影响绝望感起到重要作用。最后, 逻辑分析结果揭示, 患者的年龄以及角回和颞上回的脑白质体积可以显著预测患者首发和复发状态。综合以上结果, 抑郁症患者的绝望感存在显著且稳健的脑白质基础。同时, 这些脑白质区域可以作为稳健的生物学标志物对患者未来复发的风险进行预测, 为临床进行提前干预提供支持。

关键词 抑郁症, 脑白质体积, 绝望感, 焦虑

Association of hopelessness with white matter volume in patients with adult depression

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Abstract: Hopelessness is a crucial factor that causes persistent depressive mood and high risk of suicide in patients with depression. However, it is unclear the white matter basis of hopelessness in patients with depression. The present study enrolled 143 depressive patients diagnosed by The Diagnostic and Statistical Manual of Mental Disorders (male: $N=46$, age = 38.28 ± 14.07 years, female: $N=97$; age = 39.51 ± 12.39 years). In order to measure the white matter volume of the patient, we acquired the T1-weighted images for all subjects. Then, VBM was used in the segmentation of images and generated the white matter volume. In addition, we assessed the individual level of hopelessness by the Beck Hopelessness Scale (BHS), the level of depression by the Hamilton Depression Rating Scale (HAMD) and the level of anxiety by Hamilton Anxiety Rating Scale (HAMA). Voxel based general linear model analysis found that individual level of hopelessness was negatively correlated with the volume of white matter in regions of precuneus (MNI coordinates: $x=14$, $y=-70$, $z=44$; cluster size = 207voxels), angular gyrus (MNI coordinates: $x=46$, $y=-32$,

z = 14; cluster size = 1009 voxels), and superior temporal gyrus (MNI coordinates: x = 50, y = -14, z = 2; cluster size = 333voxels) (FDR correction, $p < 0.05$). Subsequently, we included the severity of the depression as the covariate, and found no significant changes of results. However, after including the anxiety level, results showed no significant association between the superior temporal gyrus white matter and hopelessness, which indicated that superior temporal gyrus might act an important role in relation between anxiety and hopelessness. Finally, logical regression analysis revealed that age, white matter volume in the angular gyrus and superior temporal gyrus can significantly predict the status of first episode and relapse. These results revealed a robust underlying white matter volume of hopelessness in patients of adult depression. Increasingly, these regions might be the potential biomarkers for predicting the risk of relapse, which would provide the direction for clinical intervention.

Keywords: depression, white matter volume, hopelessness, anxiety

父母对注意缺陷多动障碍儿童攻击行为的影响

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摘要 注意缺陷多动障碍(ADHD)患者不仅表现出持续性的注意力不集中、活动过度等症状, 而且表现出严重的攻击性行为。家庭环境对儿童罹患注意缺陷多动障碍有重要影响, 但尚不清楚父母的攻击性行为是否影响患儿罹患疾病以及产生异常的攻击性行为。为探讨 ADHD 儿童的父母攻击性行为对 ADHD 患者患病及攻击行为的影响, 本研究纳入 108 名经精神障碍诊断与统计手册诊断的 ADHD 儿童(男性: N = 97, 女性: N = 11; 年龄 = 9.277 ± 0.41 岁)。同时, 纳入 110 名正常儿童(男性: N = 89, 女性: N = 21; 年龄 = 10.186 ± 0.38 岁)作为对照组。两组被试在年龄($t = 0.130, p = 0.89$)及性别($\chi^2 = 3.451, p = 0.06$)上无统计学差异。所有儿童都完成注意缺陷多动障碍的评定和攻击行为的测试。攻击行为测试含总分和 4 个分维度, 身体攻击、言语攻击、敌意和愤怒。此外, 所有父母都完成攻击行为的测试。结果表明, ADHD 儿童的攻击总分显著高于对照组($t = 4.910, p < 0.01$), 且 ADHD 儿童父母的攻击总分也显著高于对照组父母(母亲: $t = 2.607, p < 0.01$; 父亲: $t = 3.122, p < 0.01$)。为了进一步探讨父母攻击性是否影响儿童罹患疾病, 逻辑回归分析表明, 父亲身体攻击($p = 0.022, Exp(B) = 0.449$)、父亲的敌意($p = 0.049, Exp(B) = 0.564$)、母亲身体攻击($p < 0.001, Exp(B) = 4.512$)与母亲愤怒($p < 0.001, Exp(B) = 0.132$)都对儿童患病起显著预测作用。相比于父亲, 母亲的攻击性行为更显著预测了儿童患病以及儿童的攻击性行为。为探索父母影响 ADHD 儿童攻击行为的通路, 结构方程模型分析发现, 父母的攻击性对 ADHD 儿童的攻击性不是单独产生影响的。最后, 本研究纳入父母的惩罚敏感性到结构方程模型中, 结果发现, 父母攻击性对儿童的影响呈显著降低趋势。这些研究结果表明母亲攻击行为相对于父亲更显著影响了儿童罹患注意缺陷多动障碍以及伴随的攻击行为。但是, 通过干预父母的惩罚敏感性可以降低父母对儿童攻击行为的影响程度。这为临床干预 ADHD 儿童提供了新的思路 and 方向。

关键词 注意缺陷多动障碍, 攻击行为, 结构方程模型, 惩罚敏感性

The influence of parents on aggression of children with ADHD

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Abstract: Patients with ADHD (attention-deficit/hyperactivity disorder) are characterized by the impairment of sustained attention, hyperactivity and other symptoms. In addition, it's common for children with ADHD to be more aggressive. Prior studies showed that family environment was associated with the risk and development of ADHD. However, it is not clear whether aggressive parents could increase the risk of ADHD and the related aggression for children. In order to examine the influence of parental aggression on the risk and aggressive behavior of ADHD, 108

children diagnosed by DSM-5 were included as the ADHD group (male: $N = 97$, female: $N = 11$; age = 9.277 ± 0.41 years). We also enrolled another 110 normal children (male: $N = 89$, female: $N = 21$; age = 10.186 ± 0.38 years) as the control group. There were no significant differences between two groups in age ($t = 0.130$, $p = 0.89$) and gender ($\chi^2 = 3.451$, $p = 0.06$). All children were assessed by the attentional deficit, hyperactivity and aggression. The aggressive questionnaire we used included the total score and four dimensions, that were physical aggression, verbal aggression, hostility and anger. In addition, all parents of ADHD and control group completed the aggressive questionnaire. Our results showed that children with ADHD had significantly higher aggressive score than that of the control group ($t = 4.910$, $p < 0.01$). The parents of children with ADHD also demonstrated significantly higher score than that of the control group (mother: $t = 2.607$, $p < 0.01$; father: $t = 3.122$, $p < 0.01$). To further explore the influence of parental aggression on the risk of ADHD, logistic regression analysis indicated that father's physical aggression ($p = 0.022$, $Exp(B) = 0.449$), father's hostility ($p = 0.049$, $Exp(B) = 0.564$), maternal physical aggression ($p < 0.001$, $Exp(B) = 4.512$) and maternal anger ($p < 0.001$, $Exp(B) = 0.132$) were the significant predictors of the disorder. Compared to fathers, mothers' aggressive behavior was a more significant predictor for the disorder and aggressive behavior after the model comparison. Further, we performed structural equation model analysis to explore the pathways of parental influence on the aggression of patients with ADHD. Results found that parental aggression did not affect the aggression of ADHD children alone. Finally, we included the sensitivity of parental punishment into the structural equation models, and found that the influence of parental aggression on children's aggression significantly reduced. These findings suggested that maternal aggression significantly influenced the development of ADHD and the related aggression in children, compared to father's. Fortunately, however, the influence from parents on children's aggressive behavior can be reduced by interfering with parents' sensitivity to punishment. These provided a new direction and solution for clinical intervention of children with ADHD.

Keywords: ADHD, aggression, structural equation model, sensitivity to punishment

自杀结果预期思考对自杀意图的影响

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摘要 目的: 过往研究发现, 结果预期思考能影响行为意图形成。在自杀研究领域, 目前尚无研究从结果预期思考的角度同时考察自杀理由和生存理由之间, 或自杀/不自杀的积极/消极结果之间如何共同影响个体自杀意图的形成。本研究旨在探讨个体有关自杀的各种结果预期对自杀意图的影响及合理性评估在其中的中介作用, 并且, 由于不同结果预期模式 (如只考虑死, 不考虑生) 对自杀意图的影响可能不同, 故进一步探索自杀结果预期思考的潜在类别, 从个体层面考察不同结果预期模式对自杀意图的影响。方法: 通过问卷筛查, 选取过去一年内至少有一次自杀意念的大学生为被试, 共 510 人。采用自编自杀结果预期思考量表 (编制过程为另一研究, 量表具有良好的信效度)、Zung 氏抑郁自评量表、自杀情况量表、自杀意图测量、自杀合理性量表进行施测, 对共同方法偏差进行控制。采用多元层级回归分析和潜在剖面分析 (LPA) 分别对数据进行分析。结果和结论: (1) 自杀结果预期的负强化、正强化通过合理性评估的完全中介作用正向预测自杀意图; 负面结果和自杀损失负向预测自杀意图, 合理性评估分别起到完全和部分中介作用。(2) 根据个体在自杀结果预期四个维度上的得分模式, 可将其分为低冲突型、中等冲突型、满怀顾虑型、高冲突型、一心向死型。其中, 满怀顾虑型和低冲突型通过合理性评估影响自杀意图的中介效应最低, 一心向死型最高; 高冲突型比中等冲突型和一心向死型低, 比满怀顾虑型高, 但和低冲突型无明显差异。

关键词 结果预期思考, 自杀意图, 中介模型, 潜在剖面分析

Impact of Prefactual Thinking about Suicide Outcomes on Suicide Intent

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Abstract: This study aims to explore the impact of prefactual thinking about suicide outcomes on suicide intent and its mechanisms. We used a questionnaire survey, 510 college students with suicidal ideation were selected from six regions of the country. Hierarchical multiple regression analysis was conducted. In addition, from the perspective of 'person-centered', we used latent profile analysis (LPA) to further explore the potential patterns of prefactuals regarding suicide outcomes and the impacts of different kinds of prefactual thinking on suicide intent. Results show that: (1) Both negative reinforcement of suicide and positive reinforcement of suicide have a positive predictive effect on suicide intent. And this effect is fully mediated by the evaluative rationality of suicide. In addition, negative outcomes and loss of suicide have negative effect on suicide intent. Specifically, the influence of negative outcomes is completely mediated by the rationality of suicide, while the influence of the loss of suicide is partly mediated by the rationality of suicide. (2) By using LPA, students who have suicidal ideation usually have five latent types of prefactual thinking: 'low-conflict', 'moderate-conflict', 'full of concerns', 'high-conflict', and 'determined about death'. These five latent types of prefactuals have different effects on suicide intent. Among them, the rationality of suicide has the strongest mediating effect on suicide intent for the type of 'determined about death', followed by 'moderate-conflict' type, then 'high-conflict' type, 'low-conflict' type, and last 'full of concerns' type.

Keywords: Prefactual Thinking about Suicide Outcomes, Suicide Intent, Mediation Model, Latent Profile Analysis

自杀相关想象对自杀意念者与自杀尝试者的区分作用

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摘要 目的: 探讨自杀意念者与自杀尝试者在自杀相关心理意象上的差异及其对自杀意念者与自杀尝试者的区分作用。方法: 从某市1家综合医院精神科及2家精神专科医院筛查近一年内有自杀意念或自杀尝试的住院大学生共143人。参考Holmes等人(2007)和Crane等人(2012)的研究, 用8个条目测量被试近一年内有自杀想法时的自杀想象频率、内容及其相关特征, 用3个条目分别测量被试在进行自杀相关想象时体验到的关联痛苦感、舒适感、麻木感, 并采用自杀情况量表、Zung氏抑郁自评量表、Marlowe-Crowne社会称许性量表进行施测。采用独立样本t检验、二分类及有序多分类Logistic回归对数据进行分析。结果: (1) 自杀意念组与自杀尝试组在自杀相关想象的频率上差异显著($t=5.11, p<0.001$); 在自杀想象的内容上, 自杀尝试组对过去自杀行为($t=7.43, p<0.001$)和未来自杀过程($t=7.49, p<0.001$)的想象显著高于自杀意念组, 但在死后世界和他人反应上, 两组的想象水平无差异; 在进行自杀相关想象时, 自杀尝试组的真实感更高($t=5.29, p<0.001$), 且伴随的舒适情绪更高($t=5.81, p<0.001$)。 (2) 在控制抑郁和自杀意图的影响后, 自杀想象频率、自杀想象内容、自杀想象相关联的情绪均对自杀行动与否则有显著的区分作用, OR值提示自杀想象频率每增加一个单位, 自杀尝试发生的风险提高1.57倍; 对过去行为的想象每增加一个单位, 自杀尝试的风险提高3.48倍, 而对未来自杀过程的想象每增加一个单位, 自杀尝试风险提高3.20倍; 自杀想象时的舒适情绪每增加一个单位, 自杀尝试的风险提高1.86倍, 而麻木感每增加一个单位, 自杀尝试风险提高1.34倍。 (3) 这些差异变量还对自杀行为次数有正向预测作用, 自杀想象频率越高、对过去自杀行为和未来自杀过程

的想象越多、自杀想象时的情绪体验越舒适, 自杀尝试的次数越多。结论: 与自杀意念者相比, 自杀尝试者有更频繁的自杀相关想象, 想象内容上更多涉及自杀过程, 想象时的真实感更强, 并伴随更多的舒适情绪, 这些差异变量能对自杀意念者与自杀尝试者进行区分。

关键词 自杀相关想象, 自杀意念者, 自杀尝试者, 区分作用

Effects of Suicide-Related Imagery on Differentiating Suicide Attempters from Suicide Ideators

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Abstract: This study aims to explore the effects of mental imagery about suicide on differentiating suicide attempters from suicide ideators. We explored the differences in suicide-related imagery between suicide ideators and suicide attempters, as well as how these differences distinguish suicide attempters from suicide ideators. A total of 143 psychiatric inpatients from a general hospital psychiatric department and two psychiatric hospitals were invited to complete the questionnaire. All of the participants are college students and had suicidal ideation or attempts in the past year. The results show that: (1) There are differences in suicidal imagery frequency, content, and related characteristics between suicide ideators and suicide attempters. Compared with suicide ideators, suicide attempters have more mental imagery about the implementation process of past and future suicide attempt, with higher level of sense of realness and related comfort feelings. (2) Logistic regression analysis shows that, differences in suicidal imagery frequency, content, and related emotions can distinguish suicide attempters from suicide ideators, even after controlling the effects of depression and suicide intent. (3) These differences are also significantly related to the frequency of suicide attempts. Higher level of suicidal imagery frequency, content, especially mental imagery about suicide process, with more related comfort feelings predict higher frequency of suicide attempts.

Keywords: Suicide-Related Imagery, Suicide Ideators, Suicide Attempters, Differentiating Effect

PTSD 的认知偏向特征和矫正

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摘要 创伤后应激障碍 (Posttraumatic Stress Disorder, PTSD) 是经历重大创伤事件后, 个体常见的心理障碍, 以侵入性症状、回避、警觉性提高和认知与情绪改变为主要临床表现。越来越多的研究发现, PTSD 个体的信息加工在注意、解释和记忆等环节出现对负性信息的加工异常, 即认知偏向 (cognitive bias)。PTSD 的认知偏向可表现为: 注意阶段对威胁刺激的注意脱离困难; 刺激的解释阶段, 对模糊情景更倾向于做出负性解释; 在记忆阶段, PTSD 人群表现出自传体记忆的过分概括化和对负性刺激的记忆优势。认知偏向矫正 (Cognitive Bias Modification, CBM) 训练程序旨在利用计算机程序, 通过改善反复训练改善个体的认知偏向。研究者发现, CBM 不仅有助于改善 PTSD 人群的认知偏向, 还能对症状的改善起到一定作用。当前, 研究者尝试使用注意偏向矫正 (Attentional Bias Modification, ABM) 和解释偏向矫正 (Cognitive Bias Modification for Interpretation, CBM-I) 等训练程序改善 PTSD 患者的注意和解释偏向及 PTSD 症状。部分研究取得了积极成果, 但研究者对 CBM 在 PTSD 症状干预的有效性方面还存在较大争议, 有待更多研究探讨。未来研究者还可以从 PTSD 症状的高异质性角度出发, 探讨具体 PTSD 症状, 如侵入性症状、回避、警觉性提高与不同认知偏向表现的关系; 基于不同认知偏向的联合作用假设探讨不同的认知过程的加工异常对 PTSD 发生发展的作用; 最后, 通过进一步验证 CBM 的训练效果、结合 CBM 和传统心理治疗等方式为 CBM 对 PTSD 干预的有效性提

供依据也是未来该领域研究的重要方向。总之,探讨 PTSD 的认知偏向特点和 CBM 的有效性有助于理解 PTSD 的认知加工异常,同时可以为计算机化的心理治疗提供新的视角。

关键词 PTSD, 认知偏向, 认知偏向矫正, 干预

Characteristics of Cognitive Bias and Its Modification In PTSD

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Abstract: Posttraumatic Stress Disorder (PTSD) is a common psychological Disorder after a major traumatic event. Main clinical symptoms of PTSD are intrusive symptoms, avoidance, increased alertness, and cognitive and emotional changes. Growing numbers of studies have found that individuals with PTSD showed processing advantage to negative information in attention, interpretation and memory process, showing Cognitive Bias. Cognitive bias of PTSD could be illustrated as: difficulty in attentional disengagement from threatening stimuli; the tendency of negatively interpret ambiguous situations; PTSD also showed the overgeneralized autobiographical memory and the advantage in memory of negative stimuli. Cognitive Bias Modification (CBM) training program aims to improve an individual's cognitive bias by using computer programs and repeated training. Researchers have found that CBM could not only improve the cognitive bias of PTSD, but also played a role in the improvement of symptoms. At present, researchers have tried to use Attentional Bias Modification (ABM) and Cognitive Bias Modification for Interpretation (Attentional Bias Modification, CBM-I) to improve attentional and interpretative bias as well as PTSD symptoms in PTSD patients. Some studies have achieved positive results, but the effectiveness of CBM in the intervention of PTSD symptoms is still controversial, and more studies are needed. From the perspective of high heterogeneity in PTSD patients, future researchers could explore the relationship between specific PTSD symptoms, such as invasive symptoms, avoidance, increased alertness and different cognitive biases. Based on the hypothesis of combined effects of different cognitive biases, the role of processing abnormalities in different cognitive processes on the occurrence and development of PTSD could be further investigated. Finally, exploring the training effect of CBM and the training effect of combination of CBM and traditional psychotherapy in PTSD might also be an important direction in this field. In conclusion, exploring the cognitive bias characteristics of PTSD and the efficacy of CBM can help to understand the cognitive processing abnormalities of PTSD and provide a new perspective for computerized psychotherapy.

Keywords: PTSD, cognitive bias, cognitive bias modification, intervention

基于机器学习预测新冠疫情中汶川地震幸存者的急性应激

——一项 12 年的追踪研究

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摘要 目的: 本研究旨在探讨汶川地震幸存者在新型冠状病毒肺炎 (COVID-19) 期间急性应激反应以及影响急性应激的预测因素。**方法:** 本研究采用汶川地震后当地幸存青少年的 12 年追踪数据, 调查了 316 名地震幸存者在人口学特征 (性别、年龄、教育程度、婚姻状况)、健康习惯 (吸烟、喝酒)、地震暴露、疫情期间的社会支持 (感知社会支持量表, PSSS)、应对方式 (简单应对方式量表, SCSQ)、心理弹性 (心理弹性量表)、地震十年后的焦虑 (焦虑问卷成人版, SCAARED)、抑郁 (抑郁症状筛查量表, PHQ-9)、创伤后应激水平 (创伤后应激障碍核查表第五版, PCL-5) 以及 COVID-19 大流行期间的急性应激 (事件影响量表-6, IES-6)。采用极端梯度提升的机器学习算法 (XGBoost) 对亚临床个案进行纵向预测。将 316 名被试按 7:3 的比例随机分为训练集和测试集, 建立模型并得到预测结果。模型的评估指标包括预测准确率和 AUC 等。**结**

果: XGBoost 预测模型的主要评估指标均表明预测模型良好, 具体指标如下: 正确率为 0.87, AUC 为 0.74, 召回率为 0.99, 精确率为 0.88。特征重要性分析结果显示: 地震暴露($F = 31$), 年龄($F = 20$), 当前每月收入($F = 19$)、创伤后成长($F = 13$)和对社会支持的感知($F = 13$)等因素是新冠疫情中的急性应激重要的前五个预测因素。

结论: 基于 XGBoost 机器学习模型可以准确预测疫情期间汶川幸存者的应激反应, 地震暴露经历、年龄、月收入、创伤后成长和社会支持是疫情期间汶川幸存者急性应激的重要预测因子。通过这些预测因子可以有效筛查疫情期间高应激水平个案, 并及时对其进行针对性干预。

关键词 汶川地震, 新冠肺炎, 机器学习, 急性应激, 预测模型

Predictors of the Acute Stress among the Wenchuan Earthquake Survivors during the COVID-19 Pandemic: A 12-Year Longitudinal Study Based on Machine Learning

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Abstract: Objective: This study aimed to explore the acute stress and its predictors among Wenchuan earthquake survivors during the Corona Virus Disease 2019 (COVID-19) pandemic. **Methods:** A total of 316 survivors were followed-up 12 years after the Wenchuan earthquake. In this longitudinal study, we assessed socio-demographic characteristics (sex, age, education level and marital status), life style (smoking and drinking), earthquake exposure, social support during the pandemic (Perceived Social Support Scale, PSSS), coping style (Simplified Coping Style Questionnaire, SCSQ), psychological resilience (Psychological Resilience Scale), anxiety (The Screen for Adult Anxiety Related Disorders, SCAARED), Depression (Patient Health Questionnaire, PHQ-9), and Post-Traumatic Stress Level (The PTSD Checklist for DSM-5, PCL-5), and acute stress during the COVID-19 pandemic (Impact of Event Scale-6, IES-6). Using eXtreme Gradient Boosting machine learning algorithm (XGBoost) to predict the factors of acute stress. The 316 subjects were randomly divided into training and testing samples by the ratio of 7:3. Evaluation metrics included accuracy, AUC, recall, and precision. **Results:** The XGBoost model is good in the current study. Specific indicators are as follows: Accuracy = 0.87, AUC = 0.74, Recall = 0.99, Precision = 0.88. The variable importance shows that, earthquake exposure ($F = 31$), age ($F = 20$), current monthly income ($F = 19$), post-traumatic growth ($F = 13$) and perception of social support ($F = 13$) are the top 5 predictors of acute stress during the COVID-19 pandemic. **Conclusions:** Based on the machine learning with XGBoost algorithm, earthquake exposure, age, monthly income, post-traumatic growth and social support are important predictors for acute stress during the COVID-19 pandemic. These factors can effectively screen high-stress cases during the pandemic and conduct interventions on target population in time.

Keywords: Wenchuan earthquake, COVID-19, XGBoost, acute stress, prediction model

大学生成人依恋与恋爱满意度： 自我表露和感知伴侣回应性的链式中介

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摘要 大学时期的恋爱关系对大学生自身的生涯发展有着非常重要的促进作用, 但是恋爱关系也收到一些个体因素的阻碍。其中大学生成人依恋是其主要影响因素。良好的依恋关系, 有助于个体社会性的发展, 而当依恋关系被破坏时, 个体更易产生心理行为问题。因此, 对于大学生成人依恋关系质量的评估吸引了越来越多的研究者的兴趣。为了探究大学生不安全依恋与恋爱满意度的及其关系作用机制, 本研究采用亲密关系经历量表、感知伴侣回应性量表、自我表露量表、恋爱满意度量表对 845 名大学生和研究生进行测量, 初始问卷 900 份, 有效问卷 845 份。本研究构建了一个链式中介模型, 重点考察自我表露和感知伴侣回应性的中

介效应把有效数据录入 SPSS24.0 采用各种统计方法对数据进行统计分析, 得出以下结论: (1) 依恋焦虑和依恋回避均对恋爱满意度有显著的负向预测作用; (2) 自我表露和感知伴侣回应性分别在依恋回避和依恋焦虑对关系满意度的影响中呈链式中介作用。针对大学生的恋爱满意度低以及出现的人际交往问题, 本研究从一定层面进行了讨论, 这对相关研究与实践的开展提供了理论参考及干预依据。目的在于提高大学生的恋爱满意度, 减轻其孤独感程度, 改善他们的人际关系, 促进他们的身心发展。

关键词 成人依恋, 自我表露, 感知伴侣回应性, 恋爱满意度

Adult attachment and love satisfaction of college students: the chain intermediary between self-disclosure and perceived partner responsiveness

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Abstract: The love relationship in college plays a very important role in promoting college students' career development, but it is also hindered by some individual factors. Adult attachment of college students is the main influencing factor. Good attachment is helpful to the development of individual sociality, and when attachment is destroyed, individuals are more likely to have psychological and behavioral problems. Therefore, the evaluation of the quality of college students' adult attachment relationship has attracted more and more researchers' interest. In order to explore the relationship between unsafe attachment and love satisfaction of college students, 845 college students and graduate students were measured with intimate relationship experience scale, perceived partner responsiveness scale, self-disclosure scale and love satisfaction scale, with 900 initial questionnaires and 845 valid questionnaires. In this study, a chain mediation model was constructed, focusing on the mediation effect of self-disclosure and perceived partner responsiveness. The effective data were entered into SPSS24.0 and analyzed statistically by various statistical methods. The following conclusions were drawn: (1) Attachment anxiety and attachment avoidance have significant negative predictive effects on love satisfaction; (2) Self-disclosure and perceived partner responsiveness play a chain mediating role in the influence of attachment avoidance and attachment anxiety on relationship satisfaction. In view of the low love satisfaction and interpersonal problems of college students, this study has been discussed from a certain level, which provides theoretical reference and intervention basis for the development of related research and practice. The purpose is to improve college students' love satisfaction, reduce their loneliness, improve their interpersonal relationship and promote their physical and mental development.

Keywords: adult attachment, self-disclosure, perceived partner responsiveness, relationship satisfaction

基于数字概念特征的条件性恐惧泛化规律研究

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摘要 恐惧泛化对人类有重要的进化意义, 但过度泛化在一定程度上会给个体带来严重的心理困扰和精神痛苦。临床研究发现过度的恐惧泛化是多种焦虑障碍的核心症状之一, 因此研究恐惧泛化对于分析焦虑障碍患者的病因和认知特点具有重要意义。目前恐惧泛化的研究大多集中在恐惧知觉泛化, 关于恐惧的概念泛化的研究较少。但该方向的研究对理解恐惧特征的过度泛化具有重要意义。目前已有的概念泛化的研究主要在探究恐惧的概念泛化影响因素, 很少涉及恐惧的概念泛化规律。本研究将整体和局部加工与条件性恐惧结合, 通过操纵阿拉伯数字(控制知识经验的影响)的整体和局部加工特性对恐惧的概念泛化规律进行深入地分析, 深度分析恐惧习得和泛化的原因, 完善恐惧泛化的理论框架。本研究采用辨别性条件恐惧范式, 以 US 主观预期值(行为指标)和 SCR(生理指标)为测量指标进行实验研究, 逐步探究基于数字概念和基于数字特征的条件性恐惧泛化的规律。研究假设认为: 在恐惧情绪下个体会对概念意义的部分特征进行优先加工, 且条件

刺激中数字概念特征的变化会影响条件性恐惧的泛化规律。结果发现,在对两位数字习得条件性恐惧后,个体会对数字的部分特征产生更大程度的泛化;而当条件刺激中的非强化刺激是强化刺激的部分特征时,个体对数字的整体特征产生更大程度的泛化。本研究发现在条件性恐惧的概念泛化中存在向数字局部特征泛化的泛化规律,且该规律会受到条件刺激中非强化刺激特征的影响。本研究对条件性恐惧的习得和泛化具有一定程度的启发意义,可进一步探索暴露疗法中刺激材料呈现方式以达到更好的暴露效果,应用于焦虑障碍的临床研究。

关键词 恐惧泛化, 概念泛化, 数字概念特征, 泛化规律

Research on the generalization law of conditional fear based on digital concept features

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Abstract: Fear generalization is of great evolutionary significance to human beings, but to a certain extent, it will bring severe psychological distress and mental pain to individuals. Clinical studies have found that excessive fear generalization is one of the core symptoms of various anxiety disorders, so the study of fear generalization is of great significance for analyzing the etiology and cognitive characteristics of patients with anxiety disorders. At present, most of the research on fear generalization focuses on fear perception generalization, and there are few researches on the conceptual generalization of fear. However, the research in this direction is of great significance for understanding the overgeneralization of fear characteristics. At present, the existing research on the conceptual generalization mainly focuses on the influential factors of the conceptual generalization of fear, and rarely involves the law of the conceptual generalization of fear. This study combines global and local processing with conditioned fear, and deeply analyzes the law of conceptual generalization of fear by manipulating the overall and local processing characteristics of Arabic Numbers (controlling the influence of knowledge and experience), deeply analyzes the causes of fear acquisition and generalization, and improves the theoretical framework of fear generalization. In this study, the discriminative conditional fear paradigm was adopted, and the US subjective expected value (behavioral indicator) and SCR(physiological indicator) were used as measurement indicators to conduct experimental research, and the law of the generalization of conditional fear based on number concept and number characteristics was gradually explored. The research hypothesis holds that under the fear emotion, individuals will preferentially process some features of conceptual meaning, and the change of digital conceptual features in the conditioned stimulus will affect the generalization law of conditional fear. The results showed that after the conditioned fear of two-digit acquisition, individuals had a greater degree of generalization of the partial characteristics of Numbers. However, when the non-reinforcing-stimulus in the conditioned stimulus is part of the reinforcing-stimulus, the individual generalizes the overall character of the number to a greater extent. In this study, it is found that there is a generalization law to the digital local feature generalization in the conceptual generalization of conditional fear, and this law is affected by the non-reinforcing feature of the conditioned stimulus. This study has some enlightening significance for the acquisition and generalization of conditioned fear, and can further explore the presentation mode of stimulus materials in exposure therapy to achieve better exposure effect, and be applied to the clinical study of anxiety disorders.

Keywords: Fear generalization, conceptual generalization, digital concept characteristics, generalization law

新兵认知功能相关因素分析及正念干预的初步研究

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摘要 武警部队是国家武装力量的重要组成部分之一, 主要担负处突、反恐和维稳任务。新兵是部队力量

的源头，认知功能是影响单兵心理健康和完成各项任务的保证，新兵的认知功能是决定部队战斗力的关键因素之一。认知功能受许多因素影响，一般心理健康水平、人格及情绪状态又是影响个体日常行为的重要因素。越来越多的实证研究发现，以冥想为代表的正念练习可以改善心理健康。以往有研究对军人认知功能影响因素有所探讨，但对新兵认知功能的研究及认知心理对军事活动影响的研究稀缺。可见，分析新兵认知功能相关因素，探寻一种可行、有效、可接受且基于实证的方法从而快速改善新兵认知功能，为提升部队整体战斗力稳固基础。本研究的目的在于探讨新兵认知功能的相关影响因素及正念干预效果，为科学施训提供参考。研究采用随机抽样法，利用认知连线测验（TMT）、一般健康问卷（GHQ-12）、大五人格问卷（GBFS）和心境状态量表（POMS）对武警某部新训大队 304 名新兵进行问卷调查并对 45 名新兵进行为期八周的正念减压（MBSR）随机对照干预和问卷调查。结果显示武警新兵认知功能显著优于普通人群，加强情绪稳定训练、培养积极情绪、改善一般心理健康、开展正念减压练习能有效提升新兵认知功能，为提高部队整体战斗力打下基础。

关键词 武警，新兵，认知功能，正念减压疗法

Analysis of Factors Relate to Cognitive Function and Mindfulness Intervention in Chinese Recruits: A Pilot Study

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Abstract: The Chinese Armed Police Force (CAPF) is one of the important components of the national armed forces which is mainly responsible for the tasks of dealing with the emergencies, counter-terrorism and maintaining social stability. New recruits are the source of strength in military. Thus, cognitive function of new recruits plays a pivotal role in the combat effectiveness of troops. Cognitive function affects the mental health of individual soldiers and is influenced by many factors. Level of general mental health and personality are the important factors that affect individual daily behavior. Previous studies have found that mindfulness exercises which are represented by meditation can improve mental health, but the research on cognitive function of recruits and the influence of cognitive psychology on military activities is scarce. The aim of this study is to investigate the related factors of cognitive function in Chinese military recruits and find out whether mindfulness-based stress reduction (MBSR) will improve cognitive function. We explored the feasibility, efficacy and authentic proof of MBSR in a group of newly recruits. Participants (n=410) were recruited from a primary army unit of the CAPF. They were first invited to a baseline cognitive function check-up. Inclusion criteria for the intervention were: 1) recruits enlisted within the past week; and 2) two recruits were randomly selected in each 29 formed classes; and 3) Randomized allocation was assigned to experimental or control groups. Exclusion criteria were: 1) having meditative experience; and 2) currently receiving mental health care or was a mental patient. Participants were informed of voluntary participation and withdrawal, as well as confidentiality. Informed consent was obtained before participation. After screening, 49 qualified participants were randomized into a MBSR and a waitlist group and took part in this 12-week study. MBSR is one of the most popular forms of physical and mental therapy today. It integrates mindfulness into daily behavioral training and reduces stress effectively. Mindfulness is a non-judgmental awareness and acceptance of the present. Its core lies in two points: One is to focus on the present; The other is not to evaluate all the ideas of the present. MBSR includes 8-week courses, 2-hour classes weekly. In addition, participants need to finish 45-minute homework exercises, which are the key component of the course. The main techniques of MBSR include sitting meditation, body scanning, voice meditation, mindfulness breathing, mindfulness eating etc. Both formal and informal exercises should be conducted daily. Previously validated questionnaires were administered to both groups at four time points: baseline, 5, 8, and 12 weeks after participation. General health was measured by the Chinese version of the Goldberg's General Health Questionnaire. The Chinese version of the General Big Five Scale is used to measure personality. And cognitive function was measured by the Trail Making Test. Cognitive function of recruits was significantly better

than that of the general population. Emotional stability and general mental health related with cognitive function. Compared to the waitlist group, the MBSR group showed more improvements in cognitive function at 12-week follow-up. These results suggested that cognitive function interact with mindfulness. Our findings suggested that MBSR could be a promising health intervention for improving cognitive function in Chinese military recruits.

Keywords: New recruits, cognitive function, mindfulness-based stress reduction

抑郁症患者儿童期情感虐待对自杀意念的影响：反刍思维的中介作用

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摘要 目的：本研究旨在探讨抑郁症患者儿童期情感虐待对自杀意念的影响，以及反刍思维在这两者间的中介作用。方法：使用反刍思维量表（RRS）、儿童期情感虐待量表（EM）、贝克自杀意念量表（BSI-CV）对福建某三所精神专科医院的230名抑郁症患者进行问卷调查。结果：研究结果显示，曾经遭受儿童期情感虐待者有190人，阳性检出率为82.6%，非受虐组情感虐待得分为（1.695±0.275），受虐组情感虐待得分为（2.924±0.613）；抑郁症患者自杀意念结果显示，70.9%的抑郁症患者有自杀意念（量表筛选条件成立）。症状反刍维度在性别上有差异（ $p<0.05$ ），反刍思维及各维度在文化程度、职业情况、家庭情况上有显著性差异（ $P<0.01$ ）；自杀意念在性别（ $P<0.05$ ）、职业情况（ $P<0.01$ ）、家庭情况（ $P<0.01$ ）上有显著性差异。结果显示，情感虐待可以显著正向预测自杀意念（ $r=0.288$ ， $p<0.01$ ），情感虐待与反刍思维（ $r=0.220$ ， $p<0.01$ ）显著相关，反刍思维与自杀意念（ $r=0.539$ ， $p<0.001$ ）显著相关；情感虐待（ $r=0.245$ ， $p=0.001$ ），反刍思维（ $r=0.241$ ， $p<0.001$ ）抑郁程度显著相关；抑郁程度（ $r=0.289$ ， $p<0.001$ ）也显著影响自杀意念。反刍思维在情感虐待和自杀意念中起中介作用，中介效应38.89%。结论：（1）抑郁症患者的情感虐待经历水平越高，其反刍思维，自杀意念与抑郁严重程度也越高。（2）抑郁症患者的反刍思维越高，其自杀意念也越高。（3）在自杀意念和症状反刍上，女性显著高于男性。（4）单亲留守家庭群体在反刍思维、自杀意念的得分上显著高于其他被试群体。（5）女性，学生及单亲家庭群体的自杀意念程度高于其他被试。（6）抑郁症患者的情感虐待与自杀意念之间，反刍思维起中介作用。

关键词 抑郁症，儿童期情感虐待，反刍思维，自杀意念

Effect of childhood emotional abuse on suicidal ideation in patients with depression: mediating role of rumination

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Abstract: Objective: The purpose of this study was to investigate the effect of childhood emotional abuse on suicidal ideation in patients with depression, and the mediating role of rumination between the two. Methods: The ruminant thinking Scale (RRS), childhood emotional abuse Scale (EM) and Baker Suicidal ideation Scale (BSI-CV) were used to investigate 230 patients with depression in three psychiatric hospitals in Fujian. Results: The results showed that 190 people had been subjected to childhood emotional abuse, and the positive detection rate was 82.6%. The score of emotional abuse in the non-abused group was (1.695±0.275), and that in the abused group was (2.924±0.613). The results of suicidal ideation in patients with depression showed that 70.9% of the patients had suicidal ideation (the screening conditions of the scale were established). Symptom rumination dimension had significant differences in

gender ($P < 0.05$), rumination and other dimensions had significant differences in educational level, occupational situation and family situation ($P < 0.01$); There were significant differences in gender ($P < 0.05$), occupational status ($P < 0.01$) and family status ($P < 0.01$). The results showed that emotional abuse positively predicted suicidal ideation ($R = 0.288$, $P < 0.01$), emotional abuse was significantly correlated with rumination ($r = 0.220$, $P < 0.01$), and rumination was significantly correlated with suicidal ideation ($r = 0.539$, $P < 0.001$). Emotional abuse ($r = 0.245$, $P = 0.001$) and rumination ($r = 0.241$, $P < 0.001$) were significantly correlated with depression. The degree of depression ($r = 0.289$, $P < 0.001$) also significantly affected suicidal ideation. Rumination played a mediating role in emotional abuse and suicidal ideation, with a mediating effect of 38.89%. Conclusions : (1) the higher the level of emotional abuse experience, the higher the severity of rumination, suicidal ideation and depression. (2) The higher the rumination, the higher the suicidal ideation. (3) Suicidal ideation and symptom regurgitation were significantly higher in females than in males. (4) The scores of rumination and suicidal ideation in single parent left-behind family group were significantly higher than other subjects. (5) Women, students and single-parent families had higher levels of suicidal ideation than other participants. (6) Rumination mediated the relationship between emotional abuse and suicidal ideation in patients with depression.

Keywords: depression, childhood emotional abuse, rumination, suicidal ideation

新型冠状病毒肺炎疫情下武汉社区工作者 心理健康水平及影响因素分析

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摘要 背景 新型冠状病毒疫情(COVID-19)期间, 社区是疫情防控的第一线, 广大社区工作者承担了大量的工作, 包括转送患者前往医院、实行地毯式排查、强化社区网格化管理、保障居民的日常生活等。在疫情第一线的压力和剧增的工作量使得社区工作者心理压力剧增, 本研究将关注这个群体的心理健康状态, 与同期医护人员进行对比, 并探究心理健康的影响因素。**方法** 2020年5月采用滚雪球式抽样方法对武汉市武昌区11个社区内共115位社区工作者进行了问卷调查, 样本年龄为 35.35 ± 9.04 岁, 其中女性为104人(90.4%)。研究工具包括自编的人口学调查、抑郁症状群量表(PHQ-9)、广泛性焦虑量表(GAD-7)、失眠严重程度指数量表(ISI)。将同期收取的武汉市某重点医院的医护人员按照性别、年龄比例与社会工作者群体匹配115人, 年龄为 34 ± 1.63 岁, 对比两个群体的心理健康状况。研究使用逐步回归法探究社区工作者心理健康的影响因素。**结果** 在社区工作者的样本中, 抑郁的检出率为20.8% (中度抑郁占13%, 重度抑郁占7.8%), 焦虑的检出率为11.3% (中度焦虑占7.8%, 重度焦虑占3.5%), 失眠的检出率为11.3% (中度失眠占9.6%, 重度失眠占1.7%)。在和医护人员的群体的心理健康状况对比中, 两个群体的抑郁、焦虑和失眠状况均无显著差别。年龄($\beta = 0.19$, $p = 0.017$)、疫情期间受到新闻报道的消极影响程度($\beta = 0.28$, $p = 0.001$)、疲劳程度($\beta = 0.36$, $p < 0.001$)、工作满意度($\beta = -0.25$, $p = 0.003$)可以显著地预测社区工作者的抑郁水平。疫情期间受到新闻报道的消极影响程度($\beta = 0.34$, $p < 0.001$)、疲劳程度($\beta = 0.20$, $p = 0.031$)、每日工作时长($\beta = 0.24$, $p = 0.011$)可以显著地预测社区工作者的焦虑水平。疫情期间受到新闻报道的消极影响程度($\beta = 0.28$, $p = 0.002$)、疲劳程度($\beta = 0.19$, $p = 0.029$)、在工作中的掌控感($\beta = -0.30$, $p = 0.001$)可以显著预测社区工作者的失眠情况。**结论** 本研究发现疫情期间社区工作者的心理健康状况较为严重, 与医护人员没有显著差异, 这意味着他们的心理健康值得更多的关注。被新闻报道影响较多、工作强度较大的社区工作者心理健康水平较低, 需要更多的心理支持和疏导。

关键词 新冠疫情, 社区工作者, 心理健康

Analysis of mental health and influencing factors of Wuhan community workers during the COVID-19 epidemic

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Abstract: Background: During the coronavirus epidemic (COVID-19), the community is the first line of epidemic prevention and control. The majority of community workers have undertaken a lot of work, including transferring patients to the hospital, implementing carpet inspections, strengthening community grid management, and providing supplies for residents, etc. The pressure on the front line of the epidemic and the sharp increase in workload have caused a sharp increase in the psychological pressure of community workers. This study will focus on the mental health of this group, compare it with medical staff in the same period, and explore the factors affecting mental health. **Method:** A total of 115 community workers in 11 communities in Wuchang District, Wuhan City were surveyed with the snowball sampling method in May 2020. The age of the sample was 35.35 ± 9.04 , of which 104 were female (90.4%). Data collection tools include self-compiled demographic questionnaires, the Patient Health Questionnaire (PHQ-9), the Generalized Anxiety Disorder (GAD-7), and the Insomnia Severity Index (ISI). The medical staff from a key hospital in Wuhan collected during the same period were matched with 115 social workers according to gender and age ratios, with an average age of 34 (± 1.63). And compared the mental health status of the two groups. The research uses the stepwise regression method to explore the influencing factors of the mental health of community workers. **Results:** In the sample of community workers, the prevalence of depression was 20.8% (13% for moderate depression, 7.8% for severe depression), 11.3% for anxiety (7.8% for moderate anxiety and 7.8% for severe depression). 3.5%), and 11.3% for insomnia (moderate insomnia accounted for 9.6%, severe insomnia accounted for 1.7%). In comparison with the mental health status of the group of medical staff, there is no significant difference in the depression, anxiety, and insomnia status of the two groups. Age ($\beta=0.19, p=0.017$), degree of negative influence from news during the epidemic period ($\beta=0.28, p=0.001$), work fatigue ($\beta=0.36, p<0.001$), job satisfaction ($\beta=-0.25, p=0.003$) can significantly predict the depression level. The degree of negative influence from news reports during the epidemic ($\beta=0.34, p<0.001$), work fatigue ($\beta=0.20, p=0.031$), and daily working hours ($\beta=0.24, p=0.011$) can significantly predict the anxiety level of community workers. The degree of negative influence from news reports during the epidemic period ($\beta=0.28, p=0.002$), work fatigue ($\beta=0.19, p=0.029$), and the sense of control at work ($\beta=-0.30, p=0.001$) can be significantly predicted insomnia in community workers. **Conclusions:** This study found that the mental health of community workers during the epidemic was more serious, and there was no significant difference from that of medical staff, which means that their mental health also deserves more attention. Community workers who are more affected by news reports and work harder have lower levels of mental health and need more psychological support and counseling.

Keywords: COVID-19, community workers, mental health

自控策略的问卷编制和概念结构探讨

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摘要 近年来, 自我控制机制的研究重点从关注抑制功能和意志资源, 转为关注省力 (effortless) 的机制, 比如自控策略。自我控制的 PI 模型 (Preventive and interventive model; PI-Model; Hofmann & Kotabe, 2012) 区分了预防性策略和干预性策略, 并提出预防性策略比干预性策略更有效的假设。但是到目前为止, 还没有工具能测量人们日常生活中自控策略的使用情况, 因此相关假设也未有充分的实证研究。本研究通过对大学生自控经历的质性数据进行编码分析, 结合 PI 模型的概念定义, 编制了自控策略问卷, 并在 3 个独立的大学

生样本（样本 1 考察一般性目标的自控，样本 2 考察金钱相关的目标，样本 3 考察学业目标）中检验该问卷的因素结构、内部一致性、校标关联效度（以预防性应对和行为冲动性为校标）和增值效度（控制良好习惯和费力抑制后自控策略与自控能力的偏相关）。同时，本研究也揭示了自控策略的分类，以及各类策略与自控能力的关联。结果得到了信效度良好的 19 题自控策略问卷，区分了四类策略：针对诱惑的预防性策略，针对目标的预防性策略，人际相关的预防性策略和干预性策略，拓展了 PI 模型的策略分类。针对诱惑和针对目标的策略划分，呼应了自控的经典理论，如 Carver 和 Scheier (1982) 的控制论和双系统理论（如 Metcalfe & Mischel, 1999），对趋近目标和回避诱惑的心理机制的区分。人际相关策略则呼应了自我调节领域的一个新视角，即以交互目标动力学（transactive goal dynamics; Fitzsimons & Finkel, 2015）为代表的关注自我调节人际交互过程的视角。另外，研究结果还推翻了 PI 模型的假设：预防性策略不一定是良好自控的机制，自控能力低的人更倾向于使用人际相关的预防性策略；而自控能力高的人比自控能力低的人更多地使用干预性策略。这可能是因为，省力性和有效性不是自控策略的本质特征，对于自控能力不同的人而言，或是对于不同类型的目标而言，策略的省力性和有效性是不同的。今后，采用该问卷可以进一步探讨哪类策略对哪类目标和哪类人群更省力、更有效，以及，是否可以通过干预自控策略帮助人们提升自控表现。

关键词 自我控制，自我控制策略，大学生，PI 模型

Scale Development and Conceptual Structure Investigation for Self-Control Strategies

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Abstract: In recent years, the focus of research on self-control mechanisms has shifted from inhibition function and volitional resources to effortless mechanisms, such as self-control strategies. The Preventive and interventive model (PI-Model; Hofmann & Kotabe, 2012) distinguished between preventive and interventive strategies and hypothesized that preventive strategies are more effective than interventive strategies. However, there are no tools to measure people's use of self-control strategies in daily life, so there is no sufficient empirical support for the relevant hypotheses. Therefore, this study developed the items of the scale for self-control strategies by analyzing the qualitative data of college students' self-control experience and combining with the conceptual definitions in PI-model, investigated the psychometric properties of the scale in three independent samples of college students (sample 1 was for self-control on general goals, sample 2 was for financial goals, and sample 3 was for academic goals) for factor structure, internal consistency, criterion-related validity (proactive coping and behavioral impulsiveness as criteria), and incremental validity (the partial correlation between strategies and self-control ability when controlling the effect of good habits and effortful inhibition). This study also revealed the classification of self-control strategies and the relationship between self-control strategies and self-control ability. As a result, a 19-item scale for self-control strategies with strong psychometric properties was developed and four strategy types were identified as temptation-oriented preventive strategies, goal-oriented preventive strategies, interpersonal preventive strategies, and interventive strategies, which extending the classification in PI-model. The distinction between temptation-oriented and goal-oriented preventive strategies echoes the dual-process descriptions of pursuing goals and avoiding temptations in traditional theories of self-control, such as Carver and Scheier's (1982) control theory and the dual-system theories (e.g. Metcalfe & Mischel, 1999). The interpersonal strategies echo a new perspective in the field of self-regulation that focuses on the interpersonal interaction process of self-regulation, which could be represented by the transactive goal dynamics (Fitzsimons & Finkel, 2015). In addition, the results also overturned the hypothesis of PI-model. The preventive strategies were not necessarily the mechanism of good self-control, as people with low self-control are more inclined to use interpersonal preventive strategy; And interventive strategies were not ineffective, as people with high self-control used interventive strategies more than those with low self-control. This may be because the effortlessness and effectiveness were not essential

characteristics of the self-control strategies and differ for different goals or for people with different levels of self-control ability. In the future, this scale can be used to further explore which kinds of strategies are more efficient and effective for which kinds of goals and which kinds of people, and whether the interventions for self-control strategies can help people improve their self-control performance.

Keywords: self-control, self-control strategies, college students, PI-model

青春期性成熟同步性对青少年抑郁的影响

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摘要 青春期性成熟是个体毕生发展中最重要、影响最为深远的转变之一，其生理和心理上的变化可以通过多种机制影响青少年抑郁。本研究通过分层抽样抽取了 S 市 3628 名初中生（2016 年时处于 6-8 年级，平均年龄为 12.26 ± 1.00 岁，52.6% 为女生）为样本，连续两年用简版青春期发育量表追踪其性成熟发育情况。该量表包含两个发育指征，询问男生是否长胡子或变声，女生是否经历过月经初潮和乳房发育，“是”计 1 分，“否”计 0 分。青春期性成熟发育同步性可以由多个指标来衡量：青春期性成熟发育阶段指青春期性成熟实际进展程度，由当年量表的总得分表示；青春期性成熟发育速度由 17 年总得分减去 16 年总得分的结果表示；青春期性成熟发育共时性指个体内不同发育指征是否同时发育，当年两个指征得分相同为共时，不同为不共时。本研究首次在中国样本中统合青春期性成熟发育阶段、速度、共时性这三个指标综合考察青春期性成熟同步性对青少年抑郁的影响，并检验其中存在的性别差异。本研究进行了一系列 ANCOVA 分析，结果发现：（1）完成青春期性成熟发育的青少年抑郁倾向较高，另外综合前人文献和本研究结果可以推测，青春期性成熟发育阶段对女生抑郁倾向影响较大，完成青春期性成熟发育的女生面临着最高的抑郁风险。（2）青春期性成熟发育速度对女生抑郁倾向无显著影响而对男生抑郁倾向影响显著，在短时间内迅速完成青春期性成熟发育的男生抑郁倾向高。（3）2016 年时共时发育的女生抑郁倾向高于不共时发育的女生和共时发育的男生，而 2017 年时共时发育组整体抑郁倾向高于不共时发育组，总体而言共时发育是一种潜在的青少年抑郁风险因素，这可能与共时发育和更高的抑郁阶段以及更快的发育速度联系在一起有关。本研究为理清青春期性成熟发育同步性各指标相互缠结又具有相对独立性的关系、理解青春期性成熟发育同步性对青少年抑郁的影响做出了贡献，同时亦可帮助家长、教师及青少年自身建立对青春期性成熟同步性更准确的认识，提示家长和教师需关注特定群体的心理健康状况，为处于性成熟发育中的青少年提供更具包容性与支持性的社会环境。

关键词 青少年抑郁，性成熟发育同步性，性成熟发育阶段，性成熟发育速度，性成熟发育共时性

The Effects of Variations in Pubertal Development on Adolescent Depression

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Abstract: Puberty is one of the most important and influential changes in human being's lifelong development. The physical and psychological changes brought by puberty can affect adolescent depression through various pathways. This study selected 3628 middle school students in S city (studying in grade 6 to 8 in 2016, with an average age of 12.26 ± 1.00 years, 52.6% of which were girls) through stratified sampling, and used the Simplified Pubertal Development Scale (Simplified-PDS) to track their pubertal development for two years in a roll. The scale contains two items, asking whether boys have grown beard or their voice has changed, and whether girls have experienced menarche and breast development ("Yes" for 1 point and "No" for 0 points). To capture the variations in multiple aspects of puberty, different dimensions of puberty related to health and well-being have been measured. Pubertal status refers to the actual stages of pubertal development, which is represented by the total scores of Simplified-PDS that year. The total score of Simplified-PDS in 2017 minus the score in 2016 is pubertal tempo, which represents how fast this individual experiences pubertal development. Pubertal synchrony refers to whether different signs of pubertal

development of an individual occur at the same time. The pubertal development of this individual is synchronous if the scores of the two items in Simplified-PDS in the same year is the same and asynchronous if not. This study is the first to integrate the three dimensions of pubertal development, which are pubertal status, tempo, and synchrony, in a Chinese sample to comprehensively investigate the impact of puberty on adolescent depression, while examining gender differences. A series of ANCOVA analysis found that: (1) Adolescents who completed pubertal development have a higher tendency to be depressed. In addition, combining previous literature and the results of this study, it can be inferred that pubertal status has a greater impact on girls' depression tendency than on boys'. Girls who have completed pubertal development may face the highest risk of depression. (2) Pubertal tempo had no significant effect on girls' depression tendency, but was positively related to boys' depression tendency. Boys who quickly went through puberty in a short period of time had a high tendency to be depressed. (3) In 2016, girls with synchronous pubertal development had higher depression tendency than girls with asynchronous development and boys with synchronous development. In 2017, the overall depression tendency of synchronous group was higher than that of asynchronous group. In general, pubertal synchrony is a potential risk factor for adolescent depression, which may be due to the close relation between synchronous development and more mature pubertal status and faster pubertal tempo. This research contributes to clarifying the intertwined and yet still relatively independent relationship between the various indicators of puberty and to understanding the influence of puberty on adolescent depression. It can also help parents, teachers and adolescents to build a more accurate understanding of puberty while remind parents and teachers to pay more attention to the mental health of certain groups of adolescents and to provide a more inclusive and supportive social environment for adolescents going through puberty.

Keywords: adolescent depression, puberty, pubertal status, pubertal tempo, pubertal synchrony

5.13“军事心理学专业委员会”分组展贴报告

军人抑郁症状的潜在类别及其影响因素分析

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摘要 目的: 探讨中国军人抑郁症状发生的个体差异, 分析造成个体抑郁水平差异的影响因素, 为改善军人抑郁症状提供科学依据。方法: 通过整群抽样的方法对某部官兵进行调查, 采用贝克抑郁自评量表 (Beck Depression Inventory, BDI-II)、儿童期创伤问卷 (Childhood Trauma Questionnaire, CTQ)、反刍思维量表 (Ruminative Responses Scale, RRS) 和匹兹堡睡眠质量量表 (Pittsburgh sleep quality index, PSQI) 的部分题目调查了官兵的抑郁症状、儿童期创伤水平、反刍思维水平和睡眠质量, 并调查了官兵基本人口学信息。运用 Mplus 软件进行潜在类别分析(latent class analysis, LCA), 并以潜在类别为因变量, 采用 SPSS 软件进行有序 logistics 回归分析。结果: 共调查基层官兵 473 人, 均为男性, 平均年龄为 (22.18±4.51)。军人抑郁症状状况可分为低症状 (N=306, 64.7%)、中症状 (N=137, 29.0%)、高症状 (N=30, 6.3%) 三个类型。回归分析结果表明: 儿童期创伤水平 (OR=1.11, $p<0.05$, 95%CI: 1.07~1.16)、反刍思维 (OR=1.09, $p<0.05$, 95%CI: 1.06~1.11)、独生子女 (OR=3.22, $p<0.05$, 95%CI: 2.05~5.04) 和战士 (OR=2.96, $p<0.05$, 95%CI: 1.23~7.12) 为抑郁水平的危险性因素, 低入睡困难水平为抑郁水平的保护性因素 (OR=0.44, $p<0.05$, 95%CI: 0.26~0.71)。结论: 军人抑郁症状状态存在明显的群体异质性, 应重点关注独生子女和基层战士, 对官兵入睡困难、反刍水平、儿童期创伤等情况也许予以关注。

关键词 军人, 抑郁, 潜在类别分析, 儿童期创伤, 反刍

Latent class analysis and influencing factors of depressive symptoms in military personnel

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Abstract: Objective: To explore the individual differences of depression symptoms among Chinese soldiers, and to analyze the influencing factors of individual differences, so as to provide a scientific basis for improving the depression symptoms of soldiers. Methods: The cluster sampling method was used to investigate officers and soldiers of a certain unit. Beck Depression Inventory (BDI-II), Childhood Trauma Questionnaire (CTQ), Ruminative Responses Scale (RRS) and items from Pittsburgh sleep quality index (PSQI) were used to investigate depression symptoms, childhood trauma, rumination and sleep quality. Mplus software was used for latent class analysis (LCA), and SPSS software was used for multiple ordinal logistic regression analysis. Results: A total of 473 soldiers were investigated, all of them were male, with an average age of (22.18 ± 4.51) . The depressive symptoms of soldiers could be divided into three types: low symptoms group ($N = 306, 64.7\%$), moderate symptoms group ($N = 137, 29.0\%$) and high symptoms group ($N = 30, 6.3\%$). The results of regression analysis showed that childhood trauma ($OR=1.11, p<0.05, 95\%CI: 1.07\sim 1.16$), rumination ($OR=1.09, p<0.05, 95\%CI: 1.06\sim 1.11$), being the only child in the family ($OR=3.22, p<0.05, 95\%CI: 2.05\sim 5.04$) and being soldiers ($OR=2.96, p<0.05, 95\%CI: 1.23\sim 7.12$) were risk factors for depression levels; low level of difficulty falling asleep was a protective factor for depression ($OR=0.44, p<0.05, 95\%CI: 0.26\sim 0.71$). Conclusion: There was obvious group heterogeneity in the state of depression symptoms in soldiers. Therefore, attention should be paid to the soldiers who were the only child in the family and soldiers in non-command posts. Military personnel with difficulties in falling sleeping, ruminant and childhood trauma might require special attention.

Keywords: military personnel, depression, latent class analysis, childhood trauma, rumination

神经电生理视角下倦怠陆军官兵认知神经功能变化特点研究

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摘要 目的 职业倦怠是一种由长期压力所导致的生理、心理综合征, 以情感衰竭、人格解体和个人成就感降低为主要表现。大量行为学研究表明, 倦怠个体表现出认知、行为等方面的障碍。本实验旨在从神经电生理角度探究倦怠陆军官兵认知神经功能的变化特点, 寻找能够反映其认知神经功能下降的有效指标, 为早期监测倦怠官兵认知神经功能变化提供有效方法, 从而提高官兵心理健康水平和部队战斗力服务。 **方法** 经《军人职业倦怠量表》筛选出总分 ≥ 1 分的20名陆军官兵作为倦怠组, 通过随机数表法随机选取未达到阳性标准的20名官兵作为无倦怠对照组分别进行认知神经功能监测。采用Go/Nogo和Oddball范式进行任务态ERP实验, 选取头部中线前额叶和顶叶电极点分别测量N200和P300 (P3a、P3b)的平均波幅。应用SPSS22.0软件对所得数据进行统计分析, 采用重复测量方差分析分别探究组间效应、电极效应及任务效应。 **结果** 在Go/Nogo实验中, 倦怠组N200波幅较对照组升高, 但组间无显著差异, 组间主效应不显著; 前额区可以诱发更加显著的N200 ($FCz>Fz>Cz, P<0.001$), 电极主效应显著; Nogo任务在各电极点均可诱发更大的N200

成分 (Nogo-N200 效应, $P < 0.001$), 任务主效应显著。倦怠组 P300 波幅显著降低 ($p < 0.001$), 在 Fz、FCz、Cz 三个电极位点上较为显著, 组间主效应显著; P300 在前额叶和顶叶的 5 个电极点上较对照组未发现显著差异, 电极主效应不显著; 与 Go 任务相比, Nogo 任务在倦怠组诱发更大的 P300 成分 (Nogo-P300 效应, $P < 0.01$), 任务主效应显著。在 Oddball 实验中, 倦怠组 P3a 波幅显著小于对照组 ($P < 0.05$), 组间主效应显著; 中央顶区电极位点可诱发更大的 P3a ($CPz > Pz > Cz > FCz > Fz$, $P < 0.001$), 电极主效应显著。倦怠组 P3b 波幅显著小于对照组 ($P < 0.05$), 组间主效应显著; 中央顶区电极位点所诱发的 P3b 平均波幅显著大于前额区 ($Pz > CPz > Cz > FCz > Fz$, $P < 0.001$), 电极主效应显著。 **结论** 一般认为, N200 可以反映个体冲突觉察和监测能力, 而 P300 被认为主要与反应抑制相关。P300 的亚成分 P3a 反映个体被动注意或朝向反应, 即代表非随意注意的能力, P3b 则代表随意注意的能力, 反映个体可通过意志努力进行选择注意的过程。结果表明, 倦怠官兵在早期阶段对冲突的识别和监测能力较常人未发生显著变化, 而其反应抑制能力则发生损害; 另一方面, 倦怠官兵随意注意和非随意注意能力均发生损害, 对于突发新异刺激的识别能力和对目标刺激的注意资源投入、分配和保持能力不足, 成为影响官兵心理健康和导致战斗力下降的重要因素。本实验从神经电生理学角度阐明倦怠陆军官兵认知功能下降的特点, 为以往的行为学研究提供有力的证据补充, 同时说明 ERP 可以作为研究认知等高级神经活动的重要方法, N200 和 P300 (P3a、P3b) 成为监测个体认知神经功能是否发生损害的有效指标。

关键词 职业倦怠, 官兵, 反应抑制, 注意, ERP

5.14“人格心理学专业委员会”分组展贴报告

自我控制影响青少年生活满意度的纵向研究：心理韧性的中介作用

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摘要 生活满意度是心理幸福感的重要组成部分, 是个人依照自己选择的标准对自己生活状况的总体性认知评估, 对青少年的身心健康发展具有重要作用。以往研究表明, 自我控制能够促使个体过上更健康、幸福的生活, 表现出更高的学术成就、更少的暴饮暴食以及更好的人际关系。然而, 目前探究自我控制影响青少年生活满意度的内在心理机制较为欠缺。心理韧性是个体应对困难经历的反弹能力, 是良好社会适应行为发展的重要指标。本研究采用自我控制量表、心理韧性量表、生活满意度量表对广州市五所中小学 788 名学生进行为期一年三个时间点 (T1、T2、T3) 的纵向追踪测试, 时间间隔为六个月, 旨在考察自我控制对青少年生活满意度的影响, 以及心理韧性在两者中的中介效应。结果发现: (1) T1 自我控制、T2 心理韧性、T3 生活满意度呈两两显著正相关; (2) 在控制性别和年龄后, T1 自我控制显著正向预测 T3 生活满意度 ($\beta = 0.17$, $SE = 0.03$, $p < 0.001$), 即自我控制水平越高, 生活满意度也越高; (3) 中介效应分析显示, T2 心理韧性在 T1 自我控制和 T3 生活满意度之间起中介作用 (effect = 0.06, $SE = 0.02$, 95% CI = [0.03, 0.10])。研究表明, 自我控制能够通过增强心理韧性, 进而提高青少年的生活满意度。本研究揭示了自我控制影响生活满意度的作用机制, 对于学校、家庭及教育工作者提高青少年的心理韧性和生活满意度具有一定的指导作用。

关键词 青少年, 自我控制, 心理韧性, 生活满意度

A Longitudinal Study of the Influence of Self-control on Adolescents' Life Satisfaction: The Mediating Role of Resilience

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Abstract: As an important part of psychological well-being, life satisfaction is an overall cognitive assessment of

one's own life according to the criteria chosen by oneself, which is of great significance to the development of adolescents' physical and mental health. Previous research has shown that self-control leads to healthier, happier lives, higher academic achievement, less overeating and better relationships. However, the research on the inner psychological mechanism of the influence of self-control on adolescents' life satisfaction is still lacking. Resilience is the bounce to cope with difficult experiences and is an important indicator of the development of good social adaptation behavior. This study adopts the self-control scale, resilience scale, life satisfaction scale to measure 788 students from five middle schools and primary schools in Guangzhou. This investigation lasted one year including three time points (T1, T2, T3) and the time interval was six months. The purpose of this study was to explore the effect of self-control on adolescent life satisfaction, and the mediating effect of resilience. The results showed that : (1) there was a significant positive correlation between T1 self control, T2 resilience and T3 life satisfaction; (2) after controlling for gender and age, T1 self-control significantly positively predicted T3 life satisfaction ($\beta = 0.17$, $SE = 0.03$, $p < 0.001$), namely, the higher the level of self-control, the higher the life satisfaction; (3) The mediating effect analysis showed that T2 resilience played a mediating role between T1 self-control and T3 life satisfaction (effect = 0.06, $SE = 0.02$, 95%CI = [0.03, 0.10]). This study indicated that self-control can increase life satisfaction in adolescents by increasing resilience. This study reveals the mechanism by which self-control affects life satisfaction, which may provide guidance for schools, families and educators to improve adolescents' resilience and life satisfaction.

Keywords: adolescent, self-control, resilience, life satisfaction

高中生未来时间洞察力与学习投入的关系： 学业自我效能感的中介作用

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摘 要 学习投入是指学生在学习活动过程中表现出的一种持续的、充满积极情感的状态。它是影响学生学习的一个重要情感因素，是衡量高中生学习情况、心理素质的重要指标。高中生学习投入的提升有利于学生自身的成长与发展。未来时间洞察力是一个人对自身未来发展和发展的认识、情感和行为倾向。学业自我效能感则是个体对自己学习能力或技能的评价，是个体控制自己学习行为和学习成绩能力的主观判断。本研究从高中生学习投入的影响因素出发，采用学习投入量表、未来时间洞察力量表和学业自我效能感量表对400名高中生进行调查，旨在探讨未来时间洞察力、学业自我效能感和学习投入的关系。研究结果表明：（1）高中生学习投入总体处于中等偏上水平，但在年级上存在显著差异，高二学生在学习投入总分及各维度上的得分均高于高一、高三学生，而未来时间洞察力、学业自我效能感在年级上的差异不显著。（2）高中生未来时间洞察力、学业自我效能感和学习投入三者密切相关，高中生未来时间洞察力对学业自我效能感和学习投入均有显著的正向预测作用。（3）高中生未来时间洞察力不仅可以直接作用于学习投入，还可以通过学业自我效能感这一中介变量对学习投入产生影响，即学业自我效能感在未来时间洞察力对学习投入的影响中发挥部分中介效应。作为教师，可通过引导学生对自身和未来发展的认识，让学生多些成功的体验，增强自我学业效能感，从而提高他们的学习投入。

关键词 学习投入，未来时间洞察力，学业自我效能感，高中生

The Relationship between Senior High School Students' Future Time Perspective and Academic Engagement: The Mediating Role of Academic Self-Efficacy

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Abstract: Academic engagement refers to students' continuous and positive emotional state in the process of learning

activities. It is an important emotional factor that affects students' learning and an important index to measure the learning situation and psychological quality of high school students. The improvement of high school students' academic engagement is conducive to their own growth and development. Future time perspective is a person's knowledge, emotion and behavioral tendency towards his own future development and social development. Academic self-efficacy is an individual's evaluation of his learning ability or skills, and a subjective judgment of his ability to control his learning behavior and academic performance. Starting from the influencing factors of high school students' academic engagement, this study investigated 400 high school students with academic engagement scale, future time perspective scale and academic self-efficacy scale, aiming to explore the relationship between future time perspective, academic self-efficacy and academic engagement. The results show that : (1) Senior high school students' academic engagement is generally above the average level, but there is a significant difference in grade level. The total score of academic engagement and all dimensions of high school students in grade two are higher than those in grade one and grade three, while there is no significant difference in future time insight and academic self-efficacy. (2) Senior high school students' future time perspective, academic self-efficacy and academic engagement are closely related. The future time perspective of high school students has a significant positive prediction effect on academic self-efficacy and academic engagement. (3) Senior high school students' future time perspective can not only directly affect their academic engagement, but also influence their academic engagement through the mediating variable of academic self-efficacy, that is, academic self-efficacy plays a part in the mediating effect of future time perspective on their academic engagement. As teachers, they can guide students to understand themselves and their future development, so that students can have more successful experiences and enhance their sense of academic efficacy, so as to improve their academic engagement.

Keywords: academic engagement, future time perspective, academic self-efficacy, senior high school students

不同重要等级价值观在内隐自我和情感偏向上的差异

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摘要 采用单类内隐联想测验, 考察了高 vs 低重要等级价值观与内隐自我和内隐情感偏向之间的关系。研究发现: 高重要等级价值观词与自我属性词和积极情感属性词进行配对任务的反应时更快, 正确率更高, 说明其表现出自动的自我和积极情感偏向, 且这两种内隐偏向之间存在着显著的相关关系; 而低重要等级价值观不仅没有明显的自动情感偏向, 还在内隐水平上表现出与自我属性词不相容的趋势。该结果为价值观系统的等级结构特性提供了内隐加工层面的证据, 同时也为价值观认同的教育实践提供了理论依据。

关键词 单类内隐联想测验, 价值观, 等级结构性, 自我

Differences of Implicit Self and Emotional Preferences Among Values with Different Importance Hierarchies

Abstract: Values are belief systems through which people tell right from wrong, good from evil, and gain from loss. On the one hand, it's found from previous studies that values are closely related to people's self-concept and are accompanied by positive emotional tendency; on the other hand, it's found that values have a hierarchical structure, and that the values with different importance hierarchies show differences in mental representation and processing characteristics. Then, are there any differences among the values with different importance hierarchies in self and emotional preferences in terms of the level of implicit processing? Additionally is there a close relationship between the degrees of self and emotional preferences of the values with different importance hierarchies? To settle the above problems, two hypotheses are proposed in this study: (1) There are automatic self preference and positive emotional preference in high importance hierarchies of values, the correlation between the two implicit processing biases is significant, and the former is weaker than the latter; (2) These implicit processing biases only exist in the values with

high importance hierarchies, but for the values with low importance hierarchies, both implicit self and positive emotional preferences no longer exist. To test the above two hypotheses, firstly in this study, eight values with high/low importance hierarchies were determined through 231 college students' scores on SVS of Chinese version. Then, through the pattern of Single Category Implicit Association (SC-IAT), as subject, 78 college students were asked to accomplish tasks of quickly classifying the values with high/low importance hierarchies and the words of self attributes vs words of others' attributes and words of positive emotions vs words of negative emotions. According to research objectives, there are four types of tasks, named self SC-IAT tasks and emotional SC-IAT tasks on values with high/low importance hierarchies, respectively. Latin square equilibrium was carried out in the order in which each subject accomplished the four tasks. According to the research findings, the tasks of matching the words of values with high importance hierarchies with the words of self attributes and those of positive emotional attributes showed shorter reaction time and a higher accuracy rate (all $p \leq 0.001$). This indicated that they showed automatic self and positive emotional preferences and that the two kinds of implicit tendencies showed significant correlations ($r=0.42$, $p < 0.05$); while values with low importance hierarchies not only showed no obvious automatic emotional tendencies, but also showed a tendency of being incompatible with words of self attributes in terms of implicit level (it was manifested as the case that the speed and accuracy rate of its automatic connection with the words of others' attributes are higher than that with the words of self attributes, $p < 0.001$). In addition, the relationship between the two implicit biases in the values with high importance hierarchies no longer exists in the values with low importance hierarchies. The above results provide evidence on the implicit processing level for the hierarchical structure of the values system. It not only expands people's understanding of the internal organization construction mode of the values system, but also provides a theoretical reference for the educational practice of value identification.

Keywords: Single Category Implicit Association, values, importance hierarchies, self

多子未必多福：社会支持的助益及与子女同住的代价

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摘要 随着老龄化进程的加速，在中国孝道文化背景下，家庭成员（尤其是子女）支持在促进老年人幸福感方面显现出了十分重要的作用，但 20 世纪中期出生者大多育有多个子女，相较于单个子女赡养，多个子女赡养到底促进还是阻碍了老年父母幸福感的提升？也即子女数量影响老年人幸福感的内在机制如何？本研究旨在考查社会支持在子女数量影响老年人幸福感之间的中介作用，以及与子女同住的调节作用机制。对湖南省 10 个县的 459 名老年人进行问卷调查。受试者完成生活满意度量表、PANAS、领悟社会支持多维度量表和儿童数量及与儿童生活有关的条目。结果发现：儿童数对 PA 和 SWLS 有正向预测作用，对 NA 有负向预测作用。社会支持在子女数量对老年人幸福感的影响中起正向中介作用，而子女数量对社会支持的影响因与子女生活在一起而显著减弱。对于与孩子住在一起的老年人来说，有更多孩子的人从孩子那里感受到的社会支持较低，而只有一个孩子的老年人从孩子那里获得的社会支持更高。对于没有和孩子住在一起的老年人来说，情况正好相反。本研究对中国家庭子女赡养模式如何促进或阻碍中国老年人幸福感的潜在机制提供了初步的解释。此外，研究结果还为比较社会支持、政府支持和社区支持三种养老模式下有效提高老年人幸福感的机制提供了参考。

关键词 心理健康，社会支持，子女数量，与子女同住，生活安排

More Children, More Well-being for Chinese Elderly People: The Benefit of Social Support and the Price of Living with Children

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Abstract: This study evaluated the mediating role of social support between the number of children and the

well-being of Chinese elderly people and explored the moderating effect of living with children on the influence of the number of children on social support, which acted on the well-being of older Chinese people. A total of 459 older adults from ten counties located in central China were surveyed. The participants completed the Satisfaction With Life Scale, PANAS, and the Multidimensional Scale of Perceived Social Support and items about the number of children and living with children. The number of children positively predicted PA and SWLS and negatively predicted NA. Social support positively mediated the effect of the number of children on the well-being of elderly adults, and the influence of the number of children on social support was significantly moderated by living with children. For older adults who lived with their children, those with more children had lower perceived social support from their children, whereas respondents with only one child had higher social support from their child. For older adults who did not live with their children, the opposite was true. Our study provides a preliminary explanation of the underlying mechanism by which the Chinese children's support model of the family promotes or hinders the well-being of Chinese elderly people. Moreover, the findings provide a reference for the comparison of mechanisms to effectively improve the well-being of elderly adults under social support, government support, and community support pension models.

Keywords: psychological well-being, social support, number of children, living with children, living arrangement

大学生无聊倾向结构验证

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摘要 无聊是指个体面对贫乏的外部刺激和内部刺激时, 知觉到生活的无意义而产生的负性情绪体验。无聊倾向和认知失败、负性情绪以及手机成瘾、进食问题等行为问题有显著正相关关系。大学生自我掌控的时间增多, 缺乏合理引导容易感知到短暂的无聊, 而反复发生的状态型无聊会促使个体形成潜在的特质型无聊。目前无聊倾向的测量工具将无聊倾向划分为外部倾向和内部倾向, 是一种特质观, 这种观点强调无聊在个体间量的差异, 以变量为中心, 采取加总和的方式, 只能笼统的得到一个无聊倾向高或低的结论。类型观通过划分类别来表征不同心理类型, 仅仅考虑到群体间无聊倾向质的差异, 容易出现强制将大学生划分到不同类别的情况, 出现虚假分类的情形。对此研究者提出可以采用因子混合模型加以解决, 因子混合模型(Factor Mixture Model, FMM)通过同时抽取两种潜变量来解释观测指标间的关联, 既具备因子分析的优势, 也具有潜剖面分析的优点。研究使用中文版无聊倾向量表对大学生进行调查, 共收回有效问卷 596 份。结果表明: 因子模型的最佳模型为两因子模型, BIC=19106.20; 潜剖面模型的最佳模型为三类别模型, 分别命名为混乱型(17.45%)、外倾型(15.94%)、平衡型(66.61%), BIC=19987.02; 潜类别因子模型的最佳模型为三类别两因子模型, BIC=19008.03; 因子混合模型的最佳模型为限定因子负荷等值, 方差和协方差等值, 各类别因子均值自由估计的模型, BIC=19035.80。根据研究建议, 可以通过 BIC 比较最优模型, 因此三类别两因子模型为最佳模型, 各类别情况如下: 混乱型(15.18%)、外倾型(10.35%)、平衡型(74.47%)。这表明, 大学生无聊倾向的差异可以从维度和类型框架出发, 即大学生无聊倾向不仅在潜在结构上是连续的, 同时在不同类别上也是存在差异的, 也就是说, 大学生无聊倾向既存在质的差异, 也存在量的差异。这为后续对大学生无聊的研究提供了另一种视角, 同时也可以为大学生无聊的干预提供一定依据。

关键词 无聊倾向, 因子模型, 潜剖面模型, 因子混合模型

Study on the Structure of College Students' Boredom Proneness

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Abstract: Boredom refers to the negative emotional when individuals experience meaninglessness in face of poor external and internal stimuli. Boredom was positively correlated with cognitive failure, negative emotion, and

behavioral problems, such as mobile-phone addiction and eating problems. College students have more time to control themselves, and lack of reasonable guidance, they are easy to perceive transient boredom, while the repeated state-type boredom will promote the formation of potential trait boredom. At present, the measurement tool of boredom divided it into external tendency and internal tendency, which is a kind of trait theory. This point of theory emphasizes the difference in degree, so researchers by taking variables as the center and adopting the way of sum. By this way, researchers can only draw a general conclusion that boredom is high or low. For type theory, it can represent different psychological types by classifying classes. It considers only the difference in kind, so it is easy to force college students to be divided into different classes and false classification occurs. In order to solve this problem, the Factor Mixture Model (FMM) proposed by researchers. This model explains the correlation between observation indexes by simultaneously extracting two latent variables, which has the advantages of both factor model and latent profile model. Boredom Tendency Inventory was used to investigate college students, and totally 596 valid questionnaires were collected in this study. The results show that the best factor model is two-factor model, $BIC=19106.20$; The optimal latent profile model is three-class model which were named as chaotic (17.45%), extroverted (15.94%) and balanced (66.61%), respectively, $BIC=19987.02$. Then, the best model of latent class factor model is three-class two-factor model, and $BIC=19008.03$. Finally, the optimal factor mixture model is the model which limited factor loading equivalence, variance and covariance equivalence, and free estimation of the mean value of all kinds of factors, the BIC is 19035.80. According to the suggestion, the optimal model can be compared by BIC, so the best model in this study is three-class of two-factor model, and importantly, the classes are as follows: chaotic class (15.18%), extroverted class (10.35%) and balanced class (74.47%). It indicates that the difference of boredom can be set out from the dimension and class framework, that is, boredom is not only continuous in the potential structure, but also different in class. That is to say, there are qualitative and quantitative difference in boredom of college students. The study suggests that results provide another perspective for follow-up research on college students' boredom, and also provide a certain basis for the intervention of college students' boredom.

Keywords: Boredom Proneness, Factor Model, Profile Latent Model, Factor Mixture Model

个体评价自我与评价非自我的神经电生理差异

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摘要 评价自我和评价非自我是个体对自身或他人能力和社会适应能力的主观判断, 对身心健康具有特殊意义。本研究通过事件相关电位来考察个体在进行自我-非自我褒贬评价时的脑电活动变化, 从而探讨评价过程中的认知特点。本研究采用 2 (评价目标: 评价自我、评价非自我) $\times 3$ (情绪效价: 正性、中性、负性) 的被试内设计。实验分为评价自我阶段和评价非自我(实验主试)阶段, 通过改编自我参照判断任务, 要求被试判断不同情绪效价的人格特质词汇(选自汉语情感词汇系统)是否符合自我或非自我。行为结果表明, 在对不同情绪效价的词汇评价中, 中性词汇所用的反应时更长 [$F(2, 43)=88.5, p<0.001$], 相比于评价非自我, 个体评价自我的反应时更长 [$F(1, 43)=73.3, p<0.001$]。脑电结果表明, 情绪效价的主效应显著, 消极词汇评价诱发一个更大的 $P600$ [$F(2, 86)=8.1, p<0.01$], 而中性词汇评价下的 $P600$ 潜伏期更长 [$F(2, 86)=7.3, p<0.01$]。评价目标的主效应也显著, 个体在评价自我时诱发出一个更大的 $N400$ [$F(1, 43)=15.8, p<0.001$], 在评价非自我时诱发出一个更大的 $P600$ [$F(1, 43)=8.4, p<0.01$]。此外, 两因素间的交互作用显著, 简单效应分析结果表明, 在评价自我过程中, 个体进行消极评价时会诱发出更大的 $P600$ [$F(2, 42)=3.21, p<0.01$]。根据提取整合模型, $N400$ 反映了多种信息从长时记忆中的提取困难, $P600$ 反映了各种词汇信息整合的困难。综上所述, 在评价过程中, 个体会优先加工具有情感色彩的词汇(尤其是负性词汇)。此外, 个体评价自我和评价非自我是分离的, 该过程会受到情绪效价的影响, 具体地说, 人们更倾向于积极地评价自己。

关键词 评价自我, 评价非自我, 自我积极倾向, 提取整合模型

The difference between individual self-evaluation and other-evaluation in neuroelectrophysiology

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Abstract: Self-evaluation is an individual's subjective judgment of his/her own ability which has special significance for physical and mental health. This study wanted to examine the changes in brain electrical activity undergoing in self-evaluation and other-evaluation of individuals. Subjects were asked to judge whether the emotional vocabulary (selected from the Chinese affective words system) matched themselves and the other. The behavioral results showed that the response time of neutral words was longer than that of the positive and negative words, and the response time for individuals to evaluate themselves was longer than for the other. The EEG results revealed that self-evaluation induced the more negative N400 amplitudes than other-evaluation, while other-evaluation evoked the more positive P600 amplitudes. Furthermore, self-negative condition induced the larger P600 amplitudes than self-positive and self-neutral condition. In addition, neutral words induced the longer P600 latency than positive and negative words. According to Retrieval-Integration model, the N400 component reflects the difficulty in retrieving a variety of information such as semantic, syntactic and pragmatic from long-term memory, and the P600 component indexes the difficulty of integrating various information. In conclusion, in the process of evaluation, individuals will give priority to processing emotional vocabulary (especially negative vocabulary). In addition, individual self-evaluation and other-evaluation are separated in neuroelectrophysiological, and emotion affects this process, specifically, people tend to evaluate themselves positively.

Keywords: self-evaluation, other-evaluation, the self-positivity bias, Retrieval-Integration model

大学生人格特质、情绪调节策略与攻击性行为之间的关系

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摘要 目的: 当个体对当前环境所提供的信息和自己过去的知识经验相结合时, 若采用不适当的情绪调节策略, 则容易产生攻击性行为, 且个体的人格特质具有独特性和稳定性, 表现出来的行为具有跨时间和跨情境的一致性。本研究主要探讨大学生人格特质、情绪调节策略与攻击性行为之间的关系, 从而为降低大学生的负性行为提供思路和解决办法。**方法:** 采用《简版大五人格测验》、《情绪调节问卷》以及《攻击性问卷》对 388 名被试进行问卷调查, 其中剔除无效数据 34 份, 得到 354 份有效数据, 通过 SPSS21.0 进行相关分析及中介效应分析。**结果:** (1) 性别差异显著, 女生更多使用认知重评策略, 而男生大多选择表达抑制策略, 女大学生的身体攻击性行为少于男大学生。(2) 认知重评与攻击性行为呈显著负相关 ($r=-0.167, p=0.002$), 与人格特质的适应性 ($r=0.189, p=0.000$)、开放性 ($r=0.212, p=0.000$)、利他性 ($r=0.144, p=0.007$) 和道德感 ($r=0.150, p=0.005$) 四个维度呈显著正相关, 表达抑制与攻击性行为的言语攻击性 ($r=-0.106, p=0.047$) 和愤怒 ($r=-0.119, p=0.000$) 两个分维度呈显著负相关。(3) 人格特质的适应性 ($\beta=0.015, p=0.006$)、利他性 ($\beta=0.010, p=0.003$)、道德性 ($\beta=0.017, p=0.001$) 三个维度通过认知重评的中介作用对攻击性行为产生影响。(4) “适应性—认知重评—攻击性行为”、“利他性—认知重评—攻击性行为”、“道德性—认知重评—攻击性行为”这三个中介效应的后半段均受到性别的影响, 相较于男性, 认知重评对女生的攻击性行为的影响更大。结论: 适应性、开放性、利他性和道德感较高的大学生倾向于采用认知重评策略, 表现出较少的攻击性行为, 并且女生使用该策略的频率要高于男生。

关键词 人格特质, 情绪调节, 认知重评, 表达抑制, 攻击性行为

The relationship between personality traits, emotion regulation strategies and aggressive behaviors in college students

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Abstract: Purpose: When an individual combines the information provided by the current environment with his/her past knowledge and experience, if he/she adopts inappropriate emotional regulation strategies, it is easy to produce aggressive behaviors. Moreover, the personality traits of the individual are unique and stable, and the behaviors displayed are consistent across time and context. This study mainly discussed the relationship between personality traits, emotional regulation strategies and aggressive behaviors of college students, so as to provide ideas and solutions for reducing negative behaviors of college students. **Methods:** A questionnaire survey was conducted on 388 subjects using the Simple Version of big Five Personality Test, Emotion Regulation Questionnaire and Aggression Questionnaire. Among them, 34 invalid data were removed and 354 valid data were obtained. Correlation analysis and mediating effect analysis were conducted by SPSS21.0. **Results:**(1) gender difference was significant. Female students used more cognitive reappraisal strategies, while male students mostly chose expression inhibition strategies. Female students had less physical aggressive behaviors than male students. (2) Cognitive reappraisal was negatively correlated with aggressive behavior ($r=-0.167, p=0.002$), and positively correlated with adaptability ($r=0.189, p=0.000$), openness ($r=0.212, p=0.000$), altruism ($r=0.144, p=0.007$) and moral sense ($r=0.150, p=0.005$) of personality traits. Expression inhibition was negatively correlated with verbal aggression and anger of aggressive behavior. (3) The adaptability ($\beta=0.015, p=0.006$), altruism ($\beta=0.010, p=0.003$) and morality ($\beta=0.017, p=0.001$) of personality traits influence aggressive behaviors through the mediating effect of cognitive reappraisal. (4) The latter half of the three mediating effects of "adaptability -- cognitive reappraisal -- aggressive behavior", "altruism -- cognitive reappraisal -- aggressive behavior" and "morality-Cognitive reappraisal -- aggressive behavior" are all affected by gender. Compared with men, cognitive reappraisal has a greater impact on girls' aggressive behavior. **Conclusion:** College students with higher adaptability, openness, altruism and moral sense tended to adopt cognitive reappraisal strategy and showed less aggressive behavior. Female students used this strategy more frequently than male students.

Keywords: Personality traits, Emotion regulation, Cognitive reappraisal, Expressive suppression, Aggressive behavior

物质主义对关系自尊的影响：领悟社会支持和关系需要满足的链式中介作用

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摘要 关系自尊是个体对其在重要他人的关系中所感知到的自我价值。以往研究揭示了关系自尊在心理幸福感和恐惧管理中的独特作用。中国人重视关系, 并且将重要他人纳入自我概念之中。因此, 对于中国人而言, 关系自尊可能是影响个体心理极为重要的变量。物质主义是强调个体对物质财富重视程度的一种价值观。前人研究发现了物质主义对个体人际关系及其满意度的负面影响, 但还未有研究探讨过物质主义对关系自尊的影响。本研究探讨了物质主义对关系自尊的负面影响, 以及领悟社会支持和关系需要满足的链式中介作用。采用物质主义量表、领悟社会支持量表、关系需要分量表以及关系自尊量表, 通过在线平台对 419 名大学生进行调查, 使用 SPSS25.0 和 Process 插件对数据进行处理和分析。相关分析表明: (1) 物质主义与关系自尊、领悟社会支持、关系需要满足均为显著负相关; (2) 领悟社会支持、关系需要满足和关系自尊两两之间显著

正相关。中介分析表明：（1）领悟社会支持在物质主义和关系自尊之间起中介作用；（2）关系需要满足在物质主义和关系自尊之间起中介作用；（3）领悟社会支持→关系需要满足的链式中介作用成立。本研究一方面首次探讨了物质主义对关系自尊的影响及其内在机制，丰富了相关变量的研究内容，另一方面启示学校心理健康教育中既要重视引导学生形成良好的价值观，也要重视良好人际关系对关系自尊的积极影响。

关键词 物质主义，关系自尊，领悟社会支持，关系需要满足

The Effect of Materialism on Relational Self-esteem: The Chain Mediating Effects of Perceived Social Support and Relatedness Need Satisfaction

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Abstract: Relational self-esteem is individual's perceived self-worth in their relationships with important others. Previous studies have revealed the unique role of relational self-esteem in psychological well-being and terror management. China stresses relationships and Chinese people include important others in their self-concept, this suggests that relational self-esteem may be a more important psychological variable for the Chinese. Materialism is a value that emphasizes the importance individuals attach to material wealth. Previous scholars have found the negative impact of materialism on individual interpersonal relationships and satisfaction, but no research has explored the impact of materialism on relational self-esteem. This study explored the negative effect of materialism on relational self-esteem, and the chain mediating roles of perceived social support and relatedness need satisfaction. Totally 419 university students completed online survey and they were assessed with materialism value scale, perceived social support, relatedness need subscale and relational self-esteem scale. SPSS 25.0 and Process macro were used to analyze data. Correlation analysis showed that: (1) Materialism was negatively correlated with relational self-esteem, perceived social support, and relatedness need satisfaction; (2) The relationship between social support, relatedness need satisfaction and relational self-esteem are all significantly positive. Mediation analysis showed that : (1) perceived social support mediated the relationship between materialism and relational self-esteem; (2) Relatedness need satisfaction mediated the relationship between materialism and relational self-esteem; (3) The chain mediating effect of perceived social support and relatedness need satisfaction was supported. On the one hand, this study first discusses materialism's influence on relational self-esteem and explores its internal mechanism, enriches the research contents of relevant variables. On the other hand, this study suggests school mental health education should not only attach importance to guide students to form good values, but also pay attention to good interpersonal relationships that have positively influenced on relational self-esteem.

Keywords: materialism, relational self-esteem, perceived social support, relatedness need satisfaction

羞怯的认知神经机制

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摘要 羞怯是个体在陌生社会情境或感知社会评价条件下会表现出恐惧和抑制的一种特质，其与诸多适应问题相关，会影响个体的日常生活。因此，探讨羞怯的认知神经机制可以为其更易产生适应问题提供神经生理解释，并能为之对应的干预措施提供科学依据，具有重要的理论与实践意义。本研究通过梳理羞怯领域采用认知神经科学技术的相关成果，如脑电图、功能性磁共振成像、弥散张量成像等，发现羞怯个体在注意、情绪体验、情绪调节上均与非羞怯个体存在差异。具体而言，羞怯的认知神经机制涉及的脑区包含额叶、顶叶、颞叶、边缘系统等脑区，在结构、功能连接、不同任务的激活状态中表现出不同：面对社会评价时，羞怯个体额叶和顶叶表现出注意警觉；在面对情绪威胁时，羞怯个体各脑区既存在对于情绪威胁的过度注意，

也存在警觉过后对于威胁的回避；羞怯个体对负向情绪体验更敏感，且拥有更强的情绪体验，表现为静息态右额脑电偏侧化，脑区更高的灰质密度和任务态时脑区更明显的激活程度；羞怯个体的情绪调节能力较差，表现为边缘系统白质纤维术结构损伤、脑区不适应的功能连接。未来研究仍需从羞怯亚类型、羞怯的个体差异与文化差异，增加多模态数据分析方法进一步深入全面揭示羞怯的认知神经机制。

关键词 羞怯，社会退缩，认知神经机制，适应问题

The Cognitive and Neural Mechanisms of Shyness

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Abstract: Shyness is a trait that individuals will show fear and inhibition in unfamiliar social situations or perceived social evaluation conditions, which may bring about many adjustment problems and affect individual's normal life. Therefore, exploring the cognitive and neural mechanisms of shyness has important theoretical and practical significance, which can help explain the reason why shy individuals generate adjustment problems more easily and provide scientific basis for corresponding interventions. This study sorts out the related achievements of cognitive neuroscience technology in the field of shyness, such as electroencephalogram, functional magnetic resonance imaging, diffusion tensor imaging, and finds that there are differences between shy individuals and non-shy individuals in attention, emotional experience, and emotional regulation. Specifically, the brain areas involved in the cognitive and neural mechanism of shyness include the frontal lobe, parietal lobe, temporal lobe, limbic system and other brain areas, which show differences in structure, functional connection, and activation of different tasks: When faced with social evaluation, the frontal and parietal lobe of the shy individuals showed attentional alertness. When faced with emotional threats, brain areas of the shy individuals showed either excessive attention or avoidance of threats after being alert; the shy individuals are inclined to negative Emotional experience and have stronger emotional experience, manifested as the lateralization of the right frontal in the resting state, higher gray matter density in the brain area and more obvious activation of the brain area in the task state; The emotional adjustment ability of shy individuals is poor, which is manifested by the structural damage of the limbic system white matter fibers and the unsuitable functional connection of the brain area. Future researches need to use multi-modal data analysis methods to further reveal the cognitive and neural mechanism of shyness from the subtypes of shyness, individual differences and cultural differences.

Keywords: shyness, social withdrawal, cognitive and neural mechanisms, adjustment problems

特质敬畏与群际亲社会行为的关系：自我超越和全人类认同的作用

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摘要 目的：近年来，敬畏作为一种关于道德和审美的情绪体验正受到心理学界的广泛关注。敬畏是指当我们面对那些广阔的、浩大的以及超越我们当前理解范围的事物时产生的混合了困惑、惊奇、钦佩、服从等多种感觉的复杂情绪体验。它通常被划分为状态性和特质性两类，其中特质敬畏强调敬畏的个体差异性，指个体易于产生和体验敬畏的一种总体倾向。以往研究已经从人际层面广泛探讨了特质敬畏的亲社会后果，如更高的捐助意愿、更多的合作行为及亲环境倾向等。然而，考虑到当今全球化进程的加快和群际交互作用的日益增强，从群际亲社会行为角度去探讨其与特质敬畏之间的关系则相对匮乏，因此，有必要考察高特质敬畏者是否对外群体成员也表现出同样的亲社会行为，及其潜在的作用机制。本研究拟基于修正后的“小我”假设，旨在考察特质敬畏对大学生群际亲社会行为的影响，以及自我超越和全人类认同在其中的作用。**方法：**采用问卷法，方便选取 648 名在校大学生，使其完成有关人口学变量、特质敬畏、自我超越、全人类认同及群际亲社会行为的调查。**结果：**在控制个体的性别、年龄和家庭社会经济地位之后：（1）特质敬畏能够正向预测群际亲社会行为；（2）自我超越和全人类认同在特质敬畏和群际亲社会行为之间分别发挥中介作用；（3）

自我超越和全人类认同能够在特质敬畏和群际亲社会行为之间起链式中介作用。**结论：**敬畏的亲社会效应除注意力转移（从自我关注转向他人）外，还包含一个人对自我及自我动机更深层次的理解。常怀敬畏之心能促进个体自我转变（如自我超越），并可能认同自己是全人类群体中的一员，这有助于对外群体成员表现出更多的亲社会行为。这些发现不仅丰富了特质敬畏的亲社会效应的解释视角，而且有益于群际关系的和谐。

关键词 群际亲社会行为，特质敬畏，自我超越，全人类认同，大学生

Dispositional Awe and Intergroup prosocial behavior among Chinese Adolescents: The Mediating Roles of Self-transcendence and Identity with All Humanity

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Abstract: Objective: Recently, awe as a kind of moral and aesthetic emotional experience has been gradually concerned by psychological researchers. Awe is defined as a complex emotional experience of confusion, surprise, admiration, and obedience that arises when we are faced with something vast, vast and beyond our current understanding. Awe is usually classified as either a state or a trait. Among them, dispositional awe emphasizes the individual difference of awe, which refers to a general tendency of individuals to produce and experience awe. Previous studies have widely examined the prosocial consequences of dispositional awe at the interpersonal level, such as higher donate inclination, more cooperative behavior, and pro-environment tendencies. However, considering the accelerated process of globalization and the increasing interaction of intergroup, the relationship between dispositional awe and intergroup prosocial behavior is relatively lacking. Therefore, it is necessary to investigate whether people with high dispositional awe show the same prosocial behavior for outgroup members, as well as potential mechanisms. Based on the modified “small-self hypothesis”, we aim to test the influence of dispositional awe on intergroup prosocial behavior among college students, and the role of self-transcendence and identity with all humanity. **Methods:** A total of 648 college students were recruited randomly to participate this survey voluntarily. They provided self-reported data on demographic variables, dispositional awe, self-transcendence, identity with all humanity, and intergroup prosocial behavior scale. **Results:** After controlling for gender, age, and family socioeconomic status, (1) dispositional awe was positively predicted intergroup prosocial behavior; (2) Self-transcendence and identity with all humanity mediated the relation between dispositional awe and intergroup prosocial behavior, respectively; (3) Self-transcendence and identity with all humanity sequential mediated this association between dispositional awe and intergroup prosocial behavior. **Conclusion:** The prosocial effects of awe include not only a shift in attention (from focusing on myself to others), but also a deeper understanding of one's self and self-motivation. Constant awe can promote one's self-transformation (e.g., self-transcendence), and may identify themselves as a member of all humanity, which induces more prosocial behavior for outgroup members. These findings not only enrich the explanatory perspectives of the prosocial effects of awe, but also benefit the harmony of intergroup relations.

Keywords: Dispositional awe, Intergroup prosocial behavior, Self-transcendence, Identity with All Humanity, College students

向死而生——死亡反省对存在幸福感的影响：一个链式中介模型

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摘要 新冠肺炎爆发以来，全世界都正在经历一场生死考验。疫情对个体生命的威胁除了引发个体强烈的死亡焦虑之外，随着时间的推移，也会引发个体对于死亡的反省。死亡反省是个体对于死亡进行思考的认知

过程，它侧重于死亡的积极方面并且包含了实现其积极方面的具体行为意图。已有少量研究揭示了死亡反省的积极效应，这其中包括幸福感。但是以往研究并未探讨与死亡和生命密切相关的存在幸福感与死亡反省的关系。存在幸福感是个体对生命、生活所产生的意义感、价值感和满意度。本研究拟探讨死亡反省对存在幸福感的影响以及敬畏和关系自尊的链式中介作用。使用死亡反省量表、敬畏情绪量表、关系自尊量表和存在幸福感分量表、对 675 名大学生进行调查，使用 SPSS25.0 和 Process 插件对数据进行处理和分析。相关分析表明：死亡反省、敬畏、关系自尊、存在幸福感两两之间显著正相关。中介分析表明：（1）敬畏在死亡反省和存在幸福感之间起中介作用，中介效应占总效应的 32%；（2）关系自尊在死亡反省和存在幸福感之间起中介作用，中介占总效应的 19%；（3）敬畏和关系自尊的链式中介作用成立，中介效应占总效应的 29%。本研究不仅在理论上丰富了死亡反省积极效应的研究内容，对于后疫情时期引导民众心理重建和恢复也具有重要的实践价值。

关键词 死亡反省，敬畏，关系自尊，存在幸福感

Being towards Death——The Influence of Death Reflection on Existential Well-being: A Chain Mediating Model

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Abstract: Since the outbreak of COVID-19, the world has been going through a test of life and death. The threat of COVID-19 outbreak to individuals not only caused intense death anxiety, but also caused reflection on death over time. Death reflection refers to an individual's deliberate cognitive processing of mortality. It focuses on the positive aspects of death and encompasses concrete behavioral intentions to realize such positive aspects. A few studies have shown the positive effects of death reflection, including well-being. However, previous studies have not explored the relationship between death reflection and existential well-being which is closely related to death and life. Existential well-being is the sense of meaning, value and satisfaction of individual life. The purpose of this study was to explore the effects of death reflection on existential well-being and the chain mediating role of awe and relational self-esteem. A total of 675 university students completed death reflection scale, awe scale, relational self-esteem scale and existential well-being subscale. SPSS 25.0 and Process macro were used to process and analyze the data. Correlation analysis showed that death reflection, awe, relational self-esteem and existential well-being were positively correlated with each other. Mediation analysis showed that: (1) Awe mediated the relationship between death reflection and existential well-being, accounting for 32% of the total effect; (2) Relational self-esteem played a mediating role between death reflection and existential well-being, accounting for 19% of the total effect; (3) The chain mediating effect of awe and relational self-esteem was supported, and the mediating effect accounted for 29% of the total effect. This study not only enriches the research content of the positive effects of death reflection in theory, but also has important practical value for guiding people's psychological reconstruction and recovery in the post-epidemic period.

Keywords: death reflection, awe, relational self-esteem, existential well-being

5.15“工程心理学专业委员会”分组展贴报告

刷新训练对自动化飞行过程中认知锁定的改善

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摘要 认知锁定是指在连续性自动化故障过程中，由于第一个故障出现后寻找线索对其进行判断与处理，

导致对第二个和后续若干个连续性自动化故障的反应延迟现象。认知锁定导致飞行员不能及时对连续性自动化故障进行分析与处理，从而对飞行安全构成威胁。在自动化飞行过程中，飞行员需要监控仪表状态、警报声音以及注意空管指令等，这种多任务状态容易导致认知狭窄。研究表明，具有较高工作记忆能力的飞行员能够最大限度避免认知狭窄。那么，飞行员的工作记忆能力提升能否避免认知锁定？刷新是工作记忆执行功能的重要成分之一，能够实现信息的不断更新与处理，且与高级认知功能之间的联系最为紧密。刷新训练不仅能够提高工作记忆能力，其提升效果还能够迁移到其它认知功能之中。因此，本研究旨在探讨工作记忆刷新功能对自动化飞行过程中认知锁定的影响以及刷新训练能否改善认知锁定。实验一探讨刷新能力高低能否预测认知锁定。被试在实验过程中分别执行 n-back 任务和自动化仪表故障监测任务。实验呈现动态的主仪表显示和飞机引擎仪表显示，要求被试判断主仪表显示和引擎仪表显示是否出现故障、按下出现故障的仪表编号以及按键做出故障处理。结果表明，与刷新能力较低的个体相比，刷新能力较高的个体对连续性自动化故障监测和处理的准确性较高和速度较快，且出现认知锁定的频次较少。实验二探讨刷新训练能否改善认知锁定。训练组进行为期 2 周的自适应视听双 n-back，控制组进行非自适应单 n-back 任务，采集两组被试训练前后的刷新能力和自动化故障反应处理能力。预测实验结果为，刷新训练提升了工作记忆能力，其提升效果能够迁移到自动化故障处理能力之中，从而减少认知锁定现象的出现。

关键词 认知锁定，连续性自动化故障，工作记忆，刷新功能，训练

Updating training reduce cognitive lock-up during the automated flying

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Abstract: Cognitive lock-up refers to human sometimes continue thinking about the first automation failure and delays response to the second and consecutive failures. Pilots cannot analyze and deal with consecutive automation failures in time because of cognitive lock-up, which poses a threat to flight safety. Pilots always need monitor instrument, alert and pay attention to air-traffic controllers' command, which induce cognitive tunneling. Studies indicated that pilots with higher working memory capacity can minimize cognitive tunneling. Thus, it is unknown whether improving working memory can avoid cognitive lock-up. Updating is an important part of executive function, which is associated with higher cognitive ability and have a key role in constant updating and processing of information. Updating training not only improve working memory, but also transfer to other cognitive functions. Therefore, the current study aimed to investigate whether updating ability influence cognitive lock-up and updating training can reduce cognitive lock-up. Experiment 1 explored whether updating ability can predict cognitive lock-up. Participants were required to perform n-back task and consecutive automation failures monitoring task. The dynamic primary flight display and engine warning display were presented on the computer, participants need to identify failures, press the number of failures and deal with failures as soon as possible. The results showed that the accuracy of identifying consecutive automation failures was higher and the speed of deal with consecutive automation failures was faster in participants with higher updating ability relative to lower performers. The frequency of cognitive lock-up was reduced in higher performers. Experiment 2 explored whether updating training can reduce cognitive lock-up. Participants were divided into adaptive training group and control group, respectively. The training group performed dual n-back tasks lasted for two weeks and control group performed non-adaptive single n-back tasks. The updating capacity and ability of identifying consecutive automation failures were measured before and after updating training. The results predict that updating training can not only improve working memory, but also enhance the ability of identifying and deal with consecutive automation failures. Besides, updating training can reduce cognitive lock-up.

Keywords: cognitive lock-up, consecutive automation failures, working memory, updating function, training

疫情下影响航空安全的飞行员心理因素——基于 ASRS 的文本分析

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摘要 新冠疫情持续所带来的不确定性和低预测性, 不仅让全球航空业在经济上遭受打击, 还有可能对航空安全造成严重的负面影响。航空安全是一个复杂的系统, 飞行员的心理因素正在其中扮演越来越重要的角色, 而疫情给航空业带来的限制和变数, 如相关政策多变、疫情处置方式不统一、飞行员飞行频率不确定等, 在一定程度上加剧了飞行员的心理波动, 导致飞行员的心理因素进一步威胁到航空安全, 增加了航空不安全事件的发生概率。因此, 深入分析与疫情相关的航空不安全事件, 挖掘与飞行员相关且影响事件发生概率的心理因素, 探讨飞行员心理因素与不安全事件严重程度的关系, 对在重大公共卫生事件背景下提升我国航空安全水平、减少航空领域的不安全事件有重大意义。本研究对美国航空安全报告系统 (ASRS) 中关于“COVID-19”的报告进行文本分析, 报告的时间选取范围为 2020 年 3 月 1 日-2020 年 12 月 31 日, 采用人因分析和分类系统 (HFACS) 对事件原因进行定性分析。结果发现: (1) 共筛选出与新冠疫情明显相关的不安全事件 199 起, 其中, 6 月发生的不安全事件最多, 占总数的 19%, 6 月后的事件发生数呈波动下降趋势并与美国确诊趋势呈大致负相关; (2) 199 起事件中, 183 起与飞行员心理因素相关 (91.96%), 发生率排前五的心理因素为: 过度自信 (48.74%)、困惑 (23.12%)、分心 (16.68%)、期望偏差 (14.07%) 与注意力不集中 (10.55%); (3) “精神疲惫 (倦怠)、任务过饱和/欠饱和、生活压力过大”这三种心理因素倾向于诱发更严重的不安全事件; (4) “任务过饱和/欠饱和”发生在通用航空飞行员上的概率显著高于其他类型飞行员, 而民航航线客机和大型货机的飞行员更容易产生精神疲惫 (倦怠)。基于此, 本研究认为及时调整飞行员在后疫情时期的心理稳态对减少飞行员的不安全行为、降低事故发生率具有重要意义, 未来研究可以进一步探讨社会公共因素对飞行员的安全态度及安全行为产生的影响, 以及飞行情境、工作特征和任务特性影响飞行人员人格特征的内部机制。

关键词 航空安全, 疫情, 飞行员心理因素

Psychological factors of pilots affecting aviation safety under COVID-19: text analysis based on ASRS

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Abstract: The uncertainty and low predictability brought by the COVID-19 continue to not only cause economic damage to the global aviation industry, but also have a serious negative impact on aviation safety. Aviation safety is a complex system, in which the psychological factors of pilots are playing a more and more important role. The restrictions and variables brought by the epidemic to the aviation industry, such as changeable relevant policies, inconsistent treatment methods of the epidemic and uncertain flight frequency of pilots, have exacerbated the psychological fluctuations of pilots to a certain extent. The psychological factors of pilots further threaten aviation safety and increase the probability of aviation unsafe events. Therefore, in-depth analysis of aviation unsafe events related to the epidemic situation, mining the psychological factors related to pilots and affecting the probability of events, and exploring the relationship between pilots' psychological factors and the severity of unsafe events are of great significance to improve China's aviation safety level and reduce unsafe events in the aviation field under the background of major public health events. This study analyzes the text of the report on "COVID-19" in American aviation safety reporting system (ASRS). The time range of the report is from March 1, 2020 to December 31, 2020. The human factor analysis and classification system (HFACS) is used to qualitatively analyze the cause of the event. The results were as follows: (1) 199 unsafe incidents which were significantly associated with COVID-19 were screened out. Among them, the most unsafe incidents occurred in June, accounting for 19% of the total, and the number of events after June showed a downward trend and was negatively correlated with the trend of diagnosis in the United States. (2) Among the 199 incidents, 183 were related to pilots' psychological factors (91.96%). The top

five psychological factors were Overconfidence (48.74%), Confusion (23.12%), Distraction (16.68%), Inaccurate expectation (14.07%) and Not paying attention (10.55%). (3) "Mental exhausted (burnout), Task over-saturation / under-saturation and Life stress" tend to induce more serious unsafe events. (4) The probability of "Task over-saturation / under-saturation" in general aviation pilots is significantly higher than that in other types of pilots, while pilots of civil aviation airliners and large cargo aircraft are more prone to Mental exhausted (burnout). Based on this, this study believes that timely adjustment of pilots' psychological homeostasis in the post epidemic period is of great significance to reduce pilots' unsafe behavior and reduce the incidence of accidents. Future research can further explore the impact of social public factors on pilots' safety attitude and safety behavior, as well as the internal mechanism of flight situation, work characteristics and task characteristics affecting pilots' personality characteristics.

keywords: aviation safety, COVID-19, pilots' psychological factors

国外态势感知在心理学领域的现状和发展趋势 ——基于 CiteSpace 的知识图谱分析

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摘要 态势感知是人机环境系统中最为核心的概念之一, 对个体或群体的决策与行动具有重要价值。在航空航天心理学领域, 态势感知是维护安全的主要因素, 长期受到国内外的广泛关注。因此, 为了进一步了解态势感知在国外的最新进展, 以探讨未来的研究方向, 追溯了 1953 年至今于 ISI Web of Science 数据库中收录的 19001 篇文献, 通过描述性分析发现国外态势感知的文章数量截至 2020 年为止, 呈逐年递增的趋势, 研究方向主要涉及工程学、计算机科学和心理学, 而教育学、经济学、环境学、社会学等内容在态势感知的总体分布中平均低于 10% 的覆盖率。基于此, 以“Psychology”为筛选标准, 对态势感知的文献进行优化细分, 得到 1980 篇原始数据, 通过 CiteSpace 绘制态势感知心理学研究的结构框架图与发展进程谱能够获得与态势感知相关的高学术影响力期刊、被引作者、作者、机构与经典文献, 此外, 还描绘了不同时期的热点问题、研究前沿和发展趋势。研究发现, 在期刊共被引分析中, Human Factors 是被引频次最高的期刊, Behavioral Sciences 是中心性最高的期刊, 而被引频次与中心性均较高的是 Journal of Personality and Social Psychology 和 Psychological Review, 其期刊定位涵盖了神经科学、认知科学、行为生物学、行为遗传学、人因学、人格社会心理学和理论心理学等诸多领域; 在作者共被引分析中, Endsley MR 的被引频次最高, Bassili JN 的中心性最高, 而 Bandura A 和 Norman DA 的两个指标均位于前列; 此外, 在作者与机构合作分析中, 未发现作者群的存在, 虽有一部分的合作团队, 但都仅限于两人交流, 且不存在具有中心性的作者, 合作力量十分薄弱, 同样, 在机构合作情况中仅有 Radboud University Nijmegen 与 University of Twente 的合作最为紧密, 是中心性最高的机构, 许多机构节点只具有两两合作的关系; 在文献共被引分析中缺乏具有显著影响力的文献; 而在关键词共现和聚类分析中, 聚类结构显著且令人信服, 该领域围绕 Consciousness、Mindfulness、Interoception、Accuracy、Attention、Vehicle automation、Driving、Self-regulation、Situation awareness、Teamwork、Anxiety 等 11 个主题展开, 其中, awareness 和 attention 是研究热点, adolescent 和 perception 的中心性显著。因此, 未来研究需要进一步夯实理论, 加强合作, 提高文献影响力并关注行为研究与其他重要主题。

关键词 态势感知, CiteSpace, 信息可视化, 知识图谱, 文献计量分析

Current situation and development trend of situation awareness in psychology abroad: knowledge graph analysis based on CiteSpace

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Abstract: Situational awareness is one of the core concepts in man-machine environment system. It is of great value to individual or group decision-making and action. In the field of aerospace psychology, situational awareness is the main factor to maintain security, which has been widely concerned at home and abroad for a long time. Therefore, in

order to further analyze the latest research progress of situational awareness abroad, so as to explore the future research direction. This study traces 19001 literatures collected in ISI Web of Science database from 1953 to now. Through descriptive analysis, it is found that the number of foreign situational awareness articles is increasing year by year until 2020. The research direction of situational awareness mainly involves engineering, computer science and psychology, while the coverage of pedagogy, economics, environmental science, sociology and so on in the overall distribution of situational awareness is less than 10%. Based on this, the literature of situational awareness is optimized and subdivided with "psychology" as the screening standard. Finally, 1980 original data were obtained. By drawing the structural framework map and development process spectrum of situational awareness in the field of psychological research through CiteSpace, we can obtain high academic influence journals, cited authors, authors, institutions and classic literature related to situational awareness. In addition, it also describes the hot issues, research frontiers and development trends in different periods. It is found that in the analysis of journal co-citation, "Human Factors" is the journal with the highest citation frequency, "Behavioral Sciences" is the journal with the highest centrality, and "Journal of Personality and Social Psychology" and "Psychological Review" have high citation frequency and centrality. The orientation of these journals covers many fields, such as neuroscience, cognitive science, behavioral biology, behavioral genetics, human factors, personality social psychology, theoretical psychology and so on. In the analysis of author co-citation, Endsley MR has the highest citation frequency, Bassili JN has the highest centrality, and Bandura A and Norman DA have the highest citation frequency and centrality. In addition, in the analysis of author cooperation network, no author group is found. Although there are some cooperation teams, they are only limited to the communication between two people, and there are no central authors, so the cooperation force is very weak. In the analysis of institutional cooperation network, only Radboud University Nijmegen cooperates most closely with the University of Twente. Radboud University Nijmegen is the most central organization, and many institutional nodes only have two-way cooperation relationship. In the analysis of literature co-citation, there is a lack of literature with significant influence. Finally, in the analysis of keyword co-occurrence and cluster analysis, the cluster structure is significant, and the result is convincing. According to the analysis of keyword co-occurrence and cluster analysis, this field focuses on 11 topics, such as consciousness, mindfulness, interaction, accuracy, attention, vehicle automation, driving, self regulation, situation awareness, teamwork and anxiety. Among them, awareness and attention are research hotspots, and the centrality of adolescence and perception is significant. Therefore, future research needs to further consolidate the theory, strengthen cooperation, improve the influence of literature and authors, and pay more attention to behavioral research and other important topics.

Keywords: Situation awareness, CiteSpace, Information visualization, knowledge graph, Bibliometric analysis

进度条中的锚定信息与加载动画对于等待时间知觉与满意度的影响

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摘要 目的: 对于用户来说, 时间是宝贵资源, 研究表明用户在网络中的等待时间与他们的满意度呈反比, 而在等待过程中提供进度条能让等待过程更加合理化。因此, 本研究通过两个实验探索进度条中的锚定信息与加载动画对用户时间知觉与满意度的影响。方法: 实验一考察进度条中加入的等待时间信息对 30 名被试的等待时间估计与用户满意度的影响。其中等待时间信息有两个水平, 低锚: 比实际加载时间短 2 秒, 高锚: 比实际加载时间长 2 秒。要求被试通过按两次空格键复制等待时间, 并评估对网页加载的满意度 (7 点评分量表)。实验二根据注意闸门理论: 等待中的填充物内容越丰富越吸引用户注意力, 在进度条中引入加载动画, 考察加载动画及动画与网页的相关性对 30 名被试的时间估计、用户满意度及用户偏好的影响。加载动画有三个水平, 无动画, 无关动画和相关动画。预期结果: 在低锚信息下, 被试会低估他们的等待时间, 且满意度更高; 在高锚信息下, 被试会高估他们的等待时间, 且满意度更低。与单纯进度条相比, 有加载动画的进度条带来更低的时间知觉与更高的满意度。且相关性动画导致估计等待时间较短, 满意度较高。用户对加载界面的喜爱顺序从高到低为: 相关性动画、无关性动画、无动画。意义: 加载界面中适当提供低锚信息会

使用户低估进度条的加载时间，而界面中的加载动画不仅可以吸引用户注意力还能优化等待体验、改善对网站与品牌的态度。

关键词 时间知觉，用户体验，进度条，锚定效应

Influence of anchoring information and loading animation in progress bar on waiting time perception and satisfaction

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Abstract: Objective: For users, time is a precious resource. Research shows that the waiting time of users in the network is inversely proportional to their satisfaction, and providing a progress bar in the waiting process can make the waiting process more reasonable. Therefore, this study explores the influence of anchoring information in progress bar and loading animation on users' time perception and satisfaction through two experiments. Methods: In Experiment 1, the influence of waiting time information added in progress bar on waiting time estimation and user satisfaction of 30 participants was investigated. There are two levels of waiting time information, low anchor: 2 seconds shorter than the actual loading time, and high anchor: 2 seconds longer than the actual loading time. The participants were asked to copy the waiting time by pressing the space bar twice, and to evaluate their satisfaction with the web page loading (7 comments subscale). According to the attention gate theory: the richer the filler content in waiting, the more attractive the user's attention. The loading animation was introduced into the progress bar, and the influence of loading animation and the correlation between animation and web page on the time estimation, user satisfaction and user preference of 30 participants was investigated. There are three levels of loading animation: no animation, irrelevant animation and related animation. Expected results: under low anchor information, participants will underestimate their waiting time and have higher satisfaction; Under high anchor information, participants overestimate their waiting time, and their satisfaction is lower. Compared with the simple progress bar, the progress bar loaded with animation brings lower time perception and higher satisfaction. And correlation animation leads to short estimated waiting time and high satisfaction. The user's favorite order of loading interface from high to low is: correlation animation, irrelevant animation and no animation. Meaning: Providing low anchor information in the loading interface will make users underestimate the loading time of the progress bar, while loading animation in the interface can not only attract users' attention, but also optimize the waiting experience and improve their attitude towards websites and brands.

Keywords: time perception, user experience, progress bar, anchoring effect

航线飞行员的风险倾向对事故卷入的影响：飞行经验的调节作用

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摘要 风险心理是航线飞行员进行风险管理的基础，能显著影响其安全驾驶行为。风险倾向是个体风险心理水平高低的程度，是个体对冒险行为的意愿或倾向，包括风险偏好倾向（容易冒险或倾向于采取冒险行动）和风险回避倾向（习惯于保守或倾向于采取保守行为）。本研究要探究航线飞行员的风险倾向及其对事故卷入的影响，以及飞行经验的调节作用。风险容忍是一种心理特质，指个体为了实现某种特定目标而情愿接受风险的数量和程度。风险知觉是情境风险意识的一种，是指个体对外部环境潜在危险的主观认知和评价，以及相应的准备状态，受个体特征和情境特征的影响。危险态度是个体对与危险相关的他人、情境及事件反应的一种特定倾向，无论是否表现出来都会影响个体的行为和思维方式。基于此，本研究抽取210名某航空公司飞行员，从风险容忍、风险知觉和危险态度3个方面来探究航线飞行员的风险心理倾向，本研究同时测量其飞

行经验和事故卷入程度。结果表明：航线飞行员的风险心理包括风险回避、合理冒险、风险偏好三种倾向。另外，研究发现航线飞行员的风险倾向与事故卷入之间存在相关，风险回避型的飞行员事故卷入较低；风险偏好型的飞行员事故卷入较高，即心理风险倾向越高，事故卷入越高，而飞行经验在其中起到调节作用。

关键词 风险倾向，事故卷入，飞行经验

The effect of airline pilots' risk propensity on accident involvement: the moderating role of flight experience

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Abstract: Risk psychology is the basis of airline pilots' risk management, which can significantly affect their safe driving behavior. Risk propensity refers to the level of individual risk psychology and the willingness or inclination of individuals to take risks, including risk preference propensity (easy to take risks or tend to take risks) and risk avoidance propensity (used to conservative or tend to take conservative behaviors). This study aims to explore the risk propensity of airline pilots and its impact on accident involvement, as well as the moderating role of flight experience. Risk tolerance is a psychological trait that refers to the amount and degree of risk an individual is willing to accept in order to achieve a specific goal. Risk perception is a kind of situational risk awareness, which refers to an individual's subjective cognition and evaluation of potential dangers in the external environment, as well as the corresponding preparation state, which is affected by individual characteristics and situational characteristics. Dangerous attitude is a specific tendency of individuals to react to other people, situations and events related to danger. Whether it is displayed or not, it will affect individuals' behavior and way of thinking. Based on this, this study selected 210 pilots of an airline company to explore the risk psychological propensity of airline pilots from three aspects of risk tolerance, risk perception and danger attitude. Meanwhile, this study measured their flight experience and accident involvement. The results show that the risk psychology of airline pilots includes risk avoidance, reasonable risk taking and risk preference. In addition, the study found that there is a correlation between the risk propensity of airline pilots and accident involvement. The pilots with risk aversion are less involved in accidents. The pilots with risk preference have higher accident involvement, that is, the higher the risk tendency, the higher the accident involvement, and the flight experience plays a moderating role.

Keywords: risk propensity, accident involvement, flight experience

工作记忆和飞行技能对飞行员情境意识和心理负荷的影响

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摘要 情境意识 (Situation Awareness, SA) 是指对环境要素和事件在时间或空间上的感知，对其意义的理解，以及对其未来状态的预测。对于飞行员而言，情境意识意味着对于飞机位置、飞行姿态、飞行条件等可能影响飞行安全的其他因素（如地形等）之间关系的心理印象，该能力直接影响着飞行安全。本研究探讨了飞行员个体差异对其情境意识和心理负荷的影响。研究目的有以下两个：首先检验工作记忆、飞行技能在预测飞行员情境意识及心理负荷中的作用，其次探讨心理负荷的增加是否会影响其情境意识能力。方法：选取30名航线飞行员在飞行模拟机中完成了一个带有分心任务的飞行场景任务，并分别使用自动操作广度任务 (Automated Operation Span tasks, AOSpan)、飞行时间等指标来测量工作记忆广度和飞行技能；通过情境意识全面评估法 (situation awareness global assessment, SAGAT) 来测量情境意识水平；在任务后采用美国航空航天局任务负荷指数 (NASA-TLX)，从6个维度测量其心理负荷。结果表明，飞行员情境意识水平可以通过工作记忆和飞行技能水平来预测，且工作记忆广度与飞行技能与心理负荷呈负相关，同时心理负荷对于不同技能水平飞行员情境意识有显著影响。上述发现对于飞行员选拔与训练，包括人机系统中自动化的交互

设计以减少飞行事故，提高飞行效率都有一定启示。

关键词 情境意识，工作记忆，心理负荷，飞行员

Effects of working memory and flight skill on situational awareness and psychological load of pilots

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Abstract: Situation Awareness (SA) refers to the perception of environmental elements and events in time or space, the understanding of their meaning, and the prediction of their future state. For pilots, situational awareness means the psychological impression of the relationship between aircraft position, flight attitude, flight conditions and other factors (such as terrain) that may affect flight safety. This ability directly affects flight safety. This study investigated the effects of individual differences on situational awareness and psychological load of pilots. The purpose of this study was to examine the role of working memory and flight skill in predicting pilots' situational awareness and mental load, and to explore whether the increase of mental load would affect pilots' situational awareness. Methods: 30 airline pilots were selected to complete a flight scene task with distraction in a flight simulator, and Automated Operation Span tasks (AOSPAN) and flight time were used to measure the working memory Span and flight skill respectively. Situation Awareness Global Assessment (SAGAT) was used to measure the level of situation awareness. After the mission, NASA Task Load Index (NASA-TLX) was used to measure the mental load from 6 dimensions. Results show that the pilot situational awareness level by working memory and flight skill levels to predict, and working memory span and negatively correlated with flying skills and mental load, mental load for different skill levels at the same time the pilot situational awareness has significant effect. These findings have some implications for pilot selection and training, including the automated interaction design in man-machine system to reduce flight accidents and improve flight efficiency.

Keywords: situational awareness, working memory, mental load, pilot

车载信息系统控件显示位置对驾驶员分心程度的影响

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摘 要 车载信息系统 (In-Vehicle Information System) 在为人们带来方便与快捷的同时，也带来了潜在的安全隐患。当驾驶员的注意力被车载信息系统显示的信息所吸引时，驾驶员的视线从路面偏离，增加了驾驶过程中发生事故的可能性。虽然很多车载信息系统增加了听觉输入输出的通道，但是显示屏的视觉显示依然是驾驶员获得信息的最重要方式。因此，有必要探究如何设计使驾驶员分心程度降低的车载信息系统显示屏，其中控件显示位置可能是一个重要的影响因素。实验分为竖屏和横屏两部分。在竖屏实验中，车载信息显示屏宽 26cm，高 51cm，安装在室内的实车模拟器中，采用 SCANeR™ 驾驶模拟系统。19 名被试 (10 男 9 女) 参加了实验，平均年龄为 32.65 岁，平均驾龄 5.47 年。被试在保持 60km/h 的速度行驶的同时，在显示屏上完成图标搜索任务。整个屏幕被分为 9 行 4 列，共 36 个区域，共有 36 个不同的图标随机出现在不同的区域中，被试需要根据语音指示，尽快找到目标图标，并做出反应。实验记录了被试的反应时和眼动指标。研究结果表明，被试首先从显示屏的左上角开始搜索，越往下方和右方被试搜索所需时间越长，同时搜索时间也会受到手臂遮挡的影响。在横屏实验中，显示屏宽 78cm，高 17cm，整个屏幕被分为 3 行 12 列，共 36 个区域，实验流程与竖屏实验相同。研究结果表明，被试优先搜索左侧半屏，在除去被方向盘遮挡的区域后，被试习惯于从上向下搜索。本实验的主要贡献是描述了驾驶员在较大车载显示屏上的视觉规律，为车载显示屏控件摆放位置的设计提供了依据。对驾驶员较为重要的信息应该放置于驾驶员优先搜索的位置，而相对而言重要性较低的信息应该放置于驾驶员较难搜索的位置。

关键词 车载信息系统, 车载显示屏, 驾驶分心, 视觉需求

Effects of in-vehicle display positioning on driver distraction

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Abstract: In-vehicle information systems (IVIS) is a double-edged sword. It provides drivers with abundant functions, such as car navigation and music player while increases the possibility of driver distraction at the same time. A visual-friendly IVIS interface should pay attention to the positioning of the elements and take drivers least time to search for information. The current study investigates the effects of positioning on driver distraction over large range of screens. A vertical screen was investigated in Experiment 1 and a horizontal screen in Experiment 2. In Experiment 1, nineteen drivers (10 men and 9 women) between the ages of 23 and 41 (mean=32.65, SD=5.41) participated in the study. All of them had possessed a driving license for at least one year (mean=5.47, SD=3.73) and drove a car regularly. The experiment was carried out in an in-door driving simulator consisting of a real car, computers, screens, and audio equipment, using the SCANeR™ Driving Simulator system (Figure 1). Three pads (HUAWEI M5, 26cm×17cm) were installed at the position of center console to make up an in-vehicle screen. A mouse that was connected to the pad over the bluetooth link was attached on the steer wheel in order to collect participants responses. Participants were requested to maintain the speed at approximately 60 km/h on highway while at the same time completed a searching task on the screen. There were 36 different icons on all of the screens. Each icon had a word “left” or “right” on it for response after locating the target icon. After hearing the instruct, participants started to search the target icon on the screens. The target icons varied in rows and columns and resulted in a 9×4 (9 rows, 4 columns) design. Response time, the length of time that participants take to fix at the target (Time-to-first-frame, TTFF) and fixation time on the target (Time-spentF) were recorded. A repeated measures MANOVA (9×4) showed that the response time, in line with TTFF, shows that it takes more effort to locate the targets in upper rows than in lower rows, more effort in right side of the screen than in the left. Blocking of driver’s arm or the gear lever can also affect the searching sequential order (see Figure 2). Fixation time spent on the target follow different rules that driver gaze at targets in Row 1 longer than other rows below. Experiment 2 was carried out in the same environment and procedure except changing the screen to a horizontal one. The target icons were placed randomly in 3 rows and 12 columns. Twenty-one drivers (14 men and 7 women) between the ages of 23 and 41 (mean=33.89, SD=4.85) participated in the study. The results show that the eccentricity from the normal line of sight and the block of steering wheel are two important factors. Drivers started searching from the first two rows and took longer time to gaze at the target icon at these rows. Besides, positions blocked by the steering wheel were more difficult to be seen. The main contribution of the current study is describing drivers’ visual behavior on large in-vehicle screens, which provides supplementary results about how display positions affect drivers’ visual demand. The results can be useful reference for IVIS interface design. To alleviate distraction of IVIS, those used most commonly during driving should be placed closest to the line of sight and those used infrequently can be placed further from the sight. Ergonomic tests should be conducted in advance to avoid blind spots. Besides, after comparing results with previous researches, it can be assumed that the expansion of the screen area didn’t change drivers’ visual behavior on the original area. The new added area may become the front rank or low rank of the searching sequence, but the searching sequential order of the original area do not change.

Keywords: In-vehicle information system, in-vehicle screen, driving distraction, visual demand

车速对电动车驾驶员危险感知的影响：基于行为和 fNIRS 的证据

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摘要 危险感知是驾驶员对交通情境中危险的识别、预测和反应的认知过程, 是与事故率密切相关的危险驾驶行为的重要预测指标。随着外卖服务行业的兴起, 与电动车相关的交通事故频发, 电动车驾驶员的行车速度对其危险感知的影响值得关注。方法: 本研究以电动车驾驶员为研究对象, 结合行为实验和近红外功能成像 (functional near-infrared spectroscopy, fNIRS) 技术, 探究不同行车速度对电动车驾驶员危险感知影响的行为表现和脑机制。研究选取 67 名经验电动车驾驶员, 采用单因素被试内设计, 被试要求完成一系列随机的危险感知任务。结果: 高速行驶时, 电动车驾驶员对危险的反应时显著缩短, 反应正确率显著下降, 同时漏报率显著升高; 在激活脑区上, 研究发现视觉联合皮层 (BA18、BA19) 和前额叶皮层 (BA9、BA10) 是危险感知任务的核心区域, 高速行驶时, 电动车驾驶员的视觉联合皮层激活度下降, 而前额叶皮层则表现出持续性的显著激活。结论: 在高速行驶时, 电动车驾驶员视野变窄, 对危险的关注度和敏感度降低, 危险识别能力下降; 紧急制动时间缩短, 大脑虽处于高度警惕状态, 但更易出现危险驾驶行为。电动车驾驶员危险感知的影响因素复杂, 研究将进一步分析人格特征、驾驶场景和速度对电动车驾驶员危险感知的交互影响及其潜在机制。

关键词 车速, 电动车驾驶员, 危险感知, fNIRS

Effect of speed on hazard perception of electric bicycle drivers: evidence based on behavior and fNIRS

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Abstract: Introduction: Hazard perception is a cognitive process of drivers' identification, prediction and response to hazards in traffic situations, and is an important predictor of risky driving behavior that is closely related to accident rates. With the rise of takeout service industry and frequent traffic accidents related to electric bicycles, the impact of electric bicycle drivers' driving speed on their hazard perception deserves attention. Methods: The study took electric bicycle drivers as research objects, combined with behavioral experiments and functional near-infrared spectroscopy (fNIRS) technology, to explore the behavioral performance and brain mechanism of the impact of different driving speed on electric bicycle drivers' hazard perception. In a within-subjects experimental design study, 67 experienced electric bicycle drivers completed a series of random hazard perception tasks. Results: When driving at high speed, the electric bicycle drivers' reaction time to hazard was significantly shortened, the accuracy rate of response decreased significantly, and the missing report rate increased significantly; Then it was found that the visual association cortex (BA18, ba19) and prefrontal cortex (BA9, BA10) were the core areas of hazard perception tasks, the activation of the visual association cortex of electric bicycle drivers decreased, while the prefrontal cortex showed continuous significant activation in condition of a high speed. Conclusions: When driving at high speed, the vision of electric bicycle drivers becomes narrow, their attention and sensitivity to hazard were reduced, ability to identify hazard was declined, the emergency braking time was shortened; Although their brain was in a high alert state, they were more prone to dangerous driving behavior. The influencing factors of electric bicycle driver's hazard perception are complex, the study will further analyze the interactive effects and potential mechanism of electric bicycle drivers' personality characteristics, driving scene and speed on hazard perception.

Keywords: speed, electric bicycle driver, hazard perception, fNIRS

5.16“决策心理学专业委员会”分组展贴报告

如何激发人们的冒险行为？

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摘要 我们有时候需要激励他人冒险(如:为祖国独立而奋战),有时候又需要劝说他人不要冒险(如:参加恐怖活动)。有一种独特的说服方式——强调最坏可能的结果来说服他人冒险,曾在历史上被成功运用于鼓励他人拿生命去冒险,为什么这种说服方式能够成功?为了探究这一问题,我们基于齐当别决策理论做了三个实验,结果发现:(1)被试越容易相信强调最坏结果的说服性语言,就越倾向于认为最坏结果维度差异小于最好结果维度差异,进而更愿意选择不确定选项;(2)相比那些没有接触到说服性语言的被试,那些阅读或者想象并写出强调最坏结果的说服性语句的被试,更倾向于认为最坏结果维度差异小于最好结果维度差异,因此相比确定选项,被试更倾向于选择不确定选项。3)研究三进一步发现,说服性语言并没有影响被试对不确定性事件发生概率的感知,在控制额外变量的影响后,说服性语言对不确定选项的预测作用依然存在。本研究提示我们,面对恐怖主义时,呈现或者强调冒险带来的最坏结果并不能起到说服他们不要参加恐怖主义的作用,甚至可能适得其反。

关键词 不确定性寻求, 不确定性规避, 齐当别理论, 维度差比较

How to persuade people to take risk?

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Abstract: Historically, an unusual persuasion highlighting the worst possible outcome of an uncertain option has successfully persuaded people to risk death. To explore the effectiveness of this persuasion, guided by an “equate-to-differentiate” account, we conducted three studies and found that 1) participants who agreed more with the persuasion highlighting the worst possible outcome of the uncertain option reported a smaller relative difference between options on the worst-possible-outcome dimension and thus were more uncertainty seeking; 2) participants exposed to the persuasion highlighting the worst possible outcome estimated a smaller relative difference on the worst-possible-outcome dimension and thus were more uncertainty seeking than those who did not experience the persuasion; 3) exposing to the persuasion highlighting the worst possible outcome did not increase participants’ perceived winning probability for the uncertain option, and if participants agreed with the persuasion, they reported a smaller relative difference on the worst-possible-outcome dimension which predicted their uncertainty preference.

Keywords: provoke uncertainty seeking, encourage uncertainty aversion, equate-to-differentiate account, intra-dimensional evaluation

最优化决策与青年单身状态：社会比较和羞怯的中介作用

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摘要 最优化决策是指个体在决策过程中精益求精，力求找到最佳的选择，获得最优的决策结果。已有研究表明，最优化决策可以视为一种类似特质的建构，也可以视为决策情境中的决策策略，这种决策风格的个体或采用此策略的个体会持续性地追求“最优解”，耗费更多的认知资源做出决策，但即使如此，他们对决策的满意度相对于满意型决策个体来说会更低，且更倾向于后悔自己的决策，体验到更多的决策后认知不协调。最优化决策还会影响到个体不同领域的决策，比如婚恋与择偶领域。目前国内对最优化决策研究起步不久，少有研究探讨最优化决策和青年单身的关系。因此，本研究旨在考察最优化决策与青年单身状态的关系，以及社会比较和羞怯在其中所起的作用，丰富相关领域内容。采用人口学资料问卷、Schwartz等人（2002）编制的最优化决策量表、王明姬（2006）修订的社会比较量表与Cheek和Buss编制的羞怯量表对402名青年进行了施测。研究结果表明：（1）在控制了性别、年龄后，最优化决策与青年单身状态呈显著负相关，与社会比较、羞怯呈显著正相关，社会比较、羞怯与青年单身状态呈显著负相关。（2）社会比较在最优化决策与青年单身状态之间具有部分中介作用。（3）羞怯在最优化决策与青年单身状态之间具有部分中介作用。（4）社会比较和羞怯在最优化决策与青年单身状态之间具有并行中介作用。上述发现证实了最优化决策在青年单身状态中的重要作用，显示了其发挥作用的多重中介路径，为渴望摆脱单身和处于恋爱婚姻困扰中的青年个体提供一些启示。

关键词 最优化决策，单身，社会比较，羞怯

Optimal decision-making and youth single status: the mediating role of social comparison and shyness

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Abstract: Optimal decision-making refers to the individual striving for excellence in the decision-making process, striving to find the best choice and obtain the best decision result. Existing studies have shown that optimal decision-making can be regarded as a construction of similar characteristics, or as a decision-making strategy in a decision-making situation. Individuals with this decision-making style or individuals who adopt this strategy will continue to pursue the "optimal solution". They spend more cognitive resources to make decisions, but even so, their satisfaction with decision-making is lower than that of satisfied decision-making individuals, and they are more inclined to regret their decisions and experience more decisions. Later cognitive dissonance. Optimal decision-making will also affect individual decisions in different areas, such as marriage and mate selection. At present, domestic research on optimization decision-making has just started, and few studies have explored the relationship between optimization decision-making and single youth. Therefore, this research aims to examine the relationship between optimal decision-making and youth single status, as well as the role of social comparison and shyness in it, and to enrich related fields. The results of the study showed that: (a) After controlling for gender and age, the optimal decision-making was significantly negatively correlated with youth single status, and significantly positively correlated with social comparison and shyness, and social comparison and shyness were significantly negatively correlated with youth single status; (b) Social comparison has a partial mediating effect between optimal decision-making and youth single status; (c) Shyness has a partial mediating effect between optimal decision-making and youth single status; (d) Social comparison and shyness have a parallel mediating effect between optimal decision-making and youth single status. The above findings confirm the important role of optimal decision-making in the single state of young people, show the multiple intermediary paths in which it plays a role, and provide some enlightenment for young individuals who desire to get rid of being single and in love and marriage.

Keywords: Optimal decision-making, singleness, social comparison, shyness

时间压力，不确定性忍受度，建议成本对建议采纳的影响

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摘要 建议是针对决策困难者的一种特定推荐, 它可以帮助决策者从新的角度思考问题, 而决策者是否采纳建议则受到多种因素的影响。实验一采用 2 (时间压力: 高时间压力和低时间压力) × 2 (不确定性容忍度: 高不确定容忍度和低不确定性容忍度) 被试间实验设计, 探究时间压力和不确定性容忍度对建议采纳的影响。实验二在实验一的基础上, 采用 2 (不确定性容忍度: 高不确定性容忍度和低不确定性容忍度) × 2 (建议成本: 高建议成本和低建议成本) 被试间实验设计, 探究高时间压力条件下, 建议成本和不确定性容忍度对建议采纳的影响。研究结果: 实验一时间压力主效应显著 ($F=28.94$, $P<0.001$), 不确定性容忍度主效应显著 ($F=17.789$, $P<0.001$), 两者交互作用边缘性显著 ($F=4.112$, $P=0.049$)。实验二不确定性容忍度主效应显著 ($F=36.080$, $P<0.001$), 建议成本主效应显著 ($F=32.668$, $P<0.001$), 两者交互作用边缘性显著 ($F=3.919$, $P=0.054$)。结论: 实验一表明高时间压力条件下个体的建议采纳值高于低时间压力条件下, 低不确定性容忍度的个体建议采纳值高于高不确定性容忍度的个体, 高时间压力下低不确定容忍度的个体建议采纳值最高, 低时间压力高不确定性容忍度的个体建议采纳值最低。实验二表明高建议成本条件下建议采纳值高于低建议成本条件下, 低不确定性容忍度的个体建议采纳者高于高不确定性容忍度的个体, 高建议成本下低不确定容忍度的个体建议采纳值最高, 低建议成本高不确定性容忍度的个体建议采纳值最低。

关键词 时间压力, 不确定性忍受度, 建议成本, 建议采纳

The Effect of Time Pressure, Intolerance of uncertainty, And Advice Cost On Advice taking

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Abstract: Suggestion is a specific recommendation for people with difficulties in decision-making, which can help decision-makers to think from a new perspective, and whether decision-makers adopt suggestions or not is affected by a variety of factors. In experiment 1, a between subjects design of 2 (ime pressure: high time pressure and low time pressure) × 2 (Intolerance of uncertainty: high Intolerance of uncertainty and low Intolerance of uncertainty) was used to explore the influence of time pressure and Intolerance of uncertainty on the advice taking. On the basis of experiment 1, a between subjects design of 2 (Intolerance of uncertainty: high Intolerance of uncertainty and low Intolerance of uncertainty) × 2 (advice cost: high advice cost and low advice cost) was used to explore the influence of advice cost and Intolerance of uncertainty on advice taking under high time pressure. The results showed that in the first experiment, the main effect of time pressure was significant ($F=28.94$, $P<0.001$), the main effect of Intolerance of uncertainty was significant ($F=17.789$, $P<0.001$). There is a certain interaction between the two factors ($F=4.112$, $P=0.049$). In experiment 2, the main effect of Intolerance of uncertainty was significant ($F=36.080$, $P<0.001$), the main effect of cost was significant ($F=32.668$, $P<0.001$), and the interaction between them was marginal ($F=3.919$, $P=0.054$). Conclusion:(1) Decision makers took more advice under high time pressure. (2) The individuals with low Intolerance of uncertainty took more advice than the highs. (3) Under high time pressure, the individuals with low Intolerance took the most advice; and the individuals with high Intolerance under low time pressure took the lowest advice. (4) Under high time pressure, decision-makers of the low Intolerance of the uncertainty took more advice than the highs. (5) High advice cost made subjects take more advice. (6) Under high time pressure and high advice cost, the individuals with low Intolerance took the most advice; and the individuals with high Intolerance under low advice cost took the lowest advice.

Key words: Time Pressure, Intolerance of uncertainty, Advice Cost, Advice taking

时间压力下无意识自我控制目标启动对冲动性购买意愿的影响

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摘要 无意识目标启动作为一种影响个体动机的方式, 具体指通过启动技术无意识地激活个体头脑中与目标相关的心理表征, 在干预性研究中可用于启动自我控制行为。目前关于冲动性购买意愿的干预研究主要是从减少自我控制资源损耗或提升自我控制能力角度出发的。本研究旨在从自我控制的动机启动角度探究无意识自我控制目标启动对高低时间压力下冲动性购买意愿的影响。本研究采用 Luo(2005)的冲动性购买研究范式, 以消费者冲动性购买意愿为因变量, 时间压力和无意识自我控制目标启动为自变量, 选取某体育大学 60 名在校大学生 (男生 41 名, 年龄 20 ± 1.88 岁) 作为实验参与者, 采用 2 (高时间压力 10min vs. 低时间压力 6h) $\times$ 2 (目标启动组 vs. 控制组) 的组间设计。采用句子拼接任务启动实验参与者的自我控制, 其中目标启动组启动材料为 12 个与自我控制相关句子、8 个中性句子, 而控制组的材料则为 20 个中性句子。之后给实验参与者呈现特定高、低时间压力购买情境并对实验参与者冲动性购买意愿、句子拼接任务的自我损耗程度进行测量。研究结果表明时间压力主效应显著 ($F(1,56) = 12.15, p = .010, \eta_p^2 = .11$), 高时间压力下的冲动性购买意愿显著高于低时间压力下的冲动性购买意愿。无意识自我控制目标启动主效应不显著。时间压力和无意识自我控制目标启动交互作用显著 ($F(1,56) = 5.09, p = .028, \eta_p^2 = .08$), 高时间压力下, 目标启动组的冲动性购买意愿显著低于控制组的冲动性购买意愿 ($F(1,56) = 4.93, p = .030, \eta_p^2 = .08$), 低时间压力下, 有无意识目标启动组间的冲动性购买意愿差异不显著。有无目标启动组间自我损耗问卷得分差异不显著, ($F(3,56) = 0.38, p = .768, \eta_p^2 = .02$), 说明无意识目标启动组没有产生比控制组更多的自我损耗。结论: 个体处于高时间压力情境下, 无意识目标启动抑制了消费者的购买冲动, 使其高、低时间压力下的冲动性购买意愿维持在一个稳定水平并且避免了个体自我损耗发生。因此无意识目标启动可作为降低高时间压力下冲动性购买行为发生的有效手段。这对于控制网络限时促销中的冲动性购买有一定启示。

关键词 无意识目标, 自我控制, 时间压力, 冲动性购买意愿

The Effect of Unconscious Self-Control Goal Priming under Time Pressure on Impulsive Purchasing Intention

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Abstract: Unconscious Goal Priming (UGP) refers to activate individuals' mental representation related to the goals in an unconscious way, which can be used to prime self-control behaviors in intervention research. Current intervention research on impulsive purchasing intention has focused on reducing the depletion of self-control resources or enhancing self-control ability. The purpose of this study was to investigate the effect of unconscious self-control goal priming on impulsive purchasing intention under high and low time pressure from the motivation of self-control. This experiment adopted Luo's (2005) paradigm of impulsive purchasing intention research. The dependent variable is consumers' impulsive purchasing intention and the independent variables are time pressure and unconscious self-control goal priming. 60 college students (41 males, $M_{age} = 20 \pm 1.88$ years) from a Beijing sport university participated. The experiment was designed by a two-factor between-subject design of 2 (high time pressure 10 min vs. low time pressure 6h) $\times$ 2 (goal priming group vs. control group). A scrambled sentence task was used to activate self-control, with 12 self-control-related sentences and eight neutral sentences for the goal priming group and 20 neutral sentences for the control group. Then, the participants completed an impulsive purchasing task under high and low time pressure. Finally, impulsive purchasing intention and ego depletion of scrambled sentence task were measured. The results showed that the main effect of time pressure was significant, $F(1,56) = 12.15, p = .010, \eta_p^2 = .11$, with impulsive purchasing intention under high time pressure being significantly higher than impulsive purchasing intention under low time pressure. The main effect of unconscious self-control goal priming was not

found. There was an interaction between time pressure and unconscious self-control goal priming, $F(1,56) = 5.09, p = .028, \eta_p^2 = .08$. Under high time pressure, impulsive purchasing intention was lower in the goal priming group than in the control group, $F(1,56) = 4.93, p = .030, \eta_p^2 = .08$, and the difference in impulsive purchasing intention between goal priming group and control group was not significant under low time pressure. There was no significant difference in the scores of the ego depletion questionnaire, $F(3,56) = 0.38, p = .768, \eta_p^2 = .02$, indicating that the unconscious goal priming group did not produce more than the control group. Conclusion: When the individual is in a high time pressure situation, unconscious goal priming inhibited consumers' impulsive purchasing, kept the impulsive purchasing intention under high and low time pressure at a stable level, and avoided individual ego depletion. Therefore, unconscious goal priming can be an effective means to reduce impulsive purchasing behavior under high time pressure. This has some enlightenment for controlling impulsive purchasing in online time-limited promotions.

Keywords: unconscious goal, self-control, time pressure, impulsive purchasing intention

死亡意识对成年人时间知觉和跨期决策的影响

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摘要 死亡意识在时间管理上具有适应性价值, 启动死亡意识会加强人们对时间有限性的关注, 影响人们在远近时间点的成本与收益之间进行权衡, 但目前关于死亡意识与时间知觉及跨期决策的研究中没有涉及到年龄差异。本研究引入年龄因素, 探究死亡意识对青年人和中年人时间知觉和跨期决策的影响。实验招募青年人被试 80 名 (平均年龄为 21.11 ± 2.46 岁), 中年人被试 81 名 (平均年龄 47.53 ± 3.53 岁), 所有被试被随机分配到死亡意识启动组或非死亡意识启动控制组。死亡意识启动任务要求被试想象并写下死亡场景, 控制任务要求被试想象并写下牙痛场景。在启动任务和分心任务之后, 被试需在一条横线上标注十年时间对其来说是短还是长。接下来的跨期决策任务要求被试在小而近和大而远的奖励中选择一个, 14 道题的结果能够反映出被试的跨期决策折扣率。结果显示: (1) 年龄、死亡意识对时距评估的影响: 中年人比青年人将 10 年时间知觉得更短 ($F(1, 157) = 64.96, p < 0.001$), 死亡意识启动组被试比控制组被试将 10 年时间知觉得更短 ($F(1, 157) = 7.58, p = 0.007$)。 (2) 年龄、死亡意识对跨期决策的影响: 年龄组和启动组别的交互作用显著 ($F(1, 157) = 4.57, p = 0.034$), 对于中年人, 死亡意识启动组被试的跨期决策延迟折扣率显著高于控制组被试的延迟折扣率 ($F(1, 157) = 4.76, p = 0.031$); 而对于青年人, 死亡意识启动组被试与控制组被试的跨期决策结果没有显著差异 ($F(1, 157) = 0.71, p = 0.400$)。跨期决策结果表明, 中年人更易受到死亡意识启动的影响, 这可能是中年人正在经历的“中年危机”现象导致其产生更多的死亡焦虑, 进而将时间段知觉为更短、将时间流速知觉为更快, 从而更加导向现在、选择及时行乐。在理论方面, 本研究从年龄视角探讨死亡启动效应, 为时间知觉和跨期决策提供更多维的研究角度。在实践方面, 本研究在我国死亡教育、生命教育以及中年心理咨询方面具有借鉴价值, 有助于引导人们树立健康的死亡观。

关键词 死亡意识, 跨期决策, 中年人, 青年人, 时间知觉

The effects of death awareness on adults' time perception and intertemporal choice

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Abstract: Death awareness serves adaptive functions in time management. Activating death awareness can raise attention over the limitation of time and affect tradeoffs between costs and rewards across different time points. Previous studies on death awareness, time perception and intertemporal choice have hardly involved the age difference. In this research, the age (young group or middle-aged group) is introduced to investigate the effects of death awareness on time perception and intertemporal choice. The experiment recruited eighty young participants (age: 21.11 ± 2.46 years old) and eighty-one middle-aged participants (age: 47.53 ± 3.53 years old). All participants

were randomly assigned to either a death awareness activation group where mortality was made salient or a control group where the participants imagined their toothache experience. After the activation task and distracted task, the participants were asked to indicate how long ten years was to them by making on a line with the statement “10 years is very short” on the left end of the line and “10 years is very long” on the right end of the line. The participants then completed fourteen intertemporal choices between a smaller-and-sooner reward and a larger-and-later reward to indicate their delay discounting rate. The results showed that (1) The effects of age and death awareness on time perception: the middle-aged participants marked the line closer to the left end than the young participants ($F(1, 157) = 64.96, p < 0.001$). The participants in the death-awareness activation group marked the line closer to the left end than those in the control group ($F(1, 157) = 7.58, p = 0.007$). (2) The effects of age and death awareness on intertemporal choice: interaction between age and activation condition was significant ($F(1, 157) = 4.57, p = 0.034$). In middle-aged group, the participants in the death-awareness activation group had a higher discounting rate and were more future-oriented in making choices than participants in control group ($F(1,157) = 4.76, p = 0.031$). In young group, there was no significant difference in delay discounting rate between two activation groups ($F(1, 157) = 0.71, p = 0.400$). The results of intertemporal choice indicate that the middle-aged are more easily affected by the salience of death awareness. This phenomenon can be the consequence of "midlife crisis", which causes the middle-aged to have more death anxiety and to perceive time flying quickly, thus leading them to be present-oriented. The research reveals the effect of death awareness from the perspective of age, expanding the literature of time perception and intertemporal choice. Moreover, practical implications in death education, life education and midlife counseling can guide people to develop an active attitude towards death.

Keywords: death awareness, intertemporal choice, young, middle-aged, time perception

电子支付对消费行为的影响

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摘要 电子账户已日渐成为当前年轻消费者心目中的主要账户, 其对个体的消费行为的影响既不同于信用卡支付, 也不同于现金支付。以往的研究主要从记忆过程, 心理账户, 经典条件理论等方面解释了现金支付和信用卡支付的支出效应, 但还未深入电子支付方面。本研究通过 4 个研究比较使用电子账户和现金账户时个体消费行为的差异。研究 1, 通过问卷调查的方式了解不同支付方式的使用现状, 结果发现, 相比现金账户, 电子账户作为人们心理的主账户, 其使用频率, 账户内保有的金额, 支付比重, 心理成本, 心理所有权, 使用倾向都更高。研究 2, 通过实验探讨不同支付方式的损失规避程度, 发现电子账户的损失规避感比现金账户的更强。研究 3, 设置了 2 (效价: 得, 失) × 3 (金额大小: 25, 200, 1000) 的实验比较了不同情景下消费者支付方式的选择倾向, 结果发现, 得失主效应显著, 金额大小主效应显著, 交互作用不显著。即, 在损失情况下, 人们更倾向选择现金账户进行支付; 在获益情况下, 人们更倾向选择电子账户收款; 随着金额数得增大, 个体越倾向选择电子账户。研究 4, 通过 2 (商品属性: 享乐/实用) × 3 (金额大小: 25, 200, 1000) 的实验发现, 在日常消费中相比实用消费, 享乐消费时人们更倾向于使用现金账户, 金额大小主效应不显著。总而言之, 电子支付使用非常广泛, 成为了年轻消费者的心理主账户 (研究 1), 人们对不同的支付方式的损失规避感 (研究 2) 和选择倾向 (研究 3, 4) 是不同的。

关键词 电子账户, 心理主账户, 心理所有权, 使用倾向, 心理成本, 损失规避

The Effect of Electronic Payment on Spending Behavior

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Abstract: Electronic account has gradually become the main mental account among young consumers, the effect of

electronic account on consumers' behavior may be different from credit card and cash payments. Prior researches had explained the difference between credit card and cash payments by attributing them to memory processes, mental accounting and classical conditioning, however it is still uncovered as to electronic payment. The present study compared the difference effect between electronic account and cash account in the consumer behaviors. Study 1 demonstrates that electronic account is the main mental account of consumers by a survey. The propensity to use, the amount held in the account, the proportion of payment, the psychological cost and the psychological ownership were significantly greater in the cash account condition as compared with the electronic account condition. Study 2 showed that higher loss aversion was associated with electronic payment. Study 3 employed a 2 (Valence: Losses vs. Gains) $\times$ 3 (amount of money: 25 vs. 200 vs. 1000) within-subjects design demonstrates that people preferred paying by cash in the losses condition and receiving money through electronic account in the gains condition. Otherwise, as the amount of money increases, individuals were more inclined to use electronic accounts. Study 4 shows that people preferred using cash accounts during hedonic consumption compared with practical consumption and the main effect of the amount of money is not significant. In sum, electronic account is widely used and has become the main psychological account of young consumers (Research 1); People exhibited different degrees of loss aversion when using electronic payment and cash payment (Research 2) and there is a domain-specific preference for electronic payment (Research 3, 4).

Keywords: electronic account, the main mental account, psychological ownership, the propensity to use, psychological cost, Loss aversion

睡眠对风险决策的影响及其神经机制

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摘要 睡眠是一种基本的生理现象。作为人类生活中不可缺少的一部分，它对个人的身体健康、认知水平和情绪功能至关重要。然而，随着科技的发展和人类生活节奏的加快，睡眠缺失或睡眠质量较差的问题在現代人群中越来越普遍，对人们的认知、情绪甚至健康造成了很多不良影响。最初关于睡眠的研究一致发现，睡眠剥夺会损害个体基本的认知过程，例如警觉性注意、工作记忆等。随后，有研究人员开始探讨睡眠剥夺对高级认知过程的影响。风险决策作为一种不确定决策，小到个人理财，大到国家政策，在生活中无处不在又不可避免。它除了受到个体对风险的感知、风险承受能力、决策策略、情境特征和决策者等多种因素的影响之外，也受到睡眠的影响。近来，越来越多的研究者开始关注睡眠与风险决策的关系，也取得了一定的研究进展。但目前为止，还没有文章对两者之间的关系作系统和深入的梳理。基于此，本文根据最新研究进展，（1）总结了睡眠和风险决策的测量工具；（2）从行为学角度和认知神经角度分别归纳了睡眠剥夺，睡眠质量，睡眠模式等对风险决策的影响；（3）提出了未来要关注睡眠对风险决策影响的差异研究等方向。这对未来进一步拓宽睡眠与风险决策的关系研究，以及充分了解不同类型的睡眠不足在风险决策及冒险行为上的作用等都有一定的借鉴意义。

关键词 睡眠，睡眠剥夺，风险决策，神经机制

The Effects of Sleep on Risk-taking and Its Neural Mechanisms

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Abstract: Sleep is a basic physiological phenomenon. As an indispensable part of human life, it is vital to an individual's physical health, cognitive level, and emotional functioning. However, with the development of science and technology and the acceleration of the pace of human life, the problem of sleep loss or poor sleep quality has become more and more common among modern people, which has caused a lot of adverse effects on people's

cognition, mood, and even health. Initial research on sleep has consistently found that sleep deprivation could damage basic cognitive processes such as vigilant attention and working memory. Subsequently, researchers began to explore the effects of sleep deprivation on higher cognitive processes. As an uncertain decision, the risk-taking decision is ubiquitous and inevitable in our life, ranging from personal finance to national policy. It is not only affected by the individual's perception of risk, risk tolerance, decision-making strategies, situational characteristics, and decision-makers but also affected by sleep. Recently, more and more researchers have begun to pay attention to the relationship between sleep and risk decision-making, and some research progress has been made. But up to now, there has been no systematic and in-depth analysis of the relationship between sleep and risk-taking. Based on this, this paper (1) Summarizes the measurement tools of sleep and the risk-taking decision based on the latest research progress; (2) Concluded the influence of sleep deprivation, sleep quality, and sleep pattern on risk decision-making respectively from the perspective of behavioral and cognitive neuroscience; (3) proposed that we should pay more attention to the differences of sleep influence on the risk-taking decision in the future. This study will be useful for further research on the relationship between sleep and risk decision-making, as well as to fully understand the role of different types of sleep deprivation in risk decision-making and risk-taking behaviors.

Keywords: sleep, sleep deprivation, risk-taking, neural mechanism

不同水平羽毛球运动员知觉预测的眼动及神经机制研究

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摘要 知觉预测是指运动员比赛过程中在决策时间紧迫的条件下利用部分信息对完整信息做出相应预期的信息加工过程。知觉预测水平的高低直接关系到比赛的胜负, 揭示高水平运动员知觉预测优势所在是十分必要的, 特别是在快速多变的羽毛球运动中良好的知觉预测是决定比赛胜利天平走向的重要因素。因此, 本研究运用眼动记录技术与 ERP 记录技术, 研究羽毛球比赛过程中的“相持阶段”, 分析不同水平羽毛球运动员在知觉预测中的行为特征及神经机制, 旨在完善羽毛球运动知觉预测的认知加工过程, 对羽毛球运动选材及训练提供一定的理论指导。实验采用视频处理软件对视频进行时间(击球前 100ms、击球瞬间、击球后 100ms)阻断的处理, 3 个时间阻断节点分别为羽毛球比赛第三拍后的“相持阶段”视频的 2200ms、2300ms、2400ms 并运用 E-Prime2.0 软件播放, 被试在观看过程中全程佩戴电极帽。以研究不同水平羽毛球运动员在“相持阶段”对击球线路预判的行为学特征及相应的神经机制。研究表明: 1) 专家组在预判时的准确率与反应时均优于新手组, 且对斜线球的预判效绩优于直线球, 新手组在直线球与斜线球上的预判效绩无差异。2) 专家组在击球前 100ms 时能做出有效的预判, 其反应时与准确率均优于新手组, 随着信息量的增加预判时的反应时缩短且准确率提高, 而新手组无差异。3) 时间点主效应显著, 击球瞬间的准确率显著高于击球前 100ms。ERPs 结果显示, 新手组在预判时诱发出 N1、N2 波幅大于专家组, 在击球瞬间的时间节点上新手组比专家组诱发出了更大的 N2 波幅。在击球前 100ms 与击球瞬间的时间节点上, 专家组诱发的 P2、P3 波幅显著大于新手组。结果表明, 高水平运动员认知资源分配合理, 主要将认知资源投入到了对关键信息的识别、处理与加工阶段, 在任务的感知阶段动用的心理资源少。随着任务难度的增大其动用的心理资源也会相应增多。

关键词 知觉预测, 击球线路, 行为特征, 神经机制

Eye movement and neural mechanism of perceptual prediction in badminton players of different levels

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Abstract: Perceptual prediction refers to the information processing process in which athletes use part of the information to make corresponding expectations of the complete information under the condition of tight

decision-making time. The level of perceptual prediction is directly related to the outcome of the game. It is very necessary to reveal the advantages of perceptual prediction of high-level athletes, especially in the fast changing badminton, good perceptual prediction is an important factor to determine the direction of victory. Therefore, this study uses eye movement recording technology and ERP recording technology to study the "Stalemate Stage" in the process of badminton competition, and analyzes the behavioral characteristics and neural mechanism of different levels of badminton players in perceptual prediction, so as to improve the cognitive processing process of perceptual prediction of badminton, and provide some theoretical guidance for badminton sports selection and training. In the experiment, video processing software was used to block the video time (100 ms before hitting, at the moment of hitting and 100 ms after hitting). The three time blocking nodes were 2200 MS, 2300 MS and 2400 ms of the "Stalemate Stage" video after the third shot of badminton game. The e-prime2.0 software was used to play the video. The subjects wore electrode caps during the whole watching process. The purpose of this study is to study the behavioral characteristics and neural mechanism of different level badminton players in the "Stalemate Stage" to predict the hitting line. The results show that: 1) the accuracy and reaction time of the expert group are better than the novice group, and the predictive performance of the diagonal ball is better than that of the straight ball, and the novice group has no difference in the predictive performance of the straight ball and the diagonal ball. 2) The response time and accuracy of the expert group were better than those of the novice group. With the increase of the amount of information, the response time of the expert group was shortened and the accuracy was improved, while the novice group had no difference. 3) The main effect of time point is significant, and the accuracy of hitting instant is significantly higher than that of 100 ms before hitting. ERPs results showed that the N1 and N2 amplitudes induced by the novice group were larger than those of the expert group in the prediction, and the N2 amplitudes induced by the novice group were larger than those of the expert group at the moment of hitting. At the time node of 100 ms before hitting and the instant of hitting, the P2 and P3 amplitudes induced by the expert group were significantly larger than those of the novice group. The results show that the allocation of cognitive resources of high-level athletes is reasonable. The cognitive resources are mainly put into the identification, processing and processing stage of key information, and less mental resources are used in the perception stage of task. With the increase of the difficulty of the task, the psychological resources will be increased accordingly.

Keywords: Perceptual prediction, stroke path, behavioral characteristics, neural mechanism

最后通牒博弈中的双系统：来自加工分离程序的证据

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摘 要 最后通牒博弈作为测量公平偏好的经典范式, 受到研究者的广泛关注。在最后通牒博弈中, 由两人对共有的一笔固定数额的金钱(或某种资源)进行分配, 其中一人作为提议者提出分配数目, 另一人作为响应者决定接受或拒绝该提议。根据决策的双系统理论, 个体在最后通牒博弈中受到自动加工的系统 1 与控制加工的系统 2 的双重作用。研究意图操纵影响个体在最后通牒博弈中系统 1 和系统 2 的因素, 采用加工分离程序范式估计两个决策系统贡献率, 并且构建相容(inclusion)题目和不相容(exclusion)题目来量化自动加工的系统 1 和控制加工的系统 2 的贡献率。加工分离程序范式的研究逻辑是: 如果操纵理论上能够影响某决策系统策略的因素确实导致了该系统贡献率的改变, 则说明该系统策略在决策过程中确实起作用。研究通过 2 个实验, 分别操纵了认知负荷因素与理性信念启动因素, 以考察公平偏好中两决策系统的作用。实验 1 操纵了可影响自动加工的系统 1 的认知负荷因素, 发现高认知负荷会提高系统 1 的贡献率, 但不影响系统 2 的贡献率; 实验 2 操纵了可影响控制加工的系统 2 的理性信念启动因素, 发现启动理性信念会提高系统 2 的贡献率, 但不影响系统 1 的贡献率。结果表明, 公平偏好可能存在于这两个独立的决策系统共同起作用。研究或能加深人们对公平偏好行为心理机制的理解。

关键词 公平偏好, 最后通牒博弈, 双系统, 加工分离程序

Dual-system in Ultimatum Game: Evidence from Process Dissociation Procedure

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Abstract: As a classic paradigm in measuring fairness preference, the ultimatum game paradigm has been drawn much attention in recent decades. In the ultimatum game, a fixed amount of money (or a resource) is shared between two persons, one of whom as proposer proposes the amount to be allocated and the other as responder decides to accept or reject the offer. From the point of view of dual-system theory, individuals' preference in ultimatum game is the result of the combined effect of automatic System 1 and controlled System 2. In this study, we attempted to manipulate the factors affecting individuals in System 1 and System 2 in the ultimatum game, and the process dissociation procedure was used to estimate the contribution of the two decision systems. The contribution of automatic processing System 1 and controlled processing System 2 were quantized by constructing inclusion questions and exclusion questions. The research logic of the process dissociation procedure is as follows: if manipulating the factors that theoretically influence the strategy of a decision system does lead to the change of the contribution rate of the system, then the strategy of the system does play a role in the decision process. In this study, cognitive load and rational belief priming were manipulated in two experiments to test the role of the two decision-making systems in fairness preference. In Experiment 1, we manipulated the cognitive load to affect the automatic processing in System 1, and found that the higher cognitive load enhanced the contribution of System 1 but did not affect the contribution of System 2. In Experiment 2, we manipulated the rational belief which could influence the processing of System 2, and found that priming the rational belief enhanced the contribution of system 2 but did not affect the contribution of System 1. The findings indicated that there are two independent systems underlying the process of ultimatum game and could deepen understanding of the mechanisms of fairness preference.

Keywords: fairness preference, ultimatum game, dual-system, process dissociation procedure

奖赏幅度对个体风险偏好水平的影响：基于 BART 范式的探讨

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摘要 在现实生活中，风险无处不在。长期以来，人们在风险情境下如何做出决策一直是行为经济学与心理学的研究领域中的一个重要问题。在以往的多数研究中，研究者通常在探索风险决策行为的过程中采用真实或虚拟金钱作为奖赏强化物，但对金钱奖赏的幅度大小对决策中风险偏好水平的影响做出的研究较少。据此，本研究应用仿真气球冒险任务（即 BART 任务：Balloon Analogue Risk Task，仿真气球冒险任务广泛应用于各类风险决策实验，其有效性已在以往研究中得到证实，可以在实验室条件下有效评估个体在真实社会中的风险行为），在实验中对真实金钱奖赏幅度的大小对风险偏好水平的影响进行了比较和初步探讨。根据实验结果数据分析，可以得出以下结论：与小额奖赏幅度相比，被试在大额奖赏幅度条件下的 BART 参数更小，未爆气球被吹的平均次数、吹爆气球的个数以及面临正负反馈（前次决策成功/失败）时的未爆气球被吹的平均次数均显著降低，表明大额奖赏幅度条件下的风险偏好水平更低。此外，在两种奖赏幅度条件下，被试的感觉寻求量表得分和 BART 任务的各项分数之间均未发现显著相关关系，感觉寻求量表的各分量表（TAS, ES, DIS, BS）得分与 BART 任务的各项分数之间也不存在显著相关。上述发现表明奖赏幅度对风险偏好水平有着不同的影响，在真实金钱奖赏条件下，个体的风险决策行为受到奖赏幅度的调控。随着奖赏幅度的增加，个体的风险偏好水平显著降低。

关键词 仿真气球冒险任务，风险决策，风险偏好水平，真实金钱奖赏幅度

The Effect of Reward Magnitude on Individual Risk Appetite: Based on BART Paradigm

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Abstract: In real life, risk is everywhere. For a long time, how people make decisions in risky situations has been an important issue in the field of behavioral economics and psychology. In most of the previous studies, researchers usually used real or virtual money as a reward reinforcer in the process of exploring risky decision making behavior, but there were few studies on the impact of the magnitude of monetary reward on the level of risk appetite in decision making. Therefore, this study applies Balloon Analogue Risk Task which is widely used in various Risk decision experiments. Its effectiveness has been confirmed in previous studies, and it can effectively assess individuals' Risk behaviors in real society under laboratory conditions. In the experiment, the effect of real money reward on risk appetite was compared and preliminarily discussed. According to the analysis of the experimental results and data, the following conclusions can be drawn: Compared with the small reward rate, the participants in a large reward by BART parameters under the condition of smaller, unexploded balloon blown the average frequency, the number of blowing up the balloon and the positive and negative feedback (previous decision success/failure) of the unexploded balloon blown the average frequency were significantly lower, shows that a large reward amplitude under the condition of lower level of risk appetite. In addition, there was no significant correlation between sensory seeking scale score and BART task score, and there was no significant correlation between sensory seeking scale score (TAS, ES, DIS, BS) and BART task score under the two reward scale conditions. These findings suggest that reward magnitude has different effects on risk appetite. In the case of real money reward, individuals' risk decision behavior is regulated by reward magnitude. With the increase of reward amplitude, the level of individual risk appetite decreased significantly.

Keywords: BART, risk decision, risk appetite level, real money reward range

损失规避是否无处不在：一项元分析

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摘要 损失规避是指在决策中损失对人们的影响更大,是预期理论的核心概念之一。众多研究表明,损失规避是较为稳定的现象,被认为是人们行为决策中较为普遍的行为偏差。但新近的研究对损失规避的普遍性提出了质疑,并开始研究损失规避的例外状况。本文通过元分析的方法旨在探究影响损失规避的因素。本研究检索并筛选后获得 32 篇文献(共包含 103 个效应值),被试总数达到 11158 名,根据异质性检验结果,使用随机效应模型进行元分析,并使用亚组分析和元回归分析做调节效应的检验,探究异质性的原因。结果发现,当个体在面临“得失概率相同,得失金额相等”的对称混合赌博任务时,会表现出显著的损失规避倾向,证实了损失规避的普遍性。其次,损失规避行为受到赌注的数值大小、赌注的金额、赌博任务中是否具有安全选项、赌博任务是否为滴定类型、是否有激励措施等因素的调节。具体而言,当赌注在数值上较大时,损失规避程度越大;当任务中具有激励措施时,损失规避程度更低;赌博任务为滴定形式时损失规避程度更大;当赌博任务存在一个“现状”选项时,损失规避程度更低。最后,发现赌博任务呈现的次数和赌注是否使用真钱对损失规避程度无显著影响。从本文的结果来看,未来应加强对损失规避机制解释方面的研究。

关键词: 损失规避, 风险决策, 预期理论, 元分析

Is loss aversion a ubiquitous effect: A meta-analysis

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Abstract: Loss aversion, which means that the effect caused by loss is greater than the same amount of gains, is one of the core concepts of Prospect Theory. Many studies have confirmed that loss aversion is a robust effect, and it is considered as a prominent behavioral bias in people's decision-making. However, recent studies have doubt the universality of loss aversion and try to find situations where there isn't a loss aversion. The present research aims to verify the robustness of loss aversion and explore the variables moderating loss aversion by a meta-analysis. 33 literatures (103 effect size) were retrieved and screened, and a total number of 11158 subjects were included in this study. According to the heterogeneity test, the meta-analysis was carried out by using random effect model. The subgroup analysis and meta-regression analysis were used to identify possible sources of heterogeneity. The results showed that when individuals face the fair gamble in which the size of the gain and loss are the same and the rate of gain and loss are the same, they will show a significant tendency of loss aversion. This result verified the robustness of loss aversion. Secondly, loss aversion was moderated by the value of bets, the magnitudes of bets, whether there were safety options in gambling tasks, whether gambling tasks were titration types, whether there were incentive. Specifically, the large value of the bets, the higher degree of loss aversion; When there are incentives in the task, the degree of loss aversion is lower; When the task is in titration experiments, the degree of loss aversion is greater; When there is a "status quo" option for gambling tasks, the degree of loss aversion is lower. Finally, it is found that the number of gambling tasks presented and whether the bet uses real money has no significant influence on the degree of loss aversion. From the results of this paper, the future research on the explanation of loss aversion mechanism should be strengthened.

Keywords: loss aversion, risk decision, prospect theory, meta-analysis

偶然积极情绪对跨期决策影响的分离效应

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摘要 跨期决策是人们对发生在不同时间点的备选方案进行权衡后做出的决定, 与人类生存发展密切相关。人们在进行跨期决策时, 易受到伴随其发生但与任务无关的情绪, 即偶然情绪的影响, 而情绪对即刻奖励/损失的偏好影响较大。本研究认为, 偶然积极情绪可能通过影响时间知觉改变个体的跨期决策偏好, 且在决策包含/不包含即刻时间信息的条件下, 该作用存在分离效应。通过三个实验进行验证, 利用视频启动情绪(研究1-3), 运用滴定法(研究1)和多重阶梯法(研究2)任务测量被试在包含(研究1、2)或不包含(研究2)即刻时间选项时的跨期决策偏好, 同时测量个体时间知觉(研究1、2), 以及在决策前个体对跨期选项中时间和结果维度的关注度是否存在差异(研究3)。综合三个研究的结果发现: 偶然积极情绪导致个体的时间知觉变长(研究1、2), 对时间维度比对结果维度具有更多的注意(研究3), 并由此导致个体在跨期决策中更偏好即刻选项(研究1-3); 但该作用具有分离效应, 即当包含即刻时间选项时个体更偏好即刻选项, 而不包含即刻选项时个体的跨期决策偏好无差异(研究2、3)。本研究从理论层面上可增进学界对跨期决策中认知和情绪系统相互作用的了解, 同时在应用层面上为如何改进相关决策提供了新视角。

关键词 跨期决策, 积极情绪, 偶然情绪, 时间知觉, 即刻效应

Disjunction effect of positive incidental affect on intertemporal choice

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Abstract: This research aimed to test how positive incidental affect (i.e., affect that is unrelated to a decision) influences intertemporal choice (IC) and its underlying mechanisms. We considered the prominent explanation for the effect of emotions on IC related to time perception and the hypothesis of the hot/cool system. The hypothesis posits that the motivational appeal of immediately available rewards drives “hot” affective processes. We assumed that positive incidental affect may have a disjunction effect on intertemporal choice, i.e., only impact IC with immediate options through affecting time perception. This research hypothesized that incidental affect leads to impatient behavior in IC through a distortion in time perception and has no impact when the immediate factor is removed. In Study 1 ($N = 66$), we examined whether time perception is the mechanism of positive incidental affect on IC. A 2×2 mixed designed paradigm was used, with induced affect (positive versus neutral) as the between-subject factor and the intervals (long versus short) of IC as the within-subject factors. The participants were induced by positive/neutral incidental affect and made IC through the titration paradigm between immediate and future options. Lastly, the time perception of participants was tested through a non-numerable line scale. In Study 2 ($N = 62$), we tested the boundary effect of positive incidental affect. A 2×2 mixed designed paradigm was used, with induced affect (positive versus neutral) as the between-subject factor and the construct of decision option (inclusion versus exclusion of the immediate factor) as the within-subject factor. The procedure and paradigm of the affect induction and the time perception measurement were slightly modified from Study 1, except for IC. A multiple staircase paradigm was used, and the experimental stimuli were modified by subdividing them into those included and excluded under immediate conditions: half of the smaller-sooner option times were “immediate,” and the other half were not. As supplementary research, we used an attention task in Study 3 ($N = 115$) to determine which attributes (outcome or time) of the IC participants allocated more attention in different affect conditions. The results of the three studies consistently indicated that positive incidental affect leads to (1) distortion in the time perception (Studies 1 and 2) and more attention to the time attribute of IC (Study 3). Participants judged future durations to be longer under positive affect than under neutral affect (Studies 1 and 2). They paid more attention to time rather than the outcome attribute before the decision (Study 3). (2) The discount rate increased in the IC task, including immediate options (Studies 1 to 3). Participants exhibited a higher level of immediacy effect after being induced by positive affect. (3) However, the subjective discount rate does not change if the objective time perception is substituted with the subjective time perception in the discounting models (Studies 1 and 2). This finding suggested that changes in future time perception influence the propensity of the immediacy effect without altering temporal discounting. In conclusion, the three studies combined demonstrated that positive incidental affect has a disjunction effect on IC through affecting subjective time perception. That is, when making an IC, including immediate choice, people judge future durations to be longer, and they pay more attention to the time attribute when induced by positive affect than by neutral affect. Consequently, the value of the future option appears less appealing, thus leading to preference for immediate reward and reflecting the immediacy effect. Incidental affect did not have any impact on intertemporal choice without immediate options. This research improves the understanding of the mechanism and boundary effect of positive incidental affect on IC and provides a new perspective on how related decision-making can be improved.

Keywords: intertemporal choice, positive affect, incidental affect, time perception, immediacy effect

你会对谁将心比心？决策者角色对生命风险偏好的影响

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摘要 在决策研究领域，先前研究者们发现个体在为自己和为他人进行决策时的风险偏好存在差异，这一差异可能是由于心理距离所导致。基于此，本研究进一步依据亲密关系和代际关系将“他人”角色进行细分，探究在生命风险情境中个体为不同决策者角色决策时风险偏好的差异，以及其中的内在机制和边界条件。54名被试（ $M = 22.52$, $SD = 2.03$, 64.8%为女性）通过线上实验平台 Credamo 参与本研究。被试为随机排序的五种决策者角色（包括自我、同辈亲密他人、同辈陌生他人、异辈亲密他人、异辈陌生他人）进行生命风险决策任务，每个任务后即刻评估其与该决策者角色的心理距离，完成分心任务后继续为下一个角色进行决策，以及完成标准人口学量表。结果表明（1）将“自我”与“他人”两种决策者角色进行比较：总体来说，为他人做决策比为自己做决策更冒险；具体来看，为同辈陌生他人、异辈亲密他人和同辈陌生他人决策均比为自我决策更冒险，而为同辈亲密他人决策与为自我决策风险偏好无显著差异。（2）将多种“他人”决策者角色进行比较：亲密关系影响生命风险偏好，即为陌生他人决策比为亲密他人决策更冒险；代际关系调节亲密关系对风险偏好的影响，具体而言，为同辈决策时，为同辈陌生他人决策比为同辈亲密他人决策更冒险；为异辈决策时，为异辈陌生他人和异辈亲密他人决策结果无显著差异。（3）心理距离在亲密关系与风险偏好之间起到完全中介作用，且代际关系能够调节心理距离的中介作用，对于同辈，心理距离的中介效应得到增强；对于异辈，心理距离的中介效应则被削弱。本研究从亲密关系和代际关系两种决策者角色属性出发，将以往研究中的他人角色具体化，并且进一步扩了解释水平理论视角下的心理距离假设；此外，本研究将自我-他人决策相关研究从经济风险领域拓宽至生命风险领域，对于理解日常生活中为不同他人决策的差异和选择寻求决策建议的请教对象具有启发意义。

关键词 决策者角色，风险决策，心理距离，亲密关系，代际关系

The Effect of Decision Makers' Roles on Life-risk Preference

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Abstract: In the field of decision-making research, previous researchers have found that people have different risk preferences when making decisions for themselves and others, which probably due to psychological distance. Based on this, this study subdivides "others" according to intimate relationship and intergeneration, also explores the influence of decision makers' roles on life-risk preference, and examines psychological mechanism and boundary condition. Fifty-four participants ($M=22.52$, $SD=2.03$, 64.8% female) were recruited in the study through the online experimental platform Credamo. They were required to make life-risk decisions for five randomly ordered decision makers' roles in sequence. After each life-risk decision task, the psychological distance between them and the decision makers' roles was assessed immediately. After completing the distracted task, participants continued to make decisions for the next role, and finally completed the standard Demographic scale. The results show that: (1) Compare the two decision makers' roles of "self" and "others": people prefer more risks when making decisions for others than to making decisions for themselves in general. Specifically, making decisions for peer strangers, different generation's intimate others and different generation's strangers are all more risk-seeking than making decisions for self, but there was no significant difference in risk preference between making decisions for peer intimate others and making decisions for self. (2) Compared the decision makers' roles of different "others": we found that intimate relationships affect life risk preference, which is, people prefer more risks when making decisions for strangers compares to making decisions for close people. Intergenerational relationship can moderate the effect of intimate relationship on life risk preference. Specifically, when making decisions for peers, people are more risk-seeking when making decisions for peer strangers compares to making decisions for close peers. There was no significant difference in the decision results between strangers and close people when making decisions for different generations. (3) Psychological distance fully mediates the relationship between intimate relationship and risk preference, and

intergenerational relationship can moderate the mediating effect of psychological distance. For peers, the mediating effect of psychological distance is strengthened. For different generations, the mediating effect of psychological distance was weakened. This study based on two decision makers' roles, concretized the role of others in previous studies by intimate relationship and intergenerational relationship, and further expanded the psychological distance hypothesis from the perspective of interpretative level theory. Besides, this study expands the psychological distance hypothesis from the perspective of construal level theory. From the perspective of intimate relationship and intergenerational relationship, the roles of others in previous studies are concretized. In addition, this study expanded the research on self-other decision-making from the field of economic risk to the field of life risk is instructive for understanding the differences in decision-making of different others in daily life and choosing people to consult for decision-making advice.

Keywords: Decision makers' roles, Risk preference, Psychological distance, Intimate relationship, Intergeneration

5.17“老年心理学专业委员会”分组展贴报告

新冠肺炎疫情下武汉老年人心理健康和应对方式的性别差异

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摘要 尽管女性在许多领域都容易受到压力影响, 但女性在应对压力方面有无或有何种优势仍存在争议。本研究在 COVID-19 爆发两个月后, 采用心理复原量表(CD-RISC)、简明症状量表(BSI-18)、应对方式量表(SCSQ)以及灵性评估量表(SSS)调查新冠肺炎疫情爆发地武汉市 227 位武汉老年人抑郁症状和心理韧性的性别差异, 并探讨积极应对方式(如重评、问题解决和社会支持)和意义感的中介作用。结果表明, 武汉老年人心理应对性别差异显著, 与老年男性相比, 老年女性心理复原得分较高($t = -2.21, p < .05$), 抑郁症状较少($t = 2.21, p < .05$), 采用更多积极应对方式($t = -3.07, p < .05$)。链式中介效应分析结果表明, 积极应对方式与意义感在性别和心理韧性之间(Boot SE = 0.05, $p < .001$)以及性别和抑郁症状之间(Boot SE = -0.38, $p < .001$)起显著中介作用。可能受社会和历史原因影响, 男女两性生活阅历不同。疫情期间老年男性社会责任感更高, 感知压力和无助更大; 男性不善于情感表达也容易导致不佳心理健康状态。本研究结果表明老年女性在压力应对早具有情绪调节优势。这暗示突发公共卫生事件的老年心理服务应关注性别差异, 并根据老年人心理性别差异和人群特点制定相关心理健康援助措施。

关键词 COVID-19, 老年人, 应对方式, 心理韧性, 意义感, 性别差异

Gender differences in mental health and coping of the elderly in Wuhan under the COVID-19 Pandemic

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Abstract: Although women are vulnerable to stress in many domains, it remains arguable whether and how women hold the advantage in coping with stress, especially in the testosterone-consumed contexts, such as pathogenic threat and economic restrictions. The present research was an attempt to test the gender difference in depression symptom

and psychological resilience among Wuhan elders two months later after the COVID-19 outbreak. Spiritual Assessment Scale for the elderly (SSS), Simplified Coping Style Questionnaire (SCSQ), Connor-Davidson Resilience Scale (CD-RISC) and Brief Symptom Scale (BSI-18) were applied to investigate 227 elders in Wuhan. The results show that there was gender differences in the psychological coping of elderly in Wuhan. Compare with elderly men, elderly women adopted more positive coping styles ($t = -3.07, p < .05$), with higher psychological resilience ($t = -2.21, p < .05$), and less depression symptom ($t = 2.21, p < .05$). The mediating effects of positive coping and meaning sense between gender and resilience are significant (Boot SE=0.05, $p < .001$), and the mediating effects of positive coping and meaning sense between gender and depression symptom are also significant (Boot SE= -0.38, $p < .001$) as well. Men and women have different life experiences by social and historical reasons. During the COVID-19 pandemic, elderly men have higher sense of social responsibility, greater pressure and helplessness, and men who are not good at expressing emotions can easily lead to poor mental health. The results found that elderly women have advantage in emotional regulation in the early stage of stress response. which implies that mental health services for the elderly in public health emergencies should pay attention to gender differences and formulate relevant mental health assistances based on such differences.

Keywords: COVID-19, The elders, coping strategies, resilience, sense of meaning, gender differences

负性情绪与轻度认知障碍的关系：基于焦虑和抑郁的视角

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摘 要 轻度认知障碍是正常老龄化群体和痴呆之间的过渡阶段，并且具有极高的可能性发展为痴呆。轻度认知障碍和轻度认知障碍亚型群体表现出了多方面的神经精神症状，尤其该群体与情绪有关的神经精神症状异常显著，比如焦虑、抑郁。这两种负性情绪是轻度认知障碍个体早期识别和干预的一个重要指标。本文梳理了轻度认知障碍及其亚型群体的神经精神症状以及焦虑和抑郁与轻度认知障碍及痴呆之间关系的研究进展，分析了轻度认知障碍个体的早期发现和情绪与认知干预的最新手段。发现焦虑和抑郁与轻度认知障碍之间是相互作用的关系，在轻度认知障碍亚型领域中，焦虑和抑郁的负性情绪症状会表现的更为明显，并且二者均会加速轻度认知障碍向痴呆转化的进程。就干预方式而言，直接的认知干预和情绪干预都是提高和改善轻度认知障碍个体认知功能的有效方法，但是多种干预手段相结合更有利于改善轻度认知障碍个体的认知功能和负性情绪。未来研究还需探讨更加标准化和情景化的评估方法，采用更多可推广，易操作的干预范式改善轻度认知障碍个体的负性情绪状态和认知功能，从而延缓老年痴呆的进程。

关键词 轻度认知障碍，痴呆，焦虑，抑郁，干预

The Relationship between Negative Emotions and Mild Cognitive Impairment.A Perspective From Anxiety and Depression

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Abstract: Mild cognitive impairment (MCI) is a transitional stage between normal aging and dementia, and it has a high risk of developing dementia. MCI and MCI subtypes are characterized by a series of neuropsychiatric symptoms. Anxiety and depression are two of the core features of neuropsychiatric symptoms related to mood in MCI and MCI subtypes. Neuropsychiatric symptoms related to negative emotions, such as anxiety and depression, are a key indicator of early identification and early intervention for elderly people with mild cognitive impairment. In this paper, the neuropsychiatric symptoms related to mood in MCI and MCI subtypes, and the relationship between anxiety, depression, MCI and dementia are reviewed. The methods of early identification and early intervention for elderly people with MCI are summarized. It is believed that anxiety and depression have an interactive relationship with MCI, and both of them can accelerate the process of MCI to dementia. The combination of different methods are

more conducive to early intervention. Future studies can explore more standardized, contextualized evaluation methods and plausible and easy-to-operate intervention methods to improve MCI individuals' negative emotional status and cognitive, which delay the progression of dementia.

Key words: Mild cognitive impairment, Dementia, Anxiety, Depression, Intervention

工作记忆广度对老年人空间数字联结的影响

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摘要 工作记忆是一个容量有限的短时存储系统, 会影响认知表现。工作记忆刷新能力是中央执行功能的重要组成部分, 刷新功能出现衰退对个体的认知老化产生重要影响。空间-数字反应编码联合效应 (Spatial-Numerical Association of Response Codes effect, 即 SNARC 效应) 是数字认知研究的重要问题, 以往研究发现认知老化与 SNARC 效应的关系会受到工作记忆抑制控制能力的影响, 但工作记忆不同广度及刷新能力对老年群体的 SNARC 效应的影响缺乏相应的研究证实。本研究以老年人作为被试, 结合 n-back 任务和相对大小比较任务设计了双任务范式, 不仅考察了言语和空间回路工作记忆广度的高低对 SNARC 效应的影响, 也同时通过 n 的变化来考察不同负荷水平 (0-back、1-back) 对 SNARC 效应的影响。实验开始前先进行言语和空间工作记忆广度的测试并分成高、低两组, 之后每组被试均完成 0-、1-back 任务。本研究结果显示, 在 0-back 条件下, 言语及空间回路广度高、低组的 SNARC 效应强度均无差异; 在 1-back 条件下, 随着言语和空间回路广度增加, SNARC 效应强度逐渐减弱。随着负荷增加, SNARC 效应有减弱的趋势。因此, 本研究发现老年人工作记忆广度和刷新能力对 SNARC 效应具有不同的影响。随着负荷增加, 执行需要增加, 老年人可分配的认知资源减少, 认知资源可得性降低, 使得 SNARC 效应减弱; 工作记忆广度较大的个体可加工的信息量增加, 更好地处理冲突信息, 从而导致 SNARC 效应较弱。

关键词 SNARC 效应, 工作记忆广度, 工作记忆刷新; 老年人

The Effect of Working Memory Span on Spatial Number Association in the Elderly

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Abstract: Working memory is a short-term storage system with limited capacity, which affects cognitive performance. Working memory updating plays an essential role in central executive function, and the decline of the updating has a significant impact on the cognitive aging of individuals. The Spatial-Numerical Association of Response Codes effect (SNARC effect) is an important field in the study of number cognition. Previous studies have found that the relationship between cognitive aging and the SNARC effect is affected by inhibition control abilities. However, the influence of different span and updating capacity on the SNARC effect of the elderly group is lack of corresponding research confirmation. In the current study, the elderly was used as participants, and a dual-task paradigm was designed by combining N-back task and relative magnitude comparison task. The effects of verbal and spatial working memory span circuits on the SNARC effect were investigated, and the effects of different load levels (0-back and 1-back) on the SNARC effect were also investigated through the change of N. Verbal and spatial working memory span tests were performed before the experiment, and participants were divided into two groups: high- and low-performance groups. Afterwards, participants in each group completed the 0-back and 1-back tasks. The results showed that under the 0-back condition, there was no difference in the SNARC effect size between the groups with high and low verbal and spatial loop span. In the 1-back condition, the SNARC effect size gradually decreased with the increase of the span of verbal and spatial loop. With the increase of load, the SNARC effect tends to weaken. Therefore, the current study found that the working memory span and updating ability of the elderly have different influences on the SNARC effect. With the increase of load and the increase of executive needs, the cognitive

resources available to the elderly decrease and the availability of cognitive resources decreases, which weakens the SNARC effect. Individuals with larger working memory span can process more information and better process conflict information, which leads to the weaker SNARC effect.

Keywords: SNARC effect, working memory span, working memory updating, the elderly

亲社会行为和社会支持对老年人主观幸福感和孤独感的影响： 自尊的中介作用

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摘要 我国目前已步入人口老龄化社会, 老年人口占比持续上升。近年来, 老年人生活质量与健康状况备受研究者关注。主观幸福感是反映老年人心理健康与生活质量的重要指标, 关系到老年人能否幸福地安度晚年; 孤独感作为一种负向情绪情感体验普遍存在于老年人群体之中, 对老年人的身心健康有较大的影响。亲社会行为与社会支持贯穿于个体日常生活之中, 能够显著提升个体幸福水平, 消除其不良情绪, 是影响老年人健康状况的重要切入点。因此, 探讨亲社会行为与社会支持对老年人主观幸福感与孤独感的影响及影响机制, 对于提升老年人身心健康有着重要意义。本研究采用亲社会行为量表、领悟社会支持量表、自尊量表、纽芬兰纪念大学幸福感受量表和UCLA孤独量表对504名老年人进行测试, 所得数据使用SPSS 19.0和Amos 23.0软件进行统计分析, 探讨亲社会行为和社会支持对老年人主观幸福感和孤独感的影响, 以及自尊的中介作用。研究结果如下: (1) 相关分析显示, 亲社会行为、领悟社会支持、自尊与幸福感呈显著正相关, 与孤独感呈显著负相关。亲社会行为、领悟社会支持与自尊呈显著正相关。(2) 回归分析显示, 在预测老年人幸福感时, 亲社会行为、领悟社会支持显著正向预测自尊、幸福感; 自尊显著正向预测幸福感。在预测老年人孤独感时, 亲社会行为、领悟社会支持显著正向预测自尊、负向预测孤独感; 自尊显著负向预测孤独感。(3) 中介效应分析显示, 自尊在亲社会行为、领悟社会支持与幸福感之间起中介作用, 在亲社会行为、领悟社会支持与孤独感之间起中介作用。研究结果表明, 亲社会行为与社会支持不仅对老年人主观幸福感和孤独感有着直接影响, 而且还通过自尊的中介作用对老年人主观幸福感和孤独感产生间接影响。具有高水平亲社会行为与良好社会支持的老年人其主观幸福感水平越高, 反之则会产生更高水平的孤独感。另外, 通过提高老年人的自尊水平, 有助于提升老年人的幸福感、缓解老年人的孤独感。

关键词 亲社会行为, 社会支持, 自尊, 主观幸福感, 孤独

Effects of Prosocial Behavior and Social Support on Subjective Well-Being and Loneliness of the Elderly: The Mediating Role of Self-Esteem

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Abstract: At present, China has entered an aging society, and the proportion of the elderly population continues to rise. In recent years, the quality of life and health of the elderly have attracted much attention of researchers. Subjective well-being is an important index reflecting the mental health and quality of life of the elderly, which is related to whether the elderly can spend their old age happily; Loneliness, as a negative emotional experience, generally exists in the elderly, which has a great impact on their physical and mental health. Prosocial behavior and social support run through the daily life of the individual, which can significantly improve the level of individual's happiness and eliminate their bad emotions. It is an important entry point to affect the health status of the elderly. Therefore, it is of great significance to explore the influence and mechanism of prosocial behavior and social support on the subjective well-being and loneliness of the elderly. In this study, 504 elderly people were tested by Prosocial Behavior Scale, Perceived Social Support Scale, Self-esteem Scale, Memorial University of Newfoundland

Well-being Scale and UCLA Loneliness Scale. The data were statistically analyzed by SPSS 19.0 and Amos 23.0 software to explore the effects of prosocial behavior and social support on subjective well-being and loneliness of the elderly, and the mediating role of self-esteem. The results are as follows: (1) Correlation analysis shows that prosocial behavior, perceived social support, self-esteem are positively correlated with well-being, and negatively correlated with loneliness. Prosocial behavior, perceived social support and self-esteem are positively correlated. (2) Regression analysis showed that prosocial behavior and perceived social support positively predicted self-esteem and well-being; Self-esteem significantly positively predicted well-being. When predicting loneliness, prosocial behavior and perceived social support significantly positively predict self-esteem and negatively predict loneliness; Self-esteem significantly negatively predicted loneliness. (3) The mediating effect analysis shows that self-esteem plays a mediating role between prosocial behavior, perceived social support and well-being, and plays a mediating role between prosocial behavior, perceived social support and loneliness. The results show that prosocial behavior and social support not only have a direct impact on the subjective well-being and loneliness of the elderly, but also have an indirect impact on the subjective well-being and loneliness of the elderly through the mediating role of self-esteem. The higher the level of subjective well-being of the elderly with high level of prosocial behavior and good social support, the higher the level of loneliness. In addition, by improving the level of self-esteem of the elderly, it is helpful to improve their happiness and alleviate their loneliness.

Keywords: prosocial behavior, social support, self-esteem, subjective well-being, loneliness

现实利他和网络利他对老年人主观幸福感和孤独感的影响： 依恋的中介作用

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摘要 随着我国人口老龄化程度的不断加深，人口老龄化的问题也日益显著，老年人群体面临着严重的身心健康问题，越来越多的学者开始对老年人的心理健康状况进行研究。主观幸福感是个体对自身生活状态和质量的总体评价，是衡量老年人心理状况的重要指标；孤独感是一种不良的情绪体验，是存在于老年人群中较为严重的心理问题之一。现实利他和网络利他是指现实和网络环境中，个体不要求回报而做出的有利于社会和他人的行为，它能够帮助个体缓解消极情绪，提升自我幸福感。因此，探讨现实利他和网络利他对老年人幸福感和孤独感的影响，以及依恋在其中的中介作用，对于提升老年人心理健康水平具有重要意义。本研究采用现实利他量表、网络利他量表、依恋量表、纽芬兰纪念大学幸福感量表和 UCLA 孤独表对 504 名老年人进行测量，所得数据通过 SPSS 19.0 和 Amos 23.0 软件进行统计分析。研究结果如下：（1）相关分析显示，现实利他、网络利他与依恋、幸福感均呈显著正相关，与孤独感均呈显著负相关；依恋与幸福感呈显著正相关，与孤独感呈显著负相关。（2）回归分析显示，在预测老年人幸福感时，现实利他显著正向预测依恋、幸福感，网络利他显著正向预测依恋、幸福感，依恋显著正向预测幸福感；在预测老年人孤独感时，现实利他显著正向预测依恋、负向预测孤独感，网络利他显著正向预测依恋、负向预测孤独感，依恋显著负向预测孤独感。（3）中介效应分析显示，依恋在现实利他与幸福感、孤独感及现实利他与幸福感、孤独感之间均起中介作用。研究结果表明，现实利他和网络利他是影响老年人主观幸福感和孤独感的重要因素，并且依恋在现实利他和老年人主观幸福感、孤独感之间起着中介作用，现实利他和网络利他还会通过依恋间接影响老年人的主观幸福感和孤独感。老年人从事的现实利他和网络利他行为越多，其获得的主观幸福感水平越高，反之则会产生较高水平的孤独感。此外，通过提升老年人的依恋水平，有利于增强老年人的主观幸福感、降低孤独感。

关键词 现实利他，网络利他，依恋，主观幸福感，孤独感

The Influence of Reality Altruism and Internet Altruism on Subjective Well-Being and Loneliness of the Elderly: The Mediating Role of Attachment

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Abstract: With the deepening of the degree of population aging in China, the problem of population aging is becoming increasingly significant. The elderly are facing serious physical and mental health problems. More and more scholars begin to study the mental health of the elderly. Subjective well-being is an individual's overall evaluation of their own living conditions and quality. It's also an important indicator to measure the psychological status of the elderly. Loneliness is a kind of bad emotional experience, which is one of the more serious psychological problems existing in the elderly group. Reality altruism and network altruism refers to the behavior that individuals do not ask for return in the reality and network environment, which is beneficial to society and others. It can help individuals alleviate negative emotions and improve their self-happiness. Therefore, it is of great significance to explore the influence of reality altruism and network altruism on the well-being and loneliness of the elderly, as well as the mediating role of attachment in them, so as to improve the level of mental health of the elderly. In this study, 504 elderly people were measured by reality altruism scale, Internet altruism scale, attachment scale, Memorial University of Newfoundland happiness scale and UCLA Loneliness Scale. The data were analyzed by SPSS 19.0 and Amos 23.0 software. The results are as follows: (1) Correlation analysis shows that reality altruism and network altruism are positively correlated with attachment and well-being, and negatively correlated with loneliness. Attachment is positively correlated with well-being and negatively correlated with loneliness. (2) Regression analysis shows that in predicting the well-being of the elderly, reality altruism significantly positively predicts attachment and well-being, network altruism significantly positively predicts attachment and well-being, and attachment significantly positively predicts well-being. In the prediction of loneliness of the elderly, reality altruism significantly positively predicted attachment and negative predicted loneliness, network altruism significantly positively predicted attachment and negative predicted loneliness, and attachment significantly negative predicted loneliness. (3) The analysis of mediating effect shows that attachment plays a mediating role between realistic altruism and well-being, loneliness, and between realistic altruism and well-being, loneliness. The results show that reality altruism and network altruism are important factors affecting the subjective well-being and loneliness of the elderly. Attachment plays a mediating role between reality altruism and subjective well-being and loneliness of the elderly. Reality altruism and network altruism also indirectly affect the subjective well-being and loneliness of the elderly through attachment. The more real altruistic and network altruistic behaviors the elderly engage in, the higher their subjective well-being level will be. On the contrary, they will have a higher level of loneliness. In addition, improving the attachment level of the elderly is conducive to enhancing their subjective well-being and reducing loneliness.

Keywords: Reality altruism, Internet altruism, Attachment, Subjective well-being, Loneliness

社区老人生活方式与睡眠质量、焦虑及抑郁的关系

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摘要 生活方式中的体育锻炼、社交活动与个体焦虑、抑郁情绪具有一定的相关, 不健康的生活方式可能是导致个体产生焦虑与抑郁情绪的危险因素。有研究发现个体的生活方式与睡眠质量密切相关。睡眠质量差易产生焦虑、抑郁等不良情绪, 影响个体的身心健康。焦虑、抑郁是社区老人常见的情绪问题, 本研究主要探讨社区老人的生活方式与睡眠质量、焦虑及抑郁情绪之间的关系。研究招募 383 名深圳市社区老人, 采用生活习惯量表(DLQ)、匹兹堡睡眠质量量表(PSQI)、焦虑自评量表(SAS)、老年抑郁量表(GDS)分别对其生活方式、睡眠质量、焦虑和抑郁状况进行测量。结果显示, 患有睡眠障碍的有 131 例, 检出率为 34.2%; 焦虑症状 39

例,检出率为 10.18%;抑郁症状 96 例,检出率为 25.07%。生活方式与睡眠质量($r = -0.15, p < 0.01$)、焦虑($r = -0.19, p < 0.01$)、抑郁($r = -0.25, p < 0.01$)均呈显著负相关。睡眠质量与焦虑($r = 0.46, p < 0.001$)、抑郁($r = 0.52, p < 0.001$)显著正相关。生活方式中脑力活动得分与睡眠质量($r = -0.18, p < 0.05$)、焦虑($r = -0.13, p < 0.05$)、抑郁($r = -0.21, p < 0.05$)显著负相关;体育活动得分与焦虑显著负相关($r = -0.14, p < 0.01$);社交活动得分与焦虑($r = -0.11, p < 0.05$)、抑郁($r = -0.12, p < 0.05$)显著负相关;不良习惯得分与焦虑($r = 0.12, p < 0.05$)、抑郁($r = 0.15, p < 0.05$)显著正相关。中介效应分析结果显示睡眠质量在生活方式影响焦虑($\beta = -0.29, 95\%CI: [-0.5346, -0.1101]$)与抑郁($\beta = -0.03, 95\%CI: [-0.0629, -0.0110]$)的过程中起部分中介作用。形成健康的生活方式、减少不良生活习惯有助于提高社区老人的睡眠质量,减轻其焦虑和抑郁症状。

关键词 生活方式, 睡眠质量, 焦虑, 抑郁, 社区老人

Relationship between lifestyle with sleep quality, anxiety, and depression among community elderly.

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Abstract: Physical exercise and social activities are related to anxiety and depression, unhealthy lifestyle may be a risk factor for anxiety and depression. Lots of investigations showed that lifestyle is closely related to sleep quality. Poor sleep quality could cause adverse emotions which affect an individual's physical and mental health, such as anxiety and depression. Anxiety and depression are common in the community elderly. To explore the relationship between lifestyle with sleep quality, anxiety, and depression among community elderly. A total of 383 participants who live in Shenzhen completed the Daily Living Questionnaire, Pittsburgh Sleep Quality Index, Self-rating Anxiety Scale, and Geriatric Depression Scale. Results showed that participants who reported poor sleep quality, anxiety, depression respectively accounting for 34.2%, 10.18%, and 25.07% ($n = 131, 39, 96$). The total score of lifestyle was negatively correlated with sleep quality ($r = -0.15, p < 0.01$), anxiety ($r = -0.19, p < 0.01$) and depression ($r = -0.25, p < 0.01$). Sleep quality was significant positively correlated with anxiety($r = 0.46, p < 0.001$) and depression($r = 0.52, p < 0.001$). The brain activity was significant negatively correlated with sleep quality($r = -0.18, p < 0.05$), anxiety($r = -0.13, p < 0.05$) and depression($r = -0.21, p < 0.05$). The exercise activity was negatively correlated with anxiety($r = -0.14, p < 0.01$). The social activity score was significant negatively correlated with anxiety($r = -0.11, p < 0.05$) and depression($r = -0.12, p < 0.05$). Bad habits was positively correlated with anxiety($r = 0.12, p < 0.05$) and depression($r = 0.15, p < 0.05$). Sleep quality mediated the effect of lifestyle on community elderly's anxiety($\beta = -0.29, 95\%CI: [-0.5346, -0.1101]$) and depression($\beta = -0.03, 95\%CI: [-0.0629, -0.0110]$). Form a healthy lifestyle and reduce poor habits is beneficial for improving sleep quality and decreasing anxiety and depression in the elderly.

Keywords: lifestyle, sleep quality, anxiety, depression, community elderly

5.18“民族心理学专业委员会”分组展贴报告

文化自信背景下少数民族语言认同研究现状

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摘 要 文化自信是一个民族、一个国家以及一个政党对自身文化价值的充分肯定和积极践行, 以及对其文化的生命力持有的坚定信心。民族语言作为民族存在的象征,是构成民族的最基本要素之一。在社会整合过程中,民族语言以及民族语言认同发挥着沟通和身份建构的作用。语言认同是一种复杂的文化心理趋同现象,是其它认同的基础,深刻地影响着人们的语言行为。中华民族共同体的建构离不开对汉语和少数民族语言的

认同。然而，随着新时代社会的多元化发展，我国各少数民族也趋向城市化融合发展。在这种发展大潮的影响下，无论是对本地的少数民族还是外来人口的语言认同情况都会产生强烈的冲击，同时还会对各自民族的母语产生一定的影响。研究主要采取文献资料法，通过中国知网及万方等数据库，选取“文化自信”、“少数民族”、“语言认同”等关键词进行搜索，选择 20 篇文献进行研读对比，对现有的关于少数民族语言认同的研究进行系统梳理，对促进文化自信背景下的少数民族语言认同研究具有积极借鉴与启示。已有研究中部分研究探讨了不同背景下少数民族语言认同的发展变化情况，其余大都为相关研究或调查研究。有关少数民族大学生的语言生活及认同状况的调查研究表明，少数民族大学生对汉语方言和普通话的掌握及认同水平均高于本族语。少数民族大学生“汉化”程度高，对本族语掌握不佳，语言转用的情况较为普遍。少有研究对少数民族语言认同的影响因素进行探索，以及少有从实践层面探讨如何促进对少数民族语言的认同与保护的研究。在语言生态巨变的环境下，我国少数民族语言逐渐退出日常生活的交流，作为珍贵的历史文化遗产，应采取有针对性的措施促进对少数民族语言的认同，并对其进行有效保护和传承。

关键词 语言认同，文化自信，少数民族

Research status of ethnic minority language identity in the context of cultural confidence

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Abstract: Cultural confidence is a nation, a country and a political party's full affirmation and active practice of its own cultural value, as well as a firm confidence in the vitality of its culture. National language is a symbol of national existence and one of the most basic elements that constitute a nation. In the process of social integration, national language and national language identity play a role in communication and identity construction. Language identity is a complex phenomenon of cultural psychological convergence, which is the basis of other identities and has a profound impact on people's language behavior. The construction of the Chinese national community is inseparable from the identification of the Chinese language and minority languages. However, with the diversified development of society in the new era, China's ethnic minorities also tended to urbanization and integration development. In such a development tide, the language identity of both the local ethnic minorities and the foreign population had a strong impact, and at the same time, it had a certain impact on the mother tongue of their respective nationalities. This research mainly adopted the literature method. Through the database of CNKI and Wanfang, keywords such as "cultural confidence", "ethnic minority" and "language identity" were selected to search, and 20 literatures were selected for study and comparison. The existing researches on ethnic minority language identity were systematically summarized, which had positive reference and inspiration for the research on ethnic minority language identity under the background of cultural confidence. Some of the existing studies had explored the development and changes of ethnic minority language identity under different backgrounds, while the rest were mostly related studies or investigation studies. Some investigations on the language life and identity of minority college students showed that the minority college students had a higher level of mastery and identity of Chinese dialects and Putonghua than their native language. Ethnic minority college students had a high degree of "Sinicization" and a poor grasp of their native languages, and the situation of language conversion was more common. Few studies had explored the influencing factors of minority languages, and few had explored how to promote the recognition and protection of minority languages from the practical level. In the context of great changes in language ecology, ethnic minority languages in China are gradually withdrawing from daily communication. As a precious historical and cultural heritage, targeted measures should be taken to promote the recognition of ethnic minority languages and effectively protect and inherit them.

Keywords: Language identity, Cultural confidence, Ethnic minorities

5.19“护理心理学专业委员会”分组展贴报告

不同学历护士对人流女性外显和内隐态度研究

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摘要 人工流产是全世界普遍存在的公共卫生问题。性观念的开放，首次性交日益低龄化，由于严重缺乏生殖相关健康常识和避孕知识，人工流产数增加。未婚女性除承受生理的伤害外，还受到传统文化价值观和禁忌带来的心理压力。随着医学模式的转变，护士的工作不再局限于打针、发药等技能性操作，更包括心理护理等创造性活动。所以探讨护士作为医务人员在护理过程中对流产女性的态度尤为重要。本研究分别从外显和内隐两个态度层面来探究护士对流产女性的态度。实验一是外显层面态度，采用 2（学历：本科、专科）×2（流产性质：未婚流产、已婚流产）两因素混合设计，因变量是被试在《人工流产态度问卷》上的评定分数。实验二是内隐层面上的态度，采用 2（学历：本科、专科）×2（流产性质：未婚流产、已婚流产）×2（IAT 阶段属性词：积极印象、消极印象）三因素混合设计，因变量为被试执行 IAT 不相容任务与相容任务反应时的差值，即 IAT 效应值。结果表明：（1）在外显层面上，本科和专科两种学历的护士都没有对人流女性表现更为消极的态度。（2）在内隐层面上，IAT 效应值随学历提升而减少，即积极印象增加，消极印象减少，表现出学历的差异。

关键词 不同学历护士，人流女性，外显和内隐态度，内隐联想测验

A Study on the Explicit and implicit Attitudes of nurses with different educational backgrounds towards abortion

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Abstract: Induced abortion is a widespread public health problem in the world. With the opening of sexual concepts, the first sexual intercourse is becoming younger and younger, and the number of induced abortions is increasing due to the serious lack of reproductive health knowledge and contraceptive knowledge. In addition to the physical harm, unmarried women also suffer from the psychological pressure brought by traditional cultural values and taboos. With the change of medical model, nurses' work is no longer limited to skilled operations such as injection and medicine dispensing, but also includes creative activities such as psychological nursing. Therefore, it is particularly important to explore the attitude of nurses as medical personnel towards women who have abortions in the nursing process. In this study, the attitudes of nurses towards women with abortion were investigated from two aspects: explicit and implicit attitudes. In the first experiment, explicit attitude was adopted. A mixed design of 2 (education: undergraduate, junior college) ×2 (nature of abortion: unmarried abortion, married abortion) was adopted. The dependent variable was the evaluation score of the subjects in the Questionnaire on attitudes to Induced Abortion. Experiment two is the attitude of the implicit level, using 2 (qualification: bachelor degree, specialized subject) × 2 (abortion properties: unmarried abortion, married abortion) × 2 (IAT stage attribute words: positive impression, negative impression) three factors mixed design, the dependent variable for the participants perform IAT incompatible tasks and compatible task reaction time difference, namely the IAT effect value. The results showed that : (1) at the external level, nurses with bachelor degree and junior college degree did not show more negative attitude towards abortion women. (2) At the implicit level, the IAT effect value decreases with the improvement of educational background, that is, the positive impression increases and the negative impression decreases, showing the difference of educational background.

Keywords: nurses with different educational backgrounds; Abortion of women; Explicit and implicit attitudes; Implicit association test

新型冠状病毒肺炎疫情暴露与非湖北一线医务人员心理健康的关系

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摘要 目的: 探究在非湖北一线医务工作者中新型冠状病毒肺炎疫情暴露与其心理健康(包括焦虑、抑郁、创伤后应激反应和睡眠)的关系。**方法:** 采用网络问卷调查法对山东省医务人员进行调查, 共 1,608 名医务人员有效应答。疫情暴露参考文献中 SARS 疫情暴露测量方法进行测量, 焦虑、抑郁、创伤后应激反应分别使用广泛性焦虑量表(GAD-7)、患者健康问卷抑郁症状群量表(PHQ-9)、事件影响量表修订版(IES-R)进行测量, 睡眠时长、失眠症状和睡眠质量通过修改的匹兹堡睡眠质量指数量表相应条目进行测量。使用一般线性回归分析疫情暴露与心理健康的关系。**结果:** 317 (19.71%) 名医务人员报告存在疫情暴露, 一般线性回归分析显示, 在控制社会人口学资料后, 工作暴露、隔离暴露和周围人感染均能够影响非湖北一线医务人员的心理健康, 在控制社会人口学资料和其他类型暴露后, 工作暴露与隔离暴露对医务人员心理健康影响有限, 而周围人感染这一暴露类型与医务人员的焦虑、抑郁、创伤后应激反应水平和失眠症状呈正相关, 与睡眠时长和睡眠质量呈负相关。**结论:** 周围人感染能够影响非湖北一线医务人员的心理健康水平(包括焦虑、抑郁、创伤后应激反应和睡眠), 需要着重关注存在周围人感染的医务人员并及时给予心理指导和心理干预。**关键词** 新型冠状病毒肺炎疫情, 医务人员, 疫情暴露, 心理健康, 横断面研究

The relationship between COVID-19 exposure and mental health of medical staff not working in Hubei during the outbreak

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Abstract: Objective: To explore the relationship between COVID-19 exposure and mental health (i.e. anxiety, depression, posttraumatic stress, and sleep) of medical staff not working in Hubei during the outbreak. **Methods:** An online survey link was shared to the medical staff in Shandong Province during the COVID-19 outbreak and a total of 1,608 medical staff responded validly. The COVID-19 exposure was measured using items developed according to the measurement of exposure to the SARS outbreak in the literature. Generalized Anxiety Disorder-7, Patient Health Questionnaire-9 and the Impact of Event Scale - Revised were used to assess anxiety, depression and post-traumatic stress symptoms, respectively. Questions adopted from the Pittsburgh Sleep Quality Index were used to measure nocturnal sleep length, insomnia, and sleep quality. The relationship between COVID-19 exposure and mental health was analyzed using general linear regression model. **Results:** A total of 317 (19.71%) medical staff reported exposure to the COVID-19 outbreak. General linear regression model analysis showed that after controlling for sociodemographic factors, work exposure, quarantining and having infected people around can affect the mental health of medical staff not working in Hubei during the outbreak. After controlling for sociodemographic factors and other types of exposure, work exposure and quarantining had limited effects on the mental health of medical staff, while having infected people around was positively associated with anxiety, depression, post-traumatic stress and insomnia symptoms, and negatively associated with sleep duration and sleep quality. **Conclusion:** Having infected people around can affect the mental health of medical staff who were not working in Hubei Province during the COVID-19 outbreak (i.e. anxiety, depression, posttraumatic stress, and sleep). Therefore, more attention needs to be paid to those medical staff who have infected people around and they should be given psychological guidance and intervention timely.

Keywords: COVID-19, Medical staff, Epidemic exposure, Mental health, Cross-sectional studies

妊娠早期和妊娠晚期孕妇症状群调查研究

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摘要 目的: 调查妊娠早期和妊娠晚期孕妇多种心身症状的发生情况(如发生频率、严重程度和困扰程度), 并识别不同妊娠阶段症状群特征。**方法:** 采用便利抽样的方法, 从2019年3月至10月选取山东省某两所三级甲等医院产科门诊的557名妊娠期女性为研究对象, 其中妊娠早期249名, 妊娠晚期308名。使用记忆症状评估量表调查研究对象在妊娠早期和妊娠晚期的症状体验, 使用研究者自行设计的一般资料调查表收集研究对象的社会人口学和临床学信息。采用SPSS 25.0和R 4.0.2软件进行数据的整理和分析。采用独立样本t检验和卡方检验以比较不同妊娠阶段孕妇的社会人口学信息是否存在差异, 采用独立样本t检验比较症状评分在不同妊娠阶段的差异; 采用Spearman相关分析、偏相关网络分析和聚类分析来确定症状群的最佳数量。**结果:** 妊娠早期孕妇症状得分排在前五位的分别为恶心、食欲不振、昏昏欲睡、精力不足、呕吐; 妊娠晚期孕妇症状得分排在前五位的分别为体重增加、难以入睡、出汗、精力不足和口干。在妊娠早期识别出4个症状群, 分别命名为妊娠反应症状群、情绪-疲乏症状群、性欲-食物味道改变症状群和口干-腹胀症状群; 在妊娠晚期识别出3个症状群, 分别为情绪-疲乏症状群、睡眠-腹胀症状群、体液缺乏症状群。**结论:** 妊娠期女性在怀孕过程中会出现多个心身症状, 且在不同妊娠阶段症状表现不同。本研究为妊娠期孕妇的症状群提供了新的见解, 有利于临床医务人员从症状群的角度较为全面地评估和管理妊娠期孕妇中多种同时发生的症状。**关键词** 症状群, 症状管理, 孕妇, 网络分析, 聚类分析

Identifying symptom clusters among pregnant women during early and late pregnancy

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Abstract: Objectives: To investigate the status of multiple psychosomatic symptoms (e.g., frequency, severity and distress) among women in early and late pregnancy and to identify symptom clusters in different gestational stages. **Methods:** A convenience sample were recruited at the obstetrics clinic of two tertiary hospitals in Shandong Province, from March 2019 to October 2019. A total of 557 pregnant women were investigated, of which 249 were in the early pregnancy stage, and 308 were in the late pregnancy stage. Participants' symptom experience in early and late pregnancy was measured by the Memorial Symptom Assessment Scale, and sociodemographic and clinical characteristics were also collected, using a questionnaire designed by the researchers. All analyses were conducted using SPSS (version 25) and R statistical software (version 4.0.2). Independent Student's t-test and the Chi-squared test were performed to compare the differences in sociodemographic information and symptom scores at different stages of pregnancy. Spearman correlation analysis, partial correlation networks, and hierarchical cluster analysis were carried out to identify optimal number of symptom clusters. **Results:** Top five scores for symptoms in early pregnancy were nausea, lack of appetite, feeling drowsy, lack of energy, and vomiting; and weight gain, difficulty sleeping, sweating, lack of energy, and dry mouth scored highly in late pregnancy. Four clusters (pregnancy reaction symptom cluster, mood-fatigue symptom cluster, change in libido and food taste symptom cluster, and dry

mouth-bloating symptom cluster) were identified in early pregnancy, and three clusters (mood-fatigue symptom cluster, sleep-bloating symptom cluster, and fluid deficiency symptom cluster) were determined in late pregnancy.

Conclusions: Women experience multiple psychosomatic symptoms during pregnancy, and the manifestation of symptoms varies, and our study provides new insights into symptom clusters of pregnant women. These results might support the development of assessment and management of multiple co-occurring symptoms in this population.

Keywords: Symptom clusters, Symptom management, Pregnant women, Network analysis, Cluster analysis

中文版抑郁敏感性莱顿指数量表在孕产妇人群中应用的效度和信度

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摘要 目的 综合应用经典测量理论(CTT)与项目反应理论(IRT)方法评价中文修订版抑郁敏感性莱顿指数量表(LEIDS-RR-CV)在孕产妇人群中应用的信度和效度, 确定产后抑郁高危人群的临界值, 以期评价孕产妇抑郁认知反应提供科学、有效的测评工具。**方法** 采用方便抽样方法, 选取2020年9月至2021年3月在福建省福州市、莆田市、泉州市4所三级甲等医院产科门诊及产科住院部就诊的符合纳排标准的344例孕妇作为研究对象。并分别于产后1周和6周进行两次随访。调查工具为自制的孕晚期、产后6周的一般情况调查表、LEIDS-RR-CV和中文版爱丁堡产后抑郁量表(EPDS)。采用问卷星在线调查方法进行资料收集。使用SPSS26.0、AMOS25.0和Stata14.0软件进行数据分析; 其中, 用均数和标准差对计量资料进行统计描述, 用频数和构成比对计数资料进行统计描述; 信度评价指标包括内在一致性、重测信度、边际信度; 效度评价指标包括结构效度、区分效度、聚合效度、校标关联效度、已知族群效度; 其他评价还包括反应度、天花板与地板效应、单维性检验、基于等级反应模型的条目分析、项目特征曲线等。设 $\alpha=0.05$ (双侧), 以 $P<0.05$ 为差异有统计学意义。**结果** LEIDS-RR-CV在孕晚期妇女和产后6周妇女中测量的Cronbach's α 系数分别为0.928、0.982, 各维度的Cronbach's α 系数范围分别为0.874~0.914、0.943~0.972。孕晚期、产后6周前后两次测量LEIDS-RR-CV的组内相关系数分别为0.934、0.862, 各维度的2周重测信度分别为0.652~0.943、0.672~0.867。验证性因子分析结果显示, LEIDS-RR-CV的五因子结构模型拟合良好, 孕晚期妇女的CMIN/DF=2.511、RMSEA=0.066、RMR=0.038、CFI=0.925、TLI=0.915, 产后6周妇女的CMIN/DF=2.586、RMSEA=0.070、RMR=0.035、CFI=0.963、TLI=0.957。在聚合效度方面, 孕晚期和产后6周妇女5个维度26个条目的标准化载荷值范围分别为0.688~0.883、0.859~0.954; 5个维度的组合信度分别为0.877~0.913、0.943~0.972; 5个维度的平均方差萃取量分别为0.588~0.648、0.805~0.870。在区分效度方面, 孕晚期和产后6周妇女的各维度之间的 r_s 值范围分别为0.250~0.805、0.719~0.933。以EPDS为效标, 将58分作为LEIDS-RR-CV筛选出孕晚期妇女抑郁高危人群的截断值(约登指数最大值为0.633, 灵敏度和特异度分别为0.904和0.730); 将60分作为LEIDS-RR-CV筛选出产后6周妇女抑郁高危人群的截断值(约登指数最大值为0.307, 灵敏度和特异度分别为0.767和0.540)。IRT分析结果显示, LEIDS-RR-CV在孕晚期、产后6周的边际信度分别为0.943、0.981; 条目分析结果显示: 在孕晚期时, LEIDS-RR-CV的26个条目中, 有23个条目的参数 α 值大于1(89%), 其余3个条目的 α 值也接近1; 条目的 β 值范围为-1.44~6.22; 有19个条目(73.08%)的最大信息量值大于0.5。在产后6周时, LEIDS-RR-CV的26个条目中, 参数 α 值均大于1; 条目的 β 值范围为-1.22~2.91; 所有条目的最大信息量均大于0.5。且两个时间点在每个项目图形中, 5条曲线具有比较好的区分性, 不存在严重的重叠现象。根据测试特征曲线图可知, 当孕晚期参与者估计认知反应水平在1.0~3.0之间; 产后6周参与者估计认知反应水平分别在-1~0、1~2之间时, LEIDS-RR-CV以最低的标准误差提供了最准确的信息。**结论** LEIDS-RR-CV可用于测评我国孕产妇人群的认知反应水平, 具有较好的信效度。LEIDS-RR-CV筛选出孕晚期、产后6周妇女抑郁高危人群的截断值分别是58分、60分。

关键词 孕产妇, 抑郁认知反应, 经典测量理论, 项目反应理论

Validity and reliability of the Chinese version of the modified Leiden index of depression sensitivity among pregnant and maternal women

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Abstract: Objective: To evaluate the reliability and validity of the Chinese version of the modified Leiden index of depression sensitivity (LEIDS-RR-CV) among pregnant and maternal women by the Classical measurement theory (CTT) and item response theory (IRT), and to determine the cut-off value of high-risk individuals in postpartum depression. Both of which is to provide a reliable and valid tool for evaluating cognitive reactivity (CR) to postpartum depression. **Methods:** From September 2020 to March 2021, a total of 344 pregnant women who met the standard of discharge were recruited by the convenient sampling method, from the obstetrical clinic and obstetrical inpatient department of four Tertiary (level 3) hospitals in Fuzhou, Putian, and Quanzhou, Fujian Province, China. The women were followed up at 1 week and 6 weeks postpartum, respectively. The participants completed the following tools through the Wenjuanxing online platform, including the self-made socio-demographic or clinical characteristic questionnaire (including late pregnancy and 6-week postpartum respectively), the LEIDS-RR-CV, and the Edinburgh Postnatal Depression Scale (EPDS). The SPSS26.0, AMOS25.0, and Stata14.0 software were used to analyze the data. The mean and standard deviation are used to describe the measurement data, and the frequency and constituent ratio are used to describe the counting data. Reliability (e.g., internal consistency, test-retest reliability, composite reliability and marginal reliability), and validity (e.g., construct validity, discriminant validity, convergent validity, criterion-related validity, and known-group validity) were assessed. The responsiveness, ceiling and floor effect, one-dimensional test, item analysis based on Graded Response Model, item characteristic curve were also assessed in this study. Suppose $\alpha = 0.05$ (bilateral), the difference was statistically significant ($P < 0.05$). **Results:** For late pregnancy and 6 weeks postpartum women, the Cronbach's α coefficient of LEIDS-RR-CV was 0.928 and 0.982, respectively. The Cronbach's α coefficients of the five factors were ranged from 0.874~0.914 and 0.943~0.972, respectively. The intra-group correlation coefficients of LEIDS-RR-CV measured in the third trimester and 6 weeks after delivery were 0.934 and 0.862, respectively, and the test-retest reliability of each dimension was 0.652~0.943 and 0.672~0.867, respectively. The results of confirmatory factor analysis showed that the five-factor structure model of LEIDS-RR-CV fitted well. In terms of convergent validity, the standardized load values of 26 items in 5 dimensions among women in late pregnancy and 6 weeks postpartum were 0.688~0.883, 0.859~0.954, and the composite reliability of 5 dimensions were 0.877~0.913 and 0.943~0.972, respectively. The average amount of variance extraction was 0.588~0.648 and 0.805~0.870, respectively. In terms of discriminant validity, the r_s values between late pregnancy and 6 weeks postpartum women were 0.250 to 0.805 and 0.719 to 0.933 respectively. Taking EPDS as the criterion, the optimal cut-off point of LEIDS-RR-CV to screen the high-risk groups of depression in late pregnant women was 58 points, with the maximum value of the Youden index was 0.633, the sensitivity and specificity were 0.904 and 0.730 respectively. The optimal cut-off point of LEIDS-RR-CV to screen the high-risk groups of depression in 6 weeks, postpartum women, with the maximum value of Youden index was 0.307, the sensitivity and specificity were 0.767 and 0.540, respectively. The results of IRT analysis showed that the marginal reliability of LEIDS-RR-CV in the third trimester and 6 weeks after delivery was 0.943 and 0.981, respectively, and the item analysis showed that in the third trimester, the parameter α value of 23 items of LEIDS-RR-CV was greater than 1 (89%), and the β value of the items was ranged from -1.44 to 6.22. The maximum information value of 19 items (73.08%) was greater than 0.5. At 6 weeks after delivery, the parameter α values of all items were all greater than 1, the β values of items were ranged from -1.22 to 2.91, and the maximum information values of all items were greater than 0.5. At both times, the five curves have a good distinction and no serious overlap. According to the test characteristic curve, when the third-trimester participants estimated CR levels between 1.0 and 3.0, and 6 weeks

postpartum participants estimated CR levels between -1: 0 and 1: 2 respectively, the LEIDS-RR-CV provided the most accurate information with the lowest standard error. **Conclusions:** LEIDS-RR-CV can be used to evaluate the CR level of pregnant and maternal women in China, which has good reliability and validity. The cutoff values of high-risk groups of depression in late pregnancy and 6 weeks postpartum selected by LEIDS-RR-CV were 58 and 60, respectively.

Keywords: Maternal, Cognitive Reactivity, Classical measurement theory, Item response theory

巴林特小组对国内医护工作者职业倦怠的影响与进展研究

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摘要 随着现代社会的发展，人们在追求高质量生活的同时，所面对的社会生活压力不断增大，职业倦怠出现率逐年增多。职业倦怠是指个体在长期工作压力下产生的心身疲劳与耗竭的状态。该名词最早由 FREUDENBERGER 于 1974 年提出，他认为职业倦怠是一种最容易在助人行业中出现的情绪性耗竭的症状，此后也有学者认为职业倦怠是个体对其工作长期的情绪及人际应激源做出反应而产生的心理综合症。各行各业的工作者均会出现职业倦怠。有研究表明，医护人员职业倦怠发生率排名第 2，仅次于教师。临床医护工作者每天在处理大量护理工作的同时要承受来自患者及家属、工作环境、人际关系及业务学习等各方面的压力，持续高强度的工作压力，会影响到个体身心健康，易产生悲观失望的负性情绪，进而出现职业倦怠，产生挫败感，心理资本降低。为克服医护人员自身职业倦怠问题，提高患者满意度，以及充分体现医护人员自身价值，人们尝试了多种方式，巴林特小组活动就是其中一种方式。Meta 分析表明，巴林特小组活动能缓解医务人员职业倦怠，调解医护人员情绪。目前我国开展此活动较为局限，自 2003 年巴林特小组活动引入我国以来，缺乏全国性大样本的研究。本研究旨在通过巴林特小组活动在医院中运用移情、反移情等基本技术，促进医护人员识别自身和患者情绪，使他们更好地帮助和理解患者。通过比较分析巴林特小组活动对医护工作者职业倦怠感的影响，来探究巴林特小组活动在职业倦怠中的理论和实践意义，继以加快巴林特小组活动在国内的推广和深入。

关键词 巴林特小组，职业倦怠，医护工作者

Research on the effects and progress of Balint group activities on job burnout of domestic healthcare workers

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Abstract: With the development of modern society, people are pursuing a high quality of life, but the pressure of social life is increasing and leading to an increase in the rate of job burnout year by year. The term job burnout refers to the state of mental and physical fatigue and exhaustion of individuals under prolonged work stress. The term was first introduced by FREUDENBERGER in 1974, who believed that job burnout is a symptom of emotional exhaustion that is most likely to occur in the helping professions. It has also been suggested since then that job burnout is a psychological syndrome that occurs when individuals react to the emotional and interpersonal stressors of their jobs over long periods of time. Job burnout occurs in people from all walks of life, and studies have shown that health care workers have the second highest incidence of job burnout, second only to teachers. Clinical health care employees deal with a large amount of nursing work every day, and at the same time, they have to bear the pressure from patients and families, work environment, interpersonal relationships and professional training and other related factors. The continuous high-intensity work pressure will affect the individual's physical and mental health, and is prone to negative emotions of pessimism and disappointment, which will lead to job burnout, frustration, and reduced psychological capital. In order to overcome the job burnout problem, improve patient satisfaction, and fully reflect the value of health care workers themselves, a variety of approaches have been tried. One of these approaches

is Balint group activities. Meta-analysis shows that Balint group activities can alleviate the job burnout of medical staff and regulate the emotions of medical staff. At present, this activity is limited in China, and there is a lack of national studies with large samples since the introduction of Balint group activities in 2003. This study aims to use the basic techniques of empathy and counter-empathy in hospitals through Balint group activities to promote health care workers to identify their own emotions and those of patients, so that they can better help and understand patients. This study explores the theoretical and practical implications of Balint group activities in job burnout by comparing and analyzing the effects of Balint group activities on health care workers' job burnout, and then accelerates the promotion and depth of Balint group activities in China.

Keywords: Balint group, job burnout, healthcare workers

后疫情时代医院职工心理资本、组织承诺、职业认同与离职意愿的相关分析

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摘要 目的 了解后疫情时代医院职工心理资本、组织承诺、职业认同与离职意愿的现状, 探讨心理资本、组织承诺、职业认同对离职意愿的影响。**方法** 采用便利抽样法对衡阳市某三甲医院 914 名职工进行心理资本、组织承诺、职业认同与离职意愿问卷调查。**结果** 后疫情时代医院职工的心理资本处于较高水平 (4.80 ± 0.89), 组织承诺水平处于中等水平 (3.03 ± 0.987), 职业认同感处于中等偏上水平 (4.03 ± 0.69), 离职意愿处于中等偏高水平 (2.78 ± 0.84); 心理资本、组织承诺、职业认同和离职意愿之间均有相关关系 ($P < 0.05$); 回归分析中组织承诺和职业认同对离职意愿可解释 25.40% 的影响; 路径分析中心理资本对离职意愿直接作用弱, 心理资本通过组织承诺、职业认同两个中介变量对离职意愿产生间接效应。**结论** 后疫情时代医院管理者应关注职工的心理资本情况, 为其提供相应的支持以提高组织承诺水平, 增强职业认同感, 从而降低离职意愿。

关键词 后疫情时代, 医院职工, 心理资本, 组织承诺, 职业认同, 离职意愿

国内外肺癌患者心理干预的文献计量学分析

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摘要 目的: 通过系统分析肺癌患者心理干预研究领域的相关文献, 了解研究现状、探讨该领域的研究热点和未来发展趋势。**方法**: 检索 PubMed、Web of Science、中国知网、万方、维普数据库, 应用 Citespace 引文分析软件及文献计量学方法分析建库至 2021 年 5 月肺癌患者心理干预的研究文献, 对有关国内外肺癌患者心理干预的文献从文献数量分布、国家文献数量分布、期刊分布情况等方面进行文献计量学分析。**结果**: 国内外关于肺癌患者心理干预的发文从数量看来美国、英国、澳大利亚在该领域处于领先地位, 正念减压疗法、运动疗法、幽默疗法、尊严疗法等是目前国外的研究热点。国外对于肺癌患者心理的关注和干预都较早且干预模式较为成熟; 国内在近十年对癌症患者心理的关注逐渐增加, 但在肺癌患者心理干预的研究起步相对较晚, 干预性研究较少且存在缺乏理论支撑, 研究设计的科学性和严谨性欠佳等问题。**结论**: 在肺癌患者心理干预研究中, 以美国、英国等为主的发达国家居于领先地位, 我国在这方面研究起步相对较晚且发文数量少, 未来可学习借鉴国外的经验, 增加干预性研究的科学性和可推广性。

关键词 肺癌, 心理干预, 研究热点, 文献计量学

Bibliometric analysis of psychological intervention for lung cancer patients

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Abstract: Objective: To understand the research status, discuss the research hot spots and the future development

trend of psychological intervention for lung cancer patients through a systematic analysis of the relevant literature. Methods: PubMed, Web of Science, CNKI, Wanfang and VIP databases were retrieved. Citespace citation analysis software and bibliometrics were used to analyze the research literatures on psychological intervention for lung cancer patients from the establishment of the database to March 2021. Literature on psychological intervention for lung cancer patients at home and abroad was analyzed in terms of literature quantity distribution, national literature quantity distribution, journal distribution and so on. Results: In terms of the number of published papers on psychological intervention for lung cancer patients at home and abroad, the United States, The United Kingdom and Australia are in the leading position in this field. MBSR, exercise therapy, humor therapy and dignity therapy are the research hot spots abroad. Overseas psychological attention and intervention for lung cancer patients are earlier and the intervention mode is more mature. In recent ten years, domestic attention to the psychology of cancer patients has gradually increased, but the research in this field started relatively late, with few intervention studies, lack of theoretical support, and poor science and rigor. Conclusions: In the research of psychological intervention for lung cancer patients, developed countries, mainly the United States and The United Kingdom, take the leading position. China started relatively late in this field and published few papers. In the future, we can learn from foreign experience to increase the scientific of intervention research.

Keywords: Lung cancer, Psychological intervention, Research hot spots, Bibliometrics

5.20“语言心理学专业委员会”分组展贴报告

中文阅读中汉字身份信息和位置信息加工受词频调节 ——来自眼动的证据

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摘要 普遍认为, 英文阅读中字母的身份信息和位置信息加工非常重要, 且存在明显的转化字母效应(transposed letter effect), 也就是说字母的位置信息加工比身份信息加工更加灵活。同时, 转化字母效应受到词频的调节。本研究主要探究中文阅读中是否真正存在转化字符效应以及该效应是否受词频调节。由于当前中文转化字符效应研究存在的问题, 实验1进行了更严格的设计, 采用边界范式和含有双字目标词的句子, 并对目标词设置4个条件(基词、转换非词、相似替换非词和完全不同替换非词), 进一步考察中文阅读中是否存在转化字符效应。实验2在实验1的基础上加入了词频变量(高频、低频)。实验1结果显示, 预视效应在所有眼动指标上都具有显著性, 这表明汉字的身份信息和位置信息加工非常重要, 且存在非常明显的转化字符效应。实验2结果显示, 汉字位置信息加工和转换字符效应在早期指标上都受到词频调节, 但身份信息加工在所有指标上都不受词频的调节。交互作用结果表明, 低频词汉字位置信息加工更严格。低频词不存在转化字符效应或是存在比高频词更小的转化字符效应。本研究结果与英文相关研究有一致性, 但也体现了中文的特点。这将为中文阅读模型提供汉字身份信息和位置信息加工的基本数据支撑。

关键词 汉字, 身份信息, 位置信息, 转化字符效应, 词频

The identity and position processing of Chinese characters are modulated by word frequency in Chinese reading: Evidence from eye movements

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Abstract: It is well-established that the identity and position information of letters are important in sentence reading and there was Transposed letter effect (TL effect, the processing of position information of letters is more flexible than processing of identity information), which was modulated by word frequency. However, given language differences, it is important to establish the identity and position processing of Chinese characters and whether it is modulated by word frequency. Experiment 1 was designed more rigorous to further investigate the existence of transposed-character effect in Chinese reading, using boundary paradigm and sentences containing two-character target words with four conditions for target words (eg. base words, TC nonwords, similar SC nonwords, and SC nonwords). In experiment 2, word frequency variable was added on the basis of experiment 1. The results of experiment 1 showed that the preview effect was significant across all measures, meaning the importance of identity and position information of characters and the obvious existence of transposed-character effect. The results of experiment 2 showed that position processing of Chinese characters and the transposed-character effect were modulated by word frequency on early measures, while the identity processing was not modulated by word frequency on all the measures. The interaction results showed that the position processing of characters of low frequency words was more rigorous and low frequency words did not have transposed-character effect or had smaller transposed-character effect than high frequency words. These findings are consistent with the relevant studies in English and also reflect features of Chinese. This will provide basic data support for the processing of Chinese character identity and position information for Chinese reading model.

Keywords: Chinese character, identity information, position information, transposed-character effect, word frequency

颞叶听觉脑区表征语言熟悉性差异的神经基础

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摘要 语言熟悉性效应是指听者在语音知觉过程中, 加工自己母语语音的能力好于加工不熟悉语言的语音。这种效应得到了大量研究的一致证明, 但是以颞叶听觉和语音加工脑区为主的大脑皮层是否以及如何表征这种语言熟悉性差异则尚未可知。为此本研究采用 Block 设计, 让被试躺在 MRI 中执行被动语音知觉任务。任务采用了三种不同熟悉度的语言作为实验材料, 即汉语(母语)、英语(L2)和韩语(不熟悉的语言), 并通过声学编辑软件对每一种语言语音进行处理, 产生无语义语音材料, 从而保证每种语言包含有语义语音和无语义语音两种实验材料。分析结果发现双侧前部颞中回(aMTG), 右侧后部颞中回(pMTG), 右侧缘上回及角回(rAG)均得到了显著的激活。右侧 AG 和缘上回能表征出有语义信息语言间的差异; 除了右侧缘上回脑区外, 这些脑区均能表征无语义信息情境下不同语言间的差异。为进一步考察颞叶听觉脑区的作用机制, 基于以往研究选取了颞横沟(HG)、颞平面(PT)和颞叶语音加工概率图包含的脑区为感兴趣区, 并抽取对

应的% Signal Change 进行条件间的对比。分析发现, 在 HG 和 PT 上并没有显著的交互效应, 左侧颞上回/沟等脑区表现出显著的语言间的熟悉性差异; 而右侧颞上回/沟等脑区在无语义语音条件下不存在语言间的显著性差异, 但神经信号变化均有体现出语音熟悉性的梯度变化。因此, 本研究认为相对于无语义信息的听觉加工, 颞叶听觉皮层对含有语义信息且可以理解的声音刺激能产生较强的神经响应, 并能表征语言熟悉性的差异。

关键词: 语义信息, 语音熟悉性, 嗓音知觉, 颞叶皮层

The representation of language familiarity effect in temporal auditory cortex

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Abstract: The language familiarity effect (LFE) refers that the listeners' behavior performance was well better in the same speaker than different speaker conditions. It has been confirmed by numbers of behavior researches, but it is still unknown whether and how temporal auditory and voice brain regions represent the LFE. This study employed the block design and asked participants who lied on the MRI scanner to passive listen to auditory stimuli. The auditory stimuli of the current study included three languages, the Mandarin Chinese (the native language), English (the second language, L2), and the Korean (an unfamiliar language). All stimuli were edited by the acoustic software and formed time-reversed auditory stimuli that have no semantic information, so each language included semantic and no semantic auditory stimuli. The analysis showed significant activation in the bilateral anterior parts of middle temporal gyrus (aMTG), right posterior parts of middle temporal gyrus (pMTG), right supramarginal gyrus and angular gyrus (rAG). A number of clusters in the right supramarginal gyrus and rAG indicated a significant language familiarity effect under the condition of semantic information. Besides the right supramarginal gyrus, the rest activation regions were all represented language familiarity difference without semantic information. For further investigation the function mechanism of temporal auditory cortex in the current study, we extracted the % Signal Change of those regions that were been selected as ROI, included the bilateral heschl's gyrus (HG), planum temporale (PT) and brain regions in the voice probabilistic maps. Beyond the HG and PT, the results showed significant familiarity differences among languages with semantic information, which was observed in the left superior temporal gyrus/ sulcus (STG/S). Moreover, although there was a non-significant language familiarity difference in the right STG/S under the condition of no semantic information, the neural signal value still showed a gradient change among them. Therefore, compared with no semantic information auditory processing, the present study unravels the temporal auditory cortex could generate a stronger neural response for those semantic and comprehensible auditory stimuli, and represents the language familiarity difference in the early stages of processing (Supported by NSFC: 31900750, 31771254 and 6143101).

Keywords: Semantic information, language familiarity effect, voice perception, temporal cortex

汉语三字词惯用语的储存激活机制研究

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摘要 为研究三字词汉语惯用语的储存激活机制，采用 DRM 范式通过汉语三字词惯用语、等价词诱发错误记忆，从而将记忆过程中汉语惯用语字面义和比喻义的处理过程进行分离，以探测汉语惯用语字面义和比喻义的关联性。实验一和实验二的等价词分别为惯用语中间字和尾字替换，数据显示等价词和惯用语配对作为材料时，两个方向上的错认率都显著高于其它材料组，而先学习等价词的错认率又显著高于先学习惯用语。实验一、二结果相似，表明实验可以有效诱发错误记忆，且错误记忆在替换字位置不同的情况下仍出现一样的效果。研究结果支持惯用语理解的建构观点，同时涉及到激活扩散理论：即汉语惯用语的信息激活是自下而上的，学习惯用语后会因语义/词汇激活扩散导致对应的等价词被激活而产生错误记忆。学习等价词后惯用语的错认率显著更高则表明惯用语的理解过程应是字面义和比喻义同时加工，且比喻义会通过字面义相同的等价词间接激活，自动发生。位置效应的不显著也揭示了惯用语比喻义的激活不单纯依赖固定词组。惯用语作为一种特殊的汉语语汇，以其比喻义作为本质，更多需要结合文化、习俗才能进行理解。本研究材料均未采用被试不熟悉的惯用语，因此无法对更多的惯用语理解理论进行探讨，这也是本研究未来努力的方向。

关键词 惯用语，DRM 范式，错误记忆，储存激活

The Storage and Activation Mechanism of Three-Character Chinese Idioms

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Abstract: In order to study the storage and activation mechanism of Three-character Chinese idioms, DRM paradigm is adopted to induce false memory through Three-character Chinese idioms and equivalent words, so as to separate the processing process of literal meaning and figurative meaning of Chinese idioms in the process of memory, so as to detect the correlation between literal meaning and figurative meaning of Chinese idioms. In experiment 1 and Experiment 2, the equivalent words were replaced by idiomatic middle words and tail words respectively. The data showed that when the equivalent words and idiomatic expressions were paired as materials, the misrecognition rate in both directions was significantly higher than that in other material groups, while the misrecognition rate of the equivalent words learned first was significantly higher than that of the idiomatic expressions learned first. The results of experiment 1 and 2 are similar, indicating that the experiment can effectively induce false memory, and the false memory still has the same effect under different substitution word positions. The results support the view of constructing idiomatic understanding, and involve the activation diffusion theory: that is, the information activation of Chinese idiomatic expressions is bottom-up, and after learning idiomatic expressions, the semantic/lexical activation diffusion will lead to the activation of corresponding equivalent words, resulting in false memory. The significantly higher misrecognition rate of idioms after learning equivalent words indicates that the process of understanding idioms should be processed simultaneously with literal meaning and figurative meaning, and metaphorical meaning can be activated indirectly and automatically by equivalent words with the same literal meaning. The insignificance of positional effect also reveals that the activation of figurative meaning in idiomatic expressions does not depend solely on fixed phrases. As a special Chinese vocabulary, idioms are more important to be understood by combining culture and custom than metaphorical meaning. The materials in this study did not adopt the familiar idioms of the subjects, so it is impossible to discuss more theories of idiom understanding, which is also the future direction of this study.

Keywords: Idiom, DRM paradigm, False memory, Storage activation

颜色隐喻的认知神经加工机制：一项 ERP 研究

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摘要 为什么人们听到“白色”会联想到干净、纯洁, 听到“黑色”会联想到冷酷、恐惧? 这种颜色隐喻认知包含复杂的认知加工机制, 但目前我们对其了解还比较有限。本研究采用事件相关电位技术, 探讨颜色隐喻的认知加工过程及其神经生理机制。有 30 名大学生被试参与本研究, 每人需要完成两项任务: 其一为颜色联想任务, 包含相关联想关系(比如/白色/-/纯洁/)和无关联想关系(比如/黑色/-/幸运/)两种实验条件, 在被试进行颜色词联想关系判断时, 同时记录其行为反应和脑神经电位(N400 反应)变化; 其二为颜色知识任务, 设置颜色关系匹配(比如/白色/-/雪花/)和颜色关系不匹配(比如/黑色/-/菠萝/)两种实验条件, 该任务中只记录被试在进行颜色匹配关系判断时的行为反应。结果发现: (1) 无关联想关系比相关联想关系所诱发的 N400 反应的波幅更大, 说明颜色联想关系对 N400 反应具有调节作用, 这为颜色隐喻认知加工提供了神经生理依据。(2) 被试左右两半球均产生了由颜色联想关系不匹配所诱发的 N400 效应, 但左半球的 N400 效应更强, 说明大脑左右两侧半球均参与颜色隐喻加工, 但具有左半球优势。(3) 被试颜色知识任务的行为表现与颜色词联想任务的行为表现存在显著的相关关系, 根据扎根认知理论, 该结果说明颜色知识可能是建立颜色联想关系的基础, 其对颜色隐喻加工具有重要作用。

关键词 颜色联想, 颜色知识, N400, 扎根认知理论

The cognitive neuropsychological processing mechanism of color metaphors: An ERP study

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Abstract: How could people associate “white” with “clean” or “pure”, associate “black” with “cold-blooded” or “horrible”, etc. Color metaphor cognition includes complex processing mechanisms, while we don’t know much about it at the moment. The current study employed the event-related potential (ERP) techniques to explore the processing mechanism and the neuropsychological basis of color metaphor cognition. Thirty college students participated in this study, and they had to accomplish two tasks, one is the color association task, which included two experimental conditions, i.e., the related color association (e.g., /white/-/pure/) and the unrelated color association (e.g., /black/-/lucky/). Participants’ behavioral and neuropsychological responses were recorded simultaneously during this task. The other is the color knowledge task, and it included the matched color relationship (e.g., /white/-/snow/) and the mismatched color relationship (e.g., /black/-/pineapple/). Only behavioral performances were recorded in this task. The results showed that: (1) the unrelated color association elicited larger amplitude of the N400 response compared with the related color association, it suggests that color association modulates the N400 response, providing a neurophysiological evidence for the color metaphor cognition. (2) The N400 effect elicited by unrelated color associations was observed in both hemispheres, while, the N400 effect was stronger in the left than in the right, indicating that both hemispheres participated in the processing of color associations, but with a left hemisphere asymmetry. (3) Participants’ behavioral performance in the color knowledge task was correlated with their behavioral performance in the color association task. According to the Grounded cognition theory, the results indicates that color knowledge is the basis to acquire color associations, and it plays an important role in color metaphor cognition.

Keywords: color association; color knowledge; N400, the Grounded cognition theory

汉语盲文阅读经验对盲人听觉词汇加工的影响

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摘要 阅读和书写经验会影响个体的口语加工。明眼人使用以视觉为主导的文字阅读体系, 而盲人使用以触摸觉为主导的盲文阅读体系。汉字是一种象形文字, 而汉语盲文与汉语拼音相对应, 其更像一种字母文字。本研究旨在探讨汉语盲文阅读经验对个体听觉词汇加工的影响。参与本研究的有 15 位先天盲大学生和 15 位明眼大学生, 两组被试年龄和智力匹配。本研究采用启动范式, 通过操纵启动词和目标词之间的字形和语义关系, 共形成三类实验材料: (1) 语义相关, 并且启动词与目标词首音节所对应的汉字表征和盲文表征均相同, 比如/bao4zhi3/ (报纸, ㄆㄠˋ ㄓㄧˇ) - /bao4she4/ (报社, ㄆㄠˋ ㄕㄜˋ); (2) 语义无关, 启动词与目标词首音节所对应的汉字表征和盲文表征均相同, 比如/bao4zhi3/ (报纸, ㄆㄠˋ ㄓㄧˇ) - /bao4xiao1/ (报销, ㄆㄠˋ ㄒㄠㄠ); (3) 语义无关, 启动词与目标词首音节所对应的盲文表征相同但汉字表征不同, 比如/bao4zhi3/ (报纸, ㄆㄠˋ ㄓㄧˇ) - /bao4yu3/ (暴雨, ㄆㄠˋ ㄩˇ)。被试需要判断所听到的目标词和前面出现的启动词之间的语义是否相关。研究结果发现, 明眼被试中, 字形相同条件所诱发的 N400 效应小于字形不同条件所诱发的 N400 效应; 而盲人被试中, 这两种实验条件所诱发的 N400 效应差异不显著。该研究结果说明, 盲人和明眼人在汉语听觉词汇加工中可能有不同的字形信息的激活, 明眼人激活的是汉字字形表征, 而盲人激活的是汉语盲文字形表征, 揭示了阅读经验对个体听觉词汇加工的影响。

关键词 盲人, 汉语盲文, 字形激活, 听觉词汇加工, N400

Effects of Mandarin Braille reading experience on auditory word processing in blind people

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Abstract: Learning to read and write alters the way people process spoken language. Mandarin Chinese is a logography writing system, however, Mandarin Braille is an alphabetic representation of Chinese Characters. To explore the influence of Braille reading experience on auditory word processing, the current study employed the ERP techniques and examined the N400 responses in blind versus sighted participants during Chinese auditory word processing. Three sets of Chinese prime-target word pairs were used as auditory stimuli: (1) semantic-related word pair, with the same pronunciation and the same orthography of the first syllable for both Mandarin Chinese and Mandarin Braille, e.g., /bao4zhi3/ (报纸, ㄆㄠˋ ㄓㄧˇ, newspaper) - /bao4she4/ (报社, ㄆㄠˋ ㄕㄜˋ, news office). (2) Semantic-unrelated word pair, with the same pronunciation and the same orthography of the first syllable for both Mandarin Chinese and Mandarin Braille, e.g., /bao4zhi3/ (报纸, ㄆㄠˋ ㄓㄧˇ, newspaper) - /bao4xiao1/ (报销, ㄆㄠˋ ㄒㄠㄠ, reimbursement). (3) Semantic-unrelated word pair, with the same pronunciation and the same orthography of the first syllable for Mandarin Braille, but with different orthographies for Mandarin Chinese, e.g., /bao4zhi3/ (报纸, ㄆㄠˋ ㄓㄧˇ, newspaper) - /bao4yu3/ (暴雨, ㄆㄠˋ ㄩˇ, rainstorm). Participants were instructed to identify whether the target word they heard was semantically related to the preceding prime word or not. The results suggest that different orthographic information have been activated between the two groups during Chinese auditory word processing, that is, Mandarin Chinese for sighted participants, while Mandarin Braille for blind participants, revealing the influence of reading experience on auditory word processing.

Keywords: blind people, Mandarin Braille, orthographic activation, auditory word processing, N400

选择自由和认知控制对概念产生的影响

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摘要 在说话者计划并决定传递信息的言语产生阶段中, 最初始的阶段是概念产生。已有研究表明, 概念产生直接受可选概念数量的影响, 认知控制等因素也会影响概念产生过程。备选概念的数量由选择自由度决定, 而选择自由度包括目标概念负载、目标选择自由和特征选择自由的影响。然而先前的研究无法预测来自不同选择自由的影响和来自认知控制的调节。本研究采用一项修订的概念产生任务来考察个体从多个概念中选择并产生一个概念时的表现。选择自由分为目标负载、目标选择自由和特征选择自由, 任务要求被试根据刺激反应规则选择刺激物的颜色或形状, 尽快和尽可能准确地大声报告相应的概念。从备选概念中选择一个概念需要打破概念之间的平衡, 抑制不相关的概念, 这依赖于认知控制能力。使用 Stroop 任务、N-back 任务和颜色-形状转换任务来测量认知控制的三个主要成分: 抑制、更新和转换。31 名 19-29 岁的成年人参与了这项研究。被试的平均反应时随着目标负载和特征选择自由的增加而增加, 且当被试根据指定的特征产生概念时, 目标选择自由引起显著差异。虽然目标负载的增加通常会减慢概念产生的速度, 但在可以自由选择任何目标的情况下提高了概念产生的准确性。此外, 抑制和更新的表现可以预测概念产生的准确性, 抑制和更新较好的个体在概念产生任务中表现也更好。更新和转换与概念产生的直接影响因素相互作用, 较好的更新减少了由目标自由和目标负载引起的准确性差异, 同时也减少了目标自由和特征自由所引起的反应时差异, 而更好的转换能力则扩大了特征自由引发的变异性。因此, 更多的选择通常会增加概念产生的成本, 但不同来源的选择自由在概念产生中影响不同。当个体需要从多个概念中选择一个时, 选择自由的增加并不一定会降低成绩, 高目标负载下个体可能会改变概念产生策略。认知控制的三个部分以不同的方式参与概念产生。抑制和更新直接影响概念产生, 更新和转换通过概念产生中的直接影响因素以相反方向影响概念产生。

关键词 概念产生, 目标负载, 选择自由, 认知控制

The influence of freedom of selection and cognitive control on concept production

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Abstract: The conceptualization is the initial stage of speech production when a speaker plan and decide what information to convey. Previous studies have shown that conceptualization is influenced by the number of alternative concepts directly, and cognitive control abilities also contribute to the process of conceptualization. The number of alternative concepts is determined by the freedom of selection, which was influenced by the load of target concepts, the freedom of target selection and the freedom of feature selection. However, the influence of selection freedom and the moderation of cognitive control on the influence could not be predicted by previous studies. Here, a revised concept selection task was used to explore the performance when individuals select and produce one concept from several alternatives in current study. The freedom of selection was separated into the load of target, the freedom of target selection and the freedom of feature selection by a varying number of colored shape stimuli and different stimulus-response rules. During the concept selection task, participants were instructed to select the color or the shape of the stimulus according to the stimulus-response rules and say the word aloud as fast and accurately as possible. At the same time, choosing one concept from alternatives needs to break the balance between concepts and inhibit the unrelated concepts, which depends on cognitive control. The Stroop task, N-back task, and Color-Shape Switching task were used to measure the three main components of cognitive control: inhibition, updating and shifting. Thirty-one adults aged 19-29 years participated in this study. Participants' mean RT increased in the load of target and the freedom of feature selection, and the significant difference caused by the freedom of target selection was found when participants produce a concept according to specified feature. Although the increasing load of target would slow

the speed of concept selection generally, it could improve the accuracy of concept selection when one could select any target freely. In addition, the performance of inhibition and updating could predict the accuracy of concept selection, and the individuals with better inhibition or updating performed better in the concept selection task. The updating and shifting of cognitive control were also interacted with the direct influencing factors. Better updating reduced the accuracy difference, which was caused by the freedom of target and the target load. It also reduced the RT differences which was caused by the freedom of target and the freedom of feature, while better shifting enlarged the variability of the freedom of feature. Therefore, more alternatives could increase the cost of concept selection generally, but different sources of variability in conceptualization process have different effects. The increase of freedom of choice does not always reduce the performance when individuals need to select one concept among more alternatives, and individuals might change the strategy of concept selection in high target load. The components of cognitive control contribute to the concept selection with different ways. Inhibition and updating influence the concept selection directly, while updating and shifting influence the concept selection in opposite direction via the effect of direct sources of variability in conceptualization process.

Keywords: concept production, target load, freedom of selection, cognitive control

个体差异对语言转换的作用：基于新学习语言的证据

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摘要 在双语领域的相关文献中, 自适应控制假说和相关的实证研究证据揭示了在熟练语言中, 双语语言控制的适应性本质, 而新语言学习初始阶段的语言控制过程尚未得到检验。本研究使用事件相关电位(ERP)技术研究抑制能力和语言转换经验的个体差异如何影响新学习语言的言语控制过程。我们首先在第1天评估了汉-英双语者的语言转换频率和抑制能力。然后, 所有双语者在接下来的6天内从新语言(即德语和日语)中学习单词。在第8天, 被试完成了新学习语言之间基于理解的语言转换任务。混合效应模型对行为数据分析的结果表明, 在对比转换式次与重复式次时, 没有显著的转换代价, 并且个体差异对新学习语言之间的语言转换没有预测作用。然而, 对 ERPs 数据分析的结果表明, 在 N2 和 LPC 指标上, 发现了转换代价的存在和个体差异的效应。具体而言, 语言转换频率显著预测了 N2 和 LPC 的波幅变化。抑制能力调节了日语中的转换效应, 这一效应通过 LPC 所反映。这些发现表明, 个体差异预测了新学习语言之间基于理解的语言控制, 从语言理解的角度为语言控制的适应性提供了新的实证研究证据。此外, 本研究基于自适应控制假说, 探讨了新学习语言之间的语言控制过程, 从而通过关注语言学习的初始阶段, 丰富了相关领域的研究。

关键词 语言转换, 转换代价, 新学习的语言, 抑制能力, ERP

Comprehension-based Language Switching between Newly Learned Languages: The Role of Individual Differences

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Abstract: Adaptive Control hypothesis and relevant empirical evidence in bilingualism literature have revealed the adaptive nature of bilingual language control in skilled languages, while the language control processes at the very initial stage of new language learning have not been examined. The present study investigated how the individual differences in inhibition ability and language switching experience influence the controlling process of newly learned languages, using event related potentials (ERPs) technology. We first assessed the language switching frequency and inhibition ability of Chinese-English bilinguals on Day 1. Then, all bilinguals learned words from new languages (namely German and Japanese words) during the next six days and completed a comprehension-based language switching task between the newly learned languages on Day 8. Results of mixed-effects models on the behavioral data showed that there was no switching costs in contrasting switch trials with repeat trials and no predictive effect of

individual difference on the language switching between newly learned languages. However, the ERPs results revealed the switching costs and the individual difference effects in N2 and LPC. The language switching frequency significantly predicted the variability of the N2 and LPC, and the inhibition ability modulated the switch effect in Japanese as showed in the LPC. These findings suggest that individual differences predict comprehension-based language control between the newly learned languages, providing new evidence for the adaptability of language control from a language comprehension perspective.

Keywords: language switching, switching cost, newly learned language, inhibition, ERP

5.21“社区心理学专业委员会”分组展贴报告

疫情期间小学生父母的期望与教养压力的关系： 家庭-工作冲突和配偶支持的中介作用

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摘要 疫情期间，学生参加云课堂，家长进行云办公，亲子、夫妻共处时间大大增加，父母的家庭-工作冲突增多，导致小学生父母的教养压力问题格外突出。根据家庭系统理论，探索小学生父母的家庭-工作冲突和配偶支持在期望与教养压力之间的内在作用，对维护疫情中的小学生父母的心理健康具有独特的现实意义。本研究采用父母期望、家庭-工作冲突、配偶支持、父母教养压力等问卷，对 625 名小学生父母进行调查。结果显示：（1）期望与教养压力、家庭-工作冲突两两间呈显著正相关；配偶支持与期望、家庭-工作冲突、教养压力都存在显著的负相关。（2）使用 Bootstrap 进行中介效应检验发现，家庭-工作冲突在期望和教养压力之间的中介作用显著($\beta=0.06$, 95%CI[0.08,0.17])；配偶支持在期望和教养压力之间的中介作用显著($\beta=0.05$, 95%CI[0.03,0.08])；家庭-工作冲突和配偶支持在期望和教养压力之间的链式中介作用显著($\beta=0.01$, 95%CI[0.002,0.012])。结论：小学生父母的期望、家庭-工作冲突、配偶支持和教养压力关系密切，期望不仅直接影响其教养压力，还会通过家庭-工作冲突和配偶支持的链式中介间接影响其教养压力。

关键词 期望，家庭-工作冲突，配偶支持，教养压力，链式中介

Influences of Expectation on Parenting Stress in Primary School Students' Parents during the Pandemic: Mediating Effect of Family-work Conflicts and Spousal Support

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Abstract: Due to the impact of the COVID-19 Pandemic, students participated in cloud classes and parents did cloud offices. The more time they spent on parent-child and husband-wife relations, the more parental family-work conflicts they would have, which made their parenting stress more prominent. According to the family system theory, it had an unique practical significance to explore the inner role of family-work conflicts and spousal support in primary school students' parents between expectation and parenting stress, which was helpful to maintain the mental health of parents in the pandemic. This study investigated 625 parents of primary school students by using the parental expectation questionnaire, the family-work conflict scale, Support in Intimate Relationships Rating Scale and the Parenting Stress Index Short Form. The results were as follows: (1) Expectation was positively correlated with parenting stress and family-work conflicts; spousal support was negatively correlated with expectation, family-work conflicts and parenting stress. (2) Using Bootstrap to examine the mediating effect, it showed that family-work conflicts had a significant mediating effect between expectation and parenting stress ($\beta=0.06$, 95%CI[0.08,0.17]); spousal support had a significant mediating effect between expectation and parenting stress ($\beta=0.05$,

95%CI[0.03,0.08]); family-work conflicts and spousal support had a chain mediating effect between expectation and parenting stress ($\beta=0.01$, 95%CI[0.002,0.012]). Conclusion: Parental expectation, family-work conflicts, spousal support and parenting stress are closely related. Parental expectation not only affects their parenting stress directly, but also affects their parenting stress through the chain mediating role in family-work conflicts and spousal support indirectly.

Keywords: expectation, family-work conflicts, spousal support, parenting stress, chain mediating effect

城市困难群众的心理特点与心理帮扶建议

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摘 要 当前, 心理学领域对贫困群众的研究主要集中在主观幸福感、心理健康和行为决策三大部分。本研究为了促进社会救助制度体系的健全完善, 帮助城市困难群众解决基本生活困难, 更好地实现对城市困难群众的救助保障, 打赢“脱贫攻坚战”, 从心理健康的角度出发, 对重庆市 10 个地区的城市困难群众进行了抽样调查, 共有 259 位群众参与, 并对 196 位城市困难群众进行访谈调研。通过症状自评量表 (SCL-90) 对其进行心理测评, 获得 171 份有效问卷, 对此分析城市困难群众的心理特点, 结果发现: ①大部分群众的心理健康水平正常, 但在躯体化症状上有问题和有严重问题的达到了 22.2%、抑郁症状 (17%)、强迫症 (15.2%), 相比全国健康成人躯体化, 显著高于全国常模, 人际关系敏感和偏执显著低于全国常模; ②不同性别的城市困难群众在心理健康各因子得分上无显著差异; ③不同年龄段的困难群众, 在人际关系敏感和偏执上有明显差异, 成年初期 (18-25 岁) 的群众在人际关系敏感和偏执的得分上显著高于其他年龄段; ④不同婚姻状况在阳性指标、躯体化、人际关系敏感、抑郁、焦虑和恐怖的因子上都存在差异显著, 离异和丧偶显著高于未婚和已婚的因子分; ⑤不同文化程度在躯体化上有显著差异; ⑥除了阳性平均分、躯体化、偏执外, 其余各因子得分在残疾状况上都有显著差异。智力残疾与精神残疾显著高于其他各因子得分; ⑦不同劳释情况的城市困难群众在心理健康各因子上无显著差异。对此提出心理帮扶建议: ①建立对城市困难群众心理健康数据库; ②在社区开展心理健康知识宣传讲座; ③完善社区心理帮扶体系建设; ④建设社区心理服务专业人才队伍。

关键词 城市困难群众, 心理健康, 心理帮扶

5.22“网络心理学专业委员会”分组展贴报告

基于双加工理论探索网络游戏障碍玩家的决策行为：一项 ERP 研究

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摘 要 现有关于网络游戏障碍 (Internet gaming disorder, IGD) 的研究主要分别基于冲动系统和控制系统来展开, 成瘾的双加工模型也认为成瘾行为是冲动系统和控制系统交互作用的结果。但是, 目前为止, 很少有研究真正从双加工系统这一综合性的观点来同时考察 IGD 玩家的冲动系统和控制系统是否存在异常, 关于其的电生理证据则更少。为了解决这一问题, 本研究选取决策行为——一种典型的依赖于冲动系统和控制系统交互作用的人类行为, 来考察 IGD 玩家的双系统加工。研究选取了 24 名 IGD 玩家, 以及 26 名娱乐游戏使用玩家 (recreational gaming users, RGU) 作为对照组, 采用事件相关脑电位 (event-related potentials) 记录了这 50 名被试在执行跨期决策 (即: 金钱折扣任务) 和风险决策 (即: 杯子任务) 任务时的电生理活动。结果显示: (1) 在行为水平上, IGD 和 RGU 玩家在跨期决策和风险决策的表现不存在显著差异; (2) 在电生理水平上, 对于跨期决策任务, RGU 玩家比 IGD 玩家表现出了更大的 P2 振幅; 此外, RGU 玩家在短期延迟和长期延迟中的 P3 振幅大于中期延迟, 但 IGD 玩家并没有表现出显著的延迟时间主效应; (3) 在电生理水平上,

对于风险决策任务不存在 IGD 和 RGU 的组间差异,但是,对于风险不利条件,RGU 玩家在损失情境下的 N2 波幅显著大于收益情境,而 IGD 玩家则不存在显著的期望价值主效应。结论:IGD 玩家和 RGU 玩家在冲动加工和控制加工上不存在显著差异,但考虑到 IGD 玩家对于延迟时间和期望价值的不敏感性,推测网络游戏障碍可能与奖赏偏好和风险觉知的改变、以及决策过程中较少的意志努力存在相关。

关键词 双加工模型,冲动系统,控制系统,事件相关电位,网络游戏障碍

A Dual Process Perspective to Explore Decision Making in Internet Gaming Disorder: An ERP Study

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Abstract: The existing IGD-related research is mainly basing on the impulsive and control systems of the dual process models separately, and the dual process models of addiction posit that addictive behaviors arises from the joint outcome of two different modes of thinking: impulsive and control processes. However, minimal research has been conducted to explicitly explore these two systems simultaneously in individuals with IGD from the comprehensive perspective—the dual process models. To address this question, the current study used the event-related potentials (ERP) technique to record brain electrical activities when 50 participants divided into 24 IGD subjects and 26 RGU subjects during decision making processing (i.e., the cups task and the monetary discounting task). The results showed: (1) at the behavioral level, there were not any between-groups differences; (2) at the neural level, as for the intertemporal decision-making, larger P2 amplitudes were found in RGU rather than in IGD subjects; and RGU displayed the larger P3 amplitudes in short-term and long-term delays than in middle-term delay whereas no delay main effect was found in IGD subjects. (3) at the neural level, as for the risky decision-making, RGU showed the larger N2 amplitudes for risk-disadvantageous in the loss domain than the gain domain whereas the IGD group did not appear any difference across expected values. These suggested that the present IGD subjects did not differ in impulsive and control systems from RGU, nevertheless, the neural differences between IGD subjects and RGU under different condition of decision-making processing, suggesting that IGD may be related to altered preference to realistic rewards and perception of risks, as well as to less effortful assessment to decision choices.

Keywords: dual-process models, impulsive system, control system, event-related potentials, internet gaming disorder

错失恐惧还是社交回避? 同伴排斥对粤澳青少年问题性社交媒体使用的影响

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摘要 随着现代网络技术和智能手机的普及,社交媒体给人类交流互动带来了极大地便利,但同时也会因过度依赖社交媒体产生问题性社交媒体使用,从而影响青少年身心健康。研究发现,同伴排斥是加剧青少年问题性社交媒体使用的重要风险因素,它可能通过促使青少年担忧错过社交信息或机会(即错失恐惧)这一“趋近路径”,或促使青少年回避现实社交情境(即社交回避)这一“回避路径”间接发挥作用。由于错失恐惧和社交回避在不同的文化间可能存在差异,如大湾区中的粤澳差异。因此,本研究尝试构建一个“趋近-回避”的双路径模型来解释同伴排斥对青少年问题性社交媒体使用的影响机制,并检验这一影响是否存在粤澳差异。采用同伴排斥量表、修订版错失恐惧量表、社交回避与苦恼量表、问题性社交媒体使用量表对粤澳两地共 965 名青少年($N_{\text{广州}}=749$ 名, $N_{\text{澳门}}=216$ 名; $M_{\text{age}}=12.78$, $SD=2.45$; 52.3%为男性)进行问卷调查。结果发现: (1) 同伴排斥越高的青少年出现问题性社交媒体使用 ($\beta=0.19, p<0.001$) 的水平也越高; (2) 中介效

应检验证实，同伴排斥显著通过错失恐惧 ($\beta = 0.11, p < 0.001$) 和社交回避 ($\beta = 0.02, p < 0.05$) 两条路径间接影响粤澳青少年问题性社交媒体使用；(3) 进一步检验粤澳区域的调节效应发现，错失恐惧在同伴排斥与问题性社交媒体使用间的中介效应不存在粤澳区域差异；但是社交回避在同伴排斥与青少年问题性社交媒体使用间发挥的中介效应存在粤澳差异，且仅在广州青少年中成立。因此，同伴排斥会较为稳定的通过错失恐惧这一趋近路径影响粤澳青少年的问题性社交媒体使用，而社交回避的中介效应表现出一定的粤澳文化差异，这一发现更有助于理解同伴排斥影响粤澳青少年问题性社交媒体使用的心理机制及文化差异，对学校和家庭从同伴环境的视角预防和干预青少年问题性社交媒体使用提供了理论参考。

关键词 同伴排斥，错失恐惧，社交回避，问题性社交媒体使用，青少年，粤港澳大湾区

Fear of missing out or social avoidance? The relationship between peer exclusion and problematic social media use among adolescents in Guangdong and Macao

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Abstract: With the development of modern network technology and the popularity of smartphones, social media exceedingly facilitates daily communication and interaction. But it may cause problematic social media use due to over relying on social media, which has negative impact on adolescents' mental and physical health. Previous studies found that peer exclusion was a core predictor of problematic social media use. It may lead to fear of missing social information or social opportunities (i.e., fear of missing out, FoMO), which influences social media use via a social approaching path. It may also lead to adolescents' avoidance of social situation (i.e., social avoidance), which influences social media use via a social avoiding path. Meanwhile, FoMO and social avoidance among adolescents may vary across culture. Therefore, the current study attempts to establish a "approaching – avoiding" double-path model to explain the influence mechanism of peer exclusion on adolescents' problematic social media use, and examine whether there are differences between Guangdong province and Macao. Adopting peer exclusion scale, the revised version of fear of missing out scale, social avoidance scale, and problematic social media use scale, we investigated 965 adolescents ($M_{age}=12.78, SD=2.45$; Male = 52.3%) in Guangzhou ($N=747$) and Macao ($N=216$). Result showed that (1) adolescents reported higher peer exclusion have higher level of problematic social media use ($\beta = 0.19, p < 0.001$); (2) mediation effect analysis showed that peer exclusion influenced adolescents' problematic social media use via FoMO ($\beta = 0.11, p < 0.001$) and social avoidance ($\beta = 0.02, p < 0.05$), respectively; (3) further moderation effect analysis of Guangzhou and Macao showed that there is no Guangzhou-Macao region difference in the mediating effect of FoMO between peer exclusion and problematic social media use, however, the mediating effect of social avoidance between peer exclusion and problematic social media use among adolescents was only found among adolescents in Guangzhou. Therefore, peer exclusion influences problematic social media use relatively stable via the social approaching path of FoMO, but there is certain Guangzhou-Macao difference in the mediating effect of social avoidance between peer exclusion and problematic social media use. The findings help to establish a further understanding of the psychological mechanism and cultural differences of how peer exclusion influences problematic social media use, which provide schools and families a theoretical reference of prevention and intervention of teenagers' problematic social media use from the perspective of peer environment.

Keywords: peer exclusion, fear of missing out, social avoidance, problematic social media use, adolescents, Guangdong-Hong Kong-Macao Greater Bay Area

大学生责任感与网络易怒行为的关系：网络道德情感和性别的作用

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摘要 网络易怒行为与冲动性人格特质具有正相关, 网络易怒行为的消减可通过人格干预进行, 但具体发生机制还有待进一步探讨。责任感是人格特征中重要的动力系统, 是个体认真负责完成符合个体要求或群体利益的道德任务后, 所持有的积极体验和肯定情感积淀, 对网络易怒行为具有显著的反向预测效果。对于易怒行为的预测路径, 除触发性愤怒刺激直接导致易怒行为外, 个体可能会从易怒倾向转变为愤怒情绪体验, 从而导致攻击行为。此外, 根据情绪调节的性别差异理论, 本研究假设性别在责任感与网络易怒行为之间可能起影响作用。本研究考察大学生责任感与网络易怒行为的关系、网络道德情感在上述关系中的中介效应以及性别对上述中介效应的调节, 采用自评大学生责任感问卷、网络易怒行为问卷和网络道德情感问卷对 592 名大学生进行调查。结果发现: (1) 网络易怒行为与网络道德情感、责任感呈现显著负相关, 网络道德情感与责任感呈正相关, 责任感能够负向预测大学生网络易怒行为; (2) 大学生责任感对网络易怒行为的预测效应受性别的调节, 对男大学生的预测效应更高 ($\beta=-0.460$, $t=-12.506$, $p<0.001$); (3) 大学生责任感经由网络道德情感影响网络易怒行为的中介效应受性别的调节, 大学生责任感对网络易怒行为的总效应为-0.217; 男性和女性大学生责任感经由网络道德情感对网络易怒行为的中介效应分别为-0.107、-0.031, 分别占总效应的比例为 49.3%, 14.3%; 男女大学生的中介效应之差的 95%置信区间为[-0.145,-0.038], 表明差异显著, 上述中介效应仅出现在男大学生。可见, 大学生责任感能够减弱网络易怒行为, 男大学生还可以通过网络道德情感的提升减少网络易怒行为的发生。

关键词 责任感, 网络道德情感, 网络易怒行为, 有调节的中介效应

The relationship between College Students' sense of responsibility and Internet irritability: the role of network moral emotion and gender

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Abstract: There is a positive correlation between Internet irritability and impulsive personality traits, which can be reduced by personality intervention, but the specific mechanism remains to be explored. The sense of responsibility is an important dynamic system in personality characteristics. It is the positive experience and positive emotional accumulation held by individuals after conscientiously completing the moral tasks in line with individual requirements or group interests, which has a significant reverse prediction effect on Internet irritability. For the prediction path of irritability, except for the triggering anger stimulation which directly leads to irritability behavior, individuals may change from irritability to anger emotion experience, which leads to aggressive behavior. In addition, according to the gender difference theory of emotion regulation, this study hypothesized that gender may play an important role in the relationship between responsibility and Internet irritability. This study investigated the relationship between College Students' sense of responsibility and Internet irritability, the mediating effect of network moral emotion in the above relationship, and the moderating effect of gender on the mediating effect. 592 college students were investigated with the self-rated college students' sense of Responsibility Questionnaire, Internet irritable behavior questionnaire and network moral emotion questionnaire. The results showed that: (1) Internet irritability was significantly negatively correlated with network moral emotion and responsibility, and network moral emotion was positively correlated with sense of responsibility, which could negatively predict college students' Internet irritability behavior; (2) the predictive effect of College Students' sense of responsibility on Internet irritability was adjusted by gender, and the prediction effect for male college students was higher ($\beta = -0.460$, $t = -12.506$, $P = 0.460$, $t = -12.506$), (3) the mediating effect of College Students' sense of responsibility on Internet irritable behavior was adjusted by gender, and the mediating effect of College Students' sense of responsibility on

Internet irritability was -0.217; the mediating effect of male and female college students' sense of responsibility on Internet irritability via network moral emotion was -0.107, -0.031, accounting for 49.3% and 14.3% respectively; The 95% confidence interval of the difference of mediating effect between male and female college students is [-0.145, -0.038], indicating that the difference is significant. The above-mentioned mediating effect only appears in male college students. It can be seen that college students' sense of responsibility can reduce the network irritability behavior, and male college students can also reduce the occurrence of network irritability through the promotion of network moral emotion.

Keywords: sense of responsibility, network moral emotion, network irritability, moderating mediating effect

虚拟社区大学生虚拟人格与网络亲社会行为的关系

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摘要 虚拟社区是指线上网络社群, 大学生群体长期在虚拟社区中进行交流互动表现出与现实世界不一致的人格特征, 又叫虚拟人格。相比于现实生活中的亲社会行为, 网络环境中的网络亲社会行为有其普遍性更有其特殊性, 大学生群体作为网络主要活跃用户, 其网络行为呈现出不同于其他年龄段网络用户的独特性。基于行为受人格、认知和环境共同影响的理论判断, 一定程度上, 大学生群体在虚拟社区中这种独特的亲社会行为受到其虚拟人格影响, 但是这种影响之间的内在联系如何, 又有着怎样的发生与发展机制呢? 文章以发掘虚拟社区大学生虚拟人格与网络亲社会行为之间的内在联系作为主线, 结合问卷调查法和半结构式访谈, 基于扎根理论与内容分析法, 深入挖掘虚拟社区大学生虚拟人格与网络亲社会行为之间的关系机制, 并最终构建出以“感受—动力—行为”为主线的关系模型, 为这种机制的发生与发展提供了理论解释。研究结果发现, 由于虚拟社区的公开性及匿名性, 大学生的虚拟人格有显著的隐藏面, 而这种隐藏面之下又存在引发行为的动力系统, 在这个动力系统之中有着趋近与规避两种人格倾向, 虚拟网络社区活动引发这两种人格倾向的内感受性变化, 进而作用于其网络亲社会行为。至此, 未来将着重加强对大学生具体虚拟人格特质与其网络亲社会行为之间的关系探讨、发生神经机制探索以及促进策略相关研究。

关键词 虚拟社区, 大学生, 虚拟人格, 网络亲社会行为

Relationship between Virtual Personality and Online Prosocial Behavior of University Students in Virtual Communities

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Abstract: Virtual community refers to online social aggregation. University students who interact with people mainly via internet show inconsistent personality characteristics with the real world, and this sort of personality is also known as virtual personality. Compared with the prosocial behavior in real life, the online prosocial behavior has its common threads, but more significantly, also has its particularity. As the main active users of the internet, college students expose distinct online behavior from those of other age groups. On the basis of the theoretical judgement, human's behavior is related to personality, cognition and environment, and to some certain degree, the unique prosocial behavior of the students in virtual community is affected by their virtual personality. However, what is the internal relation between this correlation and the mechanism of the occurrence and development? This article takes the inner link of college students' virtual personality and their online prosocial behavior in virtual community as the core line, combined with the methods of questionnaire and semi-structured interview, and based on grounded theory and content analysis to dig in the relationship mechanism between university students' virtual personality and their online prosocial behavior. Eventually, a model under the main line of “emotions—driven forces—behavior” is constructed, which in the meantime, provides a theoretical explanation to the happening and advancing mechanism of this correlation. According to the study results, due to the openness and anonymity of virtual community, a special

characteristic of students' virtual personality called hidden under the surface is found out, and so is the driven force system, which can lead the individual's behavior change. What's more, two kind of personality tendency is covered in this force system. The activities in virtual internet communities can exert a role on the changes of this two personality tendencies by influencing individual's inner feeling, and therefore, this change can affect these youngster's online prosocial behavior. At this point, more and more attention should be attached on the areas of the relationship between college students' specific virtual personalities and their online prosocial behavior, the occurrence of neural mechanism and the strategies to promote relevant research in the future.

Keywords: Virtual community, University students, Virtual personality, Online prosocial behavior

网络态度与网络成瘾的关系：链式中介效应*

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摘要 目的: 探讨网络态度对网络成瘾的影响及自我控制和人际关系的链式中介作用。**方法:** 采用网络态度量表、自我控制量表、人际关系综合诊断量表和网络成瘾量表对 869 名大学生进行调查。**结果:** ①自我控制在网络焦虑、网络行为倾向性和网络成瘾之间起部分中介作用, 中介效应占比分别为 14.29%、19.70%; ②人际关系在网络焦虑、网络行为倾向性和网络成瘾之间起部分中介作用, 中介效应占比分别为 5.06%、3.49%; ③自我控制、人际关系在网络焦虑、网络行为倾向性和网络成瘾之间起链式中介作用, 中介效应占比分别为 1.19%、2.00%。**结论:** 网络焦虑、网络行为倾向性通过自我控制和人际关系链式中介作用间接影响网络成瘾。**关键词** 网络态度, 网络成瘾, 大学生, 自我控制, 人际关系

The Relationship between internet attitude and internet addiction: a chain mediating effect*

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Abstract: Objective: To explore the influence of Internet attitude on Internet addiction and the chain mediating role of self-control and interpersonal relationship. **Methods:** 869 college students were investigated by using Internet Attitude Scale, Self-control Scale, Interpersonal Comprehensive Diagnostic Scale and Internet Addiction Scale. **Results:** ①Self-control played a partial mediating role in the relationship between Internet anxiety, Internet behavior orientation and Internet addiction, with the mediating effects accounting for 14.29% and 19.70%, respectively. ②Interpersonal relationship plays a partial mediating role among Internet anxiety, Internet behavior tendency and Internet addiction, with the mediating effect accounting for 5.06% and 3.49%, respectively. ③Self-control and interpersonal relationship played a chain mediating role among Internet anxiety, Internet behavior tendency and Internet addiction, and the mediating effect accounted for 1.19% and 2.00%, respectively. **Conclusion:** Internet anxiety and Internet behavior propensity indirectly influence Internet addiction through the chain mediating effects of self-control and interpersonal relationship.

Keywords: Internet attitude, Internet addiction, College students, self-control, Interpersonal relationship

道德推脱和网络欺负关系的元分析

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摘要 随着科学技术的发展,手机、电脑等网络通讯设备成为了人们日常社交中不可缺少的一部分。据 2020 互联网世界统计 (Internet World Stats, 简称 IWS) 报告显示,截至 2020 年 6 月 30 日,全球网民数量已达 48.33 亿,其中亚洲网民数量为 25.25 亿排在第一,欧洲网民数量为 7.27 亿排在第二。我国第 45 次《中国互联网络发展状况统计报告》也显示,截至 2020 年 3 月,我国网民数量已高达 9.04 亿,且呈现逐年递增趋势。网民数量日益递增的同时,依托网络媒介而实施的网络欺负 (cyberbullying) 也逐年呈递增的趋势,并已成为世界范围内共同关注的问题。网络欺负行为是指个体以网络为社交平台,对个体或群体进行有目的性和针对性的伤害行为。网络环境相对具有匿名性、虚拟性和隐蔽性的特点,缺乏足够的监管。在这样的环境下,道德推脱机制很容易被激活,个体更容易进行责任分散和责任转移,并增加个体在网络上的欺负行为。本研究采用元分析的方法,旨在探究道德推脱与网络欺负之间的关系问题及影响二者之间关系的调节变量。通过对国内外的中英文文献进行检索、筛选与编码,共纳入 47 篇文献,共 52 个样本,被试共计 31316 人。结果显示:(1)道德推脱与网络欺负之间呈中等程度的正相关关系 ($r = 0.337$, $95\% CI = [0.296, 0.376]$); (2)被试年龄对道德推脱与网络欺负的关系起到了显著的调节作用($Q_b = 8.987$, $p < 0.05$),成年群体($r = 0.444$)显著高于青少年群体($r = 0.312$)高于儿童群体($r = 0.266$); (3)性别在道德推脱与网络欺负的关系中起到了显著的调节作用($Q_b = 99.931$, $p < 0.001$)。随着样本中女性比例的增加,道德推脱与网络欺负之间的关系增加; (3)文化背景对道德推脱与网络欺负的关系的调节作用显著($Q_b = 4.441$, $p < 0.05$),东方文化背景下的相关关系($r = 0.360$)高于西方文化背景下的相关关系($r = 0.270$)。本研究基于社会认知的中道德推脱理论,首次以元分析的视角全面探究了道德推脱和网络欺负之间的关系,以及两者关系中可能存在的调节变量,可以为寻找解决网络欺负的对策和减少网络欺负行为提供理论依据与研究思路。

关键词 道德推脱, 网络欺负, 元分析, 调节效应

A meta-analysis of the relationship between moral disengagement and cyberbullying

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Abstract: With the development of science and technology, mobile phones, computers and other network communication devices have become an indispensable part of people's daily social contact. According to the report of Internet world stats (IWS) in 2020, as of June 30, 2020, the number of Internet users in the world has reached 4.833 billion, of which the number of Internet users in Asia is 2.525 billion, ranking first. The number of Internet users in Europe is 0.727 billion, ranking second. According to the 45th statistical report on the development of China's Internet, as of March 2020, the number of Internet users in China has reached 904 million, with an increasing trend year by year. While the number of Internet users is increasing, cyberbullying relying on Internet media is also increasing year by year, and has become a common concern in the world. Cyberbullying refers to the purposeful and targeted harm behavior of individuals or groups based on the network as a social platform. Network environment has the characteristics of anonymity, virtuality and concealment, and lacks sufficient supervision. In such an environment, moral disengagement mechanism is easy to be activated, which makes it easier for individuals to disperse and transfer responsibilities, and increases their bullying behaviors on the Internet. The purpose of this study is to explore the relationship between moral disengagement and cyberbullying and the moderating variables that affect the relationship between them. Through searching, screening and coding of Chinese and English literatures from home and abroad, 47 articles were included, with 31316 subjects. The results showed that: (1) There was a moderate positive correlation between moral disengagement and cyberbullying ($r = 0.337$, $95\% CI = [0.296, 0.376]$); (2) The age of the subjects had a significant moderating effect on the relationship between

moral disengagement and cyberbullying, and the adult group was significantly higher than the adolescent group;(3)Gender played a significant moderating role in the relationship between moral disengagement and cyberbullying. As the proportion of women in the sample increased, the relationship between moral disengagement and cyberbullying increased; (3) Cultural background had a significant moderating effect on the relationship between moral disengagement and cyberbullying, and the correlation in eastern cultural background is higher than that in the West. Based on the theory of moral disengagement in social cognition, this study explores the relationship between moral disengagement and cyberbullying from the perspective of meta-analysis for the first time, as well as the possible moderating variables in the relationship. It can provide theoretical basis and research ideas for reducing cyberbullying and finding solutions to cyberbullying.

Keywords: Moral Disengagement, Cyberbullying, Moderating Effect, Meta-analysis

大学生核心自我评价对认知失败的影响：基于条件过程模型

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摘 要 核心自我评价是指个体对自身所持有的基准的评价, 是相对稳定且基础的、涉及对自我的一种认知与评价。当大学生对自我的评价趋于负向, 会转向其他媒介以寻求支持, 而使用手机是大学生极易用来转移的方式, 久而久之容易形成手机成瘾。手机成瘾不仅是一种人际关系的补偿, 也是人格-情感-认知-执行在环境下交互作用的结果, 手机成瘾要经过这四个因素, 产生满足感才导致补偿效应的出现。手机过度使用后产生疲劳感, 往往精力分散, 容易心不在焉; 也有可能长时间注意力集中在手机提供的刺激中, 无法迁移到当前的活动, 使大学生在完成那些平日中能够胜任的简单任务时出现的错误, 尤其是容易被当前无关刺激所产生的想法或行为分散, 从而忽略正在进行的活动, 过度的认知资源消耗, 导致无法全身心投入学习和任务中, 精力损耗、身心耗竭。综上所述, 核心自我评价和手机成瘾、认知失败存在一定的关系。焦虑情绪作为一种负向情绪, 会有有效的影响对资源的合理分配以及对周围世界的认知, 因此可以探讨焦虑在上述三者间的关系。研究使用核心自我评价量表、手机成瘾量表、认知失败量表和焦虑量表, 共收回 596 份有效大学生数据。采用 Harman 单因子检验, 首因子解释率为 36.10%, 低于 40%, 共同方法不严重。各变量间相关在 -0.55~0.60 之间 (均 $p < 0.01$)。采用 process3.0 进行条件过程模型分析, 结果表明, 手机成瘾在核心自我评价和认知失败间其中介作用, 中介作用占总效应的 37.96%; 焦虑在中介模型中的直接路径上起调节效应显著 ($\beta = 0.26$, $p < 0.001$), 研究采用 J-N 检验更精确刻画调节变量对中介模型的影响, 结果发现, 当调节变量的取值在 0.7994~2.7325 个标准差之间时, 调节效应不显著, 也就是说当焦虑水平处于中等偏上时, 对中介模型不具备调节作用。

关键词 核心自我评价, 认知失败, 条件过程模型, J-N 检验

The Influence of College Students' Core Self-Evaluation on Cognitive Failure: Based on Conditional Process Model

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Abstract: Core self-evaluation refers to an individual's evaluation of the benchmark held by himself. It is a relatively stable and basic cognitive and evaluation. When college students' self-evaluation tends to negative, they will turn to media to seek support. It is easy for students to form phone addiction as time passes. Mobile phone addiction is not only a kind of compensation of interpersonal interaction, but also the result of the interaction-emotion-cognitive-execution in the environment. Overuse of mobile phone will cause fatigue, often scattered energy and easy to absent-minded. In addition, college students may focus their attention on the stimulus

provided by the mobile phone for a long time, and unable to transform to the current activity, which eventually leads to college students mistakes in completing simple tasks, especially being easily distracted by thoughts or behaviors generated by irrelevant stimuli at the moment. This further leads to excessive cognitive resource consumption, and college students are unable to devote themselves to study and tasks, resulting in energy loss and physical exhaustion. In conclusion, core self-evaluation has a certain relationship with mobile phone addiction and cognitive failure. Especially, as a negative emotion, anxiety can effectively affect the reasonable allocation of resources, and the cognition of the world. Therefore, it's necessary to explore the relationship between anxiety and the above three factors. Totally 596 valid data of college students were collected by using the Score Self-Evaluation Scale, the Mobile Phone Addiction Scale, the Cognitive Failure Scale and Anxiety Scale. Harman single factor has been used to test common method bias. And result showed that the explanatory rate of the first factor was 36.10%, that is to say, the common method bias was not serious. The correlation among the variables ranged from -0.55 to 0.60 (all $p < 0.01$). process 3.0 was used to analyze the conditional process model. The results showed that mobile phone addiction mediated the relationship between core self-evaluation and cognitive failure, which accounted for 37.96% of the total effect. Anxiety had a significant moderating effect on the direct path of the mediation model ($\beta = 0.26$, $P < 0.001$). J-N test was further used to accurately describe the influence of moderating variable on the mediation model. The results indicated that when the value of the moderating variable is between 0.7994 and 2.7325 standard deviation, the moderation effect is not significant. That is to say, when the anxiety is above the level of average, it didn't have a moderating effect on the mediation model.

Keywords: Core self-evaluation, Cognitive failure, Conditional process model, J-N analysis

网络语言影响不同类型产品的广告感知及注意

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摘要 广告是企业与消费者互动的重要方式, 因此促进消费者对于广告的积极感知可以提升营销效果。信号理论和情感迁移理论认为, 除了传播内容之外, 受众对于传播载体的感知也会影响传播效果。近年来广告营销行业中形成了风格独特鲜明的网络语言广告。已有学者在广告效果阶段模型的框架下证实了网络语言对广告感知与注意的影响。然而, 广告的传播内容与形式通常服务于产品的属性, 消费者面对享乐型产品和实用型产品时的心理活动有所差异。本研究考察了不同属性的两类产品和标准/网络语言文案对广告感知与广告注意的影响: 实验一在限制广告观看时间的条件下, 探讨语言类型和产品类型对广告评价的影响; 实验二在不限制广告观看时间的条件下, 探讨两者对广告注意的影响。两实验均采用 2×2 混合设计, 其中组间变量为语言文案类型(网络语言文案或标准语言文案), 组内变量为产品类型(实用型产品或享乐型产品), 因变量分别为对产品广告的评价(有趣性、严谨性、信任程度和产品评价四个维度)(实验一)、眼动仪记录的广告文案注视时间占总注视时间的百分比(实验二)。实验一的结果表明, 语言类型和产品类型在严谨性上的主效应显著, 产品类型在有趣性上的主效应显著, 而语言类型和产品类型在信任程度与产品评价上的交互作用显著。网络语言文案会显著降低受众对广告的严谨性感知; 在使用网络语言文案的情况下, 受众对享乐型产品广告的信任度与产品评价均显著高于实用型产品广告。实验二的结果表明, 在广告文案注视时间占总注视时间的百分比上, 语言类型和产品类型的交互作用边缘显著。网络语言文案下个体对享乐型产品广告文案的注视时长显著高于实用型产品。该发现填补了相关研究领域的空白, 并且在实践方面, 商家在设计实用型产品广告时可以考虑更多地使用标准语言文案, 而在设计享乐型产品广告时使用网络语言文案, 这样可以提升受众对于不同类型产品的信任度、产品评价及注意。

关键词 网络语言, 实用型产品, 享乐型产品, 眼动

Internet language affects the advertising perception and attention of different types of products

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Abstract: Advertising is an important way for companies to interact with consumers, so promoting consumers' positive perception of advertisement can improve marketing effects. Signaling Theory and Affect Transfer Model believe that in addition to the content of communication, the consumers' perception of the communication carrier will also influence the communication effects. Some researchers have confirmed the impact of the Internet language on consumers' perception and attention of the advertisement under the framework of Advertising Effect Stage Model. However, the content and form of advertisements usually serve the characteristics of products, and consumers have different psychological activities when facing hedonic products and practical products. We examined the impact of two types of products and languages on advertising perception and attention: study 1 explored the effect of language types and product types on advertising perception when time is limited; study 2 explored the effect of language types and product types on advertising attention when time is free. Both experiments used a 2×2 mixed design, in which the inter-group variable is the language type (Internet language or standard language), the intra-group variable was the product type (practical product or hedonic product). The dependent variables were the evaluation of advertisement (four dimensions: interestingness, rigorousness, credibility and product evaluation) (study 1), attention time of advertising recorded by eye tracker (study 2). In study1, ANOVA showed that language type and product type have main effect on rigorousness, and product type also have main effects on interestingness. And language type and product type have a significant interaction in the two dimensions of credibility and product evaluation. Network language copy significantly reduce the rigorousness of products, and improve the credibility and evaluation of hedonic products. In study 2, the result demonstrated that the interaction between language type and product type is marginal significant in the percentage of advertising copy watch time in total watch time. When using Internet language copy, watch time of hedonic products' advertising copy is significantly higher than practical products'. The discovery fills the gaps in the research of advertising. In practice, businesses can use more standard language when designing practical product's advertisements, and use Internet language when designing hedonic product's advertisements, which can improve customers' credibility, product evaluation and attention of different types of products.

Keywords: Internet language, practical products, hedonic products, eye movements

错失恐惧与问题性手机使用：抑制控制的作用

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摘要 大学生作为最有活力、最爱追求新鲜事物的群体, 随着全球互联网络的发展, 手机已是他们不可或缺的社交工具。错失恐惧是指因担忧错过他人有益的经历而导致的一种弥散性焦虑状态, 错失恐惧通过影响个体社交媒体或智能手机的使用, 进而影响个体的行为、身心健康。根据注意控制的理论, 焦虑会削弱个体的抑制控制功能。错失恐惧作为焦虑的一个亚类, 焦虑障碍会影响到个体的执行功能。因此本研究将考察抑制控制在大学生错失恐惧与问题性手机使用之间的中介作用以及探讨不同水平的错失恐惧个体在不同刺激线索下的冲突抑制的特点。方法: 研究一通过网络发放特质—状态错失恐惧量表、问题性手机使用量表、Barratt冲动性量表收集数据, 因为问题性手机的使用可以看作是对冲动控制的失败, 所以本研究采用 Barratt 冲动性量表来测量调查者的抑制控制能力。本研究共收回有效问卷 220 份, 各量表的信度分别为 0.822、0.899、0.899。

研究二采用数字 Stroop 任务,实验设计为 2 被试分组(高错失恐惧组;低错失恐惧组)×3 抑制控制任务类型(无干扰;微信消息声音和纯音干扰)的组间实验设计。利用 SPSS 26.0 进行数据分析,结果发现:(1)相关分析表明,错失恐惧与问题性手机使用、抑制控制存在正相关;(2)抑制控制在错失恐惧与问题性手机使用中起中介作用($\beta=.625, p<0.001$);(3)手机依赖与否对错失恐惧和问题性手机使用的直接效应起调节作用。(4)高水平的错失恐惧个体更容易被手机相关的刺激线索影响从而影响冲突抑制的能力。本研究进一步丰富了错失恐惧的理论研究,探讨了抑制控制、手机依赖者在错失恐惧与问题性手机使用之间的作用机制以及错失恐惧者的冲突抑制特点,有利于学校和教育工作者调整和改进教育思路,积极指导大学生的网络使用,充分发挥网络的积极作用,促进大学生群体的身心健康发展。

关键词 错失恐惧, 问题性手机使用, 抑制控制, 大学生

Fear of missing out and problematic cell phone use: the role of inhibitory control

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Abstract: College students, as the most energetic group, love to pursue new things, with the development of the global Internet, mobile phone has become an indispensable social tool for them. Fomo is a diffuse state of anxiety caused by the fear of missing out on other people's beneficial experiences. Fomo affects individuals' behavior, physical and mental health by affecting their use of social media or smartphones. According to the theory of attentional control, anxiety weakens the individual's inhibitory control function. Fomo, as a subclass of anxiety, can affect individual executive function. Therefore, this study will investigate the mediating role of inhibitory control between fOMO and problematic mobile phone use in college students, and explore the characteristics of conflicting inhibition in different levels of fOMO individuals under different stimulus cues. Methods: Study 1 collected data from the Trait State Miss Fear Scale, problematic mobile phone use Scale, and Barratt Impulsiveness Scale. Since problematic mobile phone use can be regarded as a failure of impulse control, Barratt impulsiveness Scale was used to measure the inhibitory control ability of the respondents. A total of 220 valid questionnaires were collected in this study, and the reliability of each scale was 0.822, 0.899 and 0.899, respectively. In study 2, a digital Stroop task was used. Two subjects were divided into two groups (high FOMO group; Low FOMO group)×3 inhibitory control task types (no interference; Wechat message sound and pure tone interference). SPSS 26.0 was used for data analysis, and the results showed that: (1) Correlation analysis showed that fOMO was positively correlated with problematic mobile phone use and inhibitory control; (2) Inhibitory control mediated fOMO and problematic mobile phone use ($\beta=.625, p<0.001$); (3) Mobile phone dependence moderated the direct effects of miss fear and problematic mobile phone use. (4) Individuals with high level of FOMO are more likely to be affected by cell-phone-related stimulus cues, which affects the ability of conflict inhibition. This study further enrich the theoretical research of miss fear, discusses the inhibitory control, mobile phone dependent on miss fear and problematic mechanism between mobile phone use and miss fear conflict suppression characteristics, beneficial to schools and education workers to adjust and improve the education idea, actively guide college students' Internet use, give full play to the positive role of network, Promote the physical and mental health development of college students.

Key words: fOMO, problematic mobile phone use, inhibitory control, college students

神经质对大学生问题性移动社交网络使用的影响： 错失恐惧的中介作用和意志控制的调节作用

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摘要 问题性移动社交网络使用是指个体因长时间和高强度使用社交网站,导致不可控制地延长使用时间,

并因此带来心理困扰和生理不适的现象。近年来,随着移动网络 4G 技术的发展,社交网络越来越受到全球的青睐,其发展速度之已成为一种不可阻挡的潮流。然而,过度地使用社交网络对个体心理健康(如抑郁、焦虑)将会产生很大的影响。以往的研究发现,人格是引发问题性社交网络使用的重要因素。由于高神经质者往往表现为情绪的不稳定性(如,抑郁、敏感、焦虑)以及对人际关系的焦虑,导致他们不愿意错过社交网络中的重要信息和社交事件。这种犹豫不决使得他们频繁的查看社交网络以满足个体心理需要。然而,高意志控制水平者能较好察觉自己的想法和感受,主动将自己的注意力从焦虑情绪中转移出去,继而减少社交网络的使用。因此,本研究主要探讨神经质、错失恐惧、意志控制和问题性移动社交网络使用四者的关系。采用神经质量表、错失恐惧量表、意志控制量表和问题性移动社交网络使用量表对哈尔滨市 500 名大学生进行调查。研究结果显示:(1)神经质正向预测大学生问题性移动社交网络使用;(2)错失恐惧在神经质与大学生问题性移动社交网络使用之间起中介作用,神经质正向预测错失恐惧,错失恐惧正向预测大学生问题性移动社交网络使用;(3)意志控制在错失恐惧与问题性移动社交网络使用间起调节作用。具体而言,当意志控制水平低时,错失恐惧能显著的正向预测大学生问题性移动社交网络使用,而意志控制水平高时,错失恐惧对大学生问题性移动社交网络使用的预测作用不显著。结论:神经质通过错失恐惧的中介作用影响大学生问题性移动社交网络使用,这一中介作用受到意志控制的调节。

关键词 神经质, 错失恐惧, 意志控制, 问题性移动社交网络使用

The effect of neuroticism on the use of problem mobile social networks in college students: The mediating effect of fear of missing out and the moderating effect of effortful control

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Abstract: The use of problem mobile social networks refers to the phenomenon that individuals use social networking sites for a long time and with high intensity, which leads to the uncontrollable extension of use time and thus brings psychological distress and physical discomfort. In recent years, with the development of 4G technology of mobile network, social network has been more and more favored by the world, and its development speed has become an irresistible trend. However, excessive use of social networks will have a great impact on individual mental health (such as depression, anxiety). Previous studies have found that personality is an important factor in the use of problematic social networks. As highly neurotic people tend to show emotional instability such as depression, sensitivity and anxiety, as well as anxiety about interpersonal relationships, they are reluctant to miss important information and social events in social networks. This indecision leads them to frequently check social networks to meet individual psychological needs. However, those with high levels of effortful control were better able to detect their own thoughts and feelings, actively divert their attention from their anxiety, and thus reduce their use of social networks. Therefore, this study mainly discusses the relationship between neuroticism, fear of missing out, effortful control and the use of problem mobile social networks. In this study 500 college students in Harbin were investigated with neuroticism scale, fear of missing out scale, effortful control scale and the use of problem mobile social networks scale. The results showed that : (1) Neuroticism positively predicted the use of problem mobile social networks among college students; (2) Fear of missing out plays a mediating role between neuroticism and the use of problem mobile social networks among college students. Neuroticism positively predicted fear of missing out, while fear of missing out positively predicted the use of problem mobile social networks among college students. (3) Effortful control plays a moderating role between fear of missing out and the use of problem mobile social networks. Specifically, fear of missing out significantly predicted the use of problem mobile social networks at low levels of effortful control, but not at high levels. Conclusion: Neuroticism affects the use of problem mobile social networks in college students through the mediating effect of fear of missing out, which is moderated by effortful control.

Keywords: neuroticism, the use of problem mobile social networks, fear of missing out, effortful control

亲子关系对儿童青少年手机成瘾的影响： 希望的中介与生活满意度的调节作用

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摘要 随着移动互联网的迅速发展,手机已经成为日常生活中必不可少的媒介工具。儿童青少年处在特殊的发展阶段,好奇心重、自控力差等使其更容易沉迷于手机,甚至形成手机成瘾问题。手机成瘾是一个潜在的公共健康问题,它对个体的睡眠质量、抑郁、焦虑、学业成绩等产生消极影响。为揭示亲子关系对儿童青少年手机成瘾的影响,以及希望的中介效应和生活满意度的调节效应,本研究采用亲子关系量表、手机成瘾量表、希望量表和生活满意度量表对广州市五所中小学四年级至初二年级的学生进行为期一年的纵向追踪调查。结果发现:(1) T1 亲子关系与 T3 手机成瘾呈显著负相关,与 T2 希望和 T1 生活满意度呈显著正相关;T2 希望与 T3 手机成瘾呈显著负相关,与 T1 生活满意度呈显著正相关;T1 生活满意度与 T3 手机成瘾呈显著负相关;(2) 在控制了年龄、性别后,T1 亲子关系显著负向预测 T3 手机成瘾($\beta = -0.12, SE = 0.04, p < 0.01$),即儿童青少年与父母关系越好,其出现手机成瘾的可能性越小;(3) T2 希望完全中介 T1 亲子关系与儿童青少年 T3 手机成瘾的关系(indirect effect = $-0.07, SE = 0.02, 95\%CI = [-0.12, -0.03]$),亲子关系通过促进希望间接降低了儿童青少年的手机成瘾行为;(4) T1 生活满意度显著调节“T1 亲子关系→T2 希望→T3 手机成瘾”这一中介路径的前半段($\beta = 0.08, SE = 0.03, p < 0.05$),该中介效应在高生活满意度的儿童青少年中显著(indirect effect = $-0.07, SE = 0.02, 95\%CI = [-0.12, -0.03]$),而在低生活满意度的儿童青少年中不显著(indirect effect = $-0.02, SE = 0.02, 95\%CI = [-0.06, 0.01]$)。具体而言,当儿童青少年生活满意度处于高水平时,亲子关系对其希望的促进作用更强,而当生活满意度处于低水平时,亲子关系对希望的促进作用不显著。该结果揭示了希望与生活满意度在亲子关系影响儿童青少年手机成瘾行为中的作用机制,启示相关教育者可以从改善亲子关系、提高希望感和生活满意度这三个角度进行预防和干预儿童青少年的手机成瘾行为。

关键词 亲子关系,手机成瘾,希望,生活满意度,儿童青少年

The effect of parent-child relationship on mobile phone addiction among children and adolescents: The mediating role of hope and the moderating role of life satisfaction

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Abstract: Mobile phones have become a widely used medium among children and adolescents as they are at critical developmental stages. Their strong curiosity and limited self-control pose potential risks to mobile phone addiction. Mobile phone addiction is a potential public health problem and evidence has revealed that it can lead to problems such as poor sleep quality, depression, anxiety, and poor academic achievement. This study aims to explore the relationship between parent-child relationship and mobile phone addiction and its internal mechanism. Students from Grade 4 to Grade 8 were recruited in a one-year longitudinal study to complete the Parent-child Relationship Scale, the Mobile Phone Addiction Scale, the Hope Scale and the Life Satisfaction Scale. The results showed that: (1) T1 parent-child relationship was negatively correlated with T3 mobile phone addiction, and positively correlated with T2 hope and T1 life satisfaction; T2 hope was negatively correlated with T3 mobile phone addiction, and positively correlated with T1 life satisfaction; T1 life satisfaction was negatively correlated with T3 mobile phone addiction; (2) After controlling for age and gender, T1 parent-child relationship significantly negatively predicted T3 mobile phone addiction ($\beta = -0.12, SE = 0.04, p < 0.01$), that is, the better the relationship between children and adolescents with their parents, the less likely they are to overuse mobile phone; (3) T2 hope significantly mediated the relationship between T1 parent-child relationship and T3 mobile phone addiction in children and adolescents (indirect effect = $-0.07, SE = 0.02, 95\%CI = [-0.12, -0.03]$), in other words, T1 parent-child relationship indirectly affected T3 mobile

phone addiction through the mediating roles of T2 hope; (4) T1 life satisfaction significantly moderated the effect of T1 parent-child relationship on T3 mobile phone addiction ($\beta = 0.08$, $SE = 0.03$, $p < 0.05$), and the mediating effect was significant in children and adolescents with high life satisfaction (indirect effect = -0.07 , $SE = 0.02$, $95\%CI = [-0.12, -0.03]$), but not significant in children and adolescents with low life satisfaction (indirect effect = -0.02 , $SE = 0.02$, $95\%CI = [-0.06, 0.01]$). Specifically, for children and adolescents with high life satisfaction, the effect of parent-child relationship on hope is stronger, but for children and adolescents with low life satisfaction, the effect of parent-child relationship on hope is not significant. The results reveal the mechanism of hope and life satisfaction in the effect of parent-child relationship on mobile phone addiction in children and adolescents, and indicate that mobile phone addiction among children and adolescents can be weakened through the improvement of parent-child relationship, the rise in hope and the increase in life satisfaction.

Keywords: parent-child relationship, mobile phone addiction, hope, life satisfaction, children and adolescents

生命意义对儿童青少年手机成瘾的影响： 抑郁和自我控制的纵向链式中介作用

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摘要 移动互联网时代,手机在人们的日常生活中占据着越来越重要的位置。儿童青少年处在特殊的发展阶段,好奇心重、自控力差等使其容易沉迷于手机,甚至形成手机成瘾问题。为揭示生命意义不同维度对儿童青少年手机成瘾的影响,以及抑郁、自我控制在二者之间的中介效应,本研究采用生命意义量表、抑郁量表、自我控制力量表和手机成瘾量表对广东省广州市五所四年级至初二年级的学生进行为期一年的纵向追踪调查。结果发现:(1) T1 意义存在与 T1 意义追寻、T2 自我控制显著正相关,与 T2 抑郁、T3 手机成瘾显著负相关;T1 意义追寻与 T2 自我控制显著正相关,与 T2 抑郁、T3 手机成瘾显著负相关;T2 自我控制与 T2 抑郁、T3 手机成瘾显著负相关;T2 抑郁与 T3 手机成瘾显著正相关;(2) 在控制了年龄、性别和 T1 意义追寻后,T1 意义存在通过三条中介路径的间接作用影响 T3 手机成瘾:通过 T2 抑郁的中介作用(indirect effect = -0.07 , $SE = 0.02$, $95\%CI = [-0.12, -0.04]$);通过 T2 自我控制的中介作用(indirect effect = -0.04 , $SE = 0.01$, $95\%CI = [-0.07, -0.02]$);通过 T2 抑郁和 T2 自我控制的链式中介作用(indirect effect = -0.02 , $SE = 0.01$, $95\%CI = [-0.03, -0.01]$);(3) 在控制了年龄、性别和 T1 意义存在后, T1 意义追寻既不能直接影响 T3 手机成瘾,也不能间接影响 T3 手机成瘾。该结果揭示了抑郁与自我控制在生命意义不同维度影响儿童青少年手机成瘾行为中的作用机制,启示相关教育者可以从提高意义存在、缓解抑郁情绪和提高自我控制能力三个角度进行预防和干预儿童青少年的手机成瘾行为。

关键词 生命意义, 手机成瘾, 抑郁, 自我控制

Meaning in life and mobile phone addiction among children and adolescents: A longitudinal analysis of the mediating effects of depression and self-control

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Abstract: Mobile phones have become a widely used medium among children and adolescents as they are at critical developmental stages. Their strong curiosity and limited self-control pose potential risks to mobile phone addiction. This study aims to examine how specific dimensions of meaning in life are linked with mobile phone addiction longitudinally among children and adolescents within a Chinese context. Students from Grade 4 to Grade 8 were recruited to complete measures regarding meaning in life, depression, self-control and mobile phone addiction. The results showed that: (1) T1 presence of meaning was positively correlated with T1 search for meaning and T2

self-control, and negatively correlated with T2 depression; T1 search for meaning was positively correlated with T2 self-control, and negatively correlated with T2 depression and T3 mobile phone addiction; T2 self-control was negatively correlated with T2 depression and T3 mobile phone addiction; and T2 depression was positively correlated with T3 mobile phone addiction; (2) After controlling for age, gender and T1 search for meaning, T1 presence of meaning indirectly affected T3 mobile phone addiction through three mediation pathways: through the mediation of T2 depression (indirect effect = -0.07, $SE = 0.02$, 95%CI = [-0.12, -0.04]); through the mediation of T2 self-control (indirect effect = 0.04, $SE = 0.01$, 95% CI = [0.07, 0.02]); through the chain mediation of T2 depression and T2 self-control (indirect effect = -0.02, $SE = 0.01$, 95%CI = [-0.03, -0.01]); (3) After controlling for age, gender and T1 presence of meaning, T1 search for meaning neither directly nor indirectly affected T3 mobile phone addiction. The results reveal the mechanism of depression and self-control in the effect of meaning in life on mobile phone addiction in children and adolescents, and indicate that mobile phone addiction among children and adolescents can be weakened through the improvement of presence of meaning, relief of depression and the increase in self-control.

Keywords: meaning in life, mobile phone addiction, depression, self-control

新冠肺炎疫情下社交媒体使用对急性应激的影响： 一个有调节的中介模型

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摘要 背景: 新冠肺炎疫情自发生以来, 在全球范围内蔓延, 给人们的身心健康造成了巨大威胁。为遏制疫情扩散, 中国政府采取了居家隔离、交通限制等防控措施, 多省启动了重大突发公共卫生事件I级响应。在居家隔离期间, 社交媒体成为疫情信息的主要来源。虽然社交媒体能够帮助公众及时了解疫情, 从而更好地做好防护和应对, 但是过多的通过社交媒体接触疫情信息则可能引起个体消极的心理反应, 如焦虑、恐惧、抑郁, 甚至出现急性应激反应。**目的:** 探究新冠肺炎爆发期间社交媒体使用对急性应激的影响, 以及冗思与主观社会经济地位在其中的作用机制。**方法:** 采用社交媒体使用问卷、冗思反应量表、主观社会经济地位量表和斯坦福急性应激反应问卷, 于2020年2月至3月新冠肺炎在中国爆发期间对1436名居民进行在线问卷调查。**结果:** (1) 社交媒体使用对急性应激具有直接正向预测作用; (2) 冗思在社交媒体使用与急性应激之间起部分中介作用; (3) 主观社会经济地位调节了社交媒体使用对急性应激影响的直接路径以及中介模型的后半段路径。随着主观社会经济地位的提高, 社交媒体使用对急性应激的影响以及冗思对急性应激的影响均逐渐减弱。**结论:** 研究揭示了新冠肺炎疫情下社交媒体使用对急性应激的影响及其作用机制, 对引导人们合理使用社交媒体和创伤后干预具有启示意义。**建议:** 基于突发公共危机事件下社交媒体使用可能造成消极的心理应激反应, 因此, 民众应该合理控制社交媒体使用时间, 有关部门应该加强对疫情信息传播的网络监管, 并采取适当的心理干预措施以减小疫情造成的消极心理影响。

关键词 新冠肺炎, 社交媒体使用, 急性应激, 冗思, 主观社会经济地位

Social Media Use Predicted Acute Stress during the COVID-19 Outbreak in China: A Moderated Mediation Model

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Abstract: Background: The outbreak of COVID-19 has caused huge numbers of hospitalizations and deaths. The Chinese government executed preventative and control measures to curb the spread of the virus. During the COVID-19 outbreak, the public had a great need for the latest information about COVID-19 from social media to make clear of the situation and protect their health. However, the over-reliance on social media may put the public

under psychological distress. **Objective:** The present study aimed to explore the effects of social media use on acute stress, and the action mechanism of rumination and subjective socioeconomic status. **Methods:** An online survey was conducted on a sample of 1436 Chinese people by using social media use questionnaire, ruminative response scale, subjective socioeconomic status scale and Stanford acute stress reaction questionnaire during the COVID-19 outbreak. **Results:** (1) Social media use was significantly and positively associated with acute stress. (2) Rumination played a partial mediating role between social media use and acute stress. (3) The direct effect of social media use on acute stress, and the relationship between rumination and acute stress, were both moderated by subjective socioeconomic status. The impacts of both social media use and rumination on acute stress were stronger for individuals with low subjective socioeconomic status. **Conclusions:** These findings highlight the impacts of social media use on acute stress during the COVID-19 outbreak, and contribute to better understanding how and when social media use affects acute stress. **Suggestions:** It is important to note the appropriate use of social media following collective trauma for the general public given the negative effects of social media use. Governments and other relevant agencies should strengthen supervision over the spread of pandemic-related information and implement mental health interventions to reduce negative psychological effects.

Keywords: COVID-19, social media use, acute stress, rumination, subjective socioeconomic status

微信负面影响自评量表的编制及效度和信度检验

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摘 要 目的: 编制微信负面影响自评量表(WCNIS), 并检验其信效度。方法: 对 582 份来自安徽、江苏等 2 所高校的 WCNIS 测试结果进行项目分析和探索性因素分析, 对 785 份来自安徽、江苏和河南等 3 所高校以及 264 份来自线上已参加工作的人员的 WCNIS 测试结果进行验证性因素分析、内部一致性效度检验和校标效度检验。结果: 探索性因素分析获得 34 个条目, 4 个因素, 累计解释方差总变异 50.08% 的 WCNIS 量表。四个维度分别为: 微信使用过度、亲密关系疏离、亲子关系冲突, 工作学习懈怠; 验证性因素分析验证了 4 因素模型, 其结果为 $\chi^2/df=1.931$, $P<0.001$, GFI=0.90, CFI=0.96, IFI=0.96, NFI=0.93, TLI=0.96, RMSEA=0.04。该问卷的内部一致性信度($r=0.83\sim0.87$), 总量表重测信度($r=0.95, P<0.001$), 4 个维度的重测信度($r=0.84\sim0.90$)和内部一致性效度($r=0.43\sim0.72$), 效标效度指标均符合心理测量学的要求, 微信负面影响自评量表及四因子与微信过度使用、手机依赖、非理性拖延三个量表总分及各个因子均达到显著正相关。结论: 微信负面影响自评量表的编制过程完全符合心理测量学的各项指标要求, 具有良好的信度和效度, 可以作为进一步研究微信负面影响的有效测量工具。

关键词 微信, 负面影响, 信度, 效度, 量表编制

Development of Wechat negative impact self-rating scale and Test of its validity and Reliability

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Abstract: Objective: to develop the self-rating scale of negative effects of Wechat (WCNIS) and test its reliability and validity. Methods: item analysis and exploratory factor analysis were performed on 582 WCNIS test results from 2 universities in Anhui and Jiangsu. Confirmatory factor analysis, internal consistency validity test and calibration validity test were conducted on 785 WCNIS test results from 3 universities in Anhui, Jiangsu and Henan and 264 from online workers. Results: a total of 34 items and 4 factors were obtained by exploratory factor analysis, and the WCNIS scale was used to explain the total variance of 50.08%. The four dimensions were wechat overuse, intimate relationship alienation, parent-child relationship conflict, work-study laziness. Confirmatory factor analysis verified the four-factor model, the result was $\chi^2/df=1.931$, $P<0.001$, GFI=0.90, CFI=0.96, IFI=0.96, NFI=0.93, TLI=0.96,

RMSEA=0.04. The internal consistency reliability of the questionnaire ($r = 0.83-0.87$), test retest reliability of the scale ($r = 0.95, P < 0.001$), test retest reliability ($r = 0.84-0.90$) and internal consistency validity ($r = 0.43-0.72$) of four dimensions, the criterion validity indexes met the requirements of psychometrics, wechat negative impact self rating scale and four factors were significantly positively correlated with wechat overuse, mobile phone dependence and irrational procrastination. Conclusion: the development process of wechat negative impact self rating scale fully meets the requirements of psychometrics, has good reliability and validity, and can be used as an effective measurement tool for further study of wechat negative impact.

Keywords: Wechat, negative impact, reliability, validity, scale development

媒体多任务对认知控制的影响：一项三水平元分析

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摘要 媒体多任务是个体同时使用不同媒体的一种现象，比如一边看电视一边使用手机设备发布动态。过去的研究表明媒体多任务会对认知控制产生影响，很多研究基于不同的理论视角探讨了这一影响，但研究结果却存在差异。认知控制是认知功能的重要组成部分，是指当自动的或有赖直觉的加工无法满足任务要求时，需要人们集中并维持注意而进行的一系列自上而下的心理加工过程，它主要包括抑制控制、工作记忆和认知灵活性三个维度。为明确媒体多任务与认知控制两者之间的整体效应，本研究采用元分析的方法检索与整合了国内外已有研究。由于部分研究中存在多个效应量，本研究对检索后获得的 28 项研究(150 个效应量)使用随机效应模型进行了三水平元分析。研究结果显示，媒体多任务与认知控制总效应值显著 ($\text{cohen}'d = 0.221$)，具体而言，与低媒体多任务者相比，高媒体多任务者的认知控制能力更差。这一结论支持了注意分散假设，即频繁进行媒体多任务会使个体注意力分散，无法过滤无关信息，从而对个体的认知控制造成影响。此外，本研究进一步针对认知控制的三个维度、年龄阶段、男性比以及地区进行了调节效应检验，结果发现，高媒体多任务者在抑制控制、工作记忆两个维度上表现更差，而在认知灵活性维度上没有显著差异。而媒体多任务对认知控制的影响不受年龄阶段、男性比和地区的影响。未来，媒体多任务的目的导向、多任务的形式以及认知控制的测量工具等因素效应都有待进一步研究。

关键词 媒体多任务，认知控制，三水平元分析

The Effect of Media Multitasking on Cognitive Control: A three-level meta-analysis

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Abstract: Media multitasking, which is an ever-increasing phenomenon to use different forms of media simultaneously. Numerous studies have shown that media multitasking can affect an individual's cognitive control, which is the central component of cognitive function. However, existing research is still controversial, making it difficult to draw conclusive answers. Therefore, in order to increase the understanding of the whether frequent media multitasking will affect and how it affects cognitive control, a three-level meta-analysis was performed to obtain reliable estimates of the effect sizes and examine a range of moderators. In total, 28 studies including 150 effect sizes were obtained based on a comprehensive literature search. The result showed a small negative effect of media multitasking on cognitive control. Specifically, heavy media multitaskers were worse at inhibition control and working memory than light media multitaskers, but there was no significant difference at cognitive flexibility. The results support the scattered attention hypothesis that frequent media multi-tasking distracts the individual's attention, making it impossible for the individual to filter the irrelevant information of the environment, thus affecting the

individual's cognitive control. In addition, the moderation analyses showed no effect of age, male ratio and region. In the future, the orientation, the form of media multitasking and the measures of cognitive control need to be further investigated.

Keywords: media multitasking, cognitive control, three-level meta-analysis

手游成瘾倾向大学生工作记忆中注意转换的研究

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摘要 根据陈淑慧(1999)的《网络成瘾中文量表》编制《手游成瘾倾向问卷》,对377名大学生进行测试,探索性因素分析表明该问卷包含五个因子,经过验证性因素分析最终得出2个因子,信效度检验效果良好。使用《手游成瘾倾向问卷》筛选出成瘾倾向组和对照组各24人,采用2(成瘾倾向者、对照组)×2(言语任务、视觉空间任务)的混合实验设计,分别以反应时和正确率为指标来检验手游成瘾倾向组和对照组被试在工作记忆的注意转换能力上是否存在差异。结果表明:(1)大学生手游成瘾得分在性别上差异显著,具体表现为男生得分高于女生;(2)大学生手游成瘾得分在专业和年级上不存在显著差异;(3)任务类型、被试类型在个体注意转换的正确率上均不存在主效应和交互效应;(4)任务类型、被试类型在个体注意转换的反应时上均存在显著的主效应,具体表现为:在任务类型上,被试在言语任务中的反应时显著短于在视觉空间任务中的反应时;在被试类型上,成瘾倾向组被试的反应时显著长于对照组的反应时;(5)任务类型和被试类型之间不存在交互作用。结论:相比于对照组,手游成瘾倾向大学生的注意转换在两种任务类型中的表现更差,转换代价更高,且随着任务难度的增加会付出更高的转换代价。

关键词 手游成瘾倾向,工作记忆,注意转换

A Study of Attention Converting in Working Memory of College Students Addiction Tendency of Mobile Games

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Abstract: According to Chen Shuhui (1999) "Internet Addiction Chinese Scale", the "Mobile Game Addiction Tendency Questionnaire" was compiled, and 377 college students were tested. Exploratory factor analysis showed that the questionnaire contained five factors. After confirmatory factor analysis, the final Two factors are obtained, and the reliability and validity test results are good. Use the "Mobile Game Addiction Tendency Questionnaire" to screen out 24 people in the addiction group and the control group, using a mixed experimental design of 2 (addicts, control group) × 2 (verbal tasks, visual spatial tasks), respectively The reaction time and accuracy rate are indicators to test whether there is a difference in the attention conversion ability of working memory between the mobile game addiction tendency group and the control group. The results showed that: (1) The scores of mobile game addiction among college students are significantly different in gender, and the scores of boys are higher than those of girls; (2) There is no significant difference in the scores of mobile game addiction among college students in majors and grades; (3) Tasks There are no main effects and interaction effects on the correct rate of individual attention transition between type and subject type; (4) Task type and subject type have significant main effects on the response time of individual attention transition, and the specific manifestations are as follows: In terms of task types, the response time of subjects in the verbal task was significantly shorter than that in the visual space task; in terms of the type of subjects, the reaction time of the subjects in the addiction-prone group was significantly longer than that of the control group; (5) There is no interaction between task type and subject type. Conclusion: Compared with the control group, college students with mobile game addiction tended to have worse performance in the two task types with higher conversion cost, and higher conversion cost will be paid as the difficulty of the task increases.

Keywords: Mobile games addiction tendency, Working memory, Attention switching

父母低头行为与青少年同伴疏离的关系： 父母拒绝的中介作用和性别的调节作用

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摘要 父母低头行为指父母在亲子互动过程中被智能手机分心的状况，是亲子互动中一种特殊的社会排斥现象。当父母在亲子互动中被智能手机吸引时，孩子会感知到更多来自父母的拒绝。研究发现，感知到父母拒绝程度高的孩子在未来的社会交往中很难与他人建立安全和信任的关系。因此，经常经历父母低头行为的青少年可能感受到更多来自父母的拒绝，这可能进一步影响青少年在未来社会交往中对同伴疏离的感知。本研究以方便取样法从山东省烟台市两所公立中学选取 1219 名（602 名女生， $M_{age} = 12.19$ 岁， $SD = 0.90$ ）中学生为被试，进行《父母低头行为量表》《简式父母教养方式问卷》和《父母与同伴依恋量表》的问卷调查，考查父母低头行为与青少年同伴疏离的关系，并进一步考查父母拒绝在其中的中介作用以及性别的调节作用。结果表明：（1）父母低头行为与父母拒绝和青少年同伴疏离呈显著正相关关系，父母拒绝与青少年同伴疏离存在显著正相关关系；（2）父母低头行为不仅直接影响青少年的同伴疏离，还通过青少年对父母拒绝的感知间接增加青少年同伴疏离的风险；（3）青少年性别调节了父母低头与青少年同伴疏离的直接路径，父母低头行为对男孩同伴疏离的影响要大于女生。研究提示，父母应有意识地减少亲子互动中的手机使用，为孩子营造一个亲密接纳的家庭环境，帮助孩子更好地适应未来生活。

关键词 父母低头行为，父母拒绝，同伴疏离，儿童性别

Parental Phubbing and Adolescent Peer Alienation: Parental Rejection as Mediator and Child Gender as Moderator

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Abstract: As a special manner of social exclusion, parental phubbing reflects to the degree to which parents are distracted by smartphones in parent-child interactions. When parents are attracted by their smartphones during parent-child interactions, adolescents will experience more rejection and less warmth from their parents. Children who feel ostracized by their parents are less likely to develop secure and trusting relationships with others in future social interactions. Thus, adolescents who are frequently phubbed by parents may perceive more rejection from parents, which may further affect adolescents' perception of peer alienation. A sample of 1219 students from two-parent families (602 girls, $M_{age} = 12.19$ years, $SD = 0.90$) was recruited as participants from two public middle schools in Yantai, Shandong province. Data were drawn from adolescents reporting on their experience with parental phubbing, parental rejection and peer alienation. Results demonstrated that (1) parental phubbing was significantly and positively associated with parental rejection and adolescent peer alienation, parental rejection was significantly and positively associated with adolescent peer alienation; (2) parental phubbing could directly predict adolescent peer alienation, and through the mediating role of parental rejection influence adolescent peer alienation; (3) adolescent gender moderated the direct path of parental phubbing and adolescent peer alienation, and parental phubbing had a stronger effect on peer alienation for boys than for girls. In order to help adolescents better develop peer relationship in future social interactions, parents should consciously reduce the use of smartphones in parent-child interactions and create a close family environment free of the distractions of smartphones.

Keywords: parental phubbing, parental rejection, peer alienation, child gender

亲子技术干扰与青少年问题性手机使用的关系： 亲子关系中介作用与年龄、性别的调节作用

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摘要 技术干扰指的是在人际互动过程中由于使用技术设备（如手机/电脑/电视/Pad等）而中断社会互动的一种现象。以往研究已经发现，亲子间的技术干扰对于儿童青少年的内外化行为、亲子关系等方面有着不少的负面影响。本研究基于前人研究的基础，试图探讨亲子间技术干扰对青少年问题性手机使用的影响与亲子关系在其中的中介作用，并且分析了年龄差异以及性别差异。本研究使用了技术干扰量表、问题性手机使用量表、社会关系网络量表对 7648 名初中生（M 年龄=14.40, SD=0.96）与 4052 名高中生（M 年龄=16.9, SD=0.49）进行了调查。使用 Mplus 构建了结构方程模型进行分析，并根据年级与性别进行了多组比较。结果发现：（1）亲子间技术干扰对青少年的问题性手机使用有着直接作用；（2）亲子关系在其中有着中介作用，具体来说技术干扰对亲子关系有着负向影响，而亲子关系会对问题性手机使用有着负向影响；（3）年级的调节效应显著，具体来说，亲子技术干扰对问题性手机使用的直接效应在初中生中效应更大，亲子技术干扰对于亲子关系的负面作用在初中生中效应更大，但亲子关系对问题性手机使用的负向影响在高中生中更大；（4）初中生中性别的调节作用显著，具体来说，亲子技术干扰对于亲子关系的负面影响会在女生中更大；（5）高中生中的性别调节作用不显著。本研究结果表明亲子技术干扰除了会直接提高青少年的问题性手机使用之外，也会通过降低亲子关系而间接影响青少年的问题性手机使用，并且这种影响模式存在着年龄差异与性别差异。

关键词 亲子技术干扰，亲子关系，问题性手机使用，年龄差异，性别差异

The Relationship between Parent-Child Technoference and Adolescents' Problematic Smartphone Use: The Mediating Role of Parent-Child Relationship and The Moderating Role of Age and Gender

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Abstract: Technoference refers to the interruption of social interaction due to the use of technical devices (such as mobile phone, computer, TV, Pad, etc.). Previous studies have found that parent-child technoference has a lot of negative effects on children and adolescents' behavior and parent-child relationship. Based on previous studies, this study attempted to explore the influence of parent-child technoference on smartphone dependence and the mediating role of parent-child relationship, and analyzed the age difference and gender difference. In this study, 7648 junior high school students (M age =14.40, SD=0.96) and 4052 senior high school students (M=16.9, SD=0.49) were investigated by using the Technoference Scale, the Mobile Phone Problematic Use Scale and the Network of Relationships Inventory. We used Mplus to construct a structural equation model for analysis, and conducted multiple comparisons of grade and gender. The results showed that : (1) Parent-child technoference had a direct effect on problematic smartphone use; (2) Parent-child relationship had a mediating effect. Specifically, technoference was negative associated with parent-child relationship, and parent-child relationship was negative associated with problematic smartphone use; (3) The moderating effect of grade was significant. Specifically, the direct effect of parent-child technoference on problematic smartphone use was greater in junior high school students, and the negative effect of parent-child technoference on parent-child relationship was greater in junior high school students, but the negative association between parent-child relationship and problematic smartphone use was greater in senior high school students. (4) The moderating effect of gender in junior high school students was significant. Specifically,

the negative effect of parent-child technology interference on parent-child relationship was greater in junior high school girls. (5) The moderating effect of gender was not significant among senior high school students. The results of this study indicated that parent-child technoference can directly improve adolescent's problematic smartphone use, and also affect adolescent's problematic smartphone use by reducing parent-child relationship, and this influence pattern has differences in age and gender.

Keywords: parent-child technoference, parent-child relationship, problematic smartphone use, age difference, gender difference

社交网站中的体像比较对女大学生网络强迫性购买的影响： 一个有中介的调节模型

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摘要 网络强迫性购买是个体在网络环境中过度购买且对购买失去控制的消费行为，是一种病理性的购买行为。网络强迫性购买给个体带来许多消极的影响，比如内疚心理、社会冲突以及债务负担等，女大学生更容易受到网络环境的影响，产生更多的强迫性购买，探讨影响女大学生网络强迫性购买的因素变得越来越重要。体像比较是大学生在社交网站使用过程中不可避免的心理活动，是指个体在体貌特征方面与他人或理想化的身体形象进行比较的过程，具有自动性和无意识的特点，社交网站中的体像比较会对个体的情绪和行为产生一定的影响。本研究旨在探讨社交网站中的体像比较对女大学生网络强迫性购买的影响及其作用机制。采用社交网站体像比较、体像满意度、网络强迫性购买和物质主义量表对来自武汉、河南和重庆高校的 521 名女大学生进行测量。结果表明：（1）体像比较和网络强迫性购买之间呈显著正相关，体像比较和体像满意度之间呈显著负相关，体像满意度和网络强迫性购买之间呈显著负相关；（2）体像比较通过体像满意度的部分中介作用影响网络强迫性购买；（3）女大学生体像比较的直接作用和体像满意度的中介作用受到物质主义的调节，随着物质主义水平的提高，女大学生体像比较的直接效应和体像满意度的中介效应增大。进一步简单斜率分析表明：对于物质主义水平较高的女大学生来说，体像比较对网络强迫性购买的预测作用更强，体像满意度对网络强迫性购买的预测作用也更强。研究结果进一步揭示了女大学生社交网站中的体像比较与网络强迫性购买的关系及其作用机制，有助于针对性的干预女大学生网络强迫性购买行为。

关键词 体像比较，网络强迫性购买，体像满意度，物质主义

Body Image Comparison and Online Compulsive Buying among Female College Students : A Moderated Mediation Model

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Abstract: Online compulsive buying is a consumer behavior in which individuals over-buy in the online environment and lose control of the purchase, and is a pathological buying behavior. Online compulsive buying brings many negative effects to individuals, such as guilt, social conflict, and debt burden. Female college students are more likely to be affected by the online environment and produce more compulsive purchases. Exploring the factors that affect female college students' online compulsive buying has become more and more important. Body image comparison is an inevitable psychological activity of college students in the process of using social networking sites. It refers to the process of comparing an individual's physical characteristics with others or idealized body images. It is characterized by automatization and unconsciousness and it will have a certain impact on the individual's emotions and behavior.

This study aims to explore the influence of body comparison on online compulsive buying of female college students and its underlying mechanism. Participants of the research were 521 female college students from Henan and Chongqing. Appearance Comparison of Social Network Site Use Scale, Body Image Satisfaction Scale, Materialism Scale, and Online Compulsive Buying Scale was used in this study. The results show that: (1) There is a significant positive correlation between body image comparison and online compulsive buying, a significant negative correlation between body image comparison and body image satisfaction, and a significant negative correlation between body image satisfaction and online compulsive buying Related; (2) Body image satisfaction partially mediated this association. (3) However, the direct effect of body image comparison and mediating effect of body image satisfaction was moderated by materialism, in that this direct effect and mediating effect was stronger for girls with higher materialism. Further simple slope analysis shows that for female college students with a higher level of materialism, body image comparison has a stronger predictive effect on online compulsive buying, and body image satisfaction has a stronger predictive effect on online compulsive buying. These findings advance our understanding of how and when body image comparison is related to online compulsive buying among female college students, which is helpful for targeted intervention in female college students' online compulsive buying behavior.

Keywords: body image comparison, online compulsive buying, body image satisfaction, materialism

中国网民对新冠疫苗的情感态度研究——基于微博大数据的分析

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摘要 目的 本研究旨在调查目前中国网民对 COVID-19 疫苗和疫苗接种的情感与态度, 通过机器学习算法预测其以后的情感走向, 同时利用大数据分析探究一些影响大众接种疫苗的因素, 以期对中国相关部门的疫苗接种工作提供来自大数据的支持, 能够帮助政府制定相关的政策推动国内新冠疫苗的接种进度, 为全民免疫时代的到来做出一定的贡献。**方法** 基于 Python 爬虫技术采集 2021 年 3 月 12 日至 2021 年 5 月 22 日期间新浪微博上有关“新冠疫苗”的热门话题下的微博评论共计 7 万余条, 借助 Python 语言中的 Wordcloud 模块、SnowNLP 情感分析模型以及 TF-IDF 算法, 对“新冠疫苗”的相关微博评论进行文本聚类与情感分析, 生成“每日微博评论情感变化图”展示网民对新冠疫苗的情感趋势, 再利用 pyecharts 绘图模块绘制“中国新冠疫苗情感地图”以及“中国新型冠状病毒疫情地图(累计确诊数)”, 可视化地展现网民对新冠疫苗的情感态度的时空演化过程。**结果** 在时间维度上, 中国网民的情感态度大致经历了四个阶段, 整体的情感值低于 0.5, 倾向于负面、消极的情绪状态; 在空间维度上, 中国内陆地区的情感值要普遍高于边境地区, 除了天津市和台湾省以外, 累计确诊数越高的地区情感值普遍越高。**结论** 中国网民对新冠疫苗的情感整体偏向于负面、消极, 各种因素在综合影响大众的接种意愿, 政府相关机构需要及时做出政策的调整, 关注网络舆论的变化, 同时根据各省市的具体情况因势利导, 才能够有效促进大众对新冠疫苗的认可与接种。

关键词 新型冠状病毒, 疫苗, 情感, 微博, 大数据

A study on Chinese netizens' emotions and attitudes toward COVID-19 vaccine -- Based on analysis of weibo big data

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Abstract: Purpose The purpose of this study is to investigate the emotions and attitudes of Chinese netizens towards COVID-19 vaccine and vaccination, predict their future emotional trend through machine learning algorithm, and explore some factors affecting public vaccination by using big data analysis, in order to provide big data support for the vaccination work of relevant departments in China. It can help the government formulate relevant policies to promote the domestic COVID-19 vaccine vaccination schedule, and make a certain contribution to the advent of the

era of universal immunization. **Methods** Based on Python crawler technology, a total of more than 70,000 weibo comments on the hot topic of "COVID-19 vaccine" on Sina Weibo from March 12, 2021 to May 22, 2021 were collected. With the help of Wordcloud module in Python, SnowNLP sentiment analysis model and TF-IDF algorithm, Text clustering and sentiment analysis were carried out on weibo comments related to "COVID-19 vaccine" to generate "sentiment change map of daily weibo comments" to show the emotional trend of netizens towards COVID-19 vaccine. Pyecharts mapping module was used to draw "China's COVID-19 vaccine sentiment map" and "China's COVID-19 epidemic map (cumulative number of confirmed cases)" to visually show the spatio-temporal evolution process of netizens' emotions and attitude towards COVID-19 vaccine. **Results** In the time dimension, the emotional attitude of Chinese netizens has experienced four stages. The overall emotional value is less than 0.5, and they tend to be negative and negative. In the spatial dimension, the emotional value in inland China is generally higher than that in border areas. Except for Tianjin and Taiwan Province, the region with higher cumulative diagnoses generally has higher emotional value. **Conclusion** Chinese netizens' emotions towards COVID-19 vaccine tend to be negative and negative on the whole. Various factors comprehensively affect the public's willingness to be vaccinated. Relevant government agencies need to make timely policy adjustments, pay attention to the changes in online public opinion, and take advantage of the situation according to the specific situation of each province and city, so as to effectively promote public recognition and vaccination of COVID-19 vaccine.

Keywords: novel coronavirus, vaccine, emotion, weibo, big data

中学生电子游戏心理卷入度问卷编制及其对心理健康的影响

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摘要 电子游戏正在逐渐取代传统游戏成为中学生娱乐的重要方式。电子游戏的测量工具层出不穷, 但有关电子游戏态度的测量工具集中于玩家消极品质的测量, 目标群体多数是病理性使用游戏的玩家群体, 会导致非病理性玩家群体得分出现地板效应, 进而失去大量数据。本研究目的在于编制一款中立且中性的中学生电子游戏心理卷入度问卷, 用于测量电子游戏心理卷入度状态, 同时考查电子游戏心理卷入度对中学生心理健康的影响。研究使用 SPSS25.0 软件进行探索性因素分析和方差分析、相关分析, 使用 AMOS24.0 进行验证性因素分析和路径分析。研究一以 1741 名中学生样本编制了 35 个题目的《电子游戏心理卷入度问卷(VGIQ)》初始问卷, 因素分析结果为包括游戏积极反馈, 游戏付出倾向, 情绪改变, 虚拟角色带入, 游戏相关关注, 现实观念改变六个维度, 问卷的内部一致性信度为 0.965, 分半信度为 0.926, 重测信度为 0.924, 效标关联度良好。问卷的验证性因素分析中各拟合指数良好 (TLI=0.886, CFI=0.896, RMSEA=0.068)。研究二考查了电子游戏卷入度及网络成瘾对心理健康的影响, 验证了以网络成瘾为中介的关系模型, 拟合指数良好 (TLI=0.956, CFI=0.943, RMSEA=0.077), 网络成瘾中介了电子游戏卷入度对心理健康的影响。研究结果表明, 中学生的电子游戏卷入度问卷共 35 题, 六个维度, 一阶六因子结构, 其信度和效度符合心理测量学要求, 可以用于中学生电子游戏卷入度测量; 电子游戏卷入度可以通过网络成瘾间接影响中学生的心理健康, 电子游戏心理卷入度越高则越可能出现网络成瘾现象并且越易导致心理问题的发生。

关键词 电子游戏卷入度, 电子游戏态度

Video Game Involvement Questionnaire Development of the Middle School Student and the Influence on Mental Health

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Abstract: Video games are gradually replacing traditional games as an important way of entertainment for middle

school students. Although there are lots of questionnaires for video games, these questionnaires paid more attention to the negative qualities of the players and mainly measured the pathological player group. It will result in a floor effect on normal players' scores and lose large amount of data. This paper intends to develop an impartial and neutral questionnaire to evaluate game playing attitude, quantify player's Video Games Involvement, and measure relationship between Video Game Involvement and mental health of middle school student. SPSS25.0 is used for EFA and ANOVA, AMOS24.0 is for CFA and Path Analysis in this paper. In study one, the Video Game Involvement Questionnaire (VGIQ) is compiled with 1,741 middle school students, in which contains 6 factors: Game positive feedback, Tendency of the pay in the game, Emotional change, Virtual role input, Game derivatives attention, and Attitude change. VGIQ Cronbach's 0.965, Split-half coefficient is 0.926, The test-retest reliability is 0.924, In confirmatory factor analysis, the fitting coefficients were good (TLI = 0.886, CFI = 0.896, RMSEA = 0.068). In study two, investigate the effect of VIGQ on mental health and assuming and verifying the model of the relationship between VGIQ and Mental health, which is totally mediated by Internet Addiction, the fitting coefficient is well (TLI=0.970, CFI=0.978, RMSEA=0.056). The results show that the questionnaire consists of 35 questions, six factors and a first-order six factor structure. Its reliability and validity meet the requirements of psychometrics and can be used to measure the involvement of middle school students in video games; Video game involvement can indirectly affect the mental health of middle school students through Internet addiction. The higher the degree of video game involvement, the more likely it is to appear Internet addiction and lead to psychological problems.

Keywords: Video Games Involvement, Game-playing attitude

大学生被动性社交网站使用对真实性的影响： 社会比较倾向的中介作用

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摘 要 能否真实的感知内在自我，不因外界影响而展现真实的自己是每个人都面临的问题。真实性即“个体做真实自己的程度”，是个体心理健康的重要影响因素，与主观幸福感，自我概念，人际交往密切相关。按照社交网站使用方式的不同可以分为：主动性使用和被动性使用。被动性社交网站使用是指个体在社交网站中缺乏交流沟通的信息浏览行为，如浏览他人动态等。相关研究结果指出，被动性社交网站使用不利于个体与他人建立良好的人际关系，对个体的情绪健康产生消极影响。在社交网站环境下，个体的社会比较心理更易被激活，高社会比较倾向的个体更容易受到社交网站的影响。因而在社交网站上被动的浏览其他用户的信息往往会因社会比较心理而导致内在自我与外表特征之间的不一致。本研究在自我差异理论，超人际交流理论和社会比较理论视角下，欲探讨被动性社交网站使用对大学生真实性的影响以及社会比较倾向在其中的中介作用。研究采用被动性社交网站使用量表，真实性量表，社会比较量表对 928 名大学生进行调查，选用 SPSS22.0 和 SPSS 宏程序 Process 进行数据统计分析。结果表明：（1）被动性社交网站使用与大学生真实性呈显著负相关；（2）社会比较倾向在被动性社交网站使用对大学生真实性影响中起中介作用，即被动性社交网站使用通过社会比较倾向负向预测大学生真实性。本研究揭示了大学生被动性社交网站使用与真实性的关系及其作用机制，提示我们应当注意社交网站使用情况，弱化社交网站中的比较情境，从而提高自身真实性水平。

关键词 真实性，被动性社交网站使用，社会比较倾向，大学生

The Effect of College Students' Passive Use of Social networking Sites on Authenticity: the Mediating Role of Social comparison tendency

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Abstract: Whether we can truly perceive our inner self and show our true self without being influenced by the outside world is a problem that everyone faces. Authenticity is "the degree to which an individual is true to himself", which is an important factor affecting individual mental health and is closely related to subjective well-being, self-concept and interpersonal communication. According to the different ways of using social networking sites, they can be divided into proactive use and passive use. Passive use of social networking sites refers to the information browsing behavior of individuals without communication on social networking sites, such as browsing other people's dynamic information. Relevant research results indicate that the use of sexual social networking sites is not conducive to the establishment of a good interpersonal relationship with others, and has a negative impact on the emotional health of individuals. In the context of social networking sites, individuals' social comparison psychology is more likely to be activated, and individuals with high social comparison tendency are more likely to be affected by social networking sites. Therefore, passive browsing of other users' information on social networking sites often leads to the inconsistency between inner self and appearance characteristics due to social comparison psychology. From the perspectives of self-difference theory, superinterpersonal communication theory and social comparison theory, this study aims to explore the influence of passive social networking site use on college students' authenticity and the mediating role of social comparison tendency. The passive social networking website usage scale, authenticity scale and social comparison scale were used to investigate 928 college students. SPSS22.0 and SPSS macro program Process were used for data statistical analysis. The results showed that : (1) there was a significant negative correlation between passive social networking site use and college students' authenticity; (2) Social comparison tendency plays a mediating role in the influence of passive social networking site use on college students' authenticity, that is, passive social networking site use negatively predicts college students' authenticity through social comparison tendency. This study reveals the relation and mechanism of college students' passive use of social networking sites and their authenticity, and suggests that we should pay attention to the use of social networking sites and weaken the comparative situation in social networking sites, so as to improve our own authenticity.

Keywords: Authenticity, Passive use of social networking sites, Social preference, College students

5.23“情绪与健康心理学专业委员会”分组展贴报告

学习压力对初中生情绪不稳定的影响：多重中介分析

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摘 要 青春期面临着来自人际关系、学业成就等各种压力，使青少年产生负面情绪的可能性增加，但当应对方式不同时，个人因情绪而遇到困难的可能性会有所差异。学习压力和应对方式均能影响初中生的情绪稳定程度。鉴于个体在面对压力挑战时，采取的应对方式可能不同，加之不同的应对方式和个体身心健康之间也存在不同关系。为考察初中生的学习压力、应对方式与其情绪不稳定之间的关系机制，选取 801 名初中生（男生 373 名，女生 428 名，平均年龄 13.93±0.98 岁），采用学习压力量表、应对方式问卷和情绪不稳定量表对初中生的学习压力、应对方式及情绪不稳定进行测量，采用 SPSS 25.0 和 Mplus8.3 进行数据分析。相关分析发现，初中生的学习压力、应对方式与情绪不稳定均显著相关（ $P_s < 0.01$ ）。多重中介分析发现，不同

应对方式在学习压力与情绪不稳定之间的多重中介效应模型的总间接效应大小是 0.107 ($SE = 0.016$, $P < 0.001$)。其中, 积极应对的中介作用路径是: 学习压力→积极应对→情绪不稳定($\beta = 0.055$, $SE = 0.010$, $P < 0.001$); 消极应对的中介路径为: 学习压力→消极应对→情绪不稳定($\beta = 0.052$, $SE = 0.012$, $P < 0.001$)。此外, 学习压力对情绪不稳定的直接效应也存在统计学意义($\beta = 0.545$, $SE = 0.032$, $P < 0.001$)。学习压力通过不同应对方式的中介作用能够间接影响初中生的情绪不稳定。本研究提示积极应对方式与消极应对方式在初中生学习压力与情绪不稳定之间起多重中介作用。

关键词 学习压力, 情绪, 应对方式, 多重中介

The influence of academic pressure on junior high school students' emotional instability: a multiple mediating analysis

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Abstract: A total of 801 junior high school students (373 boys and 428 girls, average age 13.93 ± 0.98) were selected. The academic pressure scale, coping strategy questionnaire and emotional instability scale were used to measure the academic pressure, coping strategy and emotional instability of junior high school students. SPSS 25.0 and Mplus 8.3 software were used for data analysis. Correlation analysis found that junior high school students' academic pressure, coping strategy and emotional instability were significantly correlated ($P_s < 0.01$). Multiple mediating analysis showed that the total indirect effect of the multiple mediating effect model of different coping strategy between academic pressure and emotional instability was 0.107 ($SE = 0.016$, $P < 0.001$). The mediating path of positive coping was: academic pressure → positive coping strategy → emotional instability ($\beta = 0.055$, $SE = 0.010$, $P < 0.001$); the mediating path of negative coping was: academic pressure → negative coping strategy → emotional instability ($\beta = 0.052$, $SE = 0.012$, $P < 0.001$). In addition, the direct effect of academic pressure on emotional instability was also statistically significant ($\beta = 0.545$, $SE = 0.032$, $P < 0.001$). Academic pressure can indirectly affect the emotional instability of junior high school students through the mediation of different coping strategy. This study suggests that positive coping strategy and negative coping strategy play multiple mediating roles between academic pressure and emotional instability of junior high school students.

Keywords: academic pressure, emotion, coping strategy, multiple mediating

自豪与羞愧情绪对认知灵活性影响的一致性：来自 ERP 的证据

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摘要 自我意识情绪是一类相比基本情绪更高级的社会情绪, 在我们的日常生活中扮演着重要的角色。以往关于情绪对认知灵活性影响的研究较多, 但均是在基本情绪的基础上进行研究, 对于更高级别的自我意识情绪(如自豪、羞愧)却鲜有研究。此外, 以往大量学者对同一效价的情绪与认知灵活性之间的关系进行研究, 结果却不尽相同, 那么是否是研究中混淆了不同的情绪类型? 比如基本情绪和自我意识情绪。本研究可以通过自我意识情绪的研究来与以往的基本情绪研究进行梳理, 对比两者与认知灵活性的关系。因此, 本研究采用大小-奇偶转换范式考察自我意识情绪对认知灵活性的影响, 选取在校大学生 45 名为被试, 采用 3 自我意识情绪类型(自豪、羞愧、中性)×2 任务类型(重复、转换)的混合实验设计, 探讨了不同自我意识情绪条件下转换任务的反应时和正确率, 并运用事件相关电位(Event-Related Potential, ERP)对转换任务的脑电特点进行探讨。行为结果发现: (1) 转换任务相比重复任务有更长的反应时和更低的正确率; (2) 相比中性情绪, 自豪和羞愧情绪条件下转换代价更大。脑电结果发现: (1) 转换任务比重复任务诱发了更大的 P3 波幅, 表明该任务诱发出了显著的转换效应; (2) 自豪和羞愧情绪下的 P3 差异波显著小于中性情绪下的, 而在 N2

差异波上不存在显著差异。以上行为和脑电结果均表明，自豪情绪和羞愧情绪抑制了转换能力，对认知灵活性的影响具有一致性，且这种一致性可能表现在晚期的决策任务上。该研究探讨了自豪情绪和羞愧情绪对认知灵活性的影响，为进一步管理学生的自豪与羞愧情绪提供了理论基础。

关键词 自豪，羞愧，认知灵活性，ERP

The Consistency of the Influence of Pride and Shame on Cognitive Flexibility: Evidence from ERP

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Abstract: Self-conscious emotions are social emotions that are more advanced than basic emotions and play an important role in our daily lives. There are many studies on the influence of emotions on cognitive flexibility in the past, but they are all based on basic emotions. There are few studies on higher-level self-conscious emotions (such as pride and shame). In addition, in the past, a large number of scholars have conducted research on the relationship between emotions of the same valence and cognitive flexibility, but the results are not the same. So is it because the research has confused different types of emotions? Such as basic emotions and self-conscious emotions. This research can use the research of self-conscious emotion to comb with the previous basic emotion research, and compare the relationship between the two and cognitive flexibility. Therefore, this study adopted the size-parity task-switching paradigm to investigate the influence of self-conscious emotions on cognitive flexibility. Experiment used the digit value (more vs. less than 5) and digit parity (odd vs. even) task-switching paradigm to investigate the behavioral and EEG characteristics of the effects of different self-conscious emotions on cognitive flexibility. 45 college students were selected as participants, the mixed design of 3(Self-conscious emotional type: pride, neutral, shame) × 2 (task types: repetition, switching) was adopted. The behavioral results show that switching tasks have longer RTs and lower accuracy rate than repeated tasks. Moreover, the switch costs under conditions of pride and shame is greater. ERP results showed larger P3 amplitude for switching task than repeated task, indicating that the task induced significant switch effect. Additionally, there was smaller P3 difference amplitudes for shame and pride compared to neutral, however, no significant differences were between three groups in the N2 difference amplitudes. The above behavioral and EEG results show that pride and shame inhibit conversion ability, and have a consistent effect on cognitive flexibility, and this consistency is mainly manifested in late decision-making tasks. The study explored the influence of pride and shame on cognitive flexibility, and provided a theoretical basis for further management of students' pride and shame.

Keywords: pride, shame, cognitive flexibility, ERPs

青少年心理资本与抑郁的关系：有调节的中介模型

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摘要 心理资本是个体积极的心理状态，包括自我效能、韧性、希望和乐观四个维度。既有研究表明，心理资本对青少年抑郁具有重要影响，但心理资本“怎样”影响（中介机制）以及“何时”影响（调节机制）青少年的抑郁仍有待深入探讨。本研究基于“积极青少年发展理论”、“拓展—建构理论”和“压力—缓冲模型”，构建一个有调节的中介模型，旨在检验积极应对方式在心理资本与青少年抑郁之间的中介作用，以及社会支持对上述中介路径的调节作用。采用心理资本问卷、积极应对方式问卷、社会支持问卷以及抑郁症自评量表对临床上已经确诊的209名抑郁症青少年（平均年龄13.28岁， $SD = 4.19$ ）进行测查。结果表明：（1）在控制了性别、年龄、家庭社会经济地位后，心理资本对抑郁具有显著的负向预测作用。（2）中介效应检验表明，积

极应对方式在心理资本与抑郁之间具有中介作用。(3)有调节的中介效应检验进一步表明,社会支持调节了“心理资本→积极应对方式→抑郁”的后半段,即当青少年的社会支持较高时,积极应对方式对抑郁的抑制作用增强。本研究从积极心理学的视角揭示了心理资本“怎样”及“何时”影响青少年抑郁,为抑郁症的预防和干预提供了新思路。研究结果启示我们在抑郁症的预防和干预中,要关注青少年自身优势资源的开发。

关键词 抑郁,心理资本,积极应对方式,社会支持,青少年

The Relationship between Psychological Capital and Adolescents' Depression: A Moderated Mediation Model

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Abstract: Psychological capital has been conceptualized as individual's positive psychological state of development which is characterized by self-efficacy, optimism, hope and resiliency. Although research has documented that adolescents with high psychological capital are more likely to reduce their risk of depression, the mediating mechanism (i.e., how psychological capital impact depression?) and moderating mechanism (i.e., when the impact is more or least potent) underlying this relation remains unclear. Based on “positive youth development theory”, “broaden-and-built theory” and “stress-buffering model”, a moderated mediation model was constructed to examine the mediating role of positive coping in linking psychological capital with depression, and whether this indirect association is moderated by social support. A total of 209 depressed adolescents ($M = 13.28$, $SD = 4.19$) who were interviewed by the experienced doctor according to DSM-IV, completed questionnaires regarding psychological capital, positive coping, social support and depression. The results indicated that: (1) After controlling for gender, age and socioeconomic status, psychological capital had a negative effect on depression; (2) mediation analysis revealed that positive coping mediated the association between psychological capital and depression; (3) tests of moderated mediation further indicated that the mediated path was stronger for adolescents with higher level of social support. These findings not only underscore the importance of identifying the mechanisms that moderated the mediated paths between psychological capital and adolescent depression from the perspective of positive psychology, but also provide new perspective for developing depression prevention and intervention. The prevention and intervention of adolescent should be particularly attentive to target the positive resources development.

Keywords: depression, psychological capital, positive coping, social support, adolescents

自发视觉注意能增强我们感知到的情绪吗？

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摘要 注意和情绪是两大基本的心理系统,两者之间相互影响这一问题受到研究者的高度关注。以往研究表明,情绪能吸引并维持人们的注意。近期有研究探讨了自发的视觉注意能否增强感知的情绪强度问题,研究者采用空间提示范式,让被试自发地将注意指向目标对象,然后考查他们对目标对象的情绪反应是否增强,结果表明,被试对目标对象的情绪感知显著增强。该研究从探讨自发注意影响情绪感知的角度探讨注意与情绪的关系,是很有启发意义的。然而,该研究的研究任务是要求被试选择或评价情绪强度较大的图片,这个任务可能只是考察出被试对目标图片的记忆印象,而没有真正考察出被试对目标图片的情绪反应是否增强,也没有考察出被试对目标图片的情绪如何增强。据此本研究设计三个实验探讨被试对自发注意的目标图片情绪感知是否增强以及如何增强。实验1采用空间提示范式操纵自发视觉注意,研究任务是让被试选择情绪感受强的图片,并同时进行情绪效价的七点评级,结果发现,图片类型的主效应显著,被标记图片与未被标记的图片的情绪效价的差异不显著。这一结果表明,前人研究得出的结果可能只是表明标记图片会使被试印象更深刻,不能证明标记图片是否增强了情绪感受。实验2同样采用空间标记范式操纵自发注意,图片呈现结束后,由电脑随机呈现被标记图片或者不被标记图片,让被试对呈现图片的情绪效价进行七点评级,结果表

明, 被试对自发注意的消极刺激感知到的情绪往消极方向增强, 对自发注意的积极刺激感知到的情绪往积极方向增强, 不是表现为“单向增强”, 而是一种双向的“离中增强”。实验 3 运用脑电技术, 采用空间标记范式操纵自发注意, 图片呈现结束后, 由电脑随机呈现被标记图片、不被标记图片或者未呈现过的图片, 要求被试再认, 脑电结果表明, 被标记图片的波幅显著高于其他图片的波幅, 进一步验证了本研究的猜想。综合三个实验的研究结果, 本研究提出, 自发视觉注意可以增强人们的情绪感知。

关键词 自发视觉注意, 情绪强度, 空间标记范式, 情绪效价

Can Voluntary Visual Attention Increase Perceived Emotional Intensity?

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Abstract: Attention and emotion are two basic psychological systems, and the interaction between them has been highly concerned by researchers. Previous studies have shown that emotions attract and maintain people's attention. Recent studies have explored whether voluntary visual attention can enhance the perceived emotional intensity. Using the spatial-cuing paradigm, researchers asked the subjects to point their attention to the target spontaneously, and then examined whether their emotional response to the target was enhanced. The results showed that the subjects' emotional perception of the target was significantly enhanced. This study is instructive to explore the relationship between attention and emotion from the perspective of the effect of voluntary attention on emotional perception. However, the task of this study is to ask subjects to select or evaluate pictures with high emotional intensity, which may only examine the memory or impression of the target picture. Therefore, we think this study does not really examine whether the subjects' emotional response to the target picture is enhanced, nor how the subjects' emotional response to the target picture is enhanced. Accordingly, our study designed three experiments to explore whether the subjects' perceived emotion of the target picture through voluntary attention is enhanced and how to enhance it. In experiment 1, the spatial-cuing paradigm was used to manipulate voluntary visual attention. Subjects are required to select pictures with strong emotional feelings, and to rate their emotional valence by seven points at the same time. The results showed that the main effect of picture type was significant, and there was no significant difference in emotional valence between cued and uncued pictures, which suggests that the results of previous studies may only show that the cued pictures will make the subjects more impressed, and can not prove whether voluntary visual attention enhance the perceived emotion. In experiment 2, the spatial-cuing paradigm was also used to manipulate voluntary attention. After the picture presentation was over, the subjects did not need to choose. The computer randomly presented the cued picture or not. The subjects were asked to rate the emotional valency of the presented picture by seven points. The results show that voluntary visual attention can enhance the perceived emotion of subjects. The emotion perceived by the negative stimulus of voluntary attention is enhanced in a negative direction, and the emotion perceived by the positive stimulus of voluntary attention is enhanced in a positive direction. It is not a "one-way enhancement", but a "two-way off-center enhancement". In experiment 3, we used EEG technology, and spatial-cuing paradigm was also used to manipulate voluntary attention. After picture presentation, the computer randomly presented cued pictures, uncued pictures or unpresented pictures, requiring subjects to recognize them. The EEG results show that the amplitude of the cued pictures are significantly higher than other pictures, which further validates our hypothesis. Combining the results of three experiments, this study suggests that voluntary visual attention can enhance people's perceived emotion.

Key words: voluntary visual attention, emotional intensity, spatial-cuing paradigm, emotional valency

睡眠剥夺影响恐惧消退的认知神经机制

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摘要 恐惧(fear)是一种与进化密切相关的基本情绪,它可以激发一系列防御机制,在人类的生存和适应中发挥着重要作用。然而,当动物或人类长期处于恐惧状态中,可能发展为焦虑症、恐惧症和创伤后应激障碍等相关情绪障碍,对其身心健康和发展都会造成严重的负面影响。先前的研究表明,睡眠剥夺会对恐惧情绪加工过程产生影响,然而睡眠剥夺影响恐惧记忆消退的认知神经机制并不清楚。为此,本研究采用了功能性磁共振技术探究了睡眠剥夺影响恐惧消退的认知神经基础。行为结果表明,恐惧消退阶段,控制组被试对唤醒刺激和非唤醒刺激的恐惧程度均高于睡眠剥夺组被试;脑成像结果发现,消退阶段,控制组被试在以下脑区有更大的激活:杏仁核、背外侧前扣带回、脑岛、海马和腹内侧前额叶等。因此,睡眠剥夺影响着恐惧消退的效果,其中杏仁核、腹内侧前额叶等脑区的活动起着核心调控作用。

关键词 睡眠剥夺, 恐惧消退, 杏仁核, 腹内侧前额叶

Cognitive neural mechanisms underlying the impact of sleep deprivation on fear extinction

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Abstract: Fear is biologically adaptive responses to environmental threat, and fear learning serves a key role in adaptive function. However, fear learning can be maladaptive at some times, resulting in excessive fear, anxiety and posttraumatic stress disorder (PTSD). Accumulating evidence sleep and sleep deprivation (SD) serves a crucial role in the process of fear. However, the impact of sleep deprivation on fear extinction remains unclear. Thus, the present study measured human brain activity during fear extinction under conditions of 24 h of sleep deprivation and normal sleep using functional magnetic resonance imaging (fMRI). Behaviorally, participants in the control group had greater fear ratings and SCR than that in the SD group for the reminder stimulus (CSa+) and no reminder stimulus (CSb+) at fear extinction stage. Some brain regions including amygdala, dACC, insula, hippocampus and vmPFC showed greater activation in the control group as compared with the SD group at fear extinction stage. The results suggested that sleep deprivation affect extinction of a fear memory as it can alter activity patterns of the insula, amygdala and ventromedial prefrontal cortex (vmPFC). In summary, these results provided a new perspective for exploring the cognitive neural mechanisms underlying the impact of sleep deprivation on processing of fear extinction.

Keywords: sleep deprivation, fear extinction, amygdala, ventromedial prefrontal cortex (vmPFC)

急性应激损害个体对视觉工作记忆中的分心物抑制： 基于 Alpha 振荡的证据

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摘要 急性应激状态下,个体大量分泌的激素会影响到与视觉工作记忆目标存储和干扰抑制密切相关的前额叶和后顶叶皮层等脑区的功能。据此我们推测急性应激会影响个体对视觉工作记忆中的目标存储和干扰抑制。研究采用2(组别:应激组,控制组)×3(记忆项目数量:2个红色、4个红色、2个红色+2个蓝色)混合实验设计。其中2个红色+2个蓝色为分心条件,记忆项目的数量为被试内变量,被试间变量为组别。采用MAST应激任务诱发个体的急性应激反应后完成视觉工作记忆任务,在视觉工作记忆任务进行中同步采集脑电活动,以行为学指标和alpha振荡能量作为测量指标。研究结果发现:在MAST应激任务前后的皮质醇

浓度差异量和主观情绪感受分数差值上，应激组显著高于控制组；在行为学指标上，应激组和控制组无显著差异；在 alpha 振荡能量上，应激组在分心条件下的 alpha 振荡能量显著低于控制组的 alpha 振荡能量。结果表明，急性应激损害了分心条件下个体对视觉工作记忆中的干扰抑制。

关键词 急性应激，视觉工作记忆，干扰抑制，alpha 振荡

Acute stress impairs distractor suppression in visual working memory: from evidence of Alpha oscillation

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Abstract: A large number of hormones secreted by the individual under acute stress will affect the function of the brain regions such as the prefrontal and posterior parietal cortex, which are closely related to the target storage of visual working memory and the suppression of interference. So, we guessed that acute stress will affect the target storage and distractor suppression in visual working memory. The study Used 2 (group: stress group, control group) × 3 (number of memory items: 2 red, 4 red, 2 red + 2 blue) mixed experimental design. Among them, 2 red + 2 blue are distraction conditions, the number of memory items is the within-subject factor, and the between-subject factor is the group. Meanwhile, used MAST to induced an individual's acute stress response to complete the visual working memory task, and collect EEG while the visual working memory task is in progress, and behavioral results and alpha oscillation power as measurement indicators. The results of the study found that the stress group was significantly higher than the control group in the difference in cortisol and the difference in subjective emotional perception scores; there was no significant difference in the behavioral indicators between the stress group and the control group; in the alpha power, The alpha power of the stress group under distraction conditions is significantly lower than that of the control group. The results show that acute stress impairs the distractor suppression in visual working memory.

Keywords: acute stress, visual working memory, distractor suppression, alpha oscillations

Disgust as an inhibition: Individuals with high disgust sensitivity have a higher ability to inhibit external stimuli

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Abstract: Disgust is a basic negative emotion that protects the organism from infection through disease-avoidant behavior, and it is an evolutionary psychological system. Disgust sensitivity refers to the stable tendency of response to disgust stimuli. Whether individuals with high disgust sensitivity have a higher inhibition ability to reject external stimuli at the psychological level has not been elucidated. Here we used abstract external stimulus conflict to simulate the inhibition of a disgust stimulus in order to identify the differences in the ability of disgust-sensitive individuals to deal with external stimuli. The classic flanker paradigm was used in the present study to test the responses of subjects with different disgust sensitivities under a congruent condition (CR) and incongruent condition (IR) so as to obtain their ability to inhibit external stimuli. The results of behavioral tests showed that the reaction time of the subjects was correlated with the disgust score under the IR and CR. EEG results showed that P2 were significantly activated and negatively correlated with disgust sensitivity scores. According to the findings of this experiment, individuals with high disgust sensitivity have relatively higher ability to suppress external stimuli, which might be because these individuals have higher mental immunity than individuals with low disgust sensitivity.

Keywords: disgust, disgust sensitivity, inhibit, external stimuli

小学生父母教养压力的特点及其影响因素

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摘要 父母的教养压力会通过其教养方式影响儿童的行为、人格以及心理健康。小学阶段是儿童心理发展的关键期，也是受父母影响较大的时期，研究小学生父母的教养压力对儿童的教养有积极的意义。近年来，随着学校教育减负、家校合作的推进，小学生的父母面临着逐渐增大的教养压力，了解小学生父母的教养压力状况，分析其教养压力的内外影响因素，如儿童的性别、年龄以及父母的期望、教养效能、受教育程度、参与状况等，可为父母在家庭教育中采取正确的家庭教养方式提供科学指导，从而对小学生的行为、人格和心理健康产生积极的影响。本研究采用父母期望问卷、父母教养能力感问卷与父母教养压力问卷对 854 名小学生父母进行调查，结果表明：（1）小学生父母的教养压力处于中等水平。（2）农村父母的教养压力显著高于城镇父母（ $t=7.55, p<0.01$ ），二孩以上的家庭父母教养压力显著高于一孩家庭的父母（ $t=7.12, p<0.01$ ），孩子的性别与年龄对父母教养压力的影响均不显著（ $t=0.74, p=0.46$ ； $F=1.19, p=0.32$ ）。（3）母亲参与教养的比例比较高（80.2%），母亲的受教育程度显著影响其教养压力（ $F=31.46, p<0.01$ ），事后检验发现，受教育为大学以下的父母教养压力大于大学及以上的父母。（4）父母的期望、教养满意度和教养效能对其教养压力均有显著影响（ $t=5.71, p<0.01$ ； $t=13.43, p<0.01$ ； $t=2.10, p<0.05$ ）。结论：小学生父母的教养压力受到其居住地、孩子的个数等外在因素影响，也受到父母期望、父母教养满意度、父母教养效能等内在因素的影响。

关键词 小学生父母，父母教养压力，父母期望，父母教养能力感

The Characteristics of Parenting Stress in Primary School Students' Parents and Its Related Influencing Factors

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Abstract: Parenting stress can affect children's behavior, personality and mental health through their parenting style. Primary school is the critical period of children's psychological development, and it is also a period greatly influenced by parents. In recent years, with the development of reducing school students' burden and the progress parent-teacher cooperation, elementary student's parents is facing with a gradual increase in the parenting stress. Exploring parenting stress and analyzing its influencing factors such as children's gender, age, parents' education levels and parents' involvement, can provide scientific guidance for parents' correct upbringing. And then it will have a positive impact on elementary school students' behavior, personality and mental health. The study investigated 854 parents of primary school students by using the parental expectation questionnaire, Parenting Sense of Competence Scale and Parenting Stress Index Short Form. The results were as follows: (1) The parenting stress of primary school students was at a middle level. (2) The parenting stress of rural parents was significantly higher than that of urban parents ($t=7.55, p<0.01$). The parenting stress of parents with more than one child was significantly higher than that ones with one child ($t=7.12, p<0.01$; $F=1.19, p=0.32$). (3) The proportion of mothers participating in parenting was relatively high (80.2%), and the mothers' education levels significantly affected their parenting stress ($F=31.46, p<0.01$). The post-test results showed that the stress of mothers with education below college level was higher than that ones with education above college level. (4) Parental expectation, parenting satisfaction and parenting efficacy all had significant effects on parenting stress ($t=5.71, p<0.01$; $t=13.43, p<0.01$; $t=2.10, p<0.05$). Result: The parenting stress of primary school students' parents is influenced by external factors such as their residence and the number of children, as well as internal factors such as parental expectation, parental satisfaction and parental effectiveness.

Keywords: primary school students' parents, parenting stress, parental expectation, parenting efficacy

额叶偏侧化与情绪表达灵活性：一项静息态 EEG 研究

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摘要 在社会交往或人际交流中, 个体往往需要根据情境的需求抑制已有的情绪或表达出相应的情绪, 甚至随着情境的变换而转换相应的情绪表达, 这就涉及到了情绪表达灵活性, 即个体根据环境变化的要求, 对情绪表达和抑制的灵活转换。情绪表达灵活性不仅是个体一种情绪智力的体现形式, 也会影响个体的社会化过程。然而, 以往研究往往考察情绪表达灵活性的后效问题, 例如情绪表达灵活性对个体适应性、心理健康等的影响, 很少从认知神经视角考察情绪表达灵活性概念本身。情绪表达灵活性的个体差异具有怎样特定的神经基础? 或者说, 情绪表达灵活性存在怎样客观的电生理指标呢? 这些问题的答案尚不清楚。本研究选择与情绪灵活性密切相关的指标额叶 EEG 偏侧化, 采用静息态脑电技术, 以 48 名大学生 ($M=22.38$, 54% 女性) 为被试, 考察了额叶 α 波偏侧化与个体情绪表达灵活性的关系。回归分析结果显示: (1) 静息态闭眼状态下额叶 α 波(8-13Hz)左侧化能够显著正向预测个体的情绪表达灵活性, 即个体闭眼状态下额叶 α 波的左侧化系数越高, 其情绪表达灵活性越高; (2) 这种预测作用在情绪表达灵活性的两个分维度——增强情绪表达和抑制情绪表达上都有所体现: 个体静息态闭眼状态下额叶 α 波左侧化系数能够显著正向预测个体增强表达能力, 正向预测个体抑制情绪表达能力 (该维度边缘显著, $p=.056$)。综上, 研究表明: 个体静息态闭眼状态下额叶 α 波左侧化能够显著正向预测个体情绪表达灵活性。本研究提示额叶偏侧化可能是情绪表达灵活性的客观电生理指标, 未来尚需更多实证研究提供额叶 α 波左侧化的提高可以增强个体情绪表达灵活性的因果证据。

关键词 情绪表达灵活性, α 波震荡, 偏侧化, 静息态脑电

Frontal Alpha Asymmetry and Emotional Expressive Flexibility: A Resting-state EEG Study

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Abstract: Humans usually need to suppress or enhance or even switch facial emotional expressions in accord with the need of context, especially in social interaction or interpersonal communication. This involves emotional expressive flexibility (EEF) which refers to the ability to enhance and suppress one's displayed emotions in accord with situational demands. EEF was considered an aspect of emotional intelligence and was crucial to individual socialization. Previous studies put more emphasis on exploring the effect of EEF on mental health, such as depression, life satisfaction and adjustment. However, little is known about the neural basis of EEF. What is the specific neural basis for individual differences in EEF? Or is there an objective electrophysiological indicator of EEF? The answers to the questions remain unclear. As frontal alpha asymmetry (FAA) is indicator of emotional flexibility, we investigated the relationship between FAA and EEF. Forty-eight participants ($M_{age}=22.38$, 54% female) underwent resting EEG and completed several questionnaires. FAA was typically calculated by subtracting the natural log of left hemisphere alpha power from that of right hemisphere; and the power within alpha frequency bands (typically 8–13 Hz) is inversely related to actual cortical activations. Thus, higher FAA scores indicated more left hemisphere

activations. Results revealed that FAA scores positively predicted EEF significantly. That is, relatively greater left frontal activation was associated with greater EEF. In addition, this prediction can be reflected in both dimensions of EEF—the enhancement and suppression abilities. To be specific, the higher the left frontal activation, the greater the abilities of enhancement and suppression. Together, these results all suggest FAA can positively predict EEF. The present study indicates that FAA may be an indicator of EEF. In the future, more empirical studies are needed to provide causal evidence that the enhancement of FAA can enhance EEF.

Keywords: Emotional expressive flexibility, Alpha oscillation, Asymmetry, Resting-state EEG

新冠疫情下政治信任对心理健康的影响：文化的调节作用

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摘要 作为社会资本的重要内容之一，政治信任在国家治理中发挥了重要作用。以往的研究表明，政治信任会影响人们的心理与行为反应，但是政治信任对心理健康的影响及内在机制尚不清晰，尤其是新冠疫情下的情况知之甚少。本研究旨在探索政治信任与心理健康（主要通过焦虑、抑郁两个指标）之间的关系。该研究在招募了 2415 个中国大陆被试（平均年龄=23.70±8.79）进行了一项横断研究，对其人口学信息、政治信任、个人主义、集体主义、焦虑和抑郁进行了问卷测量，用多元回归方法分析了政治信任与心理健康之间的关系，并检验了个人主义、集体主义调节作用。研究结果表明，大部分被试更倾向于相信政府，个人主义没有显著的调节作用，但集体主义显著调节了政府信任对心理健康的影响。随着政治信任程度的提高，在疫情下高集体主义的个体焦虑和抑郁水平会显著降低，而低集体主义的个体焦虑和抑郁水平反而显著上升，即集体主义有效缓冲了政府信任对焦虑抑郁的影响，降低了心理问题发生的可能性。研究还发现，水平的集体主义和垂直的集体主义在发挥条件作用时的机制不同。本研究对新冠疫情下政治信任与民众心理健康之间的关系进行了及时、有效的检验，对疫情下的政府管理和公众健康提供了一定的理论意义与实践参考。

关键词 政治信任，心理健康，集体主义，新冠病毒，焦虑

The influence of political trust on mental health during the COVID-19 pandemic: Culture matters

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Abstract: Political trust plays a key role in effective government. Previous studies have shown that political trust may affect people's psychological and behavioral responses, but it is less clear whether and how it affects mental health especially during the COVID-19 pandemic. The present study aimed to explore the relationship between political trust and mental health (especially anxiety and depression). 2415 Chinese participants ($Mage = 23.70 \pm 8.79$) were recruited to take part in an online survey in the end of April of 2020. Self-reported political trust, individualism, collectivism, anxiety and depression were measured. Multiple regressions were used to analyse the relationship between political trust and mental health, and examine the moderation of individualism and collectivism on mental health. The findings indicated that most participants tend to trust in government. In addition, collectivism moderates the impact of political trust on mental health. Furthermore, horizontal and vertical collectivism vary in the moderating effect. This research provides a timely and necessary study of the influence of political trust in the COVID-19

pandemic, with theoretical and practical implications for political trust and public health efforts.

Keywords: political trust, mental health, collectivism, COVID-19, anxiety

童年虐待、抑郁和自我怜悯对青少年自伤行为的影响： 一个有调节的中介模型

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摘要 背景: 非自杀性自伤行为(以下简称“自伤行为”)是指个体在没有自杀意图的前提下, 直接、故意地伤害自己的身体组织的行为。青少年时期是个体自我发展的关键时期, 自伤行为已成为影响青少年心理健康的重要议题。许多研究表明, 儿童期的虐待经历在精神病理学和其他方面都有着广泛的影响。相较于一般人口, 自伤行为在有童年虐待经历的个体中的发生率更高。为了进一步探究童年虐待与自伤行为的关系, 本研究采用抑郁和自我怜悯作为个体特征变量, 就童年虐待对自伤行为产生影响的内部机制进行探讨。方法: 本研究采用儿童期创伤经历问卷、简版自我怜悯量表、抑郁-焦虑-压力自评量表和自伤行为问卷, 对 758 名中国香港地区中学生进行问卷调查, 得到有效问卷 718 份。对所得数据使用 SPSS 和 PROCESS 插件进行相关统计分析。结果: (1) 童年虐待和抑郁可以正向预测个体的自伤水平; (2) 自伤个体的童年虐待水平和抑郁水平均显著高于非自伤个体; (3) 抑郁在童年虐待对自伤行为的影响中起部分中介作用; (4) 自伤个体的自我怜悯水平显著低于非自伤个体, 并在自我批评、孤立感和过度沉迷三个维度上的平均水平显著高于非自伤个体; (5) 自我怜悯可以调节童年虐待通过抑郁影响自伤行为的直接和间接效应, 即自我怜悯既可以缓冲童年虐待经历对自伤行为的影响, 也可以缓冲童年虐待对抑郁的影响。本论文研究结果丰富了国内青少年自伤行为整合性理论模型的研究, 并为自伤行为的干预与预防提供一定的指导作用。

关键词 非自杀性自伤行为, 童年期虐待经历, 抑郁, 自我怜悯, 青少年

The effects of childhood abuse, depression and self-compassion on adolescents' self-injury: A moderated mediation model

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Abstract: Background: Non-suicidal self-injury behavior (NSSI) refers to the behavior of an individual directly and deliberately injuring his or her body tissue without the intention of suicide. Youth is a crucial period for individual self-development, and NSSI has become an important issue affecting the mental health of adolescents. Many studies have shown that childhood abuse experiences have a wide-ranging impact on psychopathology and other aspects. Compared to the general population, NSSI is more common among individuals with childhood abuse experiences. In order to further explore the relationship between childhood abuse and NSSI, this study used depression and self-compassion as individual characteristic variables to explore the internal mechanisms of childhood abuse on NSSI. Methods: This study used Childhood Trauma Questionnaire, Self-compassion Scale-Short Form, DASS-21 and Self-injury Questionnaire as research tools. A questionnaire survey was conducted among 758 middle school students in Hong Kong, and 718 valid questionnaires were obtained. The relevant data was analyzed using the SPSS and PROCESS plug-ins. Results: (1) Childhood abuse and depression can effectively predict the individual's NSSI level. (2) The levels of childhood abuse and depression of self-injured individuals were significantly higher than those of non-self-injured individuals. (3) Depression plays a partial intermediary role in the impact of childhood abuse on NSSI. (4) The self-compassion level of self-injured individuals was significantly lower than that of non-self-injured ones, and was significantly higher than that of non-self-injured individuals in the three dimensions of self-judgment, isolation and over-identification. (5) Self-compassion can moderate the direct and indirect effects associations

between childhood abuse and NSSI via depression, that is, self-compassion can buffer the impact of childhood abuse on NSSI and depression. The results of this paper enrich the research on the integrated theoretical models of self-injury behaviors of domestic adolescents, and provide a certain guidance for the intervention and prevention of self-injury behaviors.

Keywords: NSSI; childhood abuse; depression; self-compassion; adolescents

微表情识别训练对大学生欺骗检测能力的作用研究

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摘要 目的: 近年来, 大学生受骗屡见不鲜, 但是学校和社会教育往往注重于大学生的诚信教育, 很少涉及到对于提高大学生欺骗检测能力的方法研究。微表情作为一种欺骗检测的线索, 对于欺骗检测能力的提升有着重要的作用, 本文通过探究微表情识别训练对于欺骗检测能力的作用探讨微表情识别训练对于提升欺骗检测能力的可行性。方法: 42 名被试参与了本次实验, 完成且数据有效的共 32 份 (21 女, 平均年龄 19.56)。被试依次完成对无声视频内人物的欺骗检测前测、微表情识别训练 (自发微表情识别训练和人工微表情识别训练)、欺骗检测后测实验。结果: 1. 被试的欺骗检测训练效果显著, 欺骗检测后测的成绩 ($M=.53$, $SD=.12$) 显著高于前测成绩 ($M=.43$, $SD=.12$), $t(31)=-3.25$, $p=.003$, $d=.574$; 2. 欺骗检测训练有效率为 65.63%, 且女生 (71.43%) 训练有效率高于男生 (54.55%); 3. 被试的微表情识别训练效果显著, 人工微表情训练后测 ($M=.73$, $SD=.12$) 显著高于前测 ($M=.51$, $SD=.10$), $t(31)=-8.68$, $p<.001$, $d=1.53$; 自发微表情训练后测 ($M=.45$, $SD=.16$) 显著高于前测 ($M=.36$, $SD=.15$), $t(31)=-2.88$, $p=.007$, $d=.51$; 4. 被试的欺骗检测成绩改变和自发微表情识别训练成绩改变显著正相关 ($r=.363$, $p=.041$); 5. 单因素 ANOVA 分析结果显示, 被试的性别因素对于诚实判断的训练效果差异显著 ($F=8.70$, $p=.006$); 结论: 本次研究发现微表情识别训练能显著的提高通过表情识别欺骗检测能力, 且对于女大学生的训练成功率和训练效果优于男性。

关键词 微表情识别, 欺骗检测, 性别差异

Research on the effect of Micro-expression Recognition Training on College Students' Deception Detection Ability

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Abstract: Objective: In recent years, college students are often deceived, but school and social education often focus on the integrity education of college students, rarely involving in the study of methods to improve college students' deception detection. As a clue of deception detection, micro-expression plays an important role in improving deception detection ability. The purpose of the study was to investigate the effects of the micro-expression training on the deception detection. Methods: 43 participants were recruited but only 32 (21 female, mean age=19.56) completed the entire experiment. Participants completed the deception detection pretest, micro-expression recognition training (spontaneous micro-expression training and artificial micro-expression recognition training), and post-deception detection experiments on the characters in the silent video same as the pretest. Result: 1. The post-test scores of the subjects ($M=.53$, $SD=.12$) were significant higher than the pre-test scores ($M=.43$, $SD=.12$), $t(31)=-3.25$, $p=.003$, $d=.574$; 2. The effective rate of deception detection training is 65.63%, and the training efficiency of girls (71.43%) is higher than that of boys (54.55%). 3. The training performance of the participants in the micro-expression recognition was significantly improved. The post-test of artificial micro-expression recognition ($M=.73$, $SD=.12$) was significantly higher than the pretest ($M=.51$, $SD=.10$), $t(31)=-8.68$, $p<.001$, $d=1.53$; there are also consistent results in spontaneous micro-expression recognition, post-test ($M=.45$, $SD=.16$) is higher than the pretest ($M=.36$, $SD=.15$), $t(31)=-2.88$, $p=.007$, $d=.51$. 4. There was a significant positive correlation between the change of subjects' performance in deception detection and spontaneous micro-expression recognition training ($r=.363$, $p=.041$).

5.ANOVA analysis results showed that the gender of subjects had a significant difference in the training effect of honest judgment($F=8.70$, $p=.006$). Conclusion: This study found that micro-expression recognition training can significantly improve the ability to detect deception through facial expression recognition, and the training success rate and training effect for female college students are better than the male.

Keywords: Micro-expression recognition, Deception detection, Gender differences

女大学生自我客体化对社交自我效能感的影响： 体像满意度的中介作用

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摘 要 社交是大学生生活的重要组成部分，社交自我效能感对大学生心理健康水平的预测作用十分明显。前人研究表明，状态自我客体化和特质自我客体化都会降低女性的一般自我效能感；自我客体化可以正向预测社交焦虑；女性的自我客体化会降低其与异性的社交意愿。据此提出假设一：女大学生自我客体化可负向预测其社交自我效能感。自我客体化概念的焦点是外貌，自我客体化的个体以第三人称将自己的外貌与社会理想外貌进行对比，这样的结果往往是不如意的，从而对自己的体像产生不满。研究表明，自我客体化可负向预测体像满意度。体像满意度低会产生一系列例如焦虑、羞耻、抑郁等消极体验，情绪唤起是班杜拉所提出的影响自我效能感的四种因素之一，身体不满导致的负面情绪的唤起会对社交自我效能感产生负面影响。据此提出假设二：自我客体化通过体像满意度来影响社交自我效能感。鉴于自我客体化是一个与女性联系更为紧密的概念，本研究选取山西省某大学 4244 女大学生作为被试，采用客体化身体意识量表、青少年学生身体自我量表和大学生人际交往效能感问卷对其进行调查，结果发现：（1）女大学生自我客体化与体像满意度呈负相关，自我客体化与社交自我效能感呈负相关，体像满意度对社交自我效能感呈正相关。（2）女大学生自我客体化可以直接影响社交自我效能感，也可通过体像满意度的中介作用来影响社交自我效能感。研究揭示了女大学生自我客体化对社交自我效能感的作用机制，为女大学生自我客体化、体像满意度、社交自我效能感之间的动态关系提供了有效的数据支持。

关键词 自我客体化，社交自我效能感，体像满意度，女大学生

The Effect of Self-objectification of Female College Students on Social Self-efficacy: the Mediating Role of Body Image Satisfaction

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Abstract: Social interaction is an important part of the life of college students, and social self-efficacy has a significant effect on predicting the level of college students' mental health. Previous studies have shown that both state self-objectification and trait self-objectification can reduce women's general self-efficacy; self-objectification can positively predict social anxiety; women's self-objectification can reduce their willingness to socialize with men. Based on this, hypothesis one is proposed: the self-objectification of female college students can negatively predict their social self-efficacy. The focus of the concept of self-objectification is one's appearance. Self-objectified individuals compare their appearance with the social ideal appearance in the third person. Such results are often unsatisfactory, and they are dissatisfied with their body image. Studies have shown that self-objectification can negatively predict body image satisfaction. Low body image satisfaction will produce a series of negative experiences such as anxiety, shame, depression, etc. Emotional arousal is one of the four factors that Bandura proposed to affect self-efficacy. The arousal of negative emotions caused by body dissatisfaction will have a negative impact on social self-efficacy. Based on this, hypothesis two is proposed: self-objectification affects social self-efficacy through body image satisfaction. In view of the fact that self-objectification is a concept more closely related to women, this study selected 4244 female college students from a university in Shanxi Province as subjects, using the Objectification

Body Consciousness Scale, the Adolescent Student Physical Self Scale, and the Interpersonal Efficacy Questionnaire for College Students to investigate. The results of the investigation showed that: (1) Female college students' self-objectification is negatively correlated with body image satisfaction, self-objectification is negatively correlated with social self-efficacy, and body image satisfaction is positively correlated with social self-efficacy. (2) Self-objectification of female college students can directly affect social self-efficacy, and it can also affect social self-efficacy through the mediating effect of body image satisfaction. The research reveals the mechanism of female college students' self-objectification on social self-efficacy, and provides effective data support for the dynamic relationship among female college students' self-objectification, body image satisfaction, and social self-efficacy.

Keywords: self-objectification, social self-efficacy, body image satisfaction, female college students

大学生手机成瘾与孤独感的关系

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摘要 手机作为新时代的科技产物, 为人们的生活带来诸多便利, 年轻人尤其喜欢使用手机来建立和维持社交关系。除此之外, 手机功能愈发强大, 促使大学生对手机的使用频率愈发升高, 然而对手机的过度使用有可能会手机成瘾的症状, 对正常生活与身心健康造成负面影响, 例如, 孤独感体验的增加。基于此, 本研究旨在考查大学生手机成瘾(*Mobile phone addiction*)与孤独感(*Loneliness*)之间的关系, 并从手机成瘾的四个维度: 失控性(*Uncontrollability*)、戒断性(*Abstinence*)、低效性(*Ineffectiveness*)和逃避性(*Evasion*)探讨手机成瘾对大学生的影响。方法: 采用 MPAAI 手机成瘾量表和 ULCA 孤独感量表修订版对成都某大学 318 名(20.04 ± 1.10 岁)在校大学生, 包括男生 136 名、女生 182 名进行问卷调查, 探讨大学生手机成瘾与孤独感的现状, 并以手机成瘾的四个维度为自变量, 孤独感为因变量, 性别为调节变量使用逐步回归法进行多元线性回归分析以探讨它们两者之间的相互作用及性别差异。结果表明: 大学生手机成瘾者占比 17.9%, 手机成瘾量表得分($M=42.28 \pm 11.74$); 男女生手机成瘾在低效性($t=-2.338, p<0.05$)和逃避性($t=-3.550, p<0.001$)两个维度差异显著, 女生($M=8.24 \pm 2.94$)比男生($M=7.49 \pm 2.79$)更容易在手机使用时产生低效性, 女生($M=8.26 \pm 2.75$)比男生($M=7.21 \pm 2.41$)更容易产生逃避性; 大学生中有 89.3% 的人体验到孤独($M=48.52 \pm 8.02$); 孤独感体验在性别上存在显著差异($t=-2.392, p<0.05$), 女生($M=49.45 \pm 7.31$)比男生($M=47.29 \pm 8.76$)更容易体会到孤独感; 手机成瘾与孤独感存在显著正相关($r=0.395, p<0.01$); 大学生手机成瘾中的失控性($\beta=0.172, t=3.099, p<0.01$)和逃避性($\beta=0.329, t=5.936, p<0.001$)两个维度能显著正向预测孤独感; 性别在手机成瘾与孤独感调节作用显著, 对于男生, 手机成瘾的失控性($\beta=0.304, t=3.366, p<0.01$)和逃避性($\beta=0.194, t=5.936, p<0.05$)对孤独感具有显著的正向预测作用; 对于女生, 手机成瘾的逃避性($\beta=0.418, t=6.171, p<0.001$)对孤独感具有显著的正向预测作用。研究结论: 大学生手机成瘾程度越高越感受到孤独, 且女生在手机成瘾程度与孤独感体验上都高于男生。失控性和逃避性可能是手机成瘾导致个体增加孤独感的重要影响因素。因此, 提升大学生尤其是女生对手机的自控能力尤为重要, 大学生需要控制手机使用时间以及积极参与线下活动来改善其身心健康。

关键词 手机成瘾, 孤独感, 失控性, 逃避性

The relationship between cell phone addiction and loneliness among college students

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Abstract: As a technology product of the modern era, mobile phones have brought a lot of convenience to our lives. Using mobile phones to establish and maintain social relationships is popular among young people. In addition, college students are attracted by the great multifunction of mobile phones and dependent on using them more

frequently. However, symptoms of mobile phone addiction would cause by excessive use of it, which has a negative impact on normal life and physical and mental health, such as the increase in loneliness. Based on this, current research aims to examine the relationship between the mobile phone addition and the loneliness of college students, and explore the impact of mobile phone addition on college students from four dimensions, uncontrollability, abstinence, low ineffectiveness and evasion. Methods: The MPAI mobile phone addition scale and the revised version of ULCA loneliness scale were used to conduct a questionnaire survey among 318 college students (20.04 ± 1.10 years old) in a university in Chengdu, including 136 males and 182 females, to explore the status quo of mobile phone addition and loneliness among college students. A multiple linear regression analysis was performed to explore the relationship between mobile phone dependence and loneliness (mobile phone dependence is the independent variable, and loneliness is the dependent variable). The results showed that: college students presented mobile phone addition accounted for 17.9% among samples, and the mean score of the mobile phone addition scale was $M=42.28 \pm 11.74$. The dimension of inefficient ($t=-2.338, p<0.05$) and avoidance ($t=-3.550, p<0.001$) was significant difference among male and female, in which, Females ($M=8.24 \pm 2.94$) were more likely to have inefficiency than males ($M=7.49 \pm 2.79$). And females ($M=8.26 \pm 2.75$) were more likely to have evasion than males ($M=7.21 \pm 2.41$) too. There were 89.3% of college students experienced loneliness ($M=48.52 \pm 8.02$). There were significant differences in gender ($t=-2.392, p<0.05$), females ($M=49.45 \pm 7.31$) reported more loneliness experience than males ($M=47.29 \pm 8.76$). Importantly, mobile phone addition was significantly positively correlated with loneliness ($r=0.395, p<0.01$), and the dimension of uncontrollability ($\beta=0.172, t=3.099, p<0.01$) and evasion ($\beta=0.329, t=5.936, p<0.001$) could significantly positively predicted loneliness. There were significant regulative effects in gender, that males, the dimension of uncontrollability ($\beta=0.304, t=3.366, p<0.01$) and evasion ($\beta=0.194, t=5.936, p<0.05$) could significantly positively predicted loneliness, and for females, only the dimension of evasion ($\beta=0.418, t=6.171, p<0.001$) could significantly positively predicted loneliness. Conclusions: the higher the degree of mobile phone addition of college students, the lonelier they feel. Moreover, the degree of mobile phone addiction and loneliness experience of female students were higher than that of male students. Uncontrollability and evasion may be important factors in increasing loneliness caused by mobile phone addiction. Thus, it is essential to improve the control ability of college students, especially girls. College students should control their mobile phone usage time and actively participate in offline activities to improve their physical and mental health.

Keywords: mobile phone addition, loneliness, uncontrollability, evasion

疫情期青少年感知父母负性情绪与自杀意念：同伴交往与自尊的作用

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摘 要 为了考察新冠疫情期间青少年感知父母负性情绪对其自杀意念的影响及其作用机制。研究采用正负情绪量表、自杀意念量表、自尊量表、自编同伴交往调查问卷,对贵州省、福建省、湖北省的1100名青少年进行调查,回收有效问卷1005份,有效率91.36%;其中男生492人,女生513人;初一531人,初二444人,初三29人;贵州省学生294人,福建省学生493人,湖北省学生218人;年龄范围在12-18岁,平均年龄为13.99岁。结果发现:(1)疫情重灾区湖北省与疫情轻微地区福建、贵州两省的青少年在自杀意念得分上无明显差异;(2)青少年感知父亲的负性情绪对自杀意念具有显著正向预测作用;青少年感知母亲的负性情绪对自杀意念具有显著正向预测作用;(3)自尊在青少年感知父母负性情绪和自杀意念的关系中起部分中介作用;(4)在青少年感知父母负性情绪通过自尊影响自杀意念的中介模型中,同伴交往调节自尊对自杀意念的作用路径。进一步分析显示,同伴交往时间短的青少年比交往时间长的青少年,在低自尊情况下,自杀意念更高。研究结果表明,疫情期间青少年感知父母负性情绪可能是影响自杀意念的重要因素之一,青少年感知父母负面情绪不仅可以直接影响其自杀意念,还可以通过影响自尊进而对自杀意念产生影响,而同伴交往则可以在自尊和自杀意念之间起调节作用。

关键词 感知父母负性情绪, 自杀意念, 自尊, 同伴交往, 青少年

Teenagers' Perception of Parents' Negative Emotions and Their Suicide Ideation During COVID-19: The Effect of Peer interaction and Self-esteem

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Abstract: In order to investigate how teenagers' perception of their parents' negative emotions affect their suicide ideation and its mechanism of action during the outbreak of COVID-19. The researching tools that this study adopts include a positive and negative affect schedule, a scale for suicide ideation, a self-esteem inventory and a creative questionnaire about peer interaction. This survey is toward 1100 teenagers in Guizhou province, Fujian province and Hubei province. 1005 questionnaires are collected, the effective rate of which is 91.36%. Participants include 492 boys and 513 girls, among which there are 531 seventh graders, 444 eighth graders and 29 graduates of junior high school. 294 students are from Guizhou, 493 students are from Fujian, and 218 students are from Hubei. Their age ranges from 12 to 18, the average is 13.99. The findings of the investigation are as follows:

(1) In the hardest-hit area Hubei, and the lightly affected areas Fujian and Guizhou, there shows no significant difference on teenagers' suicide ideation; (2) Teenagers' perception of their fathers' negative emotion shows evident positive predictive effect on their suicide ideation, while Teenagers' perception of their mothers' negative emotion also shows evident positive predictive effect on their suicide ideation; (3) Self-esteem plays part of the medium roles in the relation between teenagers' perception of their parents' negative emotions and their suicide ideation; (4) In the mediation model of how teenagers perceive their parents' negative emotions and how their self-esteem affects their suicide ideation, peer interaction can adjust how self-esteem functions to suicide ideation. Further analysis shows that teenagers with less peer communication are more inclined to commit suicide than teenagers with more peer communication when they all have a low self-esteem. The result of this research shows that teenagers' perception of their parents' negative emotions might be one of the key factors contributing to their suicide ideation. Teenagers' perception of their parents' negative emotions during the outbreak of COVID-19 can have direct impact on their suicide ideation, and it can also affect their self-esteem to exert further influence upon their suicide ideation. At the same time, peer interaction can work as an adjustment between self-esteem and suicide ideation.

Keywords: Perception of parents' negative emotions, Suicide ideation, Self-esteem, Peer interaction, Teenagers

认知情绪调节策略和惩罚敏感性在父母心理控制与青少年非自杀性自伤行为间的作用

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摘要 非自杀性自伤行为(NSSI)与个体诸多心理障碍和问题密切相关, 引起心理学研究者的广泛关注, 其中对其形成机制的探讨逐渐成为研究热点。NSSI 是指在没有明确自杀意图的情况下, 个体故意、重复地改变或伤害自己的身体组织, 这种行为不为社会所认可, 且不具致死性或致死性较低。青春期是 NSSI 的高发期, 家庭作为个体成长的直接环境, 对青少年 NSSI 具有重要的影响作用。父母心理控制作为一种消极的教养行为, 可能是青少年 NSSI 的重要危险因素。根据人际或系统模型与情绪调节模型具有一定的内在联系的观点, 个体早期不良的生活环境使其难以发展出有效的情绪调节策略, 致使情绪危机发生时, 个体只能通过 NSSI 来达到缓解消极情绪的目的。此外, 个体情绪调节的发展不是家庭因素对个体的单向行为, 其中会受到个体特征的调节作用。惩罚敏感性作为一种个体特征, 可能调节父母心理控制与消极认知情绪调节策略之间的关系。基于此, 本研究提出一个有调节的中介模型, 考察父母心理控制、消极认知情绪调节策略、惩罚敏感性对青少年 NSSI 的作用机制。本研究采用父母心理控制量表、认知情绪调节问卷、行为抑制和激活系统量表以及青少年自我伤害行为问卷对 583 名中学生施测。结果表明: (1) 父母心理控制、消极认知情绪调节策略、惩罚敏

感性和 NSSI 四者之间呈两两显著正相关, 相关系数在 0.196 至 0.526 之间($P < 0.001$); (2) 消极认知情绪调节策略在父母心理控制和 NSSI 之间的中介作用显著, 中介效应值为 0.09, 95%BootCI=[0.05, 0.16], 中介效应占总效应的比例为 27.27%; (3) 父母心理控制对消极认知情绪调节策略的影响受到惩罚敏感性的调节。相对于低惩罚敏感性的被试而言, 父母心理控制对消极认知情绪调节策略的预测作用在高惩罚敏感性的被试中更强, 即由 $\beta=0.15$, $P < 0.01$, 95%CI=[0.05, 0.26]增强为 $\beta=0.35$, $P < 0.001$, 95%CI=[0.25, 0.45]。结论: 消极认知情绪调节策略在父母心理控制对青少年 NSSI 的影响中起中介作用, 且该中介效应受到惩罚敏感性的调节。本研究揭示了父母心理控制对青少年 NSSI 的影响及其作用机制, 对科学预防和有效控制青少年 NSSI 具有一定的启示意义。

关键词 父母心理控制, 非自杀性自伤行为, 认知情绪调节策略, 惩罚敏感性

The Role of Cognitive Emotion Regulation Strategies and BIS Sensitivity in the Relationship between Parental Psychological Control and Non-suicidal Self-injury among Adolescents

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Abstract: Non-suicidal self-injury (NSSI) is closely related to many mental disorders and problems, which has aroused wide attention of psychological researchers, and the discussion of its formation mechanism has gradually become a research hotspot. NSSI refers to the behavior that an individual intentionally and repeatedly changes or injures his or her body organization without a clear intention of suicide, which is not recognized by the society and is not lethal or less lethal. Adolescence is a high incidence period of NSSI. As the direct environment of individual growth, family plays an important role in adolescent NSSI. As a negative parenting behavior, parental psychological control may be an important risk factor for NSSI. According to the view that the interpersonal/systemic model and the affect regulation model are intrinsically linked, it is difficult for individuals to develop effective emotion regulation strategies due to their poor living environment in the early stage. When emotional crisis occurs, individuals can only achieve the purpose of alleviating negative emotions through NSSI. In addition, the development of individual emotion regulation is not a one-way behavior of family factors, which is moderated by individual characteristics. As an individual characteristic, BIS sensitivity may moderate the relationship between parental psychological control and negative cognitive emotion regulation strategies. Therefore, this study constructed a moderated mediation model to investigate the mechanism of parental psychological control, negative cognitive emotion regulation strategies and BIS sensitivity on adolescent NSSI. A questionnaire survey was conducted among 583 adolescents. The results show that: (1) Correlation analysis showed that parental psychological control, negative cognitive emotion regulation strategies, BIS sensitivity and non-suicidal self-injury were significantly and positively correlated with each other. The correlation coefficient was between 0.196 and 0.526 ($P < 0.001$); (2) Negative cognitive emotion regulation strategies played a mediating role in the relationship between parental psychological control and non-suicidal self-injury. The mediating effect was 0.09, which 95% BootCI was [0.05, 0.16], and the proportion of mediating effect in total effect was 27.27%; (3) The effect of parental psychological control on negative cognitive emotion regulation strategies was moderated by BIS sensitivity. Specifically, compared with the subjects with low BIS sensitivity, the positive predictive effect of parental psychological control on negative cognitive emotion regulation strategies was stronger in the subjects with high BIS sensitivity. β from 0.15 which $P < 0.01$ and 95% CI = [0.05, 0.26] increased to 0.35 which $P < 0.001$ and 95% CI=[0.25, 0.45]. Conclusion: Negative cognitive emotion regulation strategies play a mediating role in the effect of parental psychological control on non-suicidal self-injury, and the mediating effect is moderated by BIS sensitivity. This study reveals the influence of parental psychological control on adolescent NSSI and its mechanism, which has certain enlightenment significance for scientific prevention and effective control of adolescent NSSI.

Keywords: parental psychological control, non-suicidal self-injury, cognitive emotion regulation strategies, BIS sensitivity

羞耻情绪与大学生社交焦虑的关系：一个有调节的中介模型

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摘要 社交焦虑是指个体不合理的和过分的惧怕人际互动以及自己在社交场合的表现，它不利于良好人际关系的建立，还会对个体的身心健康产生消极影响，甚至导致抑郁。因此，探索社交焦虑的影响因素及形成机制对个体身心健康有紧迫且重要的意义。羞耻是一种自我意识情绪，是一种指向自我的痛苦、难堪、耻辱的负性情绪体验。目前已有大量实证研究显示，羞耻情绪是社交焦虑的重要影响因子，但二者作用的内在机制还有待深入探讨。基于此，本研究构建一个有调节的中介模型，旨在探讨羞耻情绪对社交焦虑的影响，以及反刍思维的中介作用和神经质的调节作用。本研究使用羞耻情绪量表、反刍思维量表、大五人格量表简明版、社交焦虑量表调查了 356 名大学生，采用 SPSS24.0 软件对数据进行统计分析。研究结果显示：（1）在控制性别和年龄的条件下，羞耻情绪显著正向预测社交焦虑。（2）羞耻情绪、反刍思维、神经质与社交焦虑两两呈显著正相关。（3）羞耻情绪对社交焦虑有直接的正向预测作用，同时还通过反刍思维的中介作用对社交焦虑产生影响。（4）神经质在反刍思维对羞耻情绪与社交焦虑的关系中起调节作用，具体表现为，高神经质会加剧羞耻情绪对社交焦虑的消极影响，低神经质会减弱二者之间的联系。本研究结果有助于深入理解社交焦虑的形成机制，对缓解个体的社交焦虑症状有一定的启示意义。

关键词 羞耻情绪，反刍思维，神经质，社交焦虑

The Relationship between Shame and Social Anxiety in College Students: A moderated mediation model

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Abstract: Social anxiety refers to an individual's unreasonable and excessive fear of interpersonal interaction and his performance in social situations. It is not conducive to the establishment of good interpersonal relationships, but also has a negative impact on individual physical and mental health, and even leads to depression. Therefore, it is urgent and important to explore the influencing factors and formation mechanism of social anxiety for individual physical and mental health. Shame is a kind of self-conscious emotion, and it is a negative emotional experience that points to the pain, embarrassment and shame of the self. At present, a large number of empirical studies have shown that shame is an important influencing factor of social anxiety, but the internal mechanism of their effects needs to be further explored. Based on this, this study constructs a moderated mediation model, aiming to explore the influence of shame on social anxiety, and the mediating role of rumination thinking and the moderating role of neuroticism. In this study, 356 college students were investigated with Shame Emotion Scale, Rumination Thinking Scale, Big Five Personality Scale, and Social Anxiety Scale. The data were statistically analyzed with SPSS24.0 software. The results show that: (1) Shame significantly positively predicts social anxiety under the condition of controlling gender and age. (2) Shame, rumination, neuroticism and social anxiety are positively correlated. (3) Shame has a direct and positive predictive effect on social anxiety, and it also influences social anxiety through the mediation of rumination thinking. (4) Neuroticism plays a moderating role in the relationship between rumination thinking and shame and social anxiety. Specifically, high neuroticism will aggravate the negative influence of shame on social anxiety, while low neuroticism will weaken the relationship between them. The results of this study are helpful to deeply understand the formation mechanism of social anxiety, and have certain implications for relieving individual social anxiety symptoms.

Key words: shame, rumination, neuroticism, social anxiety

二胎母亲产前抑郁和头胎儿童问题行为的相关关系研究

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摘要 “全面两孩”政策的实施意味着我国全面进入“两孩时代”。二胎的到来不仅给头胎儿童带来冲击，也给二胎母亲带来身体和精神上的双重考验。二胎母亲虽然具备一定的备孕经验，但由于无法很好地照顾头胎儿童以及处理种种关系，从而更容易导致心理问题。而头胎儿童的问题行为如何影响二胎母亲的产前抑郁在文献中研究较少。而该问题对于刚刚开放二胎的中国具有重要意义。本文旨在研究头胎儿童问题行为是否影响二胎母亲的产前抑郁以及育儿日常琐事在该关系中的中介作用。利用方便抽样方法，本研究征集了105个二胎家庭。这些家庭都满足如下条件：（1）头胎儿童在3-6岁之间；（2）二胎母亲在怀孕后期；（3）头胎儿童与母亲均无身体或精神疾病。利用母亲汇报的问卷对二胎母亲的产前抑郁、育儿日常琐事以及头胎儿童的问题行为进行数据收集。本文利用回归分析和中介效应分析方法对数据进行分析。结果发现：（1）大约12%的二胎母亲存在中等以上的抑郁症状；（2）头胎儿童的问题行为与育儿日常琐事显著相关，育儿日常琐事与二胎母亲产前抑郁显著相关。该研究表明头胎儿童的问题行为并不直接影响二胎母亲的产前抑郁，而是通过育儿日常琐事起作用。育儿日常琐事的中介作用表明针对二胎母亲的支持需要从育儿日常琐事入手。

关键词 儿童问题行为，产前抑郁，育儿琐事，二胎母亲

Association between Second-time mother's prenatal depression and firstborn's behaviour problems

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Abstract: The issue of “Universal two-child” policy means China enters the “two-child” era. The arrival of the second child will not only bring shocks to the firstborn child but also bring challenges both physically and mentally for the second-time mothers. Although second-time mothers have some experiences in pregnancy, they are prone to mental health issues due the inability of taking care of the firstborn child and needs of dealing with various relationship. However, the impact of firstborn children's behaviour problems on second-time mothers' prenatal depression has received little attend from family psychologists. This problem is of great importance in China due the increase of two-child families recently after the ending of ‘one-child policy’. This research aims to understand whether firstborn children's behaviour problems affects second-time mothers' prenatal depression and the mediation role of parenting daily hassles on this relationship. Using convenient sampling, the researchers recruited 105 families transitioning to two-child satisfying the following conditions: (1) The firstborn child is between 3-6; (2) The second-time mum is in the third trimester of pregnancy; (3) There is no health issues in both mum and firstborn child. Using mum reported questionnaire, this research collected data on maternal prenatal depression, child behaviour problem and parenting daily hassles. Regression and mediation test are used to do the data analysis. Results show that (1) About twelve percent of the mothers in the sample have moderate or above depressive symptoms. (2) Firstborns' behaviour problem is significantly associated with parenting daily hassles which is significantly associated with mother's prenatal depression. The results imply that firstborns' behaviour problems didn't have direct effect on mother's prenatal depression, but had indirect effect via parenting daily hassles. The mediation role of parenting daily hassles in this relationship suggests the need for supports that reduce the levels of parenting daily hassles for the firstborn children.

Keywords: children behaviour problems, maternal prenatal depression, parenting hassles, second-time mother

2 例确诊和 6 例疑似新型冠状病毒肺炎患者创伤后应激症状调查

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摘要 目的 分析新型冠状病毒肺炎(COVID-19)确诊和疑似患者的心理状况,并探讨其心理干预措施。

方法 通过网络在线方式调查收集 2 例确诊和 6 例疑似 COVID-19 患者的资料。采用自编自评式一般情况问卷收集患者的人口学资料,用创伤后应激障碍自评量表 5(PCL-5)评估患者创伤后应激症状,用匹兹堡睡眠质量指数量表评价患者的睡眠质量。使用 SPSS 21.0 软件进行统计学分析。计数资料以例数和百分数表示,计量资料采用描述性分析。**结果** 2 例 COVID-19 确诊患者和 6 例疑似患者的年龄为 17~71 岁。女性 5 例,男性 3 例; 7 例为专科或本科以上学历, 1 例为高中及以下学历; 5 例有武汉市居民接触史。2 例确诊 COVID-19 患者中有 1 例创伤后应激障碍筛查阳性, 6 例疑似患者中有 1 例创伤后应激障碍筛查阳性。8 例患者中符合侵入症状的患者有 5 例,符合回避症状者 3 例,符合认知和情绪负性改变症状者 3 例,符合过度唤醒症状者 1 例。疫情对 8 例患者的睡眠质量均有不同程度的影响,主要表现为夜间易醒或早醒(5 例,每周至少 1~2 次)。PCL-5 总分与睡眠质量变化趋势总体一致, PCL-5 总分越高睡眠质量越差。**结论** COVID-19 确诊患者与疑似患者均存在不同程度的睡眠问题及创伤后应激症状,夜间易醒或早醒和侵入症状较明显,需要采取及时、有效的心理干预措施。

关键词 创伤后应激症状, 睡眠质量, 严重急性呼吸综合征冠状病毒 2, 新型冠状病毒肺炎, 心理干预

A preliminary study of post-traumatic stress symptoms of two confirmed and six suspected coronavirus disease 2019 patients

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Abstract: Objective To explore the psychological status and interventions in confirmed and suspected coronavirus disease 2019 (COVID-19) patients. **Methods** The data of 2 confirmed cases and 6 suspected cases of COVID-19 were collected through the Internet. Demographic data of the patients were collected by self-designed self-assessment general situation questionnaire. Post-traumatic stress symptoms were assessed by post-traumatic stress disorder checklist for DSM-5 (PCL-5). Sleep quality was evaluated by Pittsburgh sleep quality index. SPSS 21.0 software was used for statistical analysis. Enumeration data were expressed as examples and percentages, and descriptive analysis was used for measurement data. **Results** There were 5 females and 3 males aged from 17 to 71 years old. The education level was junior college, bachelor degree and above in 7 patients, and senior high school or below in one patient. Five cases had the contact history with Wuhan residents. The screening result of post-traumatic stress symptom was positive in one confirmed case and one suspected case. Among the 8 patients, 5 were in line with the invasion symptom, 3 were in line with the avoidance symptom, 3 were in line with the cognitive and emotional negative change symptom, and 1 was in line with the excessive arousal symptom.. The epidemic affected the sleep quality of 8 patients in different degrees, mainly manifested as sleep fitfully at night or early morning awakening (5 cases, at least once or twice a week). The total score of PCL-5 was consistent with the change trend of sleep quality. The higher the total score of PCL-5, and the worse the sleep quality. **Conclusion** Confirmed and suspected COVID-19 patients have sleep disorders (sleep fitfully at night or early morning awakening) and psychological

trauma (invasive symptoms), and they need timely and effective psychological interventions.

Keywords: post-traumatic stress symptoms, sleep quality, severe acute respiratory syndrome coronavirus 2, coronavirus disease 2019, psychological interventions

揭开正念的神秘面纱：正念的研究现状及未来展望

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摘要 起源于东方佛学的正念, 作为一种禅修的方法, 经西方临床咨询的运用开发, 现已成为一种流行的心理疗法。正念作为一个多维度、多层次的概念, 既可以是动态的认知, 也可以是静态的特质; 其复杂性的内涵延展出了多元化的干预方案, 且不同研究者的干预效应存在一定的争议。为此, 依据现有研究文献, 系统梳理正念的本质内涵、作用机制及干预效果。研究显示正念作用的心理成分千差万别, 其所占权重也各不相同, 因此, 我们结合正念的本质内涵和正念作用的心理活动过程, 初步构建了正念心理要素的四维模型, 这对于厘清正念的本质, 明确其作用机制与干预效应, 促进各领域应用正念的科学性与有效性具有积极意义。未来, 正念的研究应从现有的临床与咨询领域向预防与教育发展领域; 充分关注不同形式正念训练的开发与运用, 以增强正念训练的规范性和可操作性; 多方法探寻正念的作用机制; 更严谨地评估和验证正念的实际效果。

关键词 正念, 正念干预, 作用机制, 干预成分, 规范化

Unveiling the mystery of mindfulness: the current status and future trends of research on mindfulness

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Abstract: Mindfulness originated in Eastern Buddhism, as a method of meditation, and developed through the application of Western clinical consultation, has now become a popular psychotherapy. Mindfulness, as a multi-dimensional and multi-level concept, can be either dynamic cognition or static characteristics. Its complex connotation extends diversified intervention programs, and the intervention effects of different researchers have certain effects dispute. Based on the existing research literature, systematically sort out the essential connotation, mechanism of action and intervention effects of mindfulness. Studies have shown that the psychological components of mindfulness are very different, and their weights are also different. Therefore, we combined the essential connotation of mindfulness and the mental activity process of mindfulness to initially construct a four-dimensional model of the psychological elements of mindfulness. It is of positive significance to clarify its mechanism of action and intervention effects, and to promote the scientific and effective application of mindfulness in various fields. In the future, the research on mindfulness should move from the current clinical and consulting fields to the field of prevention and education, pay full attention to the development and application of different forms of mindfulness training to enhance the standardization and operability of mindfulness training, explore the mechanism of mindfulness in multiple ways, more rigorously evaluate and verify the actual effects of mindfulness.

Keywords: mindfulness, mindfulness intervention, mechanism of action, intervention component, standardization

“新冠肺炎”期间大学生情绪感染对社会适应的影响： 家庭支持的中介作用

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摘要 2020年年初, 新型冠状病毒肺炎的突然爆发, 使得担忧、焦虑等一系列情绪通过情绪感染过程在社会群体间传递, 影响着个体对社会的适应。情绪感染是指在人际交互过程中个体通过自动化、无意识模仿而达到的与情绪诱发者相同情绪体验的一种心理状态。情绪和个体的支持资源对个体的社会适应有着重要的意义, 尤其是在突发性公共事件的背景下, 二者在个体适应社会过程中扮演的角色应该得到更多的关注。因此, 本文以正处于人生发展关键阶段的大学生群体为目标群体, 探究在新型冠状病毒肺炎期间家庭支持、情绪感染和社会适应之间的关系, 并揭示家庭支持在其中的作用路径, 为个体更好的适应社会提供帮助。本研究在2020年1月22日到2月17日期间, 通过网络问卷星取样, 共收集214份有效调查问卷。研究结果发现: 大学生群体的情绪易感性和社会适应能力均处于中等水平, 个体的领悟家庭支持水平处于中上水平; 不同性别在情绪感染和家庭支持方面存在显著差异, 女生个体在情绪感染和领悟家庭支持方面显著好于男生; 情绪感染、家庭支持与社会适应存在显著相关, 情绪感染和家庭支持对社会适应有显著预测作用, 家庭支持在情绪感染和社会适应之间的部分中介模型成立, 情绪感染对社会适应路径的直接预测效应量为-0.138, 情绪感染通过家庭支持对社会适应路径的间接预测效应量为0.088, 由于家庭支持的介入, 使得情绪感染对社会适应的预测性质发生改变, 说明家庭支持在情绪感染对个体社会适应的影响中起着重要作用, 因此可以通过有效的家庭支持策略帮助个体更好地调节情绪, 应对外部环境的变化, 以增强自己的适应能力。研究进一步证明了家庭在个体发展中的重要地位。

关键词 情绪感染, 家庭支持, 社会适应, 中介作用

The relationship between emotional infection and social adjustment in college students during Corona Virus Disease 2019: the mediating role of family support

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Abstract: At the beginning of 2020, the sudden outbreak of the COVID-19 caused a series of emotions such as worry and anxiety to be transmitted between social groups through the process of emotional infection, affecting individuals' adaptation to society. Emotional infection refers to a mental state that an individual achieves the same emotional experience as the emotional inducer through automated and unconscious imitation in the process of interpersonal interaction. Emotions and individual support resources are of great significance to individuals' social adaptation, especially in the context of sudden public events, the roles they play in the process of individual adaptation to society should receive more attention. Therefore, this article takes college students who are at a critical stage of their life development as the target group, explores the relationship between family support, emotional infection, and social adjustment during the COVID-19, and reveals the role of family support in it to better serve individuals. Provide assistance in adapting to society. In this study, from January 22 to February 17, 2020, a total of 214 valid questionnaires were collected by sampling online questionnaires. The results of the study found that the emotional susceptibility and social adaptability of college students are at a moderate level, and the level of individual comprehension of family support is at a mid-to-upper level; there are significant differences in emotional infection and family support between different genders, and individual girls are emotionally infected and comprehend family support is significantly better than boys; emotional infection, family support and social adaptation are significantly related. Emotional infection and family support have a significant predictive effect on social adaptation. Part of the mediating model of family support between emotional infection and social adaptation is established. The direct

predictive effect of infection on social adaptation path is -0.138, and the indirect predictive effect of emotional infection on social adaptation path through family support is 0.088. Due to the intervention of family support, the predictive nature of emotional infection on social adaptation has changed. Family support plays an important role in the influence of emotional infection on individual's social adaptation. Therefore, effective family support strategies can help individuals better regulate their emotions, cope with changes in the external environment, and enhance their ability to adapt. Research further proves the important position of the family in individual development.

Key words: Emotional infection, Family support, Social adaptation, Mediating role

阴性分裂型特质个体情感共情与情绪调节的关系研究

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摘要 分裂型特质是一般人群中表现出的类似精神病的特质和行为表现, 与精神疾病特别是精神分裂症易感性有关, 可以分为阴性和阳性分裂型特质。以往研究表明阴性分裂型特质与共情密切相关, 同时情绪调节与阴性分裂型特质以及共情都存在紧密联系, 因此本研究拟在大学生中探讨阴性分裂型特质个体的共情异常与情绪调节的关系。采用社会快感缺失量表(The Revised Social Anhedonia Scale, CSAS) 筛选并招募了 24 名阴性分裂型特质高分组被试和 21 名低分组被试, 两组被试在年龄、性别比例和受教育年限上没有显著差异。人际反应指针量表(Interpersonal Reactivity Index, IRI)、认知与情感共情问卷(Questionnaire of Cognitive and Affective Empathy, QCAE), 以及中文版的共情准确性任务(Empathic Accuracy Task, EAT) 用来测量共情; 情绪调节问卷(Emotion Regulation Questionnaire, ERQ) 用于测量情绪调节策略使用情况, 包括认知重评和表达抑制两个维度; 此外, 分裂型人格特质问卷(Schizotypal Personality Questionnaire, SPQ) 被用来测量阳性分裂型特质。在 EAT 中, 被试观看视频(4 段正性, 4 段负性) 并实时评价视频中讲述者的情绪效价, 将被试评分与讲述者自评之间的相关作为共情准确性。看完每段视频, 被试需要完成对“讲述者情绪效价/唤醒度”、“自己观看时的情绪效价/唤醒度”、“观点采择”、“情绪感染”的评分。结果表明: 1) 与低分组相比, 高分组的情感共情得分显著更低 (IRI 共情关怀: $F(1,43) = 11.50, p < 0.01$; QCAE 远端反应率: $F(1,43) = 8.79, p < 0.01$); 在 EAT 任务中的情绪感染得分也更低 (积极视频: $F(1,43) = 4.83, p < 0.05$; 消极视频: $F(1,43) = 12.14, p < 0.001$)。2) 在情绪调节方面, 阴性分裂型特质高分组被试更多使用不适应性情绪调节策略, 即表达抑制 ($F(1,43) = 20.67, p < 0.001$)。控制 SPQ 得分后, 共情和情绪调节的组间差异仍然显著。3) 控制 SPQ 总分和性别后的偏相关分析发现阴性分裂型特质高分组被试中表达抑制与 QCAE 远端反应率分量表呈显著负相关 ($r = -0.59, p < 0.01$)。总之, 本研究发现阴性分裂型特质高分组个体表现出情感共情能力的降低和表达抑制策略使用增多, 且情感共情得分的降低可能与他们更频繁地使用表达抑制这一非适应性情绪调节策略有关。

关键词 阴性分裂型特质, 快感缺失, 情感共情, 表达抑制

Emotion regulation is associated with reduced affective empathy in individuals with high level of negative schizotypy

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Abstract: Schizotypy is a set of personality traits distributed in general population, characterized by psychotic-like experiences and behaviors such as delusion and anhedonia. There are at least two dimensions of schizotypy, positive and negative schizotypy. Negative schizotypy was found closely associated with empathy. Meanwhile, previous

studies also suggested that emotion regulation is correlated with both negative schizotypy and empathy. Therefore, we examined the relations between empathy and emotion regulation in individuals with negative schizotypy in the present study. The Revised Social Anhedonia Scale (CSAS) was adopted to screen participants and 24 individuals with high negative schizotypy and 21 individuals with low negative schizotypy were recruited. There were no significant differences in age, gender proportion, and years of education between two groups. The Interpersonal Reactivity Index (IRI), the Questionnaire of Cognitive and Affective Empathy (QCAE), and the Chinese version of Empathic Accuracy Task (EAT) were used to measure empathy. In EAT, participants were asked to continuously rate emotional valence of targets when they watch eight different video clips. The correlations between ratings of the participant and target were calculated to measure Empathic Accuracy (EA). In addition, participants completed a few questions after each video to rate the valence/arousal of target, their own valence/ arousal, perspective taking and emotion contagion. The Emotion Regulation Questionnaire (ERQ) was used to capture the habitual usages of two specific emotion regulation strategies, which are cognitive reappraisal and expressive suppression. Furthermore, Schizotypal Personality Questionnaire (SPQ) was used to measure and control positive dimension of schizotypy. The results showed: 1) Individuals with high negative schizotypy reported lower scores on affective empathy (IRI Empathic Concern: $F(1,43) = 11.50, p < 0.01$; QCAE Peripheral Responsivity: $F(1,43) = 8.79, p < 0.01$) as well as emotion contagion of the EAT (positive videos: $F(1,43) = 4.83, p < 0.05$; negative videos: $F(1,43) = 12.14, p < 0.001$) compared to the control group. 2) In terms of emotion regulation, individuals with high negative schizotypy used the non-adaptive strategy (i.e., expressive suppression) more frequently ($F(1,43) = 20.67, p < 0.001$). These group differences remained significant even after controlling the SPQ total scores. 3) A negative correlation between usage of expressive suppression and affective empathy was observed in high negative schizotypy group (QCAE: Peripheral Responsivity: $r = -0.59, p < 0.01$) after controlling SPQ scores and gender. Taken together, our study showed that individuals with high negative schizotypy showed poorer affective empathy and more frequently usage of expressive suppression. More importantly, the reduced affective empathy was related to more usage of expressive suppression.

Keywords: Negative schizotypy, Anhedonia, Affective Empathy, Expressive Suppression

悲观倾向与自杀意念的关系：焦虑、抑郁和痛苦的中介作用

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摘要 背景:大学生自杀是一个重大的公共卫生问题。研究证实,悲观倾向对自杀意念有显著影响。本研究评估焦虑、抑郁和痛苦在悲观倾向与自杀意念之间的中介作用。方法:从中国几所高校共招募1798名大学生。参与者完成了悲观倾向、躯体焦虑、积极情绪、痛苦和自杀意念的测量。采用中介模型评估焦虑、抑郁和痛苦的中介作用。结果:大学生悲观倾向与自杀意念存在显著正相关。在中介分析上,焦虑、抑郁和痛苦在悲观倾向与自杀意念的关系中起中介作用。局限性:这是一项以大学为样本的横断面研究。未来的研究将受益于利用访谈法和纵向研究来调查这些关系。结论:悲观倾向直接影响自杀意念,并通过与焦虑、抑郁和痛苦间接影响自杀意念。对未来没有什么积极期望的大学生可能会从对焦虑、抑郁和痛苦的干预中受益。

关键词 悲观倾向, 自杀意念, 焦虑, 抑郁, 痛苦

Why negative focused disposition relates to suicidal ideation? The mediating effects of anxiety, depression, and distress

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Abstract: Background: Suicide among college students is a major public health problem. Research had confirmed that negative focused disposition had a significant effect on suicidal ideation. This study evaluated anxiety, depression and distress as mediators of the relationship between negative focused disposition and suicidal ideation.

Methods: A total of 1798 college students were recruited from several Chinese universities. Participants completed measures of negative disposition, somatic anxiety, positive affect, general distress and suicidal ideation. The mediation models were conducted to assess the mediating effects of anxiety, depression and distress. Results: There was a significant positive correlation between negative focused disposition and suicidal ideation in Chinese college students. On mediation analysis, anxiety, depression and distress mediated the relationship between negative focused disposition and suicidal ideation. **Limitations:** This is a cross-sectional study of a college sample. Future research would benefit from investigating these relations utilizing interview methods and longitudinal research. **Conclusions:** Negative focused disposition appears to have a direct effect on suicidal ideation and can indirectly affect suicidal ideation through the relation with anxiety, depression and distress. College students with few positive expectations of the future may benefit from interventions focusing on anxiety, depression and distress. **Keywords:** negative focused disposition, suicidal ideation, anxiety, depression, distress

社会排斥对青少年问题性移动社交网络使用的影响：社交焦虑的中介作用和反刍思维的调节作用

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摘要 近年来,随着移动网络4G技术的发展,社交网络是一种比较受欢迎的信息交流方式,相较于其他网络应用,人们可以从社交网络中获取更多的陪伴和情感支持并且能够增加用户社会资本。青少年是移动社交网络使用的主要对象,过度地使用社交网络势必会对青少年的心理健康将会产生很大的影响。青春期是社交关系敏感期,当他们遭遇了来自周围的排斥或者忽视时,个体的自我关注程度增强,在社交互动中对自己行为的评价更加严格。而过量的注意资源投入到社会监控系统中引发个体社交焦虑。为了避免和缓解现实社交过程中产生的焦虑情绪,极易选择到脱离现实的社交网站中寻找安慰,以满足个体的心理需要。因此,导致个体沉溺于社交网络中。而具有高反刍思维特质的个体更易加重社会排斥引发的焦虑情绪和问题性移动社交网络使用。因此,本研究主要探讨社会排斥、社交焦虑、反刍思维、问题性移动社交网络使用四者的关系。采用社会排斥量表、社交焦虑、反刍思维量表和问题性移动社交网络使用量表对哈尔滨市500名青少年进行调查。研究结果显示:(1)社会排斥正向预测青少年问题性移动社交网络使用;(2)社交焦虑在社会排斥与青少年问题性移动社交网络使用之间起中介作用;(3)反刍思维在社会排斥与青少年问题性移动社交网络使用间起调节作用。具体而言,反刍思维水平高时,社会排斥能显著的正向预测青少年问题性移动社交网络使用,反之亦然。(4)反刍思维在社会排斥与社交焦虑间起调节作用;具体而言反刍思维水平高时,社会排斥能显著地正向的预测社交焦虑,反之亦然。结论:社会排斥通过社交焦虑的中介作用影响青少年问题性移动社交网络使用,这一中介作用受到反刍思维的调节。

关键词 社会排斥, 社交焦虑, 反刍思维, 问题性移动社交网络使用

The effect of ostracism on problematic social networks usage in adolescents: The mediating effect of social anxiety and the moderating effect of rumination

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Abstract: In recent years, with the development of 4G technology of mobile network, social network is a relatively popular way of information communication. Compared with other network applications, people can get more companionship and emotional support from social network and can increase users' social capital. Teenagers are the main objects of mobile social networks. Excessive use of social networks is bound to have a great impact on their mental health. Adolescence is a sensitive period of social relations. When they encounter rejection or neglect from the surrounding, the degree of self-concern of individuals increases and the evaluation of their own behaviors becomes

stricter in social interaction. Excessive attention resources invested in the social monitoring system will cause individual social anxiety. In order to avoid and alleviate the anxiety in the process of real social contact, it is easy to choose to seek consolation in the social network that is divorced from reality, so as to meet the psychological needs of individuals. As a result, individuals become addicted to social networks. Individuals with high rumination traits were more likely to aggravate anxiety caused by ostracism and problematic social networks usage. Therefore, this study mainly discusses the relationship between ostracism, social anxiety, rumination and problematic social networks usage. ostracism scale, social anxiety scale, rumination Scale and problematic social networks usage Scale were used to investigate 500 teenagers in Harbin. The results show that: (1) Ostracism positively predicts problematic social networks usage among adolescents; (2) Social anxiety plays a mediating role between ostracism and problematic social networks usage among adolescents; (3) Rumination plays a moderating role between ostracism and problematic social networks usage among adolescents. Specifically, when rumination level is high, ostracism significantly positively predicts problematic social networks usage among adolescents, and vice versa. (4) Rumination plays a regulating role between ostracism and social anxiety; Specifically, ostracism significantly positively predicted social anxiety at high rumination levels, and vice versa. Conclusion: Ostracism affects problematic social networks usage among adolescents through the mediating effect of social anxiety, which is moderated by rumination.

Keywords: ostracism, rumination, social anxiety, problematic social networks usage

语言标签影响下蒙古语者和汉语者对面部表情类别知觉的识别特点

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摘要 面部表情识别是人们日常生活中一项重要的活动, 准确识别他人的表情对成功的人际交往、情绪调节等行为都有着深远的意义。语言情境对面部表情的分类有很大的限制作用, 在面部表情类别知觉构建的过程中语言和文化起到了重要作用。本研究采用自然分类法分析了蒙古语者和汉语者情绪词的概念结构特点, 发现蒙古语被试和汉语被试的情绪词都分布在以原点为圆心的环形周围, 概念结构整体比较一致, 对于高愉悦度情绪词汇, 蒙古语者和汉语者分类基本相同, 但是对于低愉悦度情绪词汇, 蒙古语者和汉语者分类有差异, 表现为汉语者倾向于将恐惧和愤怒情绪词汇放在高唤醒度—低愉悦度水平, 蒙古语者则倾向于将恐惧情绪词汇放在低唤醒度—低愉悦度水平, 对于一般强度的愤怒情绪词汇, 蒙古语者将其放在低唤醒度—低愉悦度水平, 而高唤醒度的愤怒情绪词汇则在高唤醒度—低愉悦度水平。本研究进一步通过识别任务探讨不同语言情绪词有别的个体是如何处理面部表情类别信息, 发现在语言标签作用下, 对于单一情绪渐变的面部表情识别, 蒙古语者愤怒情绪的面部表情知觉的转折点高于汉语者, 但斜率最大, 说明相比于汉语者, 蒙古语者对愤怒情绪的面部表情识别临界点高, 并对高唤醒度的愤怒面部表情敏感, 这与蒙古语者愤怒情绪概念的分布可能有关, 在两种情绪渐变的面部表情识别任务中, 蒙古语者愤怒—悲伤的面孔连续体的类别知觉的转折点更高, 敏感度更高。这说明蒙古语者和汉语者对相同面部表情进行类别知觉有不同表现, 进一步支持了语言标签在类别知觉中起到的重要作用。

关键词 类别知觉, 面部表情, 语言标签

The Recognition Characteristics of Mongolian Speakers and Chinese Speakers Categorical Perception of Facial Expressions Under the Influence of Language Label

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Abstract: Facial expressions perception is an important activity in people's daily life. Accurate recognition of other's expressions has profound significance for interpersonal communication, and emotional regulation. Language context has a great limitation on the categorical perception of facial expressions. Language and culture play an important role in the construction process of categorical perception of facial expressions. This research uses the natural classification to analyze the Mongolian and Chinese conceptual structure of emotion words, finds that conceptual constructions of Mongolian and Chinese subjects could match with the circumplex model of emotion. It shows the similar pleasant words classification and different unpleasant words classification between Mongolian and Chinese subjects. Chinese subjects tend to classify fear and anger words in unpleasant-arousal level; however, Mongolian subjects tend to put fear words in unpleasant-relax level. Mongolian speakers place anger words of general intensity in unpleasant-relax level, while angry words with high arousal are placed in unpleasant-arousal level. This study further uses the recognition task to explore individuals master different language and different emotion words how to deal with facial expressions category information. Compared with Chinese subjects, the turning point of Mongolian angry face perception is higher and the slope is bigger in single emotion continuum of facial expressions recognition task with language labels. It shows that Mongolian subjects have a high critical point and are sensitive to angry face of high arousal level, which may relate to the anger concept distribution. Mongolian speakers show higher turning points in category perception of two emotion continuum facial expression recognition tasks and higher sensitivity in the angry-sad face continuum. This indicates that there are differences between Mongolian speakers and Chinese speakers in categorical perception of the same facial expressions, which further supports that the language label plays an important role in category perception.

Keywords: categorical perception, facial expressions, language label

积极心理学视阈下对中国军人自杀行为应对策略的思考

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摘 要 自杀是全球范围内引发关注较多的一项心理康问题,其背后有着生物因素、心理因素乃至社会因素等多维度、深层次的动因。在军队这样的特殊群体里,自杀问题同样是威胁着广大官兵生命安全的一大因素。在积极心理学的视角下不难发现,传统的文化环境和教育背景下对自杀问题的应对多是从个体人格中的消极因素入手,其主要问题表现为三个不均衡:(1)思想认识与自身处境的不均衡,即个体在自我认知、态度认识以及心理承受力上的不足与其面临的严峻外部环境存在失衡;(2)心理健康教育需求与资源配备的不均衡,近年来官兵对自身心理健康状况的关与日俱增,但相关配套设施、资源却相对不足;(3)问题严重性与社会关注度的不均衡,军人自杀事件屡屡发生,但是社会各界并未对此提高关注度,同时还存在一定的认识误区。在这些问题的基础上,本研究从积极心理学的角度出发,通过发掘官兵人格中的积极因素并加以利用,分别从积极情绪培养、积极归因训练以及积极系统构建三个方面提出了对预防官兵自杀问题的思路。首先在积极情绪培养方面,让官兵用自身积极的情感体验去激发崇高的道德情操,从而在真实的体验中找到正确的生命价值观,这是积极心理学预防自杀行为的初期思路。其次在积极归因训练中,训练广大官兵进行积极的归因训练有利于个体通过合适的认知渠道进行自我鼓励、自我认可与自我升华,从而有效地减少自杀事件的发生。最后,所谓的积极系统构建就是通过整合家、社会以及工作单位的生命教育资源,调动各方面的积因素来建立有利于官兵身心健康发展的社会支持系统架构,让官兵能够在其中得到鼓励与帮助,从而帮助自己形成和发展积极向上的生活态度,在根源上彻底切断自杀的源头。

关键词 积极心理学, 军人, 自杀心理

Consideration on the Coping Strategies of the Chinese Soldiers' Suicide Behavior from the Perspective of Positive Psychology

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Abstract: Suicide is one of the mental health problems that attracts more and more attention all over the world. There are multi-dimensional and deep-seated reasons behind, such as biological factors, psychological factors and even social factors. In such a special group as the army, suicide is also a major factor threatening the life safety of officers and soldiers. From the perspective of positive psychology, it is not difficult to find that under the traditional cultural environment and educational background, the response to suicide mainly starts from the negative factors in the individual's personality, and the main problems are as follows: (1) the imbalance between the ideological understanding and their own situation, which means that the lack of the individual's self-awareness, attitude-awareness and psychological endurance is out of balance with the severe external environment; (2) In recent years, officers and soldiers are increasingly concerned about their own mental health, but the related facilities and resources are relatively insufficient; (3) There is an imbalance between the seriousness of the problem and the social attention---- suicide behavior among military personnel occurs more and more frequently, but the community has not paid enough attention and what's worse, there are still some misunderstandings on it. On the basis of these problems, this study, from the perspective of positive psychology, explores and utilizes the positive factors in the personality of officers and soldiers, and puts forward some ideas on the prevention of suicide from three aspects: the cultivation of positive emotions, the training of positive attribution and the construction of positive system. First of all, in the aspect of the cultivation of positive emotion, make the officers and soldiers use their own positive emotional experience to stimulate the noble moral sentiment, so as to find the correct life values in the real experience. This is the initial idea of plank psychology to prevent suicide. Secondly, in the positive attribution training, training officers and soldiers to carry out positive attribution training is conducive to individual self encouragement, self recognition and self sublimation through appropriate cognitive channels, so as to effectively reduce the occurrence of suicide. Finally, the so-called construction of positive system is to integrate the life education resources of family, society and work units and to mobilize all kinds of factors to establish a social support system to the physical and mental health development of officers and soldiers, so that officers and soldiers can get encouragement and help in it, so as to help them form and develop a positive attitude towards life, which could completely cut off the source of suicide.

Keyword: military personnel, suicide, positive psychology

医学专业学生压力信念与心理困扰的关系：基于潜在剖面分析

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摘要 压力信念与其他影响压力的变量不同(例如个体正在经历压力的严重程度、数量以及个体的应对方式等),它与个体当前是否受到压力无关,而是指个体对压力赋予的一种属性和预期。医学生作为特殊的大学生群体,面临着专业知识多,行业标准高,学业任务重、就业压力大等多因素高强度的压力环境中,会产生极大的心理压力,对其身心健康产生不利的影响。而作为对压力的认知和预期,医学生的压力信念十分值得关注。以往的研究多关注医学生压力的影响因素,本研究关注到个体本身的差异,基于个体中心的视角考察医学专业大学生不同的压力信念模式与其心理困扰的程度之间的关系。运用潜在剖面分析进行异质性检验,探究医学专业大学生不同的压力信念。**目的:**了解医学专业大学生压力信念的潜在类别及其与心理困扰的关系。**方法:**于湖南、贵州、云南等地选取医学专业大学生 990 名,以大学生压力信念量表,心理困扰量表(The

item Kessler Psychological Distress Scale)为工具,通过潜在剖面分析技术探讨工作家庭冲突的潜在类别。**结果:**医学专业大学生的压力信念可分为高消极-低积极压力信念组(12.2%),高积极-低消极压力信念组(52.8%)积极压力信念倾向组(15.8%)以及压力信念对抗组(19.2%)4个潜在类别。不同压力信念类型的医学专业大学生在心理困扰得分上差异有统计学意义($P<0.001$)。在心理困扰得分上,高消极-低积极压力信念组得分最高(24.37 ± 7.84),压力信念对抗组第二(24.22 ± 7.65),高积极-低消极压力信念组次之(18.21 ± 5.99),积极压力信念倾向组得分最低(16.48 ± 5.44)。心理困扰得分在16~21分为心理困扰程度较轻,在22-29分为心理困扰程度较重,根据不同组别在心理困扰上的分数,可以看出拥有高积极压力信念以及积极压力信念倾向的个体,其心理困扰程度较轻,心理健康水平相对来说更高;而高消极压力信念以及压力信念对抗组的心理困扰严重,其心理健康水平可能会受到影响。**结论:**医学专业大学生压力信念具有明显的分类特征,且与心理困扰程度密切。

关键字 大学生,医学专业,压力信念,心理困扰,潜在剖面分析

The relationship between stress beliefs and psychological distress among medical students: Based on potential profile analysis

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Abstract: Stress belief is different from other variables that affect stress (such as the severity and quantity of stress an individual is experiencing and the way an individual copes with it). It has nothing to do with whether an individual is currently under pressure or not, but refers to an attribute and expectation that an individual endures to stress. Medical students, as a special group of college students, are faced with many factors such as high professional knowledge, high industry standards, heavy academic tasks, high employment pressure and other high pressure environment, which will produce great psychological pressure, which has a negative impact on their mental and physical health. As the cognition and expectation of stress, medical students' belief in stress deserves more attention. Previous studies mostly focused on the influencing factors of medical students' stress, but this study focused on the differences of the individuals themselves and investigated the relationship between different stress belief patterns and the degree of psychological distress of medical students from an individual-centered perspective. The potential profile analysis was used to test the heterogeneity to explore the different stress beliefs of medical students. Objective: To investigate the potential types of stress beliefs and their relationship with psychological distress in medical college students. Methods: A total of 990 medical college students were selected from Hunan, Guizhou and Yunnan provinces. The Item Kessler Psychological Distress Scale and Stress Belief Scale were used as tools to explore The potential categories of work-family conflict by potential profile analysis. RESULTS: The pressure beliefs of medical college students could be divided into four potential categories: high passive-low positive pressure belief group (12.2%), high positive-low negative pressure belief group (52.8%), positive pressure belief tendency group (15.8%) and pressure belief counter group (19.2%). There was statistical significance in psychological distress scores of medical college students with different types of pressure beliefs ($P<0.001$). In terms of psychological distress, the score of the high passive-low positive stress belief group was the highest (24.37 ± 7.84), the pressure belief confrontation group was the second (24.22 ± 7.65), the high positive-low negative stress belief group was the second (18.21 ± 5.99), and the positive stress belief tendency group was the lowest (16.48 ± 5.44). Psychological distress scores in 16 ~ 21 divided into psychological distress to a lesser degree, in 22-29 in psychological distress level, according to different category scores on the psychological distress, it can be seen that have high positive pressure and positive pressure beliefs of the individual faith, their psychological distress to a lesser degree, the psychological health level is relatively higher; However, the high negative stress beliefs and stress belief confrontation group had serious psychological distress, and their mental health level might be affected. CONCLUSION: The stress belief of medical college students has obvious classification characteristics, and is closely related to the degree of psychological distress.

Keywords: College students, medical majors, stress beliefs, psychological distress, potential profile analysis

童年期情感忽视经历对大学生情绪调节策略使用偏好的影响 及其脑结构基础

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摘要 童年期创伤经历作为早期不良经历的一种, 与成人期情绪调节策略的使用、与广泛的精神病理学症状相关联。但已有研究均没有将童年期情感忽视从其他童年期创伤经历中分离出来, 单一性的童年期情感忽视对大学生情绪调节策略使用偏好及其脑结构的影响尚不清楚。结合问卷调查和结构磁共振成像技术, 本研究旨在探讨单一性童年期情感忽视经历对大学生情绪调节策略使用及情绪调节相关脑区结构的影响。

研究首先对天津市四所高校共 4566 名的大学生进行《童年创伤问卷》初测, 得到符合标准的伴有单一性童年期情感忽视经历的潜在被试。随后, 对潜在被试进行复测, 并由两名精神科主治医师排除可能存在精神病理学症状和重大躯体隐患的被试。最后获得了仅存在童年期情感忽视经历的大学生被试 21 名 (忽视组, 10 男, 年龄 19.19 ± 0.68 岁), 无任何形式童年期创伤经历的大学生被试 26 名 (对照组, 13 男, 年龄 19.04 ± 0.87 岁)。两组被试均完成了《情绪调节问卷》和结构磁共振成像的测量。结果发现, 对照组的重评策略使用频率显著高于忽视组 (34.08 ± 5.469 Vs. $27.29 \pm 5.02, t(45) = 4.39, p < 0.001$); 而两组在抑制策略使用上无显著差异。对照组在右侧额中回的平均灰质体积显著大于忽视组 (0.52 ± 0.07 Vs. $0.46 \pm 0.07, t(45) = 2.83, p = 0.007$)。回归分析和偏相关分析表明该区域的灰质体积变化与重评策略的使用显著正相关 (回归: $\beta = 0.54, p < 0.001$; 相关: $r = 0.52, p < 0.001$)。此外, 多体素模式分析 (MVPA) 发现右侧脑岛的灰质体素信号模式能够显著预测重评策略使用 ($r = 0.38, p = 0.036$)。结果提示, 右侧额中回和脑岛的结构改变可能是童年期情感忽视经历影响大学生情绪调节策略使用的脑结构基础。基于压力加速假说, 本研究认为上述差异可能与早期压力引发的情绪行为发育敏感期的可塑性终止有关。

关键词 童年期情感忽视, 情绪调节策略, 灰质体积, 童年期创伤, 情绪调节

The influence of childhood emotional neglect experience on college students' preference for emotion regulation strategies and its brain structure

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Abstract: As an early adverse experience, the experience of childhood trauma is associated with the use of emotion regulation strategies in adulthood and with a wide range of psychopathology symptoms. However, previous studies have failed to separate childhood emotional neglect from other traumatic experiences in childhood, and the effects of single childhood emotional neglect experience on College Students' preferences for the use of emotion regulation strategies and their brain structures are unknown. The purpose of this study was to explore the effects of single childhood emotional neglect experience on the use of emotion regulation strategies and the structure of brain regions related to emotion regulation in college students. Firstly, 4,566 college students from four universities in Tianjin were tested with the childhood trauma questionnaire, and the potential subjects with single childhood emotional neglect experience were obtained. Potential subjects were then retested and excluded from the study by a pair of attending psychiatrists for possible psychopathology and major physical problems. Finally, 21 college students who only had childhood emotional neglect experience (neglect group, 10 males, age 19.19 ± 0.68 years) and 26 college students without any form of childhood trauma experiences (control group, 13 males, age 19.04 ± 0.87 years) were obtained. Both groups completed the emotion regulation questionnaire and the structural magnetic resonance imaging. The results showed that the frequency of cognitive reappraisal strategy use in control group was significantly higher than that in neglect group (34.08 ± 5.469 vs. $27.29 \pm 5.02, t(45) = 4.39, p < 0.001$), but there was no significant difference in expressive suppression strategy use between the two groups. The mean gray matter volume in the right middle frontal gyrus was significantly larger in the control group than that in the neglect group (0.52 ± 0.07 vs. $0.46 \pm 0.07, t$

(45) = 2.83, $p = 0.007$). Regression analysis and partial correlation analysis showed that the volume change of gray matter in this area was positively correlated with the use of reappraisal strategy (regression: $\beta = 0.54$, $p < 0.001$; correlation: $r = 0.52$, $p < 0.001$). In addition, multi-voxel pattern analysis showed that the right insula gray voxel signal pattern significantly predicted the use of cognitive reappraisal strategies ($r = 0.38$, $p = 0.036$). The results suggest that the structural changes of the right middle frontal gyrus and insula may be the structural basis of the influence of childhood emotional neglect experience on the use of emotion regulation strategies. Based on the stress acceleration hypothesis, this study argues that the above differences may be related to early stress-induced termination of plasticity during the developmentally sensitive period of emotional behavior.

Keywords: Childhood emotional neglect, emotion regulation strategies, gray matter volume, childhood trauma, emotion regulation

A person-centered evaluation of cognitive emotion regulation using a latent profile analysis: Associations with psychological and physical health

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Abstract: The association between cognitive emotion regulation (CER) and young adults' health outcomes has long been emphasized. However previous research has not accounted for the heterogeneity in cognitive emotion regulation strategy use. This study aimed to explore the profiles of cognitive emotion regulation strategies among a community sample of Chinese young adults, and to examine the association of latent profiles with psychological and physical health outcomes. Data were collected from 259 Chinese young adults residing and/or working in urban Shanghai (Mage = 25.85 years, 117 female). A person-centered approach with 3-step Latent Profile Analysis (LPA) was used to identify underlying profiles of cognitive emotion regulation based on the young adults' reports of their use of cognitive emotion regulation strategies when they were confronted with stressful life events. Nine different strategies, five adaptive and four maladaptive, were used as indicators. Covariates of profile members were assessed, including age, socio-economic status (SES), sexual orientation, and education level. LPA revealed three profiles, which have been tentatively labeled: *low regulators* (with little use of all strategies), *adaptive regulators* (with more use of adaptive emotion regulation strategies and less use of maladaptive strategies), and *maladaptive regulators* (with less use of adaptive emotion regulation strategies and more use of maladaptive strategies). A comparison of CER profiles applied to health-related outcomes (i.e., depression, anxiety, perceived stress, physical symptoms, and sleep quality) offered support to the validity of three CER profiles. Results showed that the higher the SES, the higher the probability of being classified into the *adaptive regulators*. And the maladaptive regulators class was associated with the highest levels of depression symptoms, anxiety symptoms, perceived stress, and poorest physical health. In contrast, the adaptive regulators class was associated with the least health problems. Our findings suggest that a person-centered perspective might be a valuable tool for understanding the structure of cognitive emotion regulation and that profiles of young adults' cognitive emotion regulation may be significant risk factors for health.

Keywords: young adults, cognitive emotion regulation, latent profile analysis

大学生的自动模仿倾向与社会快感缺失的关系初探

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摘要 在社会交往过程中存在自动模仿他人表情、姿势和动作的倾向, 这与情绪识别、观点采择和共情等社会认知有关。精神分裂症存在观点采择和共情等社会认知的缺损, 仅有的几项研究指出患者可能存在自动模仿倾向的改变。社会快感缺失作为一种阴性分裂型特质, 反映了精神疾患的易感性, 因此本研究探讨大学生自动模仿与社会快感缺失之间的关系。根据大学生在线调查中社会快感缺失量表(CSAS)得分, 本研究招募了24名高社会快感缺失被试(CSAS得分高于均分以上1个标准差, 年龄 21.1 ± 1.89 岁, 男性5名)和20名对照组被试(CSAS得分低于均分, 年龄 21.6 ± 2.14 岁, 男性3名)。被试完成模仿抑制任务(imitation-inhibition task), 实验中电脑屏幕上连续快速呈现两张图片以形成食指抬起、中指抬起或是保持静止的动画效果, 要求被试根据食指与中指间呈现的数字线索抬起相应手指(“1”食指, “2”中指), 计算被试在三种实验条件下(根据图片上手指的运动方式和被试需要进行的反应分为一致、不一致和基线)的反应时和正确率。基线条件和一致条件的反应时差异为促进效应, 衡量自动模仿倾向; 一致和不一致条件的反应时差异为衡量抑制自动模仿倾向的抑制效应。结果发现: 1) 无论是对照组还是高分组被试均表现出明显的促进效应(对照组: $11.89\text{ms} \pm 24.03\text{ms}$, $t = 2.21$, $p < 0.05$; 高分组: $16.25\text{ms} \pm 23.81\text{ms}$, $t = 3.34$, $p < 0.01$)和抑制效应(对照组: $15.84\text{ms} \pm 24.90\text{ms}$, $t = 2.84$, $p < 0.05$; 高分组: $11.07\text{ms} \pm 23.85\text{ms}$, $t = 2.27$, $p < 0.05$)。2) 相关分析发现, 对照组中CSAS得分与促进效应存在显著正相关($r = 0.53$, $p < 0.05$), 高社会快感缺失被试中未发现显著相关。两组被试中均未发现CSAS得分与抑制效应的显著相关。因此, 本研究在大学生群体中发现了显著的自动模仿的促进效应和模仿抑制效应。此外, 本研究结果提示自动模仿倾向可能与阴性分裂型特质有关, 可能是精神分裂症及其高危人群社会认知异常的潜在机制。

关键词 自动模仿, 促进效应, 模仿抑制, 社会快感缺失, 分裂型特质

Automatic Imitation was Significantly Related to Social Anhedonia in Chinese College Students

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Abstract: People tend to imitate others' facial expressions, postures and movements during social interactions without awareness, which is related to social cognition such as emotion recognition, perspective taking, and empathy. Schizophrenia is a serious mental disorder with impairments in social cognition such as perspective taking and empathy. Only a few studies have pointed out that patients with schizophrenia may have altered automatic imitations. As a negative schizotypal trait, social anhedonia reflects the vulnerability to psychotic disorder. This study aims to investigate whether automatic imitation effects exist in college students and the relationship between automatic imitation and social anhedonia. Based on the scores of the Chapman Social Anhedonia Scale (CSAS) in a large sample of college students, twenty participants with low level of social anhedonia (CSAS scores were below average, age = 21.6 ± 2.14 , 3 males) and 24 participants with high level of social anhedonia (CSAS scores were more than one standard deviation above the average, age = 21.1 ± 1.89 , 5 males) were recruited. All participants completed computerized imitation-inhibition task, in which two pictures were presented on screen in rapid succession to form animations of raising index finger, middle finger or remain still, participants were asked to raise their fingers according to the clues appeared between the index finger and middle finger with the second picture ("1" for index finger, "2" for middle finger). According to the consistency between the lifting finger on screen and the finger that

participants supposed to lift, accuracy and reaction times (RT) of three conditions (congruency, incongruency and baseline) were calculated. The RT difference between baseline condition and congruent condition was considered as facilitation effect and the RT difference between congruent and incongruent conditions was inhibition effect of automatic imitation. The results showed that: 1) both groups showed significant facilitation effect (control group: 11.89ms±24.03ms, $t=2.21$, $p < 0.05$; high social anhedonia group: 16.25ms±23.81ms, $t=3.34$, $p < 0.01$) and inhibition effect (control group: 15.84ms±24.90ms, $t=2.84$, $p < 0.05$; high social anhedonia group: 11.07ms±23.85ms, $t=2.27$, $p < 0.05$). 2) Correlation analysis showed that there was a significant positive correlation between CSAS scores and facilitation effect only in control group ($r=0.53$, $p < 0.05$). No significant correlations between CSAS scores and inhibition effect were found in either groups. Therefore, we confirmed the facilitation effect and inhibition effect of automatic imitation using an adapted imitation-inhibition task in college students. In addition, our findings suggest that automatic imitation may closely relate to social anhedonia, which might contribute to abnormalities of social cognition and social functioning in schizophrenia and its high-risk populations.

Keywords: Automatic imitation, Facilitation effect, Imitation inhibition, Social anhedonia, Schizotypy

语言能力对面孔情绪感知的影响——一项 ERP 研究

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摘 要 从人类使用语言概念命名情绪开始, 语言和情绪感知就绑定在了一起。语言对情绪感知的作用主要存在两种观点: 基本情绪理论认为, 语言是情绪感知的一种附带现象, 情绪感知可以在不依赖语言的条件下产生; 情绪建构理论则认为, 语言是情绪感知的必要条件, 如果没有情绪概念便不会感知到与情绪概念相对应的情绪。基于上述理论背景, 本研究采用事件相关电位技术探究语言能力对成年个体面孔情绪感知的影响。实验采集了 47 名 (23 男, 24 女) 成年被试的数据, 被试年龄范围为 18~28 岁, 平均 19.87 岁。实验程序为被试首先观看一张情绪面孔图片, 然后呈现 500~700 ms 的空屏, 最后呈现两张情绪面孔或情绪词语。被试需要在两张情绪面孔或情绪词语中选择一个与之前面孔情绪类别相一致的选项。实验中的情绪类别包括快乐、恐惧、悲伤和中性四种。实验还通过韦氏智力量表的言语分量表将被试分为语言能力高分组和语言能力低分组。实验的 ERP 结果发现: 在 N170 成分上, 语言能力低分组比语言能力高分组被试在词语任务上由四种情绪诱发的 N170 波幅更大; 在 P2 成分上, 词语任务比面孔任务诱发的 P2 波幅更大; 在 N2 成分上, 面孔任务比词语任务诱发的 N2 波幅更大; 在 N400 成分上, 面孔任务比词语任务诱发的 N400 波幅更大; 在 LPC 成分上, 面孔任务中快乐情绪比中性情绪诱发的波幅更大。总之, 本研究初步揭示了不同语言能力者对于面孔情绪感知的神经动态差异主要体现在早期加工阶段, 进一步支持了情绪建构理论。

关键词 面孔情绪感知, 语言能力, 情绪建构理论, 基本情绪理论, 事件相关电位

The influence of language ability on facial emotion perception--An ERP study

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Abstract: Since humans use language concepts to name emotions, language and emotion perception are bound together. There are two main views on the influence of language in emotion perception: basic emotion theory argues that language is an incidental phenomenon of emotion perception, and emotion perception can be produced without language; emotion construction theory argues that language is a necessary condition for emotion perception. If there is no emotion concept, the emotion corresponding to the emotion concept will not be perceived. Based on the above

theoretical background, this study used event-related potential technology to explore the influence of language ability on facial emotion perception. The experiment collected data from 47 adult participants (23 males and 24 females). The age range of the participants was 18-28 years old, with an average of 19.87 years old. The experiment procedure was that participants first watched an emotional faces, then presented an empty screen for 500-700 ms, and finally presented two emotional faces or emotional words. Participants needed to choose one face or word that is consistent with the emotion category of the previous face. The emotion categories in the experiment include happiness, fear, sadness, and neutral. The participants were divided into two groups through the language subscale of the Wechsler's Intelligence Scale: high language ability group and low language ability group. The ERP results found that: on the N170 component, the participants in the low language ability group had a larger amplitude of N170 evoked by the four emotions on the verbal task than those in the high language ability group; on the P2 component, the verbal task evoked a larger P2 amplitude than the face task; on the N2 component, the face task evoked a larger N2 than the word task; on the N400 component, the face task evoked a larger N400 amplitude than the word task; on the LPC component, the happy emotion evoked a larger LPC amplitude than the neutral emotion in the face task. In short, this study preliminarily revealed that the neural dynamic differences of people with different language abilities in facial emotional perception were mainly reflected in the early processing stage, which supports the emotion construction theory.

Keywords: facial emotion perception, language ability, emotion construction theory, basic emotion theory, event-related potentials

5.24“心理学脑成像专业委员会”分组展贴报告

重性抑郁症患者工作记忆任务中的额顶有效连接特征

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摘要 背景与目的: 重性抑郁患者的工作记忆受损,既往的抑郁症神经影像学提示抑郁症患者的额顶网络功能异常,但异常的额顶区功能与受损的工作记忆之间的发生机制仍不清楚。本研究将考察抑郁患者执行工作记忆任务时额顶区与全脑的功能连接特征,并分析额顶区的有效连接是否存在异常,为阐明抑郁患者工作记忆受损的神经病理学机制提供进一步的证据。**方法:** 共有 33 名重性抑郁患者 (20.24±5.04 岁, 11 男) 和 40 名年龄、性别、教育水平匹配的健康对照组被试 (20.98±2.51 岁, 14 男) 完成流调中心用抑郁量表和简式情感强度等系列心理量表与磁共振成像扫描。采用数字 n-back 任务评估工作记忆,同步采集其任务态脑影像数据 (Siemens, Skyra 3.0 T 核磁共振扫描仪; 重复时间/回波时间= 2000/28 ms, 层厚/层间距= 4/4 mm, 视野 = 210 × 210 mm, 翻转角 = 90°, 层数= 32)。采用心理生理交互作用 (psychophysiological interaction, PPI) 分析 n-back 任务中激活的脑区 (右侧顶下小叶和右侧背外侧前额叶) 与全脑的功能连接差异。采用动态因果模型 (dynamic causal modelling, DCM) 进一步分析右侧顶下小叶与右侧背外侧前额叶的有效连接。**结果:** 抑郁组组的流调中心用抑郁量表 ($t=13.15, p<0.001$)、负性情感强度分量表 ($t=3.73, p<0.001$) 得分均显著高于对照组。与对照组相比,抑郁组在完成高负荷工作记忆任务时有更低的准确率 ($t=2.24, p=0.029$) 和更长的反应时 ($t=2.20, p=0.033$)。PPI 分析结果显示抑郁症患者组的右侧顶下小叶与右侧背外侧前额叶 ($t=4.22, p=0.006$)、右侧颞上回 ($t=4.67, p=0.041$) 的功能连接较对照组显著增强。基于 PPI 分析的组间差异结果, DCM 进一步发现抑郁组从右侧顶下小叶至右侧背外侧前额叶的有效连接较对照组显著增加 ($t=3.021, p=0.003$)。相关分析显示负性情感强度得分与工作记忆中从右侧顶下小叶至右侧背外侧前额叶的有效连接参数有显著负相关 ($r=-0.491, p=0.004$)。**结论:** 抑郁患者在高负荷工作记忆任务下存在异常的额顶网络有效连接, 这为阐明抑郁工作记忆受损的神经病理学机制提供新的实验依据。

关键词 抑郁症, 工作记忆, 额顶网络, 心理生理交互作用, 动态因果模型

Prefrontal-parietal Effective Connectivity during Working Memory Task in Patients with Major Depressive Disorder

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Abstract: Background: Working memory (WM) impairment is one of the core cognitive dysfunction in patients with major depressive disorder (MDD). Neuroimaging studies have suggested abnormalities in frontoparietal activation in MDD, while the specific mechanism by which abnormal function in the frontoparietal network contributing to the deficits in working memory remains unclear. Focusing on functional connectivity of frontal and parietal regions with the whole brain and exploring whether there was abnormal effective connectivity in frontoparietal region, this study is aimed to elucidate the neuropathologic mechanism of impaired WM in patients with MDD. **Methods:** A total of 33 patients with MDD (20.24±5.04 years old, 11 male) and 40 age-, gender-, education- matched healthy controls (HCs, 20.98±2.51 years old, 14 male) completed a series of psychological assessment (such as the Center for Epidemiological Studies Depression Scale and the Short Affect Intensity Scale; CES-D & SAIS) and undertook the magnetic resonance imaging (MRI) scanning. Functional MRI data was collected (3.0 T Siemens Skyra scanner, repetition time/echo time = 2000/28 ms, thickness/gap = 4/4 mm, field of view = 210 × 210 mm, flip angle = 90°, and slices = 32) when subjects performing the numeric n-back task, which was used to assess WM. The psychophysiological interaction analysis was applied to investigate functional connectivities between brain regions (right inferior parietal lobule, IPL; right dorsolateral prefrontal cortex, dlPFC) activated during n-back task and whole brain. The dynamic causal modelling (DCM) was used to analyze the effective connectivity between right IPL and right dlPFC. **Results:** The MDD group had significantly higher scores of CES-D ($t=13.15$, $p<0.001$) and SAIS-negative subscale ($t=3.73$, $p<0.001$) than HCs. The MDD group also had lower accuracies ($t=2.24$, $p=0.029$) and longer reaction times ($t=2.20$, $p=0.033$) in high load task than HCs. Compared with HCs, the MDD patients showed increased functional connectivities of the right IPL with right dlPFC ($t=4.22$, $p=0.006$), right superior temporal gyrus ($t=4.67$, $p=0.041$). The modulation from the right IPL to the right dlPFC showed a significant group difference ($t=3.021$, $p=0.003$). A negative correlation was found between scores of SAIS-negative subscale and modulation of the connection from IPL to dlPFC in working task in MDD group ($r=-0.491$, $p=0.004$). **Conclusion:** This study showed abnormal effective connectivity among frontal and parietal regions during high load WM task in patients with MDD, which provides accumulating evidences to elucidate the neuropathologic mechanism of impaired WM in patients with MDD.

Keywords: major depressive disorder, working memory, frontoparietal network, psychophysiological interaction, dynamic causal modelling

边缘性人格障碍患者攻击行为的脑影像研究：一项系统综述

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摘要 背景: 约有 73% 的边缘性人格障碍患者 (Borderline personality Disorder, BPD) 曾有过攻击行为。影像学研究提示, BPD 患者的攻击行为可能与其脑结构与功能异常有关。本研究对国内外 BPD 患者攻击行为的脑影像研究成果进行了总结和系统评价, 为进一步阐明 BPD 患者攻击行为的脑机制提供依据。**方法:** 检索 Web of Science 和 PubMed 数据库, 手动检查参考文献, 最终纳入 28 篇文章, 包括 13 篇结构性磁共振成像

(structural Magnetic Resonance Imaging, sMRI) 文章, 6 篇功能性磁共振成像(functional Magnetic Resonance Imaging, fMRI)文章, 8 篇正电子发射型计算机断层扫描 (Positron Emission Tomography, PET) 文章, 以及 1 篇磁共振波谱 (Magnetic Resonance Spectrum, MRS) 论文, 共包括 23 个边缘性人格障碍样本和 21 个健康对照样本, 总计 648 名 BPD 患者和 593 名健康对照被试。**结果:** 所有研究均为横断面设计, 各项研究之间异质性较高, 在研究方法与控制变量 (如样本性别比例、利手、病史、服药等) 上差异较大。多数 sMRI 文章发现攻击与边缘系统和涉及情绪加工与行为控制的皮层 (如眶额叶、前扣带回皮层、脑岛等) 密切相关, 其关系受到偏侧化、症状类型和严重程度等因素的影响, 但有 3 篇报告攻击行为与杏仁核、海马体、眶额叶皮层等结构灰质体积之间缺乏显著相关。2 篇 fMRI 论文显示攻击行为与默认网络和突显网络内静息态功能连接改变相关, 另有 3 篇采用诱导攻击实验范式发现攻击状态下 BPD 患者从脑区 (海马、杏仁核) 到网络 (默认网络、控制网络、情感环路) 均存在异常激活。2 篇 PET 论文采用行为学范式表明 BPD 患者在愤怒状态下, 眶额叶、杏仁核、纹状体等区域相对葡萄糖代谢率存在异常变化。另外, sMRI、fMRI 与 PET 三种类型研究都显示在攻击行为和脑影像结果中, BPD 患者存在显著的性别差异。**结论:** 当前研究揭示 BPD 患者攻击行为与边缘系统和皮层的体积改变密切相关, 存在脑网络激活与连接异常, 且存在大脑内糖代谢改变, 但这些异常改变和边缘性人格障碍症状之间的因果关系尚待探索。未来研究应该致力于完善对关键变量的控制, 采取更优研究方法 (如纵向研究), 进一步探索 BPD 患者攻击行为的神经学基础。

关键词 边缘性人格障碍, 攻击, 脑影像

A Systematic Review of Neuroimaging Studies of Aggression in Borderline Personality Disorder

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Abstract: Background: 73% of patients with Borderline Personality Disorder (BPD) have engaged in aggressive behaviors. Neuroimaging studies have suggested that aggression among BPD patients is linked to the abnormality of structure and function in brain. This systematic review summarizes current research results on aggression among BPD patients and provides an overview of relevant brain mechanisms. **Methods:** A systematic search of PubMed and Web of Science databases, in addition to a manual check of references, identified 28 articles eligible for the review, including 13 about structural magnetic resonance imaging (sMRI), 6 about functional magnetic resonance imaging (fMRI), 8 about positron emission tomography, and 1 about magnetic resonance spectrum. The review covered 23 BPD and 21 Healthy Control samples, encompassing 648 patients with BPD and 593 controls. **Results:** The studies included all were cross-sectional, which were heterogeneous in terms of choosing approaches and controlling variables (e.g. gender, handedness, medical history, medication). Most sMRI studies reported close relationships between aggression and limbic system and cortex regions involved in emotion processing and behavioral control, such as orbitofrontal cortex (OFC), anterior cingulate cortex (ACC), and insula. These relationships were affected by laterality, and type and severity of symptoms. Nevertheless, 3 articles reported no significant relationship between aggression and gray matter volume (GMV) in amygdala, hippocampus, and OFC. Two fMRI articles linked aggression to altered resting-state functional connectivity in Default Mode Network (DMN) and Salience Network (SN), while 3 others adopting an induced aggression paradigm detected abnormal activation in regions (hippocampus and amygdala) and in networks (SN, control network, and emotion circuit) during aggression among BPD patients. Two PET studies adopting an aggressive behavioral task reported that under provocation BPD patients showed altered relative glucose metabolic rate in OFC, amygdala, and striatum. All three types of imaging studies reported significant gender differences in aggressive behaviors and neuroimaging results. **Conclusion:** The current literature has revealed the relationship between aggression in BPD and aberrant volumes of the limbic system and frontal cortex, abnormal activation and network connectivity, and alterations in brain glucose metabolism, while the causal

relationship between these changes and BPD symptoms needs to be confirmed in future research. This review suggests future studies to better control the confound variables and adopt longitudinal design to further explore the neurological basis of aggression in BPD patients.

Keywords: Borderline Personality Disorder, Aggression, Neuroimaging

工作记忆负荷和数学能力对 SNARC 效应的影响

---- 一项 ERP 的研究

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摘要 空间—数字反应编码联合效应 (Spatial—Numerical Association of Respond Codes effect, 简称 SNARC) 是指在奇偶判断任务中, 被试左手对小数字反应更快, 右手对大数字反应更快的倾向。以往研究发现 SNARC 效应不仅稳定存在于长时记忆的心理数字线上, 同时还会受到不同的工作记忆负荷的影响, 具有很大的灵活性 (Deng, Chen, Xiao, & Li, 2017)。但目前 SNARC 效应受到工作记忆负荷影响的脑机制研究并不清楚。此外, SNARC 效应和个体数学能力之间的关系目前未得出一致的结果 (Hoffmann et al., 2014; He et al., 2021), 但个体的数学能力越高, 抑制控制能力越强, 且抑制控制能力会调节着 SNARC 效应的大小。本研究采用相对大小比较任务和 N-back 任务相结合的双任务范式, 选取文科组 (文学相关专业) 和理科组 (数学相关专业) 作为数学能力高低的指标, 来考察在 0-back 和 1-back 两种负荷下, 两组被试的 SNARC 效应是如何受到数学能力影响的。行为结果表明, 不管是 0-back 还是 1-back 负荷下, 文科组出现经典的 SNARC 效应, 而理科组的 SNARC 效应消失。这表明数学能力越高, SNARC 效应越弱。脑电结果发现, (1) 0-back 条件下, 文科组在额部和顶枕部的早期 N1、P2 波幅以及晚期 P3 波幅上均存在 SNARC 效应, SNARC 一致的波幅比不一致的波幅更正; 而理科组 SNARC 效应只存在于早期的额部和顶枕部的 N1、P2 以及额部 N2 波幅, SNARC 一致的波幅比不一致的波幅更正。(2) 1-back 条件下, 文科组的 SNARC 效应出现在额叶、顶叶的 P2、N2 及 P3 波幅成分, SNARC 不一致的波幅比一致波幅更正; 而理科组的 SNARC 效应只出现于早期 N1、P1 波幅和 P2 潜伏期, SNARC 不一致的波幅比一致波幅更正。(3) 文科组的顶枕 P3 波幅随着负荷的增加而减小, 表明随着刷新程度的增加, P3 波幅减小, 1-back 水平下需要更多的注意资源来完成任务。这些结果说明, SNARC 效应的大小及其发生阶段会受到数学能力的影响。文科组的 SNARC 效应发生在早期的知觉表征阶段和晚期的反应选择阶段, 理科组的 SNARC 效应只发生在早期的知觉表征阶段。这可能是由于理科组对数字更加敏感, 抑制控制能力更强, 能够更早地检测并解决与数字空间相关的冲突。

关键词 SNARC 效应, 工作记忆负荷, 抑制控制, 数学能力, ERP

The influence of working memory load and mathematical ability on the SNARC effect: An ERP study

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Abstract: Spatial—Numerical Association of Respond Codes effect refers that participants tend to respond faster to small numbers with their left hands and faster to large numbers with their right hands in the parity task. Previous studies have found that the SNARC effect exists not only stably in the mental number line of long-term memory, but also affected by different working memory loads, which has great flexibility (Deng, Chen, Xiao, & Li, 2017). However, the research on the neuromechanism of the SNARC effect affected by working memory load is relatively unclear. In addition, the relationship between the SNARC effect and individual mathematical ability is still controversial (Hoffmann et al., 2014; He et al., 2021). However, the higher the individual's mathematical ability, the stronger the inhibitory control ability, and the inhibitory control ability regulates the size of the SNARC effect. In the study, a dual-task paradigm combining the relative magnitude comparison task and the N-back task was adopted. We selected literature students (literature majors) and science students (math majors) as the indicators of mathematical

ability, to investigate how the SNARC effect affect by mathematical ability in both groups under 0-back and 1-back conditions. The behavioral results showed that under either 0-back or 1-back condition, the classical SNARC effect appeared in the literature group while the SNARC effect disappeared in the science group. It suggests that the higher mathematical ability, the weaker the SNARC effect. Moreover, the ERP results demonstrated that (1) under the 0-back condition, the SNARC effect in the literature group appeared on the early N1、P2 and the late P3 amplitudes in frontal and parietooccipital regions, SNARC compatible amplitude was more positive than incompatible amplitude; the SNARC effect in the science group only existed in the early frontal and parietooccipital N1, P2 and frontal N2 amplitudes, SNARC compatible amplitude was more positive than incompatible amplitude. (2) Under the 1-back condition, the SNARC effect in the literature group appeared in P2, N2 and P3 amplitudes in frontal and parietal lobes, SNARC incompatible amplitude was more positive than compatible amplitude; the SNARC effect in the science group only appeared in the early N1, P1 amplitudes and P2 latency, SNARC incompatible amplitude was more positive than compatible amplitude. (3) P3 amplitude in parietooccipital regions decreases with the increase of load in the literature group, indicating that P3 amplitude decreases with the increase of the updating degrees, and more attention resources are needed to complete the task at the 1-back condition. These results indicated that the size and processing stage of the SNARC effect are affected by mathematical ability. The SNARC effect in the literature group occurred in the early stage of perceptual representation and the late stage of response selection, while the SNARC effect in the science group only occurred in the early stage of perceptual representation. It may be due to science group being more sensitive to numbers, inhibitory control ability being stronger and being able to detect and resolve numerical-spatial conflicts earlier.

Keywords: The SNARC effect; Working memory load; Inhibitory control; Mathematical ability; ERP

网络游戏成瘾者在决策后赌博任务中 内侧前额叶功能异常与元认知行为的相关

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摘 要 网络游戏成瘾(IGD)是一种行为成瘾障碍,自我意识功能失调是成瘾的一个关键特征,导致对成瘾行为的自我控制受损。元认知被定义为对自身认知状态的认知,它使个体能够在目标导向行为中评估自己的表现,并能够据此指导合适的行为选择。本研究旨在通过比较44个IGD患者组与46个健康对照组(HC)在完成知觉决策后进行元认知选择(可选的赌博或放弃)与电脑选择(迫选的赌博或放弃)任务时的行为和功能磁共振成像数据的组间差异,以考察IGD基于元认知的行为选择是否存在异常以及相关的脑区神经基础。行为结果发现,知觉决策阶段,IGD组的决策准确性显著高于健康对照;而元认知选择阶段,IGD组的可选放弃率与元认知能力(γ)均无显著性异常。fMRI结果显示,知觉决策阶段,相比于HC组,IGD组的额上回、壳核、顶下小叶、颞下回激活增强。并且IGD组的左侧额上回的脑区活动与决策准确性显著负相关,与冲动性量表得分(BIS)显著正相关,而HC组壳核的脑区活动与决策准确性及反应时显著正相关。此外,元认知选择阶段,相比于HC组,IGD组的内侧前额叶(ACC)激活减弱,而额上回激活增强。并且IGD组与HC组ACC的脑区活动均与可选放弃率显著正相关。并且HC组ACC和额上回的脑区活动与 γ 显著负相关。本研究结果表明IGD者基于元认知的行为选择并未表现异常,但与元认知相关的脑区可能存在功能受损。

关键词 网络游戏成瘾, 元认知, 功能磁共振成像, 决策后赌博, 元认知能力

Dysfunctional medial prefrontal function is associated with metacognitive behavior in People with internet gaming disorder during the post-decision wagering task

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Abstract: Internet gaming disorder (IGD) is a kind of behavioral addiction disorder. Dysfunctional self-consciousness is one of the key characteristics of addiction, contributing to compromised control over addictive behaviors. Metacognition is defined as cognition about one's own cognitive state, which enables us to estimate our own performance during goal-directed actions and to select a suitable strategy based on that estimation. This study compared the differences in behavior and fMRI data between 44 IGD patients and 46 healthy controls (HC) when they performed a metacognitive choice (optional wager or pass) and computer choice (forced wager or pass) tasks after perceptual decision making. To investigate whether there were abnormal metacognitive behavioral choices in IGD and the neural substrates. Behavioral results showed that the decision accuracy of IGD was significantly higher than that of HC in perceptual decision-making stage. However, in the metacognitive selection stage, there was no significant abnormality in the optional pass rate and metacognitive sensitivity (gamma) in the IGD group. The fMRI results showed that, compared with the HC, the IGD showed enhanced activation in the superior frontal gyrus, putamen, inferior parietal lobule and inferior temporal gyrus during the perceptual decision-making stage. And the activity of the left superior frontal gyrus was negatively correlated with decision accuracy and positively correlated with Barratt Impulsiveness Scale (BIS) score in the IGD. While the activity of the putamen was positively correlated with decision accuracy and response time in the HC. Furthermore, during metacognitive selection, the IGD group demonstrated reduced activation in the medial prefrontal lobe (ACC) and increased activation in the superior temporal gyrus compared to the HC group. In addition, ACC brain activity in both IGD group and HC group were significantly positively correlated with the optional pass rate. However, the activity of ACC and superior temporal gyrus was negatively correlated with gamma in HC. These findings suggest that IGD did not exhibit abnormal metacognition behavior, but metacognition-related brain regions may have impaired functions.

Keywords: Internet gaming disorder, Metacognition, Functional magnetic resonance imaging, Post decision wagering, Metacognition sensitivity

5.25“音乐心理学专业委员会”分组展贴报告

抑郁特质者对音乐和面孔情绪的识别

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摘要 抑郁会导致情绪障碍和思维迟缓, 情绪与抑郁的关联成为研究的热点。抑郁特质者识别音乐情绪和面孔情绪是否具有特定敏感度, 且这些情绪识别能力是否受到视听跨通道信息整合的影响? 这些问题还有待探索。本研究选取 27 名高抑郁特质者和 31 名低抑郁特质者, 采用单通道和跨通道的情绪启动范式对此进行探究。研究结果显示, 在单通道情绪识别任务中, 当音乐情绪与面孔情绪不一致时, 高抑郁特质组的音乐和面孔情绪识别能力与低抑郁特质组存在显著性差异, 表现为高抑郁特质者的反应更快, 准确率也更高。在跨通

道的情绪识别任务中, 分别研究以音乐和面孔情绪为启动刺激下对音乐与面孔表情目标刺激的反映, 结果表明当视觉与听觉情绪不一致时, 高抑郁特质者在跨通道信息处理中体现出较强的能力。本研究结果表明, 抑郁特质者表现出较高的音乐情绪敏感性与较低的面孔情绪敏感性, 同时其跨通道信息处理能力较强。

关键词 抑郁特质, 启动范式, 音乐情绪识别, 面孔情绪识别

Musical and facial emotion recognition in depression-like traits

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Abstract: Depression can lead to emotional disorders and mental retardation, and the association between emotion and depression has become a hot research topic. Previous studies have examined musical and facial emotion recognition in depression-like traits. However, findings remain to be explored. In this study, using within- and cross-modal affective priming paradigm, we examined musical and facial emotion recognition in depression-like traits. 27 high depression-like traits and 31 low level of depression-like traits were selected to explore this by adopting within-modal and cross-modal affective priming paradigm. The results showed that when the music emotion was inconsistent with the face emotion, there was a significant difference between the music and face emotion recognition ability of the high depression-like trait and the low depression-like traits with a within-modal affective priming paradigm. The reaction of the high depression trait was faster and the accuracy was higher than the low depression trait. We studied the subjects' reaction to target stimulation when target facial images/musical chords were primed by affectively congruent or incongruent musical chords/facial images with a cross-modal affective priming paradigm. The results showed that high depression-like traits showed stronger ability in cross-modal information process when the visual and auditory emotions were inconsistent. Our findings suggest that the depression-like traits show higher level of ability of music emotion recognition and lower level of ability of facial emotion recognition, and their ability of cross-modal information process is stronger.

Keywords: depression-like traits; priming paradigm; music emotion recognition; facial emotion recognition

音乐序列学习的认知神经机制：一项基于 EEG 的研究

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摘要 像语言一样, 音乐将听觉上的离散元素组织成有层级的序列。前人研究主要集中于对音乐序列层级结构的感知和识别, 及分析其相对应的多种 ERP 成份。然而, 鲜少有研究探究大脑在线加工、学习和记忆音乐序列中的高级层级结构的过程, 音乐序列学习的神经指标与神经机制尚不明确。在当前的研究中, 我们选取 10 首高度结构化(包含多个规整乐句)的巴赫音乐片段作为材料, 通过将每个乐段给被试重复播放 10 遍来模拟自然环境中的音乐学习过程。一共有 21 名未受过专业音乐训练的成年被试参与了实验, 我们通过问卷收集了被试的音乐训练经历和学习后对每首歌曲的记忆程度, 并使用 EEG 记录了被试音乐学习全过程的神经响应, 以探究被试学习和记忆音乐序列中层级结构的认知神经机制。通过计算被试大脑信号与声学信号在频域上的相干(Cacoh), 我们发现了与前人研究一致的大脑对节拍频率和音符频率的神经响应, 但频域上的该神经响应不受聆听音乐遍数的调节。相反, 通过在时域上的分析我们发现: 随着重复聆听音乐片段遍数的增多, 对音乐序列平均记忆程度更好的被试在跨乐句边界处的时间响应函数(TRF)权重上表现出更快速的下降。该现象证明了人脑可以通过被动地重复听音乐来逐步学习音乐乐句的高级结构, 且 TRF 能精细地反映与个体记忆程度相关的对音乐层级结构的学习效应, 是一种在时域上可以用来探究对音乐学习与记忆的认知神经机制的敏感工具。在后续的研究中, 我们可以使用更前沿的分析方法如表征相似性分析(可以提供音乐序列神经表征的具体信息)或时频分析(可以同时提供时域和频域的信息)来更深入地研究音乐序列学习的认知神

经机制。

关键词 音乐, 序列学习, 记忆, 脑-声信号相干, 时间响应函数

The Cognitive Neural Mechanism Underlying Music Sequences Learning: An EEG Study

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Abstract: Same as language, perceptually discrete elements are organized into hierarchically structured sequences in music. Previous studies mainly focus on the perception and recognition of the hierarchical structures in music sequences, and analysis of corresponding ERP components. However, few studies have explored the procedure of online processing, learning, and memory of higher-level structures in music sequences; the neural signatures and neural mechanisms of music sequence learning remain largely unclear. In the current research, we selected 10 highly structured Bach music pieces (including multiple regular phrases) as materials, and simulated the music learning procedure in natural environment by repeatedly presenting each music piece to participants for 10 times. A total of 21 adult participants who have not received professional music training were recruited in the experiment. We collected the participants' music training experience and the degree of memory of each music piece after learning through questionnaires, and employed EEG to record the neural signals of participants' entire learning procedure to explore the mechanism underlying how participants learn and memorize hierarchical structures in music sequences. By calculating the coherence between the participants' cerebral signals and acoustic signals (Cacoh) in the spectral domain, we found neural tracking at beat and note frequencies, which is consistent with previous studies. However, the magnitude of neural tracking was neither modulated by the number of music repetitions nor the memory scores of music pieces. On the contrary, by conducting analysis in the temporal domain, we found that through repetitions of listening, people who memorized the music sequence better showed a sharper decrease on the weights of temporal response function (TRF) over boundary beats of musical phrases. Overall, our research proves that the human brain is capable of gradually learning the high-level structure of musical phrases by passively and repeatedly listening to music. And TRF can precisely reflect the learning effect on the hierarchical structure of music related to the individuals' memory, thus provides a sensitive tool to explore the cognitive neural mechanisms of music sequence learning and memory. In the future, we can further analyze the data using methods like representational similarity analysis which can provide more information about neural representation of music sequences, or time-frequency analysis which can provide resolution in both temporal and spectral domains, to gain a deeper understanding of human music sequence learning.

Keywords: Music, Sequence learning, Memory, Cerebral-acoustic coherence, Temporal response function

生成音乐认知：音乐心理学的新进展

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摘要 生成音乐认知是音乐心理学中对生成认知心理学方法论的应用和推广。主要理论上, 继承和发展了瓦雷拉“生命——心灵连续统一体”的命题, 即音乐是通过身体语言(具身化)积极洞察他人思绪的特有的生命过程。同时, 对德耶格等人的“社会协同论”的原理又巧妙加以运用。与传统音乐认知是个体大脑的信息加工观点不同, 生成音乐认知是将认知视为一种不同个体参与社会互动的结果, 将音乐视为一种联系他人的组

带社交活动。因而，音乐认知可被理解为参与该互动过程双方“系统性地共同生成”的，是互动双方通过在不断变化的环境中即时、熟练地参与音乐的时间来展开互动，同时具备音乐知觉产生在双方互动全过程变化复杂性和任何一方的差异性，在这个过程中，交往的双方都可以获得对方脸、声音、手和脚以及与周围互动形成的固定模式的可以达到产生共鸣的动机和感受的体验，可以使人类更为成熟地表达情感。方法论上，较之于传统音乐认知主要有三个方面的转变：研究视角上，从生物-文化视角转向社会文化-历史视角；研究路线上，从个体主义的还原论转向人际互动的整体论、具身论；研究方法上从二分法(客观主义/主观主义，内部/外部，先天/后天等)转向主客同一、主体间性。生成音乐认知研究者在音乐疗法等方面有一定的实证成果，例如对新生儿同理心、音乐疗法的理论和实证探索，总结出音乐播放在引出和引导新生儿的交流中起着至关重要的作用，因为人类从出生起就以相对复杂的方式对音乐做出反应。同时，音乐是一种用来启动新生儿同理心的工具，从而音乐疗法可以适用于新生儿等群体。生成音乐认知起步较晚，但有一定的理论基础，并拓宽了音乐心理学研究范畴，未来，生成音乐认知应该注重对 4E 认知理论整合和运用，并结合人的完整形象和实践本质产生更多有益的实证成果。

关键词 生成音乐认知，音乐理解，心理学方法论，生成认知心理学，社会协同理论

Enactive music cognition: a new development in music psychology

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Abstract: Enactive cognitive music is the application and promotion of enactive cognitive psychology methodology in music psychology. In the main theory, it inherits and develops Varela's proposition of "the life-mind continuum", namely that music is a unique life process of positive insight into the thoughts of others through body language (embodied). At the same time, the principle of "social synergy theory" of De Jaeger et al. is skillfully applied. Different from the traditional view that music cognition is the information processing of individual brain, music cognition is generated by regarding cognition as the result of different individuals' participation in social interaction and music as a social activity that connects others. Music cognition can be understood, therefore, to participate in the interactive process of both sides "systematically co-determined", is the interaction between both sides in the changing environment of real-time, skillfully to participate in the music of time to interact, to have a combination of music perception changes produced in the interaction process complexity, and the differences of each other, in the process, communication both sides can obtain the other side of the face, voice, hands and feet, and interact with the surrounding formation of the fixed pattern to resonate with motives and feelings of experience, can make the human more mature to express emotion. In terms of methodology, compared with traditional music cognition, there are three main changes: from the research perspective, from the bio-cultural perspective to the socio-culture-historical perspective; On the research line, from the reductionism of individualism to the holistic theory of interpersonal interaction, embodied theory; On the research methods from the dichotomy (objectivism/subjectivism, internal/external, nature/nurture, etc.) to the subject-object identity, intersubjectivity. Enactive music cognitive researchers in such aspects as music therapy has certain empirical results, such as newborns for empathy, the exploration in both theory and practice of music therapy, music playback is summarized in the lead and guide the newborn's communication plays a vital role, because humans from birth to respond to music in the form of relatively complex. At the same time, music is a tool used to activate newborn empathy, so that music therapy can be applied to groups such as newborns. Enactive music cognition started late, but it has a certain theoretical basis and broadens the research scope of music psychology. In the future, Enactive music cognition should pay attention to the integration and application of '4E cognition psychology' theory, and produce more beneficial empirical results by combining the complete image of human and the essence of practice.

Key words: enactive musical cognition, musical understanding, Psychological methodology, generative cognitive psychology, social synergy theory

5.26“眼动心理研究专业委员会”分组展贴报告

人际敏感大学生对自我卷入感与情绪词的注意偏向研究 ——基于眼动数据的证据

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摘要 当前, 高校大学生的人际敏感问题持续高发, 因人际敏感导致的不良事件引发社会广泛关注。而在网络发达的年代, 大学生每天都会浏览大量的信息, 高人际敏感的大学生是否会对负性的内容和高自我卷入的文字更关注和投入, 尚未得到研究探讨。因此, 本研究采用眼动技术探讨高人际敏感大学生对情绪材料 and 自我卷入感材料加工的注意偏向。实验采用 2(高、低人际敏感)×3(正性、中性、负性情绪词)×2(高、低自我卷入)的混合设计, 人际敏感组为被试间变量, 情绪词和自我卷入感为被试内变量。实验材料: 参照罗跃嘉等人的汉语情感词系统搜集三种情绪效价的两字情绪词, 通过前测让被试完成对情绪词效价、唤醒度和熟悉度的 7 点评定, 根据分析结果分别筛选出正、中、负性的情绪词。以第一人称(如我、我们)作为高自我卷入感材料; 以第三人称(如他/她、小明等)作为低自我卷入感材料。接着, 通过文献分析方法和专家评定法完成 120 个自编的人际情境句子, 同时控制了字数、句子结构及情绪词在句子中的位置及成分, 每一个句子包含一种类型的情绪词和一类自我卷入的名称。实验前被试先完成 SCL-90 量表中的人际敏感因子分量表, 要求被试阅读一系列相关句子后完成共 24 个词汇再认任务, 同时使用 Tobii300 眼动仪追踪被试的眼动轨迹。实验结果发现: (1) 人际敏感程度越高, 对词汇的判定标准越严格, 对负性情绪材料的感受性越弱。(2) 高人际敏感被试存在对负性情绪词的注意偏向, 表现为总注视时间更长以及注视次数更多。(3) 高人际敏感被试不存在自我卷入感偏好, 表现为对高、低自我卷入感材料的总注视时间无显著差异。本研究结果表明, 高人际敏感的大学生可能存在对负性情绪词语的自动地注意偏向, 高人际敏感的大学生在阅读负性情绪词的时候不受自我卷入感的影响。

关键词 人际敏感, 情绪词, 自我卷入感, 注意偏向

Attention Bias of College Students' Interpersonal Sensitivity on self-involvement and emotional words

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Abstract: At present, the interpersonal sensitivity problems of college students often have happen much, and the adverse events caused by interpersonal sensitivity have aroused widespread concern in the society. However, in the

era of Internet, college students will browse a large amount of information every day. It is not sure whether college students with high interpersonal sensitivity will pay more attention to negative or high self-involvement content and words. Therefore, this study aim to used eye movement technology to explore the high interpersonal sensitivity college students' attention bias with the emotional materials and self-involvement materials. The mixed design of 2(high and low interpersonal sensitivity) $\times$ 3(positive, neutral and negative emotional words) $\times$ 2(high and low self-involvement) was adopted in the experiment. The interpersonal sensitivity group was the between variable of the subjects, and the emotional words and self-involvement were the within variables of the subjects. Experimental materials: The two-character emotional words with three emotional valence were collected by referring to the Chinese emotional words of Luo Yuejia et al.. The pretest tested the emotional valence, arousal and familiarity of emotional words. According to the analysis results, positive, medium and negative emotional words were selected. The first person (I, we) as the material of high self involvement; Use the third person (he/she, Xiaoming, etc.) as the material of low self involvement. Then, through literature analysis and expert evaluation, 120 self-compiled interpersonal sentences were completed. Meanwhile, the word count, sentence structure and the position and composition of emotional words in the sentences were controlled. Each sentence contained a type of emotional words and a type of self-involvement. Before the experiment, the subjects completed the interpersonal sensitivity factor sub-scale of the SCL-90 scale. After reading a series of related sentences, the subjects were required to complete a total of 24 vocabulary recognition tasks. Meanwhile, the Tobii300 eye tracker was used to track the eye movement of the subjects. Experimental results showed that:(1) the higher interpersonal sensitivity, the stricter the criteria for vocabulary, and the weaker the sensitivity to negative emotional materials. (2) Subjects with high interpersonal sensitivity tended to pay more attention to negative emotional words, which was manifested as longer total gaze time and more gaze times. (3) Subjects with high interpersonal sensitivity had no preference for self-involvement, which showed that there was no significant difference in the total fixation time of materials with high and low self-involvement. This indicates that college students with high interpersonal sensitivity may have an automatic attention bias towards negative emotional words, and they are not affected by self-involvement when reading negative emotional words.

Keywords: Interpersonal Sensitivity, Emotional Words, Self-involvement, Attention Bias

急性应激对积极和消极情绪在注意定向和注意解除中的影响

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摘要 急性应激是个体对不可预期和不可控的环境无法调节时所做出的反应。注意偏向是说与中性刺激相比, 个体把注意更多的分配到情绪刺激上。研究发现, 急性应激影响个体对情绪刺激的注意偏向, 但如何影响注意定向和注意解除的原理尚不清楚。因此, 本研究使用眼动技术探讨了急性应激对情绪刺激在注意定向和注意解除成分中的影响, 本研究将 50 名大学生随机分成两组 (每组 25 人): 应激组 (接受 MAST 急性应激任务) 与控制组。所有被试者进入实验室后分别采集两次唾液皮质醇和状态焦虑量表的基线数据, 在采集之后对应激组进行应激诱发并进行眼动任务。眼动任务中对三种类型图片对 (高兴—中性, 厌恶—中性, 悲伤—中性) 自由观看, 之后收集注意投入和脱离的反应时数据并进行了皮质醇和状态焦虑数据收集。实验结果表明: (1) 状态焦虑分数, 组别和时间交互作用不显著, 但应激诱发后, 应激组的状态焦虑分数显著大于控制组。 (2) 皮质醇浓度, 组别和时间交互作用显著, 简单效应分析, 应激诱发后应激组皮质醇浓度明显大于控制组。 (3) 行为学数据表明组别主效应显著, 事后检验发现, 应激组反应时显著大于控制组。组别、注意类型、效价三方交互作用显著, 简单效应分析发现: 注意定向中, 应激组对高兴和悲伤面孔的反应时显著大于控制组。注意解除中, 应激组对厌恶和悲伤的反应时显著大于控制组。 (4) 眼动数据, 首视点定向偏向分数和首视点潜伏期偏向分数的组别和效价交互作用不显著。首视点注视时间偏向分数和总注视时间偏向分数的组别和效价交互作用显著, 简单效应分析: 应激组对厌恶面孔的首视点注视时间偏向分数显著大于控制

组, 应激组在高兴面孔上的首视点注视时间偏向分数显著小于悲伤面孔。应激组对悲伤面孔的总注视时间偏向分数显著大于控制组。综上所述, 急性应激会导致消极情绪在注意解除中的影响, 然而其在注意定向中的相关性影响并未发现。

关键词 急性应激, 注意定向, 注意解除

Effects of acute stress on positive and negative emotions in attention orientation and attention relief

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Abstract: Acute stress is an individual's response to an unpredictable and uncontrollable environment. Attention bias means that individuals pay more attention to emotional stimuli than to neutral stimuli. It is found that acute stress affects the attention bias of individuals to emotional stimuli, but the mechanism of how it affects attention orientation and attention removal is not clear. Therefore, this study used eye movement techniques to explore the effects of acute stress on emotional stimuli in attentional orientation and attentional release components. Fifty college students were randomly divided into two groups (25 per group): the stress group (MAST acute stress task) and the control group. After entering the laboratory, all subjects collected baseline data of salivary cortisol and state anxiety scale twice, and then stress-induced and eye-movement tasks were performed in the stress group. During the eye movement task, three types of image pairs (happy -- neutral, aversive -- neutral, sad -- neutral) were viewed freely, and then data on attention engagement and disengagement responses were collected and cortisol and state anxiety data were collected. The experimental results showed that : (1) the state anxiety score, group and time interaction were not significant, but after the stress induced, the state anxiety score of the stress group was significantly higher than that of the control group. (2) Cortisol concentration, group and time interaction were significant. Simple effect analysis showed that cortisol concentration in stress group was significantly higher than that in control group after stress induced. (3) Behavioral data showed that the main effect of the group was significant, and the post-test found that the stress group was significantly greater than the control group in response. The interaction among groups, attention types and titers was significant. The simple effect analysis showed that in attention orientation, the response of the stress group to happy and sad faces was significantly higher than that of the control group. In the attention relief, the response of the stress group to disgust and sadness was significantly greater than that of the control group. (4) For eye movement data, there was no significant interaction between groups and titers of first sight orientation bias score and first sight latency bias score. The interaction between the group and titer of the first sight fixation time bias score and the total fixation time bias score was significant. Simple effect analysis: the first sight fixation time bias score of the stress group was significantly higher than that of the control group, and the first sight fixation time bias score of the stress group was significantly lower than that of the sad face. The total gaze time bias score of the stress group was significantly higher than that of the control group. In conclusion, acute stress can lead to the effect of negative emotion in attention relief, but its correlation effect in attention orientation has not been found.

Keywords: acute stress, attention orientation, attention relief

视觉搜索中双目标成本的老化效应

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摘要 视觉搜索是人们获取外界信息进行加工的一种重要方式。在视觉搜索过程需要个体从某一刺激背景中找出特定的刺激, 具有较高的目的性。而在背景中同时搜索两个目标会比独立搜索两次单目标的过程更慢

且更不准确。双目标成本(dual-target cost)效应预示着两种注意资源的竞争以及个体对注意进行分配的控制能力。在青年人中,双目标成本效应是普遍存在的,但是目前对于视觉搜索中双目标成本的老化效应还缺乏实证研究支持,且老年人自上而下的加工的增强还是自下而上的注意的损伤还存在争议。青年人和老年人在视觉加工上的认知策略差异还未得出一致结论。研究使用不同的颜色线索和方向定义目标和干扰物,建立双目标搜索条件和单目标搜索条件。采用 2(年龄:青年人、老年人) $\times$ 2(搜索类型:单目标、双目标) $\times$ 3(搜索子集:4、8、12)的混合实验设计,对青年人和老年人的眼动轨迹进行追踪,探讨青年人和老年人在视觉搜索过程中的双目标成本效应和视觉加工机制。结果发现,与青年人相比,老年人在双目标条件下的潜伏期更长,对干扰物的注视次数更多,回视次数更多,在搜索子集更大时表现出搜索困难。表明老年人对于干扰信息的抑制能力减弱,更多的依赖线索信息引导视觉搜索,使用更为保守的视觉搜索策略,与青年人相比老年人在视觉搜索过程中有着更大的双目标成本。

关键词 视觉搜索,双目标成本,搜索子集,老化效应,眼动

Age-related dual-target cost in visual search

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Abstract: Visual search is an important way for people to obtain external information for processing. The process of visual search requires individuals to find specific stimuli from a certain stimulus background, which has a high purpose. Simultaneous search for one of two targets is slower and less accurate than for a single target. The dual-target cost effect predicts the competition between the two kinds of attention resources and the individual's ability to control the distribution of attention. Dual-target cost effect was prevalent among young adults, but there was still a lack of empirical research to support the aging effect of dual-target cost in visual search, and there was still a dispute whether the enhancement of top-down processing or the damage to bottom-up attention in the older adults. No consensus has been reached on the differences of cognitive strategies in visual processing between the young adults and the older adults. Different color cues and directions were used to define the target and the distractors, and dual-target search conditions and single target search conditions were established. A 2(age: young adults vs. older adults) $\times$ 2(search types: single target vs. double target) $\times$ 3(set size: 4, 8, 12) mixed factorial design was used to track the eye movements of young adults and older adults, and to explore the cost effect and visual processing mechanism of young adults and older adults in the visual search process. The results showed that, compared with the young participants, the older participants had a longer latency period, a greater number of fixations on the distractors, to recheck previously inspected areas of the display more often. The results suggest that the older adults were unable to inhibit irrelevant information, relied more on cue information to guide visual search, and used more conservative visual search strategies. Compared with the young, the older adults had greater dual-target cost in visual search.

Keywords: Visual search, Dual-target cost, Set size, Aging, Eye movement

物质主义价值观对跨期决策偏好的影响：来自信息加工过程的证据

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摘要 本研究采用眼动追踪技术,分别探讨了物质主义价值观对个体的跨期决策偏好及信息加工过程的影响。研究一采用 2(物质主义倾向:高/低) $\times$ 2(量级:大/小)的混合实验设计,使用物质主义价值观量表界定被试的物质主义倾向,因变量为折扣率。结果表明,物质主义倾向与量级的的主效应显著,其交互作用亦显著。在小量级条件下,高物质主义者在决策中表现出更强的冲动性、其折扣率显著高于低物质主义者;在大量级条件下,高物质主义者的折扣率低于低物质主义者,但其差异不显著。大量级条件下,两类物质主义倾向的被试折扣率均低于小量级条件下的折扣率,且存在显著差异。研究二在已有行为研究结果的基础上,通过眼动追踪,增加了对高低物质主义者决策过程差异的关注,以期对研究一行为结果的差异做出过程方面

的解释。研究二仍采用 2（物质主义倾向：高/低）×2（量级：大/小）的混合实验设计，因变量为被试的折扣率以及各项眼动指标。结果表明，与高物质主义者相比，低物质主义者做决策时，其注视时间及反应时更长，注视点数量更多，并使用更完整的信息搜索策略。

关键词 眼动追踪，物质主义价值观，跨期决策

The Influence of Materialist Values on Intertemporal Decision-Making Preference: Evidence from the Information Processing Process

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Abstract: This study uses eye tracking technology to separately explore the influence of materialistic values on individuals' intertemporal decision-making preferences and information processing processes. Study 1 adopts a mixed experimental design of 2 (materialism tendency: high/low) × 2 (magnitude: large/small), using the materialism value scale to define the subjects' materialism tendency, and the dependent variable is the discount rate. The results show that the main effect of materialism tendency and magnitude is significant, and the interaction is also significant. Under small-scale conditions, high-materialists are more impulsive in decision-making, and their discount rate is significantly higher than that of low-materialists; under large-scale conditions, high-materialists have a lower discount rate than low-materialists. Activists, but the difference is not significant. Under the large-scale condition, the discount rates of the two types of materialism tendencies are lower than the discount rate under the small-scale condition, and there are significant differences. Based on the results of the existing behavioral research, the second study increased attention to the differences in the decision-making process of high and low materialists through eye tracking, in order to explain the differences in the results of the first behavior. The second study still uses a mixed experimental design of 2 (materialist tendency: high/low) × 2 (magnitude: large/small), and the dependent variables are the discount rate of the subjects and various eye movement indicators. The results show that, compared with high-materialists, low-materialists have longer gaze time and reaction time when making decisions, have more gaze points, and use more complete information search strategies.

Keywords: Eye tracking, materialistic values, intertemporal decision-making

汉语阅读中的词汇识别是优先进行了整体加工吗？

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摘要 对于客体进行的视觉加工存在整体性和局部性两个层面。以人脸等非语言视觉对象的识别为例，大量研究证据强调整体处理的重要性，即所有部分都必须共同考虑。在字母识别中也发现了整体处理效应。然而，对汉字是否也得到整体处理的研究相对较少。另外，关于降低刺激质量究竟是影响早期视觉编码还是词汇通达的争论也鲜有借助汉字为材料进行的研究。为探讨以上两个问题，我们通过高斯模糊汉字的外部或内部的方法对句子中的汉字进行处理，模糊汉字外部相较于模糊内部更大程度上破坏了汉字的整体结构。同时，通过考察模糊条件可能对词频效应产生的影响来进一步探讨刺激质量的下降影响词汇加工的阶段。实验假设，首先，如果读者在正常阅读过程中倾向于利用整体信息来加快词汇识别过程，那么模糊外部应该比模糊内部表现出更大阻碍阅读的效果。因为模糊汉字外部相较于模糊内部更大程度上破坏了汉字的整体结构，模糊外部比模糊内部更不利于整体加工。相反，如果汉字识别不需要首先进行整体处理，我们不应看到模糊外部和模糊内部之间的任何区别。其次，如果文本模糊只影响视觉表征的早期编码，只能看到频率和模糊条件的主效应。否则，应看到频率和模糊条件的交互作用。当前研究采用 2（频率：高/低）×3（模糊条件：内部/外部/正常）被试内设计。在天津师范大学招募被试（18-23 岁）48 名，其中女生 30 名。结果发现：（1）外部和内部模糊条件的注视时间显著长于正常条件，在早期指标中，内部模糊条件需要比外部模糊条件更长的注视时间。（2）在跳读和回视中发现频率和模糊条件之间的存在交互作用。结果表明：（1）汉字的外形在阅读中并不是特别重要。汉字的识别不仅需要整体处理，还需要早期阶段的精细细节。（2）文本质量只影

响视觉和正字法特征的早期编码，没有影响词汇加工阶段。

关键词 整体处理，模糊，汉语阅读，眼动研究

Does word recognition in Chinese reading have a priority of overall processing?

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Abstract: Visual processing for objects has integrity and locality. Taking the recognition of non-verbal visual objects such as face, a lot of research evidence highlights the importance of overall treatment, namely that all parts must be considered together. The overall processing effect was also found in letter recognition. However, relatively little research whether the logographic Chinese characters are also holistically processed. Moreover, whether the stimulus quality reductions affect only the early visual encoding or also the lexical processing of words. However, there is only a few studies have been conducted on this issue in Chinese. To explore the above two problems, we used Gaussian blurring of outside or inside part of Chinese characters in Chinese. At the same time, by examining the effect that blur conditions may have on the effect of word frequency, we further explore the stage of lexical processing which is affected by the decrease of stimulus quality. The experiment assumes that, first, if Chinese readers tend to use the overall information to accelerate the vocabulary recognition process during the normal reading process, then the blur outside should show a more hindering effect of reading than the blur inside. Because blur Chinese characters external than blur internal to a greater extent destroy the overall structure of Chinese characters, blur external than blur internal is more detrimental to the overall processing. Instead, if Chinese character recognition does not require overall processing first, we should not see any difference between blur external and blur inside. Second, if the text ambiguity only affects the early encoding of the visual characterization, we can only see the main effects of the frequency and blur conditions. Otherwise, we should see the interaction between the frequency and the blur conditions. The current study uses the 2 (frequency: high / low) $\times$ 3 (blur condition: internal / external / normal) in-test design. Recruiting 48 subjects (ages 18-23) at Tianjin Normal University, including 30 girls. The results found that (1) Both outside and inside blurring conditions have significant longer fixations than normal condition and inside blurring condition requires longer fixations than outside blurring condition on early-stage measures. (2) The interactions between frequency and blur condition in skipping rate and regressions. The results show that: (1) the interactions between frequency and blur condition in skipping rate and regressions in, but not in any reading time measures. The findings indicate that exterior shape of Chinese characters is not especially important during reading. Chinese characters' recognition requires not only holistically processing, but also fine details on early stage. (2) Text quality affects only the early encoding of visual and orthographic features rather than lexical processing during Chinese reading.

Keywords: Overall processing, blur, Chinese reading, eye movement

5.27“心理学质性研究专业委员会”分组展贴报告

基于内容分析法的常态化疫情防控下心理卫生工作协同机制分析 ——以海南省为例

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摘 要 常态化疫情防控下，公众及医务人员心理健康水平是打赢这场持久的人民战争的重要致胜因子。通过采用内容分析法，探讨此次新冠肺炎疫情中针对不同人群的心理卫生工作协同机制和途径，为政府提出完

善和落实常态化防控下不同人群的心理卫生工作指南提供参考。利用内容分析法构建组织领导—实施方案—特色工作的三维多方协同分析框架,借助数理统计软件 SPSS20.0 和内容分析法软件 CATPAC 对搜集到的海南省新冠肺炎疫情期间 19 个市县和 2 所精神卫生医疗机构 21 份心理工作情况报告文本,共计 5 万字进行编码分析。在一维分析中发现:海南省疫情防控当中组织领导建基于各市县卫生健康委员会领导,听从卫生行政部门的指挥,政府占主导地位;省级卫生行政部门、各市县卫生健康行政部门的心理危机干预实施方案衔接紧密、协同性较高;特色工作中能够体现出政府、服务机构、公众协同性。在三维分析中发现:组织领导—实施方案协同性较差,实施方案与特色工作协同性表现较好,不同层级组织领导与实施方案协同性表现较好。实施方案应尽快统一心理危机干预标准以及工作内容和注意事项,明确各级卫健委、教育部门和其他行政部门在疫情防控心理卫生工作中的地位,成立"疫情防控心理卫生领导小组",响应国家成立专家队号召,并加强对心理卫生工作和当地实际结合的思考。

关键词 常态化疫情防控, 心理卫生, 协同机制, 内容分析法

An analysis of the collaborative mechanism of mental health work under normal epidemic prevention and control based on content analysis-- Take Hainan Province as an example

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Abstract: Under the normal epidemic prevention and control, the mental health level of the public and medical personnel is an important factor to win this long people's war. Content analysis was adopted to explore the collaborative mechanism and approaches of mental health work for different populations in this COVID-19 epidemic, so as to provide reference for the government to propose and implement guidelines for mental health work for different populations under normal prevention and control. Using the content analysis to analysis the three-dimensional collaborative analysis framework: organization and leadership, implementation plan, characteristic work with the aid of mathematical statistics software SPSS 20.0, CATPAC and content analysis software to collect COVID - 19 during the outbreak of the 19 cities and counties of hainan province and mental health of medical institutions ,2 mental work report text, a total of more than 50000 words to encode analysis. In the one-dimensional analysis, it is found that in the epidemic prevention and control in Hainan Province, the organizational leadership is based on the leadership of the municipal and county health commissions, and follows the command of the health administration department, with the government in the leading position. The implementation plan of psychological crisis intervention of provincial health administrative departments and municipal and county health administrative departments is closely connected and highly coordinated. The characteristic work can reflect the coordination of the government, service agencies and the public. In the three-dimensional analysis, it is found that the coordination between the organization leader and the implementation plan is poor, the coordination between the implementation plan and the characteristic work is good, and the coordination between the organization leader and the implementation plan at different levels is good. Implementation of the scheme should be unified standard of psychological crisis intervention and work contents as soon as possible and the matters needing attention, clarify the position of health commissions, education departments and other administrative departments at all levels in the mental health work of epidemic prevention and control set up "leading group for epidemic prevention and control of mental health," responded to an appeal by the established national specialists, and strengthen the mental health work is combined with local actual thinking.

Keywords: Normalized epidemic prevention and control, mental health, collaborative mechanism, content analysis

农村留守初中生手机依赖问题状况的质性研究

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摘要 随着信息技术的迅猛发展,手机已成为人们日常生活中不可或缺的“必备品”。随之,手机依赖这一现象愈发突出,再加上新冠疫情的突发,“停课不停学”网络课堂的开设使得中学生对手机的使用频率逐渐提高。尤其是对于农村留守儿童这一群体,父母不能长期陪伴在孩子身边,孩子需通过手机与父母维持基本的情感联系。其次,孩子大多以祖辈抚养长大,而祖辈的思想观念与生活方式与“互联网的原住民”初中生可谓存在极大的鸿沟,且初中生也正处成长过程的青春期,有着闭锁性、不稳定性、自主性、动荡性等心理特点。通过与手机“做伴”,孩子从中得到一些心理支持与慰藉,这便更容易促成农村留守初中生“手机依赖”这一问题。本研究采用质性研究的方法,通过滚雪球抽样法和典型抽样法,对10位农村留守初中生及其家长、老师进行单独地深入访谈,将访谈过程进行录音后转化成文字资料,借助Nvivo软件对文字资料进行阅读整理、编码归纳。研究发现,在农村留守初中生眼中手机是一个“利大于弊”的东西,他们可以利用手机来学习、娱乐和人际交往通讯等;而家长和老师分别将手机视为“新时代的鸦片”和“校园里的违禁品”。对于手机的使用和管控方面,学生表示“可以自我管控”、“大人干预过多”、“沟通存在代沟”;家长表明“孩子自控能力弱”、“管控即战争”、“不能理解的游戏世界”;老师一方认为“孩子缺乏自控力”、“家校需要联合管控”、“软硬需共施”。与此同时,针对研究所揭示的农村留守初中生手机依赖问题,研究者提出以下对策:1.增进家长与孩子之间的沟通,聆听孩子的心理需求;2.促进家校合作,达成管理共识;3.开展心理主题活动,提高学生自控力;4.树立理想目标,引导积极价值取向。

关键词 手机依赖,留守儿童,初中生,质性研究,个体访谈

A qualitative study on mobile phone dependence of rural left behind junior middle school students

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Abstract: With the rapid development of information technology, mobile phone has become an indispensable "must-have" in people's daily life. With this phenomenon, the phenomenon of mobile phone dependence is becoming more and more prominent. With the sudden emergence of COVID-19, the opening of the network classroom which "suspend classes and stop learning" has made the use frequency of mobile phone among middle school students gradually increase. Especially for the group of left behind children in rural areas, parents can not accompany their children for a long time. Children need to maintain basic emotional contact with their parents through mobile phones. Secondly, most children are raised by their grandparents, and there is a great gap between their grandparents' ideas and lifestyles and the "Internet aborigines" junior middle school students, and junior middle school students are also in the puberty of the growth process, with psychological characteristics such as closeness, instability, autonomy and turbulence. By "keeping company" with mobile phones, children get some psychological support and comfort, which makes it easier to promote the problem of "mobile phone dependence" of rural left behind junior middle school students. This study adopts the method of qualitative research. Through snowball sampling and typical sampling, 10 rural left behind junior middle school students, their parents and teachers are interviewed separately. The interview process is recorded and transformed into written materials. The written materials are read, coded and summarized with the help of NVivo software. The study found that in the eyes of rural left behind junior middle school students, mobile phones are a thing with "advantages outweighing disadvantages". They can use mobile phones to study, entertainment and interpersonal communication; Parents and teachers regard mobile phones as "opium of the new era" and "contraband on campus". In terms of the use and control of mobile phones, students said that "self-control", "too much adult intervention" and "there is a generation gap in communication"; Parents said that "children's self-control ability is weak", "control is war", "incomprehensible game world"; The teacher side believes that

"children lack self-control", "families and schools need joint control" and "both hardware and software need to be implemented". At the same time, aiming at the problem of mobile phone dependence of rural left behind junior middle school students revealed by the Research Institute, the researchers put forward the following countermeasures: 1. Improve the communication between parents and children and listen to children's psychological needs; 2. Promote home school cooperation and reach management consensus; 3. Carry out psychological theme activities to improve students' self-control; 4. Set ideal goals and guide positive value orientation.

Keywords: mobile phone dependence, left behind children, junior high school students, qualitative research, individual interview

新时代高校社团成员获得感：影响因素及其作用机制模型 ——基于扎根理论的探索性研究

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摘要 教育对象获得感的获得程度是衡量教育水平的对象性标准,也是检验思想政治教育实效性的一个关键因素(裴红娟,2021)。高校社团作为大学生思想政治教育重要阵地,其成员获得感是指个体因参与社团活动时得到需求满足,在相应获得后产生正向积极的主观感受。那高校社团成员获得感受到哪些因素影响,其作用机制是如何生成的?这些问题均值得关注。因此,本研究采用质性研究方法收集和分析资料,选取具有高校社团参与经历的10名在校生(4个男性,6个女性)作为访谈对象,围绕他们在参与社团过程中体验到获得感和影响其提升获得感的因素进行了半结构访谈。所有的访谈均被记录下来并转录为文本,根据扎根理论,并采用Nvivo12.0进行三级编码——开放编码、主轴编码和选择编码后进行模型建构。通过探索性的分析得到如下的影响因素模型:兴趣与技能基础是影响高校社团成员获得感的直接因素,社团参与投入度是影响高校社团成员的中介变量,组织氛围和社会支持是影响高校社团成员的调节变量。本研究建构了高校社团成员获得感影响因素模型,为提升高校社团成员获得感水平提供了初步的理论基础。

关键词 获得感,高校社团,扎根理论

Influencing factors and mechanism of the sense of gain of college community members in the new era: An Exploratory study based on grounded theory

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Abstract: The degree of gain of educational objects is the object standard to measure the level of education, and it is also a key factor for testing the effectiveness of ideological and political education (Pei Hongjuan, 2021). College community as an important field of ideological and political education of college students, the sense of gain of its members refers to the individual's need to be satisfied when participating in community activities, and give rise to positive subjective feelings after the corresponding gain. What factors will affect the sense of gain of college community members, and how its mechanism is generated, all of the above research questions are worth mentioning. Therefore, this study adopted qualitative research method to collect and analyze data, and selected 10 students (4 males and 6 females) who have participated in college communities as the interviewees, semi-structured interviews were conducted on the participants' sense of gain and the influencing factors of improving their sense of gain in the process of participating in the community activities. All interviews were recorded and transcribed into texts. According to the grounded theory, Nvivo12.0 was used for three-level coding —open coding、axial coding and selective coding and then the model is constructed. Through exploratory analysis, the following influencing factor models are obtained: interest and skill base are the direct factors that affect the sense of gain of college community

members, engagement of community participation is the intermediary variable that affects college community members, and organizational climate and social support are the moderator variables affecting the sense of gain of college community members. This research constructs a model of the influencing factors of college community members' sense of gain, which provides a preliminary theoretical basis for improving the level of college community members' sense of gain.

Keywords: the sense of gain, college community members, grounded theory

高职生入学适应过程及其影响因素 ——基于对 20 位高职大一新生的质性研究

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摘 要 通过质性研究的方法探索高职生入学适应的过程及其影响因素。研究者采用质性研究所通用的目的性抽样，具体采取了强度抽样和极端型个案抽样相结合的方式，抽取 20 名(男女各 10 名)大一新生作为样本，并在其入学一个月、三个月、六个月对其进行半结构化访谈。运用扎根理论对收集到的资料依次进行初步分析、类属分析和理论建构；运用参与者检验法、非参与者检验法对研究结果进行效度检验。研究得出以下结论：高职生入学适应的过程主要呈现五种模式。模式一：U 型曲线模式，高职生在入学初期对学校生活有着良好的适应，随着时间的进行适应性逐渐降低，当达到最低点时，随着时间流逝，适应性又将逐渐提升。模式二：倒 U 型曲线模式，高职生在入学初期其适应情况较低，随着时间的进行适应性逐渐升高，当达到最高点时，随着时间流逝，适应性又将逐渐降低。模式三：J 型曲线模式，高职生在入学初期对其学校生活适应性较低，但随着时间的进行适应性在逐渐提升中。模式四：反 J 型曲线，高职生在入学初期对其学校生活适应性较高，但随着时间的进行适应性在逐渐降低。模式五：波浪型曲线，高职生在入学之后其适应性一直处于上下波动的状态。同时，高职生的入学适应还受个体因素及其环境因素的影响，个体因素主要包括：入学期待，自我评价等，外部因素主要包括校园环境，教学方式等。

关键词 高职生，入学适应，质性研究

Higher vocational students' admission adaptation process and its influencing factors: Based on the qualitative research of 20 freshmen in Higher Vocational Colleges

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Abstract: Through the method of qualitative research, this paper explores the process and influencing factors of Higher Vocational Students' admission adaptation. The researcher adopts the purposeful sampling commonly used by the qualitative research institute, specifically adopts the combination of intensity sampling and extreme case sampling, selects 20 freshmen (10 males and 10 females) as samples, and conducts semi-structured interviews one month, three months and six months after their admission. Using the grounded theory, the collected data are preliminarily analyzed, taxonomically analyzed and theoretically constructed; Participant test and non participant test were used to test the validity of the research results. The research draws the following conclusions: the process of admission adaptation of higher vocational students mainly presents five modes. Mode 1: U-shaped curve mode. In the early stage of enrollment, higher vocational students will have a good adaptation to school life. With the progress of time, the adaptability will gradually decrease. When it reaches the lowest point, the adaptability will gradually improve with the passage of time. Mode 2: inverted U-shaped curve mode. In the early stage of enrollment, the adaptability of higher vocational students is low. With the progress of time, the adaptability gradually increases. When it reaches the highest point, the adaptability will gradually decrease with the passage of time. Model 3: J-curve model. Higher vocational students have low adaptability to their school life at the beginning of enrollment, but their adaptability is

gradually improving with time. Mode 4: anti-j curve. Higher vocational students have high adaptability to their school life at the beginning of enrollment, but the adaptability is gradually decreasing with time. Mode 5: wavy curve. The adaptability of higher vocational students has been fluctuating up and down after enrollment. At the same time, the admission adaptation of higher vocational students is also affected by individual factors and their environmental factors. Individual factors mainly include admission expectation, self-evaluation, etc. external factors mainly include campus environment, teaching methods, etc.

Keywords: Higher Vocational Students, admission adaptation, qualitative research

5.28“脑电相关技术专业委员会”分组展贴报告

刷新训练对青年人工作记忆的影响-来自行为及 ERP 的证据

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摘要 刷新作为工作记忆中央执行功能的重要组成, 具有一定的可塑性, 通过对其进行训练可提升个体工作记忆水平。**实验设计:** 本研究以深圳市大学城研究生为研究对象, 采用 2 (工作记忆水平: 高能力组、低能力组) × 3 (认知负荷: n=2、3、4) × 3 (训练序号: 1、2、3) 混合实验设计, 使用字母 n-back 任务对两组被试进行间隔时间为一周的三次训练, 探究刷新训练对青年人工作记忆表现及神经活动存在怎样的影响。**结果:** 1) 行为指标 ACC: 认知负荷主效应显著, 训练序号主效应极其显著, 训练序号与工作记忆水平间交互作用显著, 无其他显著主效应和交互作用; RT: 工作记忆水平和训练序号各自的主效应极其显著, 二者之间的交互作用十分显著, 认知负荷的主效应及其他交互作用均不显著; TP: 工作记忆水平和训练序号各自的主效应极其显著, 认知负荷的主效应及所有交互作用均不显著。2) ERP P300 平均波幅: 除了 F3 电极点认知负荷及训练序号间交互作用显著外, F3 电极点所有主效应和其他交互作用均不显著; 其余电极点除 FZ 电极点认知负荷、认知负荷与训练序号间交互作用边缘显著之外, 其余交互作用均不显著; P300 潜伏期: 所有主效应及交互作用均不显著。3) 结果表明个体工作记忆表现 (即测量的 ACC、RT、TP 等行为指标) 与神经活动 (P300 平均波幅) 是有一定相关性的, 但高、低能力组的 P300 平均波幅与不同认知负荷下训练间相关性和相关程度是不同的。**结论:** 刷新训练可以提升青年人的工作记忆表现, 但对不同工作记忆水平的改善机制不同; 个体 P300 平均波幅与工作记忆表现存在一定的相关关系, 但会随着认知负荷的变化有所差异。

关键词 刷新训练, 工作记忆, ERP, 青年人

The influence of refresh training on Young Adults' working memory – the evidence from behavior and ERP

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Abstract: As an important component of central executive function in working memory, refresh has been proved to be malleable to a certain extent, training on it can improve the level of individual working memory. **Experimental design:** select graduate students from Shenzhen university town as the research object, this study adopts 2 (working memory level: high capacity, low capacity groups) × 3 (cognitive load: n = 2, 3, 4) × 3 (training sequence number: 1, 2, 3) the mix design of experiment, using the letter n - back task for time interval between two groups of subjects for three times a week training, explore the refresh training to young people working memory performance and neural activity. **Results:** 1) ACC: the main effect of cognitive load was significant, the main effect of training sequence

number was extremely significant, and the interaction between training sequence number and working memory level was significant. RT: the main effects of working memory level and training sequence are extremely significant, and the interaction between them is very significant, while the main effects and other interactions of cognitive load are not significant. TP: the main effects of working memory level and training sequence were significant, while the main effects of cognitive load and all interactions were not significant. 2) average amplitude of ERP P300: all the main effects and other interactions of F3 electrode points were not significant, except the significant interaction between cognitive load and training sequence. In the rest of the electrode points, the interaction between cognitive load and cognitive load and the training sequence number was not significant except the significant edge. P300 incubation period: all main effects and interactions are not significant. 3) The results show that individual working memory performance (that is, measured behavioral indicators such as ACC, RT, TP) is related to neural activity (average amplitude of P300), but the average amplitude of P300 in the high and low ability groups is different with different cognitive loads. The correlation and degree of correlation between trainings are different. **Conclusion:** refresh training can improve the performance of working memory in young people, but the improvement mechanism is different for different working memory levels. There is a certain correlation between the average amplitude of body P300 and the performance of working memory, but it will be different with the change of cognitive load.

Keywords: Refresh training, Working memory, ERP, Young adults

视听觉反馈模式对神经反馈学习影响研究

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摘要 脑电神经反馈 (Electroencephalography neurofeedback, 简称 EEG-NF) 利用操作性条件反射原理, 通过视觉或听觉等反馈模式将脑电活动实时呈现给被试, 使得被试学会自主调节脑电活动 (简称为神经反馈学习), 以期改善相应的认知或行为表现。虽然诸多研究表明 EEG-NF 对各种心理障碍的症状和健康个体的认知表现等都具有改善作用, 但其效果具有较大的个体差异性。其中, 神经反馈学习是神经反馈有效性的关键因素。有研究表明, 成功的神经反馈学习伴随目标行为的改善, 而失败的神经反馈学习则不能获得目标行为的改善。因此, 如何优化神经反馈方案从而提升神经反馈学习效果成为重要的研究问题。反馈模式是影响神经反馈方式的重要因素之一, 但哪种反馈模式更有利于神经反馈学习却鲜有探讨。因此, 本研究通过对 Pz 位置进行 alpha (8-12 Hz) 增强训练, 探讨不同的反馈模式 (视觉反馈 vs. 听觉反馈) 对神经反馈学习的影响。实验选取 20 名健康被试, 随机分配到视觉反馈训练组和听觉反馈训练组。被试接受连续 5 天的听觉/视觉神经反馈训练, 每天训练 5 组, 每组 5 分钟, 并且在每天训练前后分别进行 2 分钟的睁眼静息态测试。视觉组利用拼图游戏进行反馈; 听觉组以风景图作为注视屏幕, 利用被试自己所选的最爱的歌曲及海浪声这两种声音进行反馈。与前人研究相比, 该训练模式趣味性更高, 更能吸引被试的注意力, 提高被试的动机。训练结束后, 计算每个被试的短时神经反馈学习指标 (即 alpha 随组数的变化趋势) 和长期神经反馈学习指标 (即 alpha 随天数的变化趋势)。结果发现, 虽然每组内的被试之间的神经反馈学习有个体差异, 但两组被试在组平均上都显示出 alpha 活动在训练过程中得到增长。此外, 无论是短时还是长期神经反馈学习指标, 其在不同的神经反馈模式之间并无显著差异。结果表明, 听觉神经反馈和视觉反馈一样有效, 为今后的神经反馈模式确定提供了依据, 即被试可以选择自己喜欢的视觉或听觉反馈模式。

关键词 EEG-NF; 神经反馈学习; 神经反馈模式; alpha

A comparison of visual vs. auditory feedback modalities effects on neurofeedback learning

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Abstract: Electroencephalography neurofeedback (EEG-NF) that utilizes the principle of operant conditioning presents EEG activity to individuals in real time through visual or auditory feedback modalities, and enables participants to learn to self-regulate EEG activity (referred to as neurofeedback learning), with the purpose of improving corresponding cognitive or behavioral performance. Although many studies have shown that EEG-NF can improve the symptoms of various psychological disorders and the cognitive performance of healthy individuals, its effects have large individual differences. Among them, neurofeedback learning is a key factor in the effectiveness of neurofeedback. Studies have shown that successful neurofeedback learning accompanies the improvement of target behavior, while failed neurofeedback learning cannot achieve the improvement of target behavior. Therefore, how to optimize the neurofeedback protocol to improve the effectiveness of neurofeedback learning has become an important research question. Feedback modality is a key factor of neurofeedback, but which feedback modality is more effective for neurofeedback learning is rarely discussed. Therefore, this study explored the effects of different feedback modality (visual feedback vs. auditory feedback) on neurofeedback learning in alpha (8-12 Hz) enhancement neurofeedback training on the Pz position. Twenty healthy participants were randomly assigned to the visual feedback training group or the auditory feedback training group. Each training session includes five 5-min training blocks and 2-min eyes-open resting EEG recording before and after the training respectively. The visual group used a jigsaw puzzle to present the alpha activity to the participants, while the auditory group used the landscape picture as the screen and used the participants' favorite songs and the sound of the waves to present the alpha activity to the participants. Compared with previous studies, this training modality is more interesting and can attract the participants' attention and improve their motivation. After training, the short-term neurofeedback learning index (the change trend of alpha over blocks within sessions) and the long-term neurofeedback learning index (the change trend of alpha across sessions) were calculated for each participant. As a result, although there were inter-individual differences in neurofeedback learning within each group, the mean alpha amplitude across all participants in each group significantly increased within sessions and across sessions. In addition, no matter whether short-term or long-term neurofeedback learning index, there was no significant difference between the two groups. The results suggest that auditory neurofeedback is as effective as visual feedback, providing a basis for selection of modality in future neurofeedback studies, that is, participants can choose their favorite visual or auditory feedback modality.

Keywords: EEG-NF; neurofeedback learning; the modality of neurofeedback; alpha

意识状态对反馈评估影响的 ERP 研究

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摘要 为了适应环境, 人们利用多种信息来不断调整自己的行为, 从而达到既定的目标。反馈加工是人脑对反馈结果进行评估的重要心理加工过程。反馈相关负波(FRN)作为反馈相关脑电成分, 表示人脑监控系统对行为结果的评估, 其中消极反馈比积极反馈在头皮前部引起更大的负波。在无意识状态下, 人们在主观意识下无法辨别阈下呈现信息。本研究把阈下反馈信息和脑电技术结合起来, 使用时间估计任务探索监控系统对阈下信息的评估情况, 即阈下反馈信息对 FRN 的影响。具体来说, 本研究通过使用连续闪烁抑制范式(CFS)

将反馈信息置于不同意识状态下,系统考察了客观阈上、主观阈上、主观阈下和客观阈下呈现反馈信息能否诱发反馈相关负波 FRN。实验一使用连续闪烁抑制范式来呈现反馈信息,探讨客观阈上和客观阈下呈现反馈信息对反馈加工的影响。行为结果表明无论是客观阈上还是客观阈下,消极反馈都比积极反馈对接下来的行为产生更大的调整。但是脑电结果表明,在客观阈上呈现时出现 FRN 效应,即消极反馈比积极反馈诱发出更大的 FRN 波幅,在客观阈下呈现时,消极反馈和积极反馈诱发的 FRN 波幅没有显著差异。实验二在实验一的基础上,调整意识状态至主观报告阈限水平,进一步探索客观阈上呈现、主观阈上呈现和主观阈下呈现对反馈加工的影响。结果发现,行为结果中不同意识状态(客观阈上呈现、主观阈上呈现、主观阈下呈现)对行为调整没有显著差异,消极反馈比积极反馈对接下来的行为产生更大的调整。脑电结果中客观阈上呈现条件诱发出 FRN 效应,主观阈上呈现和主观阈下呈现均没有出现 FRN 效应。本研究表明,无意识反馈信息能够对行为产生影响,优化行为的调整。相对于无意识反馈影响行为所体现的对于阈下信息初级加工,FRN 表现的是对于反馈信息更高级的加工,需要意识的参与。其中,反馈相关负波受到注意资源的影响。

关键词 反馈加工,连续闪烁抑制范式(CFS),反馈相关负波(FRN),意识状态

The influence of states of consciousness on feedback evaluation:an ERP study

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Abstract: In order to adapt to the environment, people use a variety of information to constantly adjust their behavior to achieve the set goals. Feedback processing is an important psychological processing process in which the human brain evaluates the feedback results. The feedback-related negative wave (FRN) is used as a feedback-related EEG component to represent the evaluation of behavioral outcomes in the human brain monitoring system. In the unconscious state, people can not distinguish subliminal presentation of information in the subjective consciousness. This study put the subliminal feedback combined with electrical technology, using the time estimate task exploration evaluation of subliminal information monitoring system, i.e. subthreshold feedback effects on FRNS. Specifically, in this study, the continuous scintillation suppression paradigm (CFS) was used to place the feedback information in different states of consciousness, and systematically investigated whether feedback information can be induced on the objective supraliminal, subjective supraliminal, subjective subliminal, and objective subliminal. Experiment1 uses the continuous flash suppression paradigm to present feedback information, and explores the effect of feedback information on feedback processing under the objective supraliminal and objective subliminal. Behavioral results show that both supraliminal and objective subliminal, negative feedback produces greater adjustment to the following behaviors than positive feedback. However, the results of EEG showed that the FRN effect appeared on the supraliminal, that is, the negative feedback induced a larger FRN amplitude than the positive feedback. When presented under the objective subliminal, there was no significant difference between the negative feedback and the positive feedback-induced FRN amplitude. On the basis of Experiment 1, Experiment 2 adjusts the state of consciousness to the threshold level of subjective report, and further explores the impact of on objective supraliminal presentation, subjective subliminal presentation and subjective subliminal presentation on feedback processing. It was found that different states of consciousness (objective supraliminal presentation, subjective subliminal presentation, subjective subliminal presentation) in behavioral outcomes did not significantly differ in behavioral adjustment, negative feedback produces greater adjustment to the following behaviors than positive feedback. EEG results clearly showed FRN effect on objective supraliminal, none of the subjective supraliminal and subjective subliminal presentations showed an FRN effect. This study shows that unintentional feedback can influence behavior and optimize behavioral adjustment. Compared with the unconscious feedback affecting the behavior of the primary processing of subliminal information, FRN represents a higher level of processing for feedback information, requiring the participation of consciousness. Among them, the feedback-related negative waves are affected by the attention resources.

Keywords: feedback processing, continuous flash suppression(CFS), feedback related negativity(FRN), consciousness state

首发未服药抑郁症患者的额叶 α 不对称性

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摘要 研究背景: 抑郁症 (Major Depressive Disorder, MDD) 的静息态脑电 (Resting-State Electroencephalogram, rsEEG) 研究较一致地表明, 额叶 α 不对称性 (Frontal Alpha Asymmetry, FAA, $\ln[\text{右}] - \ln[\text{左}]$) 是抑郁的风险因素之一, 但关于 FAA 能否用于识别抑郁症尚存在争议。因此, 本研究拟进一步考察 MDD 患者在静息状态下是否存在 FAA 异常特征, 并检验异常的 FAA 能否有效识别 MDD。**方法:** 42 名首发未服药 MDD 患者和 42 名在性别、年龄、智力水平与 MDD 患者相匹配的健康对照 (Health Control, HC) 被试完成了 rsEEG 的采集, 并完成了评估抑郁水平的流调中心用抑郁量表 (Center for Epidemiologic Studies Depression Scale, CES-D)。采用 2 (组别: MDD, HC) $\times$ 2 (左右额叶: 左, 右) $\times$ 5 (电极位置: FP1/FP2; F1/F2; F3/F4; F5/F6; F7/F8) 重复测量方差分析比较 MDD 组与 HC 组在功率谱密度值 (Power Spectral Density, PSD) 上的差异; 采用 2 (组别: MDD, HC) $\times$ 5 (电极位置: FP2-FP1; F2-F1; F4-F3; F6-F5; F8-F7) 重复测量方差分析比较 MDD 组与 HC 组的 FAA 差异; 重复测量方差分析的效应量大小用偏 η^2 表示。采用最小绝对收缩和选择算子 (Least Absolute Shrinkage and Selection Operator, LASSO) 回归筛选可有效识别 MDD 的 FAA 指标。基于 LASSO 回归的结果, 使用支持向量机 (Support Vector Machine, SVM) 结合十折交叉验证法对 MDD 与 HC 进行分类。采用皮尔逊相关分析计算所筛选的 FAA 特征与 CES-D 得分的相关性。**结果:** (1) PSD 的组别 $\times$ 左右额叶 $\times$ 电极位置的交互作用显著 ($F_{(4,79)} = 6.69, p < 0.001$, 偏 $\eta^2 = 0.25$), 简单效应分析表明, 在 MDD 组, 各电极对中右侧电极的 PSD 均小于左侧电极的 PSD (p 均 < 0.05); 在 HC 组, 各电极对中的右侧电极的 PSD 值均大于左侧电极 (p 均 < 0.05)。 (2) FAA 的组别 $\times$ 电极位置的交互作用显著 ($F_{(1,82)} = 35.56, p < 0.001$, 偏 $\eta^2 = 0.30$), 简单分析效应表明, 在纳入的 5 个电极对中, MDD 组的 FAA 值均显著低于 HC 组 (p 均 < 0.01)。 (3) LASSO 回归与 SVM 结果显示, rsEEG 的 FAA ($\ln[F4] - \ln[F3]$ 、 $\ln[F6] - \ln[F5]$ 、 $\ln[F8] - \ln[F7]$) 可有效识别 MDD (准确率=87.50%、敏感性=90.00%、特异性=83.33%、ROC 曲线下面积=0.90)。 (4) FAA ($\ln[F4] - \ln[F3]$ 、 $\ln[F6] - \ln[F5]$ 、 $\ln[F8] - \ln[F7]$) 与 CES-D 得分呈显著负相关 ($|r|$ 在 0.48-0.50 之间, p 均 < 0.001)。**结论:** 静息状态下, MDD 患者右侧额叶的活动强度较左侧额叶更强, 其额叶不对称性表现出与一般个体相反的模式, 这可能是 MDD 潜在的神经电生理标记之一。

关键词 抑郁症, 静息态, 脑电, 额叶 α 不对称性, 支持向量机

The Frontal Alpha Asymmetry in Patients with First-episode Drug-naïve Major Depressive Disorder

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Abstract: Background: Previous studies of resting-state Electroencephalogram (rsEEG) in major depressive disorder (MDD) have consistently shown that frontal alpha asymmetry (FAA, $\ln[\text{right}] - \ln[\text{left}]$) might be one of the risk factors for depression, while there has been controversy about whether FAA could be used to identify depression. Therefore, the present study aimed to reexamine the abnormal FAA in MDD patients during resting state and to

investigate whether the abnormal FAA could identify MDD. **Method:** Forty-two first-episode, drug-naïve MDD patients and 42 gender-, age-, and intelligence- matched healthy controls (HCs) completed rsEEG. All participants also completed the Center for Epidemiologic Studies Depression Scale (CES-D). The group differences in power spectral density (PSD) were compared by $2 \times (\text{group: MDD, HC}) \times 2$ (left or right frontal: left, right) $\times 5$ (electrode position: FP1/FP2, F1/F2, F3/F4, F5/F6, F7/F8) repeated measurement analysis of variance. The group differences in FAA were compared by 2 (group: MDD, HC) $\times 5$ (electrode positions: FP2-FP1, F2-F1, F4-F3, F6-F5, F8-F7) repeated measures ANOVA. Partial η^2 was adopted to estimate the effect size of the repeated measures ANOVA. The least absolute shrinkage and selection operator (LASSO) regression was conducted to select the FAA indexes which could effectively identify MDD patients. Based on the indexes selected by LASSO regression, the support vector machine (SVM) combined with a ten-fold cross-validation method was performed to classify MDD and HC groups. Pearson analysis was used to calculate the correlation between the FAA indexes and CES-D scores. **Results:** (1) The interaction of PSD between group $\times$ left or right frontal $\times$ electrode position was significant ($F_{(4,79)}=6.69, p<0.001$, partial $\eta^2=0.25$). Simple effect analysis showed that the PSD values of the right electrode were lower than those of left electrode in the MDD group (all $p<0.05$), while in the HC group, the PSD values of right electrode were all significantly higher than those of the left electrode (all $p<0.05$). (2) The interaction of FAA between group $\times$ electrode location was significant ($F_{(1,82)}=35.56, p<0.001$, partial $\eta^2=0.30$). Simple effect analysis showed that the FAA values of MDD group were significantly lower than those of HC group in each electrode pair (all $p<0.01$). (3) The results of LASSO regression and SVM showed that the FAA of rsEEG ($\ln[F4]-\ln[F3]$, $\ln[F6]-\ln[F5]$, $\ln[F8]-\ln[F7]$) could identify MDD patients (accuracy=87.50%, sensitivity=90.00%, specificity=83.33%, area under the ROC curve=0.90). (4) FAA of rsEEG ($\ln[F4]-\ln[F3]$, $\ln[F6]-\ln[F5]$, and $\ln[F8]-\ln[F7]$) were negatively correlated with CES-D scores ($|r|$ being 0.48-0.50, all $p<0.001$). **Conclusions:** In the resting state, the activity intensity of the right frontal was stronger than that of the left frontal in MDD patients. The opposite pattern to general population in frontal alpha asymmetry may be one of the potential neurophysiological markers of MDD.

Keywords: Major depressive disorder, Resting state, Electroencephalogram, Frontal alpha asymmetry, Support vector machine

空间指令对数字-空间联结的影响：来自 ERP 的证据

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摘要 数十年来，数字与空间的关系一直引起人们的兴趣。但数字-空间联结的起源仍然存在争议。有两种流行的假说用于解释数字-空间联结：视觉空间编码假说和言语-空间编码假说。本实验中，通过在词语标签（左-右，右-左）后呈现阿拉伯数字（1-9，除了5），让被试对数字大小做出判断，使用事件相关电位（ERPs）技术探索数字空间联合反应编码（SNARC）效应在空间指令条件下的编码机制和时间进程。行为结果发现：空间指令条件下，出现了显著的 SNARC 效应，物理一致性主效应显著，物理一致条件相比，物理不一致条件的反应时更长；词语一致性主效应不显著；物理一致性和词语一致性交互作用不显著。表明视觉空间编码是 SNARC 效应主要的编码方式。脑电结果发现：锁时于刺激时，在 130ms 到 450ms 的时间窗内，物理一致性主效应显著，物理不一致的 s-LRP 起始潜伏期比物理一致的更长，说明 SNARC 效应出现在反应准备之前的知觉阶段；锁时于反应时，在 -260ms 到 -50ms 的时间窗内，R-LRP 的起始潜伏期不存在差异，说明 SNARC 效应与反应准备和反应执行无关。研究结果说明，在空间指令条件下，会出现显著的 SNARC 效应，并且视觉空间编码是数字-空间联结主要的编码方式，这时的 SNARC 效应是数字和空间之间的显性联结，而不是概念之间的相互联结。SNARC 效应出现在早期知觉阶段，而与反应选择无关。

关键词 SNARC，视觉空间，言语-空间，单侧化准备电位

The impact of spatial-number association under spatial instruction: Evidence from ERP

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Abstract: The relationship of number and space has aroused interest for decades. But the origin of spatial-number association remains controversial. There are two popular proposals used to explain the spatial-number association: the visuospatial coding account and verbal-spatial coding account. In this experiment, by presenting Arabic digits(1-9, except 5) after the word labels(Left-Right, Right-Left), the subjects were asked to do magnitude comparison task. Event-related potentials (ERPs) were used to explore the encoding mechanism and time course of the spatial-number association response coding (SNARC) effect under spatial instruction condition. The behavioral results found that: under spatial instruction condition, there is a significant SNARC effect. And the main effect of physical congruency is significant. Longer response times in the physically incongruent compared with physically congruent. The main effect of word congruency is not significant. There is an interaction effect between physical congruency and word congruency. It shows that visuospatial coding is the main coding mechanism of SNARC effect. The results of EEG showed that the main effect of physical congruency is significant in the time window of 130ms to 450ms during the time-locked stimulation, and the onset latency of physically incongruent s-LRP is longer than that of physically congruent, indicating that the SNARC effect appears in the stage of perception before reaction preparation. When the time is locked in the reaction, there is no difference in the onset latency of R-LRP within the time window of -260ms to -50ms, indicating that the SNARC effect has nothing to do with the preparation of the reaction and the execution of the reaction. The research results show that under the spatial instruction condition, there will be significant SNARC effect, and visuospatial coding is the main coding mechanism of space-number association. At this time, the SNARC effect is the explicit connection between number and space, rather than concept. The SNARC effect appears in the early stage of perception, and has nothing to do with response-related.

Keywords: SNARC, visuospatial, verbal-spatial, lateralized readiness potential

视觉数字与随机生成数字对行为的影响：一项 ERP 研究

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摘要 空间-数字反应编码联合效应（Spatial-Numerical Association of Response Codes Effect，即 SNARC 效应）指人们对数字进行大小或奇偶判断时，左手对小数反应更快，而右手对大数反应更快的现象，是探究人类知觉与行为之间相互关系的证据之一。已有研究使用自由选择范式证实了数字空间表征对行为决策的影响。本研究将视觉数字和随机生成数字与自由选择范式相结合来进一步探究数字的空间表征。研究的目的是采用 ERP 技术考察对视觉数字和随机生成数字做自由按键反应时，是否均存在 SNARC 效应，以及 SNARC 效应的发生阶段和脑机制是否存在异同。本研究采用 2（刺激类型：视觉数字，随机生成数字）×2（数字大小：小数，大数）的实验设计。首先给被试呈现数字（1、2、8 或 9）、符号（#或&）和问号（?）中的任意一个刺激，呈现时间为 1600ms。当刺激为数字或符号时，被试需选择用左手或右手对刺激做自由按键反应；当呈现的刺激是问号（?）时，被试要先在头脑中随机生成“1、2、8、9”中的一个数字后再自由选择按左键或右键，且要求按左右键以及想到四个数字的次数都要尽量平均。最后，要求被试对视觉数字或随机生成数字进行大小判断与奇偶判断，据此推断被试随机生成的数字。行为结果显示：视觉数字与随机生成数字均存在 SNARC 效应，即左手对小数反应更多，右手对大数反应更多。脑电结果显示：（1）视觉数字的 SNARC 效应出现在左半球额部和顶枕部的 N2 波幅上，对应于反应选择阶段，且额部 SNARC 一致条件的 N2 波幅比不一致更负，顶枕部不一致条件的 N2 波幅比一致更负。（2）随机生成数字的 SNARC 效应出现在顶枕部的 N1、P2 波幅上，且不一致条件的 N1 波幅比一致条件更负，一致条件的 P2 波幅比不一致条件更正，表明随机生成数字的 SNARC 效应出现于早期的知觉表征阶段及反应选择阶段。因此，随机生成数字在刺激表征的

早期阶段就开始出现了 SNARC 效应，而视觉数字的 SNARC 效应只出现在反应选择阶段。以上结果表明，在感知觉未输入数字信息时，数字与空间之间的联结仍然存在，并且会影响人们的反应选择。

关键词 SNARC 效应，随机生成数字，自由选择范式，ERP

The impact of visual numbers and randomly generated numbers on behavior: an ERP study

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Abstract: Spatial-Numerical Association of Response Codes Effect (SNARC effect) refers to the tendency during number processing that the left hand responds faster to small numbers, and the right hand responds faster to large numbers, which is one of the evidences to explore the relationship between human perception and behavior. Previous studies with the help of free-choice paradigm have Confirmed the influence of number representation on behavioral decision-making. This study combines visual numbers and randomly generated numbers with free choice paradigm to further explore the spatial representation of numbers. The aim of this study is to use ERP technology to investigate whether there is SNARC effect when making free key response to visual numbers and randomly generated numbers, and whether there are similarities and differences in the occurrence stage and brain mechanism of SNARC effect. Our study adopted the experimental design of 2 (stimulus type: visual numbers, randomly generated numbers) $\times$ 2 (number magnitude: small, large). Firstly, the participant are presented with any one of the numbers (1, 2, 8, 9), symbols (#, &) or question mark(?) as stimulus for 1600ms. When the stimulus is a number or a symbol, the participants need to press the left or right button freely; When the question mark appears, the participants should first randomly generated a number of “1, 2, 8, 9” in their mind, and then randomly pressed the left or right key. And participants were asked to press the left and right keys and think of four numbers as evenly as possible. Finally, the subjects were asked to make a magnitude and parity judgments on the visual numbers or randomly generated numbers, which is the basis for us to infer the specific numbers that the participants generated. The behavioral result showed that there exist SNARC effect in both visual numbers and randomly generated numbers, that is, the left hand reacts more to small numbers and the right hand reacts more to large numbers. The EEG results showed that: (1) the SNARC effect of visual numbers appeared on the N2 amplitude of the frontal and parieto-occipital regions of the left hemisphere, corresponding to the reaction selection stage, and the N2 amplitude of the frontal SNARC consistent condition was more negative than that of the inconsistent condition, and the N2 amplitude of the parieto-occipital inconsistent condition was more negative than that of the consistent condition. (2) The SNARC effect of randomly generated numbers appears on the N1 and P2 amplitudes of the occipital part, and the N1 amplitude of the inconsistent condition is more negative than that of the consistent condition, and the P2 amplitude of the consistent condition is corrected than that of the inconsistent condition, indicating that the SNARC effect of randomly generated numbers appears in the early perceptual representation stage and response selection stage. Therefore, the SNARC effect of Visual Numbers appears in the early stage of stimulus representation, while the SNARC effect of Randomly Generated Numbers only appears in the response selection stage. These results show that the connection between number and space still exists when digital information is not input, and it will affect people's reaction choice.

Keywords: SNARC effect, Randomly Generated Numbers, Free-choice paradigm, ERP

5.29“心理学与社会治理专业委员会”分组展贴报告

新冠疫情下锻炼游戏对居家锻炼的心理促进作用

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摘要 在新冠疫情期间, 居家锻炼成为了人们共同关心的问题。锻炼场地不再开放, 外出需佩戴口罩也限制了户外锻炼, 因此很多人选择用锻炼游戏进行居家锻炼。锻炼游戏是一种需要进行粗大动作运动的电子游戏, 这类游戏近年来通常用于培养青少年的运动兴趣及与解决日益增长的超重问题。本文运用文献研究法与逻辑分析法总结出新冠疫情下锻炼游戏对居家锻炼的心理促进作用有: 1、转变认知。锻炼游戏以游戏为载体, 将锻炼与富有挑战和乐趣的游戏结合起来, 转变人们对居家锻炼是枯燥、痛苦行为的认知。2、激发兴趣。锻炼兴趣是建立在个体对锻炼的认识、判断与评价之上的, 很多人会因为没有兴趣而拒绝居家锻炼, 而锻炼游戏将锻炼行为融入到游戏的形式之中, 利用个体对游戏的兴趣让他们产生对居家锻炼的兴趣。3、调整动机。人们进行锻炼的动机多且杂, 而在使用锻炼游戏进行锻炼时, 因各种目的而锻炼的动机会被置于次要层次, 而在游戏中击败敌人获得奖励的动机将被置于首位。这种简单、直接的动机在一定程度上可以将人们的唤醒水平控制在一定的水平上, 并且还可以通过更改游戏难度来控制唤醒水平的高低。4、目标设置。锻炼游戏将常规的很难获得及时、强力反馈的时长、体重、组数等健身目标转化为在游戏中击败越来越强的敌人并获得及时、强力反馈的游戏中的小目标。这可以激励人们坚持锻炼。5、增强自我效能。锻炼游戏为锻炼者带来了锻炼行为的可控性知觉以及通过游戏奖励的形式给出的良好结果的及时反馈, 这会逐步提高锻炼者的自我效能感, 从而产生良性循环。6、保护自尊。很多自尊较低的锻炼者不会去健身房等开放式场合进行锻炼, 锻炼游戏成为了具有独立性、封闭性的居家锻炼的有效工具, 这既能保护他们的自尊, 还能逐步提高他们的自尊。综上所述, 锻炼游戏在新冠疫情下对居家锻炼有着多种心理促进作用。这种促进不仅仅局限于疫情下或只在居家锻炼中, 还可以体现并使用于任何情境下的初学者或刚刚开始锻炼的群体中。

关键词 新冠疫情, 锻炼游戏, 居家锻炼, 心理促进因素

The psychological promoting effect of exergames on home exercise under the circumstance of COVID-19

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Abstract: During the coVID-19 epidemic, exercise at home has become a common concern. Exercise venues are no longer open, and the need to wear masks outside limits outdoor exercise, thus, many people choose to use exergames to exercise at home. Exergames are videogames that require gross motor activity. These games have been used in recent years to develop young people's interest in sports and to deal with the growing problem of overweight. Literature research and logical analysis are used here to summarize that the psychological promoting effects of exercise games on home exercise under the circumstance of COVID-19 are: 1. Change cognition. Exergames use games as the carrier and combine exercise with challenging and fun games to change people's cognition that exercise at home is boring and painful. 2. Stimulate interest. Exercises' interest is based on the individual's understanding, judgment and evaluation of exercise. Many people will refuse to do exercise at home because they have no interest in it. However, exergames integrate exercise behavior into the form of game and use the individual's interest in game to generate their interest in doing exercise at home. 3. Adjust motivation. People have many and varied motivations for

exercising, but when exercising with an exercise game, motivation for exercising for various purposes is put on the back burner, while motivation to win a reward for defeating an enemy in the game is put on the top priority. This kind of simple, direct motivation can control people's arousal level to a certain extent, and can also control the level of arousal by changing the difficulty of the game. 4. Goal-setting. Exergames transform regular fitness goals such as time, weight, and group counts, which are difficult to get timely and powerful feedback, into small goals in games that defeat increasingly strong enemies and get timely and powerful feedback. This can motivate people to keep exercising. 5. Enhance self-efficacy. Exergames bring exercisers' controllable perception of exercise behavior and timely feedback of good results in the form of game rewards, which will gradually improve their sense of self-efficacy, thus creating a virtuous cycle. 6. Protect self-esteem. Many exercisers with low self-esteem will not go to the gym or other open places to exercise, exergames have become an effective tool for independent, closed home exercise, which can not only protect their self-esteem, but also gradually improve their self-esteem. In conclusion, exergames have a variety of psychological promoting effects on home exercise under the circumstance COVID-19. This promotion is not limited to the epidemic or only happened in home exercise, but can also be reflected and applied to beginners or people just starting exercise in any situation.

Keywords: COVID-19, exergame, home exercise, psychological promoting effect

精神健康社工在社会心理服务支持中的作用 ——基于《丹麦社工服务法》的启示

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摘 要 在社会治理体系中, 精神健康问题越来越受到重视。当我们谈及心理问题或者精神疾病患者时, 多数想到的是精神科医生和心理治疗师, 心理咨询师。他们在患者的康复过程中无可厚非, 起着不可替代的作用。然而这种从病症上和心理机理上的调整真的能够全面的帮到精神疾病的患者群体吗? 时至今日, 在很多的地方他们依旧被当作“疯子”看待, 有很大一部分的患者群体因为“污名化”以及社会舆论的作用下不敢就医。在经济和精神的双重压力下, 这种问题层出不穷, 甚至很多的家长宁愿把患有精神疾病的孩子放在家里, 这不仅对其个人成长极其不利, 也成为了社会治理进程中的一大隐患。同时由于心理治疗领域中对于社会因素的关注缺失, 很大一部分的患者在医院住院或者在家隔离治疗的状态下, 开始出现与社会脱节, 自我效能感降低等现象。因此帮助此类群体的社会功能恢复便显的尤为重要。在欧美等国, 精神健康社工的存在对于解决此类问题就显的尤为重要, 他们通过社区支持给了精神疾病患者更多的人际交往示范以及情感连接, 帮助来访者找寻自己对于社会的价值, 消除他们身上对于精神疾病的羞耻感。要做好我国的心理健康社会支持, 我们就应该向其他先进各国学习。丹麦作为世界上最幸福的国家之一, 其心理健康领域的社会支持在国际领先, 本文通过对《丹麦社工服务法》的全文翻译研究, 发现其对于精神疾病患者的个人日常照护与帮助、住房出行问题, 未成年人及弱势群体的强制就医执行、个人就业与财政救济、护理家庭与寄养家庭, 家属关怀与支持, 社工行为监督以及法律效力等方面都作出了明确的阐述, 这是非常值得我们借鉴与思考的, 希望能够对我国的心理健康社工服务作出启发和思考。

关键词 精神健康社工, 社区支持, 社会心理服务, 丹麦社工服务法

The Role of Mental Health Social Workers in Social Psychological Service Support——Based on the Enlightenment of the "Notice of Social Services Act"

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Abstract: In the social governance system, mental health problems have been paid more and more attention. When we talk about mental problems or mental illness, most of us think of psychiatrists and psychotherapists, Psychological

counselor. They are beyond reproach in the process of patients' recovery and play an irreplaceable role. However, can this adjustment in terms of symptoms and psychological mechanism really help the group of patients with mental illness in an all-round way? Today, they are still treated as "madmen" in many places, and a large part of the patients are afraid to seek medical treatment because of "stigmatization" and the influence of public opinion. Under the dual pressure of economy and spirit, this kind of problem emerges endlessly. Even many parents prefer to keep their children with mental illness at home. This is not only extremely detrimental to their personal growth, but also becomes a big hidden danger in the process of social governance. At the same time, due to the lack of attention to social factors in the field of psychotherapy, a large number of patients are in hospital or in isolation at home. Some phenomena began to appear, such as being out of touch with the society, decreasing the sense of self-efficacy and so on. Therefore, it is particularly important to help these groups restore their social function. In Europe and the United States and other countries, the existence of mental health social workers is particularly important for solving such problems. Through community support, they have given people with mental illness more demonstrations of interpersonal communication and emotional connection, helping visitors find their value to society, and eliminating their sense of shame about mental illness. To do a good job of mental health and social support in our country, we should learn from other advanced countries. Denmark is one of the happiest countries in the world, and its social support in the field of mental health is internationally leading. Based on the translation study of the full text of the "Notice of Social Services Act", this article finds that it have made clear explanations of provides daily care and assistance for patients with mental illness, housing and travel issues, enforcement of mandatory medical treatment for minors and vulnerable groups, personal employment and financial relief, Nursing families and foster families, care and support of family members, supervision of social work behavior and legal effects, etc. This is very worthy of our reference and thinking, and hope to inspire and thinking about mental health social work services in our country.

Keywords: Mental Health Social Workers, Community support, Social Psychological Service, Notice of Social Services Act

COVID-19 常态化防控期间国内大众的心理反应及相关因素研究

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摘要 目的:考察新冠肺炎疫情常态化防控期间国内大众的心理反应,探究本阶段时期相比于新冠疫情爆发初期大众心理的特点,为减少疫情的长期心理影响提供参考。方法:采取滚雪球抽样法,通过网上问卷平台收集 526 份有效问卷。采取知觉心理力量表(CPSS)、领悟社会支持量表(PSSS)、焦虑自评量表(SAS)、创伤后应激障碍检查表第五版(PCL-5)分别对国内大众的心理压力、社会支持、焦虑、创伤后应激障碍(PTSD)水平进行测量。同时收集人口学变量及新冠疫情期间的主观和客观收入满意度。结果:总样本中轻度焦虑及以上个体共 104 人(19.8%), PTSD 阳性个体 125 人(23.8%), 具有健康威胁性压力个体 130 人(24.7%)。在控制人口学变量后,以社会支持为自变量,以压力、焦虑、PTSD 为因变量进行多元回归。结果表明,社会支持可以预测压力、焦虑和 PTSD 水平($F_1=21.285, F_2=9.818, F_3=5.683, p<0.05; B_1=-0.174, B_2=-0.207, B_3=-0.16, ps<0.05$)。对于非学生样本,控制人口学变量后多元回归方程结果表明,社会支持可以预测压力、焦虑和 PTSD 水平($F_1=11.128, F_2=6.392, F_3=3.559, p<0.05; B_1=-0.178, B_2=-0.171, B_3=-0.164, ps<0.05$)。此外,客观收入变化水平也与三种心理健康问题呈显著相关($F_1=11.128, F_2=6.392, F_3=3.559, p<0.05; B_1=-1.185, B_2=-1.521, B_3=-2.138, ps<0.05$)。结论:疫情防控期间,社会支持是国内大众心理健康的重要保护性因素,对减轻压力、减少焦虑情绪体验和 PTSD 症状均具有良好的效果。在非学生的成人人群中,除了社会支持外,收入水平的变化也是心理健康的重要影响因子,疫情对收入的影响可以使个体产生不良的心理反应。应该加大对大众的社会支持水平,关注疫情期间社会就业与收入问题。

关键词 新冠肺炎, 心理压力, 社会支持, 焦虑, 创伤后应激障碍

Study of psychological responses and associated factors during the regular prevention and control of COVID-19 in China

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Abstract: Objective: To investigate psychological response of domestic public during the regular prevention and control of COVID-19, and explore current psychological characteristics compared to the initial outbreak, offer information to reduce the long-term psychological impact of COVID-19. Methods: The participants were selected by snowball sampling method. 526 valid questionnaires were collected through an online questionnaire platform. Chinese Perceived Psychological Stress Scale (CPSS), Perceived Social Support Scale (PSSs), Self-rating Anxiety Scale (SAS) and The PTSD Checklist for DSM-5 (PCL-5) were used to measure the levels of psychological stress, social support, anxiety and post-traumatic stress disorder (PTSD). At the same time, demographic variables, income change and income satisfaction during the outbreak period were collected. Results: There were 104 (19.8%) individuals with mild anxiety or above, 125 (23.8%) with positive PTSD and 130 (24.7%) with health threatening stress. After controlling demographic variables, Multiple Regression Analysis was conducted with social support as independent variable, stress, anxiety and PTSD as dependent variables. The results showed that social support associated with stress, anxiety and PTSD levels ($F_1=21.285$, $F_2=9.818$, $F_3=5.683$, $p<0.05$; $B_1=-0.174$, $B_2=-0.207$, $B_3=-0.16$, $ps<0.05$). For non-students samples, the results of multiple regression equation after controlling demographic variables showed that social support associated with stress, anxiety and PTSD levels ($F_1=11.128$, $F_2=6.392$, $F_3=3.559$, $p<0.05$; $B_1=-0.178$, $B_2=-0.171$, $B_3=-0.164$, $ps<0.05$). In addition, the change degree of income level also associated with the three kinds of mental health problems ($F_1=11.128$, $F_2=6.392$, $F_3=3.559$, $p<0.05$; $B_1=-1.185$, $B_2=-1.521$, $B_3=-2.138$, $ps<0.05$). Conclusion: during the regular prevention and control of COVID-19, as an important protective factor for mental health of the public in China, social support has effect on reducing stress, anxiety and PTSD symptoms. For non-student groups, in addition to social support, the change of income level is also an important factor affecting mental health. The impact of COVID-19 on income can make individuals produce adverse psychological reactions. We should increase the level of social support to the public and pay more attention to employment and income problems during the regular prevention and control period.

Keywords: COVID-19, stress, social support, anxiety, PTSD

新冠肺炎患者的创伤后应激症状及其影响因素研究

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摘要 目的: 分析新型冠状病毒肺炎 (COVID-19) 患者创伤后应激症状水平及其影响因素, 为确诊患者心理干预和防护提供数据支撑。**方法:** 本研究采用问卷调查的方式对 258 名 COVID-19 确诊患者进行研究。采用创伤后应激障碍自评量表 5 (PCL-5) 评估患者创伤后应激症状 (PTSS), 该问卷共 20 题采用 0-4 级评分, 将评分为 2 或以上的项目视为症状阳性, 遵循 DSM-5 诊断规则至少要求: B 标准 1 项 (问题 1-5), C 标准 1 项 (问题 6-7), D 标准 2 项 (问题 8-14), E 标准 2 项 (问题 15-20) 符合 PTSS 阳性。**结果:** 258 名患者平均年龄 56.63 岁, 52.7% 为女性, 12.4% 曾诊断为重症或以上, 从症状出现到初次就医的中位时间为 2 天 (四分位区间 1-4 天), 从症状出现到确诊的中位时间为 8 天 (四分位区间 3-13 天)。所有患者 PCL-5 总分为 17.04 ± 13.63 , 按照 DSM-5 诊断规则 PTSS 阳性者 48 人, 占比 18.6%。B 标准 (重复体验) 阳性者 127 人, 占比 49.2%; C

标准（回避）阳性者 99 人，占比 38.4%；D 标准（认知和情绪的消极改变）阳性者 88 人，占比 34.1%；E 标准（警觉性增高）阳性者 81 人，占比 31.4%。女性患者比男性患者 PCL-5 得分高（ 19.54 ± 14.58 VS. 14.25 ± 11.95 , $p < 0.01$ ）。在男性患者当中，出现疑似症状后推迟就医者（ ≥ 3 天）比及时就医者（ < 3 天）PCL-5 得分高（ 19.36 VS. 14.05 , $p < 0.05$ ），出现疑似症状后诊断延迟者（ > 7 天）比及时诊断者（ ≤ 7 天）PCL-5 得分高（ 20.00 VS. 12.30 , $p < 0.01$ ），在女性患者中并未发现延迟就医或诊断对其创伤后症状水平有显著性影响。**结论：**早就医早诊断不仅影响 COVID-19 患者疾病的治疗和干预，也显著影响患者的心理状态。尤其是男性患者，推迟就医或诊断会增加其创伤后应激症状水平。

关键词 新冠肺炎，创伤后应激障碍，影响因素

A cross sectional study on post-traumatic stress symptoms and influence factors in 258 patients diagnosed with COVID-19

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Abstract: Objective: This article was to study the levels of post-traumatic stress symptoms and influence factors in patients with COVID-19, so as to provide data support for psychological intervention and protection in confirmed patients. Methods: 258 patients diagnosed with COVID-19 in Wuhan were investigated by questionnaire. Post-traumatic stress symptoms (PTSS) were assessed by self-rating scale for post-traumatic stress disorder (PCL-5). Respondents were asked to rate how bothered they had been by each of 20 items in the past month on a 5-point Likert scale ranging from 0-4. The PCL-5 can determine a provisional diagnosis by treating each item rated as 2 = "Moderately" or higher as a symptom endorsed, then following the DSM-5 diagnostic rule which requires at least: 1 Criterion B item (questions 1-5), 1 Criterion C item (questions 6-7), 2 Criterion D items (questions 8-14), 2 Criterion E items (questions 15-20). Results: The average age of 258 patients was 56.63 years old, 52.7% of them were female, and 12.4% had been diagnosed as severe or above. The median time from symptom onset to first hospital visit was 2 days (quartile range 1-4 days), and the median time from symptom onset to diagnosis was 8 days (quartile range 3-13 days). The mean total score of PCL-5 in all patients was 17.04 ± 13.63 . According to DSM-5 diagnostic rules, 48 patients were positive in PTSS, accounting for 18.6%. 127 (49.2%) were positive in Criterion B (intrusion symptoms), 99 (38.4%) were positive in Criterion C (avoidance), 88 (34.1%) were positive in Criterion D (negative alterations of cognitions and mood), and 81 (31.4%) were positive for standard e (increased arousal). The PCL-5 score of female patients was higher than that of male (19.54 ± 14.58 vs. 14.25 ± 11.95 , $P < 0.01$). Among male patients, the PCL-5 score of patients with delayed medical assistance seeking (≥ 3 days) after suspected symptoms was higher than that of patients seeking medical assistance in time (< 3 days) (19.36 vs. 14.05 , $P < 0.05$). Patients with delayed diagnosis (> 7 days) had higher PCL-5 scores than those with timely diagnosis (≤ 7 days) (20.00 vs. 12.30 , $P < 0.05$). However, there was no significant effect of delayed medical assistance seeking and diagnosis on post-traumatic symptoms in female patients. Conclusion: Early medical assistance and diagnosis not only affect the treatment and intervention of patients with COVID-19, but also significantly affect the psychological state of patients. Especially in male patients, delayed medical assistance seeking and diagnosis may increase PTSD symptoms.

Keywords: COVID-19, PTSD, influence factors

信息引导策略对环保行为的影响

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摘要 环保行为是社会可持续发展的重要组成部分。通过呈现信息影响环保行为，是相对成本低廉且便捷有效的干预方式。呈现不同的信息对环保行为的影响程度是不同的，我们研究两种社会规范和两种环境信息对环保行为的影响。我们假设在社会规范里，描述性规范和命令性规范都能促进环保行为；在环境信息里，呈现

积极信息和消极信息都能提高环保行为。我们招募了 80 名大学生，他们是自愿参加实验并且不知道实验的目的。我们使用环保行为量表将参与者分为高低组，高低组被纳入五个处理水平。研究采用了 Greater Good Game 范式，该范式区分了环保行为和合作行为。我们向参与者展示了不同规范和不同信息引导策略的信息，然后他们将虚拟货币投资到不同的账户：投给自己，投给团体，投给环保组织。我们用每个参与者在环保账户中投入的金额来衡量参与者的环保行为。我们的目的是探索环境信息和社会规范对环保行为的影响。研究采用多项式处理树模型(MPT)建模，通过 multiTree v046 软件进行参数估计及嵌套模型比较。与假设 1 一致，与控制组相比，积极环境描述干预提高环保行为概率；检验假设 2，消极环境信息对环保行为干预效果不显；检验假设 3，描述性规范对环保行为干预不显著；与假设 4 一致，命令性规范提高环保行为概率。研究发现，积极信息可以增加环保行为的频率，而消极信息并没有促进环保行为。强制性规范干预对环保行为的影响显著，而描述性规范干预的效果不显著。本研究探讨了呈现什么样的信息可以促进环保行为。为未来环保行为的宣传提供了更加具体、高效的策略。在开展环保行为信息宣传时，使用积极信息，命令式规范更能促进环保行为。

关键词 环保行为，信息引导策略，环境信息，社会规范，多项式加工树模型

The influence of information guidance strategy on environmental behavior

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Abstract: Environmental behavior plays a significant role in developing the sustainable society. Presenting information is a relatively low-cost, convenient and effective intervention method to influence environmental behavior. We studied two types of social norms and two types of environmental information that affected environmental behavior and we found that presenting different information has different effects on environmental behaviors. We assumed that in terms of social norms, both descriptive norms and imperative norms could promote environmental behavior. And in terms of environmental information, presenting both positive and negative information could improve environmental behavior. We expect to provide empirical evidence for scientific intervention through research on the factors that influence environmental behaviors. We recruited 80 participants in Shaanxi Normal University. The study adopted the Greater Good Game paradigm. Unlike previous studies that did not distinguish between environmental behavior and cooperative behavior, this paradigm distinguished environmental behavior from cooperative behavior. We presented participants with information of different norms and different information guidance strategies, then, they invested virtual currency into different accounts. The choices were: vote for your own account, vote for the group's account and vote for environmental protection organizations' account. We used the amount of virtual currency by each participant in the environmental protection account to measure the environmental behavior of the participants. Our purpose was exploring the impact of environmental information and social norms on environmental behavior. We recruited 80 participants. The study adopted the Greater Good Game paradigm. Unlike previous studies that did not distinguish between environmental behavior and cooperative behavior, this paradigm distinguished environmental behavior from cooperative behavior. We presented participants with information of different norms and different information guidance strategies, then, they invested virtual currency into different accounts. The choices were: vote for your own account, vote for the group's account and vote for environmental protection organizations' account. We used the amount i virtual currency by each participant in the environmental protection account to measure the environmental behavior of the participants. Our purpose was exploring the impact of environmental information and social norms on environmental behavior. Study used a two-stage multinomial processing tree (MPT) modeling, we conducted parameter estimation and nested model comparisons by multiTree v046. Consistent with Hypothesis 1, epositive> econtrol, compared with the control group, the positive environmental description intervention increased the probability of environmental behavior. When adding

parameter limit $e_{\text{positive}} = e_{\text{control}}$, test hypothesis 1, the degree of model misfit increased significantly, and the parameters are significantly different, positive environmental information significantly promotes environmental behavior; add parameter limit $e_{\text{negative}} = e_{\text{control}}$, test hypothesis 2, parameters difference were not significant, the effect of negative environmental information on environmental behavior is not significant. Add parameter limit $e_{\text{description}} = e_{\text{control}}$, test hypothesis 3, parameters difference were not significant, descriptive norms do not significantly interfere with environmental behavior; consistent with hypothesis 4, $e_{\text{command}} > e_{\text{control}}$, compared with the control group, imperative norms increased the probability of environmental behavior. Add parameter limit $e_{\text{command}} = e_{\text{control}}$, test hypothesis 4, the degree of model misfit increased significantly, and the parameters difference were significant, the imperative description significantly promotes environmental behavior. Positive information effectively increased the frequency of environmental behaviors, while negative information did not; the effect of imperative norms increased the frequency environmental behavior, but descriptive norms did not. On the basis of previous research, this research further explores what kind of information is presented could promote environmental behavior. It provides a more specific and efficient strategy for the publicity of future environmental behaviors. When carrying out environmental behavior information promotion, use more positive information and use less negative information. Moreover, in Chinese culture, the use of imperative norms can better promote environmental protection.

Key words: Environmental behavior, information guide strategy, environmental information, social norms, MPT

贫困循环：资源稀缺影响人们对不公平分配的容忍

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摘 要 摆脱贫困是一个世界性的难题，世界各国都在为消除贫困而努力。稀缺理论(Scarcity Theory)指出，因资源稀缺而产生的稀缺心态会导致一系列的心理后果，从而导致贫困的延续。以往鲜有研究探讨资源稀缺会如何影响人们对不公平分配的态度。本研究提出假设，资源稀缺会增加人们对不公平产出分配（金钱分配）的容忍度，降低人们对不公平投入分配（工作投入分配）的容忍度。本研究改编了最后通牒博弈范式，在博弈过程中同时考虑不公平的投入分配和不公平的产出分配两个方面，考察了主观资源稀缺和客观资源稀缺如何影响人们在最后通牒博弈中对不公平分配的容忍度。研究结果发现，主观资源稀缺和客观资源稀缺会增加人们对不公平的产出分配（金钱分配）的容忍度。但主观资源稀缺会降低人们对不公平的投入分配（工作投入分配）的容忍度以及投入意愿。以上研究结果可能说明，主观资源稀缺和客观资源稀缺存在不同的心理效应，导致在人们在主观资源稀缺和客观资源稀缺条件下对不公平投入分配的态度不一致。同时，主观资源稀缺和客观资源稀缺增加人们对不公平产出分配的容忍可能会导致资源稀缺状态的进一步延续，形成贫困循环。此外，本研究还讨论了以上研究结果对贫困干预的启示。

关键词 贫困，资源稀缺，不公平分配容忍，最后通牒博弈

The Cycle of Poverty: Resource Scarcity Influences People's Tolerance towards Unequal Distribution

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Abstract: As getting rid of poverty is a worldwide issue, all countries around the world are making efforts to eliminate poverty. Scarcity theory suggests that the scarcity mindset stemming from resource scarcity results in a number of psychological consequences, which can cause the continuation of poverty. Given that little research has explored how resource scarcity affects people's tolerance towards unequal distribution, the present study hypothesized that resource scarcity increases people's tolerance towards unequal distribution of output (e.g., money) and decreases people's tolerance towards unequal distribution of input (e.g., workload). By adapting ultimatum game

paradigm to consider both unequal input distribution and unequal output distribution, the present study examined how subjective and objective resource scarcity affected people's tolerance towards unequal distribution in the ultimatum game. The results indicated that people with high level of subjective or objective resource scarcity held higher tolerance towards unequal distribution of output (e.g., money). However, people with high level of subjective resource scarcity held lower tolerance towards unequal resource input (e.g., workload) and less willingness to input. These results may demonstrate that subjective resource scarcity and objective resource scarcity have different psychological effects, and cause different attitudes towards unequal input. Meanwhile, subjective resource scarcity and objective resource scarcity increase people's tolerance to unequal distribution of output, which may lead to further continuation of resource scarcity. Moreover, the potential contributions of these psychological consequences to poverty intervention are discussed.

Keywords: poverty, resource scarcity, tolerance towards unequal distribution, ultimatum game

金钱启动对疫情风险感知的影响

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摘要 2020 年年初新冠肺炎疫情突然爆发并迅速蔓延, 疫情持续至今。新冠疫情作为一次重大的公共卫生安全事件, 被感染的风险威胁着社会上的每一个人, 影响着个体的身体健康与情绪状态。而民众对风险感知的水平在一定程度上影响着国家防控措施的顺利实施。同时, 金钱在人们在当今社会生活中是不可或缺的一种资源, 在人们生活中扮演着重要角色。个体在面临重大威胁事件时, 金钱作为一种重要的社会资源, 能否降低个体对于威胁事件的感知? 已有很多前人研究证明金钱概念启动能够使个体产生更强的控制感。控制感作为风险感知的一个重要维度, 影响着个体的风险感知水平。本研究基于金钱启动的社会资源理论与自给自足理论, 试图探讨金钱是否会对民众风险感知水平有所影响。本研究招募了 66 名大学生被试, 采用单因素被试间设计进行研究。研究结果发现, 相对于非金钱启动组的被试, 金钱启动组的被试对风险的感知水平更低。这可能是因为金钱启动降低了个体对负性信息的敏感性, 从而降低个体的风险感知水平, 这有利于减少他们的恐慌情绪, 对疫情防控的顺利进行以及对社会安全的保障都起着积极作用。本研究将金钱启动与个体对于疫情风险感知相联系, 拓展了金钱启动的研究领域, 为防疫工作的顺利进行提供了理论基础, 具有重大实践意义。

关键词 金钱启动, 风险感知, 新冠疫情, 负性情绪

The influence of money priming on the perception of epidemic risk

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Abstract: COVID-19, which broke out in the early 2020 and spread quickly, has been constantly influencing our lives until now. COVID-19 is a serious public health and safety incident. The risk of being infected is threatening everyone in society, affecting our health condition physically and mentally. And people's level of the perception of risk affects the smooth implementation of national prevention and control measures to a certain extent. Meanwhile, as an essential resource, money plays an important role in our lives. Can money, which is viewed as an important social resource, reduce individuals' sense of threat when they are faced with threatening incidents? Many previous studies have proved that money priming can make individuals have more sense of control. That's because sense of control is an important dimension of risk perception. It affects the level of risk perception. Based on social resource theory and self-contained theory, this study tries to explore whether money has an influence on people's risk perception level. We recruited 66 college students as subjects and adopted a single factor inter-subject design to conduct the research. The result showed that compared with participants of the non-monetary priming group, those in the monetary priming group had a lower level of risk perception to negative information. This may be caused by the fact that money reduced the sensibility to negative information of the non-money priming group and thus lowered their level of risk

perception and reduced their panic. The result contributes to the smooth progress of the prevention and control of the pandemic as well as the guarantee of social security. In this study, money priming and individual perception of epidemic risk are linked, which expands the research field of money priming, provides a theoretical basis for the smooth progress of epidemic prevention, and has great practical significance.

Key Words: money priming, risk perception, COVID-19, negative emotions

信任违背损害了工作记忆刷新能力

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摘要 信任渗透于一切社交活动, 是社会资本之一。但是当个体的信任没有得到满足时, 信任违背就会发生, 这种信任危机会直接损害个体的心理健康, 危害到我国的经济发展、政治安定和社会氛围, 对整个社会的和谐有序运行构成严重威胁。目前大多数研究主要关注在信任违背后采用哪种策略修复信任效果更好, 但是很少有人去系统地探讨具体应该修复哪些方面, 即信任被违背后受害方的认知具体受到怎样的影响。根据双加工模型, 控制加工的削弱和对负性或动机相关刺激自动加工的增强是导致抑郁, 焦虑和成瘾等冲动行为的重要原因。研究发现信任违背可能会损害控制性加工, 具体表现为相比经历信任, 经历信任被违背个体的工作记忆刷新能力受损。但是我们不清楚是信任违背损害了控制加工还是信任提高了控制加工。其次, 研究发现信任违背会促使对负性刺激的自动加工增强, 表现为经历信任违背后个体对负性刺激产生注意偏向。那么是否信任违背对控制加工的削弱会受到情绪刺激的调节, 即相对中性刺激, 信任违背个体对负性刺激的刷新能力更弱? 因此, 本研究第一个研究目的是验证信任违背对工作记忆刷新能力的削弱, 第二个是探讨其工作记忆的受损是否受到外在刺激的情绪效价所调节。本研究采用重复信任游戏诱发信任违背, 控制组不涉及信任和不信任反馈。随后采用字母版的 n-back 任务测量工作记忆刷新能力, 情绪性词语版的 n-back 任务测量情绪性工作记忆, 并且后者同时记录 ERP。结果发现, 在字母版的 n-back 任务中, 信任违背组在 2-back 水平下正确率低于控制组。在情绪性词语版的 n-back 任务中, 信任违背组在 P2 上的平均波幅小于控制组, 在 P3 上的平均波幅两组没有显著差异。这表明信任违背损害了一般性工作记忆, 并且无论外在刺激的效价如何, 这种工作记忆能力的受损都同等严重。因此, 今后缓解信任违背的负面影响时可以从控制加工角度入手。

关键词 信任违背, 工作记忆刷新能力, 情绪性工作记忆, 双加工模型

Trust violations impairs working memory updating

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Abstract: Trust permeates all social activities and is one of social capital. But when the individual's trust is not satisfied, trust violation will occur. This trust crisis will directly damage the individual's mental health, endanger the country's economic development, political stability and social atmosphere. Previous research mainly focuses on which strategy is better to repair trust behind the violation of trust, but few study systematically explore which aspects should be repaired, that is, how the cognition of the victim is affected by the violation of trust. According to the dual-processing model, the weakening of control processing and the enhancement of automatic processing of negative or motivation-related stimuli are important causes of impulsive behaviors such as depression, anxiety, and addiction. Studies have found that trust violations may impair controlled processing, which is manifested in the impairment of working memory updating when individuals experiencing trust violations compared to experiencing trust. But it is still unclear whether trust violation damages control processing or trust improves control processing.

Secondly, the study found that trust violation can promote the automatic processing of negative stimuli, which is manifested as the individual's attention bias towards negative stimuli after experiencing trust violation. So whether the weakening of control processing by trust violation will be moderated by emotional stimuli, that is, relatively neutral stimuli, and trust violation individuals have weaker ability to update negative stimuli? Therefore, the first purpose of this study is to verify that trust violation impairs working memory updating, and the second is to explore whether the impairment of working memory is moderated by the emotional valence of external stimuli. This study uses repeated trust games to induce trust violations, and the control group does not involve trust and distrust feedback. Subsequently, the letter version of the n-back task was used to measure the ability of working memory updating, and the emotional word version of the n-back task was used to measure the emotional working memory, and the latter recorded ERP at the same time. It was found that in the letter version of the n-back task, the accuracy of the trust violation group was lower than the control group at the 2-back level. In the emotional word version of the n-back task, the amplitude of P2 was smaller in the trust violation group than that of the control group, and there was no significant difference in the amplitude on P3 between the two groups. This shows that trust violation damages general working memory, and regardless of the valence of external stimuli, the impairment of this working memory ability is equally serious. Therefore, when mitigating the negative impact of trust violation in the future, we can start from the perspective of control process.

Keywords: trust violation, working memory updating, emotional working memory updating, dual-process model

国内特殊儿童文娱活动现状和未来发展——以自闭症儿童为例

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摘要 过去 10 年国内社会支持问卷调查显示, 社会支持仍面临着多方面的困难, 如经济、教育和精力的欠缺和不足。根据面向自闭症儿童康复机构教师和自闭症儿童家长开展的调查和访谈调研报告, 我国自闭症儿童康复机构存在人力资源管理、内部管理、财务管理等方面制度不完善, 执行能力不强, 机构整体管理运作能力较低等问题。同时, 自闭症儿童康复机构提供的服务内容需要丰富, 并且在规模与场地方面也需要完善, 服务过程的监督改进评估机制不健全, 缺乏规范的服务成效测量工具。本文将介绍国内外近 15 年的特殊儿童社会支持与服务的进展, 借鉴最新的社会支持机构内容, 浅谈国内社会支持的未来发展。其中介绍近年 VR (虚拟现实 Virtual Reality) 技术改善自闭症儿童刻板行为; 动物治疗在自闭症儿童疗愈、改善、适应人际交流过程的研究与成果。其次将系统式家庭心理治疗的理念与框架引入当今特殊儿童社会支持机构中, 增设面向特殊儿童家庭成员的服务, 协助家长和社会更加理解特殊儿童与其沟通与交互; 向家长提供面向中国 ASD (自闭症 Autism Spectrum Disorder) 教育与康复从业者的 RBT (Registered Behavior Technician) 培训课程, 为特殊儿童的康复提供更大可能性; 设立情绪疏导专栏, 减轻家长的压力, 舒缓他们的情绪, 促进特殊儿童疗愈与成长, 改善家庭氛围, 讨论现有特殊儿童社会支持机构未来如何逐步转化为具有可持续性的特殊儿童文娱活动中心。

关键词 社会支持, 特殊儿童, 自闭症, 文娱活动

The present and future development of recreational activities for children with special needs in China: Recreational centers for Autism Spectrum Disorder children and families

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Abstract: Domestic social support questionnaire surveys over the past 10 years showed that social support still faced difficulties in many aspects, such as the lack of economical, educational, and physical/psychological support. According to the previous investigation reports conducted on teachers of autistic children rehabilitation institutions and parents of autistic children, issues in financial, internal, and human resource management. Low work motivation/implementation and poor institutional system structure has been a malingering issue that has yet seen better solutions. Services provided by rehabilitation institutions for autistic children lack diversity. Monitoring and evaluation of existing social support systems lack standardized evaluation procedures and tests to examine the effectiveness of current social support systems and programs. The present study aims to review the progress of social support and services for special children both domestically and internationally, revolving mainly around autism spectrum disorder (ASD) children over the past 15 years. Furthermore, discuss possible future developments in social support for ASD children in China. Such as the advent of Virtual Reality (VR) technology and VR related works to intervene ASD children's repetitive behavior. Including employment of animal therapy in the treatment process, to improve and enhance ASD children's interpersonal communication skills. The present study also propose a novel concept and framework of ASD intervention by introducing systematic family therapy into current social support systems for children with special needs. Specifically, the need to diversify and enrich current services that social support programs provide for family members of special need children to help parents and the society to better understand their child. To achieve this, Registered Behavior Technician (RBT) training courses could be provided to parents of ASD children and rehabilitation institution teachers in China to better facilitate the treatment process. Emotional guidance and related counselling services to relieve parents' stress, soothe their emotions and promote the treatment, growth, and development of children with special needs should also be provided. The implications and necessity of a reform on the existing social support system/institutions for children with special needs to transform into sustainable recreational centers that hosts recreational activities aimed to facilitate rehabilitation of children with special needs and provide family members support in the future are examined.

Keywords: Social support, children with special needs, Autism Spectrum Disorder, Recreational activities

5.30“文化心理学专业委员会”分组展贴报告

孝道与幸福感的跨文化研究:感恩与宽恕的中介作用

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摘要 孝道是子女对父母采取的一套社会态度和行为。为了研究孝道与幸福感之间的关系,并探讨这种关系是否因国家而异,本研究基于二元孝道模型和幸福感研究的现状,分析了不同国家的二元孝道对主观幸福感的影响,并探讨了感恩和宽恕的中介作用。本研究采用跨文化研究方法,选取中国大学生300人(男性89人,年龄18-30岁),伊斯兰国家学生303人(男性204人,年龄18-46岁)。采用二元孝道量表(DFPS)、埃蒙斯情绪指标(EMI)、生活满意度量表(LSS)、心田宽恕量表(HFS)和感恩问卷-6(GQ-6)测量二元孝道、主观幸福感、宽恕和感恩的水平。结果表明:(1)互惠孝与感恩、宽恕、主观幸福感正相关,而权威孝与感恩、宽恕、主观幸福感负相关。(2)感恩在互惠孝与主观幸福感之间起中介作用,互惠孝正向预测感恩和主观幸福感,感恩正向预测主观幸福感。然而,当自变量为权威孝时,模型不成立。(3)宽恕在互孝和主观幸福感之间起中介作用,互孝正向预测宽恕和主观幸福感,宽恕正向预测主观幸福感。然而,当自变量为权威孝道时,模型不成立。在这一过程中,互惠孝对宽恕的预测作用以及宽恕对主观幸福感的预测作用因国家不同而不同。因此,本研究揭示了孝道对幸福感的作用机制,并比较了不同文化背景下的差异,对学校和家庭

的孝道教育具有一定的启发作用。

关键词 双元孝道，感恩，宽恕，主观幸福感，跨文化

A Cross-cultural study of Filial Piety and Well-being: The mediating role of Gratitude and Forgiveness

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Abstract: Filial piety is a set of social attitudes and behaviors of children for the purpose of their parents. To investigate the relationship between filial piety and well-being and to explore whether this relationship varies across countries. Based on the dual filial piety model and the status of well-being research. This study analysis the effects of dual filial piety on subjective well-being (SWB) in different countries, and examines the mediating effects of gratitude and forgiveness. In this study, 300 Chinese college students (89 males, aged 18-30 years), 303 Students from Islamic countries (204 males, aged 18-46 years) were selected by cross-cultural study. Dual Filial Piety Scale (DFPS), Emmons Mood Indicator (EMI), Life Satisfaction Scale (LSS), Heartland Forgiveness Scale (HFS) and The Gratitude Questionnaire-6 (GQ-6) were used to measure the levels of dual filial piety, subjective well-being, forgiveness and gratitude. The results showed that: (1) reciprocal filial piety was positively correlated with gratitude, forgiveness, and SWB, while authoritative filial piety was negatively correlated with gratitude, forgiveness, and SWB. (2) Gratitude played a mediating role between reciprocal filial piety and SWB, that is, reciprocal filial piety positively predicted gratitude and SWB, and gratitude positively predicted SWB. However, the model is not valid when the independent variable is authoritative filial piety. (3) Forgiveness played a mediating role between reciprocal filial piety and SWB, that is, reciprocal filial piety positively predicted forgiveness and SWB, and forgiveness positively predicted SWB. However, the model is not valid when the independent variable is authoritative filial piety. In this process, the country plays a moderating role in the effect of reciprocal filial piety on forgiveness and the effect of forgiveness on subjective well-being. Therefore, this study reveals the influence mechanism of filial piety on well-being, and compared the differences between different cultural backgrounds, which has a certain enlightening effect on the education of filial piety in schools and families.

Keywords: Dual filial piety, Gratitude, Forgiveness, Subjective well-being, Cross-cultural

双元孝道在促进内、外群体道德关怀中的作用： 中国与印尼学生的跨文化研究

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摘 要 孝道是子女对父母采取的一套社会态度和行为。然而, 孝道与对不同社会成员的道德关怀之间是否存在联系尚不清楚。因此, 本研究旨在探讨中国和印尼样本在双元孝道与道德关怀的关系上是否存在差异, 并探讨自我与他人之间的心理距离的中介作用。本研究共选取 429 名中国大学生 (男性 171 人, 年龄 18-20 岁) 和 363 名印尼大学生 (男性 174 人, 年龄 23-29 岁), 分别完成了双元孝度量表 (DFPS)、自我与他人心理距离量表 (IOS) 和道德关怀圈量表 (CMR) 的自我报告测量。结果表明: (1) 互惠孝和权威孝都与自我和他人的心理距离呈正相关。互惠孝与对内群体的道德关怀正相关, 与外群体的道德关怀负相关, 而权威孝则相反。 (2) 互惠孝通过缩小自己与亲属、陌生人的心理距离来增强对外群体的道德关怀, 国家的差异可以调节互惠孝对道德关怀的影响。 (3) 权威孝可以直接正向预测对外群体的道德关怀。此外, 权威孝可以拉近自我与朋友之间的心理距离, 进而减少对外群体的道德关怀。当中介变量改为自我与陌生人的心理距离时, 这种效应就会逆转。因此, 本研究揭示了不同文化背景下孝道对道德关怀关系的潜在机制。值得注意的是, 权威孝可以促进对外群体的道德关怀, 所以我们认为, 权威孝也需要提倡。家庭和学校要重视孝道的培养, 从而促进自我与他人的心理整合, 增强对他人的道德关怀。

关键词 权威孝, 互惠孝, 道德关怀, 心理距离, 跨文化

Dual Filial Piety plays different roles in facilitating Moral Concern for in~and out~ group : a Cross-cultural Study comparing Chinese and Indonesian students

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Abstract: Filial piety is a set of social attitudes and social behaviors of children towards their parents. However, it is still unclear whether there is a connection between filial piety and the moral concern for different social members. Therefore, this study aims to investigate whether there are differences in the relationship between dual filial piety and moral concern in Chinese and Indonesian participants, and to explore the mediating role of psychological distance between self and others. 429 Chinese college students (171 males, aged 18-20 years) and 363 Indonesian college students (174 males, aged 23-29 years) were included in this study who completed the Dual Filial Piety Scale (DFPS), Inclusion Others in the Self Scale (IOS) and Circle of Moral Regard (CMR). The results showed that: (1) Reciprocal filial piety and authoritative filial piety were both positively associated with the psychological distance between self and others. Reciprocal filial piety is positively associated with the moral concern for the in-group, and negatively associated with the moral concern for the out-group, while authoritative filial piety is just the opposite. (2) Reciprocal filial piety can enhance the moral concern for out-groups by reducing the psychological distance between self and relatives and between self and strangers, and country can moderate the influence of reciprocal filial piety on moral concern. (3) Authoritative filial piety positively predicted out-group. However, authoritative filial piety can reduce the psychological distance between self and friends to reduce the moral concern for the out-group. This effect was reversed when friends who were psychologically distant from themselves were replaced with strangers. Therefore, this study reveals the influence mechanism of filial piety on the relationship of moral concern in different cultural backgrounds. It is worth noting that authoritative filial piety can promote the moral concern for out-groups, so we believe that authoritative filial piety also needs to be advocated. Families and schools should pay attention to the cultivation of filial piety, so as to promote the psychological integration of individuals and others, and thus enhance the moral concern for different groups.

Keywords: Authoritative filial piety, Reciprocal filial piety, Moral concern, Psychological distance, Cross-cultural

个人主义调节选择自主性对幸福感的影响程度： 基于全球调查数据的分析

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摘要 选择自主性对幸福感的影响是决策领域的重要话题，以往研究者认为相比西方文化，在东方文化中选择自主性对幸福感的贡献程度不大，但这一猜想缺乏实证数据的直接验证。本研究通过对两批全球调查数据的分析，证明选择自主性对不同文化下的国民幸福感影响程度有所不同。研究一基于 2021 年全球幸福指数报告数据集和霍夫斯泰德文化维度数据，通过对 82 个国家和地区的探索，发现选择自主性对国民幸福指数的主效应显著，同时个人主义和选择自主性对国民幸福指数的交互作用显著，一个社会的个人主义程度越高，选择自主性影响国民幸福指数的效应量越大；将各个地区的人均 GDP、国民预期健康寿命、对腐败的感知程度、社会支持、慷慨程度等其他可能影响幸福感的因素作为控制变量后，该效应仍然存在。研究二基于 2007 年全球幸福指数报告数据集和霍夫斯泰德文化维度数据再次重复了上述分析过程并得到相同结论，证明了这一效应的跨时间稳定性。总结来说，本研究发现了文化维度在影响幸福感的因素中的重要地位，自主性在不同文化下对人的心理健康和行为有着不同程度的影响；自主性的积极影响更多与建立在个人主义意识形态上的西方文化紧密相关，在制定有关提高中国国民幸福感的相关政策时，要考虑到我国独特的集体主义文化背景。

景和相互依赖的行为模式。

关键词 个人主义与集体主义, 国民幸福指数, 选择自主性, 文化差异

Individualism moderates the degree to which choice autonomy affects happiness: Predicting happiness from choice autonomy in 82 societies

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Abstract: The influence of autonomy on happiness is an important topic in the field of decision making. Previous researchers believed that compared with western culture, the contribution of choice autonomy to happiness in eastern culture is small, but this conjecture lacks direct verification of empirical data. By analyzing two batches of global survey data, this study proves that the degree of influence of choice autonomy on citizen happiness under different cultures is different. Study 1 based on 2021 global happiness index data sets and Hofstede's culture dimension data, through the exploration of 82 countries and regions, found that there was a positive effect of choice autonomy on happiness, and the choice autonomy by individualism interaction was also significant; the higher the degree of a society's individualism, the greater the effect of choice autonomy on happiness. The effect remained even after controlling for logged GDP per capita, healthy life expectancy, perceptions of corruption, social support, and generosity, which might influence happiness. Based on the 2007 Global Happiness Report data set and the Hofstede's Cultural Dimensions data, study 2 repeated the analysis and reached the same conclusion, demonstrating the stability of the effect across time. In summary, this study found that the cultural dimension was in an important position of the influencing factors of happiness. Choice autonomy under different cultures has varying degrees of influence on people's mental health and behaviors. Autonomy's positive influence is much more a specialty of western cultures built on the ideology of individualism. When formulating the related policies of improving Chinese's well-being, it should be considered that the unique cultural background of collectivism and the interdependent behavior pattern of our country.

Keywords: Collectivism and individualism, happiness, choice autonomy, cultural difference

5.31“经济心理学专业委员会”分组展贴报告

网络评论类型对大学生体验性消费的影响

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摘要 随着数据时代的到来, 无论是实物性消费亦或是体验性消费, 网购的形式日益重要。而网购时对于商品的观感和体验感都略有缺失, 这种情况下, 网络信息对于商品的评价就显得尤为重要。已有研究表明, 商品的网络评价对于消费者的实物性消费决策和体验性消费决策都存在显著影响。物质生活越来越富足的人们也更加追求体验性消费带来的舒适感和幸福感。参考国内电商平台数据发现, 大学生是体验性消费的主力军。本研究旨在探究网络评价的类型对大学生体验性消费决策的影响。此次研究运用情景模拟的问卷调查法, 采用《消费者网络消费情况调查问卷》在辽宁省某高校随机抽取 187 名在校大学生进行施测, 调查问卷的主体为以著名旅游城市大连的额某家五星级酒店, 通过该酒店的主客观网络评价作为情景材料从而引导被试对该酒店的消费决策。剔除无效数据后, 最终得到有效数据 182 份。对数据分析结果显示, 积极的客观评价对消费者购买意愿的影响显著高于积极的主观评价, ($t=3.297$, $df=180$, $p<0.05$)。因此, 我们得出如下结论: 同样为积极评价的情况下, 相比于主观评价, 网络评价中的客观评价更能影响大学生消费者购买决策, 即, 人们在网预订酒店时, 对酒店客观条件、基础设施的评价比入住后个人感受更能影响其他消费者对于该家

酒店的预订。这一结论能够对体验性消费品牌互联网终端 OT 平台在筛选或罗列网络评价时给出一定的指导建议。

关键词 体验性消费, 网络评论类型, 购买决策

The Influence of The Types of Online Reviews on College Students' Experiential Consumption

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Abstract: With the advent of the data age, whether it is physical consumption or experiential consumption, the form of online shopping is becoming increasingly important. Previous studies have shown that consumers' online evaluation of goods will affect consumers' consumption decisions. This study aims to explore the impact of the types of network evaluation on College Students' experiential consumption decision. In this study, 187 college students were randomly selected from a university in Liaoning Province by using the questionnaire survey method of scenario simulation, and 182 valid data were obtained. The results showed that positive objective evaluation had a significantly higher impact on consumers' purchase intention than positive subjective evaluation ($t = 3.297$, $df = 180$, $p < 0.05$). Therefore, we draw the following conclusion: in the case of positive evaluation, compared with subjective evaluation, the objective evaluation in network evaluation can more influence college students' consumer purchase decision. This conclusion can give some guidance and suggestions to the operational technology of experiential consumer brand internet terminal when screening or listing network evaluation.

Keywords: Experiential Consumption, Online Review, Purchase Decision

个人投资者的人格特质与非理性投资行为的相关研究

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摘要 当前我国证券市场以小型和中型投资者为主体, 其中, 个人投资者的投资行为对证券市场的健康发展有较大影响。而个人投资者的投资行为往往与其人口学背景与人格特质有着密切关系。研究旨在通过对个人投资者的人格特质及非理性投资行为进行研究, 探讨我国个人投资者的个体差异对其投资行为的影响。结合行为金融学理论, 研究将个人投资者非理性投资行为划分为过度自信, 处置效应及羊群效应, 并探究不同性别, 年龄, 学历, 入市年限等人口学变量的投资者在非理性投资行为上的差异, 同时, 结合人格特质理论, 研究对个人投资者自身人格特质和非理性投资行为的关系进行分析和探讨。研究采用问卷调查法, 使用大五人格量表 (NEO Five-Factor Inventory, NEO-FFI) 和投资行为量表对 236 名近期参与中国证券市场投资的个人投资者进行调查。研究结果如下: (1) 在我国个人投资者的投资活动中, 非理性投资行为普遍存在, 且行为倾向较高; (2) 不同性别个体的非理性投资行为之间不存在显著性差异, 但不同年龄, 学历及入市年限的投资者的非理性投资行为之间差异显著。年龄长, 学历高, 入市年限长的投资者非理性投资行为较少。 (3) 投资者的人格特质和其非理性投资行为之间存在相关关系, 其中, 神经质, 外倾性和开放性 with 处置效应呈现显著相关。而开放性和责任心与过度自信呈现显著相关。

关键词 大五人格模型, 人格特质, 非理性投资行为, 行为金融学

Research on Personality Traits of Individual Investors and Irrational Investment Behavior

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Abstract: At present, China's securities market is dominated by small and medium-sized investors. The investment behavior of individual investors has great influence on the healthy development of securities market. And the investment behavior of individual investors is often closely related to its demographic background and personality traits. The purpose of this study is to explore the influence of individual differences of individual investors on their investment behavior through the study of individual investors' personality traits and irrational investment behavior. Combining with behavioral finance theory, individual investors irrational investment behavior is divided into overconfidence, disposition effect and herding effect, and to explore the differences in irrational investment behaviors among investors with different gender, age, education background, years of market entry and other demographic variables. At the same time, combining the theory of personality traits, study analyzes and discusses the relationship between individual investors' personality traits and irrational investment behavior. This study uses NEO Five-Factor Inventory (NEO-FFI) and Investment behavior Scale to survey 236 individual investors who have recently invested in China's securities market. The results are as follows : (1) Irrational investment behavior is common in the investment activities of individual investors in China, and the behavior tendency is high; (2) There is no significant difference between the irrational investment behaviors of individuals with different genders, but there is a significant difference between the irrational investment behaviors of investors with different ages, educational background and years of entering the market. Individuals with older ages, higher education and longer time that enters the market are less likely to make irrational investments. (3) There is a correlation between investors' personality traits and their irrational investment behaviors. Neuroticism, extroversion and openness were significantly correlated with disposition effects. And openness and Conscientiousness were significantly correlated with overconfidence.

Keywords: The Five Factor Model, personality trait, Irrational investment behavior, Behavioral Finance

助人行业从业者职业压力与生活质量的关系： 家庭经济水平的调节作用

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摘 要 目的: 探讨助人行业从业者(公务员、护理人员和教师)职业压力与生活质量的关系, 以及家庭经济水平在职业压力与生活质量关系中的调节作用。方法: 2018年3月—2019年4月, 采用方便抽样法选取公务员、护理人员以及教师为研究对象。采用生活质量8条目简明量表、职业压力角色量表和自编家庭经济量表进行调查。采用独立样本t检验与单因素方差分析考察一般人口学资料对生活质量的影响; 采用Pearson相关分析探讨职业压力、家庭经济水平与生活质量间的相关性; 采用分层回归分析家庭经济水平对职业压力与生活质量间的调节效应; 采用简单斜率检验, 对调节效应进行详细分析。结果: 独立样本t检验与单因素方差分析结果显示, 护理人员的生活质量得分在年龄方面差异有统计学意义($P < 0.05$)。Pearson相关分析结果表明, 助人行业从业者的家庭经济水平与生活质量间均存在正向相关, 职业压力与家庭经济水平、生活质量间均存在负向相关。分层回归结果显示, 职业压力对生活质量存在负向影响($\beta_{\text{公务员}} = -0.213$, $\beta_{\text{护理人员}} = -0.291$, $\beta_{\text{教师}} = -0.268$, $P < 0.05$)。家庭经济水平与职业压力的交互项对生活质量存在正向作用($\beta_{\text{公务员}} = 0.083$, $\beta_{\text{护理人员}} = 0.090$, $\beta_{\text{教师}} = 0.078$, $P < 0.05$)。调节效应图显示, 伴随职业压力水平增加, 三种助人行业从业者的生活质量均出现下降趋势, 但是这种趋势受家庭经济水平的调节。在公务员人群内, 与家庭经济低水平组相比($\beta_{\text{公务员}} = -0.444$, $P < 0.05$), 家庭经济中、高水平组中的生活质量下降较为平缓($\beta_{\text{公务员}} = -0.318$, $\beta_{\text{公务员}} = -0.192$, $P < 0.05$);

在护理人员人群内,与家庭经济低水平组相比($\beta_{\text{护理人员}}=-0.666, P<0.05$),家庭经济中、高水平组中的生活质量下降也更为平缓($\beta_{\text{护理人员}}=-0.489, \beta_{\text{护理人员}}=-0.313, P<0.05$);同样的趋势也发生在在教师人群内,即与家庭经济低水平组相比($\beta_{\text{教师}}=-0.649, P<0.05$),家庭经济中、高水平组中的生活质量下降也较为平缓($\beta_{\text{教师}}=-0.484, \beta_{\text{教师}}=-0.318, P<0.05$)。结论:职业压力会降低助人行业从业者的生活质量,而较高的家庭经济水平则可以缓解职业压力对生活质量的这种负面影响。

关键词 生活质量,职业压力,家庭经济,助人行业

The Influence of Occupational Stress on Quality of Life among Helping Professionals: the Moderating Role of Family Economy Level

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Abstract: Objective: To explore the relationship between occupational stress and quality of life of helping professionals (civil servants, nurses and teachers), and the moderating effect of family economy level in the relationship between occupational stress and quality of life. Methods: From March 2018 to April 2019, using 8-Item Short Form, Occupational Role Questionnaire and Self-compiled Family Economic Scale, civil servants, nurses and teachers were investigated by convenience sampling. The independent sample t-test and one-way analysis of variance were used to examine the influence of general demographic data on quality of life. Pearson correlation analysis was used to explore the correlation among occupational stress, family economy level and quality of life. Stratified regression was used to analyze the moderating effect of family economy level in the relationship between occupational stress and quality of life. The adjustment effect was analyzed in detail by moderating effect test. Results: The results of independent sample t-test and one-way analysis of variance showed that the difference of quality of life scores of nurses was statistically significant in terms of age ($P < 0.05$). Pearson correlation analysis results showed that there was a positive correlation between family economy level and quality of life of helping professionals, and a negative correlation among occupational stress, family economy level and quality of life. Stratified regression results showed that occupational stress had a negative effect on quality of life ($\beta_{\text{civil servants}} = -0.213, \beta_{\text{nurses}} = -0.291, \beta_{\text{teachers}} = -0.268, P < 0.05$) and the interaction between family economy level and occupational stress had a positive effect on quality of life ($\beta_{\text{civil servants}} = 0.083, \beta_{\text{nurses}} = 0.090, \beta_{\text{teachers}} = 0.078, P < 0.05$). The moderating effect charts showed that with the increase of stress level, the quality of life showed a downward trend. Among civil servants, compared with the low level of family economy group ($\beta_{\text{civil servants}} = -0.444, P < 0.05$), the quality of life in the medium and high level of family economy group decreased more slowly ($\beta_{\text{civil servants}} = -0.318, \beta_{\text{civil servants}} = -0.192, P < 0.05$); Among nurses, compared with the low level of family economy group ($\beta_{\text{nurses}} = -0.666, P < 0.05$), the quality of life in the medium and high level of family economy group decreased more slightly ($\beta_{\text{nurses}} = -0.489, \beta_{\text{nurses}} = -0.313, P < 0.05$); In addition, compared with the low level of family economy group ($\beta_{\text{teachers}} = -0.649, P < 0.05$), the quality of life in the medium and high level of family economy group decreased more gradually among teachers ($\beta_{\text{teachers}} = -0.484, \beta_{\text{teachers}} = -0.318, P < 0.05$). Conclusion: Occupational stress can reduce the quality of life of helping professionals, and the higher family economic level can alleviate the negative effect of occupational stress on the quality of life.

Key words: Quality of life, Occupational stress, Family economy, Helping Professions

工作-家庭冲突对工作激情的影响：组织公民行为的中介作用以及心理弹性的调节作用--基于经验取样法

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摘要 依据角色理论和资源流失理论, 工作领域和家庭领域所涉及的多个角色对员工提出了许多要求, 为满足各种工作和家庭角色的需要, 许多人屈服于角色压力。而这种压力很可能导致资源消耗的发生。资源流失理论认为时间、注意力和精力等资源是有限的, 个体长时间处于冲突压力情境容易挫伤员工工作的积极态度。以往的研究主要关注于工作-家庭冲突对工作效果的不利影响, 而目前有关工作-家庭冲突对工作效果的有利影响鲜有研究, 并且其中的影响机制尚不明确。基于此, 本研究探讨工作-家庭冲突与工作激情的关系以及组织公民行为的中介作用和心理弹性的调节作用, 采用工作激情量表、工作-家庭冲突量表、组织公民行为量表以及心理弹性量表, 通过经验取样法连续 10 天对 95 位在职员工进行问卷调查并建构结构方程模型进行分析。研究结果表明: (1) 工作-家庭冲突对员工的工作激情表现出了显著的负向影响; (2) 组织公民行为在工作-家庭冲突与工作激情的关系中起部分中介作用; (3) 心理弹性在组织公民行为对工作激情的影响中起显著的调节作用。所以本研究建议相关公司可以采取通过改善员工的组织公民行为, 提升员工的心理弹性水平的方式, 来促进员工工作激情的激发, 进而提升员工的工作效率。

关键词 工作激情, 工作-家庭冲突, 组织公民行为, 心理弹性

The influence of work-family conflict on work passion: the mediating effect of organizational citizenship behavior and the regulating effect of psychological resilience -- Based on empirical sampling method

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Abstract: According to the role theory and the resource drain theory, the multiple roles involved in the work field and family field put many demands on employees. In order to meet the needs of various work and family roles, many people give in to role pressure. And this pressure is likely to lead to resource consumption. According to the theory of resource drain, resources such as time, attention and energy are limited, and individuals who are in conflict and pressure situation for a long time are likely to frustrate employees' positive attitude towards work. Previous studies mainly focused on the negative impact of work-family conflict on work effect, but there are few studies on the positive impact of work-family conflict on work effect, and the mechanism of the impact is still unclear. Based on this, this study explores the relationship between work-family conflict and work passion, as well as the mediating effect of organizational citizenship behavior and the regulating effect of psychological resilience. Using the Work Passion Scale, work-family Conflict scale, organizational citizenship Behavior Scale and mental resilience scale, 95 employees were investigated by empirical sampling method for 10 consecutive days and the structural equation model was constructed for analysis. The results show that : (1) work-family conflict has a significant negative impact on employees' work passion; (2) organizational citizenship behavior plays a partial mediating role in the relationship between work-family conflict and work passion; (3) Psychological resilience plays a significant regulating role in the influence of organizational citizenship behavior on work passion. Therefore, this study suggests that relevant companies can improve their employees' organizational citizenship behavior and enhance their psychological resilience to stimulate their work passion and thus improve their work efficiency.

Keywords: work-family conflict, work passion, organizational citizenship behavior, psychological resilience

黑白还是彩色？图片色彩对公益捐赠意愿的影响

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摘要 图片是公益广告的组成部分之一，在促进公益捐赠的过程中发挥了重要的作用。从解释水平理论的视角来看，图片色彩的不同导致信息表征中解释水平的差异，黑白图片相比于彩色图片有着更高的解释水平，进而带来不同的心理和行为结果。本研究旨在从解释水平理论的视角探究公益广告图片的色彩（黑白、彩色）对消费者公益捐赠意愿的影响及其内在机制和边界条件。实验1采用单因素被试间实验设计，自变量为图片色彩（黑白、彩色），因变量为捐赠意愿。招募被试60名，结果初步证明彩色图片条件下被试的捐赠意愿显著高于黑白图片条件下被试的捐赠意愿， $t(58) = 2.55$ ， $p = 0.013$ ， $d = 0.66$ ，并且心理距离在图片色彩对捐赠意愿的影响中起到完全中介作用。为考察图片中是否呈现受捐者人像对结果的影响，实验2探究了图片色彩和人像呈现对捐赠意愿的影响。实验2采用2（图片色彩：黑白、彩色）×2（人像呈现：有人像、无人像）两因素被试间实验设计，招募被试143名，结果表明人像呈现会调节图片色彩对捐赠意愿的影响， $F(1, 139) = 13.942$ ， $p < 0.001$ ， $\eta^2 = 0.090$ ，当图片中有人像时，彩色（vs. 黑白）图片条件下的捐赠意愿更高；当图片中无人像时，黑白（vs. 彩色）图片条件下的捐赠意愿更高。究其原因，彩色（vs. 黑白）图片代表着更低的解释水平，低解释水平对应较近的心理距离，因此当图片中呈现受捐者人像时，彩色图片能够拉近消费者与受捐者之间的心理距离，消费者愿意付出更多的金钱和爱心。研究结论推进了解释水平理论在消费者亲社会行为领域的理论研究，为公益组织营销公益产品、增加公益资助提供了重要的实践启示，并为公益决策部门通过经济有效的方法促进现实中的慈善捐赠提供了有效的政策参考。

关键词 公益捐赠，黑白，彩色，心理距离，解释水平理论

Black-and-white or colorful? The influence of color on charitable donation intention

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Abstract: Picture communications can be either colorful or black-and-white. Drawing from construal-level theory, Black-and-white versus color imagery is respectively associated with high-level versus low-level construal, leading to different psychological and behavioral outcomes. Drawing from construal-level theory, this research tests the influence of black-and-white versus color imagery on consumer's charitable donation intention and explores underlying mechanisms and boundary conditions. Study 1 examines the effect of color (presence vs. absence) on donation intention and the mediating role of psychological distance. The study recruits 60 participants and finds that participants are more willing to donate when the imagery is colorful (vs. black-and-white), $t(58) = 2.55$ ， $p = 0.013$ ， $d = 0.66$ ，and psychological distance plays a full mediating role. Study 2 further explores the interaction of color (presence vs. absence) and portrait (presence vs. absence) on donation intention. The study recruits 143 participants and shows a significant interaction of color and portrait, $F(1, 139) = 13.942$ ， $p < 0.001$ ， $\eta^2 = 0.090$. Specifically, color (vs. black-and-white) imagery leads to higher donation intention when portraits present while black-and-white (vs. color) leads to higher donation intention when portraits absent. In summary, this research shows that color (vs. black-and-white) imagery has a significant positive effect on donation intention, driven by close psychological distance, only when there are portraits in pictures. Theoretically, the current findings extend construal level theory to domain of consumer's prosocial behavior. Practically, this research suggests that public service firms should pay great attention to how color can influence public benefits, thus expanding public funding.

Keywords: charitable donation, black-and-white, colorful, psychological distance, construal-level theory

道德概念净脏隐喻对清洁产品消费决策的影响：惩罚的净化效应

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摘要 概念隐喻理论强调，个体在感知经验的基础上运用净脏、温度、黑白等简单具体概念来表征复杂抽象的道德概念，形成道德概念净脏隐喻、温度隐喻和黑白隐喻。以往研究发现，道德概念温度隐喻(Van Acker, Kerselaers, Pantophlet, & IJzerman, 2016)、触觉隐喻(丁瑛, 宫秀双, 2016)对消费产品决策产生影响。但到目前为止，鲜有研究探讨道德概念净脏隐喻对消费产品决策的影响。以往研究也表明，道德概念净脏隐喻具有心理现实性(Zhong, Liljenquist, 2006; Lee & Schwarz, 2010)，并且惩罚可以减轻个体因不道德行为而产生的罪恶感，具有道德净化效应(Tangney, Stuewig, & Mashek, 2007)。那么，道德概念净脏隐喻是否对清洁类消费产品产生影响？受到惩罚的个体在道德净化之后是否对清洁类消费产品决策产生影响？基于此，本研究通过3个实验探讨道德概念净脏隐喻的心理现实性及其对清洁相关产品消费决策的影响，在此基础上进一步探讨惩罚在其中的净化作用。研究结果表明：(1) 道德概念净脏隐喻存在心理现实性，具体而言，道德与洁净关联，不道德与肮脏关联；(2) 道德概念净脏隐喻对清洁产品消费决策有影响，与道德概念洁净条件相比，被试在肮脏条件下对清洁相关物品更加渴望，购买意愿也更强；(3) 相比于无惩罚不道德故事条件，在有惩罚不道德故事条件下，被试对清洁相关物品的渴望程度和购买意愿降低。以上研究表明，道德概念净脏隐喻具有心理现实性并对清洁产品消费决策产生影响，而且惩罚在其中起净化作用。以上研究有助于学校通过净化环境从而对学生进行道德教育，帮助学生形成正确的道德认知，也可为消费者决策领域提供心理学方面的决策指导。

关键词 概念隐喻，净脏，消费决策，惩罚

Clean and Dirty Metaphor of Moral Concept and its influence on the consumption decision of clean products:

The purifying effect of punishment

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Abstract: Conceptual Metaphor Theory (CMT) emphasizes that individuals use simple concrete concepts such as clean and dirty, warm and cold, black and white to represent complex and abstract moral concepts on the basis of perceptual experience, thus forming clean and dirty metaphor, warm and cold metaphor and black and white metaphor of moral concepts. Previous studies have found that moral conceptual temperature metaphor (Van Acker, Kerselaers, Pantophlet, & IJzerman, 2016) and tactile metaphor (Ying Ding & Xiushuang Gong, 2016) have impact on the decision of consumption products. However, up to now, few studies have explored the influence of clean and dirty metaphor of moral concept on the decision of consumption products. Previous studies have also shown that clean and dirty metaphor of moral concept has psychological reality, and punishment can reduce the individual's sense of guilt caused by immoral behavior, it has the effect of moral purification (Tangney, Stuewig, & Mashek, 2007). As a result, does clean and dirty metaphor of moral concept influence the decision of consumption products? Does the punished individual affect the consumption decision of clean products after moral purification? Based on this, the current study explored the psychological reality of clean and dirty metaphor of moral concept and its impact on the consumption decision-making of cleaning related products via three experiments, and further explored the purification effect of punishment in it. The results suggest that: (1) Clean and dirty metaphor of moral concept has psychological reality, specifically, moral and clean were related, so were immoral and dirty; (2) Clean and dirty metaphor of moral concept has an impact on decision-making of clean products consumption, compared with the moral concept of clean metaphor condition, the subjects are more eager for cleaning related items and have stronger willingness to buy them under the dirty metaphor condition; (3) Different from the unpunished immoral story condition, the subjects' desire for cleaning-related items and purchase intention were reduced under the punished immoral story condition. The above research shows that clean and dirty metaphor of moral concept has psychological

reality and has an impact on the consumption decision of clean products, and punishment plays a purifying role in it. It is helpful for schools to carry out moral education for students by purifying the environment and help students form correct moral cognition, and to provide psychological guidance for consumption decision-making.

Keywords: conceptual metaphor, clean and dirty, consumption decision, punishment

自我控制与产品促销对消费者购买意向的影响

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摘 要 随着社会的发展，人们的生活水平普遍提高，影响其消费的因素也在逐渐增多，促销(promotion)便是其中的一种。产品促销活动一直以来都是消费者与商家共同关注的问题，消费者会经常关注、参与产品促销活动进而减少生活开支，而商家也会经常推出促销活动来激发甚至增强消费者冲动性购买的意向，吸引消费者选购。自我控制对消费者在购买上两难抉择的影响一直以来备受关注，自我控制可以让消费者在面临两难问题时保持理智，直接或间接地影响消费者的购买行为。本研究引入了产品促销这一变量，旨在探究价格促销与赠品促销这两种产品促销对高低不同自我控制能力的消费者购买意向的影响。以北京某大学 108 名大学生为研究对象，实验采用 2（自我控制：高，低）×2（产品促销：价格促销，赠品促销）的混合设计，被试间变量为自我控制，被试内变量为产品促销，因变量为消费者的购买意向。结果表明：1）自我控制的主效应显著。与高自我控制的个体相比，低自我控制个体的购买意向更强；2）产品促销的主效应显著，与赠品促销相比，价格促销更能激起消费者的购买意向；3）自我控制与产品促销的交互作用显著。低自我控制的个体在面对价格促销与赠品促销时，其购买意向均无差异，但都高于在这两种情境下的高自我控制的个体；与赠品促销相比，高自我控制的个体在面对价格促销时的购买意向更强。

关键词 自我控制，产品促销策略，购买意向

The Effect of Self-control and Product Promotion on Consumers' Purchase Intention

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Abstract: The influence of self-control on consumers' purchasing dilemma has long been the focus of merchants and scholars. In this study, the variable of product promotion was introduced to explore the effect of price promotion and premium promotion on the purchase intention of consumers with different levels of self-control. In this study, 108 students from a university in Beijing were recruited. The experiment was conducted using 2 (self-control: high, low) ×2 (product promotion: price promotion, premium promotion) mixed design. The between-subject variable was self-control, and the within-subject variable was product promotion. The dependent variable was consumers' purchase intention. The conclusion was that self-control and product promotion could affect consumers' purchase intention. Compared with premium promotion, consumers with high level of self-control have stronger purchase intention in the face of price promotions. Consumers with low level of self-control in the face of price promotions and premium promotion, despite their purchase intention having no difference, have higher purchase intention than consumers with high level of self-control in both situations.

Keywords: Self-control, price promotion, premium promotion, purchase intention

组织氛围、工作投入、工作满意度对企业员工工作绩效的影响

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摘 要 背景:员工是企业发展的动力，员工的工作绩效直接关系到企业的生存和发展，如何提高员工的工作绩效也已经成为管理心理学界的热点话题。新生代知识员工的关系与工作绩效的激发无疑是现代企业可持续

发展的关键。目的：探究组织氛围、工作投入和工作满意度三个因素与工作绩效关系及其作业机制。方法：通过问卷调查的方法，对 148 名企业员工进行了调查。其中，男性 54 人，女性 94 人；18-25 岁 79 人，25-40 岁 40 人，40-60 岁 29 人。将组织氛围（分为信任氛围、沟通氛围、情绪氛围、公平氛围四个维度）、工作投入（分为活力、奉献、专注三个维度）和工作满意度（分为对上级的满意度、对报酬、晋升和工作本身的满意度、对同事的满意度、对绩效评价和工作环境的满意度 4 个维度）作为自变量，工作绩效（分为任务绩效、人际绩效、适应和努力绩效三个维度）为因变量，进行相应的描述性统计、差异性检验、相关分析和回归分析。结论：(1)男性员工工作绩效得分大于女性员工；已婚员工工作绩效得分高于离异人群；不同公司性质、公司规模与工作绩效无显著关系。(2)组织氛围、工作投入和工作满意度与工作绩效之间两两呈正相关。(3)工作满意度能显著预测工作绩效，工作投入为中介变量；工作满意度中的对同事满意度维度能显著预测工作绩效，工作投入的专注维度为中介变量。

关键词 组织氛围，工作投入，工作满意度，工作绩效

The Influence of Organisation climate, Job Engagement and Job Satisfaction on Job Performance

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Abstract: Background: Employees are the driving force of enterprise development, and their job performance is directly related to the survival and development of enterprises. How to improve their job performance has also become a hot topic in the field of management psychology. The relationship between the new generation of knowledge workers and the stimulation of job performance are undoubtedly the key to the sustainable development of modern enterprises. Objective: To explore the relationship between organizational climate, job involvement and job satisfaction and job performance and its operating mechanism. Methods: A questionnaire survey was conducted among 148 employees. Among them, there are 54 males and 94 females; 79 people aged 18-25, 40 people aged 25-40 and 29 people aged 40-60. Organizational atmosphere (divided into four dimensions: trust atmosphere, communication atmosphere, emotional atmosphere and fair atmosphere), job engagement (divided into three dimensions: vitality, dedication and concentration) and job satisfaction (divided into four dimensions: satisfaction with superiors, satisfaction with remuneration, promotion and work itself, satisfaction with colleagues, satisfaction with performance evaluation and work environment) are taken as independent variables, and job performance (divided into task performance, interpersonal performance, adaptation and hard work) is taken as independent variables. Conclusion: (1) The job performance score of male employees is higher than that of female employees; Married employees have higher job performance scores than divorced people. There is no significant relationship between different company nature and size and job performance. (2) Organizational climate, job involvement and job satisfaction are positively correlated with job performance. (3) Job satisfaction can significantly predict job performance, and job involvement is an intermediary variable; The dimension of satisfaction with colleagues in job satisfaction can significantly predict job performance, and the focus dimension of job involvement is an intermediary variable.

Key words: Organizational climate, Job engagement, Job satisfaction, Job performance

5.32“积极心理学专业委员会”分组展贴报告

积极能否促进安全：心理资本对飞行员安全行为的影响及其机制

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摘要 近些年来，随着积极心理学和积极组织行为学的兴起和发展，安全科学和人因工程领域的研究者们逐渐开始关注“积极能否促进安全”这一热点问题。然而，当前研究者们对该问题的探讨大多停留在理论层面，缺乏深入的实证研究。基于此，本研究从积极组织行为学的核心概念——心理资本(psychological capital)着手，拟探讨其对飞行安全的潜在积极影响，从而在航空情境中考察“积极能否促进安全”这一问题。心理资本是当前积极心理学运动在工作场所的应用，主要指个体积极的心理发展状态，包括自我效能感、希望、乐观和韧性四个方面。与积极心理学类似，心理资本的研究呼吁将注意力转移到人们积极的、功能性的和富有成效的方面，而不是专注于解决他们的问题，这使得它有望成为一种促进安全行为的积极替代方法。因此，本研究基于积极心理学视角，并围绕心理资本理论和个体-环境交互理论，深入探究心理资本与飞行员安全行为的关系及其内在机制。选取心理资本问卷、工作投入量表、航空安全氛围量表以及飞行员安全行为问卷对 347 名中国航线飞行教员、机长和副驾驶进行调查。在检验共同方法偏差和问卷信效度的基础上，通过结构方程模型分析，结果发现：（1）心理资本对飞行员安全行为具有显著的促进作用，高心理资本飞行员的安全行为水平显著高于低心理资本飞行员；（2）工作投入在心理资本对飞行员安全行为的影响过程中发挥了部分中介作用；（3）组织安全氛围在心理资本对飞行员安全行为的影响过程中发挥了调节作用，即积极的组织安全氛围削弱了心理资本对飞行员安全行为的影响。本研究的意义和贡献在于一方面能够通过实证研究去检验和回答“积极能否促进安全”，从而体现积极心理（心理资本）在安全和人因工程领域的潜在价值，并进一步扩大积极心理学和积极组织行为学的影响；另一方面通过考察飞行员安全行为的心理机制，能够为有针对性的飞行员选拔和训练提供理论支持及科学依据，进而从实践角度进一步保障和提升航空安全。

关键词 心理资本，工作投入，安全氛围，安全行为，飞行员

Can positivity promote safety: the effect of psychological capital on pilots' safety behavior and its mechanism

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Abstract: In recent years, with the rise and development of positive psychology and positive organizational behavior, researchers in the field of safety science and human factors engineering gradually pay attention to the hot issue of "can positivity promote safety". However, the current researches on this issue mostly remain at the theoretical level and lack of in-depth empirical research. Based on this, this study started from the core concept of positive organizational behavior -- psychological capital, and intends to explore its potential positive impact on flight safety, so as to investigate the question of "can positivity promote safety" in the aviation context. Psychological capital is the application of the current positive psychology movement in the workplace, which mainly refers to individual's positive psychological state of development, including self-efficacy, hope, optimism and resilience. Similar to positive psychology, psychological capital research calls for shifting attention to the positive, functional, and productive aspects of people rather than focusing on solving their problems, making it a promising alternative to promoting safe behavior. Therefore, this study based on the perspective of positive psychology and centered on psychological capital theory and individual-environment interaction theory, deeply explored the relationship between psychological capital and pilot safety behavior and its internal mechanism. Psychological capital questionnaire, work

engagement scale, aviation safety climate scale and pilot safety behavior questionnaire were selected to investigate 347 flight instructors, captains and co-pilots of Chinese airlines. On the basis of testing the common method deviation and the reliability and validity of the questionnaire, through the analysis of structural equation model, the results show that: (1) psychological capital significantly promoted the safety behavior of pilots, and the safety behavior level of pilots with high psychological capital was significantly higher than that of pilots with low psychological capital; (2) Work engagement partially mediated the effect of psychological capital on pilot safety behavior; (3) Organizational safety climate played a moderating role in the process of the influence of psychological capital on pilot safety behavior, namely, the positive organizational safety climate weakened the influence of psychological capital on pilot safety behavior. The significance and contribution of this study lies in that on the one hand, it can test and answer the question "can positivity promote safety" through empirical research, so as to reflect the potential value of positive psychology (psychological capital) in the field of safety and human factor engineering, and further expand the influence of positive psychology and positive organizational behavior. On the other hand, by investigating the psychological mechanism of pilot safety behavior, it can provide theoretical support and scientific basis for targeted pilot selection and training, and further safeguard and improve aviation safety from the perspective of practice.

Keywords: psychological capital, work engagement, safety climate, safety behavior, pilots

正念注意觉知对状态损耗敏感性的影响：认知重评的中介作用

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摘要 损耗敏感性是指同等情景下个体自我控制能力下滑速度。损耗敏感性越高, 个体自我控制资源损耗得越快。作为 Salmon 等 (2014) 为了区别于特质自我控制而提出的概念, 损耗敏感性是否受正念注意觉知影响仍存在争议。为了进一步探究这一分歧, 本研究通过问卷法直接探究了正念注意觉知与状态损耗敏感性的关系。另外, Garland 等 (2009) 等提出的正念应对模型认为, 高正念个体更可能通过进行积极的认知重评 (个体通过重新赋予情绪刺激一个不同以往的意义来调节自身的情绪) 这一情绪调节策略来调节情绪。因此在本研究中, 我们进一步探索了认知重评在正念注意觉知和状态损耗敏感性之间可能的中介作用。同时, 我们还检验了另外一种情绪调节策略, 即表达抑制 (个体通过在外在行为上隐藏自己内在的情绪体验来调节自身的情绪) 作为中介变量的效果, 来验证认知重评的独特中介作用。研究共招募 358 名 MTurk 被试, 剔除注意力不集中以及 IP 地址重复的被试后, 最终回收有效作答 300 份。被试回答一系列问卷, 包括正念注意觉知量表 (MAAS)、情绪调节问卷 (ERQ)、及状态损耗敏感性问卷 (SDSS)。结构方程模型拟合的结果发现, 情绪调节的认知重评策略在正念注意觉知与状态损耗敏感性二者之间起部分中介作用: 正念注意觉知能直接显著负向预测状态损耗敏感性, 同时也可以显著正向预测认知重评策略, 而认知重评策略显著负向预测状态损耗敏感性; 虽然正念注意觉知能够显著负向预测表达抑制策略, 但表达抑制策略对状态损耗敏感性的影响路径系数不显著, 即情绪调节的表达抑制策略在正念注意觉知与状态损耗敏感性二者之间不起中介作用。这一结果表明, 对正念注意觉知的培养与提升能够直接或间接地降低人们的自我控制能力下滑的速度, 帮助个人避免自我损耗。而正念注意觉知的这一效应, 可能是藉由激活个体的认知重评策略而非表达抑制策略实现的。

关键词 正念注意觉知, 情绪调节, 认知重评, 状态损耗敏感性

Mindfulness predicts reduced state depletion sensitivity: The mediating role of cognitive reappraisal

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Abstract: Depletion sensitivity refers to the rate of which self-control resource is consumed in controlled situations

(Salmon et al., 2014). It is still controversial whether and how depletion sensitivity could be influenced by mindfulness. In the present research, we examined the relationship between mindfulness and state depletion sensitivity (SDS). In addition, the mindful coping model (Garland et al., 2009) suggests that individuals with higher mindfulness are more likely to regulate their emotions through positive cognition reappraisals. Hence, we also examined the potential mediating role of cognitive reappraisal (CR). Another emotion regulation strategy, namely expressive suppression (ES), was also measured to test if CR could have unique mediating effect. A total of 358 MTurk adults participated in our online study. 58 participants were excluded due to inattentive responses or duplicated IP addresses. The final sample comprised 300 participants. Participants were instructed to answer a series of established questionnaires, including the Mindfulness Attention Awareness Scale, the Emotion Regulation Questionnaire and the State Depletion Sensitivity Questionnaire. Employing structural equation modeling, we found that CR partially mediated the relationship between mindfulness and reduced SDS: mindfulness positively predicted CR, which in turn negatively predicted SDS. Although mindfulness significantly predicted reduced ES, ES did not mediate the relationship between mindfulness and SDS. Echoing past findings, the present research suggests that mindfulness could facilitate one's self-regulatory processes. Specifically, mindfulness predicted reduced state depletion sensitivity, and that this relationship was mediated by increased CR.

Keywords: mindfulness, emotion regulation, cognitive reappraisal, state depletion sensitivity

拖延对睡眠质量的影响：自我控制的中介作用和心理弹性的调节作用

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摘要 睡眠障碍已经成为一个全球性问题，睡眠质量不好会导致一系列的身心问题，如肥胖、心脑血管疾病、心脏病以及抑郁等等。因此，为了改善睡眠质量，我们必须要了解影响睡眠质量的因素并探索这些因素是如何对睡眠质量产生影响的。已有研究表明，拖延是大学生群体中的一种普遍现象，会对人们正常的学习生活产生消极影响。已有研究表明，拖延是影响睡眠质量的主要因素之一，然而拖延影响睡眠质量这一过程的内部机制尚不清楚。在本研究中，我们旨在揭示拖延如何影响睡眠质量，并探讨在这一过程中自我控制的中介作用和心理弹性的调节作用。本研究采用了随机整体抽样法，从西北地区两所大学抽取了 522 名大学生，采用简版一般拖延量表（GPS-9），自我控制量表（Brief Self-Control Scale），心理弹性量表（Ego-Resilience Scale）以及匹兹堡睡眠质量问卷（PSQI）为调查工具，并用 SPSS22.0 对数据进行分析。研究结果表明：（1）拖延与自我控制和心理弹性呈负相关，与睡眠质量呈正相关；自我控制与心理弹性呈正相关，与睡眠质量呈负相关；心理弹性与睡眠质量呈负相关。（2）自我控制在拖延和睡眠质量之间起中介作用；（3）心理弹性在拖延和睡眠质量之间起调节作用。结论：拖延通过自我控制对睡眠质量产生影响，这一过程受到心理弹性的调节作用。本研究为睡眠质量的提高提供了理论指导。

关键词 拖延，睡眠质量，自我控制，心理弹性，大学生

利他情境对善良特质个体情绪注意偏向的影响

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摘要 特质一致性效应已在大量研究中得到证明，即个体偏爱加工与其人格特质类型相一致的情绪刺激，消极情感特征个体（如焦虑、抑郁个体）更倾向于选择性注意负性的情绪刺激；积极情感特征个体（如外向性个体）则倾向于选择正性情绪进行加工。那么善良作为一种中华民族自古推崇的道德观念和中国人特有的人格特质，其对于个体的注意偏向又会产生怎样的影响呢？此外，是否可以通过一些方式来改变高善者和低善者在这方面的差异呢？基于此，本研究通过两个实验探索了高、低善良特质个体的情绪面孔注意偏向特点，以及利他情境对其的影响。本研究两个实验均通过中国人格问卷测量个体的善良特质得分，并筛选出高、低善良人格特质个体参与实验。实验 1 采用 2（组别：高、低善良特质）× 4（面孔组合：愤怒-中性，高兴-中性，

中性-愤怒, 中性-高兴) 的混合实验设计, 借用面孔表情视觉搜索范式探索善良特质个体的情绪注意偏向。结果发现, 低善良特质个体对愤怒面孔的察觉速度显著快于对高兴面孔的察觉速度 ($F(1, 51) = 4.720, p = 0.034$); 而高善良特质个体对两种情绪面孔的察觉速度不存在显著差异 ($F(1, 51) = 1.587, p = 0.214$); 实验 2 引入利他情境, 为 2 (组别: 高、低善良特质) $\times$ 2 (利他情境、非利他情境) $\times$ 4 (面孔组合: 愤怒-中性, 高兴-中性, 中性-愤怒, 中性-高兴) 的混合实验设计。通过署名捐款的形式进行利他操纵, 并接着完成与实验 1 相同的实验任务。发现进行了利他操作的高低善良特质被试间不存在注意偏向差异, 且呈现出对正性面孔的搜索速度快于负性面孔的趋势 ($F(1, 20) = 4.082, p = 0.057$)。由此可见, 高善者对正、负性情绪面孔的察觉表现出注意对称性, 低善者则表现出愤怒优势效应; 同时, 利他情境能够对善良特质个体的注意偏向产生短时影响。

关键词 善良特质, 利他情境, 注意偏向, 情绪面孔搜索

Effect of altruistic situations on the attentional bias of individuals with kindness trait

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Abstract: Trait-congruency effect has been proved in a large number of studies, that is, individuals prefer to process emotional stimulations consistent with their trait types, individuals with negative emotional traits (e.g., anxiety and depression) tend to selectively pay attention to negative emotional stimulations. Individuals with positive emotion traits (e.g., extroversion) tend to choose positive emotion for processing. Then, as a moral concept advocated by the Chinese nation since ancient times and a unique personality trait of The Chinese people, what impact will kindness have on the attentional bias of individuals? In addition, is there any way to change this difference between people with high-kindness and low-kindness? In this study, two experiments were conducted to explore the attentional bias of emotional faces in individuals with high and low kindness traits, and the effects of altruistic situations on the attentional bias of individuals with kindness trait. In both experiments, the Chinese Personality Scale was used to measure kindness level, and individuals with high-kindness and low-kindness were selected to participate in two studies. In experiment 1, we used 2 (kindness trait: high vs. low) $\times$ 4 (combination matrixes: angry-neutral vs. happy-neutral vs. neutral-angry vs. neutral-happy) hybrid experimental design to explore the emotional attentional bias of individuals with kindness by using a visual face detection task. The results showed that, in low kindness-group, the searching speed of angry faces was significantly faster than that of happy faces ($p = 0.034$). However, this difference was not found in high-kindness group ($p = 0.214$). In experiment 2, we added 'altruistic situation' as an intergroup variable, using 2 (kindness trait: high vs. low) $\times$ 2 (situation: altruistic vs. non-altruistic) $\times$ 4 (combination matrixes: angry-neutral vs. happy-neutral vs. neutral-angry vs. neutral-happy) hybrid experiment design to find the effects of altruistic situations on the attentional bias of individuals with kindness trait. In the altruistic situation, participants were asked to participate in a donation activity, and they would donate ¥10 under their real names. It was found that there was no difference in attentional bias between the high and low kindness participants with altruistic operation, and they tended to search for positive faces faster than negative faces ($p = 0.057$). In conclusion, high-kindness people showed attentional symmetry when searching positive and negative emotional faces, while low-kindness people searched angry faces more faster. At the same time, the altruistic situation can have a short-term effect on the attentional bias of individuals with kindness trait.

Keywords: kindness personality trait, altruistic situation, attentional bias, facial expression

人工智能时代的隐私让渡

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摘要 人工智能技术的快速发展带来了新的隐私挑战。一个典型的例子是所谓的“隐私悖论”，即人们表面上声称关心自己的隐私，但依然公开分享自己的信息。例如，大多数在线交易需要消费者提供姓名、地址、银行卡等内容，消费者对个人信息是否会被黑客入侵或不当使用存在担忧，但在大多数情况下依然会同意共享隐私信息。技术的发展为我们提供了诸多便利，丰富了人们社交和娱乐的方式，创造了更多元和复合的个性化体验，但这些好处往往需要我们用个人隐私换取。让渡隐私，似乎成为了享受人工智能时代先进性的代价。尽管人们一直关注和争取隐私权，但算法的高效运作和广泛传播可能会系统地削弱人们采取有意义行动的能力和心理动机。人工智能时代的隐私往往以各类数据为载体进行留存和传播，个人数据成为了一种高价值的商品。人工智能时代的隐私让渡问题，概括来说是什么样的人出于什么样的原因在什么样的情况下愿意去让渡隐私的问题。本文基于人工智能时代的隐私背景，根据“何人让渡隐私-为何让渡隐私-何时让渡隐私-隐私让渡以何为度”的框架，系统地探讨了人们在隐私让渡方面的个体差异和内在动机，以及实际语境对于人们态度和行为的影响，并提出了人工智能时代隐私管理的策略。个体在让渡隐私方面的具体差异，主要体现在个性特征和具体的决策过程之中，人们的隐私关注和隐私素养与具体的隐私行为之间存在紧密的联系。以下四方面因素都会影响人们的隐私让渡行为：（1）对技术易用性和享乐性的追求；（2）塑造自我或是增进人际关系的需要；（3）人们对于隐私泄露所产生的负面影响的轻视；（4）机器拟人化程度的提高。当隐私让渡在某些语境中具有必要性时，或是人们分享个人信息的意愿超于隐瞒信息的意愿时，可能会选择让渡隐私。人工智能时代的隐私管理，首先需要保障隐私让渡主体的知情权和同意权，其次在隐私让渡的内容和程度上要为用户提供更大的选择空间，最后隐私保护应当被纳入数据系统和技术的设计、开发和应用中。

关键词 人工智能，隐私让渡，隐私心理，隐私管理

Privacy transfer in the era of artificial intelligence

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Abstract: The rapid development of artificial intelligence has brought new privacy challenges. A typical example is the so-called "privacy paradox", which means that people ostensibly claim to care about their privacy but still share their information publicly. For example, most online transactions require consumers to provide their names, addresses, bank card numbers, etc. Consumers are concerned about whether personal information will be hacked or improperly used, but in most cases they will still agree to share private information. The development of technology has provided us with a lot of convenience, enriched the way people socialize and entertain, and created more diverse and complex personalized experiences, but these benefits often require us to offer personal information. Giving up privacy seems to be the price of enjoying the advancement of the artificial intelligence era. Although people have been paying attention to and fighting for the right of privacy, the efficient operation and widespread dissemination of algorithms may systematically weaken people's ability and psychological motivation to take meaningful actions. In the era of artificial intelligence, privacy is often retained and disseminated by various types of data, and personal data has become a high-value commodity. The issue of privacy transfer in the era of artificial intelligence is, in general terms, what kind of person is willing to transfer privacy for what reasons and under what circumstances. Based on the background of privacy in the era of artificial intelligence, this paper systematically discusses people's individual differences and internal motivation in privacy transfer, as well as the impact of actual context on people's attitudes

and behaviors, and puts forward privacy management strategies. The individual differences in transferring privacy are mainly reflected in people's personalities and specific decision-making processes, and there is a close relationship between people's privacy concerns, privacy literacy and specific privacy behaviors. The following four factors will affect people's privacy transfer behaviors: (1) the pursuit of ease of use and enjoyment of technology; (2) the need to shape themselves or enhance interpersonal relationships; (3) people's contempt for the negative impact of privacy leakage; (4) the increasing degree of machine anthropomorphism. When privacy transfer is necessary in certain contexts, or when people's willingness to share personal information exceeds their willingness to conceal information, they may choose to transfer privacy. Privacy management in the era of artificial intelligence first requires to ensure people's right to know, and secondly, to provide users with more choice in the content and extent of privacy transfer, and finally, privacy protection should be incorporated into the data system and technology design, development and application.

Keywords: artificial intelligence, privacy transfer, privacy psychology, privacy management

大学生自我同情对主观幸福感的影响： 个人成长主动性和生命意义感的链式中介作用

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摘 要 随着积极心理学的发展，幸福感逐渐成为人们关注的议题之一。根据自我决定理论，内在目标和内部动机是提升幸福感的重要因素(Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004)。自我同情是一种积极的自我态度，与个体的发展和心理健康密切联系。自我同情不仅可以使个体更清晰地看待自己，尊重自己作为一个完整的人，对自身的痛苦、不足给予不加评判的理解，避免了自我批判的消极后果，还能够通过增加自我完善的内部动机，激发个人成长这一内在目标，使得个体更加有意识地提升和完善自己、实现自我，进而体验到更强烈的主观幸福感。尽管已有研究表明，自我同情对主观幸福感具有积极影响，但是，自我同情和主观幸福感之间的具体影响机制仍有待进一步探讨。因此，本研究从积极心理学的视角出发，基于自我决定理论，探讨自我同情、个人成长主动性、生命意义感和主观幸福感四者之间的关系。以 549 名大学生为被试，采用自我同情量表、主观幸福感量表、个人成长主动性量表及生命意义感量表进行测试。结果显示：(1) 自我同情显著正向预测主观幸福感；(2) 个人成长主动性在自我同情和主观幸福感之间起到部分中介作用；(3) 生命意义感在自我同情和主观幸福感之间起部分中介作用；(4)自我同情通过正向影响个人成长主动性和生命意义感进而对主观幸福感产生积极影响，即个人成长主动性和生命意义感在自我同情与主观幸福感之间起链式中介作用。

关键词 自我同情，个人成长主动性，生命意义感，主观幸福感

The relationship between self-compassion and subjective well-being of college students: the chain-mediating effect of personal growth initiative and meaning in life

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Abstract: With the development of positive psychology, well-being has become one of the issues that people are concerned about. According to Self-Determination Theory, intrinsic goal and intrinsic motivation act an important role in enhancing one's subjective well-being (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). Self-compassion is a positive self-attitude, which is closely related to one's development and mental health. Self-compassion involves being kind and understanding toward oneself, respecting oneself as a fully human and offering nonjudgmental understanding to one's pain, inadequacies and failures, so that protect against the negative consequences of self-judgment. Through increasing self-improvement motivation, self-compassion can stimulate the

intrinsic goal of personal growth, encouraging individuals to improve themselves intentionally and with full awareness. With all these above, individuals can fulfill themselves finally and experience high level of subjective well-being. Although previous studies have shown that self-compassion has a positive impact on subjective well-being, the specific mechanism between them needs to be explored. Based on Self-Determination Theory, this study explored the relationship among self-compassion, personal growth initiative, meaning in life and subjective well-being. 549 college students were tested with Self-Compassion Scale, Index of Well-Being, Personal Growth Initiative Scale-II and Meaning in Life Scale. The results showed that: (1) Self-compassion positively predicted subjective well-being. (2) Personal growth initiative played a mediation role in the relationship between self-compassion and subjective well-being. (3) Meaning in life played a mediation role in the relationship between self-compassion and subjective well-being. (4) Personal growth initiative and meaning in life exerted a chain-mediating effect on the association of self-compassion with subjective well-being.

Keywords: self-compassion, personal growth initiative, meaning in life, subjective well-being

道德提升感对大学生亲社会行为的影响：生命意义感的中介作用

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摘要 亲社会行为的心理机制一直是心理学研究领域中的热点问题，它能够衡量整个社会的道德发展水平和公民素质的高低，且对于维持人与人之间良好的社会关系也有重要作用。道德提升感是欣赏他人的美德并感到自己的道德情操被提升的一种积极的道德情绪，对亲社会行为有积极的作用。本研究基于积极情绪的扩展与建构理论和社会学习理论，主要探讨了道德提升感、生命意义感和大学生亲社会行为之间的关系及其内在作用机制。采用方便取样方法，选取来自内蒙古自治区和山西省共 524 名大学生作为被试，其中男生 131 人，女生 393 人，平均年龄为 20.20 ± 1.39 岁。研究采用道德提升感问卷、青少年亲社会倾向量表及生命意义感问卷进行测试，采用 SPSS25.0、AMOS21.0 和 Mplus8.0 统计软件进行数据处理，采用偏差校正的非参数百分位 Bootstrap 方法对生命意义感在道德提升感和大学生亲社会行为中的中介作用进行检验。研究结果发现：（1）道德提升感与生命意义感及大学生亲社会行为两两间均存在显著的正相关；（2）采用偏差校正的非参数百分位 Bootstrap 法检验显示，道德提升感对大学生亲社会行为有显著的正向预测作用；（3）道德提升感间接地通过生命意义感对大学生亲社会行为产生作用，生命意义感起着部分中介作用。因此得出结论，道德提升感可以通过生命意义感间接影响大学生的亲社会行为。

关键词 道德提升感，亲社会行为，生命意义感，大学生

The Influence of Moral Elevation on Prosocial Behavior in College Students: The Mediating Role of Meaning of Life

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Abstract: This present study aimed to explore the relationship among moral elevation, meaning of life and prosocial behavior, by surveying 524 college students, with 131 males and 393 females, with moral elevation questionnaire, meaning of life questionnaire, and prosocial behavior questionnaire. The results show that: (1) The relationships between each pair of moral elevation, meaning of life and prosocial behavior are correlated significantly and positively; (2) Moral elevation has a significant direct effect on prosocial behavior. (3) Moral elevation have a significant indirect effect on prosocial behavior through meaning of life, that is, moral elevation have a significant direct effect on prosocial behavior and meaning of life play a partial mediating role between them. It is concluded that in the structural equation model of moral elevation on prosocial behavior of college students, meaning of life plays a partial mediating role. These findings suggest some measures for college students' prosocial behavior should be taken.

5.33“校园欺凌与暴力防治专业委员会”分组展贴报告

小学五年级孤儿生活满意度与攻击行为的关系

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摘要 以往对孤儿心理的研究往往单独的关注于孤儿消极心理, 或积极心理的某一方面, 尚无对二者关系的探究。本文以辽宁某小学三个班级普通小学五年级学生为对照组, 选用 Buss_Perry(1992)攻击问卷、《青少年生活满意度量表》张兴贵(2004)等量表对某公立孤儿学校五年级学生的生活满意度与攻击行为两者之间的关系进行探究。研究结果表明: 孤儿学生环境满意度得分与躯体攻击得分、敌意得分、攻击总分呈显著负相关($p<0.05$)。普通学生友谊满意度得分、学习满意度得分、环境满意度得分、自由满意度得分及总满意度均与躯体攻击得分、愤怒得分、敌意得分、攻击总分呈显著负相关($p<0.01$)。孤儿学生愤怒得分、敌意得分、攻击总分显著高于普通学生。普通学生学校满意度得分、环境满意度得分、生活满意度总分显著高于孤儿学生。孤儿学生攻击性量表各维度得分主效应显著, 敌意与躯体攻击得分无显著性差异, 敌意得分显著高于言语攻击、愤怒得分, 言语攻击与愤怒得分差异不显著, 躯体攻击得分与言语攻击得分差异不显著; 青少年生活满意度量表各维度得分主效应显著, 友谊满意度与学校满意度得分无显著差异, 显著高于其余各维度得分, 学校满意度与学业满意度得分无显著差异, 显著高于环境满意度及自由满意度得分, 环境满意度、自由满意度以及学业满意度得分差异不显著。普通学生攻击性行为, 以及生活满意度量表各维度得分的单因素重复测量方差分析结果显示: 攻击性行为量表各维度得分主效应显著, 敌意与躯体攻击得分无显著性差异, 敌意维度得分显著高于言语攻击维度得分、愤怒得分, 言语攻击与愤怒得分差异不显著; 青少年生活满意度量表各维度得分主效应显著, 学校满意度得分显著高于其余各维度得分, 友谊满意度得分显著高于环境满意度、自由满意度以及学业满意度得分, 环境满意度、自由满意度以及学业满意度得分差异不显著。普通小学女生学校满意度得分显著高于男生, 男生躯体攻击得分显著高于女生。孤儿学生的攻击性高于普通学生, 普通学生的生活满意度高于孤儿学生。孤儿学生生活满意度中环境满意度越低, 攻击性行为越高。孤儿学生环境满意度低于普通学生。相比于孤儿学生, 普通学生攻击性行为受到生活满意度量表中更多因素的影响。

关键词 孤儿, 生活满意度, 攻击性行为

Relationship Between Life Satisfaction and Aggressive Behavior of Orphans in The Fifth Grade of Primary School

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Abstract: Previous studies on orphans' psychology often focused solely on the negative or positive psychology of orphans, and there has been no exploration of the relationship between the two. This article takes the fifth-grade students in three classes of a primary school in Liaoning as a control group, and chooses Chinese Buss—Perry Attack Questionnaire (1992), "Adolescent Life Satisfaction Scale" Zhang Xinggui (2004) and other scales to investigate the relationship between life satisfaction and aggressive behavior of orphans in a public orphan school. The results of the study showed that the scores of environmental satisfaction of orphan students were significantly negatively correlated with the scores of physical attack, hostility, and total attack scores ($p<0.05$). Ordinary students' friendship satisfaction

scores, learning satisfaction scores, environmental satisfaction scores, freedom satisfaction scores, and total satisfaction were all significantly negatively correlated with physical attack scores, anger scores, hostility scores, and total attack scores ($p < 0.01$). The scores of anger, hostility and attack of orphan students were significantly higher than those of ordinary students. Ordinary students' school satisfaction scores, environmental satisfaction scores, and total life satisfaction scores are significantly higher than those of orphan students. The main effect of scores in each dimension of the Orphan Student Aggressiveness Scale is significant. There is no significant difference between the scores of hostility and physical attack. The scores of hostility are significantly higher than the scores of verbal attack and anger. The scores of verbal attack and anger are not significantly different. The scores of physical attack and verbal attack are not significant. The difference is not significant; the main effect of the scores on each dimension of the Youth Life Satisfaction Scale is significant. There is no significant difference between the scores of friendship satisfaction and school satisfaction, which is significantly higher than the scores of other dimensions. There is no significant difference between the scores of school satisfaction and academic satisfaction, and the scores are significantly high. In terms of environmental satisfaction and free satisfaction scores, the differences in environmental satisfaction, free satisfaction and academic satisfaction scores were not significant. The results of single-factor repeated measures analysis of variance of the average students' aggressive behavior and life satisfaction scale scores on each dimension show that the main effect of the scores on each dimension of the aggressive behavior scale is significant, there is no significant difference between the scores of hostility and physical aggression, and the scores of the hostile dimension are significant. Higher than the verbal aggression score and anger score, the difference between the verbal aggression and anger scores is not significant; the main effect of the scores on each dimension of the Youth Life Satisfaction Scale is significant, the school satisfaction score is significantly higher than the scores of the other dimensions, and the friendship satisfaction score is significantly higher the scores of environmental satisfaction, freedom satisfaction, and academic satisfaction, while the scores of environmental satisfaction, freedom satisfaction, and academic satisfaction are not significantly different. Ordinary primary school girls have significantly higher school satisfaction scores than boys, and boys' physical attack scores are significantly higher than girls. The results show that: orphan students are more aggressive than ordinary students, and the life satisfaction of ordinary students is higher than that of orphan students. In the life satisfaction of orphans, the lower the environmental satisfaction, the higher the aggressive behavior. The environmental satisfaction of orphan students is lower than that of ordinary students. Compared with orphan students, the aggressive behavior of ordinary students is affected by more dimensions in the life satisfaction scale.

Keywords: Orphans, life satisfaction, aggressive behavior

学校氛围与青少年攻击行为的关系：自我控制的中介与父母支持的调节作用

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摘要 青少年攻击行为一直是社会关注的热点问题, 以往研究表明, 攻击行为会给青少年带来一系列不良影响, 如严重影响个体的身心健康、人格发展以及社会适应。学校是青少年学习和生活的重要场所, 学校环境(如学校氛围)与青少年攻击行为的形成有着密切联系。然而, 以往较少探讨学校氛围影响青少年攻击行为的内在作用机制。本研究基于生态系统理论, 从学校和家庭微系统的角度出发, 采用学校氛围量表、自我控制量表、攻击行为量表和父母支持量表对广州市五所中小学 1008 名学生(男生占 52.8%)进行测试, 旨在考察学校氛围与青少年攻击行为的关系, 以及自我控制在其中的中介作用和父母支持的调节作用。结果发现: (1) 在控制性别和年龄后, 学校氛围显著负向预测攻击行为($\text{effect} = -0.33, SE = 0.03, p < .001$), 即学校氛围越好, 青少年表现出的攻击行为越少。(2) 中介效应分析显示, 自我控制在学校氛围与攻击行为的关系中起显著的中介作用($\text{effect} = -0.05, SE = 0.01, 95\% CI = [-0.08, -0.03]$), 学校氛围通过促进青少年的自我控制,

进而降低其攻击行为。(3)有调节的中介效应分析显示,父母支持显著调节学校氛围与自我控制的关系,在高父母支持下,学校氛围对自我控制的作用更强。本研究揭示了学校氛围影响青少年攻击行为的中介和调节机制,对学校和家庭有针对性地预防和降低青少年的攻击行为具有重要参考价值。一方面,学校应当致力于为学生营造安全公平、和睦的环境,促进教师与学生的沟通,对做出攻击行为的学生进行有效的引导和教育;同时,父母应当给予孩子更多的鼓励和支持,信任和尊重孩子,培养积极健康的亲子关系,这有助于提高青少年的自我控制。

关键词 青少年, 学校氛围, 自我控制, 攻击行为, 父母支持

The Effect of School Climate on Adolescent Aggression: Self-control as a Mediator and Parental support as a Moderator

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Abstract: Aggression has always been a hot issue of social concern. Previous studies have shown that aggression will bring a series of adverse effects to adolescents, such as seriously affecting individual physical and mental health, personality development and social adaptation. School is an important place for young people to study and live, and school environment (e.g., school climate) is closely related to the formation of aggressive behavior. However, the internal mechanism of school climate affecting adolescents' aggressive behavior has rarely been explored in the past. Based on the ecosystem theory and from the perspective of school and family microsystems, this study tested 1008 students (52.8% males) from five primary and middle schools in Guangzhou using the school climate scale, the self-control scale, the aggression scale and the parent support scale. The purpose of this study was to investigate the relationship between school atmosphere and adolescent aggression, the mediating role of self-control and the moderating role of parental support. The results showed that: (1) after controlling for gender and age, school climate significantly negatively predicted aggression (effect = -0.33, $SE = 0.03$, $p < .001$), that is, the better the school climate, the less aggression of adolescents. (2) The analysis of the mediating effect showed that self-control played a significant mediating role in the relationship between school school climate and aggression (effect = -0.05, $SE = 0.01$, 95%CI = [-0.08, -0.03]). The school climate reduced aggression by promoting self-control. (3) The moderated mediating effect analysis showed that the relationship between school climate and self-control was significantly moderated by parental support. Specially, the effect of school climate on self-control was stronger under the condition of high parental support. This study reveals the mediating and moderating mechanism of school climate affecting adolescent aggression, which has important reference value for school and family to prevent and reduce adolescent aggression. On the one hand, schools should be committed to creating a safe, fair and harmonious environment for students, promoting the communication between teachers and students, and providing effective guidance and education to students who commit aggressive behaviors. At the same time, parents should give their children more encouragement and support, trust and respect their children, and cultivate a positive and healthy parent-child relationship, which is conducive to improving adolescents' self-control.

Keywords: adolescent, school climate, self-control, aggression, parental support

道德推脱与校园欺凌中旁观者亚型的关系研究：基于潜在剖面分析

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摘要 校园欺凌不仅是欺凌者和受欺凌者之间发生的简单互动关系,在欺凌事件中旁观者也发挥着重要的作用。Salmivalli 根据旁观者不同的行为特征将其分为四种类型:保护者、协助者、强化者、局外者,并提出目前校园欺凌干预的焦点是扩大保护者群体,将消极旁观者,尤其是局外者转变成为保护者。然而校园欺凌

旁观者的已有分类忽略了保护者、局外者在实际欺凌发生中可能存在的不同亚型。如保护者行为既可指向受欺凌者，如安慰受欺凌者；也可表现为指向欺凌者的坚定保护行为。因此本研究聚焦于旁观者中的保护者与局外者群体可能存在的异质性。此外，道德推脱被证实与个体所做出的旁观者行为存在紧密联系，道德推脱水平越高，个体更倾向于做出消极的旁观者行为。综上，本研究拟使用潜在剖面分析方法，探究校园欺凌保护者与局外者可能存在的亚型，并考察道德推脱与保护者、局外者亚型的关系。采用道德推脱问卷、保护者与局外者角色问卷对江西省 1562 名初高中生进行问卷调查。使用潜在剖面分析方法对校园欺凌保护者、局外者群体的异质性进行探索，并用 logistic 回归探究道德推脱与保护者、局外者亚型的关系。结果发现：（1）校园欺凌保护者、局外者群体可分为四个潜在类别：攻击型保护者（20.8%）、安慰型保护者（32.4%）、同情型局外者（15.8%）和矛盾型角色（30.9%）。（2）不同的亚型角色在道德推脱水平上差异显著（ $p < .001$ ）。（3）相对于攻击型保护者，同情型局外者与矛盾型角色报告更高的道德推脱水平（ $\text{logit} = .54, p < .001$; $\text{logit} = .56, p < .001$ ）。（4）攻击型保护者与安慰型保护者的道德推脱水平差异不显著（ $\text{logit} = -.08, p > .05$ ）。研究表明，个体的道德推脱水平与校园欺凌事件中的保护者、局外者亚型密切相关，道德推脱水平低的个体更容易做出积极的保护行为，如安慰受欺凌者或攻击欺凌者以保护受欺凌者。本研究结果启示教师和家长要引导学生切实体会受欺凌者的心理感受，降低其道德推脱水平，从而促进更多的学生在面对校园欺凌时做出保护者行为，降低校园欺凌发生的概率。

关键词 潜在剖面分析，校园欺凌，旁观者亚型，道德推脱

The Relationship between Moral Disengagement and Bystander Subtypes in School Bullying: Based on Latent Profile Analysis

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Abstract: School bullying is not only a simple interaction between the bullies and the victims, but bystanders also play an important role in bullying. Salmivalli divided bystanders into four types according to different behavioral characteristics of individuals: defenders, assistants, reinforcers and outsiders, and proposed that the current focus of school bullying intervention is to expand the group of defenders, and turn passive bystanders, especially outsiders, into defenders. However, the existing classification of bystanders in school bullying ignores the different subtypes of defenders and outsiders that may exist in the actual bullying. It may act as a defender who can point to bullying, such as comforter bullied; but also may showed strong protective behavior to point to the bullies. Therefore, this study focuses on the possible heterogeneity of the group of defenders and outsiders. In addition, moral disengagement has been shown to be strongly correlated with bystander behavior, the higher level of moral disengagement, the more likely the individual is to engage in negative bystander behavior. Therefore, this study aims to use latent profile analysis to explore the possible subtypes of defenders and outsiders and the relationship between moral disengagement and defenders and outsiders' subtypes. The moral disengagement questionnaire and the defender and outsider roles questionnaire were used to investigate 1562 middle and high school students recruited from Jiangxi Province. The latent profile analysis was used to explore the heterogeneity of the defenders and outsiders, and the logistic regression was used to explore the relationship between moral disengagement and defenders and outsiders' subtypes. The results showed that: (1) defenders and outsiders can be divided into four potential categories: aggressive defenders (20.8%), comforting defenders (32.4%), sympathetic outsiders (15.8%) and ambivalence roles (30.9%). (2) There were significant differences in the level of moral disengagement among different subtypes. (3) compared with aggressive defenders, the sympathetic outsiders and ambivalence roles reported higher levels of moral disengagement ($\text{logit} = .54, p < .001$; $\text{logit} = .56, p < .001$). (4) There was no significant difference in the level of moral disengagement between aggressive defenders and comforting defenders ($\text{logit} = -.08, p > .05$). In sum, adolescents' level of moral disengagement is closely related to the defenders and outsiders' subtypes in school bullying. Adolescents with lower levels of moral disengagement are more likely to engage in defender behavior, such as comforting the victims or attacking the bullies to protect the victims. The results of this study suggest that teachers

and parents should guide students to truly understand the psychological feelings of the victims of bullying and reduce their level of moral disengagement. In this way, more students will be encouraged to act as defenders in the face of school bullying and reduce the probability of school bullying.

Keywords: latent profile analysis, school bullying, bystander subtypes, moral disengagement

疫情常态化下威胁感知对高中生攻击行为的影响：有调节的中介作用

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摘 要 大量研究表明环境对青少年攻击行为有着重要的影响。然而, 以往的研究大多是从个人层面来研究青少年攻击行为的影响机制, 而较少从群体层面出发研究群体情绪与高中生攻击行为的关系。根据社会认同理论, 群体情绪也能影响个体行为。因此, 我们预测, 疫情常态化下, 对新冠疫情的威胁感知会影响高中生攻击行为, 并且群体焦虑在威胁感知和高中生攻击行为之间起中介作用; 国家认同在威胁感知和群体焦虑之间起调节作用。本研究通过对 250 名高中生进行威胁感知, 群体焦虑, 国家认同以及攻击行为调查问卷后, 发现: 1) 威胁感知和群体焦虑都能显著预测高中生的攻击行为; 2) 群体焦虑在威胁感知和高中生攻击行为之间起中介作用。3) 国家认同在威胁感知和群体焦虑之间起调节作用; 具体来说, 国家认同越低的高中生其群体焦虑水平会越低, 国家认同较低的个体其群体焦虑水平会越高。本研究从群体认同的视角探讨了疫情常态化下, 威胁感知与高中生攻击行为的内在机制, 以及国家认同在该机制中的作用。

关键词 威胁感知, 群体焦虑, 高中生攻击行为

The Impact of Threat perception in COVID-19 on Aggressive behavior of senior high school students: A Moderated Mediation Model

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Abstract: Abundant evidence has demonstrated an association between environmental influences and adolescent aggressive behavior. However, previous research has demonstrated the mechanism of aggressive behavior of senior high school students from the personal level rather than the group level. From the social identity theory, we predicted that the relationship between threat perception in COVID-19 and aggressive behavior of senior high school students would be mediated by collective angst, and this mediation relationship would be moderated by national identity. This research showed a moderated mediation model by investigated 300 senior high school students through the questionnaire survey. The results showed that: (1) senior high school students with a higher level of threat perception in COVID-19 have higher tendency of aggressive behavior. The positive association was mediated by collective angst; threat perception in COVID-19 significantly positively affected collective angst, and collective angst positively affected aggressive behavior of senior high school students; (2) National identity could moderate the relationship of threat perception and aggressive behavior of senior high school students; The indirect effect was stronger for lower national identity senior high school students than upper national identity senior high school students. From the perspective of group identity, this study identifies the potential underlying mechanism by which threat perception in COVID-19 is associated with aggressive behavior of senior high school students, and highlights an important role of collective angst in influencing mechanism.

Keywords: threat perception, collective angst, aggressive behavior of senior high school students

坚毅训练课程对初中生校园欺凌的影响：一项准实验研究

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摘要 联合国教科文组织（UNESCO）于 2019 年 12 月 1 日宣布每年 11 月的首个星期四为“反对校园暴力和欺凌国际日”，并强调了任何形式的校园暴力行为都是对青少年受教育权利和健康生活的侵害。探讨如何采取有效措施减少校园欺凌显得尤为重要。本研究从培养个体积极品格出发，设计开发六周的坚毅训练系列课程，考察干预课程在减少初中生校园欺凌上的效果。采用准实验的研究范式，以《简式坚毅量表》、《青少年网络受欺凌量表（CSAC）》、《欧洲网络欺凌干预量表（ECIPQ）》和《中学生欺负行为量表》为调查工具，采用整班抽样的方式，选取 163 名初中生作为实验组，201 名初中生作为对照组，检验坚毅训练课程的实施效果。结果表明：（1）坚毅课程有效减少了初中生的传统被欺凌（ $t=2.49, p<0.05$ ）和网络被欺凌（ $t=2.78, p<0.05$ ）；（2）干预课程显著减少欺凌者的传统欺凌行为（ $t=3.66, p<0.05$ ）和被欺凌者的传统被欺凌（ $t=2.75, p<0.05$ ）；（3）干预课程显著减少了高坚毅者的传统被欺凌（ $t=2.83, p<0.05$ ）、中等坚毅者的网络被欺凌（ $t=2.67, p<0.05$ ）以及低坚毅者的传统欺凌行为（ $t=2.97, p<0.05$ ）。本研究验证了六周坚毅课程训练在减少校园欺凌上产生积极成效，未来可以设计坚毅主题的校本课程，通过提升个体积极品质，达到预防校园欺凌的目的。

关键词 初中生,校园欺凌,坚毅课程,准实验

The impact of grit training programs on school bullying among middle school students: A quasi-experimental study

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Abstract: The United Nations Educational, Scientific and Cultural Organization (UNESCO) declared the first Thursday of November every year as the International Day against school violence and bullying" on December 1, 2019, and emphasized that any form of school violence is a violation of teenagers' right to education and healthy life. It is particularly important to explore how to take effective measures to reduce school bullying. In this study, we designed and developed a six-week series of grit training courses based on the development of individual positive character, and investigated the effect of intervention courses on reducing school bullying of middle school students. In this study, 163 junior high school students were selected as the experimental group and 201 junior high school students as the control group by using the quasi experimental design idea a quasi-experimental research paradigm, with the survey tools of Grit Scale, CSAC, ECIPQ and Bullying Behavior Scale for Middle School Students to test the implementation effect of the grit training course. The result shows: (1) Grit curriculum effectively reduced traditional victimization ($t=2.49, P < 0.05$) and cyberbullying victimization ($t=2.78, P < 0.05$) of junior high school students; (2) The intervention program significantly reduced the traditional bullying behavior of the bullies ($t=3.66, p<0.05$) and the traditional victimization of victims ($t=2.75, p<0.05$); (3) And significantly reduced traditional bullying of high gritter ($t=2.83, p<0.05$), cyberbullying of medium gritter ($t=2.67, p<0.05$), and traditional bullying of low gritter ($t=2.97, p<0.05$). This study verifies that the six-week grit course training has produced positive results in reducing school bullying. In the future, school-based courses with the theme of grit can be designed to achieve the purpose of preventing school bullying by improving the positive qualities of individuals.

Keywords: middle school students, school bullying, grit training course, a quasi-experimental

六周成长型思维课程对初中生校园欺凌态度的影响： 一项准实验研究

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摘要 目的：探究成长型思维课程干预减少初中生校园欺凌的效果。方法：选取湖北省宜昌市某县两所中学 480 名初中生，随机分为实验组($n=276$)和对照组($n=204$)。实验组进行 6 周成长型思维课程干预，在此期间对照组不进行任何干预。干预组和对照组初中生在干预前、干预后分别实施成长型思维量表、中学生欺负行

为量、欧洲网络欺凌调查问卷、青少年网络受欺凌量表等问卷调查；运用配对样本 t 检验进行数据分析处理，并运用 SPSS 宏程序 PROCESS 建立回归方程。结果：（1）前测数据表明，实验组和对照组在成长型思维和校园欺凌行为上均无显著差异。（2）追踪数据表明，干预课程显著提升了初中生成长型思维水平。实验组学生的成长型思维均显著提高，对照组学生的成长型思维变化不显著；（3）成长型思维课程能够有效减少校园欺凌。实验组学生的欺凌态度出现显著性提高，校园欺凌和受欺凌行为都出现显著性下降，对照组学生的欺凌态度、欺凌和受欺凌行为变化不显著；（4）成长型思维和欺凌基线水平的主效应都显著，成长型思维基线水平越低，个体在成长型思维各维度上升幅度越大；欺凌基线水平越高的个体，校园欺凌行为下降越明显。结论：成长型思维课程干预可以显著提高初中生的成长型思维水平，提升他们反对欺凌的态度，进而有效减少欺凌行为的发生。

关键词 成长型思维，欺凌态度，初中生

Effects of 6-Week Growth Mindset Courses Among Junior School Students' Attitudes on Bullying: A Quasi-Experimental Study

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Abstract: Objective: To explore the effect of growth mindset intervention courses in reducing school bullying of junior school students. Methods: 480 junior school students from two middle schools were selected and randomly divided into experimental group ($n=276$) and control group ($n=204$). The experimental group received 6-week growth mindset intervention course, while the control group did not receive any intervention during this period. In the intervention group and the control group, Growth Mindset Scale, Bullying Behavior Scale for Middle School Students, European Cyberbullying Questionnaire and Youth Internet Bullying Scale were conducted. The paired t -test was used for data processing. Using PROCESS to establish regression equation model in SPSS. Results: (1) The pre-test data showed that the experimental group and the control group had no significant differences in growth mindset and bullying behavior. (2) The intervention courses significantly improved the growth mindset level of junior school students. The growth mindset of the experimental group students was significantly improved, the control group students did not change significantly; (3) School bullying was effectively reduced by the growth mindset courses. For the experimental group, the anti-bullying attitude was increased significantly, school bullying was declined significantly. While the control group did not change significantly; (4) The main effect of growth mindset and bullying baseline level is significant. The lower baseline level of growth mindset, the greater increase of the individual growth mindset; the higher individual with the higher baseline level of bullying, the more obvious the decline in school bullying behavior. Conclusion: The growth mindset intervention courses can significantly improve the level of growth mindset in junior school students, enhance their anti-bullying attitude, and effectively reduce school bullying.

Keywords: growth mindset, bullying attitude, junior school students

儿童心理虐待对关系攻击的影响：黑暗人格和友谊嫉妒的链式中介

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摘要 目的：本研究探讨了黑暗人格和友谊嫉妒在儿童心理虐待对关系攻击影响的中介作用。方法：选取了 2053 名中职生，采用儿童心理虐待量表、黑暗人格量表、友谊嫉妒量表和关系攻击量表分别测遭受心理虐待程度、黑暗人格、友谊嫉妒和关系攻击的水平，并用结构方程模型分析各变量间的关系。结果：儿童心理虐待、黑暗人格、友谊嫉妒和关系攻击间两两显著正相关（ $r=0.208\sim0.922$ ， $P<0.01$ ），结构方程模型显示，儿童心理虐待通过黑暗人格和友谊嫉妒的中介作用对关系攻击产生影响，且该中介作用包含三条路径：黑暗

人格的单独中介作用、友谊嫉妒的单独中介作用，以及黑暗人格—友谊嫉妒的链式中介作用。结论：儿童心理虐待对关系攻击的影响，主要是通过黑暗人格这一中介路径，黑暗人格特质是产生关系攻击的关键因素。

关键词 儿童心理虐待；黑暗人格；友谊嫉妒；关系攻击

The Influence of Child Psychological Abuse on Relationship Attack: The Chained Mediation of Dark Personality and Friendship Jealousy

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Abstract: Objective: This study explored the mediating role of dark personality and friendship jealousy in the influence of child psychological abuse on relationship aggression. Method: Selected 2053 secondary vocational students, using the Child Psychological Abuse Scale, Dark Personality Scale, Friendship Jealousy Scale, and Relationship Aggression Scale to measure the level of psychological abuse, dark personality, friendship jealousy, and relationship aggression, respectively. The structural equation model analyzes the relationship between the variables. Results: Child psychological abuse, dark personality, friendship jealousy, and relationship aggression are significantly positively correlated ($r=0.208-0.922$, $P<0.01$). The structural equation model shows that child psychological abuse is through the mediating effect of dark personality and friendship jealousy. Relationship attacks have an impact, and the mediating role includes three paths: the sole mediating role of dark personality, the sole mediating role of friendship jealousy, and the chain mediating role of dark personality-friendship jealousy. Conclusion: The influence of child psychological abuse on relationship aggression is mainly through the intermediary path of dark personality. Dark personality traits are the key factor for relationship aggression.

Keywords: child psychological abuse; dark personality; friendship and jealousy; relationship assault

基于动机的四分暴力类型说的概述与应用

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摘要 传统的反应性-主动性攻击的二分法比较模糊，掩盖了攻击产生的异质性，阻碍了对攻击的深入研究。逆转理论从动态、多维、可变的视角对动机、情绪以及暴力等核心主题的论述，为从动机角度深入探究和理解人类攻击行为的复杂性提供了理论基础。基于逆转理论，综合考虑攻击产生的动机和实施攻击时的自我控制的协同作用，研究者提出了四分暴力类型说(Quadrupartite Violence Typology, QVT)。该学说将攻击类型扩展为冲动厌恶型(反应性)攻击、控制欲求型(主动性)攻击、冲动欲求型攻击以及控制厌恶型攻击等四类，每种类型都与特定的目标、情绪以及关键的心理过程相关。四种攻击类型从动机角度又可表述为愤怒驱动的攻击、娱乐驱动的攻击、奖励驱动的攻击以及报复驱动的攻击，而从愤怒角度又可表述为反应性愤怒攻击、强迫性愤怒攻击、报复性愤怒攻击以及寻求刺激性愤怒攻击。研究者已在不同的样本中证实了四分暴力类型的合理性，并围绕愤怒类型开发了愤怒攻击量表(Angry Aggression Scales, AAS)，网络攻击类型问卷(The Cyber-Aggression Typology Questionnaire, CATQ)以及面对面攻击类型问卷(Face-to-Face Aggression Typology Questionnaire, FATQ)。该学说的应用从最初对具有人格障碍的罪犯的分析，扩展到了青少年的研究中；从对现实中的犯罪、暴力、欺凌攻击的分析，扩展到网络攻击和网络欺凌的研究中；该学说还可与攻击的经典理论相结合，提高对攻击的解释力。四分暴力类型说对现实攻击以及网络攻击的解释更加细化、多维、可变，更符合生活实际，但目前的研究仍以静态测量的方式来验证QVT结构的合理性，还没有突显动态性。未来可围绕愤怒情绪开发相应的实验室任务，从动态、可变的视角验证QVT结构的合理性，并进一步完善基于四分暴力类型说的预防和干预策略，防止集中在愤怒(反应性攻击)和奖励(主动性攻击)动机的暴力和欺凌干

预策略无效或适得其反。

关键词 四分暴力类型，逆转理论，主动性攻击，反应性攻击

Summary and Application of The Quadripartite Violence Typology Based on Motivation

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Abstract: The traditional dichotomy of reactive-proactive aggression is vague, which covers up the heterogeneity of aggression and hinders the further study of aggression. The reversal theory discusses the core themes such as motivation, emotion, and violence from a dynamic, multidimensional and variable perspective, which provides the theoretical basis to deeply explore and understand the complexity of human aggression from the perspective of motivation. Based on the reversal theory, the researchers put forward the theory of Quadripartite Violence Typology (QVT), considering the synergy between the motivation of aggression and self-control when aggressing. This theory expands the aggression types into four types: impulsive-aversive aggression (reactive aggression), controlled-appetitive aggression (proactive aggression), impulsive-appetitive aggression, and controlled-aversive aggression, and each type is related to specific goals, emotions and key psychological processes. The four aggression types can be expressed as anger-driven aggression, entertainment-driven aggression, reward-driven aggression and revenge-driven aggression from the perspective of motivation, and can be expressed as reactive anger aggression, compulsive anger aggression, retaliatory anger aggression and stimulating anger aggression from the perspective of anger. Researchers have confirmed the rationality of Quadripartite Violence Typology in different samples, and developed Angry Aggression Scales, AAS), The Cyber-Aggressive Typology Questionnaire (CATQ) and Face - to - Face Aggressive Typology Questionnaire (FATQ) around anger types. The application of this theory has expanded from the initial analysis of criminals with personality disorder to the study of teenagers; From the analysis of crime, violence and bullying aggression in reality, it extends to the research of cyber aggression and cyber bullying; This theory can also be combined with the classical theory of aggression to improve the explanatory power of aggression. The explanation of the quartered violence type theory on real aggression and cyber aggression is more detailed, multidimensional and changeable, which is more in line with the actual life. However, the current research still verifies the rationality of QVT structure by static measurement, and has not highlighted its dynamics. In the future, we can develop corresponding laboratory tasks around anger, verify the rationality of QVT structure from a dynamic and variable perspective, and further improve the prevention and intervention strategies based on QVT ,so as to prevent the violence and bullying intervention strategies focusing on anger and reward motivation from being ineffective or counterproductive.

Keywords: quadripartite violence typology, reversal theory, proactive aggression, reactive aggression

校园排斥对中职生生命意义感的影响：链式中介效应分析

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摘 要 近年来，关于人类生命意义的议题受到各领域的广泛关注。有学者认为，人类具备寻找生命意义的内在驱动力，无法实现生命意义会导致心理痛苦。生命意义感(*meaning in life*)是指个体积极寻找并发现生活意义的程度。生命意义感主要从人际交往中获得，当个体的人际互动出现问题，便会增加其失去生命意义及价值感的威胁。作为一种常见的人际交往现象，校园排斥(*campus exclusion*)是发生在校园范围内的社会排斥，具体指个体在校园生活中被他人拒绝或忽视，难以建立和维持正常人际关系，使其归属和关系需求受到阻碍的现象和过程。本研究通过整群抽样方式，采用青少年校园排斥问卷、心理资本问卷、消极应对方式问卷和生命意义感量表对 1043 名中职生进行问卷调查。通过 SPSS23.0 和 AMOS23.0 软件对数据进行处理和分析，探讨校园排斥对生命意义感的影响，以及心理资本和消极应对方式的作用。在控制性别和年龄后，结果表明：

(1) 校园排斥负向预测中职生的生命意义感；(2) 校园排斥既能通过心理资本和消极应对方式的单独中介作用预测生命意义感，也能通过心理资本与消极应对方式的链式中介作用对生命意义感加以预测。研究最终梳理出一条“人际环境压力→人格特质发展→应对方式运用→生命意义建构”的理论作用机制，同时揭示出校园排斥对中职生生命意义感的影响，并强调了心理资本等人格因素与应对方式对生命意义感的作用。

关键词 校园排斥，生命意义感，心理资本，消极应对方式，中职生

The Effects of Campus Exclusion on Secondary Vocational Students' Perceived Meaning in life: Chain Mediating Effect Analysis

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Abstract: In recent years, the issue of the meaning of human life has attracted wide attention in various fields. Some scholars believe that human beings have the inherent drive to seek the meaning of life, and failure to achieve the meaning of life will lead to psychological pain. The meaning in life refers to the degree to which an individual actively seeks and finds the meaning of life. The meaning in life is mainly obtained from interpersonal communication. When individuals have problems in interpersonal interaction, it will increase the threat of losing their sense of meaning and value in life. Campus Exclusion, as a common phenomenon of interpersonal communication, is a social exclusion occurring on campus. It specifically refers to the phenomenon and process of individuals being rejected or ignored by others in campus life, which makes it difficult for them to establish and maintain normal interpersonal relationships, thus impeding their needs for belonging and relationship. In this study, 1043 secondary vocational students were surveyed by cluster sampling using the adolescent school exclusion questionnaire, the psychological capital questionnaire, the negative coping style questionnaire, and the life meaning scale. The data were processed and analyzed by SPSS23.0 and AMOS23.0 software to explore the impact of campus exclusion on the life meaning, as well as the role of psychological capital and negative coping style. After controlling for gender and age, the results showed that : (1) campus exclusion negatively predicted secondary vocational students' life meaning; (2) School exclusion can predict the meaning in life through the single mediating effect of psychological capital and negative coping styles, and can also predict the meaning in life through the chain mediating effect of psychological capital and negative coping styles. The theoretical mechanism of " interpersonal environmental stress → personality traits development → coping style application → meaning in life construction " was sorted out. Meanwhile, the influence of campus exclusion on the meaning in life of secondary vocational students was revealed, and the role of personality factors such as psychological capital and coping style on the meaning in life was emphasized.

Keywords: campus exclusion, meaning in life, psychological capital, negative coping style, secondary vocational students

少年的呼喊——对学业成就较高群体遭遇校园欺凌的调查分析

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摘要 影片《少年的你》的播出，引发了公众对校园欺凌的关注和讨论。在电影中，学业成就较高的陈念性格内向，家庭条件较差，因帮助受欺凌同学的行为而遭到了校园欺凌。但国内以往研究大多聚焦弱势群体，而在学业成就较高（High academic achievement）群体的遭遇方面，为数不多的研究也仅片面地分析了相关现状及原因。电影作品是对现实生活的反映，在当下电影制片和公众共同关注到学业成就较高群体遭遇校园欺凌的问题时，有必要对其进行进一步讨论。本研究从学业成就较高的群体遭受校园欺凌的现状的严重性及特点、遭受校园欺凌的独特原因、遭受校园欺凌带来的影响展开，探讨校园欺凌与学业成绩较高的群体之间的关系。通过问卷法和半结构化访谈等方式，采用 SPSS 26.0 对数据进行统计分析，还原了学业成就较高的群

体遭遇校园欺凌的现状，深入分析了此类问题的产生原因和影响，以期引起国内对这一群体遭遇校园欺凌现状的关注；同时以《少年的你》为载体，考察了校园欺凌影片对防治校园欺凌的作用，从传播学的角度，为防治校园欺凌提供了新的思路本研究丰富和完善了我国在校园欺凌与学业成就的关系上的研究，填补了原有研究中对这一群体遭遇校园欺凌的空白，为今后对学业成就较高的群体遭受校园欺凌的充分研究奠定了一定基础；通过对校园欺凌的核心判定依据“反复性”、“持续性”的重新界定，综合影视传播、法律、教育等方面，对校园欺凌的综合防治提出建议，并对未来研究方向进行展望。

关键词 校园欺凌，暴力防治，学业成就，少年的你

The Cry of Teenagers — An Investigation and Analysis of School Bullying Encountered by Groups with High Academic Achievement

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Abstract: The release of the film *Better Days* has sparked public concern and discussion about school bullying. In the film, Chen nian, an introvert with high academic achievement and poor family conditions, is bullied in school for helping a bullied classmate. However, most of the previous domestic researches focused on the disadvantaged groups, and in terms of the experiences of the groups with High academic achievement, the few researches only made a one-sided analysis of the relevant situation and reasons. Films are reflections of real life, and at a time when both filmmaking and the public are concerned about the problem of bullying among high achiever groups, it needs to be discussed further. This study explores the relationship between school bullying and groups with high academic achievement from the perspective of the seriousness and characteristics of the current situation, the unique causes of school bullying, and the impact of school bullying. By means of questionnaire and semi-structured interview, SPSS 26.0 was used for statistical analysis of the data, to restore the status quo of the group with high academic achievement suffering from school bullying, and to deeply analyze the causes and effects of such problems, in order to draw attention to the status quo of this group suffering from school bullying in China. This study uses *Better Days* as the carrier to examine the bullying effect on prevention and control of bullying film, from the perspective of communication studies, offers a new way for the prevention of bullying, enrich and perfect our country of this research on the relationship between bullying and academic achievement of research, fill in the research of the original blank for this group encounter bullying, It lays a foundation for the research on the bullying of the group with high academic achievement in the future. By redefining the core judgment basis of "repeatability" and "continuity" of school bullying, this paper puts forward suggestions on the comprehensive prevention and treatment of school bullying from the aspects of film and television communication, law and education, and looks forward to the future research direction.

Keywords: school bullying, violence prevention, academic achievement, *Better Days*

小学生受欢迎程度与欺负行为的关系 ——个体感知的欺负行为可接受性与道德推脱的调节作用

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摘 要 当前我国和全球的校园欺负现象都十分严峻，各国政府和各国际组织也出台了相关法律法规、政策及文件以应对校园欺负。联合国教科文组织提出的“全面性教育”理念中也涵盖了认识与应对校园欺负的相关内容。生态系统理论认为，多重环境因素影响着人类个体的行为发展，其中关键的一环就是同伴关系。根据柯尔伯格的道德认知发展理论中习俗水平的好孩子定向阶段，那些在同伴群体中受欢迎的学生为了维持自己在同伴心中的好孩子形象，因而更少实施欺负行为，相反，那些在同伴群体中不受欢迎的个体则会表现出更多的欺负行为。同伴关系是小学阶段最主要的人际关系，个体感知的欺负行为可接受性主要是指行为主体感

知到的来自同伴群体对欺负行为的认同程度。道德推脱是指个体做出某些不道德行为后产生的一些特定的认知倾向，这些认知倾向包括重新定义自己的行为，使其伤害性显得更小、最大限度地减少自己在行为后果中的责任和降低对受害者痛苦的感知。小学生受欢迎程度与欺负行为的关系会因为其感知到的欺负行为可接受性以及个体自身的道德推脱水平这一认知倾向而发生变化。本研究以 1262 名四、五年级的小学生为被试（51% 男孩），考察个体感知到的欺负行为可接受性和个体的道德推脱如何影响受欢迎程度和欺负行为之间的关系。受欢迎程度采用同伴提名测量，欺负行为采用张文新，武建芬和 Jones(1999)修订的 Olweus 欺负问卷进行测量、个体感知到的欺负行为可接受性通过学生自我报告两个问题——“你的五个好朋友中，有几个认为可以欺负其他同学？有几个认为不可以欺负其他同学？”进行测量、道德推脱采用潘清泉、周宗奎（2010）修订的儿童道德脱离量表进行测量。结果发现：（1）小学生的受欢迎程度可以显著负向预测其欺负行为；（2）个体感知的欺负行为可接受性在小学生受欢迎程度与欺负行为之间起到调节作用。当个体感知的欺负行为可接受性低时，受欢迎程度低的学生比受欢迎程度高的学生有更少的欺负行为，相反，当个体感知到的欺负行为可接受性高时，受欢迎程度低的学生比受欢迎程度高的学生有更多的欺负行为；（3）道德推脱对小学生的受欢迎程度与欺负行为可接受度对欺负行为的交互效应具有高阶调节作用。在道德推脱水平低的学生中，个体感知到的欺负行为可接受性与受欢迎程度对欺负行为的交互效应显著，在道德推脱水平高的学生中，该交互效应则不显著。本研究检验了个体感知的欺负行为可接受性与道德推脱在小学生受欢迎程度与欺负行为之间的作用，对从同伴关系角度减少小学生的欺负行为具有一定的指导意义。

关键词 受欢迎程度；欺负行为；感知欺负行为可接受性；道德推脱；小学生

Relationship between primary school students' popularity and bullying - the moderating role of individual's perceived bullying acceptability and moral disengagement

Abstract: At present, the phenomenon of campus bullying in China and worldwide is very serious, governments and international organizations have also issued relevant laws and regulations, policies and documents to deal with campus bullying. UNESCO's concept of "comprehensive education" also includes awareness and response to bullying on campus. Ecosystem theory holds that multiple environmental factors influence the behavior development of human beings, one of the key factors is peer relationship. According to Kohlberg's theory of moral cognitive development, students who are popular in the peer group are less likely to commit bullying in order to maintain their image as good children in the peer group, while those who are not popular in the peer group exhibit more bullying. Peer relationship is the main relationship in primary school. Individual's perceived bullying acceptability mainly refers to the degree of recognition of bullying behavior from peer groups perceived by the actor. Moral disengagement refers to specific cognitive tendencies that arise from individuals making certain immoral behaviors, including redefining their own behavior to make it less harmful, minimizing their own responsibility for the consequences of the behavior, and reducing their recognition of the victim's pain. The relationship between primary school students' popularity and bullying can change due to individual's perceived acceptability of the bullying behavior and individual's own moral disengagement level. The study investigated 1,262 fourth- and fifth grade primary school students (51 percent of boys) on how individual's perceived acceptability of the bullying behavior and individual's moral disengagement affected the relationship between popularity and bullying. Popularity is measured by peer nomination, Bullying was measured using the Olweus Bullying Questionnaire revised by Zhang Wenxin, Wu Jianfen and Jones (1999), and individual's perceived bullying acceptability was measured by student's self-report - "How many of your five best friends think it's ok to bully other students?" How many think it is not proper to bully other students? ". Moral disengagement was measured using the child moral disengagement scales revised by Pan Qingquan, and Zhou Zongkui (2010). The results showed that: (1) the popularity of primary school students can significantly negatively predict their bullying behavior; (2) Individual's perceived bullying acceptability moderates the relationship between primary school students' popularity and bullying behavior. When individual's perceived

acceptability is low, students with low popularity have less bullying than students with high popularity, whereas students with low popularity have more bullying behavior than students with high popularity when individual's perceived bullying acceptability is high; (3) Moral disengagement has a high-order moderation effect on the interaction between primary school students' popularity and perceived acceptability on bullying behavior. Among the students with low moral disengagement level, the interaction effect of individual's perceived acceptability and popularity on bullying behavior was significant, and among the students with high moral disengagement level, the interaction effect was not significant. This study examines the role of individual's perceived bullying acceptability and moral disengagement in the relationship between popularity of primary school students and bullying behavior, which has some guiding significance for reducing bullying behavior in primary school students from the perspective of peer relationship.

Key words: popularity; bullying; perceived bullying acceptability; moral disengagement; primary school students

农村小学生同伴攻击/受侵害类型及其学校适应： 基于潜在剖面分析

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摘 要 本研究采用方便抽样调查了江西省 1489 名 4-6 年级农村小学生的攻击受侵害情况, 采用潜在剖面分析方法探索其攻击与受侵害类型, 并尝试从积极情绪、消极情绪、师生关系、同伴关系及学业成绩维度进一步解释不同攻击受侵害类型与其学校适应的关系。结果表明: (1) 农村小学生攻击受侵害分为四类: 高攻击-高受侵害型(2.35%)、低攻击-高受侵害型(22.16%)、中攻击-中受侵害型(8.87%)及低卷入型(66.62%); (2) 不同亚类型具有一定的“共发性”, 除高攻击-高受侵害组外, 各亚组均表现出间接攻击高于直接攻击, 间接受侵害高于直接受侵害; (3) 不同亚型在性别、年级、是否寄宿上均差异显著, 男生、低年级、寄宿生更容易卷入校园欺凌; (4) 不同亚型在学校适应上的表现, 在积极情绪及消极情绪上, 高攻击-高受侵害均显著高于其他各组, 在人际关系和学业表现上, 低卷入组显著优于其他各组。这提示说明: 农村小学生卷入校园欺负的比例及风险明显更高, 且攻击受侵害群体内部存在异质性分类, 不同亚型均表现出间接攻击侵害高于直接攻击侵害行为, 这一“隐蔽性”要求农村学校教师、学生家长应及早发现校园欺负的苗头, 防微杜渐, 不能忽视学生间较为隐秘间接的攻击侵害行为, 及时制止, 消除校园欺负进一步恶化; 其次, 应科学甄别农村小学生群体中“高攻击-高受侵害”组个体身份的“双重性”, 长期关注其在学校适应方面的特殊性; 再次, 在干预实践中, 需要针对男生、低年级、寄宿生等校园欺负高发人口学特征群体, 有区别地进行校园欺负的防治及干预。

关键词 校园欺负, 同伴攻击, 同伴侵害, 农村小学生, 潜在剖面分析

Types of Aggressive Victims of Rural Pupils and Their School Adaptation: Based on Latent Profile Analysis

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Abstract: The current study investigated whether there were distinct subgroups of rural children who experienced different forms of aggression and victimization using latent profile analysis (LPA), and whether these subgroups differed from one another in their different levels of school adaptation. Participants were children in grades 4-6 from rural central primary schools. It showed that: 1) four subgroups were identified, including high aggression-victimization subgroup, high victimization subgroup, medium aggression-victimization subgroup, and low

involvement subgroup;2) There was high degree of co-occurrence among four subgroups of aggression and victimization. Except for the high aggression-victimization subgroup, all subgroups showed that indirect aggression was higher than direct aggression, and indirect victimization was higher than direct victimization;3) There were significant differences in gender, grade and boarding status among different subgroups. Boys, lower grade and boarding students were more likely to be involved in campus bullying ;4) In terms of school adaption, the scores of positive and negative emotions in high aggression-victimization subgroup were significantly higher than those in other subgroups. However, the scores of Interpersonal relationship and academic achievement of low involvement subgroup were significantly better than those of other subgroups. Therefore, we should pay more attention to bullying in rural schools, pay attention to rural primary school students who are in high aggression-victimization subgroup, and carry out targeted intervention and prevention according to the characteristics of different subgroups and students' adaptation.

Keywords: School bullying, Peer aggression, Peer victimization, Rural primary school students, Latent profile analysis

初中校园欺凌旁观者行为特征及其影响因素研究

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摘 要 校园欺凌一直是国内外研究热点之一,但研究大多数集中在欺凌者与被欺凌者这两种角色,对校园欺凌旁观者的关注研究较少。有研究表明当校园欺凌发生时,旁观者如果能进行及时干预,欺凌行为则会减少,而对于经历欺凌事件的旁观者而言,其人生价值观也会受到影响。可见,对于减少校园欺凌行为,对旁观者进行相关研究显得尤为重要。本文对以往国内外关于校园欺凌旁观者角色进行系统的综述与分析,重点分析不同类型初中校园欺凌旁观者的行为特征及其影响因素。现有的研究中发现旁观者这一类群体也会受到欺凌事件的影响,在欺凌事件发生时,对欺凌行为持有不同态度的初中生会表现出不同的行为特征,相关研究将旁观者角色分为4种:协助者,强化者,局外人和保护者。有因未能制止欺凌行为而使被欺凌者受伤害,自身出现内疚,焦虑,难过等负面情绪;也有在欺凌事件发生时持有什么都不做,消极,被动的旁观者态度;而有些旁观者行为会对欺凌事件的发展起到助推作用。以往研究表明,影响校园欺凌旁观者行为因素包括个体因素如欺凌态度,共情,自尊,学校满意度,亲社会行为,公正世界信念等,其他因素如父母教养方式,友谊质量,师生关系,社会支持等。最后本文从旁观者干预模型,社会认知理论对不同类型的旁观者行为特征及其影响因素进行解释,为制定相关校园欺凌干预措施提供借鉴。

关键词 校园欺凌,旁观者,旁观者干预模型,初中生

A study on the behavior characteristics and influencing factors of bystander bullying in middle school

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Abstract: School bullying has been one of the hot research topics at home and abroad, but most of the research focuses on the two roles of the bully and the bullied, and there is little research on the bystanders of school bullying. Studies have shown that when bullying occurs, bystanders who intervene can reduce bullying behavior, and for bystanders who experience bullying, their life values are affected. Therefore, it is particularly important to conduct research on bystanders to reduce school bullying. This paper systematically reviews and analyzes the role of bystanders in school bullying at home and abroad, and focuses on analyzing the behavioral characteristics and influencing factors of bystanders in different types of middle school bullying. Existing research has found that

bystanders are also affected by bullying, junior high school students with different attitudes towards bullying will show different behavioral characteristics. Related studies have divided the roles of bystanders into four types: helper, reinforcer, outsider and protector. The failure to stop the bullying behavior caused the victim to be hurt, their own guilt, anxiety, sad and other negative emotions; There is also a do-nothing, passive, passive bystander attitude when bullying occurs; And some bystander behavior can contribute to the development of bullying. Previous studies have shown that the factors influencing bystander behavior in school bullying include individual factors such as bullying attitude, empathy, self-esteem, school satisfaction, prosocial behavior, belief in a just world, and other factors such as parenting style, friendship quality, teacher-student relationship, and social support. Finally, this paper explains different types of bystander behavior characteristics and their influencing factors from the bystander intervention model and social cognitive theory, so as to provide reference for the formulation of relevant intervention measures of school bullying.

Keywords: School bullying, Bystanders, Bystander Intervention Models, Junior high school students

青少年早期的同伴地位与同伴圈子层的群体规范对校园欺凌中保护行为的作用及性别差异

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摘要 以我国中部地区某省会 2 个区县 7 所学校的八年级 2470 名学生为被试, 采用多元线性回归和多层线性模型对保护行为的影响因素进行分析, 考察学生的两种同伴地位 (社会支配和社会喜爱) 和保护行为的关系, 并考察同伴圈子层的群体规范 (保护行为规范和欺凌行为规范) 和保护行为的关系, 以及对同伴地位和保护行为关系的调节作用, 同时探究此作用机制在不同性别或性别圈子的结果。研究的主要结果如下: (1) 同伴地位中, 社会支配对保护行为有显著的正向预测作用, 社会喜爱对保护行为的正向预测作用只在男生或男生圈子中显著。(2) 同伴圈子的群体规范中, 只有保护行为规范会显著正向预测保护行为, 欺凌行为规范则不显著。(3) 保护行为规范对社会支配、社会喜爱和保护行为的关系都有显著的调节作用。高保护行为规范的同伴圈子中, 社会支配对保护行为的正向预测作用更强, 男生圈子中的社会喜爱才会显著正向预测保护行为。圈子欺凌行为规范对社会支配和保护行为的关系有显著的调节作用, 这一调节作用在不同性别圈子中的效应具有差异, 表现为男生圈子中, 随着圈子欺凌行为规范的降低, 社会支配和保护行为的正向预测作用越强, 而女生圈子则相反。结果启示我们, 面对欺凌事件的干预和预防, 应该更加注重积极行为的正面示范作用和积极规范的引导作用, 及时识别并鼓励欺凌中的积极保护行为, 发挥同伴中积极规范的影响作用, 以此促使更多的学生去遵守积极规范, 表现出积极行为, 促进亲社会行为和保护行为的传播。同时, 性别上的差异启示我们, 在校园中建立积极规范过程中, 应当尤其注重对男生圈子中群体规范的塑造。

关键词 校园欺凌, 保护行为, 同伴地位, 同伴圈子, 群体规范

The effects of social status, peer clique norms and gender differences on protective behaviors in bullying among early adolescents

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Abstract: This study would use Multiple Linear Regression and Hierarchical Linear Models to reveals the relationships. We would focus on the effect of social status (Social dominance and Social preference), the influences of clique norms (Defending norm and Bullying norm), and to which extent the clique norms moderate the effect of the two measures of social status on defending behaviors. Additionally, the gender difference would be explored in each study. Participants in the study were 2470 Grade 8 students (1200 girls, Mage = 14.4 years) in Central China.

The findings are as follow:(1) Social dominance was positively associated with defending behaviors significantly, but social preference was only positively associated with the boys' defending behaviors significantly. (2) Only clique defending norm was positively associated with defending behaviors, clique bullying norm was not significant. (3) Clique defending norm had significant moderating effects on the relationships between social status and defending behaviors. When in cliques with higher defending norms, the positive associations between social dominance and defending behaviors were stronger. The positive association between social preference and defending behaviors was significant only in boy cliques with high clique defending norms. The main effect of clique bullying norm was not significant, but clique bullying norm had significant moderating effects on the relationship between social dominance and defending behaviors. The moderating effect was different among different gender groups. The positive association between social dominance and defending behaviors was stronger with the decrease of bullying norms in the boy cliques, while the opposite effect was found in the girl cliques. The results inspire us that, in the face of bullying intervention and prevention, we should pay more attention to the positive exemplary role and regulate positively guide of the positive behavior. And timely identify and encourage positive protection behavior of bullying, promoting the effect of positive norms in the play companion, to encourage more students to comply with the specifications and to show positive behavior, and at last promoting the spread of prosocial and protective behaviors. At the same time, gender differences suggest that in the process of establishing positive norms on campus, we should pay special attention to the shaping of group norms in the boys' clique.

Keywords: Bullying, Defending behaviors, Social status, Clique, Group norm

5.34“行为与健康心理学专业委员会”分组展贴报告

创伤后应激障碍相关精神障碍与自身免疫疾病的遗传关联

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摘要 背景: 创伤后应激障碍(posttraumatic stress disorder, PTSD)是患者经历创伤事件后引发的一种应激性精神障碍。创伤后应激障碍与另外两种精神疾病精神分裂症(schizophrenia, SCZ)和重性抑郁障碍(major depressive disorder, MDD)高度相关。包括流行病学在内的研究表明, 精神障碍可能与某些自身免疫疾病有关, 如干燥综合征(Sjögren's syndrome, SS)。研究创伤后应激障碍相关的精神障碍(包括创伤后应激障碍本身、精神分裂症和重性抑郁障碍)与自身免疫疾病之间的遗传关联性(genetic correlation), 有助于发展创伤后应激障碍的遗传学和症状学研究。目前全基因组关联研究(genome-wide association study, GWAS)从基因组大样本的角度提供了发现不同性状之间相关性的契机。方法: 应用多基因风险评分(polygenic risk score, PRS)对全基因组关联研究数据进行分析, 检测创伤后应激障碍相关精神障碍(创伤后应激障碍、精神分裂症和重性抑郁障碍)与两种自身免疫疾病(干燥综合征和乳糜泻(Celiac disease))的遗传关联。所有的全基因组关联研究数据都来自公共资源。结果: 创伤后应激障碍与干燥综合征和乳糜泻均呈遗传相关(P 值=0.0043和0.029); 精神分裂症和重性抑郁障碍与两种自身免疫疾病呈高度遗传重叠(P 值在 $9.8\text{e-}26$ ~ $4.1\text{e-}5$ 之间)。结论: 干燥综合征和乳糜泻与创伤后应激障碍相关精神障碍显著关联。自身免疫疾病和创伤后应激障碍相关的精神障碍可能有着某些遗传机制共性。在研究创伤后应激障碍时, 可以考虑自身免疫疾病的症状。

关键词 创伤后应激障碍, 自身免疫疾病, 遗传关联, 多基因风险分数, 全基因组关联研究

Genetic correlation between posttraumatic stress disorder-related mental disorders and autoimmune disorders

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Abstract: Background: Posttraumatic stress disorder (PTSD) is a stress-related psychiatric-condition which occurs after trauma exposure. PTSD is highly correlated to two mental disorders, schizophrenia (SCZ) and major depressive disorder (MDD). Available studies, including epidemiology investigations, have indicated that mental disorders may be correlated to some autoimmune disorders such as Sjögren's syndrome. Discovering genetic correlation between PTSD-related mental disorders (including PTSD itself, SCZ and MDD) and autoimmune disorders could help to develop genetics and symptomology study of PTSD. Now genome-wide association study (GWAS) with large sample size provides the opportunity to discover the genetic correlations across disorders from the point view of whole genome variations. Methods: In this study, we tested the relationship between PTSD-related mental disorders (PTSD, SCZ and MDD) and two common autoimmune disorders, Sjögren's syndrome (SS) and Celiac disease (CeD), by applying polygenic risk score (PRS), to GWAS data. All the GWAS data were from public resources. Results: PTSD showed genetic correlation to both SS and CeD ($P = 0.00425072$ and 0.0289555 , respectively); SCZ and MDD showed highly genetic overlap with both SS and CeD (P ranging from $9.8e-26$ to $4.1e-5$). Conclusions: Sjögren's syndrome and Celiac disease are significantly correlated to PTSD-related mental disorders. Autoimmune disorder and PTSD-related disorders may share close genetic mechanisms. It's worthy to considering autoimmune disorder symptoms when investigating PTSD.

Keywords: PTSD, autoimmune disorder, genetic correlation, polygenic risk score (PRS), genome-wide association study (GWAS)

社交媒体浏览自拍与青少年限制性饮食行为：瘦理想内化与媒介素养的作用

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摘要 随着移动互联网技术的发展, 社交媒体成为日常生活中不可缺少的一部分, 并对人们的生活产生重要影响。已有研究表明, 社交媒体是影响人们身体意象及进食态度与行为的重要因素。近年来, 自拍成为社交媒体上一种十分流行的现象, 备受青少年群体的青睐。同时, 青少年正处于身体发育的关键时期, 进食行为对他们的身心健康起重要影响。因此, 本研究以青少年为研究对象, 旨在探讨社交媒体浏览自拍与限制性饮食之间的关系及瘦理想内化在其中的中介作用。同时, 研究将考察媒介素养在上述中介效应中的调节作用。研究选取 1481 名中学生 (女生 720 人, 平均年龄 15.49 ± 1.84 岁) 为研究对象, 调查了他们在浏览自拍、瘦理想内化、媒介素养及限制性饮食上的得分。结果发现: ①社交媒体浏览自拍与青少年限制性饮食之间存在显著正相关。②瘦理想内化在社交媒体浏览自拍与青少年限制性饮食之间中介效应显著, 且这一中介模型不存在性别差异; 也就是说, 对于青少年而言, 在社交媒体浏览他人自拍, 会导致瘦理想内化水平的提高, 进而产生限制性饮食行为。③媒介素养在社交媒体浏览自拍与瘦理想内化之间起调节作用, 具体而言, 对于媒介素养高的个体, 社交媒体浏览自拍对瘦理想内化的预测作用显著低于低媒介素养的个体; 换句话说, 媒介素养对社交媒体浏览自拍影响限制性饮食的间接效应起缓冲作用。研究结果丰富了中国背景下青少年身体意象和饮食行为的相关研究, 提示我们通过媒介素养干预项目的实施, 提高青少年媒介素养水平, 有助于降低青少年消极身体意象, 减少限制性饮食行为的产生, 对青少年心理健康水平的提高有重要意义。

关键词 浏览自拍, 社交媒体, 瘦理想内化, 限制性饮食, 媒介素养

Selfie-viewing on social media and restrained eating among adolescents: The roles of thin-ideal internalization and media literacy

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Abstract: With the development of mobile Internet technology, social media has become an essential part of and has an important influence on people's daily life. A wide range of research has documented that social media use is an important influence factor of people's body image and eating behaviors. Recently, selfie has become a very popular phenomenon on social media, especially among adolescents. Adolescents are in a critical period of physical development and eating behaviors have a crucial effect on their physical and mental health. Therefore, the present study examined the link between selfie-viewing on social media and restrained eating as well as the mediating role of thin-ideal internalization in this relationship. Furthermore, the moderating role of media literacy in the indirect effect was also examined. A sample of 1481 Chinese middle and high school students (720 girls, mean age = 15.49 ± 1.84) completed self-reported measures of selfie-viewing, thin-ideal internalization, media literacy, and restrained eating. Results showed that selfie-viewing was positively associated with restrained eating. Thin-ideal internalization mediated the association between selfie-viewing and restrained eating and no gender difference was found in the mediation model. Media literacy moderated the relationship between selfie-viewing and thin-ideal internalization. To be specific, for adolescents higher in media literacy the association between selfie-viewing and thin-ideal internalization was weaker than that for those lower in media literacy. In other words, media literacy had a buffering role in the indirect effect of selfie-viewing on restrained eating via thin-ideal internalization. Findings of the present study enrich the literature on body image and eating behaviors among adolescents in the Chinese context, and imply that media literacy intervention program could be developed to improve adolescents' media literacy and further decrease their body image and eating concerns, which would have important implications for adolescents' mental health.

Keywords: selfie-viewing, social media, thin-ideal internalization, restrained eating, media literacy

大学生生活目标对正负情绪和生活习惯的影响

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摘要 问题提出: 近年来大学生患高血压、肥胖的比例在逐年增加, 这与其不良的生活习惯密不可分。与此同时, 他们还受到情绪问题的困扰, 导致学习成绩下降、人际关系恶化等问题。而目标本身有激励的作用, 对个体意义重大。因此本研究对生活目标、正负情绪和生活习惯进行了研究。**目的:** 将生活目标的分类细化, 分别探究内外部生活目标对大学生的正负情绪和其生活习惯的影响。并探讨生活目标在个体保持心理健康和养成良好生活习惯中发挥的巨大作用。**研究方法:** 采用问卷调查法, 使用生活目标量表、生活愿望量表、正负情绪量表和生活习惯问卷对 H 大学 379 名同学 (其中女生 227 人, 男生 152 人) 进行了问卷调查, 平均年龄为 19 岁。所有资料均采用 Excel 软件建立调查表数据库, 应用 SPSS22.0 软件进行数据分析。采用的统计方法主要有: 相关分析、T 检验和单因素方差分析。**结果:** (1) 男生、女生在烟酒生活习惯上有显著差异 ($p < .001$), 男生的烟酒生活习惯差于女生。不同年级大学生的生活目标有显著差异 ($p < .01$), 本科二年级学生的生活目标与其他年级相比目标不明确。不同专业大学生的烟酒生活习惯有显著差异 ($p < .01$), 理工科学生的烟酒使用多于其他专业; (2) 生活目标与正性情绪呈正相关 ($p < .001$), 与负性情绪呈负相关 ($p < .001$); (3) 内部生活目标与正性情绪、健康的烟酒、饮食、睡眠、活动生活习惯有显著正相关 ($p < .001$), 与负性情绪有显

著负相关($p<.001$)。外部生活目标与负性情绪有显著正相关($p<.001$)，与正性情绪、健康的烟酒、饮食、睡眠、活动生活习惯有显著负相关($p<.001$)；(4)外部与内部生活目标的个体在正性情绪($p<.001$)、负性情绪($p<.001$)、生活习惯($p<.001$)上差异显著。具体表现为：相比拥有外向生活目标的个体，内向生活目标的个体正性情绪多、负性情绪少且生活习惯更加健康。**结论：**生活目标是正负情绪和生活习惯的重要影响因素。树立内部的生活目标有利于正性情绪和健康生活习惯的培养，为大学生生活目标的研究提供数据支持与理论支撑。

关键词 生活目标,正负情绪,生活习惯,大学生

The influence of life goals on positive and negative emotions and living habits of college students

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Abstract: Questions raising: In recent years, the proportion of college students suffering from hypertension and obesity is increasing year by year, which is inseparable from bad living habits. At the same time, many college students are troubled by emotional problems, resulting in the decline of academic performance and the deterioration of interpersonal relations. The goal itself has the role of incentive, which is of great significance to individuals. Therefore, this study studies life goals, positive and negative emotions and living habits. **Purpose:** The classification of life goals is refined to explore the impact of internal and external life goals on College Students' positive and negative emotions and their living habits. It also discusses the great role of life goals in maintaining mental health and developing good living habits. **Research method:** Questionnaire survey method was used. 379 students from North China University of science and technology were selected as the subjects (female=227,male=152). They were measured with life goal questionnaire, life desire questionnaire, positive and negative emotion questionnaire and living habit questionnaire. The average age was 19 years old. Excel software was used to establish questionnaire database for all the data, and SPSS software 22.0 was used for data analysis. The statistical methods mainly included correlation analysis, T test and single factor analysis of variance. **Result:** 1 Male and female students have different smoking and drinking habits($p<.001$). Male students smoke and drink more than female students. Different grades of college students have differences in life goals ($p<.01$), the specific performance is that the sophomores' life goals are not clearer compared with other grades. Different majors have differences in smoking and drinking habits($p<.01$), the specific performance is that science and engineering students smoke and drink more than other majors. 2 There is a significant positive correlation between life goals and positive emotions ($p<.001$), and a significant negative correlation between life goals and negative emotions ($p<.001$). 3 Introverted life goals have significant positive correlation with positive emotions, healthy tobacco and alcohol, diet, sleep and activity living habits($p<.001$), and significant negative correlation with negative emotions($p<.001$). Extroverted life goals have significant positive correlation with negative emotions($p<.001$), and have significant negative correlation with positive emotions, healthy smoking, drinking, diet, sleep and activity living habits($p<.001$). 4 Individuals with extroverted and introverted life goals have significant differences in positive emotions ($p<.001$), negative emotions ($p<.001$) and life habits ($p<.001$). The specific performance are: Compare with people with extroverted life goals, introverted individuals have more positive emotions, less negative emotions, and healthier lifestyles. **Conclusion:** Life goals are important influencing factors of positive and negative emotions and living habits. Establishing internal life goals is conducive to the cultivation of positive emotions and healthy living habits, and provides data support and theoretical support for the research of College Students' life goals.

Keywords: life goals, life habit, positive and negative emotions, undergraduate

锻炼和久坐的关系：基于行为能量消耗最小化(BMEC)的新视角

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摘要 在传统研究中, 锻炼与久坐具有冲突对立的关系, 很多研究都把久坐行为和锻炼视为对立面, 就像是同一枚硬币的两面, 锻炼和久坐被视为是不同的结构。诚然是有大量的研究支持这一观点。但是, 最近的研究表示, 锻炼和久坐并不一定完全对立。行为能量消耗最小化(Behaviors Minimizing Energetic Cost, BMEC)中和了锻炼和久坐的对立关系, 在这一框架下, 久坐是因为个体被能量消耗最小化吸引, 这时久坐行为就变成了一种奖励。奖励对锻炼行为很重要, 锻炼被认为是一种奖励, 同样, 久坐行为也是一种奖励。这时, 两者关系并不对立, 而是同一连续体上的构面。在这一理论中, 身体不活动的流行可以用尽量减少能量消耗的行为的潜在回报价值来解释, 能量消耗最小化在人类进化中获得了有益的价值。从进化角度来看, 人类已经参与进 BMEC 中去, 行为总是遵循两种机制, 经济和效率。有效的行动为生存提供了优势。虽然 BMEC 有间接证据证明但缺少直接证据, 这无疑是该理论继续发展的障碍。这一理论为阐述锻炼和久坐的关系开辟了新的视角, 从人类进化和奖励的角度, 给锻炼和久坐的关系有了新的解释。该理论接纳久坐, 认为久坐是人类的本能, 并有回报价值, 提出个体需要抵抗的是对能量消耗最小化的吸引, 而不是纯粹久坐不动的这个行为。在未来的研究中, 首先是需要加入更多人类进化学, 解释身体不活动流行的原因, 其次急需大量实证研究证明久坐等消耗量最小化的行为是奖励, 最后, 根据研究结果, 提供针对减少对能量消耗最小化的吸引的干预手段, 而不是提供减少单纯的久坐行为方案。

关键词 锻炼行为, 久坐行为, 行为能量消耗最小化(BMEC)

The Relationship Between Exercise and Sedentary: A new perspective based on the theory of BMEC

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Abstract: In traditional research, exercise and sedentary have a conflicting and opposite relationship. A lot of studies regard sedentary behavior and exercise as opposite sides, just like the two sides of the same coin, exercise and sedentary are viewed as different constructs. It is true that there is a large amount of research supporting this view. However, recent studies have shown that exercise and sedentary are not completely stand in opposite sides. The theory of BMEC (Behaviors Minimizing Energetic Cost) counterbalance the relationship. In this frame of the theory, the reason why a person going to sedentary is because he or she fascinated by behaviors minimizing energetic cost, in this time, sedentary will become a rewarding. Reward is an important in exercise behavior. Exercise is considered a reward, as is sedentary. In this time, relationships are not opposite, but rather on the same facet continuum. In this theory, physical inactivity pandemic can be explained in potential rewarding value of BMEC, and BMEC gained beneficial value in human evolution. From an evolutionary perspective, humans have evolved to BMEC, behavior always follows two mechanisms: economy and efficiency, effective action provides an advantage for survival. Although BMEC's indirect evidence has been provided, direct experimental evidence is lacking, which undoubtedly will become an obstacle to the continued development of the theory. This theory opens up a new perspective for explaining the relationship between exercise and sedentary, from the perspective of human evolution and reward, giving a new explanation for the relationship between exercise and sedentary. This theory accepts sedentary and believes that sedentary is a human instinct and has rewarding value. Meanwhile it proposes that what individuals need to resist is the attraction to minimize energy cost, rather than the pure sedentary behavior. It is sure that firstly need add more human evolutionary to explain physical inactivity pandemic. Secondly, a large number of empirical studies are urgently needed to prove that BEMC is a reward. And lastly, according to the results of the study, provide interventions aimed at reducing the attraction of BMEC, rather than providing solutions to reduce pure sedentary

behavior.

Keywords: Exercise behavior, Sedentary behavior, Behaviors Minimizing Energetic Cost(BMEC)

伴随心境对环境复愈性效果的影响--基于压力减少理论的视角

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摘要 压力减少理论认为复愈性环境可以降低个体的生理唤醒, 激发积极情绪, 使其原本消极的情绪被积极情绪所取代, 进而缓解压力。然在复愈过程中, 人们会因为有其他事件或人物的伴随而使复愈性效果受到影响。本文通过对被试的伴随心境状态进行调节, 分析在不同伴随状态中被试的表现, 探究了其对环境复愈性效果的影响以及可能存在的作用机制。本研究分为两个部分, 第一部分通过浏览复愈性环境图片来验证自然环境图片的复愈性效果; 第二部分采用 SART 的范式, 通过指导语诱发被试在浸入复愈性环境时产生不同伴随状态(喜欢的人、讨厌的人和独自一人), 分析被试前后测的注意反应测验成绩, 以探究复愈性环境下个体复愈性的效果及其心理机制。结果发现, 实验一中浏览自然环境图片的被试任务测验成绩显著地好于控制组, 说明本研究中采用的自然环境图片具有实证的复愈性效果。而实验二中不同伴随心境的被试在持续性注意反应任务中的前测与后测成绩存在差异, 喜欢的人伴随实验组被试在前测和后测任务成绩无显著性差异, 说明由喜欢的人伴随的个体在复愈性环境中没有获得复愈性效果的提升; 讨厌的人伴随实验组后测任务成绩显著低于前测成绩; 独自一人观看复愈性环境图片实验组的后测成绩也不如前测成绩。我们认为个体在喜欢的人伴随的情况下, 削弱了复愈性环境的复愈性效果体验, 在讨厌的人伴随下会想到讨厌的人产生愤怒、厌恶等消极情绪, 然而复愈性环境对情绪的改善和缓解是有限的, 以致于影响到后测任务成绩, 而独自一人组的结果我们猜测可能与实验时间设置有关。两个实验表明个体在复愈性环境中的复愈性效果受到各种社会交往背景的影响, 被试当时的伴随心境及情绪会影响环境复愈性效果的发挥。

关键词 复愈性环境, 压力减少理论, 环境, 伴随

The Influence of Company on the Restoration Effect of Environment -- A Perspective Based on the Stress Recovery Theory

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Abstract: The stress recovery theory (SRT) assumes that in the restorative environment, individual's physiological arousal would be reduced, and negative emotions would be replaced by positive emotions, which can relieve pressure to get restoration. However, in the process of restoration, the effect would be influenced by social background factors. Thus, this experiment regulates emotional state of the subjects to explore the influence of company on restoration effect and the mechanism of restoration effects. In this study, there are two experiments. The experiment 1 verifies the restoration effect of virtual environment by browsing the environment pictures. And based on the results of experiment 1, the experiment 2 explores the restoration effect in different accompanying states which induced by instructional language in the process of experiment. The subjects are divided into three conditions that can bring relatively intense emotional state: accompanied by the person you like, accompanied by the person you dislike and being alone. The results of the experiment 1 show that the accuracy of task in the experimental group is significantly improved, and there is also a significant difference in the accuracy of post-test results between the two groups, which indicates that psychological restoration effect exists in the natural environment pictures to the subjects. The results of the experiment 2 show that there is no significant difference in the scores of pre-test and post-test tasks in the group accompanied by the preferred person, which indicates that the individual accompanied by the preferred person does not achieve the restoration effect in the restorative environment. Second, the scores of pre-test and post-test tasks in

the group accompanied by the disliked people are significantly different, and the latter is lower than the former. Third, the post-test results of being alone group are not as good as the pre-test results. We think, the presence of preferred person weakens the restoration effect experience of the restorative environment. Second, the instruction in the experiment may induce negative emotions, while the restorative environment has limited effects on emotional improvement and remission, which affects the performance of the post-test task. Third, the defect in the being alone group may attribute to the specific time of schedule. In conclusion, the restoration effect is affected by the background of social interaction, which is influenced by different emotional experience and company states of the subjects in the restorative environment.

Keywords: restoration, Stress Recovery Theory, environment, company

正念训练降低冰毒戒断者的毒品内隐渴求

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摘 要 物质依赖是具有反复性的, 研究者们致力于寻找有效的预防复吸的方法。对毒品的渴求会破坏毒品戒断状态; 毒品成瘾者能够清晰地意识到毒品使用的危害, 双过程模型提示独立于意识之外的自动化过程可能影响着毒品使用行为, 因此毒品的内隐渴求更为关键。正念防复吸治疗整合了正念冥想和传统防复吸技术; 正念训练可以提高特质正念的水平, 进而降低对毒品的渴求; 负强化情绪加工模型也认为, 正念训练可以降低负性情绪, 进而减少个体为回避负性情绪而产生的寻药行为。因此本研究认为, 正念训练能够降低冰毒戒断者的毒品内隐渴求。采用随机抽样的方法, 从山东省女子戒毒所选取 70 名无长期冥想经验、冰毒依赖至少半年以上的戒断者参与实验, 其中 40 名为实验组 (M 年龄=32.42, SD 年龄=6.72)、30 名为对照组 (M 年龄=28.13, SD 年龄=4.06)。实验组参与者要进行为期 3 个月的正念训练, 采用 2 (组别: 实验组、对照组) × 2 (测量时间: 前测、后测) 的混合实验设计, 毒品内隐渴求为实验因变量, 以毒品内隐态度和毒品内隐动机作为毒品内隐渴求的指标, 由 Eprime1.0 编制的 SC-IAT 进行测量, 自我报告的积极情绪、消极情绪、正念水平为控制变量。结果表明 SC-IAT 测量的内部一致性信度是良好的, 测量时间和组别的交互效应显著: 对于实验组, 后测的毒品内隐态度和毒品内隐动机显著低于前测; 对于对照组, 后测的毒品内隐态度和毒品内隐动机与前测没有显著差异。因此, 我们认为正念训练是可以降低毒品内隐渴求的, 正念训练为毒品戒除工作提供了一种有效的方法, 正念训练对毒品内隐渴求的降低效果与已有的外显毒品渴求研究的结果一致, 同时我们需要男性参与者的研究和更大样本量的研究对本研究的结论进行进一步的检验和复制。

关键词 正念训练, 冰毒戒断者, 毒品内隐渴求

Mindfulness training reduces drug implicit craving of methamphetamine abstiners

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Abstract: Substance dependence is repetitive, and researchers are committed to finding effective ways to prevent relapse. Drug craving can destroy the drug withdrawal state; drug addicts can clearly realize the harm of drug use. The dual-process model suggests that automated processes independent of consciousness may affect drug use behaviors, so the implicit craving for drugs is more critical. Mindfulness-Based Relapse Prevention integrates Mindfulness Meditation and traditional Relapse Prevention; mindfulness training can improve the level of trait mindfulness, thereby reducing the craving for drugs; the negative reinforcement emotional processing model also

believes that mindfulness training can reduce negative emotions, thereby reducing the individual's drug-seeking behavior to avoid negative emotions. Therefore, this study believes that mindfulness training can reduce the drug implicit craving of methamphetamine withdrawal patients. Using a random sampling method, 70 abstainers who had no long-term meditation experience and had been dependent on methamphetamine for at least half a year were selected from the Shandong Women's Rehabilitation Center to participate in the experiment, of which 40 were in the experimental group (M age = 32.42, SD age = 6.72), Thirty subjects were the control group (M age = 28.13, SD age = 4.06). Participants in the experimental group were required to undergo mindfulness training for 3 months, using a mixed experimental design of 2 (groups: experimental group, control group) $\times$ 2 (measurement time: pre-test, post-test), and the implicit craving for drugs was the experimental cause Variables, using implicit drug attitude and motivation as indicators of implicit drug cravings, measured by SC-IAT compiled by Epime1.0, and self-reported positive emotions, negative emotions, and mindfulness levels as control variables. The results show that the internal consistency reliability of the SC-IAT measurement is good, and the interaction effect between the measurement time and the group is significant: for the experimental group, the implicit attitude and implicit motivation of drugs in the post-test are significantly lower than those in the pre-test; for the control In the group, there was no significant difference between the implicit attitudes and motivations of drugs in the post-test and the pre-test. Therefore, we believe that mindfulness training can reduce the implicit craving for drugs, and mindfulness training provides an effective method for drug abstinence. The effect of mindfulness training on the reduction of implicit craving for drugs is the same as the results of existing research on explicit drug cravings. Consistent, and at the same time, we need a study of male participants and a larger sample size to further test and replicate the conclusions of this study.

Keywords: Mindfulness training, methamphetamine addicts, implicit drug craving

初中生自我同情与睡前拖延的关系：情绪调节的作用

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摘 要 睡前拖延是拖延领域的一个新概念，它会导致普通人群的睡眠不足，严重影响人们的身心健康。已有研究表明，自我同情者会积极实践健康行为，不太可能有睡前拖延，并且也可能采用认知重评策略来减少影响入睡的消极情绪。但以往研究较少探讨中学生的睡前拖延情况。因此，本研究采用问卷法，以 483 名初中生(男生 229,女生 254)为参与者，探讨初中生自我同情与睡前拖延的关系，以及情绪调节在这一关系中所起的作用。结果发现：自我同情与睡前拖延存在显著负相关($r=-0.469, P<0.001$)；自我同情与认知重评存在显著正相关($r=0.375, P<0.001$)，而与表达抑制存在显著负相关($r=-0.284, P<0.001$)；认知重评与睡前拖延存在显著负相关($r=-0.415, P<0.001$)，表达抑制与睡前拖延存在显著正相关($r=0.103, P<0.05$)。进一步中介效应分析结果显示，认知重评在初中生自我同情与睡前拖延之间的关系中起着部分中介作用，中介效应占总效应的 22.25%。通过 Bootstrap 程序检验中介效应，95%的置信区间为 $[-0.147, -0.065]$ 。本研究结果增进了对初中生自我同情与睡前拖延潜在关联机制的理解，并可以为初中生睡前拖延的干预提供科学参考。

关键词 睡前拖延，自我同情，情绪调节，初中生

Self-compassion and Bedtime Procrastination in Junior Middle School Students: The Effects of Emotion Regulation

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Abstract: Bedtime procrastination is a new concept in the field of procrastination. It may cause sleep deprivation in the general population and seriously affect people's physical and mental health. Studies have shown that self-compassion actively practice healthy behaviors, and are less likely to have bedtime procrastination, and may also use cognitive reappraisal strategies to reduce the negative emotions that affect falling asleep. However, previous

studies have rarely explored the bedtime procrastination of junior middle school students. Therefore, this study used a questionnaire method, with 483 junior middle school students (229 boys and 254 girls) as participants, to explore the relationship between self-compassion and bedtime procrastination, and the role of emotion regulation in this relationship. The results showed that self-compassion was significantly negatively correlated with bedtime procrastination($r=-0.469$, $P<0.001$), and was significantly positively correlated with cognitive reappraisal($r=0.375$, $P<0.001$), but was significantly negatively correlated with expression inhibition($r=-0.284$, $P<0.001$); cognitive reappraisal was significantly negatively correlated with bedtime procrastination($r=-0.415$, $P<0.001$), and expression inhibition was significantly positively correlated with bedtime procrastination($r=0.103$, $P<0.05$). Further analysis of the mediating effect showed that cognitive reappraisal played a partial mediating role in the relationship between self-compassion and bedtime procrastination in junior middle school students, and the mediating effect accounted for 22.25% of the total effect. The mediation effect was tested by the Bootstrap program, and the 95% confidence interval was [-0.147, -0.065]. This study deepens our understanding in regard to the potential mechanisms underlying the association between junior middle school students' self-compassion and bedtime procrastination, and can provide a scientific reference for the intervention of junior middle school students' bedtime procrastination.

Keywords: bedtime procrastination, self-compassion, emotion regulation, junior middle school students

5.35“时间心理学专业委员会”分组展贴报告

15 天头低位卧床对情绪性时间知觉的影响

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摘要 情绪刺激会使个体的时间知觉产生扭曲, 对于决定情绪性时间调整的因素, 情绪维度观认为情绪的基本维度——唤醒度和愉悦度是影响时间判断的主要因素, 而具身化情绪观则强调对情绪的感受包括知觉、身体状态及其与周围环境交互作用产生的反应。本研究利用模拟太空失重状态下生理反应的经典头低位卧床模型, 采用 IAPS 中筛选出的三类情绪性图片刺激: 中性刺激、高唤醒威胁性刺激和高唤醒恶心刺激, 结合 300ms-900ms 呈现时距的二分任务探究参与者在 15 天-6°头低位卧床状态下的时间知觉变化。实验共持续 29 天, 分别为卧床前适应阶段(7 天)、卧床阶段(15 天)与卧床后恢复阶段(7 天), 在卧床阶段, 参与者全程维持-6°头低位卧床状态。16 名参与者在四个时间点的数据(卧床前阶段第 3 天, 卧床第 8 天, 卧床第 15 天, 卧床后恢复阶段第 4 天)被采集, 研究结果表明: (1) 参与者在卧床中期阶段(第 8 天)表现出对威胁性刺激的时间高估效应($PSE = 595.15ms$) ($F_{(2,45)} = 4.750$, $p = 0.006$, $\eta_p^2 = 0.387$); (2) 参与者对威胁性刺激的时间敏感性出现显著下降的趋势, 在卧床后期阶段(第 15 天)尤为明显($F_{(3,45)} = 4.596$, $p = 0.007$, $\eta_p^2 = 0.235$)。本研究结果表明当参与者的行为模拟(后倾身体状态)与情绪刺激的行动含义一致(远离威胁性刺激)时, 对身体状态的关注会引起时间高估。同时, 短期情绪刺激的多次呈现也可能导致情感效应的缺乏, 影响时间知觉的敏感性。这些结果在一定程度上支持了情绪的具身认知观点, 并为今后在特殊环境(如微重力)下的时间感知科学研究提供了重要证据。

关键词 时间知觉, 情绪刺激, 头低位卧床, 具身认知

Effects of 15-Day Head-Down Bed Rest on Emotional Time Perception

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Abstract: Emotional stimuli can distort individual's time perception. Dimensional emotion perspective considers emotional valence and arousal as the main factors influencing temporal judgments, while the embodiment emotion

perspective emphasizes that feelings of emotion include perceptions, bodily states and reactions to their interaction with the surrounding environment. The present study used three emotional picture stimuli: threatening pictures evoking high-arousal, disgusting pictures also classed as high on arousal, and neutral pictures rated “neutral” in both valence and arousal, in combination with a 300ms-900ms time intervals bisection task to measure participants' time perception in 15 days of -6° head-down bed rest. This study based on a classical head-down bed model that simulates the physiological response to weightlessness in space. It lasted for a total of 29 days, which comprised a pre-HDBR period of 7 days, a -6° HDBR period of 15 days and a post-HDBR recovery period of 7 days. During the 15 days bed rest period, participants were restricted to absolute head-down recumbence. Data were collected from 16 participants at four time points: the third day of the pre-BR, the eighth (BR-Mid), the fifteenth day (BR-Late) of the HDBR period, and the fifth day of the post-BR. We found that: (1) participants showed temporal overestimation of the threatening stimuli in the middle phase (day 8) ($PSE=595.15ms$) ($F_{(2,45)} = 4.750, p = 0.006, \eta_p^2=0.387$). (2) Participants' temporal sensitivity to threatening stimuli decreased significantly in the later phase (day 15) ($F_{(3,45)} = 4.596, p = 0.007, \eta_p^2=0.235$). These results suggested that attention to the physical state causes temporal overestimation when participants' behavioural simulation (backward leaning body state) is consistent with the action implications of the emotional stimulus (away from the threatening stimulus). Also, multiple presentations of short-term emotional stimuli may lead to a lack of affective effects and affected temporal perceptual sensitivity. This study provides new evidence to support the theory of embodied cognition in the context of time perception and suggests important perspectives for future perception science research in special environments such as microgravity.

Keywords: time perception, emotional stimuli, head-down bed rest, embodiment

基于 Citespace 对未来时间洞察力的可视化分析

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摘要 未来时间洞察力的研究起源于时间知觉的研究,是一种同时含有能力和动力特性的相对稳定的人格特质,是个体对未来时间的认知、情感态度和行为倾向的总和。为了更深刻认识未来时间洞察力,探讨其研究概况、热点以及发展趋势,为研究者提供参考。对 web of science 核心合集数据库中检索时间为 2011-2020 年,主题为“future time perspective”或“future time insight”,语种为 English,文献类型为 Article OR Review,关于未来时间洞察力研究的 434 篇文献进行知识图谱分析。

结果显示:(1)2011 到 2020 年对未来时间洞察力的研究呈现持续上升的趋势,由预测趋势线知,未来对此方面研究仍会持续增长。(2)主要国家及机构:美国(121 篇)及中国(49 篇)在未来时间洞察力研究领域处于国际领先地位,但中国发文数量偏少,与美国存在差距。研究机构集中在荷兰(3 所)、中国(2 所)和德国(2 所)。(3)未来时间洞察力研究热点高频词的关键词大致可以归为八大类——社会情感选择性理论、交叉滞后面板、时间洞察力、未来动机、社会工作、未来方向、一般自我效能感、学习策略;通过关键词凸显显示此领域的近期的研究热点为社会支持。今后要进一步开展多学科视角下的研究,将相关研究各学科交叉融合,跨学科研究多样化,以提升研究的内在理论支撑力。(4)主要研究者:分别来自莱比锡大学的 Hannes Zacher 教授,内梅亨大学的 Annet De Lange 教授以及荷兰开放大学 Beatrice van der Heijden 教授。高产作者也是国外研究者居多,今后要吸引更多国内学者研究,以期深化该领域的相关研究。

关键词 未来时间洞察力, 知识图谱, CiteSpace, 可视化分析

Based on Citespace visualization analysis of future time perspective

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Abstract: Future time perspective of research originated in time perception, Is a kind of contained both capacity and the dynamic characteristics of a relatively stable personality, is the individual's perception of future time, emotional attitude and behavior of combined. For deeper understanding in the future time perspective, this paper discusses the research work, hotspot and development trend, provide reference for the researchers. In this paper, knowledge map analysis is made on 434 literatures about future time insight, whose retrieval time is from 2011 to 2020, the subject word is "future time perspective" or "future time insight", the language is English, and the literature type is Article OR Review. The results show that: (1) From 2011 to 2020 in the future time perspective studies showed a trend of rising, by predicting the trend line, this research will still hold in the future. (2) Major countries and institutions: the United States (121 papers) and China (49 papers) are in the leading position in the field of future time perspective research, but the number of papers published by China is relatively small, and there is a gap with the United States. Research institutions are concentrated in the Netherlands (3), China (2) and Germany (2). (3) The key words of high-frequency words can be roughly divided into eight categories: social emotion selectivity theory, cross lag panel, time insight, future motivation, social work, future direction, general self-efficacy and learning strategies; Key words highlight that the recent research hotspot in this field is social support. In the future, it is necessary to further carry out the research from the perspective of multi-disciplinary, integrate the relevant research disciplines, and diversify the interdisciplinary research, so as to enhance the internal theoretical support of the research (4) Main researchers: Professor Hannes Zacher from the University of Leipzig, Professor Annet de Lange from the University of nemegen and Professor Beatrice van der Heijden from the Open University of the Netherlands. Most of the high-yield authors are also foreign researchers. In the future, more domestic scholars should be attracted to deepen the relevant research in this field.

Keywords: future time perspective, knowledge map, CiteSpace, visual analysis

大学生未来时间洞察力和择业效能感的关系—— 时间管理倾向的中介作用

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摘 要 未来时间洞察力是个体感知未来和表现出来的稳定的行为倾向所表征的人格特质, 大学生对自己未来的工作有一些思考和规划, 是未来时间洞察力在择业过程中的一种体现。在择业过程中, 择业效能感、时间管理倾向也都是重要的因素。本研究主要探讨大学生群体中未来时间洞察力各维度(未来积极、未来消极、未来迷茫、未来清晰、未来坚持、未来计划)与时间管理倾向、择业效能感之间的关系, 对 240 名不同年级的重庆市大学生进行了问卷调查和数据分析, 并且通过 Bootstrap 方法分析中介效应。结果表明: 在大学生群体中, (1) 未来时间洞察力在六个维度上均显著正向预测时间管理倾向($p < .01$); 未来时间洞察力在未来积极($r = .94, p < .01$)、未来坚持($r = .94, p < .01$)、未来清晰($r = .90, p < .01$)、未来计划维度($r = .88, p < .01$)上显著正向预测择业效能感, 在未来消极($r = -.74, p < .01$)和未来迷茫维度($r = -.85, p < .01$)上显著负向预测择业效能感; 时间管理倾向和择业效能感呈正相关($r = .98, p < .01$); (2) 时间管理倾向在未来积极(中介效应值=3.82, 95%CI=[3.34,4.28], 直接效应值=.68, 95%CI=[.32,1.05])、未来坚持(中介效应值=4.01, 95%CI=[3.49,4.48], 直接效应值=.47, 95%CI=[.05,.89])与择业效能感的关系中, 起部分中介作用; 在未来迷茫(中介效应值=5.80, 95%CI=[5.32,6.25])、未来清晰(中介效应值=6.47, 95%CI=[5.69,7.24])、未来计划(中介效应值=5.42, 95%CI=[4.94,5.91])与择业效能感的关系中, 起完全中介作用; 在未来消极(中介效应值=2.66, 95%CI=[2.32,2.96], 直接效应值=-.15, 95%CI=[-.29,-.003])和择业效能感的关系中产生遮掩效应。研究发现, 未来时间洞察力、择业效能感和时间管理倾向三者均显著相关, 大学生被试在三者均处于中等偏上水平。拥有未来积极、未来坚持特征的学生, 更倾向通过合理管理时间去实现目标, 未来迷茫、未来消极在某种程度上也促进学生的时间管理能力。根据以上结果, 高校在进行专业教育的同时, 可以设置相应课程提升同学们的职业规划能力、时间管理能力, 提升大学生的择业效能感, 帮助同学实现自己的价值。

关键词 未来时间洞察力, 时间管理倾向, 择业效能感, 大学生

The Relationship Between Future Time Perspective and Career Self-Efficacy of College Students — The Mediating Role of Time Management Disposition

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Abstract: Future Time Perspective (FTP) is a personality trait characterized by individual perception of the future and stable behavior tendency. College students have some thinking for their future work, which is an example of FTP in the process of job selection. Time management disposition and career self-efficacy are also important factors of job selection. The main purpose of this research is to explore the relationship between the dimensions of FTP (future positivity, future negativity, future confusion, future clarity, future persistence, future planning), time management disposition and career self-efficacy. A questionnaire survey and data analysis were conducted on 240 college students of different grades in Chongqing, and the mediational model was analyzed by bootstrap method. The results show that: for college students, (1) FTP positively predicts time management disposition in six dimensions ($P < .01$); FTP significantly positively predicted career self-efficacy in the future positivity ($r = .94, P < .01$), future persistence ($r = .94, P < .01$), future clarity ($r = .90, P < .01$) and future planning dimensions ($r = .88, P < .01$), and significantly negatively predicted career self-efficacy in the future negativity ($r = -.74, P < .01$) and future confusion dimensions ($r = -.85, P < .01$); time management disposition was positively correlated with career self-efficacy ($r = .98, P < .01$). (2) Time management disposition plays a partial mediating role in the relationship between future positivity (indirect effect = 3.82, 95% CI = [3.34, 4.28], direct effect = .68, 95% CI = [.32, 1.05]), future persistence (indirect effect = 4.01, 95% CI = [3.49, 4.48], direct effect = .47, 95% CI = [.05, .89]) and career self-efficacy; It plays a complete mediating role in the relationship between future confusion (indirect effect = 5.80, 95% CI = [5.32, 6.25]), future clarity (indirect effect = 6.47, 95% CI = [5.69, 7.24]), future plan (intermediary effect value = 5.42, 95% CI = [4.94, 5.91]) and career self-efficacy; It also produces a masking effect in the relationship between future negativity (indirect effect = 2.66, 95% CI = [2.32, 2.96], direct effect = -.15, 95% CI = [-.29, -.003]) and career self-efficacy. The study found that there was a significant correlation among FTP, career self-efficacy and time management disposition, and the college students were at the upper middle level. Students who have the characteristics of positive future and persistence in the future are more inclined to achieve their goals through reasonable time management. Confusion and negativity in the future also promote students' reflection of time management ability to some extent. According to the above results, while carrying out professional education, colleges and universities can set up courses to improve students' career planning ability and time management ability, to improve college students' career self-efficacy and help students realize their own value.

Keywords: future time perspective, time management disposition, career self-efficacy, college students

5.36 “硕博论坛基础心理学” 分组展贴报告

(1) “硕士研究生论坛—基础心理学” 展贴报告

语义认知老化：基于语义关联效应的考察

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摘要 有关语义认知是否存在老化一直存在争议，一些研究认为如同诸多认知能力，语义认知同样存在老化，但也有研究认为老年人依然有着较好的语义认知能力(Laver, 2009; Verhaeghen, 2003)。为探究该问题，本

研究采用图-词干扰范式,操纵词汇与图片间的语义关联性(一致、高相关、低相关和无关),让老年或年轻被试根据颜色线索阅读词汇或命名图片,记录被试的反应时和正确率。词汇阅读任务:(1)反应时:语义关联性主效应显著, $F_{(3, 144)} = 6.11, p < .01, \eta_p^2 = .11$, 事后多重比较表明,一致条件反应时最短,其次是无关条件,语义高相关条件下反应时最长,但后三种条件差异不显著。被试主效应不显著,语义关联性和被试间交互作用显著, $F_{(3, 144)} = 3.42, p < .05, \eta_p^2 = .07$, 简单效应分析表明,两类被试语义关联性效应都达到了显著水平,老年被试语义关联性效应更为明显;(2)正确率:语义关联性主效应显著, $F_{(3, 144)} = 8.05, p < .01, \eta_p^2 = .14$, 事后多重比较表明,无关条件下错误率最高,与其它三种条件差异显著,其他条件差异不显著。被试主效应显著, $F_{(1, 48)} = 7.84, p < .01, \eta_p^2 = .14$, 老年人正确率较低,语义关联性和被试间交互作用显著, $F_{(3, 144)} = 5.18, p < .01, \eta_p^2 = .10$, 简单效应分析表明,年轻被试语义关联性效应不显著,老年被试语义关联性效应显著。图片命名任务:(1)反应时:语义关联性主效应显著, $F_{(3, 144)} = 12.07, p < .001, \eta_p^2 = .20$, 事后多重比较表明,高相关条件反应时最长,与其它三种条件差异显著,其它条件差异不显著。被试主效应显著, $F_{(3, 48)} = 28.27, p < .001, \eta_p^2 = .37$, 老年被试反应时间较长,语义关联性和被试间交互作用显著, $F_{(3, 144)} = 7.3, p < .001, \eta_p^2 = .13$, 简单效应分析表明,老年被试语义关联性效应不显著,年轻被试效应显著, $F_{(3, 144)} = 23.23, p < .001, \eta_p^2 = .31$;(2)正确率分析:语义关联性主效应不显著,被试主效应不显著,语义关联性和被试间交互作用显著, $F_{(3, 144)} = 8.89, p < .001, \eta_p^2 = .16$, 简单效应分析表明,两类被试语义关联性效应都显著,老年被试效应表现较小, $F_{(3, 144)} = 3.02, p < .05, \eta_p^2 = .06$, 年轻被试效应较为明显, $F_{(3, 144)} = 7.28, p < .001, \eta_p^2 = .14$ 。结论:(1)语言产出中语义关联性效应显著,高语义关联条件下被试反应较慢且错误率较高;(2)语义认知老化效应明显,较之于年轻被试,在图-词任务语义高关联条件下,老年被试反应时较长。主要原因可能是老年人认知控制能力的衰退,存在语义干扰时老年人不能较好地抑制干扰因素的影响。

关键词 语义认知, 认知老化, 图词干扰, 语义关联

Semantic cognition aging:

A research based on the effect of semantic associations

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Abstract: Whether or not semantic cognition aging effect is present has been controversial, although some studies have found semantic cognition aging like other cognitive abilities, others claimed that older adults still have better semantic cognition abilities. To probe this problem, the present study has employed the picture-word interference paradigm and manipulated different degree of semantic associations between words and pictures (repeated, high associations, low associations, and no associations). According to the colors of cues older or young participants need to read the words or name the pictures, recording their response time and correct rate. The words reading task: (1) response time: the main effect of semantic association is significant, $F_{(3, 144)} = 6.11, p < .01, \eta_p^2 = .1$, multiple comparisons indicate that response time of the repeated condition is the shortest followed by no associations condition, time of high association condition is the longest, but the latter three have no significant difference. The main effect of participants is not significant, but a significant interaction effect between semantic association and participants has been found, $F_{(3, 144)} = 3.42, p < .05, \eta_p^2 = .07$. Simple effects analysis demonstrates that the semantic association effects of both the two kinds of participants are significant and the effect of the older is stronger; (2) correct rate: the main effect of semantic association is significant, $F_{(3, 144)} = 8.05, p < .01, \eta_p^2 = .14$, multiple comparisons demonstrate that wrong rate is the highest for the no associations condition, showing significant differences with other three conditions, but there are no significant differences among other three conditions. The main effect of participants is significant, $F_{(1, 48)} = 7.84, p < .01, \eta_p^2 = .14$, the correct rate of the older is lower, the interaction effect between semantic association and participants is significant, $F_{(3, 144)} = 5.18, p < .01, \eta_p^2 = .10$, simple effects analysis demonstrates that the semantic association effect of the young is not significant but the older. Pictures naming task: (1) response time: the main effect of semantic association is significant, $F_{(3, 144)} = 12.07, p < .001, \eta_p^2 = .20$, multiple comparisons indicate that response time of the high association condition is the longest, showing

significant differences with other three conditions, but there are no significant differences among other three conditions. The main effect of participants is significant, $F_{(3, 48)} = 28.27, p < .001, \eta_p^2 = .37$, the older response longer, the interaction effect between semantic association and participants is significant, $F_{(3, 144)} = 7.3, p < .001, \eta_p^2 = .13$, simple effects analysis demonstrates that the semantic association effects of the old is not significant but the young, $F_{(3, 144)} = 23.23, p < .001, \eta_p^2 = .31$; (2) correct rate: the main effect of semantic association is not significant, but a significant interaction effect between semantic association and participants has been found, $F_{(3, 144)} = 8.89, p < .001, \eta_p^2 = .16$, simple effects analysis demonstrates that the semantic association effect of both the two kinds of participants are significant, but the effect of the old is weaker, $F_{(3, 144)} = 3.02, p < .05, \eta_p^2 = .06$, and the effect of the young is stronger, $F_{(3, 144)} = 7.28, p < .001, \eta_p^2 = .14$. Conclusions: (1) there is a significant semantic association effect during language production, participants respond longer with a high wrong rate in the high association condition; (2) semantic cognition aging effect is obvious, comparing with the young, the older need longer time to respond in high association condition of the picture-words interference tasks. The main reason may be the cognitive control abilities' aging, so the older could not control the effects of interference factories when the semantic interference is present.

Keywords: semantic cognition, cognitive aging, picture-word interference, semantic association

基于场景的预期对面面部表情加工的影响：认知负荷的调节作用

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摘要 预期在个体知觉过程中起着重要作用。面部表情作为重要的知觉目标, 总是出现在一个场景中, 这使人们能够根据一定的规律对面面部表情产生预期。然而, 很少有研究从预期的角度关注场景对面面部表情加工各个阶段的影响。本研究利用事件相关电位, 探讨情景预期对早期和晚期面部表情加工的影响。此外, 我们还使用认知任务来操纵认知负荷, 以干扰基于场景的预期。在每个实验试次开始时, 都会呈现一幅场景图片(积极的, 消极的), 以期诱发个体对之后面部表情的预期。结果显示: 在认知资源充足的条件下, 当场景与面孔的情绪效价一致时, 面孔诱发的 N170 波幅较大, 而当面孔不一致时, 面孔诱发的 N400 波幅较小; 而在认知负荷条件下, 则没有这种差异。这表明, 预期对面面部表情识别的影响存在于面部表情加工的早期和后期阶段, 当个体的认知资源被不相关的任务所占用时, 预期对面面部表情识别的影响会减弱。由于面部表情在现实生活中的感知不是孤立的目标, 而是整个场景, 本研究的发现不仅有利于我们了解预期发生作用的认知过程, 而且对我们理解真实世界的面部表情知觉具有重要意义。

关键词 场景效应, 认知负荷, 面部表情, N170, N400

The influence of scene on facial expression processing: the moderating effect of cognitive load

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Abstract: Prior expectations play an important role in the process of individual perception. Facial expressions, as important perceptual targets, almost always appear within a scene which enable individuals to generate predictions of facial expressions based on this conditional probability. However, few studies paid attention to how scenes impact various processing stages of facial expressions in the perspective of expectation. In the present study, using event-related potential, we investigated the influence of scene-based prediction on early and late facial expression

processing. In addition, we used a cognitive task to manipulate cognitive load, to interfere with scene-based prediction. In each trial, a scene picture (positive, negative) at the start of each sequence was presented, implying the type of facial expressions that will occur later. The results indicated that under the condition of sufficient cognitive resources, faces elicited larger N170 amplitudes and smaller N400 amplitudes when the emotional valences of the scenes and faces were congruent than when the emotion valences of faces were incongruent. However, in the condition of cognitive load, there was no such difference. The results suggested that the effect of expectation on facial expression recognition existed both in the early and late stages of processing facial expressions, and the effect of expectation on facial expression recognition would be weakened when an individual's cognitive resources were occupied by unrelated tasks. Since perception of facial emotion in the real life is never of isolated targets, but always of entire scenes, these findings are important not only for tracking the cognitive processes of expectation, but for our understanding of real-world facial expression perception in general.

Keywords: scene effect, cognitive load, facial expression, N170, N400

大学生相对剥夺感、愤怒沉浸和社会攻击的发展特点与关系以及新冠肺炎疫情带来的影响：基于潜在增长模型的分析

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摘要 社会攻击是大学生中普遍存在的一种攻击行为，具有较大的危害，有必要对这一种攻击行为在大学生中的发展特点和机制进行探究。新冠肺炎疫情(COVID-19)对大学生的心理和行为也产生了重大的影响，在此期间大学生社会攻击的发展特点和机制可能出现变化。本研究选取大学生 1174 人，从 2018 年 10 月至 2020 年 10 月以半年为间隔进行五次追踪调查，采用个人相对剥夺感量表修订版、愤怒沉浸分问卷以及社会攻击亚量表，借助分段潜在增长模型(piecewise latent growth model)考察了相对剥夺感、愤怒沉浸和社会攻击的发展轨迹趋势以及疫情对这些变量的发展趋势的影响，并对愤怒沉浸在相对剥夺感与社会攻击之间的中介作用进行检验。结果发现：（1）相对剥夺感、愤怒沉浸以及社会攻击均在疫情前均呈下降趋势，而在疫情期间均呈上升趋势；（2）愤怒沉浸的初始水平在相对剥夺感的初始水平与社会攻击的初始水平之间发挥中介作用；（3）在疫情发生前以及疫情期间，相对剥夺感的发展速度均通过愤怒沉浸的发展速度对社会攻击的发展速度起中介作用。上述结果提示，大学生入学后的社会攻击呈现下降趋势，而疫情的流行会增加社会攻击，此外，随着时间发展，相对剥夺感可通过愤怒沉浸影响社会攻击。了解疫情前后社会攻击的发展趋势和影响因素，有助于预测未来紧急事件发生时社会攻击的产生与发展，从而为实现迅速的社会预防和干预提供指导。

关键词 相对剥夺感，愤怒沉浸，社会攻击，新冠肺炎疫情，潜在增长模型

Developmental trajectories and relationships of relative deprivation, anger rumination, and social aggression in college students and the impact of COVID-19 pandemic: A latent growth curve analysis

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Abstract: Social aggression is a common aggressive behavior among college students, which harmful to both individuals and society. It is necessary to explore the development characteristics and mechanism of this kind of aggressive behavior in undergraduates. The COVID-19 pandemic has a significant impact on college students' psychology and behavior, so it may be seen as a turning point that changed the trajectory and mechanism of social aggression in undergraduates. In this study, 1174 college students were selected for five follow-up surveys at six-month intervals from October 2018 to October 2020. We used Personal Relative Deprivation Scale-Revised, the anger rumination subscale of the Displaced Aggression Questionnaire and the social aggression subscale of the Subtypes of Antisocial Behavior Questionnaire. Using piecewise latent growth model, we investigated the

development of relative deprivation, anger rumination and social aggression and the influence of the COVID-19 pandemic on the trajectories of these variables, then examined the mediating effect of anger rumination in the relationship between relative deprivation and social aggression. The results showed that : (1) the changes of relative deprivation, anger rumination and social aggression showed a similar trend, which decreased before the outbreak of COVID-19, while increased during the pandemic; (2) The initial level of anger rumination played a mediating role between the initial level of relative deprivation and the initial level of social aggression; (3) The changes of relative deprivation affected the changes of social aggression through the changes of anger rumination before and during the pandemic. These results suggest that relative deprivation in college students showed decrease tendency from entrance to pre-pandemic, while the pandemic would increase the social aggression. In addition, we found the indirect role of anger rumination in the relationship between relative deprivation and social aggression over time. Understanding the development trend and influence factors of social aggression before and after the COVID-19 pandemic is helpful to predict the production and development of social aggression when emergency occur, thus providing guidance for rapid social prevention and intervention.

Keywords: relative deprivation, anger rumination, social aggression, COVID-19, latent growth model

老年人的多感觉整合特性分析

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摘要 在日常生活中, 我们往往需要接收来自多个感觉通道的大量感官输入, 这些感觉信息通过适当整合, 从而帮助我们有效地认识客观世界, 这种现象被称为多感觉整合。随着年龄的增长, 老年人的认知功能和神经系统逐渐退化, 此时多感觉整合作为一种补偿机制对老年人而言意义重大。基于已有的研究成果, 主要从两方面对老年人的多感觉整合进行论述: (1) 影响老年人多感觉整合的相关因素, 主要分为两方面, 即被试间因素和被试内因素。其中, 被试间因素包括认知退化、注意控制赤字和对先验的依赖程度, 随着老年人的年龄增长, 其认知神经机制逐渐退化、对无关信息的抑制和对目标信息的识别能力逐渐下降以及对先验知识的依赖程度增强, 从而导致其在认知等多个方面弱于年轻人, 多感觉整合作为单一感觉能力下降的补偿机制, 能够保证老年人的正常生活; 被试内因素包括刺激的一致性、呈现时间的一致性和任务的难度, 随着呈现多感觉信息的一致性程度增强、呈现时间无限趋近以及任务难度下降, 老年人的多感觉整合增益增强; (2) 利用脑成像技术, 如 ERP、MEG 等, 探索老年人进行多感觉整合加工过程中的认知神经机制, 包括研究老年人进行多感觉整合时的神经震荡(α 、 β 、 γ 、 θ 、 δ)特性, 以及老年人进行多感觉整合时涉及的脑区(颞上沟、上丘、扣带回等)。本文最后讨论了迄今为止开展的工作对老年人多感觉整合相关理论和研究的影响, 并指出推进该领域的下一步工作。

关键词 多感觉整合, 老年人, 影响因素, 认知神经机制

The analysis of characteristics of multisensory integration in older adults

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Abstract: In our daily life, we receive a great quantity of sensory inputs from multiple sensory channels. These sensory information can help us understand the objective world effectively through appropriate integration. The phenomenon is called multisensory integration. With the growth of age, the cognitive function and nervous system of older adults gradually degenerate. At this time, multisensory integration as a compensation mechanism is of great significance to older adults. Based on the previous studies, this paper mainly discusses the multisensory integration of older adults from two parts: (1) the influential factors that affect the multisensory integration of older adults are mainly divided into two aspects, namely, between variables and within variables. Between variables include cognitive

degradation, attention control deficit and dependence on prior knowledge. With the growth of older adults, their cognitive neural mechanism degenerates, their inhibition of irrelevant information and their ability to recognize target information decline, and their dependence on a prior knowledge increases, resulting in their weakness in cognition and other aspects. As a compensation mechanism for the decline of single sensory ability, multisensory integration can ensure the normal life of the older adults; within variables include stimulus consistency, time consistency and task difficulty. With the increase of the consistency of presentation of multisensory information, the infinite approach of presentation time and the decrease of task difficulty, the gain of multisensory integration of older adults is enhances; (2) explore the cognitive neural mechanism of the older adults in the process of multisensory integration by using brain imaging technologies, such as ERP and MEG, it includes the study of the characteristics of nerve concussion (α 、 β 、 γ 、 θ 、 δ) during multisensory integration in older adults, as well as the brain areas involved in multisensory integration in older adults (superior temporal sulcus、superior colliculus、cingulate gyrus). Finally, this paper discusses the impact of the work so far on the theory and research of multisensory integration in older adults, and points out the next work in this field.

Keywords: multisensory integration, older adult, influential factors, the cognitive neural mechanism

语义透明度对汉语单词视觉识别加工的影响：一项 ERP 研究

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摘要 关于语义透明度在单词识别加工的作用, 一类理论采用连接激活法 (Conjunctive activation approach) (Libben, 1998), 认为透明成分的语义存在词汇到语义层面的连接, 在加工过程中可以被激活, 继而促进整词的识别加工; 而不透明成分的意义缺乏从词汇至语义的连接, 导致其语义在加工过程中不可用, 对单词加工不产生影响。意义计算法 (Meaning Computation Approach, Ji 等人, 2011) 认为, 无论是透明成分还是不透明成分, 其词汇及语义表征在加工过程中都会激活, 以建构单词所有可能的解释。在意义构建过程中, 透明成分会促进加工, 不透明成分阻碍加工, 因为含有不透明成分单词的建构意义与实际意义会不一致, 需要时间和认知资源解决语义冲突。鉴于此, 本研究的目的是探讨语义透明度如何影响汉语单词视觉识别机制, 同时考察上述两个不同模型的适切性。

本研究设计了两个 ERP 实验, 实验一为首成分重复启动, 实验二采用整词重复启动, 均采用单因素四水平设计和掩码启动范式 (SOA=47ms)。实验共包含 4 个条件, 分别为透明词 (如“马夫”), 半透明词 (如“马蜂”), 不透明词 (如“马虎”) 和控制组 (如“炉灶”)。24 名和 23 名大学生完成两种语义分类判断任务。结果发现不透明词加工最容易, 透明词次之, 而半透明词在各个时段加工最困难。研究结果表明, 汉字的语义透明度信息影响了单词视觉识别的过程, 连接激活法和意义计算法并未完全预测汉语单词的视觉识别加工, 不透明成分语义作用根据单词类型的不同有所区分。本研究倾向于扩展支持 El-Bialy 等人 (2013) 的结果, 及汉语单词加工的双通道模型, 语义透明度可能影响使用哪条路径 (如 Schreuder & Baayen, 1995)。汉语单词的视觉识别加工可能是一个动态的、可逆的、双向加工路径。

关键词 语义透明度, 汉语双字词, N400

Effects of Semantic Transparency on the Visual Recognition and Processing of Chinese Two-character Words: an ERP Study

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Abstract: There exist two major approaches on the role of semantic transparency in the processing of compound words. The first one is the Conjunctive Activation Approach (CAA), which supposes that the meanings of transparent constituent speed compound processing, while the meanings of opaque constituents exert no influence on the processing. The second one is the Meaning Computation Approach (MCA) due to Ji et al. (2011), which assumes that both opaque and transparent constituents' semantic representations are activated and computed into a combined representation. However, the meanings of opaque constituents slow down the processing as the computed meaning contradicts the conventional lexicalized meaning, which takes time and cognitive resources to solve the semantic conflicts. In view of this, the present study attempts to examine whether the visual processing mechanism of Chinese two-character words would be affected by semantic transparency in a masked priming paradigm. Using one single factor four-level experimental design and mask priming paradigm(SOA=47ms), two ERP experiments are conducted. Two-character words of Chinese varying with a graded degree of semantic transparency were divided into such four conditions: Transparent-transparent ("TT", e.g. “马夫” / ma3 fu1/ horse-keeper), Opaque-transparent ("OT", e.g. “蜜蜂” / ma3 feng1/ hornet), Opaque-Opaque ("OO", e.g. “马虎” / ma3 hu / careless), and the control (e.g. “炉灶” / lu2 zao4 / range). Each of them served as either a target (in Exp.1) or a prime(in Exp.2) with both forward and backward masks and an SOA of 47ms, and their initial character as a prime (in Exp.1) or a target (in Exp.2) (e.g. “马” / ma3/ horse or “炉” / lu2/ range). 21 and 23 undergraduate and graduate students, whose native language is Chinese, performed two semantic categorization tasks. It was found that opaque words (OO) were the easiest to process, transparent words (TT) were the second, and semi-transparent words (OT) were the most difficult to process. The results show that semantic transparency affects the visual recognition processing of Chinese words. both two approaches do not completely predict the current results. This study tends to extend the results supporting El-Bialy et al. (2013) and support the dual-route processing model of Chinese word, and semantic transparency may influence which route is used (e.g., Schreuder & Baayen, 1995). Also, the processing may be dynamic, reciprocal and bi-directional.

Keywords: Semantic transparency, two-character Chinese words, N400

正负情绪唤醒对时间知觉的影响：A-B 型人格特质的视角

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摘要 时间知觉是对客观现象的延续性和顺序性的反映。既往研究表明影响时间知觉的因素较多。例如, 有研究发现不同人格特质个体的时间知觉存在差异, 也有发现情绪唤醒对个体时间知觉产生影响。但目前鲜有研究同时探讨人格特质与情绪唤醒对个体时间知觉的影响。因此, 本研究基于 A-B 型人格特质视角, 探讨个体在正负性情绪唤醒下时间知觉能力变化。本研究采用 AB 型人格特质测量表筛选出 A 型、B 型人格被试各 20 名; 所有被试共接受两轮实验, 间隔一小时; 时间知觉任务为四种时距材料(500ms、1000ms、2000ms、4000ms)分别随机呈现四次, 被试通过复制法进行反应。实验一采用两因素混合实验设计。其中, 组间变量为 A-B 型人格特质(A 型人格与 B 型人格), 组内变量为时间知觉材料(500ms、1000ms、2000ms、4000ms); 被试按人格特质分为两组, 每组二十人。结果显示情绪未唤醒时, 四个时距中 A 型被试时间估计较 B 型被试更接近标准时距。实验二采用三因素混合实验设计。其中, 组间变量为 A-B 型人格特质(A 型人格与 B 型人格)和情绪唤醒(正性、负性), 组内变量为时间知觉材料(500ms、1000ms、2000ms、4000ms); 被试按照两个组间变量随机分为四组, 每组十人。结果显示较长时距(4000ms)下 A-B 型人格类型($F_{(1, 36)}=8.417$,

$p<0.01$)主效应显著, 情绪唤醒($F_{(1,36)}=2.781$, $p>0.05$)主效应不显著, 两者的交互作用显著($F_{(1,36)}=5.524$, $p<0.05$); 进一步做简单效应分析发现, 情绪唤醒的简单效应只在 A 型被试中显著。结合实验一、实验二的实验数据发现接受正性和负性情绪唤醒后, A 型人格被试时间估计能力较未唤醒时变化都显著, B 型变化都不显著; 在较长时距 (4000ms) 下, 无论是否接受情绪唤醒, A、B 两种人格类型被试时间估计差异都显著, 但未接受情绪唤醒时差异更大。本研究通过引入情绪唤醒变量对人格类型变量和时间知觉能力的关系做进一步探讨, 发现 A、B 两种人格类型被试的时间知觉能力在情绪唤醒和未接受情绪唤醒状态下都存在差异, 在较长时距 (4000ms) 下差异显著; 并且情绪唤醒会对不同人格特质被试的时间知觉能力产生调节作用。

关键词 时间知觉, 情绪唤醒, A-B 型人格类型

The Influence of Positive and Negative Emotional Arousal on Time Perception: The Perspective of Type A-B Personality Traits

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Abstract: Time perception is a reflection of the continuity and order of objective phenomena. Previous studies have shown that there are many factors that affect time perception. For example, some studies have found that there are differences in the time perception of individual with different personality traits, and some studies have found that the emotional arousal has an impact on individual time perception. However, there are few studies that explore simultaneously the impact of personality traits and emotional arousal on individual time perception. Therefore, based on the perspective of A-B personality traits, this study explores the changes in individual time perception ability under positive and negative emotional arousal. In this study, 20 type A and type B personality test subjects were screened out using the AB type personality trait measurement table; all subjects received two rounds of experiments with an interval of one hour; the time perception task which is consisted of four time interval materials (500ms, 1000ms, 2000ms and 4000ms) was presented randomly four times, and the subjects responded by copying. Experiment 1 used a two-factor mixed experimental design. Among them, the between-group variables are type AB personality traits (type A personality and type B personality), and the interclass variables are time perception materials (500ms, 1000ms, 2000ms, 4000ms); the subjects were divided into two groups according to personality traits, each group has twenty people. The results showed that when the emotion was not awakened, the estimated time of type A subjects in the four intervals of time was closer to the standard time interval than that of type B subjects. Experiment 2 used a three-factor mixed experimental design. Among them, the between-group variables are type AB personality traits (type A personality and type B personality) and emotional arousal (positive and negative), and the interclass variables are time perception materials (500ms, 1000ms, 2000ms, 4000ms); the subjects were randomly divided into four groups with ten persons in each group according to the variables between the two groups. The results showed that the main effect of type AB personality type ($F_{(1,36)}=8.417$, $p<0.01$) was significant at a longer time interval (4000ms), and the main effect of emotional arousal ($F_{(1,36)}=2.781$, $p>0.05$) was not significant, the interaction between the two variables was significant ($F_{(1,36)}=5.524$, $p<0.05$); the simple effect analysis found that the simple effect of emotional arousal was only significant in Type A subjects. Combined with the experimental data of Experiment 1 and Experiment 2, it is found that after receiving positive and negative emotional arousal, the time estimation ability of Type A personality subjects changed significantly compared with that when they were not awakened, and the change of Type B personality was not significant; at a longer time interval (4000ms), regardless of whether they accept emotional arousal, there was a significant difference in the estimated time of the two personality types A and B, but the difference was even greater when they did not receive emotional arousal. This study further explored the relationship between personality type variables and time perception ability by introducing

emotional arousal variables. It found that the time perception ability of the two personality types A and B are different in the state of emotional arousal and unaccepted emotional arousal, and the difference is significant under a longer time interval (4000ms); and emotional arousal can regulate the time perception ability of subjects with different personality traits.

Keywords: Time perception, emotional arousal, A-B personality types

中文简版自我控制问卷(BSCS)在不同性别和年级中的 测量等值性

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摘 要 自我控制能力对个体实现目标、完成任务以及身心健康的发展起着关键的作用。自我控制 (Self-Control) 是自我的核心功能之一, 指人们克服冲动、习惯或自动化的反应, 有意识的掌控自己行为方向的能力。国内外有众多研究都使用了简版自我控制问卷 (Brief Self-Control Scale, BSCS) 作为测量工具, 发现个体的自控能力存在性别和年级的差异, 但这种差异是由真实的性别和年级的差异造成的还是由于测量工具本身导致的尚不清楚。自我控制问卷经修订成中文版后从原本的五个维度变成了四个维度, 因此本研究进一步验证中文简版自我控制问卷在我国文化背景下的四因子模型, 考察中文简版自我控制问卷在青少年群体中的跨性别和跨年测量等值性。采用中文版 BSCS 对贵州省某两所中学 1793 名学生 (男 812, 女 981) 开展调查。对调查的有效数据进行验证性因素分析和多组比较, 结果显示该问卷在总样本及性别的组间样本中的四因子模型拟合良好, 该问卷在中学生不同性别间和不同年级间的形态等值、弱等值、强等值和严格等值模型均可被接受, 即中文版 BSCS 在男女生之间和高一至高三年级之间测量等值性假设成立, 中文版 BSCS 的四因子结构在中学生男女性别之间具有测量等值性, 并且具有跨年度的测量等值性。性别、年级之间的群组差异可以认为是由样本特质造成的差异而非量表本身的系统误差所致, 测量结果可以在年级、性别之间进行跨组比较, 可以用于中国青少年有关研究。

关键词 自我控制, 测量等值, 中学生

Measurement Invariance of Chinese Brief Self-Control Scale across gender and grade

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Abstract: Self-control ability plays a key role in achieving goals, accomplishing tasks, and developing physical and mental health. Self-control is one of the core functions of the self. It refers to the ability of people to overcome impulse, habit or automated response and consciously control the direction of their behavior. Many studies at home and abroad have used the Brief Self-Control Scale (BSCS) as a measurement tool, and found that there are differences in the self-control ability of individuals by gender and grade, but it is not clear whether this difference is caused by the real gender and grade difference or the measurement tool itself. The Self-Control Scale has been revised into the Chinese version from its original five dimensions to four dimensions. Therefore, this study further validates the four-factor model of the Chinese Brief self-control questionnaire in the context of Chinese culture, and examines the simplified Chinese self-control questionnaire across gender and grade measurement Invariance in adolescents. The Chinese version of BSCS was used to conduct a survey of 1793 students (812 males and 981 females) from two middle schools in Guizhou Province. A confirmatory factor analysis and multi-group comparison of the valid data of the survey showed that the questionnaire fits well in the four-factor model of the total sample and the gender inter-group sample. The questionnaire has a good shape among middle school students of different genders and different grades. Equivalence, weak equivalence, strong equivalence, and strict equivalence models are all acceptable, that is, the Chinese version of BSCS measures equivalence between male and female students and

between the first to third grades. The four-factor structure of the Chinese version of BSCS It has measurement equivalence between male and female middle school students, and has measurement equivalence across grades. Group differences between genders and grades can be considered to be caused by differences in sample characteristics rather than systematic errors in the scale itself. Measurement results can be cross-group comparisons between grades and genders, which can be used for research on Chinese youth.

Keywords: Self-Control, Measurement Invariance, middle school students

心跳诱发电位在突破连续性闪烁抑制任务中的作用

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摘要 心脏作为人体的重要器官, 它在大脑皮层上的响应与许多认知任务存在交互作用。由于大脑皮层不断地从身体接收心脏的信息, 其对心跳的神经响应可能影响正在进行的认知活动。近年来, 越来越多研究者关注心脏与大脑的关系。一些研究者发现, 刺激呈现前出现的心跳诱发反应 (heartbeat evoked responses, HERs) 可以影响在阈值处的微弱视觉光栅的检测: 当 HERs 越大时, 在阈值处的微弱光栅的检出率越高, 在一定程度上说明 HERs 和意识以下的感知觉探测是存在密切关系的。结合前人研究的发现, 本研究拟进一步探讨心跳诱发电位 (heartbeat evoked potentials, HEPs) 对无意识视觉信息加工的影响机制。为此, 本研究设计了特定的突破连续性闪烁抑制任务 (breaking continuous flash suppression, b-CFS), 共采集 34 名健康成年大学生的行为和心电数据, 以及 129 名健康成年人士的行为、脑电和心电数据。具体操作如下: 屏幕中央出现一张被连续动态视觉噪音掩蔽的光栅刺激, 其对比度在 1 秒钟之内由 0% 增加到 100%, 确保其初始时处于不可见的状态, 使光栅识别处于抑制阶段, 但在一段时间后突破抑制。被试需要在觉察到光栅刺激出现时尽快判断刺激倾斜的方向。实验结果发现, 从大学生被试的行为数据来看, 无意识视觉信息加工的时间与心率变异性的低频/高频 (LF/HF) 存在显著负相关关系。低频/高频是心率变异性频域分析中可用于反应人体交感神经活性的重要指标。说明人体交感神经活性越强, 无意识视觉信息加工的时间越短。此外, 从心电与脑电数据来看, 发生在心跳的舒张期和收缩期的试次的反应时之间无显著差异; 而锁定到心跳 R 波之后 200ms 到 500ms 的 HEP 的振幅更大时, 反应时更短, 也就是无意识视觉信息加工的时间与 HEPs 有关。这表明心脏活动与视觉感知任务在大脑皮层上存在相互作用。

关键词 心跳诱发电位, 无意识视觉信息, 突破连续性闪烁抑制

The role of heartbeat evoked potentials in breaking continuous flash suppression task

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Abstract: As an important organ of the human body, the heart's response on the cerebral cortex interacts with many cognitive tasks. Since the cerebral cortex continuously receives information from the heart from the body, its neural response to the heartbeat may affect ongoing cognitive activities. In recent years, more and more researchers have paid attention to the relationship between the heart and the brain. Some researchers have found that heartbeat evoked responses (HERs) before stimulus presentation can affect the detection of faint visual gratings at the threshold: the

larger the HERs, the higher the detection rate of the faint gratings at the threshold. It shows that HERs are closely related to perceptual detection below consciousness. Combining the findings of previous studies, this study intends to further explore the mechanism of heartbeat evoked potentials (HEPs) on the processing of unconscious visual information. To this end, this study designed a specific breakthrough continuous flash suppression (b-CFS) task, which collected 34 healthy adult college students' behavior and ECG data, and 129 healthy adults' behavior and brain Electricity and ECG data. The specific operation is as follows: A grating stimulus masked by continuous dynamic visual noise appears in the center of the screen, and its contrast is increased from 0% to 100% within 1 second to ensure that it is initially invisible, so that the grating recognition is inhibited Stage, but break the inhibition after a period of time. Participants need to determine the direction of the stimulus tilt as soon as they perceive the grating stimulus. The experimental results found that from the behavioral data of college students, there is a significant negative correlation between the time of unconscious visual information processing and the low frequency/high frequency (LF/HF) of heart rate variability. Low frequency/high frequency is an important indicator that can be used to reflect the activity of human sympathetic nerves in the frequency domain analysis of heart rate variability. It shows that the stronger the human sympathetic nerve activity, the shorter the processing time of unconscious visual information. In addition, from the ECG and EEG data, there is no significant difference in the response time between the diastolic and systolic phases of the heartbeat; while the HEPs, which is locked to the ECG R wave, has a greater amplitude of 200ms to 500ms. The reaction time is shorter, that is, the time of unconscious visual information processing is related to HEP. This indicates that there is an interaction between heart activity and visual perception tasks in the cerebral cortex.

Keywords: heartbeat evoked potentials, unconscious visual information, breaking continuous flash suppression task

高低行为抑制控制对情绪标注效应影响的 ERP 研究

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摘要 情绪标注效应 (Emotion labeling effect) 指对刺激的情绪特征进行描述或命名时个体情绪减弱的现象, 以往研究探讨了行为抑制能力是否影响外显的情绪调节, 但尚未有研究探讨行为抑制能力对内隐的情绪调节的影响。本研究采用 ERP 技术, 比较高、低不同抑制能力大学生 (每组各 16 名, 男女各半) 进行情绪标注 (内隐的情绪调节) 的脑电活动特点。具体而言, 采用修正的双选择 oddball 任务, 以区分个体行为抑制能力高低; 以中国面孔情绪图片系统 (CFAPS) 中的愤怒和愉快情绪图片为实验材料的情绪标注实验, 采用被试类型 (行为抑制能力高、行为抑制能力低) $\times$ 情绪 (愤怒、愉快) $\times$ 任务类型 (情绪标注、性别标注) $\times$ 电极点 (FZ、FCZ、CZ、CPZ、PZ) 的混合实验设计, 以图片呈现后的 LPP 波幅 (300~800ms) 作为情绪标注效应的指标, 来探索高低行为抑制控制对情绪标注效应的影响。结果发现: 高抑制能力组与低抑制能力组相比, 在情绪标注任务上诱发的 LPP 幅值显著低于性别标注, 而低抑制能力组, 在情绪标注和性别标注任务上诱发的脑电波幅差异不显著; 无论行为抑制控制能力高或低, 在愉快情绪下情绪标注与性别标注差异显著, 情绪标注下 LPP 波幅更低。结果表明, 高抑制能力个体可以通过情绪标注产生情绪标注效应, 个体的反应抑制能力高, 情绪标注效应越好; 结果支持了力量模型。

关键词 行为抑制, 情绪标注, 情绪标注效应

A Study of High and Low Behavior Inhibitory Control on Emotional Labeling Effect from ERPs

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Abstract: Emotion labeling effect refers to the reduction of Emotion in labeling or naming of emotional features of a stimulus. Previous researches have explored whether the ability of behavioral inhibition affects the regulation of

explicit emotions, while there is no studies learning about the impact of behavioral inhibition on implicit emotions regulation. We use the method of ERP to access the characteristics of brain electrical activity of emotional labeling (implicit emotions regulation), under high and low inhibitory abilities (16 college students in each group, half male and half female) . Modified double-choice oddball task are administered to distinguish the inhibition capacity of subject; the emotion labeling experiment make angry and happy emotion images from the Chinese Faces Emotion Picture System (CFAPS) as materials, use a mixed design of Behavioral inhibition(high, low) $\times$ Emotion (anger, pleasure) $\times$ Task type (emotional labeling, gender labeling) $\times$ Electrode points (FZ, FCZ, CZ, CPZ, PZ) to explore the impact of behavior inhibitory control on emotional labeling, and compare with LPP amplitude (300~800ms) after images presented we can find difference of those two kind subjects on emotional labeling effect. The results show that the amplitude of LPP was significantly lower, when the labels of affect labeling are high inhibitory ability, but the amplitude of LPP has no difference when the labels of affect labeling are low inhibitory ability; the difference between emotion labeling and gender labeling is significant in happy mood, and the amplitude of LPP is lower in emotion labeling. The results suggest that individuals with high inhibition ability can produce emotion labeling effect through emotion labeling. The higher the response inhibition ability of individuals, the better the emotion labeling effect. The strength model has been further proved.

Keywords: Behavioral inhibition, Emotional labeling, Emotional labeling effect

不同编码意识下目标探测对背景项目的影响——基于 R/K 范式的研究

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摘要 注意促进效应（Attentional Boost Effect, ABE）指当学习阶段采用目标探测性质的二级任务，伴随目标项同时呈现的背景项目的加工会得到增强，产生一种伴随目标项的记忆优势。已有研究证实 ABE 在多种条件下存在相对稳定性，无论实验材料是词汇还是图片，无论是内隐记忆还是外显记忆。目前有关 ABE 的大多数研究中，学习阶段要求被试进行有意编码，而也有研究发现，无意编码条件下随后的再认测验中也能发现 ABE。不同的编码意识条件下对信息进行不同的加工：有意识编码下对信息的加工更加精细化，而无意识编码则更依赖于对信息的知觉加工。过去已有研究采用 R/K 范式对有意编码下再认中的回想和熟悉进行区分，发现目标探测主要促进的是依赖于信息精加工的回想，而对于依赖信息知觉加工的熟悉则没有促进作用。为探讨在不同的编码意识条件下，目标探测对再认记忆中的回想和熟悉的作用是否不同，本研究在经典的注意促进效应的研究范式的基础上，通过指导语操纵被试在学习阶段的编码意识状态。有意编码条件下要求被试进行目标探测任务的同时记忆屏幕上呈现的词汇；而无意识编码条件下要求被试仅进行目标探测任务忽略屏幕上呈现的词汇。在随后的再认测验中，目标词和分心词与新词混合随机呈现，要求被试做出新/旧判断以及旧词判断后的记得/知道（R/K）判断。结果发现，两种编码条件下都产生了明显的注意促进效应，但目标探测对再认记忆中的回想和熟悉的作用有所不同，具体表现为：有意编码条件下，在 R 反应上目标显著大于分心，而在 K 反应上没有差异，说明目标探测主要作用于依赖信息精细加工的回想；而无意识编码条件下，在 R 反应上二者没有差异，在 K 反应上目标显著大于分心，说明目标探测主要作用于受项目知觉加工变化影响的熟悉。综合两个条件下的实验结果，我们可以认为，目标探测引发的加工增强作用具有非特异性，时间选择注意机制促进的加工类型取决于与目标探测同时进行的认知加工。

关键词 注意促进效应，编码意识，R/K 范式，回想，熟悉

The influence of target detection on background item under different encode intentionality condition——A study based on R/K paradigm

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Abstract: Attention boost effect (ABE) refers to the phenomenon that when performing a secondary task of target detection in the study phase, the processing of the background item presented with target will be enhanced, producing a memory advantage accompanying the target item. Studies have found that ABE is relatively stable under various conditions, whatever the experiment material is word or picture, whatever the test is implicit or explicit. In most studies about ABE, participants were instructed to perform intentional encoding in the study phase, but other studies have found that ABE can also be found under incidental encode condition. Information is processed differently under different encode conditions: the processing of information under intentional encode condition is more elaborative, while incidental encode is more dependent on the perceptual processing of information. Previous studies have used the R/K paradigm to discuss recollection and familiarity in recognition under intentional encoding. It was found that target detection mainly promotes recollection based on elaborative processing, but has no effect on familiarity affected by perceptual processing. In order to discuss whether target detection has different effect on recollection and familiarity in recognition memory under different encoding intentionality conditions, this study manipulated encode intentionality of participants in the study phase through instruction, basing on the classic ABE paradigm. Participants were told to encode a series of words while performing target detection task in the intentional encode condition, while other participants were instructed to perform target detection task only and ignore the words presented on the screen in the incidental encode condition. In subsequent recognition test, the target words and distractor words were mixed with new words and presented randomly, participants were instructed to make old/new judgments and remember/know judgments. The results showed that ABE was produced in both two encode conditions, but the effect of target detection on recollection and familiarity in recognition memory was different. Specifically, under intentional encode condition, the hit rate of target words was significantly higher than that of distractor words in remember, but there was no difference between target and distractor in know, indicating that target detection mainly has effect on recollection based on elaborative processing; under incidental encode condition, there was no difference between target and distractor in remember, but target was significantly higher than distractor in know, indicating that the effect of target detection mainly appears in familiarity affected by perceptual processing. Combining the results of the two experiments, we can draw a conclusion that the processing enhancement effect triggered by target detection is non-specific, and the type of processing promoted by the time-selective-attention mechanism depends on the cognitive processing performed simultaneously with target detection.

Keywords: attentional boost effect, encode intentionality, R/K paradigm, recollection, familiarity

不同认知资源下情绪调节策略对道德决策的影响

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摘 要 人们在进行道德决策时, 往往会伴随强烈的情绪体验。情绪调节策略可以减弱道德决策中的情感冲突, 然而不同的情绪调节策略在侧重点上有所不同, 如认知重评侧重改变情绪的前因, 表达抑制侧重改变情绪的反应, 且二者所需认知资源也存在差异。已有研究表明, 有效使用情绪调节策略可以改变道德决策的倾向, 但是哪种调节方式更有效, 不同的方式对道德决策会产生怎样的影响, 目前尚未统一定论。本研究旨在探讨认知重评和表达抑制在不同认知资源条件下对道德决策产生的影响。预实验用于检验情绪调节策略在情绪调节及道德评价任务中的作用。结果显示, 使用情绪调节策略的被试相比对照组的情绪自评更加积极, 且对不道德行为的评价更积极。实验一采用 2 (时间压力: 有、无) × 3 (情绪调节策略: 认知重评、表达抑制、无) 的被试间设计, 利用时间压力范式探讨不同情绪调节策略对道德决策的影响。结果发现, 时间压力与情绪调节策略交互作用显著, 无时间压力条件下, 认知重评组与表达抑制组被试都更倾向于选择功利主义决策, 对自己决策的道德程度评价更积极; 时间压力条件下认知重评的调节效应不显著, 而表达抑制仍然具有显著的调节效果。实验二采用 2 (认知资源损耗: 高、低) × 3 (情绪调节策略: 认知重评、表达抑制、无) 的被试间设计, 利用 Stroop 任务探讨在不同认知资源损耗条件下情绪调节策略对道德决策的影响。结果发现, 认知资源损耗与情绪调节交互作用显著, 低认知资源损耗条件下, 认知重评组与表达抑制组被试都更倾向于选

择功利主义决策, 对自己决策的道德程度评价更积极; 高认知资源损耗条件下, 表达抑制仍然具有显著的调节效果, 而认知重评的调节效应不显著。本研究结果表明, 情绪调节过程会受到认知资源的影响, 并对道德判断产生显著作用。

关键词 道德决策, 认知重评, 表达抑制, 认知资源

The Impact of Emotional Regulation Strategies on Moral Decision-making under Different Cognitive Resources

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Abstract: During making moral decisions, people are often accompanied by strong emotional experience. Emotion regulation strategies can weaken emotional conflicts in moral decision-making. However, different emotion regulation strategies have different emphases. For example, cognitive reappraisal focuses on the antecedents of changing emotions, while expression inhibition focuses on the response to changing emotions. There are differences in the demand for recognize resources between the two approaches. Studies have shown that effective use of emotion regulation strategies can change the tendency of moral decision-making, but which regulation method is more effective and how different methods will affect moral decision-making has not yet been unified. This study aims to explore the impact of cognitive reappraisal and expression inhibition on moral decision-making under different cognitive resource. Pre-experiment was conducted to test the role of emotion regulation strategies in emotion regulation and moral evaluation tasks. The results showed that compared with the control group, the participants who used emotion regulation strategies had more positive emotion self-evaluation and more positive evaluation of immoral behavior. In Experiment 1, 2 (Time pressure: Yes or No) $\times$ 3 (Emotional Regulation Strategy: Cognitive Reappraisal, Expression Inhibition, None) were designed among the subjects. The time pressure paradigm was used to explore the effects of different emotional regulation strategies on moral decision-making. The results showed that the interaction effect between time pressure and emotional regulation strategies was significant. Without time pressure, both cognitive reappraisal group and expression inhibition group were more inclined to choose utilitarian decision-making and evaluate their moral level more positively. Cognitive reappraisal had no significant moderating effect under time pressure, while expression inhibition still had significant moderating effect. Experiments 2 (Cognitive Resource Depletion: High or Low) $\times$ 3 (Emotional Regulation Strategy: Cognitive Reappraisal, Expression Inhibition, None) were designed among the subjects. Stroop task was used to explore the impact of emotional regulation strategies on moral decision-making under different cognitive resource depletion conditions. The results showed that the interaction effect between cognitive resource depletion and emotional regulation strategies was significant. With the absence of cognitive resource depletion, both cognitive reappraisal group and expression inhibition group were more inclined to choose utilitarian decision-making and scored more positively on the moral level of their decision-making. Without the absence of cognitive resource depletion, expression inhibition still had a significant moderating effect, while cognitive reappraisal had no significant moderating effect. The results of this study show that emotional regulation is influenced by cognitive resources and has a significant effect on moral judgment.

Keywords: Moral decision-making, Cognitive reappraisal, Expression inhibition, Cognitive resources

心理稳健性量表 (MR2B) 的信效度检验及大学生常模编制

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摘要 有意识行动理论认为个体的适应能力包含生理、社会和心理三个部分。呈现良好的心理表现, 承受应激状态的能力和从应激状态中恢复的能力是心理适应能力的构成要素, 心理稳健性反应的是个体承受应激状态和从应激状态中恢复的能力, 是心理适应能力的一个基础要素, 包含两个基础的因子: 阻碍和助推。心理稳健性量表从认知和情感两个维度测量影响任务表现的心理特质, 包含自我效能感、心理韧性、心理弹性、反刍思维等心理特质。目的: 对由 Hackfort 编制的心理稳健性量表(2020 英文版)进行跨文化的检验和修订, 为国内个体心理稳健性的相关研究提供测量工具。方法: 采用两人直译-回译的方法将源量表进行翻译, 以 968 名在校大学生为对象进行问卷网上调查, (1) 英文版量表的条目被调整为符合中文语法的相应条目, (2) 采用探索性因素分析、内部一致性检验和验证性因素分析对心理稳健性量表(中文版)进行信效度检验和修订。结果: 探索性因素分析发现, 中文版心理稳健性量表与英文版量表同样由自尊、自信、情绪稳定性和再生不足四个维度组成; 内部一致性信度系数分别为 0.778、0.589、0.589、0.381; 验证性因素分析结果表明, 修订后的心理稳健性量表(中文版)的模型拟合较好: $NFI = 0.922$, $IFI = 0.946$, $NNFI = 0.922$, $CFI = 0.946$, $RMSEA = 0.064$ 。结论: 修订后的心理稳健性量表具有较好的信度和效度, 可以用来测量心理稳健性这一心理特质。建议今后研究可以采用不同的被试群体, 以检验量表的外部效度。

关键词 心理稳健性, 自信, 自尊, 情绪稳定性, 再生不足

Reliability and Validity Test of the Mental Robustness Scale (MR2B) and Norms for College Students

Abstract: According to the action-theory, the adaptation ability of individuals including three parts: physical, social and psychological. Those ability to render mental performances, to withstand stressful situations and to recover from stressful situations are the adaptability of the psychological elements. Mental robustness is composed by withstanding stressful situations and recovering from stressful situations. It is a basic elements of psychological adaptation ability, consists of two basic factors: barriers and boosters. The Mental Robustness scale measures psychological traits that affect mental performance from cognitive and emotional dimensions, including self-efficacy, resilience, resilience, rumination and other mental traits. Objective: To test and adapt *The Mental Robustness Scale by Hackfort (English Version 2020)* for the Chinese culture, and to provide a measurement tool for Chinese research on individual appraisal of mental robustness. Methods: *The Mental Robustness Scale* was translated from English to Chinese by the parallel-back translation method. An online study was conducted among 968 college students. (1) The English version of the Scale was adapted to Chinese language and meaning of the items. (2) For testing the structure of this adapted version and its reliability and validity an exploratory factor analysis the calculation of internal consistency, and a confirmatory factor analysis were run. Results: Exploratory factor analysis showed that Chinese version of *The Mental Robustness Scale* in accordance with the English version comprises four dimensions: Self-assurance, Self-Esteem, Emotional Lability and Regeneration Insufficiency. The internal consistency coefficients are 0.778, 0.589, 0.589, and 0.381. The results of the confirmatory factor analysis showed that the model fit of the adapted Chinese version can be well accepted: $NFI = 0.922$, $IFI = 0.946$, $NNFI = 0.922$, $CFI = 0.946$, $RMSEA = 0.064$. Conclusion: The adapted Mental Robustness Scale has proven a good reliability and validity, and can be used to measure the trait aspect of mental robustness. It is suggested for future studies to refer to different groups of subjects to create further norms and evaluations of the external validity of the scale.

Keywords: mental robustness, self-assurance, self-esteem, emotional lability, regeneration insufficiency

乳酸诱发神经可塑性的潜在机制

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摘要 越来越多的实验证明证据支持体育锻炼可以增强神经可塑性,进而延缓增龄性神经退化,乃至降低神经退行性疾病发生风险。但体育锻炼诱发神经可塑性的潜在机制尚不明确,乳酸可能是体育锻炼诱发神经可塑性的关键点之一。现在从三个层面介绍乳酸诱发神经可塑的潜在机制。1.Yang et al.乳酸盐通过增强神经元中 NMDA 谷氨酸受体的活性来促进可塑性相关基因的表达。此外,乳酸盐增加细胞内 NADH 和钙水平。这可能是星形胶质细胞乳酸诱导神经可塑性的中心机制。乳酸诱导的 NMDA 受体活性增强后细胞内钙的增加可能是运动和 BDNF 表达之间的联系。2.乳酸盐可以结合神经元上的 GPCR81 和 BBB。Lauritzen 等人已经表明,在鼠模型中,血脑屏障上的 HCAR1 对于调节运动对血管生成的影响至关重要。乳酸盐结合神经元上的 HCAR1 抑制腺苷酸环化酶,从而降低 cAMP,导致神经元活性和基因调控降低。乳酸盐可能在控制血流和突触功能方面具有代谢和调节功能。乳酸盐可以影响前列腺素 E2 的摄取,从而影响血管舒张。3.乳酸盐可以通过 sir t1 激活诱导 PGC1 α /FNDC5/BDNF Hayek et al. 表明,在啮齿动物中,自主运动促进海马 BDNF 表达,并以乳酸依赖的方式改善记忆和学习。小鼠腹腔内乳酸输注诱导 SIRT1 活性,从而增强 PGC1 α /FNDC5/BDNF 途径,从而改善空间学习和记忆保持。基于神经可塑性视角来探讨体育锻炼的神经可塑性效益,可以为最佳的锻炼认知效益寻找指标,也可以为未来促进认知能力与抵抗增龄性神经退行性疾病寻找药物。

关键词 乳酸,神经可塑性,脑源性营养物质, NMDA

Potential Mechanism of Neuroplasticity Induced by Lactic Acid

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Abstract: More and more experiments prove that physical exercise can enhance neural plasticity, thus delaying aging neurodegeneration and even reducing the risk of neurodegenerative diseases. However, the potential mechanism of neural plasticity induced by physical exercise is not clear, and lactic acid may be one of the key points of neural plasticity induced by physical exercise. This paper introduces the potential mechanism of neural plasticity induced by lactic acid from three aspects. 1.Yang et al. lactate promotes the expression of plasticity related genes by enhancing the activity of NMDA glutamate receptor in neurons. In addition, lactate increased intracellular NADH and calcium levels. This may be the central mechanism of neural plasticity induced by lactic acid in astrocytes. The increase of intracellular calcium after the increase of NMDA receptor activity induced by lactic acid may be the connection between exercise and BDNF expression. 2. Lactate can bind to GPCR81 and BBB on neurons. Lauritzen et al. have shown that HCAR1 on the blood-brain barrier plays an important role in regulating the effect of exercise on angiogenesis in mouse model. HCAR1 on lactate-bound neurons inhibits adenylate cyclase, thereby reducing cAMP, resulting in decreased neuronal activity and gene regulation. Lactate may be controlling blood

Keywords: lactic acid, neuroplasticity, brain-derived nutrients, NMDA

沙盘游戏理论的研究现状、应用及评价

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摘要 沙盘游戏疗法由瑞士心理学家卡尔夫创建,在 20 世纪 90 年代逐渐进入中国。沙盘游戏疗法作为一种非语言性的心理咨询与治疗的技术,它充分利用了非语言交流和荣格心理学的象征含义,重视沙盘制作者在创作过程中的自主性和自发性。沙盘游戏疗法的具体操作如下:首先,心理咨询师要创建一种安全且自由的环境,使沙盘制作者可以放心的展现自己的内心世界。之后沙盘制作者可从摆放各种微缩小型模具的架子上自由地挑选沙具,并在装有细沙的沙盘中自由地摆放自己的沙具,最终形成可以表现自己内心世界的沙盘“场景”,整个过程不受外界干扰。最后,沙盘分析师通过分析每个沙具的不同摆放位置,了解制作者的潜意识层面的相关内容,更好地探究沙盘制作者的内心世界。起初,沙盘游戏疗法在国外被用来治疗各类儿童情绪障碍和行为障碍,并且起到很好的治疗效果。之后随着它的不断完善,使用技术的不断提高,沙盘游

戏疗法的治疗对象也不仅限于儿童，它的治疗对象也逐渐拓展，其应用范围也不断拓宽。沙盘游戏疗法在我国的应用还处在探索时期，它的本土化进程也在逐渐展开，尤其是对中国经典代表性文化的具体释义的研究。未来研究还可继续提升沙盘游戏疗法在不同领域的应用，并标准化其在不同领域内的诊断指标。

关键词 沙盘游戏疗法, 应用现状, 无意识

The research status, application and evaluation of sandplay game theory

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Abstract: Sandplay therapy was founded by Swiss psychologist Karl Karf and gradually entered China in the 1990s. As a non-verbal psychological counseling and therapy technique, sandplay therapy makes full use of nonverbal communication and the symbolic meaning of Jungian psychology, and attaches importance to the autonomy and spontaneity of the sandplay maker in the creative process. The specific operation of sandplay therapy is as follows: First, the psychologist should create a safe and free environment, so that the sandplay maker can feel safe to show their inner world. After that, sand table makers can freely select sand tools from the shelves where all kinds of miniature molds are placed, and freely place their own sand tools in the sand table equipped with fine sand, finally forming a sand table "scene" that can express their inner world, and the whole process is free from external interference. Finally, the sand table analyst can better explore the inner world of the sand table maker by analyzing the different placement of each sand set to understand the subconscious level of the maker. At first, sandplay therapy was used to treat a variety of emotional and behavioral disorders in children abroad, and it has a good therapeutic effect. Since then, with its continuous improvement and the continuous improvement of the use of technology, the treatment objects of sandplay play therapy are not limited to children, its treatment objects are also gradually expanded, and its application scope is also continuously broadened. The application of sandplay play therapy in China is still in the exploration period, and its localization process is also gradually developing, especially the study of the specific interpretation of the representative Chinese classical culture. Future research should continue to improve the application of sandplay therapy in different fields and standardize its diagnostic indicators in different fields.

Keywords: Sandplay therapy, application status, unconscious

声调相似性在汉语口语识别中的作用——来自眼动的证据

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摘要 已有的听觉词汇识别模型认为, 在听觉词汇识别过程中, 听觉输入信号与词汇表征之间的语音相似程度会影响候选词汇的激活程度。然而, 以前的模型大都是基于非声调语言和音段信息建立的(如, 英语、西班牙语)。与字母语言不同, 中文是一种声调语言, 在汉语普通话中有四种声调, “阴平”(一声), “阳平”(二声), “上声”(三声)和“去声”(四声)。研究发现, 不同的声调之间存在相似性的差异, 例如, 与其它声调相比, 汉语普通话中的阳平(二声)与上声(三声)有更多的语音相似性(Gandour, 1983)。当前研究的目的是使用词汇情境范式来探讨词汇声调相似性如何影响中文的听觉词汇识别。在范式中, 被试被要求听一个口语目标词, 同时给被试呈现由四个词组成的视觉屏幕, 即目标词, 声调相似的语音竞争词, 和两个不相关的干扰词。对于每一个阳平(二声)的听觉目标词(如, “阳台”/yang2tai2/), 匹配两种类型的声调竞争词, 一个上声(三声)的高声调相似性竞争词(如, “养子”/yang3zi3/), 和一个去声(四声)的低声调相似性竞争词(如“样本”/yang4ben3/)。任务是用鼠标点击视觉屏幕上的目标词, 同时记录被试在视觉屏幕上的眼动情况。结果发现, 在两种声调条件下, 都观察到了显著的语音竞争效应, 即在声调竞争词上的注视概率高于两个无关的干扰词。特别的是, 在高声调相似性条件下观察到的语音竞争效应比低声调相似性条件下更大。结果表明, 在听觉词汇识别过程中, 声调信息是以一种逐级的方式起作用, 与目标词声调相似性高的词比声调相似性低的词被激活的程度更高。当前研究的发现表明声调信息的激活水平受到声调相似性的影响。

关键词 声调, 语音相似性, 听觉词汇识别, 汉语, 眼动

The role of tone similarity during spoken-word recognition in Chinese: Evidence from an eye-tracking study

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Abstract: Existing spoken-word recognition models agree that in the process of spoken-word recognition, the phonological similarity between the auditory input signal and lexical representation affected the activation degree of the lexical candidates. However, previous models are mostly based on non-tonal languages and the segmental information, such as English, Spanish. Unlike alphabetical languages, Chinese is a tonal language with four lexical tones—high-level, mid-rising, low-dipping, and falling tones. Studies found that different lexical tones shared different similarities between each other. For example, the mid-rising tone is more phonetically similar with the low-dipping tone compared to other tone pairs (Gandour, 1983). The aim of the current study was to explore that how the lexical tone similarity affects the Chinese spoken-word recognition using a printed-word paradigm. In the paradigm, participants were asked to listen to a spoken target word, and simultaneously they were presented with a visual display of four words—namely, a target word, a phonological competitor, and two unrelated distractors. For each target word with a mid-rising tone (e.g., 阳台 /yang2tai2/ “balcony”), two types of tonal competitors: a high tonal similarity competitor with a low-dipping tone (e.g., 养子 /yang3zi3/ “adopted son”) and a low tonal similarity competitor with a falling tone (e.g., 样本 /yang4ben3/ “sample”) were constructed. The task was to click on the target word on the visual screen with the mouse, and participants’ eye movements on the visual screen were recorded at the same time. Results showed significant phonological competitor effects (i.e., the fixation proportion on the phonological competitor was higher than that on the distractors) under both tone conditions. Specifically, a larger phonological competitor effect was observed in the high tonal similarity condition compared to the low tonal similarity condition. The results indicate that the tonal information functions in a graded manner during the spoken-word recognition, and words with high tonal similarity with targets are activated to a higher degree than words with low tonal similarity. Findings of current study contribute to the activation level of tone information is affected by the similarity of tones.

Keywords: lexical tone, phonological similarity, spoken-word recognition, Chinese, eye movements

自我关注重评和情境关注重评对积极情绪的作用机制

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摘要 认知重评是一种高效的情绪调节策略, 相对于其他的情绪调节策略, 认知重评对生理和心理的影响更有益。认知重评可以分为自我关注重评和情境关注重评, 两种重评策略都可以有效的调节负性情绪, 但是调节效果存在差异。以往研究主要考察其对消极情绪的调节, 并未探索重评的两种亚型对积极情绪的调节效果以及对随后认知控制的影响。本研究共两个实验, 分别考察自我关注重评和情境关注重评对积极情绪的调节效果以及对随后认知控制的影响差异。实验1考察自我关注重评(n=26)和情境关注重评(n=27)对积极情绪的调节效果, 对正性图片进行重评, 并且对图片的效价和唤醒度进行评级。实验2考察使用认知重评(自我关注组 n=27, 情境关注组 n=30)后, 在随后的冲突任务中的认知控制能力, 在实验1的基础上增加数字 Stroop 任务, 利用反应时和正确率干扰分数评估认知控制能力。实验1结果表明, 两种重评方式都可以有效的调节积极情绪, 但是其调节效果存在差异。在降低正性的条件下, 情境关注组的效价显著低于自我关注组。在增加正性的条件下, 本研究并未发现自我关注组和情境关注组之间情绪调节的显著差异。本研究的另一点发现是, 在降低正性的条件下, 自我关注组的唤醒度显著低于情境关注组, 该结果与图片效价结果相矛盾。实验2并未发现两种重评方式的认知控制能力的显著差异, 但是调节方式的主效应达到了边缘显著, 呈现出自我关注

重评的反应时干扰分数(一致条件-不一致条件)低于情境关注重评的趋势。总之,两种重评方式都可以有效的调节情绪,但是其调节效果存在差异。使用情境关注重评降低正性情绪比使用自我关注重评更加有效,但是由于自我关注重评是通过降低事件的个人相关性来降低正性情绪,因此其唤醒度低于情境关注重评。对于重评后的认知控制能力,与情境关注重评相比,使用自我关注重评调节积极情绪后,在随后的冲突任务中认知控制能力呈现出更强的趋势。

关键词 情绪调节, 积极情绪, 自我关注重评, 情境关注重评, 认知控制

The Mechanism of Self-focused and Situation-focused Reappraisal on Positive Emotions

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Abstract: Cognitive reappraisal, is a kind of effective emotion regulation strategies, beneficial to physical and psychological effects more cognitive reappraisal than other emotion regulation strategies. It can be divided into self-focused and situation-focused reappraisal, both reappraisal strategy can effectively adjust the negative emotions, while the regulate effects were different. Previous studies focused on the regulation of negative emotions, but did not explore the effects of the two reappraisal subtypes on the regulation of positive emotions and the subsequent cognitive control. There are two experiments In this study. In Experiment 1, the moderating effects of self-focused reappraisal ($n = 26$) and situation-focused reappraisal ($n = 27$) on positive emotions were examined. Participants were asked to reappraisal the positive images and rate the valency and arousal of all the images. In Experiment 2, self-focused reappraisal ($n = 27$) and situation-focused reappraisal ($n = 30$) were used to investigate whether attempts to increase or decrease positive emotions had different effects on subsequent cognitive control tasks. The digital Stroop task was added on the basis of Experiment 1 and cognitive control was evaluated by the interference scores of response time and accuracy rate. The results of Experiment 1 showed that both reappraisal strategy can effectively adjust the negative emotions, while the regulate effects were different. In the condition of decreasing positive emotion, the situation-focus reappraisal had a significantly lower valency than the self-focus reappraisal. Under the condition of increasing positive emotion, no significant difference in emotion regulation was found between the self-focus reappraisal and the situation-focus reappraisal in this study. Another point of this study finding is that the arousal of self-focus reappraisal in the condition of decreasing positive emotion was significantly lower than situation-focus reappraisal. This result is in contradiction with the results of the valence. In Experiment 2, there was no significant difference in the cognitive control between the two reappraisal subtypes, but the main effect of moderating mode reached marginal significance, showing a tendency that the response time interference score of self-focus reappraisal was lower than that of situation-focus reappraisal. In conclusion, self-focused reappraisal and situation-focused reappraisal can effectively regulate emotions, while the regulate effects were different. Reducing positive emotion by situation-focus reappraisal is more effective than self-focus reappraisal. But since self-focused reappraisal reduces positive emotions by reducing the personal relevance of events, its arousal degree is lower than that of situation-focused reappraisal. For the cognitive control after reappraisal, the individual's cognitive control after the self-focus reappraisal is stronger compared with the situational attention reappraisal.

Keywords: emotion regulation, positive emotion, self-focused and situation-focused reappraisal, cognitive control

多身份追踪中的同身份优势：基于布尔地图的注意刷新

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摘要 背景: 对多个具有独特身份特征的目标的持续追踪需要视觉注意系统频繁刷新目标的位置信息并与身份信息绑定, 现有的多客体追踪模型和多身份追踪模型 2.0 都没有说明当多身份追踪中存在若干相同特征的目标时注意系统将如何进行追踪。目的: 结合布尔地图理论, 本研究探究了多身份追踪中注意系统是否会对多个相同的客体同时进行注意刷新。本研究操纵在运动结束前对某一个目标进行线索提示, 如果注意刷新的单元是布尔地图, 则提示目标被注意刷新的同时与之具有相同身份的目标也将被刷新。方法: 实验采用多身份追踪范式, 以颜色作为客体身份信息。屏幕上首先呈现 12 个圆, 其中两两颜色相同。所有客体随机运动 5 到 7 秒, 参与者被要求追踪两两颜色相同的 6 个目标客体。在运动将要结束前 300 ms, 6 个目标客体中的随机一个会在 150ms 内连续闪烁两次作为线索提示, 随后运动结束, 每个客体被一个灰色圆遮蔽。之后进入报告阶段, 某个客体被白色实线圈出作为探测刺激, 同时屏幕下方呈现 6 种颜色和一个叉号。参与者若判断该探测刺激非追踪目标, 则点击叉号, 若判断该探测刺激为追踪目标则点击报告该目标的颜色。实验记录了参与者反应的击中率、反应时以及错误类型。实验采用单因素四水平重复测量设计, 条件分别为探测刺激与提示刺激相同 (PSC), 探测刺激为提示刺激同色的另一目标 (POC), 探测刺激为非提示颜色的目标 (PNC), 探测刺激为干扰项 (PD)。结果: 重复测量方差分析结果显示, PSC 条件击中率显著高于 POC 条件 (.830 vs .774, $p = .008$) 和 PNC 条件 (.830 vs .732, $p < .001$); POC 条件击中率显著高于 PNC 条件 (.774 vs .732, $p = .028$)。未被直接提示但与提示目标具有相同身份信息的目标击中率显著高于其余目标, 表明提示线索同时引起了两个相同目标的注意刷新。结论: 多身份追踪的刷新过程中存在同身份优势, 刷新的单元可能是布尔地图, 多个相同身份的客体可表征在同一张布尔地图上并被同时刷新。

关键词 多身份追踪, 视觉注意, 布尔地图, 注意刷新

Same-identity benefit in multiple-identity tracking: Boolean map as the unit of attentional refreshing

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Abstract: Background: The continuous tracking of multiple targets with unique identity characteristics requires the visual attention system to update the location information of the targets and bind them with the identity information in current time, the existing model of multiple object tracking and Model of Multiple Identity Tracking 2.0 (MOMIT 2.0) do not explain how the visual attention system will work when there are several targets have the same identity information in multiple identity tracking (MIT). Purpose: Combined with the Boolean map theory, the present study explored whether visual attention will refresh the attention of multiple identical objects at the same time. The present study manipulated the process of MIT that one target will be cued before the end of tracking, if the unit of visual attention is multiple identical objects, the target with the same identity will be refreshed at the same time as the cued target is refreshed. Method: The experiment used multiple identity tracking paradigm and took color as identity information. 12 discs were displayed on a monitor, every two of which had the same color. All objects moved randomly for 5 to 7 seconds, participants were asked to track 3 pairs of objects. In the first 300 ms before the motion

was about to end, a random one of the six targets would flash twice as a clue in 150 ms, and then the motion ended, each object was obscured by a gray disc. In reporting stage, one object was circled by a white solid line as a probe stimulus, 6 colors and a cross were displayed at the bottom of the screen. If participant judge that the probe stimulus is not one of tracking targets, then click the cross., otherwise, click to report the color of the target. The hit rate, reaction time and error type were recorded. The experiment used a single factor repeated measurement design. The conditions were as follow: the probe target was the same as the cued target (PSC), the probe target was the target with the same color as the cued target (POC), the probe target was a random one of the rest two pairs of targets (PNC), and the probe target was a random one of distractor (PD). Results: The results of repeated measurement ANOVA showed that the hit rate of PSC condition was significantly higher than that of POC condition (.830 vs. .774, $p = .008$) and PNC condition (.830 vs. .732, $p < .001$); the hit rate of POC condition was significantly higher than that of PNC condition (.774 vs. .732, $p = .028$); the hit rate of the target that is not directly cued but had the same identity as the cued target was significantly higher than that of other targets, indicating that the clue has attracted the attention of two same targets at the same time. Conclusion: The present study shows a same identity advantage in multiple identity tracking. The same Boolean map may be the unit of attentional refreshing, that is, multiple identical targets that are presented on the same Boolean map could be refreshed at the same time.

Keywords: multiple identity tracking, visual attention, Boolean map, attentional refreshing

视觉工作记忆中是否存在多种表征形式

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摘 要 大量研究证明视觉工作记忆编码阶段存在知觉表征和语义表征两种表征形式。但对于视觉工作记忆的保持阶段是否也存在这两种不同的表征形式这一问题还存在争议。已有研究使用脑电技术对该问题进行了探究，结果表明视觉工作记忆保持阶段存在起源于不同编码时期的知觉表征和语义表征。但脑电技术存在解码所需训练试次多、噪音大等缺点。而眼动技术中瞳孔大小指标有着指标明确、无需解码等优点。因此本研究使用眼动追踪技术，通过瞳孔光反射来对视觉工作记忆保持阶段是否存在多种表征形式这一问题进行进一步探究。

实验将眼动追踪技术、Stroop 范式和变化觉察范式相结合，使用了 2(字体颜色：黑色、白色)×2(字义：黑、白)的被试内实验设计。被试需要记住注视点两侧刺激的字体颜色，随后的声音线索会提示要测试的刺激的位置。被试需要在接下来的 3 秒钟内紧盯中间注视点，并且回忆线索位置的字体颜色，同时记录眼动数据。最后屏幕上呈现一个色块，需要被试判断色块颜色是否与线索提示位置的字体颜色一致。

对行为数据结果进行分析，发现字色一致条件下的正确率要高于字色不一致，反应时要快于字色不一致，与 Stroop 效应一致。使用 python 构建线性混合效应模型，以 10ms 为时间窗口对瞳孔直径进行分析。结果发现在字色一致条件下，字体颜色为黑色条件下的瞳孔直径大于字体颜色为白色条件下的瞳孔直径，且这种差异时程长于字色不一致。字色不一致条件只在早期表现出这种差异，后期两种字体颜色条件下的瞳孔大小无差异。说明在字色不一致条件下，字义产生的效应混合了字体颜色的效应，使得后期两种字体颜色条件下的瞳孔直径的差异不显著。综合以上结果说明，视觉工作记忆保持阶段的初期和后期的表征形式不同，存在两种表征形式，保持阶段初期为知觉表征，负责加工刺激的基本特征；后期转换为语义表征，负责加工刺激的语义。

关键词 视觉工作记忆，瞳孔光反应，stroop 范式

Whether there are multiple Representational Formats in Visual Working Memory

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Abstract: Many studies have demonstrated that perceptual representation and semantic representation exist in the encoding period of visual working memory. However, whether these two different forms of representation also exist in the maintenance of visual working memory is controversial. A previous study explored by EEG has shown that perceptual representations and semantic representations originated from different encoding periods exist in visual working memory maintenance. But EEG has many disadvantages, such as plenty of training trials for decoding and high noise. While the pupil size index in eye tracking technology has many advantages, for instance, intuitionistic index and no need to decode. Therefore, in this study, we used eye tracking technology to investigate whether there are multiple representational formats in visual working memory maintenance.

In this experiment, eye tracking technology, Stroop paradigm and Change Detection paradigm were combined, and a 2(color: black and white) $\times$ 2(semantics: black and white) within-subject design was used. Participants were asked to remember the colors of the memory items on both sides of the fixation, then a acoustic cue would indicate the location of the stimuli to be tested. The participants were required to focus on the fixation for the next three seconds and recall the color at the cued location while recording the eye-movement data. Finally, a color patch was presented on the screen, and the participants needed to judge whether the color patch is the same as the color of the cued memory item.

The analysis of behavioral data results shows that the correct rate in the semantic-color consistent condition is higher than that in the condition of semantic-color inconsistent condition, and the response time is also faster in the semantic-color consistent condition than that in the semantic-color inconsistent condition, which is the same as the classical Stroop effect. A linear mixed effect model was constructed in Python, and the pupil diameter was analyzed with a moving time window of 10ms. The results showed that the pupil diameter in the black was larger than that in the white under the semantic-color consistent condition, and the duration of the difference was longer than that in the inconsistent condition. This difference was only shown in the early stage of the inconsistent condition, and no significant difference was found in the later stage. These results indicate that the semantic effect is mixed with the color effect under the inconsistent condition, so that the difference of pupil diameter under the two colors conditions is not significant. These results suggest that there are two representational formats in the early and later stages of visual working memory maintenance. In the early stage of visual working memory maintenance, representational format is perceptual representation, which processes basic features of stimuli. Later stage, representational format transformed into semantic representation, which processes the semantics of the stimulus.

Keywords: visual working memory, pupillary light response, stroop paradigm

双价转换任务中口译经验对个体认知转换优势的影响

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摘 要 口译是一种强化的双语转换活动, 口译经验丰富者表现出明显的双语任务转换优势。已有研究表明, 双语任务转换与非语言任务转换具有相似的神经机制, 因此, 口译员的双语转换经验可能会影响其在非语言任务转换中的表现。本研究采用双价“颜色-形状”转换任务, 考察了口译专业研究生(一年口译训练经验)和普通大学生(无口译训练经验)两组被试在非语言任务转换中的认知灵活性。在本实验中, 两组被试分别完成单任务转换任务(判断颜色或形状)和混合任务转换任务(根据线索提示进行颜色或形状的判断), 以转换代价和混合代价为认知转换能力的测量指标。结果显示, 两组被试的混合代价无显著差别, 但口译学生组转换代价小于普通学生组。这一结果表明, 密集的口译活动的确会增强非语言任务转换能力, 且具体任务转换控制能力与

口译员接受的口译训练时长有一定关系。以往研究多在低要求的单价转换任务中发现口译员或双语者的局部转换能力,而在本实验中,口译学生组在双价任务转换实验中也表现出转换代价优势,表明口译学生具有瞬间、具体的局部认知转换能力。本研究结论进一步验证了口译经验不仅可加强口译员双语转换能力,且同样促进了其非语言转换能力。这一结论为口译研究提供了研究思路,对口译人才培养具有借鉴意义。

关键词 双价任务,语言转换能力,认知转换能力,口译学生,转换代价

加工难度对概念隐喻的影响及其机制

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摘要 隐喻是一种常见的认知方式,根植于日常生活的思维和行为中,在日常生活和特殊儿童干预治疗等领域中应用广泛。概念隐喻指由具身经验向抽象概念进行映射,从而理解抽象概念的过程,对理解语言认知与教育实践运用起重要作用。目前,概念隐喻的理论内容不断的更新和发展,但受限于研究关注的缺乏,加工难度对概念隐喻的影响机制的系统性有待提高。本研究在剖析加工难度对概念隐喻理论、知觉符号理论以及语言学角度等概念隐喻的影响机制与理论进展基础上,围绕始源概念域、目标概念域以及始源概念域向目标概念域映射三个核心成分,从加工难度的视角对概念隐喻进行重新梳理与分类。最后,基于概念隐喻的发展轨迹、特殊群体、认知神经机制研究现状,提出未来研究可以对比科学、新颖和传统概念隐喻间,具体和抽象概念隐喻间的加工机制及认知神经基础差异。进一步地,未来可尝试引入社会心理学的相关范式,通过更有生态效度的情景实验法,以提高概念隐喻研究的认知生态性,揭示社会交往情境下个体如何获取身体经验,并结合认知神经科学研究方法揭示概念隐喻的脑机制。加工难度与其他因素对概念隐喻的交互影响机制,有助于为后续研究提供方法与视角方面的启示,深化概念隐喻的理论内容和实践意义。

关键词 加工难度,概念隐喻,理论模型,分类

The influence and mechanism of difficulty on conceptual metaphor

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Abstract: Metaphor is a common way of cognition, rooted in the mind and behavior of daily life. It is widely used in daily life and special children's intervention and treatment. Conceptual metaphor refers to the process of mapping from embodied experience to abstract concepts for understanding abstract concepts. It plays an important role in understanding language cognition and educational practice. At present, the theoretical content of conceptual metaphors is constantly updated and developed, but due to the lack of research attention, the systematic of the impact mechanism in processing difficulty on conceptual metaphors needs to be improved. Based on the analysis of the impact mechanism and theoretical progress of difficulty on conceptual metaphor, this research focuses on the three core components of source conceptual domain, target conceptual domain, and the mapping of source conceptual domain to target conceptual domain. From the perspective of difficulty, we re-organize and classify conceptual metaphor. Finally, based on the development trajectory, special groups, and the cognitive neural mechanisms of conceptual metaphor, it is proposed that future study can compare the processing mechanism and cognitive neural basis differences among scientific, novel and traditional conceptual metaphor, or between concrete and abstract conceptual metaphor. Furthermore, this research attempts to combine cognition and paradigms of social psychology which have more ecologically valid situational experiment methods, to improve the cognitive ecology of conceptual metaphor research and reveal how individuals gain physical experience in social interaction situations. Neuroscience research methods reveal the brain mechanism of conceptual metaphors, as well as the interaction mechanism of processing difficulty and other factors on conceptual metaphors, which will help to provide enlightenment on methods and perspectives for subsequent research. It can also deepen the theoretical content and practical significance of conceptual metaphors.

Keywords: Difficulty, Conceptual metaphor, Theoretical model, Classification

急性社会压力对第三方帮助行为的影响

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摘要 第三方行为在日常生活中广泛存在, 例如警察执法、路人见义勇为等, 在社会规范的建立和维持过程中发挥重大作用。第三方行为多发生在急性压力下, 但目前关于急性压力如何影响第三方行为的研究较少, 且结果并不一致。此外, 第三方行为包括第三方惩罚和第三方帮助, 已有文献集中于探讨第三方惩罚机制及急性压力影响其的作用机制, 有关第三方帮助行为及急性压力如何影响该行为的研究尚处于初步阶段。本研究使用第三方帮助范式和特里尔社会压力测试(Trier Social Stress Test, TSST)考察急性社会压力下被试的第三方帮助行为, 并探索分配方案不公平程度的调节作用。研究发现, 对于被试的投币个数, 分配方案不公平程度的主效应显著, 即非常不公平条件下第三方被试的助人力度显著大于较不公平条件, 较不公平条件下的助人力度显著大于公平条件。急性压力的主效应不显著, 分配方案不公平程度和急性压力的交互作用不显著。对于被试的投币频率, 分配方案不公平程度的主效应显著, 即非常不公平条件下和较不公平条件下第三方被试的助人力度显著大于公平条件, 较不公平条件下的助人力度和非常不公平条件下的助人力度没有显著差异。急性压力的主效应不显著, 分配方案不公平程度和急性压力的交互作用不显著。以上结果表明在仅有助人选项的情况下, 急性社会压力对第三方帮助行为没有显著影响。本研究丰富了第三方行为领域的研究, 为急性压力如何影响第三方行为提供新的实验证据, 为后续研究提供了更多思路。

关键词 急性压力, TSST, 第三方帮助

The impact of acute social stress on third-party helping

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Abstract: Third-party behaviors are widespread in daily life, such as police law enforcement, passerby's act of courage, etc. They play a major role in the establishment and maintenance of social norms. Third-party behaviors mostly occur under acute stress, but there are few studies on how acute stress affects third-party behaviors, and the results are not consistent. In addition, third-party behavior includes third-party punishment and third-party helping. The existing literature has focused on exploring the mechanism of third-party punishment and the mechanism by which acute stress affects it. Research on third-party helping behavior and how acute stress affects this behavior is still at the preliminary stage. This study uses the third-party help paradigm and the Trier Social Stress Test to investigate the third-party help behavior of participant under acute social stress, and to explore the moderating effect of the unfairness of the distribution plan. The study found that the main effect of the unfairness of the distribution plan is significant for the number of coins invested by the participants, that is, under very unfair conditions, the helping of third-party participants was significantly greater than the less fair conditions, and the helping under less fair conditions was significantly greater than the fair conditions. The main effect of acute stress is not significant, and the interaction between the degree of unfairness of the allocation plan and acute stress is not significant. For the frequency of coin insertion by the participants, the main effect of the degree of unfairness of the distribution plan is significant, that is, the third-party participants' assistance under very unfair conditions and under less fair conditions is significantly greater than that under fair conditions and under less fair conditions. There is no significant difference between the intensity of helping under less fair conditions and the intensity of helping under very unfair conditions. The main effect of acute stress is not significant, and the interaction between the degree of unfairness of the allocation plan and acute stress is not significant. The results show that when there is only a helping option, acute social stress has no significant impact on third-party help behavior. This study enriches the research in the field of third-party behavior, provides new experimental evidence for how acute stress affects third-party behavior, and provides more ideas for follow-up research.

Keywords: acute stress, TSST, third-party helping

外显情绪判断任务中自我相关性影响情绪词加工的时间进程

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摘要 现实生活中的情绪信息经常伴随着相关人物出现, 与自我相关的情绪性刺激能够更有效地激发个体的动机性注意。因此, 判断情绪信息是否与自我相关, 并对自我和他人情绪进行区分在社会交往中非常重要。本研究利用 ERPs 技术, 要求 22 名被试对呈现在名字 (自我和他人) 之后, 不同词性 (名词和形容词) 的情绪词 (积极和消极) 进行效价判断, 考察在外显情绪判断任务中, 自我相关信息影响情绪词加工的动态时间特征及二者的整合机制。结果发现, 在情绪词加工早期, 消极词比积极词诱发了波幅更大的 N1, 表明个体对高唤醒刺激的加工存在消极偏向。重要的是, 在自我名字条件下, 积极词比消极词诱发了波幅更大的 P2 和波幅更小的 N400, 而在他人名字条件下, 积极词和消极词的波幅不存在显著差异。P2 的结果表明自我名字的呈现激活了个体的自我积极概念, 从而使积极词比消极词自动捕获了更多的注意资源。N400 的结果则表明相比于他人, 个体将自我和积极信息进行整合时消耗了更少的认知资源。此外, 自我与情绪性名词和形容词之间的相互作用不存在显著差异, 说明词性不是影响自我对情绪产生偏向的因素。综上, 本研究结果表明, 在外显情绪判断任务中, 自我相关信息促进积极词的加工不仅出现在晚期的语义整合阶段, 而且在早期的词形分析阶段就已经开始, 且符合自我积极偏向假说。

关键词 情绪词, 自我相关性, N1, P2, N400

The Time Course of Self-relevance Affecting Emotional Words Processing in Explicit Emotional Tasks

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Abstract: In real life, emotional information is often accompanied with relevant person, and self-related emotional stimuli can efficiently stimulate individuals' motivational attention. Therefore, it is very important to judge whether emotional information is related to self and to distinguish between self and others' emotions is of significance in social interaction. In the present study, by using ERPs, we asked 22 subjects to judge the valence of emotional words (positive and negative) with different word class (nouns and adjectives) that appeared after the name (self and others), exploring the dynamic temporal characteristics of self-related information affecting emotional information and their integration mechanism in explicit emotional tasks. ERP results showed that negative words elicited larger N1 amplitudes than positive words in the early processing stage, indicating that there was a negative bias in the processing of high arousal stimuli. More importantly, positive words paired with self-names elicited significantly larger P2 amplitude and smaller N400 amplitude than negative words paired with self-names. Nevertheless, there was no significant difference between the positive and negative words paired with other names in the ERPs amplitude. The P2 results indicated that the presentation of self name activated the individual's positive self-concept, so that positive words automatically captured more attention resources than negative words. The N400 results may demonstrate that compared to others, individuals consumed fewer cognitive resources to integrate self and positive information. In addition, there was no significant difference in the interaction between self and emotional nouns and adjectives, indicating that word class was not a factor affecting the self's bias towards emotions. In conclusion, self-related information not only promoted the semantic processing of positive words in the later stage, but also in the early stage of word form analysis, supporting the self-positive bias hypothesis.

Keywords: emotional words, self-relevance, N1, P2, N400

自上而下和显著性加工对类别注意控制定势的影响

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摘要 在视觉搜索任务中, 类别特异的注意控制定势 (category-specific attentional control setting, cACS) 帮助注意系统选择与目标类别相匹配的刺激, 认知系统对相关刺激的神经反应增强。注意选择过程包括自上而下加工和显著性加工, 但两种加工对 cACS 的作用机制尚不清楚。为考察两种注意选择加工在不同类型 cACS 加工中的作用, 本研究采用多数函数任务 (majority function task, MFT) 的变式和 oddball 范式, 通过改变认知负载控制自上而下的加工, 通过改变刺激的新异水平来控制显著性加工。此外, 将目标定义为基于语义概念的范畴的数字和字母, 以及基于原型范畴的“O”型和“X”型图案两种, 以此考察不能类型的 cACS 的作用差异。研究结果发现: 1) 自上而下加工影响 cACS, 认知负载主效应显著: 相比于低认知负载, 高认知负载的目标识别正确率更低, 反应时更长。2) 显著性加工是否影响 cACS 与目标反应有关: 当显著性水平与目标反应无关时, 对不同 cACS 的影响较小; 当显著性水平与目标反应相关时, 对两种 cACS 均产生显著影响, 且自上而下加工和显著性加工对 cACS 产生注意整合。3) 当刺激新异时, 基于原型的 cACS 表现显著优于基于语义的 cACS, 表明基于原型的 cACS 可能涉及更多自下而上的加工。总的来说, 研究结果证实了注意选择的自上而下和显著性加工及其整合过程能够影响不同类别的 cACS, 研究结果从类别信息加工层面探讨注意过程, 并为现实中类别信息识别等提供了理论证据。

关键词 类别注意控制定势, 注意选择, 显著性, 认知负载

The effects of top-down and salience processing on category-specific attentional control settings

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Abstract: In visual search tasks, category-specific attentional control setting (cACS) helps the attention system select stimuli that match the target category, and the neural response of cognitive system to the relevant stimuli will be enhanced. Attentional selection processing includes top-down process and salience process, but the mechanism of both types of processes on cACS is still unclear. To investigate the role of the two attentional selection processes in different types of cACSs, the present study employed a variation of the majority function task (MFT) and the oddball paradigm. Top-down process was controlled by changing the cognitive load and salience process was controlled by changing the stimuli surprise level. In addition, to investigate the differences in the effects of cACSs, we defined the targets as numbers and letters in the semantic-based category, and "O" type and "X" type patterns in the prototype-based category. The findings revealed that 1) top-down process affected cACS with a significant main effect of cognitive load: compared with lower cognitive load, higher cognitive load resulted in lower correct target recognition rates and longer response times. 2) whether salience process affected cACS was related to target response: when salience was irrelevant to target response, the effect on different cACSs was smaller; when salience level was relevant to target response, the effect on both types of cACSs was significant, moreover, top-down process and salience process produced attentional integration of cACS. 3) When the stimuli were oddball stimulus, prototype-based cACS performed better than semantic-based cACS, suggesting that prototype-based cACS may

involve more bottom-up processing. In summary, the results of this study confirm that top-down and salience process of attentional selection and their interaction process can influence different categories of cACSs. The findings broaden the view of attentional process at the level of category information processing and provide theoretical evidence for realistic category information recognition, etc.

Keywords: category-specific attentional control setting, attentional selection, salience, cognitive load

语言类型对熟练双语者道德判断影响:来自藏族被试的证据

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摘要 道德外语效应指外语呈现相同意义材料会使被试更倾向于功利主义选择。虽然近年来有研究发现, 道德外语效应不能出现在高熟练度双语被试中, 但有学者认为即便是高熟练度双语被试, 语言的外语性, 即母语与目标语及其承载文化之间的相对心理距离也可能影响被试的判断。本研究基于汉藏语系被试, 设计了3个实验, 对这一设想进行检验。

3个实验被试均采用“滚雪球”的方式进行招募, 实验1实验材料是天桥困境和亚洲疾病问题。采用单因素被试间设计, 自变量为语言类型(汉文和藏文), 因变量为被试选择道义主义倾向所占比例, 采用线上和线下相结合的方式, 考察视觉通道下的道德外语效应。收集有效数据95份。结果表明, 被试在天桥困境中的选择无显著差异, $\chi^2(1, N=95)=3.517, p=0.061$ 。在亚洲疾病问题中, 不论是在收益框架, $\chi^2(1, N=95)=0.78, p=0.37$; 还是损失框架 $\chi^2(1, N=95)=0.49, p=0.48$, 语言类型都没有影响被试的选择。

实验2与实验1类似, 区别在于实验2考察的是听觉通道下的道德外语效应。一共收集40份有效数据。结果显示, 在天桥困境中, 语言类型不影响被试的选择, $\chi^2(1, N=40)=0.20, p=0.88$ 。在亚洲疾病问题中, 无论是在收益框架中 $\chi^2(1, N=40)=0.16, p=0.69$; 还是损失框架中 $\chi^2(1, N=40)=0.02, p=0.89$, 两种语言没有出现差异。

实验3使用的是道德判断CNI模型, 为的是更细致地考察被试在使用两种语言时的差异。一共收集有效数据117份。结果显示, 在考虑语言分组之时, CNI模型的拟合良好, $G^2(2)=2.15, p=0.34$ 。两组被试在N参数上差异显著, $\Delta G^2(1)=19.54, p<0.01$; 在C参数上差异显著, $\Delta G^2(1)=6.24, p<0.05$; 在I参数上差异不显著, $\Delta G^2(1)=0.90, p=0.34$ 。结果表明, 语言类型影响了被试对结果和规则的敏感性, 具体来说, 汉语“提高”了藏族被试功利主义倾向(C), 以及对社会道德规范(N)的敏感性, 即语言激活了该语言所处文化下所对应的道德观。

总的来说, 本研究说明, 在高熟练度的双语被试中, 语言外语性对被试道德判断的影响是存在的, 但这一影响需要通过设计更为精巧的实验中才能体现。

关键词 道德外语效应, CNI模型, 双语者

The influence of language type on the moral judgment of skilled bilinguals: evidence from Tibetan subjects

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Abstract: Moral foreign language effect refers to the fact that when materials are presented with the same meaning in foreign language as the mother tongue, skilled bilinguals are inclined to utilitarian choices. Although recent studies have found that moral foreign language effects usually appear in highly proficient bilingual subjects inapparently, some scholars believe that skilled bilinguals' judgment will be influenced by the foreign language nature of the language, which means the relative psychological distance between the mother tongue and the foreign language for

subjects. Based on the subjects of the Sino-Tibetan language department, three experiments were designed to test this assumption.

The three kinds of experimental subjects were recruited in a "snowball" way. The experimental materials of Experiment 1 contained the flyover dilemma and the Asian disease problem. A single-factor inter-subject design is adopted, the independent variable is the language type (Chinese and Tibetan), and the dependent variable is the proportion of the subjects' choice of moralism. The online and offline methods are combined to examine moral foreign language effect under the visual channel. 95 valid data were Collected. The results show that there is no significant difference in the choices of the subjects in the flyover dilemma, $\chi^2(1, N=95) = 3.517, p=0.061$. In the Asian disease problem, whether in the benefit frame, $\chi^2(1, N=95)=0.78, p=0.37$; or the loss frame $\chi^2(1, N=95)=0.49, p=0.48$, the language type has no effect on Participant's choice.

Experiment 2 is similar to Experiment 1, the difference is that the moral foreign language effect were examined under the auditory channel in Experiment 2. A total of 40 valid data were collected. The results show that in the flyover dilemma, the choice of subjects won't be affected by the language type, $\chi^2(1, N=40)=0.20, p=0.88$. In the Asian disease problem, whether it is $\chi^2(1, N=40)=0.16, p=0.69$ in the benefit framework, or $\chi^2(1, N=40)=0.02, p=0.89$ in the loss framework, there is no difference in such two languages.

The CNI model of moral judgment were used in Experiment 3, in order to examine the differences in the subjects' use of the two languages in detail. A total of 117 valid data were collected. The results show that when the language grouping is considered, the CNI model fits well, with $G^2(2)=2.15, p=0.34$. There is a significant difference between the two groups of subjects on the N parameter, $\Delta G^2(1)=19.54, p<0.01$; the difference is significant on the C parameter, $\Delta G^2(1)=6.24, p<0.05$; the difference is not significant on the I parameter, $\Delta G^2(1)=0.90, p=0.34$. The results show that the subjects' sensitivity to results and rules were affected by the language type. Specifically, Chinese "improves" the Tibetan subjects' utilitarian tendency (C) and their sensitivity to social ethics (N), which means language activate the corresponding moral values in the culture of the language.

In general, this study demonstrates that in highly proficient bilingual subjects, the influence of foreign language on subjects' moral judgments exists, but this kind of influence needs to be reflected in further experiments.

Keywords: Moral foreign language effect, CNI model, Bilinguals

自我感知的无用对中国老年人认知功能的影响研究

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摘要 目的:了解我国老年人自我感知的无用对认知功能的影响,为提高老年人的生活质量、促进积极老龄化提供参考。方法:基于中国老年健康影响因素跟踪调查(CLHLS)2018年数据,采用简易智力状态检查量表(MMSE)评估认知功能水平,自我感知的无用是采用一个单独的问题来衡量的:“随着年龄的增长,你是不是觉得自己更没用了?”并按频率编码为:高(总是和经常)、中(有时)和低(很少和从不)。采用均值(±标准差)、例数(百分比)描述性分析,采用 Mann-Whitney U Test 检验探究各变量在有无认知障碍上的差异,采用二分类 logistic 回归探究自我感知的无用对老年人认知功能的影响。结果:共采集到 14500 名老年人数据资料,自我感知无用高频组 2665 人(18.4%),中频组 4306 人(29.7%),低频组 5994 人(41.3%),无法回答 1535 人(10.6%)。MMSE 平均分(23.27±8.29)分,有认知障碍 5376 人(37.1%),无认知障碍 9124 人(62.9%)。Mann-Whitney U Test 检验结果显示年龄大 85 岁以上、女性、居住地为城镇、丧偶、不吸烟、不喝酒、不经常锻炼、感知无用高频的老年人认知障碍的发生风险较高;Logistic 回归模型在调整了年龄、性别、居住地、婚姻状况、是否抽烟、是否喝酒、是否经常锻炼之后,不同程度的自我感知无用与认知功能仍存在显著关系,以高频组为参考,自我感知无用低频组出现认知功能障碍的风险降低。(P<0.001, OR=0.03, 95% CI: 0.03-0.05) 结论:高频的自我感知无用与认知功能障碍的发生显著相关,需要更多的干预方法减轻老年人的自我感知无用,从而减缓认知障碍的发生,促进我国积极老龄化。

关键词 老年人, 自我感知无用, 认知功能

The effect of self-perceived uselessness on cognitive function in Chinese elderly

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Abstract: Objectives: To understand the effect of self-perceived uselessness on cognitive function of the elderly in China, and to provide reference for improving the quality of life of the elderly and promoting active aging. **Methods:** Based on 2018 data from the Chinese Follow-up Survey on Health Influencing Factors in Aging (CLHLS), cognitive function was assessed by MMSE. Self-perceived uselessness was measured by a single item: “with age, do you feel more useless?” and coded by frequency: high (always and often), moderate (sometimes) and low (seldom and never). The M($\pm$ SD) and N (%) were used for descriptive analysis. The mann-Whitney U Test was used to explore the difference between variables with or without cognitive impairment. The binary logistic regression was used to explore the impact of self-perceived uselessness on the cognitive function of the elderly. **Results:** A total of 14,500 elderly data were collected, There were 2665 people (18.4%) in the self-perceived useless high-frequency group, 4306 people (29.7%) in the mid-frequency group, 5994 people (41.3%) in the low-frequency group, and 1535 people (10.6%) who could not answer. The mean MMSE score was (23.27 $\pm$ 8.29). There were 5376 (37.1%) patients with cognitive impairment and 9124 (62.9%) patients without cognitive impairment. The results of Mann-Whitney U Test showed that the elderly who were over 85 years old, female, lived in the town, widowed, did not smoke, did not drink, did not exercise regularly, and experienced high frequency of perceptual useless had a higher risk of cognitive impairment. After adjusting for age, sex, residence, marital status, smoking, drinking and regular exercise, the Logistic regression model showed a significant relationship between different levels of self-perceived uselessness and cognitive function. Using the high frequency group as reference, the low frequency group of self-perceived uselessness had a reduced risk of cognitive dysfunction ($P < 0.001$, OR = 0.03, 95% CI: 0.03 0.05) **Conclusions:** High-frequency self-perceived uselessness is significantly related to the occurrence of cognitive dysfunction. More intervention methods are needed to reduce the self-perceived uselessness of the elderly, so as to slow down the occurrence of cognitive impairment and promote active aging in China.

Keywords: Older adults, Self-perceived uselessness, cognitive function

汉语歧义消解认知加工的研究方法述评

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摘 要 汉语歧义消解认知加工的研究方法主要有非即时加工实验方法与即时加工实验方法两种方法。非即时加工实验方法主要指行为实验法, 其指标多为反应时, 采用的范式主要有词汇判断任务、意义适合性判断任务、句子验证任务、跨通道启动任务、移动窗口技术等, 侧重于刺激材料的呈现以及实验任务的设置。其中, 跨通道启动任务的基本要求是以听觉方式呈现刺激材料, 以视觉方式呈现探测词, 可以与其他多任务范式结合使用。而即时加工实验方法则主要采用眼动记录技术和事件相关电位脑电记录技术, 侧重于即时测量被试所作反应及相应的脑电效应, 为汉语歧义消解加工过程提供即时测量数据。无论是非即时加工实验方法中的各种经典实验范式, 还是即时加工实验方法中眼动记录技术和脑电技术, 都为汉语歧义消解认知加工的研究工作提供了有效工具, 但也各有其局限性。未来的研究可选择将非即时加工实验方法和即时加工实验方法结合使用, 以避免或减少单一方法局限性所带来的研究结论的不确定。同时, 也可尝试应用正电子发射断层摄像术与功能性磁共振成像术, 有助于将行为数据与生理数据结合起来, 更加准确地揭示汉语歧义消解认知加工过程的规律。

关键词 汉语, 歧义消解, 非即时加工实验方法, 即时加工实验方法

A Review of the Research Methods of Cognitive Processing in Chinese Ambiguity Resolution

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Abstract: There are two main research methods in cognitive processing of Chinese ambiguity resolution: off-line measures and on-line measures. The off-line measures mainly refer to the behavioral experimental methods, whose indicator is mostly reaction time. The paradigms adopted mainly include word judgment task, meaning suitability judgment task, sentence verification task, cross-channel initiation task, mobile window technology, etc., focusing on the presentation of stimulus materials and the setting of experimental tasks. Among them, the basic requirement of cross-channel initiation task is to present the stimulus materials in auditory mode and probe words in visual mode, which can be combined with other multitask paradigms. The on-line measures mainly adopt eye movement recording technology and event-related potential recording technology, focusing on the on-line measurement of the subjects' responses and corresponding electroencephalogram effects, and providing on-line measurement data for the processing of Chinese ambiguity resolution. Both the classical experimental paradigms in the off-line processing experimental methods and the eye movement recording technology and event-related potential recording technique in the on-line processing experimental methods provide effective tools for the research of Chinese ambiguity resolution cognitive processing, but each has its own limitations. Future research may choose to combine the off-line processing experimental methods and the on-line processing experimental methods, in order to avoid or reduce the limitations of single method research. At the same time positron emission tomography and functional magnetic resonance imaging can also be used to combine behavioral data with physiological data, so as to reveal more accurately the rules of cognitive processing in Chinese ambiguity resolution.

Keywords: Chinese, ambiguity resolution, off-line measures, on-line measures

基于位置的奖赏干扰子抑制的眼动研究

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摘要 研究者们提出信号抑制假说用于解决刺激驱动假说和目标定向假说的争议。该假说认为突显的刺激会产生一个注意优先性的信号, 这一信号有可能自动地捕获观察者的注意, 也可能被观察者所抑制。然而奖赏学习的研究表明人们有强烈的倾向去关注奖赏线索, 即使这些线索与他们当前的目标或任务无关, 当奖励线索与目标无关时, 它们的存在可能会损害认知表现。这种现象被称为奖赏驱动的干扰, 也就是任务无关、奖励相关的干扰刺激影响观察者搜索目标项目的绩效。先前的研究中所采用的奖赏信息一般是与干扰项特征建立联结, 将奖赏信息与干扰项位置建立联结是否会观察到不一样的现象? 实验室近期的研究发现奖赏位置的干扰子可以被显著的抑制, 为信号抑制假说提供了基于位置抑制的实验证据。本研究采用眼动追踪技术, 期望为基于位置的干扰子抑制提供眼动方面的证据。实验采用奇异项搜索模式, 在奇异项存在的试次中存在一个高奖联结的位置, 一个低奖联结的位置和两个无奖联结的位置, 被试抑制住哪种位置上的奇异项就会获得相应类别的奖赏反馈。结果发现当奇异项出现在有奖位置时与奇异项出现在无奖位置相比, 反应时明显更快; 且高奖位置的首次眼跳潜伏期比无奖位置的首次眼跳潜伏期长。研究结果表明: 奖赏位置的干扰子可以被显著的抑制, 为信号抑制假说提供了基于位置抑制的眼动证据。

关键词 选择性注意, 信号抑制假说, 奖赏位置, 干扰子抑制

Location-based reward distractor suppression: An eye tracking study

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Abstract: Signal suppression hypothesis has been proposed to solve the controversy between stimulus-driven hypothesis and goal-directed hypothesis. The hypothesis holds that the salient stimulus will produce a signal of attention priority, which may automatically capture observers' attention or be suppressed by observers. However, the findings of reward learning show that reward cues have a strong tendency to capture attention of observers. Even if these cues are not related with their current goals or tasks, reward cues may impair cognitive performance when they are not related to goals of observers. This phenomenon is called reward-driven distraction, that is, task independent and reward related distraction affect the performance of the observer in searching the target item. The reward information used in previous studies is usually associated with the characteristics of the distractor. Will the different phenomenon be observed when the reward information is associated with the location of the distractor? Recent studies in the laboratory have found that the distractors associated with reward location can be significantly suppressed, which provides experimental evidence for location-based inhibition of the signal inhibition hypothesis. In this study, the eye tracking is used to provide oculomotor evidence for location-based suppression. The experiment adopts the singleton detection mode. There are a high-reward, a low-reward and two non-reward positions in the singleton-present trials. The participants will obtain the corresponding reward feedbacks if they inhibit corresponding reward locations. The results show that when the singleton appears in the reward position, the reaction time is significantly faster than when the singleton appears in the non-reward position; The latency of the first saccade in the high reward locations was longer than that in the non-reward locations. The results show that the distractors of reward location can be significantly suppressed, which provides oculomotor inhibition evidence for the signal suppression hypothesis.

Keywords: selective attention, signal suppression hypothesis, reward location, distractor inhibition

词频影响汉语口语中交集歧义字段的切分——来自眼动的证据

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摘要 交集歧义字段在汉语中普遍存在。例如, 四字交集歧义字段“移动物体”可以组成三个不同的词汇: “移动”(AB)、“物体”(CD)以及中间词“动物”(BC)。大量的前人研究已经对汉语阅读中交集歧义字段的切分机制进行了探索。然而, 目前仍不清楚听觉形式下交集歧义字段的词切分机制以及词汇激活情况。由于, 与视觉信息相比, 听觉信息具有时间序列性以及不确定性的特点, 我们假设, 听觉形式下交集歧义字段的词切分机制以及词汇激活情况也许会与视觉形式下有所不同。因此, 本研究旨在探究 1): 在听觉四字交集歧义字段 ABCD 的识别过程中, 中间词(BC)是否能够语义激活; 2): 词频因素如何影响听觉交集歧义字段中词汇的切分和激活。在当前的研究中, 我们操纵了交集歧义字段(ABCD)中 BC 词的词频。在高频条件下, BC 词频高于 AB 和 CD 词频(如“移动物体”), 在低频条件下, BC 词频低于 AB 和 CD 词频(如“发现金属”)。实验中, 被试在听目标四字交集歧义字段(如, “移动物体”)的同时, 观看由一个 BC 语义相关词(如, “昆虫”, 与“动物”语义相关)和两个无关干扰词组成的视觉屏幕, 其在视觉屏幕上的眼动轨迹会被记录下来。实验任务要求被试判断视觉屏幕中是否有与听觉目标有语义相关的词。实验结果显示, 落在 BC 语义相关词上的注视点比干扰词更多, 这说明四字交集歧义字段的中间词(BC)的语义信息可以被激活。更重要的是, 我们发现词频因素影响了交集歧义字段的切分过程, 即只在高频条件下观察到了语义竞争效应, 而并未在低频条件下观察到。该发现意味着词频因素在汉语口语中交集歧义字段的切分过程中起着关键性的作用, 高频中间词更有可能被更高程度地激活, 而低频中间词不能或者只能很小程度被激活。我们的研究为共同激活假设提供了证据。

关键词 交集歧义字段, 汉语口语, 词频, 眼动, 词汇情景范式

Word frequency influences the segmentation of the overlapping ambiguity strings (OASs) in spoken Chinese: evidence from eye-tracking

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Abstract: The overlapping ambiguity strings (OASs) are common in Chinese. For example, the 4-character OAS “移动物体” (ABCD) can compose three different words: “移动” (AB, move), “物体” (CD, object) and a middle word “动物” (BC, animal). A number of prior studies have investigated that the mechanism of segmenting the OASs in Chinese reading. However, the word segmentation mechanism and word activation of OASs remains less clear in the spoken modality. Given that auditory stimuli is time-locked and of uncertainty compared to the visual stimuli, we assumed that segmentation mechanism underlying the spoken OASs may be different from that in the visual modality. The present study aims to investigate 1) whether or not the middle words could be semantically activated in the spoken OASs; 2) how word frequency influences the word segmentation and activation of spoken OASs. In the current study, we manipulated the word frequency of the middle words (i.e., BC) in the OASs. In the high-frequency condition, the frequency of BC was higher than that of AB and CD words (e.g., 移动物体) and in the low-frequency condition, frequency of BC was lower than that of AB and CD words (e.g., 发现金属). In the study, participants' eye-movements on the visual display composing of a BC semantic-related word (e.g., “昆虫”, beetle, semantic-related to BC “动物”, animal) and two distractors were recorded when hearing the target 4-character OAS (e.g., “移动物体”) simultaneously. The task was to judge whether there was a semantic associate of the spoken target on the visual display. Results showed that more fixations fall on the BC semantic-related words than distractors, suggesting that the semantic information of the middle words in the 4-character OASs can be activated. More importantly, we found that the segmentation of OASs was influenced by word frequency such that the semantic competition effect was only observed in the high-frequency condition and absent in the low-frequency condition. The findings suggest that the word frequency plays a critical role during the segmentation of OAS in spoken Chinese and high-frequency middle words were more likely to be activated to a higher degree and low-frequency words were not activated or only activated to a lower degree. Our study provides supporting evidence for the multiple activation hypothesis.

Keywords: overlapping ambiguity strings, spoken Chinese, word frequency, eye-tracking, printed word paradigm

基于希望感理论对大学生无望型抑郁的干预

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摘要 抑郁是大学生中常见的消极情绪, 无望抑郁是其中重要的亚型。若不进行干预, 将可能发展成严重心理问题。积极心理学倡导关注人的积极品质而非心理问题, 主张通过培养积极品质来挖掘个体潜力并获得良好生活, 而希望感正是其中一种。希望感作为一种积极的心理资本, 对改善大学生的无望抑郁情绪, 提升心理健康水平具有独特作用。本研究在 CiteSpace 文献可视化技术的支持下, 从积极心理学的角度出发, 避开抑郁的危险因素, 直接关注抑郁恢复的保护性因素, 为个体重获希望缓解抑郁提供了新的路径。首先, 通过普查大学生抑郁情绪和希望感来筛选被试; 其次, 采用希望疗法干预抑郁情绪。在此基础上, 利用心理测量法和 fNIRS 技术评定抑郁情绪和希望感的水平及干预效果。

关键词 希望感, 抑郁, 功能性近红外光谱技术

Intervention of Hopeless Depression in College Students Based on Sense of Hope Theory

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Abstract: Depression is a common negative emotion among college students, among which hopeless depression is an important subtype. Without intervention, serious psychological problems may develop. Positive psychology advocates focusing on people's positive qualities rather than psychological problems. It advocates cultivating positive qualities to tap individuals' potential and achieve a good life, and the sense of hope is one of them. As a kind of positive psychological capital, the sense of hope plays a unique role in improving the hopeless depression and mental health of college students. With the support of CiteSpace literature visualization technology, this study, from the perspective of positive psychology, avoided the risk factors of depression and directly focused on the protective factors of depression recovery, providing a new path for individuals to hope to alleviate depression. First of all, we screened the students by examining their depression and hope. Secondly, hope therapy was used to interfere with depression. On this basis, the level of depressive mood and sense of hope and the effect of intervention were assessed by psychometric and fNIRS techniques.

Keywords: hope, depression, fNIRS

学习判断改变记忆表现的元分析

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摘要 学习判断是个体对于新近学习内容在未来测验中正确提取信心的预见性估计。它是记忆研究中经常使用的一种评估个体元认知能力的方法。然而, 让学习者进行学习判断可能会改变他们的记忆表现, 这被称为学习判断反应性, 目前对于学习判断反应性的存在有无及表现方向尚存争议。本研究使用元分析探究学习判断对记忆表现的影响, 结果表明: (1) 存在学习判断的正反应性($\text{hedges}'g=0.202$), 即进行学习判断会使个体记忆表现更佳; (2) 学习材料类型对学习判断的反应性存在调节作用, 相比使用低相关词对($\text{hedges}'g=0.069$)、混合词表($\text{hedges}'g=0.143$)以及文本材料($\text{hedges}'g=0.124$), 使用高相关词对($\text{hedges}'g=0.359$)作为学习材料所表现出学习判断反应性更强; (3) 学习时间对于学习判断的反应性存在调节作用, 相比于没有时间限制的学习(学习者自定步调, $\text{hedges}'g=0.082$), 固定时间学习步调($\text{hedges}'g=0.252$)的学习判断反应性更加显著; (4) 测验类型对学习判断反应性不存在调节作用($Q_b=0.78, p=0.677$)。

关键词 学习判断, 学习判断反应性, 记忆表现, 元分析

A meta-analysis on judgments of learning changing memory performance

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Abstract: Judgments of learning assess the likelihood that an individual will retrieve learned items on a future test, which often be used in memory research to evaluate individual's metacognitive ability. However, judgments of learning may change the memory performance, positively or negatively, which can be called as reactivity of judgment of learning. Prior studies showed little consensus on the existing and direction of the effect. We conducted a meta-analysis to explore the effect of judgment of learning on memory performance. The results indicated that judgment of learning have a positive effect on memory performance($\text{hedges}'g=0.202$).sub-group analysis revealed that the reactivity of judgment of learning was moderated by types of stimuli, with positive reactivity observed for the related word pairs($\text{hedges}'g=0.359$),small reactivity for mixed word pair($\text{hedges}'g=0.143$)and text material($\text{hedges}'g=0.124$),but no reactivity to unrelated word pair($\text{hedges}'g=0.069$).And the reactivity of judgment of

learning was also moderated by learning times, which experimenter-paced study showed more positive reactivity(hedges'g=0.252) than self-paced study(hedges'g=0.082).In addition, there was no moderate effect on test types. This result indicated individual's memory will be of beneficial to making judgment of learning.

Keywords: judgment of learning, reactivity of judgment of learning, memory performance, meta-analysis

特质正念对正负性情绪注意偏向的影响

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摘 要 特质正念是影响情绪与情感体验的重要人格因素，但特质正念影响情绪与情感体验的内在机制尚不清楚。因此，本研究采用点探测范式与情绪 Stroop 范式，探讨了特质正念对正负性情绪注意偏向的潜在影响。实验一为 2（组别：高特质正念组，低特质正念组）*3（与探测点一致的情绪类型：正性，中性，负性）混合实验设计。结果发现：组别与情绪类型的交互作用显著($F_{(1,43)} = 5.81, p < .01, \eta^2 = .12$)，即高特质正念个体在探测点与正性情绪面孔一致时反应最快，探测点与负性情绪一致时反应最慢($M_{正性} = 420.38, SD = 13.41; M_{负性} = 440.40, SD = 13.85; p < .05$)；而低特质正念个体在各种情绪条件下的反应时无明显差异。实验二为 2（组别：高特质正念组，低特质正念组）*3（情绪类型：正性，中性，负性）混合实验设计。结果表明：组别与情绪类型交互效应显著($F_{(1,44)} = 9.61, p < .001, \eta^2 = .18$)，即正性情绪条件下，高特质正念个体对图片边框颜色的反应显著慢于低特质正念个体($M_{高} = 476.54, SD = 8.35; M_{低} = 445.88, SD = 7.65; p < .05$)；中性情绪条件下结果相同($M_{高} = 468.32, SD = 8.26; M_{低} = 443.95, SD = 7.57; p < .05$)；而在负性情绪条件下，两组的反应时无显著差异。以上结果说明，在注意的早期选择阶段，对正负性情绪的注意偏向受到特质正念的影响，具体表现为特质正念促进对正性情绪面孔的注意定向；并且在早期注意定向之后，特质正念还进一步削弱对正性情绪面孔的注意脱离，同时也减弱了对中性情绪面孔的注意脱离。

关键词 特质正念，正负性情绪，注意偏向

Trait mindfulness influences attentional bias of positive and negative emotion

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Abstract: Trait mindfulness is a widely recognized susceptibility personality factor affecting emotional and affective experience. However, the underlying mechanisms is unclear. Therefore, dot-probe task and emotional-Stroop paradigms were used to explore the inner mechanism of trait mindfulness on positive and negative emotional attentional bias in this study. Experiment 1 was a 2*3 mixed design with the group (high trait mindfulness and low trait mindfulness) as a between-subject factor and emotion type consistent with the detection point' location (positive, neutral, and negative) as a within-subject factor. The results showed that the interaction between trait mindfulness and emotional condition was significant ($F_{(1,43)} = 5.81, p < .01, \eta^2 = .12$). Specifically, the reaction time (RT) of positive pictures consistent with detection point (420.38 ± 13.41) was significant shorter than negative conditions (440.40 ± 13.85) in high trait mindfulness group ($p < .05$); while there were no significant differences between positive, neutral and negative conditions in terms of low trait mindfulness group ($p > .05$). In Experiment 2, a 2 (group: high trait mindfulness and low trait mindfulness) * 3 (emotion type: positive, neutral, and negative) mixed design also revealed a significant interaction ($F_{(1,44)} = 9.61, p < .001, \eta^2 = .18$). Follow-up analyses showed that the RT of positive conditions in high trait mindfulness group (476.54 ± 8.35) were significantly longer than that of the low trait mindfulness group (445.88 ± 7.65), $p < .05$. The same above result was found in neutral condition ($M_{High} = 468.32, SD = 8.26; M_{Low} = 443.95, SD = 7.57; p < .05$). However, there was no significant difference between different trait mindfulness groups in response to the negative emotion pictures ($p > .05$). All the results suggested that: (1) at the

early stage of attention selection, the attention bias to positive and negative emotions was influenced by trait mindfulness, which facilitated attention orienting to positive emotional faces. (2) after the early attention orienting, trait mindfulness weakened the attention disengagement from the positive emotion further, and led to disengage from neutral emotion much slower.

Keywords: Trait mindfulness; Positive and Negative Emotion; Attentional bias

多语者多能：熟练英汉双语青年认知灵活性中的认知优势

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摘要 语言经验是执行功能的一个重要的影响因素。有研究发现, 在掌握两种以上语言后, 个体的执行功能会发生变化。但也有研究发现, 语言经验的影响作用并不显著, 尤其在认知灵活性方面。本研究采用任务切换范式中的数字转换范式, 探究不同熟练度双语青年在认知灵活性中的差异。方法: 2 (熟练度类型) * 2 (任务类型) 的混合实验设计, 熟练类型为熟练度双语青年和非熟练度双语青年。结果发现: 熟练度与任务类型交互作用显著, 两组被试在重复任务中无明显差异, 在换任务中熟练度被试反应时显著小于非熟练度被试。切换代价差异显著, 非熟练度被试切换代价大于熟练度被试。结论: (1) 熟练度双语青年在转换任务中表现出更好的认知灵活优势。(2) 熟练度双语青年切换代价更小。(3) 双语优势促进认知灵活能力。

关键词 执行功能, 认知灵活性, 任务切换, 熟练水平

The versatility of polyglots: Cognitive Advantages in Cognitive Flexibility of Skilled English-Chinese Bilingual Youth

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Abstract: Language experience is an important factor influencing executive function. Studies have found that after mastering two or more languages, an individual's executive function will change. However, some studies have found that the influence of language experience is not significant, especially in terms of cognitive flexibility. This study uses the number switching paradigm of task switching paradigm, this paper explores the differences of cognitive flexibility among young bilinguals with different proficiency levels. Method: 2 (proficiency type) * 2 (task type) mixed experiment design. The proficiency types were proficient young bilinguals and unskilled young bilinguals. Results: the interaction between proficiency type and task type was significant, and there was no significant difference between the two groups in repeated tasks. The reaction time of skilled subjects was significantly higher than that of unskilled subjects in switching tasks. The switching cost of unskilled subjects was higher than that of proficient subjects. Conclusion: (1) proficient young bilinguals have better cognitive flexibility in switching tasks. (2) The switching cost of proficient young bilinguals is lower. (3) Bilingual advantages promote the cognitive flexibility.

Keywords: Executive function, cognitive flexibility, task switching, proficiency levels

价值观念词的垂直空间隐喻及其影响因素

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摘要 概念是人类思维的基本单位, 概念隐喻理论认为, 隐喻在形成和理解概念的过程中发挥着重要作用。已有研究表明, 抽象概念的加工与隐喻过程中个体的身体经验有联系, 空间方位作为人类最直接的身体经验, 深度参与着抽象概念的理解。然而, 作为一种特殊的抽象概念, 价值观念(如“文明”、“富强”)的隐喻机制还不

清楚。因此,本研究从空间隐喻的角度,通过三个实验依次探讨价值观念这一类抽象概念的隐喻机制,考察不同情绪效价价值观念词的垂直空间隐喻特点,及其是否受语言因素(语义关系)和具身因素(空间位置)的影响。实验一采用愉悦度判断任务,要求被试对呈现在屏幕上方或下方的正、负价值观念词进行判断。结果发现,价值观念词存在空间隐喻特点,表现为正性价值观念词呈现在空间上方时,被试对词汇愉悦度判断的反应更快,类似的加工优势也出现在位于空间下方的负性价值观念词中;实验二要求被试完成语义判断任务,即判断屏幕上下呈现的两个词汇之间的语义关系(反义 vs. 无关),探讨词对呈现的空间位置如何影响价值观念词汇的语义理解。结果表明,与词汇—空间位置一致条件相比(即正性价值观念词在上,负性价值观念词在下),被试在词汇—空间位置不一致条件下的词对判断时间更长;实验三采用空间位置判断任务,判断价值观念词的意义与其出现的位置是否一致,探讨语义关系如何影响价值观念词汇的空间隐喻特点。结果发现,在语义无关词对的条件下,被试对词对进行空间位置判断的反应时间更长。总的来说,本研究证明了价值观念与道德概念、情绪概念等类似,都具有明显的空间隐喻心理现实性,同时受到具身因素和语言因素的影响。这一结论支持了概念的隐喻理论,有利于促进人们对不同类型抽象概念隐喻机制的理解。

关键词 垂直空间隐喻, 价值观念, 空间隐喻, 影响因素

部分线索对工作记忆提取的影响

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摘要 为了探讨部分线索对工作记忆提取的作用,使用被试内实验设计,采用修正的部分线索范式,通过4个实验对被试的再认成绩进行分析,结果发现:(1)实验1当学习阶段的记忆负荷量为4个,线索呈现在保持阶段时,被试对线索所在组目标词的反应时快于线索不在组,表明线索具有促进记忆提取的作用;被试对线索所在组和线索不在组目标词的反应正确率差异不显著,说明在任务相对简单的情况下,被试的正确率不受线索影响。(2)实验2当学习阶段的记忆负荷量不变,线索呈现在提取阶段时,被试对线索所在组目标词的反应时快于线索不在组,表明线索仍旧具有促进记忆提取的作用;被试对线索所在组和线索不在组目标词的反应正确率差异不显著。(3)实验3当学习阶段的记忆负荷量增加到6个时,被试对不同线索条件的反应时差异不显著,表明增加记忆负荷量的任务削弱了线索的促进作用,被试对不同线索条件的反应正确率差异不显著。(4)实验4当学习阶段的记忆负荷量仍旧为4个,在线索阶段增加无线索的条件时,被试对有线索组目标词的反应时快于无线索组,表明线索具有促进记忆提取的作用;被试对不同线索条件的反应正确率差异不显著。结果表明:当学习阶段记忆负荷量为4个时,无论是否有线索,以及无论线索呈现在保持阶段还是提取阶段,线索对工作记忆信息提取均具有促进作用,增加记忆负荷量则会削弱线索的促进作用,研究结果支持优先提取说。

关键词 部分线索, 被试内设计, 工作记忆, 优先提取说

Effects of Partial Cues on Working Memory Retrieval

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Abstract: In order to explore the effect of partial cues on working memory retrieval, an in-subject experiment design was used to analyze the recognition performance of four experiments using the modified partial cues paradigm. The results showed that: (1) In Experiment 1, when the memory load in the learning stage was 4 and the cue was presented in the retention stage, the subjects reacted to the target words in the cue group was faster than that in the absence of the cue group, which indicated that the cue had the effect of promoting memory retrieval. There was no significant difference in the correct response rate between the target words in the group where the cue was and those in the group where the cue was not, indicating that the correct response rate was not affected by the cue when the task was relatively simple. (2) In experiment 2, when the memory load in the learning stage was unchanged and the cue was presented in the retrieval stage, the participants' response time to the target words in the cue group was faster than that in the absence of the cue group, indicating that the cue still had the effect of promoting memory retrieval.

There was no significant difference in the response accuracy between the target words in the cue group and the target words in the cue group. (3) In Experiment 3, when the memory load in the learning stage was increased to 6, there was no significant difference in the response time of the subjects to different cue conditions, indicating that the task of increasing the memory load weakened the stimulative effect of cue, and there was no significant difference in the correct response rate of the subjects to different cue conditions. (4) In Experiment 4, the participants' response time to the target words in the cued group was faster than that in the uncued group when the uncued condition was added in the cued stage, while the memory load in the learning stage was the same as that in the uncued group. There was no significant difference in the response accuracy of the subjects under different cueing conditions. The results showed that when the memory load was 4 in the learning stage, no matter there was a cue, and no matter the cue was presented in the retention stage or the retrieval stage, the cue promoted the working memory information retrieval, and the increase of memory load would weaken the promotion effect of the cue. The results supported the priority retrieval theory.

Keywords: Partial clues; Within-subjects design; Working memory; Priority extraction

面孔整体加工的 ERP 研究：类别-个体化理论的验证

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摘要 面孔整体加工是指知觉系统有选择性地快速、准确地整合面孔各部分信息，从而形成一种整体表征。类别-个体化理论认为，对于外群体成员，人们往往关注类别信息，倾向于将成员均归为一类，而对于内群体成员，更关注个体信息，倾向于将每个成员形成单独的整体表征。早期支持该理论的研究表明，高加索人对本族面孔的组合面孔效应大于他族面孔。但近年来，亚洲人或高加索人在知觉本族和他族面孔时行为上均表现出相同程度的组合面孔效应（整体加工的指标）。这意味着人们在面孔知觉早期是否存在类别信息和个体信息的选择性注意及其对后续加工的影响等问题并不清楚。为了考察面孔知觉早期是否存在信息选择及其对后续加工模式的影响，本研究采用事件相关电位（event-related potential, ERP）来探测个体在面孔知觉最初几百毫秒的电生理信号变化（如 P100、N170、P200 和 N200）及其与后续加工模式之间的关系。实验选取 19 名（9 男）中国被试，测量其对三类面孔（亚洲面孔、高加索面孔以及亚洲-高加索两歧面孔）的组合面孔效应及其脑电成分幅度和潜伏期。行为结果表明，中国被试对于亚洲面孔和高加索面孔表现出相同的组合面孔效应（ $p < 0.01$ ），但对两歧面孔未表现出类似的组合面孔效应（ $p = 0.52$ ）。ERP 结果表明，他族面孔诱发 P100 和 N170 幅度大于本族和两歧面孔（ $p < 0.001$ ），而本族和两歧面孔之间没有明显差异（ $p > 0.05$ ）。他族面孔诱发 P200 成分的幅度大于两歧面孔（ $p < 0.001$ ），且两歧面孔诱发 P200 的幅度大于本族面孔（ $p = 0.05$ ）。两歧面孔诱发 N200 的幅度小于本族面孔（ $p = 0.02$ ），与他族面孔没有明显差异（ $p = 0.43$ ）。ERP 与行为数据的相关分析进一步显示，对亚洲面孔而言，P200 的幅度越小，组合面孔效应越大（ $r = -0.45$, $p = 0.05$ ）；对高加索面孔和两歧面孔而言，P200 的幅度和组合面孔效应没有相关（高加索面孔 $r = -0.13$, $p = 0.59$ ；两歧面孔 $r = -0.09$, $p = 0.70$ ）。上述结果提示，在面孔知觉早期，他族信息诱发更强的注意，而本族信息能促使个体形成整体加工，支持了类别-个体化理论。

关键词 整体加工，种族，类别-个体化，ERP

An ERP Study on Holistic Face Processing: Categorization-Individuation Model Testing

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Abstract: Holistic Face processing refers to the selectively rapid and accurate integration of face information by the perceptual system, so as to form a whole representation. Categorization-Individuation Model proposes that attention

to category-diagnostic facial characteristics of out-group members can cause targets to be perceived and remember as more homogeneous. While selective attention to the identity-diagnostic facial characteristics of in-group members tend to form a whole representation of each member. Early work supported this hypothesis by showing stronger composite effect size in own-race faces than in other-race faces. While more recent studies showed that same composite-face effect (an index for holistic face processing) sizes were observed with composite face paradigm for own-race faces and other-race faces by Asians and Caucasians. It was not clear whether selective attention to the category- or identity-diagnostic facial characteristics be at the early stage of face perception and how to influence the subsequent face processing. In order to investigate whether characteristic selection be at the early stage and how to influence the subsequent face processing, an event-related potential (ERP) was used to detect the electrophysiological components (e.g., P100, N170, P200, and N200) during the first few hundred milliseconds of face perception and the relationships with subsequent face processing. Nineteen (9 males) Chinese participants were recruited. We measured the composite face effect size of three face types (Asian faces, Caucasian faces, and Asian-Caucasian ambiguous faces) and the amplitude of the ERP component. The behavioral results showed that same composite face effect sizes were observed for Asian faces and Caucasian faces ($p < 0.01$), but no similar effect for the ambiguous faces ($p = 0.52$). The ERP results showed that P100 and N170 amplitudes were significantly larger for other-race faces than own-race and ambiguous faces ($p < 0.001$), but no difference between own-race and ambiguous faces ($p > 0.05$). P200 amplitude was significantly larger to other-race faces than ambiguous faces ($p < 0.001$), and it was marginally larger for ambiguous faces than own-race faces ($p = 0.05$). N200 amplitude was markedly smaller for ambiguous faces than own-race faces ($p = 0.02$), but there was no difference between other-race and ambiguous faces ($p = 0.43$). The correlation analysis between neural responses and behavioral data showed that the smaller P200 amplitude, the larger composite face effect for Asian faces ($r = -0.45$, $p = 0.05$). However, there was no correlation between the amplitude of P200 and the composite face effect for Caucasian ($r = -0.13$, $p = 0.59$) and ambiguous faces ($r = -0.09$, $p = 0.70$). The results suggest stronger attention to category-diagnostic characteristics were elicited by other-race faces at the early stage of perception. And attention to identity-diagnostic characteristics for own-race faces played a role in holistic face processing which support the Categorization-Individuation Model.

Keywords: holistic processing, race, Categorization-Individuation, ERP

团队成员利己利他倾向的数量和分布对个体决策的影响

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摘要 Gross(2019)首次探索了个体解决方案存在时个体解决方案与合作解决方案的成本比对人们合作倾向的影响。本研究进一步探讨了个体解决方案存在时团队可信度对人们合作倾向的影响。实验一和实验二考察了合作伙伴不同水平的利他倾向和利己倾向对被试决策的影响。实验三和实验四探讨了利他倾向和利己倾向的分布对被试决策的影响。实验一和实验二的结果显示,随着队友利他倾向的增加,被试选择合作解决方案的比例增加。当团队成员的利他倾向达到一定值时,参与者会稳定地信任团队并采用合作解决方案。随着队友利己倾向的增加,参与者选择个人解决方案的比例增加。当队友的利己倾向达到一定值时,个体解决方案会稳定地被采用。实验三和实验四的结果显示,在团队中总利他倾向不变的情况下,利他倾向分配的利他群体成员越多,参与者对团队的信任越高,表现出利他倾向的分散效应。在总利己倾向不变的情况下,利己倾向分配到的利己群体成员越少,参与者对团队的信任越高,显示出利己倾向的收敛效应。

关键词 利他倾向, 利己倾向, 合作, 可信度, 发散效应, 收敛效应

The Effect of Quantity and Distribution of Teammates' Tendency of Self-interest and Altruism on Individual Decision-making

Abstract: Gross and De (2019) were the first to explore the impact of the cost ratio of individual solution versus collective solution on people's cooperation tendency in the presence of individual solution. This study further explored the impact of team credibility on people's propensity to cooperate in the presence of individual solution. Study one and two investigated the influence of different altruistic tendency or self-interest tendency of teammates on participants' decision-making. Study three and four explored the influence of the distribution of altruistic tendency or self-interest tendency on participants' decision-making. The results of study one and two showed that the proportion of participants taking the collective solution increased with the increase of the altruistic tendency of the teammate. When the altruistic tendency of the teammate reached a certain value, the participants would stably trust the team and adopt the collective solution. The proportion of participants taking the individual solution increased with the increase of the self-interest tendency of the teammate. When the self-interest tendency of the teammate reached a certain value, the individual solution would be adopted stably. The results of study three and four showed that, with total altruistic tendency unchanged, the more altruistic group members the altruistic tendency was allocated to, the higher a participant's trust in the team would be, showing the decentralized effect of altruistic tendency. In the case that total self-interest tendency was unchanged, the fewer self-interest group members the self-interest tendency was allocated to, the higher a participant's trust in the team would be, which showed the convergent effect of self-interest tendency.

Keywords: altruistic tendency, self-interest tendency, cooperation, credibility, decentralized effect, convergent effect

(2) “博士研究生论坛—基础心理学”展贴报告

新冠疫情下我国大学生居家体育锻炼和身心健康的相关研究

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摘要 2020年新型冠状病毒肺炎流行, 严峻的疫情和严格的交通外出限制, 使得大部分大学生不得不停留在家。疫情发展带来的焦虑、恐惧、长期居家带来的压抑等, 均使得大学生的身心状况受到影响。相关研究表明, 体育运动可以降低焦虑感和抑郁感, 且与心理健康水平密切相关。然而上述研究的背景为正常的生活情境, 新型冠状病毒肺炎流行属于重大公共卫生事件, 造成大众应激水平较高。虽然有研究指出, 体育运动在危机干预中对心理健康有积极的作用, 但是此次疫情尚在持续中, 结束期限也没有明确, 大学生无法外出, 在家“停课不停学”情况下, 体育锻炼是否还能带来相应的心理益处呢? 本研究整合《体育活动等级量表》, 大学生身心健康自评、大学生人口统计学信息等, 编写了《新型冠状病毒肺炎期间体育锻炼调查问卷》, 并随机选取328名年龄为18-24岁的在校大学生作为调查对象, 以了解疫情期间大学生居家体育锻炼情况, 以及体育锻炼和大学生身心健康之间的关系。研究结果显示: 1. 疫情期间76.2%大学生参加体育锻炼, 参加锻炼的学生中的65.6%参与小锻炼量的体育活动。2. 疫情期间参与体育锻炼的大学生最近身体状况($F=6.740$, $p<0.001$)得分显著高于未参与活动的学生, 不同锻炼量的大学生心理健康自评($F=4.081$, $p<0.05$)得分差异显著。3. 焦虑自评、最近身体状况可以显著预测($F=914.504$, $p<0.001$)疫情期间大学生身心健康水平, 回归方程对变异的解释率为84.8%, 拟合优度良好。本研究表明, 疫情期间, 体育锻炼高参与率是大学生体育锻炼的主要特点, 体育锻炼的等级为小锻炼等级; 适量的体育锻炼可以产生心理效益, 对疫情期间大学生身心健康起到了积极的作用; 大学生焦虑水平和自身最近身体状况对该时期的身心健康影响最大。

关键词 体育锻炼, 身心健康, 新型冠状病毒, 居家

The Relationship between Physical Exercise at Home and Physical-Mental Health of College Students in China during the COVID-19 Outbreak

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Abstract: Because of the widespread of COVID-19 epidemic in 2020, most college students have to stay at home. The anxiety, depression and fear brought by the epidemic affected the physical and mental condition of college students. Studies have shown that physical activity can reduce anxiety and depression and is related to mental health. However, the background of the previous studies are relate to normal situation, the epidemic of COVID-19 as a public health event, most likely to causing higher level of stress among the public. Under this background, whether physical exercise can bring the corresponding psychological benefits? This study integrated Sports Rating Scale, college students' physical-mental health, students' demographic information into a new questionnaire. Randomly selected 328 college students as the objects (aged 18-24 years), in order to understand college students' physical exercise at home during the epidemic situation, as well as physical exercise and the relationship between the college students' physical- mental health. Research results showed that (1) 76.2% of college students take part in physical exercise during the COVID-19 outbreak and 65.6% of the students take part in low level of Exercise Level Valuation. (2) During the outbreak, college students who taking part in physical exercise make significant higher score ($F = 6.740, p < 0.001$) in Recent Physical Condition score than those who did not; and students of different exercise level have significant different score ($F = 4.081, p < 0.05$) in The Self-evaluation of Mental Health. (3) Recent Physical Condition and Anxiety Self-assessment can significantly ($F = 914.504, p < 0.001$) predict college students' physical-mental health level during the outbreak, the Regression Equation results can explain 84.8% of the mutation rate, its goodness-of-fit is fine.

Key words: physical exercise, physical-mental health, COVID-19, at home

“I come from Beijing”比“I come from běi jīng”更省力？ 发音方式调节双语控制机制

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摘 要 双语者在语言产生过程中需要双语控制机制来避免两种语言的冲突。已有研究认为, 双语控制可分为指向语言整体的全局控制(常用混合代价作为指标)和指向具体词汇的局部控制(常用切换代价作为指标), 而且发音过程是双语控制的重要位点。然而, 以往研究关心的大多是标准发音方式下的双语控制, 但是在日常语言使用中, 我们除了使用(尽可能)标准的发音方式之外, 还可能使用一些其它的发音方式(如, I come from Beijing [而非 běi jīng]、高德猫腻 [而非 Good morning]), 尚不清楚发音方式会如何调节双语者的局部控制和全局控制。本研究招募了 36 名汉-英非平衡双语者(其中 18 名女性), 让他们分别使用标准口音、中式口音、英式口音来完成单词图片命名任务和语言切换任务。结果发现, 相比于标准口音, 中式口音显著地增大了汉语的切换代价(即切换试次比重复试次多花费的反应时间)和混合代价(即重复试次比单语试次多花费的反应时间)、减小了英语的切换代价和混合代价, 英式口音显著地增大了英语的切换代价和混合代价、减小了汉语的切换代价、并使得汉语混合代价有减小的趋势。这表明使用非目标语言的发音方式来产出目标语言可以减弱目标语言所受到的干扰, 该效果的实现很可能是因为口音营造的语言情境使得双语者对非目标语言的整体控制和局部控制都得到了增强, 从而使得切换至目标语言更有效率。本研究首次揭示发音方式对双语控制机制的调节作用, 为进一步完善双语控制理论提供证据, 为语言教学和语言使用提供启示。

关键词 双语者, 发音方式, 口音, 全局控制, 局部控制

Is “I come from Beijing” easier than “I come from běi jīng”? Accented articulation modulates the mechanism of bilingual language control

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Abstract: Bilinguals need bilingual language control mechanisms to avoid cross-language interference during language production. Research has shown that bilingual language control differentiates into local and global language control (indexed by switching costs and mixing costs, respectively), which operate on a specific item and the whole language system, respectively. Furthermore, articulation was documented as an important locus of bilingual language control. However, previous studies mostly focused on the bilingual language control when bilinguals articulate in a standard manner, leaving the global and local language control during accented articulation unknown (e.g., *I come from Beijing* [rather than *běi jīng*], or *gǔ dé mǎo nǐ* [rather than *Good morning*]). Thirty-six unbalanced Chinese-English bilinguals (18 females) were recruited to complete the picture naming task of the single-language and dual-language using standard, Chinese and English accents. The results showed that, compared to the standard accent, the Chinese accent significantly increased the switching costs (i.e., the extra reaction times [RTs] for switching trails than non-switching trails) and the mixing cost (i.e., the extra RTs for non-switching trails than single-language trails) in Chinese, and decreased the switching costs and mixing costs in English. The English accent significantly increased the switching costs and mixing costs of English, whereas decreased the switching costs of Chinese, and resulting in a tendency of reduced mixing costs of Chinese. These suggest that articulating the target language in a manner of the non-target language leads to reduced interference from non-target language and increased efficiency of language switching, which is likely due to the boosted global and local control in accented-articulation context over non-target language. The present study first reveals the effects of accented articulation on bilingual language control, providing evidences for improving the theory of bilingual language control theory and implications for language teaching and language use.

Keywords: bilingual, accented articulation, accent, global control, local control

选择性注意在跨通道分类中的作用

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摘要 多模态环境下, 个体是如何处理信息以优化任务表现的? 选择性注意是关注任务相关信息的同时过滤任务无关内容的能力。以往研究显示, 选择性注意在分类任务中有重要作用。多模态环境会促进或干扰分类任务表现, 但其中的选择性注意机制少有研究。本研究结合分类任务与反应抑制的 Flanker 范式, 使用多项式加工树模型(Multinomial Processing Tree model), 探究选择性注意的聚焦成分和过滤成分在跨通道分类中的作用。69 名成年被试在视听环境下完成视觉分类任务和听觉分类任务, 结果发现, 选择性注意会通过聚焦成分和过滤成分在跨通道分类任务中发挥作用, 但其作用的机制是不同的。具体表现为: 听觉信息会被优先处理, 表现在其作为任务相关或任务无关的信息时, 均会自动分配更多的注意资源; 而对视觉信息的处理有更强的灵活性, 会根据其与任务的相关性, 灵活有效地在聚焦成分和过滤成分上分配注意资源。这些新颖的结果证明了选择性注意在多感官分类中的关键但不同的作用, 这为理解跨通道分类的机制提供了一个很有前景的视角。

关键词 选择性注意, 跨通道, 视觉分类, 听觉分类, 多项式加工树模型

The Role of Selective Attention in Multisensory Categorization

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Abstract: Selective attention is the ability to focus on goal-relevant information while filtering out irrelevant information. Previous research showed that behavioral responses could be either facilitated or interfered with in a multisensory context. The question of how selective attention works in this scenario arises. To address this question, a modified flanker task was used, in which adults ($N = 69$) were asked to attend to visual or auditory targets and categorize them, while ignoring other stimuli. A Multinomial Processing Tree (MPT) model was used to decompose selective attention into focusing and filtering components. We found that both the ability to focus on the target and filter out irrelevant information are needed in the visual and auditory categorization, but the underlying mechanisms are different. Specifically, auditory information tends to be prioritized: We allocate more attention to it automatically, regardless of whether it is a target or a distractor. In contrast, visual information is processed flexibly: We can focus on it voluntarily and filter out it effectively. These novel results demonstrate the critical but differential role of selective attention in multisensory categorization, which offers a promising perspective to understand the mechanism of multisensory processing.

Keywords: selective attention, multisensory, categorization, Multinomial Processing Tree (MPT) model

阈下药物相关线索对海洛因戒断者反应抑制的影响

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摘要 海洛因成瘾问题是个世界性的难题, 它对家庭和社会都造成了很多无法弥补的危害。长期的药物使用会损害人体大脑的结构和功能, 导致个体的反应抑制功能降低。反应抑制是指有意识地抑制与当前行为不相关的反应, 或者是抑制被自动激活的行为的能力, 人们常常需要处于某种原因的考虑而去抑制自己的行为, 这就需要反应抑制功能来起作用, 而这种反应抑制能力的异常或损伤也是成瘾者反复复吸的重要原因。以往研究主要通过阈上呈现药物相关线索来探索药物相关线索对海洛因戒断者反应抑制的影响, 然而阈上和阈下刺激加工的神经通路和反映特点并不一致, 那么阈下的药物相关线索是否也会对海洛因成瘾者反应抑制产生影响? 本研究根据 go/nogo 任务范式, 采用 2 (被试类型: 海洛因戒断组、正常组) × 2 (线索类型: 海洛因相关线索、中性线索) 的两因素混合实验设计来考察阈下呈现药物相关线索对海洛因戒断者反应抑制的影响。结果表明: (1) 海洛因戒断组的反应时显著长于正常组, 验证了海洛因成瘾者存在受损的反应抑制功能; (2) 海洛因相关线索的反应时显著短于中性线索, 说明海洛因戒断群体中出现了阈下药物相关线索对反应抑制的促进作用, 这可能是因为相对其它刺激, 阈下药物相关刺激的生理唤醒能够有效地唤醒个体的活动, 提升戒断者的警觉性和反应准备。

关键词 海洛因戒断者, 药物相关线索, 阈下, 反应抑制

Effect of subthreshold drug-related cues on response inhibition in heroin abstainers

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Abstract: The problem of heroin addiction is a worldwide problem, and it has caused many irreparable harms to the family and society. Long term drug use will damage the structure and function of human brain, resulting in the reduction of individual response inhibition function. Response inhibition refers to the ability to consciously inhibit the response that is not related to the current behavior, or the behavior that is automatically activated. People often need to suppress their own behavior for some reason, which requires the function of response inhibition, and the

abnormality or damage of this response inhibition ability is also an important reason for the repeated relapse of addicts. Previous studies mainly explored the effect of drug-related cues on the response inhibition of heroin addicts by presenting drug-related cues above the threshold. However, the neural pathways and reflection characteristics of suprathreshold and subthreshold stimulation processing are not the same, so will subthreshold drug-related cues also affect the response inhibition of heroin addicts? According to the go / NoGo task paradigm, this study adopted 2 (subjects: heroin abstiners group, normal group) * 2 (cue type: heroin-related cues, neutral cues) to investigate the effect of subthreshold drug-related cue on heroin abstiners' response inhibition. The results showed that: (1) the response time of heroin abstiners group was significantly longer than that of normal group, which verified that heroin addicts had impaired response inhibition function. (2) The response time of heroin related cues is significantly shorter than that of neutral cues, indicating that subthreshold drug-related cues have a promoting effect on response inhibition in heroin abstiners groups, which may be because the physiological arousal of subthreshold drug-related stimuli can effectively awaken the individual's activities, enhance the alertness and response preparation of abstiners compared with other stimuli.

Keywords: Heroin addicts, drug-related cues, subthreshold, Response inhibition

理性经济人信念对金钱捐赠的影响及作用机制

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摘要 捐赠行为是典型的亲社会行为, 对于个体的人际交往和社会的道德文明建设都有重要意义。已有研究发现, 理性经济人信念会影响亲社会行为。共情作为诱发亲社会行为的亲社会动机, 可能在当中起着中介作用。然而, “理性经济人信念-共情”的影响路径以及“理性经济人信念-亲社会行为”的影响路径尚不清晰。本研究使用线上问卷实验法对于“理性经济人信念-共情-亲社会行为”的路径进行了深入的探索, 发现情境中的责任感知和钱的效用感知调节了不同理性经济人信念个体的捐赠行为。

研究一探讨了责任感知的作用, 收集到 447 份有效答卷。研究一启动理性经济人信念, 之后描述捐赠情境, 并测量了参与者对受捐者的状态共情、对捐赠行为的责任感知以及捐赠意愿和金额。结果发现, 当个体的理性经济人信念较强时, 个体的责任感知越高, 对受捐者的共情越高, 愿意捐赠的金额也越多。研究二探讨了效用感知的作用, 收集到 321 份有效答卷。结果发现, 当个体的理性经济人信念较强时, 个体在金钱效用感知水平高时, 对受捐者的共情越低, 愿意捐赠的金额越少。本研究通过构建有调节的中介模型, 探讨了理性经济人信念如何影响状态共情进而影响捐赠行为, 及其责任感知和金钱效用感知在其中所起的作用。研究结果表明, 可以对强理性经济人信念者强调其责任感, 弱化金钱效用感知, 从而有针对性地促进其亲社会行为。

关键词 理性经济人信念, 共情, 金钱捐赠, 责任感知, 金钱效用感知

The Effect and Mechanism of Rational Economic Man Belief on Money Donation

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Abstract: Donation is a typical prosocial behavior, which is of great significance for individual interpersonal communication and social moral civilization construction. It has been found that rational economic man belief can affect prosocial behavior. Empathy, as a prosocial motivation to induce prosocial behavior, may play a mediating role. However, the influence path of "rational economic man belief — empathy" and "rational economic man belief — prosocial behavior" are not clear. This study uses online questionnaire experiment method to explore the path of "rational economic man belief — empathy — prosocial behavior", and finds that the perceived responsibility and

money effectiveness in the context moderate the donation behavior of participants holding different degrees of rational economic man belief.

Study 1 explores the role of perceived responsibility and collected 447 valid data. In the first study, we use certain mechanism to activate participants' rational economic man belief, and then describe the context of donation to them. Next, we measure participants' state empathy for the help seeker, and their perceived responsibility in the donation context, as well as their donation willingness and money amount. The results show that when the rational economic man belief is strong, the higher the perceived responsibility, the higher the empathy for the help seeker, and the more the money donation amount. Study 2 explores the role of perceived money effectiveness and collected 321 valid data. The results show that when the rational economic man belief is strong, the higher the perceived money effectiveness, the lower the empathy for the help seeker, and the less the money amount he is willing to donate. By constructing a moderated mediation model, we find how rational economic man belief affects state empathy and then money donation, and the role of perceived responsibility and money effectiveness in the pathway. The results show that for people whose rational economic man belief is strong, we can emphasize their sense of responsibility and weaken the money effectiveness in the donation context, so as to promote their prosocial behaviors.

Keywords: rational economic man belief, empathy, money donation, perceived responsibility, perceived money effectiveness

青少年关爱道德判断的测评及其与亲社会行为的关系

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摘要 自科尔伯格提出道德认知发展理论以来，公正概念一度成为道德判断的核心，而 Gilligan 认为还存在关爱取向的道德判断，并在大量女性案例的研究基础上，提出了关爱道德发展理论，将关爱道德分为三个水平。Skoe 在此基础上将其扩展为三个水平和两个过渡阶段，并构建关爱伦理访谈(the Ethic of Care Interview, 简称 ECI) 来测量个体的关爱道德发展。但 ECI 作为一种半结构化访谈式问卷，不便于进行团体施测。同时，道德判断与亲社会行为之间关系的问题一直是道德心理学领域研究的热点问题，但各研究结果不一，甚至彼此冲突。针对这些问题，本研究通过自编青少年关爱道德判断测验，以 530 名青少年学生为被试，在检验问卷信效度的同时，探究青少年关爱道德判断能力的特点以及关爱道德与亲社会行为之间的关系，结果表明：

（1）青少年关爱道德判断问卷信效度良好，可作为青少年关爱道德判断能力的测量工具；（2）青少年关爱道德判断在性别变量上存在显著差异，女生关爱道德判断显著高于男生，在年级、是否独生子女和父母文化程度变量上差异不显著；（3）青少年关爱道德判断与亲社会行为之间呈显著正相关，能有效预测个体的亲社会行为；（4）道德同一性在关爱道德判断与亲社会行为的关系之间起着部分中介作用；（5）青少年关爱道德判断-道德同一性-亲社会行为的中介模型受到公正道德判断的调节，四者构成一个有调节的中介模型，且公正道德判断仅对后半路径起到调节作用。

由此可见，青少年关爱道德判断确实存在性别差异，女生关爱水平显著高于男生；关爱道德判断不仅能直接预测亲社会行为，还受到道德同一性的中介作用；尽管公正道德判断不能直接影响青少年的亲社会行为，但可以在道德同一性与亲社会行为关系中起到调节作用，进而作用于亲社会行为。

关键词 关爱，道德判断，公正，道德同一性，亲社会行为

The evaluation of adolescents' care-based moral judgment and its relationship with the prosocial behavior

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Abstract: The concept of justice has become the core of moral judgment since Kohlberg put forward the theory of cognitive development of morality. While Gilligan believed that caring orientation of moral judgment could not be ignored. Based on the research of a large number of women's cases, Gilligan proposed a care-based moral development theory, which divided care-based morality into three levels. Skoe extended that theory including three levels and two transition phases. Although ECI (The Ethic of Care Interview) developed by Skoe has been proven to be an effective measurement for the development of caring ethics, it is not convenient for group testing as a semi-structured interview questionnaire. The relationship between moral judgment and prosocial behavior has always been a hot issue in the field of moral psychology. But the results are different and even conflict with each other. In response to these problems, this study adopted a self-designed Adolescent Care Moral Judgment Test, with 530 young students as subjects. While testing the reliability and validity of the questionnaire, this study explored the characteristics of adolescents' care moral judgment and the relationship between care-based morality and prosocial behavior. The results are as follows:

(1) The questionnaire has good reliability and validity, which can be used as a measuring tool for adolescents' ability of care moral judgment. (2) There are significant differences in the gender variables in adolescents' care moral judgment. The care judgment of girls is significantly higher than that of boys, and there are no significant differences in the variables of grade, one-child status and parents' educational level. (3) There is a significant positive correlation between care moral judgment and prosocial behavior, while justice moral judgment has nothing to do with prosocial behavior. Compared with justice morality, care moral judgment is a more effective predictor of prosocial behavior. (4) Moral identity plays a partial mediating role between the relationship between care moral judgment and prosocial behavior. (5) the care moral judgment - moral identity - prosocial behavior mediation model is moderated by justice moral judgment, and justice moral judgment only plays a moderating role in the latter half of the path.

It can be seen that there is indeed a gender difference in adolescents' care moral judgment. Care moral judgment not only directly predicts prosocial behavior, but also can take the moral identity as an intermediary and work together with justice moral judgment in prosocial behavior.

Keywords: care, moral judgment, justice, moral identity, prosocial behavior

不同的识别策略：类别化的动物与个体化的人类

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摘 要 人们面对动物时，通常只需识别其属于哪一类别，而不用区分同一类别的不同个体：种类信息已足够用于绝大部分行为决策。生物分类学中，人类也属于广义的动物，但人类面对同类很少进行“他/她是人类”的类别加工，而更注重区别个体间的不同。本研究试图通过行为实验，证明对动物与人类的这一识别策略差异，并通过脑电实验探究这一认知加工的神经过程。行为实验借鉴了视觉搜索范式：我们假设，若对某一类别倾向于采用不区分个体的分类加工，那么该类别作为搜索分心物时的数量对于搜索速度影响较小；而倾向于对类别内个体进行区分的类别，随着数量增多，作为分心物对搜索的干扰效果更强。实验中我们将人类的轮廓图片与黑猩猩、狗、白头雕三种动物的轮廓图片进行组合，每种组合中人类与动物互为分心物/搜索目标，分心物的数量有 7/11/15 三种水平，形成 3（动物种类）× 3（分心物数量）× 2（人类/动物是搜索目标）的组内设计。结果发现，人类作为分心物时，搜索动物的速度显著受到分心物数量的影响；搜索人类的速度则几乎不受动物分心物的数量影响。脑电实验采用了重复抑制范式：对于被分类加工的类别，类别中的不同个体连续呈现将使类别信息被重复加工，相比非单一类别交替呈现，类别相关的神经过程将被抑制。与行为实验类似，我们将人类与上述三种动物分别组合；动物与人类都有单类别重复呈现序列，以及两种类别交替呈现序列，形成 3（动物种类）× 2（呈现序列）× 2（人类/动物）的组内设计。结果发现，动物均在 P2 这一 ERP 成分上引发显著的重复抑制效应，人类则未引发此效应。我们将图片全部倒置进行对照实验：准确识别客体变得困难，但依然能大致区分不同物种。人类图片则也引发 P2 的重复抑制效应。行为与脑电实验一致证

明了“分类加工动物、差异化加工人类”的这一识别策略差异，并且对人类的差异化加工依赖于有效提取其差异化信息。这一认知过程的对应神经活动大概在目标出现后 200ms 左右发生。

关键词 客体识别，分类加工，视觉搜索，重复抑制

The Distinct Recognition Strategies: Categorical Animals and Individualized Human Beings

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Abstract: When faced with animals, people usually categorize them into certain species, but not individualize them: the category information is enough for decision-making in the most cases. In biological taxonomy, human beings also belong to the generalized animals. We seldom process somebody with the classification of human beings, but prefer to distinguish different individuals. The current study aimed to demonstrate this distinction of recognizing strategies with behavioral and EEG experiments, and in the meantime, explored the temporal neural underpinnings of the processing. The behavioral experiment drew on the paradigm of visual search. We hypothesized that the increase of the number of distractors would not slow down the search performance, if subjects preferred to categorize the distractors rather than individualize them. On the contrary, if people liked to distinguish different individuals within the category, which served as the distractors, the increasing number of distractors would bring more interference to the search task. In the experiment, we paired human beings with chimpanzees, dogs and eagles respectively. All of them were represented by black contours. In each pair, human beings and animals were targets/distractors for each other, and we set 3 levels for the number of distractors, 7, 11, and 15. Therefore, the experiment was a 3 (animal species) $\times$ 3 (levels of the distractor number) $\times$ 2 (humans as targets/distractors) within-subject design. The results showed that when human beings acted as the distractors, the speed of animal searching was slowed down with the increase of the distractor number. In contrast, the human searching was not significantly influenced by the number of animal distractors. The EEG experiment used the repetition suppression paradigm: if individuals within one category were treated only as examples of this category, the repetitive presentation of different individuals belonging to one category would suppress the related categorical processing, compared with the alternative presentation of several categories. Similar to our behavioral design, 3 nonhuman animal species were respectively combined with human beings, each of which included repetitive and alternative sessions for both animals and humans. This EEG experiment was a 3 (animal species) $\times$ 2 (repetitive/alternative sessions) $\times$ 2 (humans/animals) within-subject design. The results demonstrated that 3 kinds of animals evoked significant repetition suppression effect on the P2 component, but this effect didn't come to humans. In addition, we used inverted pictures to conduct one control experiment, with the totally identical design to the above. When observing inverted contours, it was hard for subjects to clearly recognize the objects, but the intact contour information enabled subjects roughly distinguish different species. In the control EEG experiment, human beings also evoked the repetition suppression effect on P2, just like nonhuman animals. To sum up, our behavioral and EEG experiments proved that people take distinct strategies to recognize animals and human beings: categorical for animals, but individualized for human beings. And the corresponding neural processing takes place about 200 ms after the target onset.

Keywords: object recognition, categorical processing, visual search, repetition suppression

时长估计中跨通道整合策略的影响因素研究

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摘要 多感觉整合在人们对事物形成稳定的知觉并做出准确判断中发挥着重要的作用，但是之前的多感觉整合研究主要集中在以视觉通道占优势的空间相关领域，其中有不少研究发现了多感觉整合符合贝叶斯框架下的最优整合模型。我们的研究将多感觉整合着眼于听觉占优势的时间估计领域。目前已有的少部分多感觉时间估计研究大多以序列呈现的瞬时刺激构建空白时间间隔，导致这类研究的生态性很低。我们的研究利用动态连续的视听刺激构造了非空白持续时间，此外，我们还创造性的将类自然的时间结构信息加入视听刺激中，这种自然环境中的信息在时间知觉上是重要的，特别是考虑到研究的外部效度。除了探究具有时间结构信息的视听多感觉刺激在时间估计领域是否仍具有整合优势及符合的策略模型外，我们的研究还旨在探讨多感觉整合的可能条件，比如，同步性和一致性。

本研究共分为两个实验。实验一通过呈现视、听单通道刺激，具有时间结构一致性且同步的视听多感觉刺激的时间辨别任务探究多感觉输入在时间估计上是否具有整合优势及多感觉整合符合优势通道模型还是最优整合模型。实验二加入了视听刺激在时间结构的一致性和同步性两个因素，探究一致性及同步性对多感觉整合的影响。

研究发现了有趣的现象——大脑在多感觉整合的时间估计上似乎是“聪明的偷懒者”，在不同的视听同步或一致性条件下会灵活的采用不同的策略：在视听一致且同步呈现时没有整合优势，符合优势通道模型，在视听刺激时间结构一致但异步呈现，不一致同步时符合贝叶斯框架下的最优模型，在不一致异步条件下，不同被试在策略选取上似乎有最优整合模型和优势通道模型的不同倾向性，加权模型在该条件下的拟合相对更好。如果视听信息的冲突条件是时间结构不一致，被试似乎倾向于给予优势通道相对于最优整合模型预测更多的权重。

关键词 多感觉整合，多感觉整合优势，贝叶斯模型，时间估计，同步性和时间结构一致性

Multisensory Integration in Time Estimation and Its Factors

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Abstract: Multisensory integration plays an important role in people's stable perception and accurate judgment of objects and things. However, previous studies on multisensory integration mainly focus on spatial related fields dominated by visual modality, and many of them have found that multisensory integration conforms to the Bayesian optimal integration model. Our study focuses on multisensory integration in the time estimation domain where the auditory is dominated modality. Although there have been a small minority of studies on multisensory time estimation, almost all of them only used the instant stimuli presented in the sequence to construct a blank time interval, which leads to the low ecology. However, our research constructed non-blank durations using dynamic continuous audiovisual stimuli. In addition, we creatively added nature-like time-structure information to stimuli. Such information in the natural environment is important for time perception, especially considering the external validity of this research. In addition to exploring whether audio-visual stimuli with time-structured information still have an integration advantage in the field of time estimation and which strategy model it conforms to, our study also aims to explore possible conditions for multisensory integration, such as synchronism or consistency of the multisensory information.

Our study is divided into two experiments. In Experiment 1, we explored whether when presented multisensory stimuli, there would be an integrated advantage in time estimation, and whether multisensory integration conforms to the dominant modality model or optimal integration model by time discrimination task presenting visual-single modality, auditory-single modality, and audio-visual stimuli synchronously and time structure consistently. In experiment 2, we added two factors, the consistency in time structure and synchronism of audio-visual stimuli, to explore the influence of these two factors on multisensory integration.

Our study find an interesting phenomenon -- the brain on multisensory integration of time estimates seems to act as a smart “shirker”, under the different conditions of audio-visual stimuli synchronism and consistency, it will flexibly uses different strategies: when the audio-visual stimuli consistent and synchronous, it shows no integration

advantages, the strategy that the brain adopts conforms to the dominant modality model; when the audio-visual stimuli present asynchronously with the same time structure or present synchronously but with different structure, the brain adopts Bayesian optimal model; under the inconsistent and asynchronous condition, different subjects seems to select different strategies, some tend to adopt optimal integration model, the others tend to adopt the dominant modality model, and under this condition, the weighting model fits relatively better. Compared with asynchronism, if the conflicting condition of audiovisual information is time structure inconsistency, subjects are seemingly inclined to give more weight to the dominant modality than the prediction weight according to the optimal integration model. These results may be related to attention allocation.

Keywords: multisensory integration, multisensory integration advantages, Bayesian optimal integration model, time estimation, synchronism and time structure consistency

词义相似程度对非熟练汉日双语者同形词识别的影响

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摘要 研究背景: 分布式概念表征模型是双语词汇表征的经典模型。该模型认为, 概念表征由多个概念节点组成, 在两种语言之间重叠的概念节点越多, 词汇通达的速度就越快。在拼音文字研究中发现两种语言的同形同义词(如“lamp”在英语和荷兰语中都表示“灯”)比非同形词(如“book”只在英语中表示“书”, 在荷兰语中“boek”表示“书”)相比识别速度更快, 即具有加工优势。分布式概念表征模型认为这是由于同形同义词比非同形词具有更高的概念重叠。但已有研究主要以拼音文字为实验材料。在汉日两种语言中存在许多同形类义词, 即词形一致而词义部分一致, 部分不一致(如日语单词“爱情”, 既可以指男女爱情, 也表示亲人之爱)。汉日同形类义词是否具有加工优势, 还鲜有研究。

研究问题: 本研究通过两个实验考察词义相似程度对非熟练汉日双语者同形词识别的影响, 并考察汉日同形类义词是否具有加工优势。根据分布式概念表征模型的预测, 同形类义词的概念重叠度比同形同义词低, 加工优势会减小甚至消失。

实验一选取非熟练汉日双语者为被试, 要求被试对汉日同形同义词(例如日语“学校”, 意为“学校”)、同形类义词(例如日语“爱情”意为“爱情”、“亲情”)和非同形词(日语“映画”, 意为“电影”)进行日语词汇判断。结果发现, 词义相似程度影响汉日同形词的加工, 与非同形词相比, 同形同义词具有显著的加工优势, 而同形类义词并没有加工优势。

实验二进一步探究同形类义词为何不存在加工优势。在同形类义词中, 部分意义与汉语相同, 称为共有义(如“爱情”中的男女爱情), 部分意义为日语特有, 称为独有义(如“爱情”中的亲人之爱)。实验二采用掩蔽启动范式, 要求被试在共有义启动(恋爱-爱情)、独有义启动(亲情-爱情)和无关启动(苹果-爱情)三种启动条件下对目标词进行词汇判断。结果发现, 独有义具有显著的启动效应, 而共有义不存在启动效应。

研究结论: 词义相似程度影响非熟练中日双语者同形词的识别, 这也符合分布式概念表征模型的预测。在非熟练汉日双语者对同形类义词的表征中, 同形类义词与独有义的联结比它与共有义的联结强, 由于独有义与汉语词意义重叠程度较低, 这可能导致同形类义词不存在加工优势。

关键词 汉日同形词, 同形同义词, 同形类义词, 词汇识别, 分布式概念表征模型

Influence of word meaning similarity on homograph recognition of unskilled Chinese-Japanese Bilinguals

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Abstract: Background: Distributed Representation Model(DRM) is a classical model of bilingual lexical representation. The model holds that concept representation is composed of multiple concept nodes. The more concept nodes overlap between the two languages, the faster lexical access. In the study of alphabetic language, it is found that cognates of the two languages (such as "lamp" means "lamp" in English and Dutch) are faster than noncognates (such as "book" only means "book" in English and "boek" means "book" in Dutch), that is, they have processing advantages. The DRM considers that this is because cognates have higher concept overlap than noncognates. However, the existing research mainly takes alphabetic language as experimental materials. There are many partial cognates in both Chinese and Japanese languages, that is, the word form is consistent, while the word meaning is partially consistent and partially inconsistent (for example, the Japanese word "愛情" can refer to both male and female love and the love of relatives). There is little research on whether Chinese-Japanese partial cognates have processing advantages.

Research questions: two experiments were conducted to investigate the influence of word meaning similarity on homonym recognition of unskilled Chinese and Japanese bilinguals, and whether Chinese-Japanese partial cognates have processing advantages. According to the DRM, the concept overlap of partial cognates is lower than that of cognates, and the processing advantage will be reduced or even disappear.

In Experiment 1, unskilled Chinese Japanese bilinguals were selected as subjects, and the subjects were asked to decision the Japanese lexical of Chinese-Japanese cognates (such as Japanese "学校", which means "school"), partial cognates (such as Japanese "愛情", which means "love" and "family affection") and non-cognates (Japanese "映画", which means "film"). The results show that the degree of word meaning similarity affects the processing of Chinese and Japanese homographs. Compared with non-cognates, cognates have significant processing advantages, while partial cognates have no processing advantages.

Experiment 2 further explored why partial cognates did not have processing advantages. In partial cognates, some of the meanings are the same as those in Chinese, which are called shared meanings (such as the love between men and women in "愛情"), and some of the meanings are unique to Japanese, which are called unique meanings (such as the love of relatives in "愛情"). In Experiment 2, the masked priming paradigm was used, and the subjects were asked to decision the lexical of the target words under three priming conditions: shared meaning priming (恋爱-愛情), unique meaning priming (亲情-愛情) and irrelevant priming (苹果-愛情). The results showed that unique meaning had a significant priming effect, while shared meaning had no priming effect.

Conclusion: the similarity of word meaning affects the recognition of homographs in unskilled Chinese-Japanese bilinguals, which is also in line with the prediction of DRM. In the representation of partial cognates by unskilled Chinese-Japanese bilinguals, the connection between partial cognates and unique meanings is stronger than that between partial cognates and shared meanings. Due to the low degree of overlap between unique meanings and Chinese words, partial cognates may not have processing advantages.

Keywords: Chinese-Japanese homographs, Cognates, Partial cognates, Lexical recognition Distributed Representation Model

如何解决智慧定义之争：素质与情境交互作用式智慧观

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摘 要 在当代心理学中，对智慧的定义从一系列成熟的人格特质到理性的知识，再至对有关生命的重要且实用的专业知识，再至强调实践或行动和自我超越等，至今已有 20 余种智慧定义。由于成熟的人格特质以及有关生命和过美好生活的重要且实用的专业知识的类型和标准多种多样，因而尚没有一个公认的智慧定义。Sternberg 认为现有智慧定义可概括为四种界定角度：1）将智慧视作人自身的一种功能或属性；2）将智慧视作个体在情境里展现出来的一种属性；3）将智慧视作人与情境互动中的一种属性；4）将智慧视作行动的属性（Sternberg, 2019a）。本文详细评述了这四种智慧界定的优劣。同时，为了避免不必要的争论，更为了看

清智慧的本质，提出素质与情境交互作用式智慧观：个体或群体之所以能在某情境中展现智慧，是因为他或他们身上已具备相应的智慧素质，此情境又恰好有利于其智慧素质的展现。素质与情境交互作用式智慧观和前人提出的人与情境互动型智慧观的相同之处在于：二者都主张个体的智慧受来自个体自身和情境因素的双重影响。二者的不同之处是：素质与情境交互作用式智慧观主张人的智慧素质存在于人身上，而它能否在行动中展现出来则取决于人和情境双重变量；人与情境互动型智慧观主张人的智慧根本不存在于人或情境之中，而是存在于人与情境的互动之中。

关键词 智慧，素质，情境，人格，思维方式

How to Resolve the Debate on the Definition of wisdom: The Quality and Context Interactive View of Wisdom

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Abstract: In contemporary psychology, the definition of wisdom ranges from a set of mature personality traits to rational knowledge, to important and practical professional knowledge about life, to an emphasis on practice or action and self-transcendence. There are more than 20 definitions of wisdom, but there is no accepted definition, because of the variety of mature personality traits and important and practical professional knowledge about life and living a good life. According to Sternberg, the current definition of wisdom can be summarized from four perspectives: 1) wisdom as a function/property of person; 2) wisdom as a property of the situation; 3) wisdom as a property of person x situation interaction; 4) wisdom as a property of action (Sternberg, 2019a). This paper reviews the merits and demerits of these four definitions of wisdom in detail. In order to avoid unnecessary arguments and see the essence of wisdom clearly, this paper puts forward the view of intelligence based on the interaction of quality and situation: the reason why an individual or group can display wisdom in a certain situation is that they already have the corresponding wisdom quality, and the situation is conducive to the display of their wisdom quality. The quality and situation interaction wisdom view is similar to the human and situation interaction wisdom view put forward by predecessors: both advocate that the individual intelligence is influenced by the individual and the situation factors. The differences between the two are as follows: The former holds that human intelligence quality exists in human body, but whether it can be displayed in action depends on the double variables of human and situation; The later holds that human wisdom does not exist in people or situations at all, but in the interaction between people and situations.

Keywords: wisdom, quality, satiation, personality, the style of thinking

动作频率对动作增强效应的影响

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摘要 近期有研究发现，动作可以促进与之无关的背景信息的记忆成绩，表现出动作增强效应(AIME, action-induced memory enhancement; Yebra et al., 2019)。然而，近期有研究者提出双任务交互模型(the dual-task interaction model)，认为仅目标决策就能增强背景信息的记忆成绩(Swallow&Jiang, 2013)。由于在动作增强效应的研究中，动作反应也是被试的行为目标，因此难以区分背景信息所获得的记忆优势是源于动作还是目标决策。为了进一步澄清动作是否会对背景刺激的记忆产生促进作用，实验1在原有范式的基础上通过操纵指导语和增加动作种类的方式（非动作：动作=1:5）将动作与目标决策分离（非目标动作条件），同时设置目标动作条件进行对比以观察在相同决策条件下动作对背景刺激记忆的影响。鉴于目标决策促进作用的存在可能干扰我们对动作效应的观察，而已有研究表明分心拒绝对分心词不会产生额外影响，因此研究主要观察动作对分心词的影响。实验1结果发现，动作不仅没有对分心词的记忆成绩产生促进作用，还产生了抑制作用。

为了进一步检验实验 1 的结果是源于动作促进效应不存在还是动作促进效应受动作频率的调节所致，实验 2 和 3 在实验 1 的基础上，将动作与非动作刺激的呈现比例调整为 1:1（实验 2）和 1:2（实验 3）。结果发现，在 1:1 条件下，动作促进了分心词的记忆成绩；而在 1:2 条件下，动作对分心词的记忆成绩没有产生影响。研究表明，动作对背景刺激存在促进效应，但该效应受动作呈现频率的调节。

关键词 动作增强效应，双任务交互模型，动作，记忆

The impact of action frequency on action-induced memory enhancement effect (AIME)

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Abstract: Recent research has found that action can boost the memory performance of unrelated background information and show the action-induced memory enhancement (AIME; Yebra et al., 2019). However, some researchers have recently proposed the dual-task interaction model, which believes that only target decision-making can enhance the memory performance of background information (Swallow & Jiang, 2013). Because in the AIME study, the action response is also the behavioral goal of the subjects, it is difficult to distinguish whether the memory advantage gained by the background information comes from the action or the target decision. In order to further clarify whether the action will promote the memory of the background stimulus, Experiment 1 separates the action from the target decision by manipulating the instruction and increasing the type of action (non-action: action=1:5) on the basis of the original paradigm (Non-target action conditions), and set the target action conditions for comparison to observe the effect of actions on the background stimulus memory under the same decision-making conditions. Considering that the existence of goal decision-making promotion may interfere with our observation of action effects, and existing studies have shown that distraction rejection does not have an additional effect on distraction words, so the research mainly observes the effect of actions on distraction words. Experiment 1 found that the action did not promote the memory performance of the background stimulus, but instead produced an inhibitory effect. In order to further test whether the result of Experiment 1 is because the boost effect of action does not exist, or because the AIME is regulated by the action frequency. Experiments 2 and 3 adjusted the presentation ratio of action and non-action stimuli to 1:1 (Experiment 2) and 1:2 (Experiment 3) on the basis of Experiment 1. It was found that under the 1:1 condition, the action promoted the memory performance of distracted words; while under the 1:2 condition, the action had no effect on the memory performance of distracted words. The results of the study show that the action has a promoting effect on the memory of the background stimulus, but this effect is regulated by the frequency of the action.

Keywords: the action-induced memory enhancement, the dual-task interaction model, action, memory

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(1)“硕士研究生论坛—发展与教育心理学”展贴报告

家庭社会经济地位与儿童观点采择的关系：一个有调节的中介模型

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摘要 家庭社会经济地位 (socioeconomic status, SES) 存在差距已经是当前社会的一个客观现实, 它给儿童发展带来的影响引起广泛关注。SES 是家庭经济资源 (如家庭收入)、社会资源 (如教育水平) 的整合, 对儿童认知发展尤其是观点采择能力发展起着重要作用。理论和实证研究表明, SES 与多种家庭特征 (如家庭功能) 密切相关, 家庭功能又对儿童观点采择具有重要影响。基于此, 本研究运用家庭社会经济地位问卷、家庭亲密度与适应性量表以及人际反应指针量表调查了 795 名 (男生 424 名) 二年级至五年级的小学生, 考察 SES 对儿童观点采择的影响、家庭功能在其中的中介作用以及该过程是否受到性别的调节。研究结果表明: (1) 在控制了独生与否、年级后, 家庭社会经济地位能够显著正向预测儿童的观点采择 ($\beta = 0.13, p < 0.001$),

即家庭社会经济地位越高, 儿童观点采择水平也会提高; (2) 家庭功能在家庭社会经济地位和儿童观点采择之间起部分中介作用 ($\beta = 0.02$, 95% CI = [0.01, 0.04]); (3) 性别显著调节直接路径, 即家庭社会经济地位对儿童观点采择的预测作用在女生群体中显著 ($\beta = 0.19$, 95% CI = [0.09, 0.27]), 男生群体中不显著 ($\beta = 0.05$, 95% CI = [-0.04, 0.14])。本研究从个体层面(性别)与微系统层面(家庭社会经济地位、家庭功能)揭示了儿童观点采择的多重影响因素, 对提高儿童观点采择具有一定的现实指导意义。

关键词 家庭社会经济地位, 观点采择, 家庭功能, 年级

Socioeconomic Status and Children's Perspective Taking: A Moderated Mediation Model

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Abstract: It has become a harsh reality that there is a gap in family socioeconomic status (SES), and its impact on children's development has attracted widespread attention. SES is the integration of family economic resources (such as family income) and social resources (such as education level), which plays a great role in children's cognitive development, especially on perspective taking. Theoretical and empirical studies have shown that SES was closely related to a variety of family characteristics (such as family function), moreover family function had an important influence on children's perspective taking. Therefore, the present study examines the influence of SES on children's perspective taking, as well as the mediating role of family function, and whether this process is moderated by gender. Based on this, a total of 795 (424 boys) primary school students from second to fifth grade were surveyed, using the Family Socioeconomic Status Questionnaire, the Family Intimacy and Adaptability Scale, and the Interpersonal Response Indicator Scale. The results showed that: (1) after controlling for one child or not and grade, family socioeconomic status significantly predicted children's perspective taking ($\beta = 0.13$, $p < 0.001$); (2) family function played a partial mediating role in the relationship between family socioeconomic status and children's perspective taking ($\beta = 0.02$, 95%CI = [0.01, 0.04]); (3) gender significantly moderated the direct pathway. Specifically, the predictive effect of family socioeconomic status on children's perspective taking was significant for girls ($\beta = 0.19$, 95%CI = [0.09, 0.27]), but not for boys ($\beta = 0.05$, 95%CI = [-0.04, 0.14]). This study reveals the multiple influencing factors of children's perspective taking from the individual level (gender) and microsystem level (family socioeconomic status, family function), which may inform the practice of the improvement of children's perspective taking.

Keywords: family socioeconomic status, perspective taking, family function, grade

大学生网络囤积行为问卷的编制及信效度检验

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摘要 随着移动互联网的发展, 网络已经改变了大学生群体生活和学习的方式, 同时也给传统的心理现象向网络空间中的拓展提供了可能。囤积行为是指个体对没有用处或没有价值的物品表现出过度获取或无法丢弃的行为, “获取”、“堆积”、“难丢弃”是研究者们公认的囤积行为三维度, 它会对个体(如人际关系、负面情绪)和组织(如公共卫生问题、社会福利)带来影响。随着手机等移动互联网工具的普及, 网络空间为囤积行为创造了新的条件。网络空间的跨越性、非同步性、匿名性和去抑制性, 使囤积行为从物理的现实空间迁移到网络的虚拟空间时, 有相似但又独特的表现。①个体在网络空间中会频繁地保存无用或没有价值的网络

资源。②由于过度获取网络资源，导致个体网络存储空间不足手机无法正常使用。③网络囤积行为同样会对个体（如压力）和组织造成损害（如信息共享、知识管理文化）。虽然，网络囤积行为引起了研究者的关注，但其概念内涵尚不清晰且缺乏相应的研究工具。因此，本研究在以往研究的基础上，通过质性研究，获取“网络囤积行为”的相关资料，编制大学生网络囤积行为问卷，并检验该问卷在大学生群体中的信度和效度。首先，在梳理已有囤积行为和网络囤积行为相关研究的基础上，编制结构化访谈问卷并进行质性研究，以编制初步的大学生网络囤积行为量表。其次，以 427 名在校大学生为被试对问卷进行探索性因素分析，并在此基础上以 424 名在校大学生为被试对问卷进行结构效度分析、效标关联效度和信度分析。结果：①探索性因素分析结果表明，大学生网络囤积行为问卷包括“保存”、“堆积”、“难删除”三个因子，每个因子 4 个项目，累计方差贡献率为 72.954%；②验证性因素分析结果表明，该问卷具有较高的结构效度，拟合指标结果如下： $\chi^2/df=3.343$, RMSEA=0.074, GFI=0.935, NFI=0.943, CFI=0.959, IFI=0.959；③该问卷的效标关联效度和信度也符合相关测量学要求。本研究将网络囤积行为定义为个体在网络使用过程中持续保存、堆积且难以删除网络资源的行为倾向。大学生网络囤积行为问卷的信度和信度良好，为日后深入探讨网络囤积行为的影响因素及影响后效提供了良好的测量工具。

关键词 网络囤积，囤积行为，网络心理学，问卷编制

Development and validation of Cyber Hoarding Behavior Questionnaire for College Students

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Abstract: With the development of mobile Internet, the Internet has changed the way of College Students' living and learning, and also provided the possibility for the traditional psychological phenomenon to expand into the cyberspace. Hoarding behavior refers to the behavior of individuals showing over-acquisition or irreplaceability for useless or worthless items. "Acquiring", "Clutter" and "Difficulty discarding" are the three factors of hoarding behavior, which will affect individuals (such as interpersonal relationships, negative emotions) and organizations (such as public health issues, social welfare). With the popularization of mobile Internet tools such as mobile phones, cyberspace has created new conditions for hoarding behavior. Due to the leapfrogging, non-synchronicity, anonymity and disinhibition of the cyberspace, hoarding behavior has similar but unique performance with cyber hoarding behavior when it is transferred from the physical real space to the virtual space. (1) Individuals will frequently save useless or worthless Internet resources in cyberspace. (2) Due to excessive access to cyber resources, cyber storage space is insufficient and mobile phones cannot be used normally. (3) Cyber hoarding can also damage individuals (such as pressure) and organizations (such as information sharing, knowledge management culture). Although the cyber hoarding behavior has attracted the attention on researchers, its concept connotation is still not clear and it lacks the corresponding research tools. Therefore, the purpose of this study was to develop and validate Cyber Hoarding Behavior Questionnaire for College Students. An iterative process based on: (1)structured semi-interview questionnaires based on previous studies of hoarding behavior and cyber hoarding behavior, (2)qualitative data from 33 semi-structured interviews with college students, (3)a preliminary cyber hoarding behavior questionnaires for college students, (4)427 college students were selected as subjects to conduct exploratory factor analysis on the questionnaire, (5)424 college students were selected as subjects to analyze the structural validity, criterion-related validity and reliability of the questionnaire. Results: (1) The results of exploratory factor analysis showed that the college students' cyber hoarding behavior questionnaire included three factors: "Saving", "Stack" and "Difficulty deleting". with 4 items for each factor, and the cumulative variance contribution rate was 72.954%; (2) The confirmatory factor analysis showed that the questionnaire had high structural validity, and the fitting index results

were as follows: $\chi^2 / DF = 3.343$, RMSEA = 0.074, GFI = 0.935, NFI = 0.943, CFI = 0.959, IFI = 0.959; (3) The reliability and validity of the Cyber Hoarding Behavior Questionnaire for College Students are good and meet with the psychometric standard. In this study, cyber hoarding behavior is defined as "the behavior tendency of individuals to save, stack and difficult to delete cyber resources in the process of cyber use". This questionnaire has good reliability and validity, and can be applied to measure the cyber hoarding behavior, which can be used for in-depth study of the influencing factors and the impact of the aftereffect of cyber hoarding behavior in the future.

Keywords: Cyber hoarding behavior, hoarding behavior, cyber-psychology, questionnaire compilation

基本心理需要缺失和青少年自伤行为：一个有调节的中介模型

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摘要 自我决定理论(Self-Determination Theory, SDT)认为, 人类的基本心理需要就像心理上的营养物一样, 对个体心理的健康成长、整合和幸福感受必不可少、至关重要。当基本心理需要受到阻滞时, 个体可能会发展出僵硬、刻板的行为模式(例如, 自伤), 来帮助他们免受需要受阻的伤害。自伤指个体在没有自杀意图的情况下, 故意对自己的身体组织造成伤害或疼痛的行为, 是世界各国青少年普遍存在的一种严重的行为问题。鉴于青少年群体中自伤行为的高发率以及危险性, 有必要了解青少年自伤行为的形成机制。本研究采用问卷调查法, 以基本心理需要缺失量表、抑郁量表、自我同情量表、自伤行为量表对 1691 名青少年进行测试, 基于自我决定理论探讨基本心理需要缺失影响青少年自伤行为的内在心理机制。结果显示: (1) 基本心理需要缺失对青少年自伤行为有显著的正向预测作用; (2) 抑郁在基本心理需要缺失与青少年自伤行为之间起着部分中介作用; (3) 基本心理需要缺失通过抑郁影响自伤行为的间接效应(中介效应的前半段和后半段)受到自我同情的调节, 且间接效应对于自我同情水平较低的青少年显著, 而对于自我同情水平较高的青少年不显著。由此可见, 在青少年成长过程中, 应重视青少年基本心理需要的满足及自我同情能力的培养, 以便更好的预防和干预自伤。

关键词 基本心理需要缺失, 抑郁, 自我同情, 自伤行为

Basic Psychological Need Frustration and Adolescent Non-Suicidal Self-injury: A Moderated Mediation Model

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Abstract: According to Deci and Ryan's (2000) Self-Determination Theory, basic psychological needs specify the necessary conditions for psychological growth, integrity, and well-being, and the psychological need frustration can lead to nonsuicidal self-injury (NSSI). Based on this theory, the current study tested a moderated mediation model with basic psychological need frustration, depression, self-compassion, and NSSI. Specifically, we examined whether depression mediated the association between basic psychological need frustration and NSSI, and whether this indirect effect was moderated by self-compassion. A total of 1691 Chinese adolescents anonymously filled out questionnaires regarding basic psychological need frustration, depression, self-compassion, and NSSI. The results revealed that basic psychological need frustration was positively associated with NSSI, and this association was mediated by depression. Self-compassion buffered the association between basic psychological need frustration and depression, as well as the association between depression and NSSI. These findings highlight the importance to consider the satisfaction of their basic psychological needs and the cultivation of their self-compassion ability when dealing with risks associated with adolescent NSSI, and have important implications for the prevention and intervention of NSSI.

Keywords: basic psychological need frustration, depression, self-compassion, non-suicidal self-injury

心理弹性中介学业情绪对初中生学习倦怠的影响

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摘要 为揭示学业情绪在心理弹性对学习倦怠的影响所起作用及其是否具有发展的一致性, 以方便抽样方式对某城市一初中的 750 名初中生进行青少年学习倦怠量表、青少年心理韧性量表、青少年学业情绪问卷测量, 使用 lisrel8.8 数据处理, 结果发现: 心理弹性中介学业情绪影响学业倦怠的结构方程模型的各个指数良好, 积极情绪和消极情绪各自的正负向中介效应、心理弹性的负向间接效应均通过 BOOTSTRAP、SE 检验; 心理弹性负向预测学习倦怠的 69.0%, 心理弹性正向预测积极学业情绪的 41.0%、负向预测消极学业情绪的 55.8%, 积极学业情绪、消极学业情绪在心理弹性对学习倦怠影响的中介效应比率分别为 22.0%, 30.9%, 模型内变量路径有跨年级的整体普遍性, 模型内效应量跨年级局部不一致性, 初二心理弹性对学习倦怠影响低于初一和初三, 初一和初三时期, 消极情绪对学业倦怠影响显著大于积极情绪, 经讨论得到的结论是心理弹性部分中介积极、消极学业情绪影响学业倦怠, 心理弹性对消极学业情绪制约作用大于对积极情绪生成作用, 消极学业情绪对学习倦怠行为产生、促进作用比积极情绪对倦怠行为的制约、防范作用大, 初一、初三时期消极学业情绪比积极学业情绪对学习倦怠中介影响更大。

关键词 初中生, 学习倦怠, 心理弹性, 学业情绪

Mediation of Academic Emotion on Psychological Resilience and Learning Burnout in Junior High School Students

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Abstract: To explore the role of academic emotion in the influence of psychological resilience on learning burnout and whether it has a developmental consistency. 750 junior middle school students in Gansu were sampled by convenience method. Adolescent Learning burnout Scale, Adolescent Psychological Resilience Scale and Adolescent Academic Sentiment Questionnaire were measured. The data were processed by LISA 8.8. The indexes of the structural equation model of the effect of psychological resilience on learning burnout were good. The positive and negative mediating effects of positive and negative emotions and the negative indirect effects of psychological resilience were all tested by Bootstrap and SE. Psychological resilience negatively predicted learning burnout 69.0%, positively predicted positive academic emotion 41.0% and negatively predicted negative academic emotion 55.8%. The mediating effect rates of positive academic emotion and negative academic emotion on learning burnout were 22.0% and 30.9%, respectively. The path of variables in the model has the overall universality across grades, and the effect size in the model has the local inconsistency across grades. The impact of psychological resilience on learning burnout in the second year of junior high school is lower than that in the first and third year of junior high school. The impact of negative emotion on learning burnout is significantly greater than that of positive emotion in the first and third year of junior high school. Psychological resilience can not only directly affect learning burnout, but also indirectly influence it through positive and negative academic emotions. The effect of psychological resilience on negative academic emotions is greater than that on positive emotions. The effect of negative academic emotions on the generation of learning burnout behavior is greater than that of positive emotions on the restriction of learning burnout behavior. The effect of negative academic emotions on learning burnout mediation is greater than that of positive academic emotions in the first and third years of junior high school.

Keywords: Junior high school students, Learning burnout, Psychological resilience, Academic emotions

道德认同内化和符号化对大学生亲社会行为的影响： 一个有调节的中介模型

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摘要 采用道德认同量表、人际反应指针量表、亲社会行为倾向量表和五因素正念度量表对 533 名大学生进行调查，随后采用统计软件 SPSS 23.0 和 Mplus8.3 对数据进行整理和结构方程模型分析，探讨道德认同对大学生亲社会行为的影响机制。结果表明：(1)道德认同内化($\beta=.309, p<.001$)和符号化($\beta=.372, p<.001$)均能正向预测大学生亲社会行为；(2)共情在道德认同内化和符号化对大学生亲社会行为的影响过程中起部分中介作用；(3)正念在道德认同内化和符号化通过共情对大学生亲社会行为的影响过程中起调节作用，正念减弱了道德认同符号化对亲社会行为的正向影响($\beta=-.123, p<.01$)，同时增强了共情对亲社会行为的正向影响($\beta=.124, p<.01$)，但正念在道德认同内化对亲社会行为影响中的调节作用不显著($\beta=-.009, p>.05$)。即相对于低正念水平，高正念水平大学生的道德认同内化和符号化对亲社会行为的促进作用都更多地通过较为稳定的共情中介实现，减少了对外界情境激活的依赖。

关键词 亲社会行为，道德认同内化，道德认同符号化，共情，正念

The Effects of Moral Identity Internalization and Symbolization on College Students' Prosocial Behavior: A Moderated Mediation Model

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Abstract: To explore the mechanism between moral identity internalization/symbolization and college students' prosocial behavior, a sample of 533 college students were recruited to complete moral identity measure, interpersonal reactivity index, prosocial tendencies measure, and five facet mindfulness questionnaire. The results showed that: (1) Both internalization and symbolization positively predicted prosocial behavior of college students. (2) The empathy played partial mediating role between internalization/symbolization and college students' prosocial behavior. (3) More importantly, the structural equation model revealed that the data fit the theoretical moderated mediation model well. Mindfulness played a moderating role in the moderated mediation model. The interaction of symbolization and mindfulness has a significant direct effect on prosocial behavior. Mindfulness weakens the positive effect of moral identity symbolization on college students' prosocial behavior. Besides, the interaction of empathy and mindfulness has a significant direct effect on prosocial behavior. Mindfulness enhances the positive influence of empathy on college students' prosocial behavior. In conclusion, higher mindfulness can reduce the dependence of the symbolization on the activation of external situations, and make the realization of prosocial behavior through empathy, which is more stable.

Keywords: prosocial behavior, moral identity internalization, moral identity symbolization, empathy, mindfulness

校园人际谣言与初中生抑郁的关系研究： 核心自我评价的中介作用和自我同情的调节作用

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摘要 遭受校园人际谣言是初中生抑郁的重要风险因素。初中生处在身心发展的重要阶段，对校园负面环境的心理承受能力较弱，更容易受到校园人际谣言的影响，也有着更高的抑郁风险。然而，以往研究大多对校园欺凌整体或者直接欺凌进行研究，校园人际谣言作为间接欺凌的典型形式，因其隐蔽性未得到相应的重

视。因此,本研究以校园人际谣言作为新视角,深入探讨校园人际谣言对初中生抑郁的影响及作用机制,包括核心自我评价的中介作用和自我同情的调节作用。本研究采用校园人际谣言量表、核心自我评价量表、自我同情量表和简版流调中心抑郁量表对 1811 名初中生进行调查。结果发现:(1)校园人际谣言、核心自我评价、自我同情与初中生抑郁之间,均两两显著相关;(2)核心自我评价部分中介了校园人际谣言与初中生抑郁之间的关系;(3)“校园人际谣言→核心自我评价→抑郁”这一中介路径的后半段受到自我同情的调节;个体的自我同情水平越高,核心自我评价对初中生抑郁的负向预测作用越弱。研究结果揭示了校园人际谣言和核心自我评价在初中生抑郁发生过程中的影响机制,发现了自我同情作为保护性因素的作用机制,这不仅有助于深入理解初中生抑郁的发生机制,而且为引导初中生合理面对校园人际谣言、缓解抑郁情绪提供了一定的启示。

关键词 校园人际谣言, 抑郁, 核心自我评价, 自我同情

The Influence of Negative School Gossip on Depression in Junior High School Students: The Mediating Role of Core Self-evaluation and The Moderating Role of Self-compassion

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Abstract: Exposure to negative school gossip is a significant risk factor for depression among junior high school students. Junior high school students are at an important stage of physical and mental development. They have a weak psychological tolerance for negative school environments, which are vulnerable to negative school gossip and have a higher risk of depression. However, most previous studies have focused on overall or direct bullying, negative school gossip, as a typical form of indirect bullying, has not received corresponding attention due to its concealment. Therefore, we take negative school gossip as a new perspective to explore the mechanisms of negative school gossip on depression, including the mediating role of core self-evaluation and the moderating role of self-compassion. In this study, the Negative School Gossip Questionnaire, Core Self-evaluation Scale, Self-compassion Scale, and short form of the CES-D were used to survey 1811 junior high school students. The results showed that: (1) Negative school gossip, core self-evaluation, self-compassion, and depression were significantly correlated with each other; (2) Core self-evaluation played a partial mediating role between negative school gossip and depression among junior high school students; (3) The second half of this mediating path of “negative school gossip → core self-evaluation → depression” was regulated by self-compassion; The higher the level of individual self-compassion, the lower the predictive effect of core self-evaluation on depression. The results reveal the mechanisms of negative school gossip and core self-evaluation on depression and found the mechanism of self-compassion as a protective factor, which not only helps further understand the mechanism of depression among junior high school students, but also provides certain insights to guide junior high school students to face negative school gossip reasonably and alleviate depression.

Keywords: Negative school gossip, depression, Core self-evaluation, Self-compassion

近 20 年道德认知理论的发展与演进

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摘 要 道德认知作为道德的重要组成部分, 会影响个体的道德行为。研究基于理论发展的脉络, 对道德认知理论的现状和最新进展进行了回顾和梳理, 并对发展趋势做了分析。道德认知是个体依据内在道德观念和准则, 对客观存在的道德关系以及对如何处理这种关系的原则和规范的认识, 并集中表现在道德判断上。关

于道德判断中的“理性与情感之争”，即道德判断究竟是一个由认知控制的推理加工过程还是一个由情绪启动的自动的直觉过程，引起了广泛讨论。综合分析以往研究发现，近年来道德认知理论开始由对普遍道德原则的寻求转向对具体情境下个体道德心理特征的探究。道德直觉模型和双加工理论是当前有关道德认知理论的主流理论基础，受到大多数研究者的认同。不过也有学者考虑到以往理论无法解释的情况，基于新的视角和眼光，开始思考具体情境下的道德认知发展状况，进一步丰富了道德认知的理论体系。道德认知理论的发展路径由简单的行为学研究转到认知神经机制研究。早期的道德认知理论的提出是建立在行为观察与分析基础上，而对于具体情境下的道德认知和行为的发生机制，先前的理论并不能清晰地回答，因而不能对个体的道德认知发展与行为进行预测和干预。随着 fMRI、EEG、ERP 等认知神经技术的进步，许多学者得以借助认知技术探寻道德认知的脑机制，为相关理论提供多方面的证据支持。通过利用相关技术探究个体做出道德判断的神经活动特点，从生理机制方面来补充和丰富道德认知的研究。国内也有学者基于当前道德认知研究的现状，开始探索本土文化背景下的道德心理现象和规律，今后需要有更多的研究，立足于本民族的文化优势，推进本土化的道德心理研究，促进本民族道德教育与实践。

关键词 道德心理，道德认知，道德判断，理论，最新进展

The development and evolution of moral cognitive theory in recent 20 years

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Abstract: As an important part of morality, moral cognition influences individual's moral behavior. Based on the context of theoretical development, the study reviewed and sorted out the current situation and latest progress of the theory of moral cognition, and analyzed the development trend. Moral cognition is the individual on the basis of inner moral concept and standard, the objective existence of the moral relations as well as to how to deal with the relationship between the understanding of the principles and practices, and focuses on the moral judgment. The debate between reason and emotion in moral judgment, that is, whether moral judgment is an inferential process controlled by cognition or an automatic intuitive process initiated by emotion, has been widely discussed. After a comprehensive analysis of previous studies, it is found that in recent years, the theory of moral cognition has shifted from the search for universal moral principles to the exploration of individual's moral psychological characteristics under specific circumstances. The moral intuition model and the double-processing theory are the mainstream theoretical basis of the current theories of moral cognition, which are accepted by most researchers. However, some scholars began to think about the development of moral cognition in specific situations based on new perspectives and perspectives, which further enriched the theoretical system of moral cognition, considering the points that previous theories could not explain. The development path of moral cognitive theory has changed from simple behavioral research to cognitive neural mechanism research. The early theory of moral cognition was put forward on the basis of behavior observation and analysis, but for the occurrence mechanism of moral cognition and behavior in specific situations, the previous theory could not clearly answer, so it could not predict and intervene the development of individual's moral cognition and behavior. With the progress of fMRI, EEG, ERP and other cognitive neurotechnologies, many scholars have been able to explore the brain mechanism of moral cognition with the help of cognitive technology, and provide various evidence support for relevant theories. By using these techniques to explore the neural characteristics of individuals making moral judgments, we can supplement and enrich the study of moral cognition from the aspect of physiological mechanism. Based on the current status of moral psychology research, some domestic scholars have begun to explore the phenomena and laws of moral psychology in the context of local culture. In the future, more researches are needed to promote the localization of moral psychology research and promote the moral education and practice based on the cultural advantages of this nation.

Keywords: Moral psychology, moral cognition, moral judgment, theory, the latest progress

冷酷无情特质与校园欺凌的关系：一个有调节的多重中介模型

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摘要 鉴于校园欺凌的普遍性与危害性, 国内外已开展了许多关于欺凌行为的影响因素和发生机制的研究, 例如从家庭角度、学校角度出发, 但较少研究从个人角度特别是人格特质切入, 系统探讨个人特质与欺凌行为的关系。而从人格特质出发进行研究有助于从源头排查校园中潜在的欺凌者, 进而及时阻断欺凌行为的发生。因此, 本研究将从人格特质角度探讨冷酷无情特质与初中生欺凌行为的关系, 并考察其中可能存在的中介和调节变量。为考察冷酷无情特质(CU 特质)与初中生欺凌行为的关系, 探讨道德推脱和内疚的中介作用和班级氛围的调节作用, 此研究采用整群抽样法, 使用问卷对 522 名初中生进行调查。结果显示: (1) CU 特质显著正向预测欺凌行为, 道德推脱和内疚在该过程中均起部分中介作用, 并且两者的链式中介作用显著; (2) 良好的班级氛围可以降低 CU 特质对欺凌行为的正向预测作用, 也可以通过提高内疚水平从而减少欺凌行为, 亦可以抑制道德推脱对欺凌行为的诱发作用。本研究系统揭示了初中生欺凌行为的内部心理机制, 同时深化了 CU 特质与校园欺凌的研究。以往在校园欺凌研究中同时考察道德认知和道德情绪的研究鲜见, 因此本研究在一定程度上拓展和补充了校园欺凌的相关研究。此外, 本研究的发现还对干预初中生的欺凌行为具有一定的教育意义。首先, 学校心理健康教育工作者应当重视对具有特殊人格学生的筛查, 并给予他们更多的关注和帮助; 其次, 依据道德推脱机制, 学校心理健康教育工作中可以增加对学生开展系统课程的训练, 以帮助他们形成正确的道德观念, 降低道德推脱水平, 培养责任感和担当意识; 最后, 作为预防校园欺凌的保护因子, 教师要注重营造良好的班级氛围。

关键词 冷酷无情特质, 道德推脱, 内疚, 班级氛围, 校园欺凌

Callous-Unemotional Traits and School Bullying: A Moderated Multiple Mediation Model

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Abstract: In view of the universality and harmfulness of school bullying, many studies on the influencing factors and mechanisms of bullying behavior have been carried out at home and abroad, such as from the perspective of family and school, but there are few studies from the perspective of individuals, especially personality traits to discuss the relationship between personal traits and bullying behavior systematically. Researching from the perspective of personality traits helps to identify potential bullies on campus from the source, and then block the occurrence of bullying in a timely manner. Therefore, this study will explore the relationship between Callous-Unemotional traits and bullying behavior of junior high school students, and examine the possible mediators and moderators. In order to investigate the relationship between Callous-Unemotional traits (CU traits) and bullying behavior of junior high school students, and to explore the mediating role of moral disengagement and guilt and the moderating role of classroom climate, this study adopted a cluster sampling method and used questionnaires to survey 522 junior high school students. The results show that: (1) The CU traits significantly positively predict bullying. Moral disengagement and guilt both play a part of the mediating role in the process, and the chain mediation role of the two

is significant; (2) A good class climate could reduce the positive predictive effect of CU traits on bullying behaviors, and increase the level of guilt to reduce bullying behaviors, and could also inhibit the inducing effect of moral disengagement on bullying behaviors. . This research system reveals the internal psychological mechanism of bullying behavior of junior high school students, and at the same time deepens the research on CU traits and school bullying. In the past, studies on both moral cognition and moral emotions in the study of school bullying are rare. Therefore, this study expands and supplements the relevant research on school bullying to a certain extent. In addition, the findings of this study also have certain educational significance for intervention in the bullying behavior of junior high school students. First of all, teachers should pay attention to the screening of students with special personalities and give them more attention and help; second, according to the moral disengagement mechanism, teachers can increase the number of systematic courses for students, to help them form correct moral concepts, reduce their level of moral disengagement, and cultivate a sense of responsibility and responsibility; finally, as a protective factor to prevent school bullying, teachers should pay attention to creating a good class climate.

Keywords: callous unemotional traits; moral disengagement; guilt; class climate; school bullying

婚姻关系的代际传递——基于变量中心和个体中心的视角

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摘要 幸福的婚姻对成年个体的生活满意度起着重要的作用, 在过去几十年中, 国内外的研究者一直致力于探究影响婚姻关系的关键因素。在众多影响因素中, 原生家庭的父母婚姻关系的重要影响已经得到了大量理论和研究的支持。但是以往大部分关于婚姻代际传递的研究采用的都是以变量为中心的方法, 并关注于某一特定的婚龄段, 而忽视了群体差异。因此, 本研究根据家庭生命周期理论, 结合以变量为中心的方法——主客体互倚模型 (Actor Partner Interdependence Model, APIM) 和以个体为中心的方法——潜在剖面分析 (Potential Profile Analysis, LPA) 在多个婚龄段的夫妻中再次检验了婚姻的代际传递效应, 以进一步探讨该效应是否存在群体内部的异质性。本研究通过熟人介绍、网上张贴项目广告和社区合作三种形式招募了 674 对夫妻, 其中 122 对新婚期夫妻, 356 对养育期夫妻, 195 对空巢期夫妻。研究采取线下问卷的形式, 每一对夫妻都分别填写了自编《原生家庭情况问卷》, 《婚姻质量问卷(Quality of Marriage Index)》和《婚姻不稳定指数量表简化版(Marital Instability Scale- Short Form)》。以变量为中心的分析结果发现: 1.对于新婚期的夫妻 (N=122 对), 丈夫的原生家庭婚姻关系显著地正向影响自己和伴侣的婚姻质量和稳定性, 妻子的原生家庭婚姻关系则不影响自己和伴侣的婚姻质量和稳定性; 2.对于养育期的夫妻 (N=356 对), 夫妻双方的父母婚姻关系都显著地正向影响自己以及伴侣的婚姻质量和稳定性; 3.对于空巢期的夫妻 (N=195 对), 夫妻双方的父母婚姻关系都不影响自己以及伴侣的婚姻质量和稳定性。以个体为中心的分析结果则表明: 1.根据夫妻来自的原生家庭父母婚姻情况, 可以分为三个剖面: 双方都来自于婚姻幸福的原生家庭 (剖面 1), 妻子来自于婚姻幸福的原生家庭而丈夫来自于婚姻不幸福的原生家庭 (剖面 2), 丈夫来自于婚姻幸福的原生家庭而妻子来自于婚姻不幸福的原生家庭 (剖面 3); 2.三个剖面对应的婚姻质量和稳定性存在显著差异, 属于剖面 1 的夫妻的婚姻质量和稳定性都最高, 其次是剖面 2, 最低的是剖面 3。

关键词 婚姻代际传递, 家庭生命周期理论, 主客体互倚模型, 潜在剖面分析

The Intergenerational Transmission of Marital Relationship——Integrating Variable-Centered and Person-Centered Approaches

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Abstract: A happy marriage plays an important role in adult well-being. In the past decades, researchers at home and abroad have been devoted to exploring the key factors affecting marriage. Among the various influencing factors, the important influence of parents in the family of origin on marriage has been supported by a large number of theories and studies. However, most of the previous studies on intergenerational transmission of marriage adopted a variable-centered approach and focused on a specific group of couples, while ignoring group differences. Therefore, this study integrated the variable-centered approach - actor partner interdependence model (APIM) and the person-centered approach - potential profile analysis (LPA) to re-examine the effect of intergenerational transmission of marriage among couples over the family life cycle based on the family life cycle theory to further explore whether there is heterogeneity in the effect. This study recruited 674 couples through introduction of acquaintances, posting project advertisements online and community cooperation, including 122 newly-married couples, 356 parents of minor children and 195 parents of adult children. Each couple filled in the self-composed Questionnaire of the Family of Origin, the Quality of Marriage Index and the Marital Instability Scale-Short Form. The results of the variable-centered approach were as follows: 1. For the newly-married couples (N=122), the husband's family of origin has a significant positive impact on the marital quality and stability of himself and his partner, while the wife's family of origin has no impact on the marital quality and stability of himself or her partner. 2. For the parents of minor children (N=356), the marital relationship of the parents of both couples had a significant positive impact on their own and their partner's marital quality and stability; 3. For the parents of adult children (N=195), the marital relationship of both parents does not affect the marital quality and stability of themselves or their partners. The person-centered analysis results show that: 1. According to couples' parental marital relationship, they can be divided into three profiles: both of wife and husband come from family with happy marriage (profile 1), the wife come from family with happy marriage while her husband come from family with unhappy marriage (profile 2), the husband come from family with happy marriage while his wife come from family with unhappy marriage (profile 3); 2. There are significant differences in the marital quality and stability across the three profiles. The couples belonging to profile 1 rated the highest scores in marital quality and stability, followed by profile 2 and the lowest is Profile 3.

Keywords: Intergenerational transmission of marital relationship, family life cycle theory, actor partner interdependence model, potential profile analysis

学习习惯对学业成绩的不同影响机制

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摘要 目的: 运用小学生学习习惯问卷评估小学生的学习习惯, 进而分析小学生学习习惯及其不同维度对小学生学业成绩的不同影响机制。结果: (1) 女生在学习主动性、课堂守纪、课外阅读、听讲专注度、作业承诺、勤奋度以及总体学习习惯上的平均得分显著高于男生; (2) 去拖沓、课堂守纪、课外阅读对三科总成绩具有显著的正向预测效应; 对语文成绩起直接作用是作业承诺、课外阅读、去拖沓习惯; 对数学成绩有直接影响的是去拖沓、课堂守纪习惯; 作业承诺、课外阅读习惯则是英语成绩的预测因子。(3) 在不同年级中, 学习习惯也同样具有不同影响机制, 对三年级学生学业成绩起直接作用的变量是作业承诺、课堂守纪因子; 对四年级学生学业成绩起直接作用的变量是作业承诺因子; 对于五年级而言, 去拖沓、学习主动性则是其学业成绩的预测因子。结论: 众所周知, 良好的学习习惯指向优异的学业成绩, 但往往忽略了学习习惯对学生学业成绩的影响的多种机制, 重点培养与督促关键学习习惯能够促成学生的优化成长, 在学校、教师、家长开展学生的学习习惯养成的多元化教育之中, 根据学科和学生个人特征, 着重不同的学习习惯方面作为重点督促和培养内容是更加合乎学生实际与取得高效结果的方式方法。

关键词 学习习惯; 学业成绩; 小学生

The different influence mechanism of study habit on academic achievement

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Abstract: Objective: to evaluate the learning habit of primary school students by using the learning habit questionnaire, and to analyze the different influence mechanism of learning habit and its different dimensions on the learning achievement of primary school students. Results: (1) the average scores of the female students were significantly higher than that of the male students in learning initiative, discipline, reading after class, listening and speaking attentiveness, homework commitment, diligence and general learning habits (2) procrastination, discipline in class and extra-curricular reading have significant positive predictive effect on the total scores of the three subjects, and homework commitment, extra-curricular reading and the habit of procrastination play a direct role on the Chinese scores; Procrastination and discipline are the most important factors, while homework commitment and reading habit are the most important predictors of English achievement. (3) in different grades, learning habits also have different influence mechanisms. The variables that have direct effect on the third grade students' academic achievement are homework commitment and discipline-abiding factors; For the fourth-grade students, homework commitment is the most important variable, while for the fifth-grade students, procrastination and learning initiative are the most important predictors. Conclusion: It is well known that good study habits refer to excellent academic performance, but the mechanism of the influence of study habits on students' academic performance is often neglected, focusing on the cultivation and supervision of key learning habits can lead to the optimal growth of students. In the diversified education of developing students' learning habits in schools, teachers and parents, in accordance with the discipline and individual characteristics of students, focusing on different learning habits as the focus of supervision and training content is more practical and efficient way to achieve results.

Keywords: Study Habits, Academic achievement, Pupils

父母心理控制对学前儿童攻击行为影响的追踪研究：儿童抑制控制的中介作用

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摘要 攻击行为会对个体发展和社会稳定产生消极的影响，探究影响儿童早期攻击行为的影响因素及其作用机制，对减少儿童青少年攻击行为的发生，提高其社会适应能力具有重要的现实意义。父母心理控制作为一种典型的侵入式教养方式，对儿童攻击行为的影响受到了研究者的广泛关注。本研究旨在探究父母心理控制对学前儿童攻击行为的独特影响，并重点揭示儿童的抑制控制在其中的中介作用。研究采用整群抽样的方法，对 131 名来自河北邯郸和山东滨州的学前儿童（T1: $M = 4.07$ 岁, $SD = 0.76$ ）及其父母进行间隔 15 个月的两次追踪测查，使用家庭基本信息调查表收集家庭基本信息，采用 Olsen 等人（2002）编制的心理控制问卷测量父母心理控制，采用 Crick 等人（1997）编制的学前儿童社会行为量表（教师版）测量儿童的攻击行为，并使用 NIH Toolbox 中的侧抑制控制和注意任务测量儿童的抑制控制。结果显示：（1）母亲心理控制能直接正向预测儿童的关系、外显攻击，也能通过儿童抑制控制间接预测两种攻击行为，中介作用模型不存在儿童性别差异；（2）父亲心理控制对学前儿童关系攻击、外显攻击的直接和间接预测作用均不显著。本研究结果表明，母亲心理控制比父亲心理控制对儿童的认知和行为发展有更多的消极影响，并且儿童抑制控制是母亲心理控制影响儿童攻击行为的一个中介变量。

关键词 心理控制，关系攻击，外显攻击，抑制控制，学前儿童

A Longitudinal Study of the Influence of Parental Psychological Control on Preschoolers' Aggression: Mediating Effect of Children's Inhibitory Control

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Abstract: Aggression in early childhood has been associated with negative outcomes for children and society. It is therefore important to understand better the etiological factors and mechanisms that may shape aggression for reducing the occurrence of aggressive behaviors among children and adolescents and improving their social adaptability. Parental psychological control, a typical intrusive parenting style, has attracted extensive attention from researchers. Therefore, this longitudinal study aims to explore the long-term effects of parental psychological control on preschool children's aggressive behaviors and its mechanism, that is, the mediating effects of children's inhibitory control. Using cluster sampling method, the present study recruited 131 preschoolers ($T1: M_{age} = 4.07, SD = 0.76$) and their parents to participate two waves of assessment with the time interval of 15 months. Questionnaire survey was used to collect the data of family basic information, parents' psychological control, preschool children's relational and overt aggression, and the inhibitory control and attention task in NIH Toolbox was used to measure the inhibitory control ability of children. Results showed: (1) Maternal psychological control not only had direct and positive prediction on children's relational and overt aggression, but also had indirect and positive prediction through children's inhibitory control. There were no significant child gender differences in the mediating effects. (2) Paternal psychological control had no significant direct and indirect effects on children's relational and overt aggression. These results indicated that compared to paternal psychological control, maternal psychological control has more negative effects on children's cognitive and behavioral problems, and children's inhibitory control mediated the predictive effects of maternal psychological control on children's aggression.

Keywords: psychological control, relational aggression, overt aggression, inhibitory control, preschoolers

亲子冲突、同伴侵害与青少年非自杀性自伤的关系：OXTR 基因 rs53576 多态性的调节作用

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摘要 非自杀性自伤（NSSI）是指个体在没有自杀意图的前提下，故意伤害自己的身体，包括咬、切、烧等行为。理论和实证研究表明，亲子关系对青少年 NSSI 的形成和发展具有重要影响，但是目前针对亲子关系与青少年 NSSI 关系的具体机制的研究较少。NSSI 的整合理论认为消极的家庭环境造成个体的人际沟通与交往问题，进而导致 NSSI。此外，来自神经生物学的证据表明，催产素受体基因（OXTR）能够调节个体对人际环境的感知，进而影响个体的人际适应性。据此，本研究采用亲子关系中的亲子冲突分量表、同伴侵害量表、非自杀性自伤量表对 469 名青少年进行调查（ $M_{age}=13.31$ 岁， $SD=0.47$ ；男生占 52.45%），探讨亲子冲突与青少年 NSSI 的关系，以及同伴侵害的中介作用、OXTR 基因的调节作用。结果发现：（1）亲子冲突、同伴侵害均正向预测青少年 NSSI；（2）中介效应表明，亲子冲突可以通过同伴侵害间接影响青少年 NSSI；（3）有调节的中介效应表明，OXTR 基因 rs53576 多态性调节了“亲子冲突→同伴侵害→青少年 NSSI”的后半段路径以及“亲子冲突→青少年 NSSI”这一直接路径。具体而言，携带 AA 基因型的青少年，亲子冲突显著正向预测同伴侵害，并进一步正向预测青少年 NSSI。相反，携带 G 等位基因的青少年，“亲子冲突→同伴侵害→青少年 NSSI”这一中介路径不显著。此外，只有携带 AA 基因型的青少年，其亲子冲突显著预测 NSSI。本研究结果为理解亲子关系影响青少年 NSSI 的内部机制提供了证据，同时为揭示 NSSI 的“基因 X 环境→行为”框架提供了启示。

关键词 亲子冲突，NSSI，同伴侵害，OXTR 基因

Parent-Adolescent Conflict, Peer Victimization and Adolescent NSSI: The Moderating Role of Oxytocin-Receptor Gene.

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Abstract: Non-suicidal self-injury (NSSI) refers to an individual intentionally injuring his body without suicidal intention, including biting, cutting, burning and other behaviors. The study found that the annual prevalence of NSSI among adolescents in China ranged from 15% to 32.7%. Such behavior is relevant to a variety of adverse adjustment outcomes, such as depression suicide ideation, and suicide attempt. Theoretical and empirical studies have shown that parent-adolescent relationship plays an indispensable role in the formation and development of adolescent NSSI, but there are few studies explore the underlying mechanism. According to the integration theory of NSSI, the negative family environment may causes the interpersonal communication problems of individuals, and then leads to NSSI. Furthermore, neurobiological evidence suggests that the oxytocin receptor gene (OXTR) rs53576 polymorphism may moderate individual's perception of interpersonal environment, which in turn affects individual's interpersonal adjustment.

A total of 469 adolescents (52.45% boys, $n = 246$) ranging in age from 12 to 15 ($M_{age} = 13.31$ years old, $SD = 0.47$) participated in this study. First, we collected saliva from adolescents for DNA. Then, adolescents reported conflict with parents (i.e., conflict frequency, intensity of conflict), frequency of perceived aggression by peers, and rate of NSSI. All the measurement methods have good reliability and validity. In this study, Model 4 and Model 59 of PROCESS for SPSS were used to test the mediating effect and moderated mediating effect, respectively.

The results showed that: (1) parent-adolescent conflict and peer victimization positively predicted NSSI. (2) The mediating effect showed that the effect of parent-adolescent conflict on adolescent NSSI partially mediated by peer victimization. (3) The rs53576 polymorphism of the OXTR gene moderated the mediating role of peer victimization on the relationship between parent-adolescent conflict and adolescent NSSI. Specifically, for adolescents with AA genotype, parent-adolescent conflict significantly positively predicted peer victimization and further positively predicted adolescent NSSI. In contrast, the pathway of parent-adolescent conflict→peer victimization→adolescent NSSI was not significant in adolescents with G allele. In addition, parent-adolescent conflict significantly predicted NSSI only in adolescents with AA genotype. The results of this study provided evidence for understanding the underlying mechanism of parent-adolescent relationship affecting adolescent NSSI, and provide enlightenment for revealing the “gene x environment-behavior” framework of NSSI.

Keywords: parent-adolescent conflict, NSSI, peer victimization, OXTR gene rs53576 polymorphism

自我同一性典型理论述评

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摘要 继艾里克森提出自我同一性的发展阶段论后, 自我同一性就成为发展心理学研究的重要议题, 众多学者以埃里克森的自我同一性的发展阶段论和玛西亚提出四种独立的同一性状态为基础, 对自我同一性进行操作化, 并对个体的同一性形成过程进行了研究。自我同一性过程是真实自我和客我之间不断统整和建构的过程, 少年期是个体自我同一性形成的关键时期, 个体如何在与外界的接触中不断形成和完善自我同一性, 深化同一性过程, 并将自己的动机、信念、情感、能力、经验等不同心理内容进行整合, 对此研究者相继提出了诸多的理论模型。在阐述同一性形成过程的基础上, 众多学者通过不断整合和改进研究模型, 详细分析了融合科学理智检验的建构与自我表达的发现观点的自我同一性个性化过程模型、承诺之后再行探索的三维模型、对自我决定动力探索的同一性承诺模型, 进一步得出, 所有的承诺行为如何通过良好的自我调整完成自我实现, 达到一种最佳的自我个性化状态。本文主要探讨了同一性过程中个性化过程模型、三维模型、

自我决定动机视角下的同一性过程模型中的发展与路径之间的关系，并总结性的提出了该模型的独特之处及未来发展方向，对同一性的深入探索提供了新的思路。

关键词 自我同一性，个性化过程模型，三维模型，自我决定动机

A Review of the Canonical Theory of Self-identity

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Abstract: After Eriksson proposed the developmental stage theory of self-identity, self-identity has become an important topic of developmental psychology research. Many scholars use Eriksson's developmental stage theory of self-identity and Marcia proposed four kinds of development stages. Based on the state of independent identity, the self-identity is operationalized, and the formation process of individual identity is studied. The process of self-identity is a process of continuous integration and construction between the true self and the objective self. The juvenile period is a critical period for the formation of individual self-identity. How can individuals continue to form and improve self-identity in contact with the outside world, and deepen the identity The process of sex and the integration of different psychological content such as their own motivations, beliefs, emotions, abilities, and experiences, researchers have successively proposed many theoretical models for this. On the basis of elaborating the formation process of identity, many scholars have continuously integrated and improved the research model, and analyzed in detail the self-identity personalized process model that combines the construction of scientific rational inspection and self-expression of discovery viewpoints, and then explores after promises. The three-dimensional model, the identity commitment model for self-determination dynamic exploration, further draws out how all commitment behaviors can achieve self-realization through good self-adjustment and achieve the best state of self-individualization. This article mainly discusses the relationship between the development and path of the identity process model, the three-dimensional model, and the identity process model from the perspective of self-determination motivation, and summarizes the uniqueness and future of the model. The development direction provides new ideas for the in-depth exploration of identity.

Keywords: self-identity, personalization process model, three-dimensional model, self-determination motivation

认知重评影响自传体记忆的研究

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摘要 通过两个实验，考察诱发消极情绪后的认知重评对自发和自觉自传体记忆提取的影响。实验1使用自传体记忆的线索词范式，采用2（情绪调节策略：自由观看、认知重评）×3（自传体记忆线索词情绪效价：消极、中性、积极）的混合实验设计，其中情绪调节策略为被试间变量。因变量为自觉提取自传体记忆的具体性和生动性。实验过程为：在视频诱发消极情绪后，由认知重评和自由观看组被试根据情绪线索词进行自觉自传体记忆的提取。结果表明，自传体记忆的生动性不受认知重评策略和线索词效价的影响；认知重评策略能提升自传体记忆的具体性，且对消极情绪自传体记忆的具体性促进更大。实验2使用自发自传体记忆的警戒任务范式，采用2（情绪调节策略：自由观看、认知重评）×3（自发提取自传体记忆效价：消极、中性、积极）的混合实验设计，其中情绪调节策略为被试间变量，因变量为自发自传体记忆提取的数量和生动性。实验过程为：在视频诱发消极情绪后，由认知重评和自由观看组被试在完成“线条任务”的同时，记录自发出现的自传体记忆。结果表明，自传体记忆的数量和生动性不受认知重评策略的影响；情绪性词引比中性词引发了更多数量的自传体记忆。以上结果表明，由于加工方式的原因，自觉自传体更易受到认知重评策略的影响，消极情绪自传体记忆的提取需要更多的认知资源。

关键词 记忆，认知重评，自传体记忆，情绪调节

A Study on the Influence of Cognitive Reappraisal on Autobiographical Memory

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Abstract: In two experiments, we explored the effect of cognitive reappraisal after inducing negative emotions on involuntary and voluntary autobiographical memory retrieval. Experiment 1, we used a 2 (emotion regulation strategies: simply view/cognitive reappraisal) $\times$ 3 (clue word valence: negative/neutral/positive) mixed experiment design through the clue word paradigm of autobiographical memory. The dependent variable was the specificity and vividness of voluntary autobiographical memory. The experiment process was that participants conducted voluntary autobiographical memory retrieval based on emotional clues after the video induced negative emotions. The results showed that the vividness was not impacted by cognitive reappraisal strategies and clue word valence; cognitive reappraisal strategies can enhance the specificity, especially the specificity of negative emotion autobiographical memory. Experiment 2 used a 2 (emotion regulation strategies: simply view/cognitive reappraisal) $\times$ 3 (clue word valence: negative/neutral/positive) mixed experiment design through the vigilance task paradigm of involuntary autobiographical memory. The dependent variable was the number and vividness of involuntary autobiographical memory retrieval. After the video induced negative emotions, participants recorded the involuntary autobiographical memory while completing the "line task". The results showed that the amount and vividness were not affected by cognitive reappraisal strategies; The amount was higher for emotional than for neutral words. The results suggested that the voluntary autobiography is more prone to cognitive reappraisal strategies due to the processing methods, and the retrieval of negative emotion autobiographical memory requires more cognitive resources.

Keywords: memory, cognitive reappraisal, autobiographical memory, emotion regulation

抑制控制能力对初中生手机依赖的影响：状态焦虑的调节作用

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摘要 手机依赖(Smartphone dependence, SPD)被定义为个体因频繁使用手机,从而无法控制对手机的使用冲动,出现了明显的上瘾症状,进而影响个体生活和社会功能的一种问题行为。近年来,手机依赖越来越多地出现在初中生群体中,严重干扰了他们的身心健康和学习生活。有研究显示,抑制控制能力的提升能够有效降低个体手机依赖水平。以往的研究主要考察大学生群体中抑制控制对手机依赖的影响,对初中生抑制控制能力对手机依赖的影响的研究却少有报道;此外也有研究表明,焦虑也是手机依赖的形成因素。因此,本研究考察了抑制控制能力对初中生手机依赖的预测作用,以及焦虑对抑制控制与手机依赖的调节作用。

本研究分别采用手机依赖指数量表(MPAI)、状态-特质焦虑量表(STAI)以及经典的标准 Simon 任务测量初中生的手机依赖程度,状态及特质焦虑及其抑制控制能力。结果发现:(1)抑制控制能力显著负向预测初中生手机依赖;(2)状态焦虑、特质焦虑与手机依赖戒断性维度呈显著正相关;但只有状态焦虑的调节作用显著,即状态焦虑水平越高,抑制控制能力对手机依赖的影响越大,高状态焦虑低抑制控制情况下的初中生手机依赖最严重。说明随着抑制控制能力的增强,初中生手机依赖水平降低,佐证了问题性手机使用路径理论模型中的冲动途径;拓宽了前人关于手机依赖形成的理论,并启示我们在教育实际中,为了减少抑制控制能力差对初中生手机依赖的促进,要在进行抑制控制训练的同时辅以降低状态焦虑的辅导,使得训练取得更好的效果。

关键词 手机依赖 (SPD), 抑制控制, 状态焦虑, Simon 任务, 调节作用

The influence of inhibitory control ability on Smartphone dependence in middle school students: the moderating effect of state anxiety

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Abstract: Smartphone dependence (SPD) is defined as a problem behavior in which the individual cannot control the impulse to use the smartphone due to the frequent use of it, showing obvious symptoms of addiction, and thereby affecting the individual's life and social functions. In recent years, SPD is more and more common among junior high school students, which seriously interferes with their physical and mental health and learning life. Studies have shown that the enhancement of inhibitory control ability can effectively reduce the level of SPD of individuals. Previous studies mainly investigated the influence of inhibitory control ability on SPD in college students, but there are few reports on the influence of inhibitory control ability on SPD among junior high school students. In addition, studies have shown that anxiety is also a contributing factor to SPD. Therefore, this study investigated the predictive effect of inhibitory control ability on SPD of junior high school students, and the moderating effect of anxiety on inhibitory control ability and SPD.

In this study, the Mobile Phone Addiction Index Scale (MPAI), the State-Trait Anxiety Inventory (STAI) and the classic Simon task were used to measure the degree of SPD, state and trait anxiety and their inhibitory control ability of junior high school students. The results showed that: (1) the inhibitory control ability significantly negatively predicted the SPD of junior high school students; (2) the State anxiety and trait anxiety and withdrawal of SPD were significantly positively correlated; But only state anxiety had a significant moderating effect, that is, the higher the level of state anxiety, the greater the influence of inhibition control ability on SPD, And the junior high school students with high state anxiety and low inhibition control had the most severe SPD. This indicates that with the enhancement of inhibitory control ability, the dependence level of junior high school students on smartphones decreases, which proves the impulsive pathway model of problematic smartphone use.; It broadens the previous theories about the formation of SPD, which suggests that in practical education, in order to reduce the promotion of the poor inhibitory control ability on the SPD of junior high school students, the inhibition control training should be supplemented by the guidance to reduce state anxiety, so that the training can achieve better results.

Keywords: Smartphone dependence, Inhibitory control ability, State anxiety, Simon task, Moderator effect

时间来源记忆：情绪效价和加工方式的影响

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摘要 本研究通过两个实验，探究绝对时间来源记忆和相对时间来源记忆在不同情绪效价和加工方式影响下的认知特点和加工机制。实验1采用3（情绪效价：正性、中性、负性）×2（加工方式：控制加工、自动加工）混合实验设计，以绝对时间来源记忆和项目记忆的正确率、反应时为因变量。结果显示，中性图片的项目记忆效果优于情绪性图片，正性图片的绝对时间来源记忆效果优于中性和负性图片，不同加工方式并未对项目记忆表现产生影响，而控制加工的绝对时间来源判断慢于自动加工，正确率无显著差异。实验2采用3（情绪效价：正性、中性、负性）×2（加工方式：控制加工、自动加工）混合实验设计，以相对时间来源记忆的正确率、反应时、得分和项目记忆的正确率、反应时为因变量。结果显示，中性图片的项目记忆效果同样优于情绪性图片，负性图片的相对时间来源记忆得分高于中性和正性图片，不同加工方式的项目记忆表现没有差异，而控制加工相较于自动加工显著提高了相对时间来源记忆表现。根据以上结果可知，情绪性图片在绝对和相对时间来源记忆上存在加工优势，项目记忆和时间来源记忆的加工方式不同，具体表现为项目记忆和相对时间来源记忆是无意识的自动加工，而绝对时间来源记忆更多的是意识参与的控制加工。

关键词 来源记忆, 时间来源记忆, 情绪效价, 加工方式

Temporal Source Memory: the Influence of Emotional Valence and Processing Mode

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Abstract: This study explored the cognitive characteristics and processing mechanism of absolutely and relatively temporal source memory under different emotional valence and processing modes through two experiments. Experiment 1 adopted a 3 (emotion valence: positive, neutral, negative) $\times$ 2 (processing mode: control processing, automatic processing) mixed design. The dependent variables were the accuracy rate and the reaction time of absolutely temporal source memory and item memory. The results showed that the memory effect of neutral pictures in item memory was better than that of neutral and negative pictures, and the memory effect of positive pictures in absolutely temporal source memory was better than that of the neutral and negative pictures. There was no impact on the performance of item memory under different processing modes, while the judgement of absolutely temporal source memory under control processing was slower than automatic processing, and the difference in the accuracy rate was not significant. Experiment 2 adopted a 3 (emotional valence: positive, neutral, negative) $\times$ 2 (processing mode: control processing, automatic processing) mixed experimental design. The dependent variables were the accuracy rate, the reaction time and the scores of relatively temporal source memory and the accuracy rate and reaction time of item memory. The results showed that the memory effect of neutral pictures in item memory was also better than that of emotional pictures, and the memory effect of negative pictures in relatively temporal source memory was better than that of emotional pictures. There was no difference in the performance of item memory under different processing modes, while compared with automatic processing, control processing significantly improves the performance of relatively temporal source memory. According to the comparison of above results, the memory advantage of emotional pictures exists in absolutely and relatively temporal source memory processing. There are different processing modes between item memory and temporal source memory. Specifically, item memory and relatively temporal source memory are an automatic processing without consciousness, while absolutely temporal source memory is more of a conscious control processing.

Keywords: source memory, temporal source memory, emotional valence, processing mode

焦虑和抑郁在大学生睡眠质量和亲和动机间的中介作用

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摘要 作为人类在社会生存中普遍具有的一种重要动机, 亲和动机 (Affiliation Motivation) 对个体的社会交往、社会适应、身心健康等方面都有着重要的影响。以往研究表明, 睡眠问题及抑郁、焦虑等心理健康问题的出现都会显著降低个体的亲和动机水平 (McAdams, 1987)。而睡眠质量又是焦虑、抑郁的重要影响因素之一 (王道阳, 2016)。本研究以大学生为研究对象, 采用亲和动力量表 (Affiliation Motivation Scale, AFMS)、匹兹堡睡眠质量指数量表 (Pittsburgh Sleep Quality Index, PSQI)、症状自评量表 (Symptom Checklist 90, SCL-90), 对山西省三所高校的 560 名大学生进行调查, 探索焦虑和抑郁在大学生睡眠质量和亲和动机之间的中介作用, 为改善大学生的心理健康状况、提高大学生的亲和动机水平提供依据。采用 SPSS 25.0 和 AMOS 24.0 统计软件进行数据分析和模型验证。各量表的信效度良好, 研究不存严重的共同方法偏差, $\chi^2/df=3.11$, $CFI=0.991$, $NFI=0.986$, $RMSEA=0.042$, 模型拟合良好。结果表明, 大学生睡眠质量与焦虑、抑郁之间均存在显著正相关 (r 值分别为 0.393, 0.379, P 值均 <0.01), 焦虑、抑郁之间呈正相关 ($r=0.831$, $P<0.01$); 亲和动机水平与睡眠质量、抑郁、焦虑之间均呈负相关 (r 值分别为 -0.255、-0.474、-0.382, P 值均 <0.01)。

结构方程模型显示,睡眠质量主要通过三条路径影响亲和动机水平:睡眠质量可以直接对亲和动机产生影响($\beta=-0.24$)抑郁可以独立地中介睡眠质量和亲和动机的关系($\beta=-0.06$),焦虑-抑郁在睡眠质量和亲和动机之间起链式中介作用($\beta=-0.11$)。结论 焦虑和抑郁在睡眠质量预测亲和动机中起多重中介作用。睡眠质量越差,越容易产生焦虑和抑郁情绪,从而导致较低的亲和动机水平。

关键词 焦虑,抑郁,睡眠质量,亲和动机,多重中介模型

The mediating effect of anxiety and depression on sleep quality and affiliation motivation in college students

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Abstract: As an important motivation in human social survival, affiliation motivation has an important impact on individual social communication, social adaptation, physical and mental health and so on. Previous studies have shown that sleep problems, depression, anxiety and other mental health problems can significantly reduce the level of affiliation motivation (McAdams, 1987). Sleep quality is one of the important influencing factors of anxiety and depression (Wang daoyang, 2016). In this study, 560 college students from three universities in Shanxi Province were investigated by affiliation Motivation Scale (AFMS), Pittsburgh sleep quality index (PSQI) and symptom checklist 90 (SCL-90), To explore the mediating effect of anxiety and depression on College Students' sleep quality and affiliation motivation, so as to provide basis for improving college students' mental health and affiliation motivation. SPSS 25.0 and Amos 24.0 statistical software were used for data analysis and model validation. The reliability and validity of each scale are good, and there is no serious common method deviation in the study, $\chi^2 / DF = 3.11$, CFI = 0.991, NFI = 0.986, RMSEA = 0.042, the model fits well. The results showed that there was a significant positive correlation between sleep quality and anxiety and depression ($r = 0.393, 0.379, P < 0.01$), and there was a positive correlation between anxiety and depression ($r = 0.831, P < 0.01$); The level of affiliation motivation was negatively correlated with sleep quality, depression and anxiety (R values were $-0.255, -0.474, -0.382, P < 0.01$). Structural equation model shows that sleep quality mainly affects the level of affiliation motivation through three paths: sleep quality can directly affect affiliation motivation ($\beta = -0.24$) depression can independently mediate the relationship between sleep quality and affiliation motivation ($\beta = -0.06$), anxiety depression plays a chain mediating role between sleep quality and affiliation motivation ($\beta = -0.11$). Conclusion anxiety and depression play multiple mediating roles in the prediction of sleep quality and affiliation motivation. The worse the sleep quality, the more likely it is to produce anxiety and depression, resulting in a lower level of affiliation motivation.

Keywords: anxiety, depression, sleep quality, affiliation motivation, multiple mediating model

大学新生心理健康与父母教养方式的关系：人格的中介作用

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摘 要 近年来大学生的心理健康问题越来越多的受到国家和社会的关注, 加强和改进大学生心理健康教育是新形势下促进大学生健康成长、培养造就拔尖创新人才的重要途径, 是全面贯彻党的教育方针、建设人力资源强国的重要举措, 是推动高等教育改革、加强和改进大学生思想政治教育的重要任务。大一年级新生是大学生中一个特殊的群体, 一方面他们要独自面对一个全新的生活、学习环境, 尽快适应不同角色身份的转变; 另一方面他们的年龄还不成熟, 生活经验明显不足。在这样的矛盾与压力下, 大一年级新生容易产生心理上的失衡, 如果处理不当更容易导致心理问题的产生。为了考察大学新生父母教养方式、人格和心理健康之间的关系。本研究于 2020 年 9 月中旬至 10 月中旬, 采用整群抽样的方法对山西省两所大学 (山西师范大

学、山西大同大学) 1244 名新入学的大学一年级学生进行问卷测试, 回收问卷 1190 份, 有效率 95.6%。其中男生 513 名, 女生 677 名, 平均年龄 (18.4 ± 0.87) 岁。采用父母教养方式评价问卷 (EMBU)、症状自评量表 (SCL-90)、艾森克人格问卷 (EPQ) 作为研究工具, 以 SPSS 25.0 进行数据的分析处理。结果表明: (1) 积极的父母教养方式与大学生的 SCL-90 总分呈显著负相关 ($t = -0.34 \sim -0.28; p < 0.01$), 消极的父母教养方式与大学生 SCL-90 总分呈显著正相关 ($t = 0.41 \sim 0.48; p < 0.01$)。 (2) 精神质、神经质在父母情感温暖与心理健康之间起部分中介作用, 神经质、精神质和内外向性在父亲和母亲拒绝、父亲惩罚、过度保护与心理健康之间起部分中介作用。结论: 父母教养方式会通过大学新生的人格倾向对其心理健康产生影响。

关键词 心理健康, 父母教养方式, 人格, 大学新生

Relationship between freshmen's mental health and parenting style

--The mediating role of personality

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Abstract: In recent years, the mental health problems of college students have attracted more and more attention from the state and society. Strengthening and improving college students' mental health education is an important way to promote the healthy growth of college students and cultivate top-notch innovative talents under the new situation. It is an important measure to comprehensively implement the party's educational policy and build a powerful country with human resources. It is also an important measure to promote the reform of higher education. Strengthening and improving college students' Ideological and political education is an important task. Freshmen are a special group of college students. On the one hand, they should face a new living and learning environment alone and adapt to the transformation of different roles and identities as soon as possible; On the other hand, their age is still immature and their life experience is obviously insufficient. Under such contradiction and pressure, freshmen are prone to psychological imbalance. If they are not handled properly, they are more likely to lead to psychological problems. In order to investigate the relationship between parental rearing style, personality and mental health of freshmen. From mid September to mid October 2020, cluster sampling was used to test 1244 freshmen from two universities in Shanxi Province (Shanxi Normal University and Shanxi Datong University). 1190 questionnaires were collected, with an effective rate of 95.6%. There were 513 boys and 677 girls, with an average age of (18.4 ± 0.87) years. EMBU, SCL-90 and EPQ were used as research tools, and SPSS 25.0 was used to analyze the data. The results showed that: (1) there was a significant negative correlation between positive parental rearing style and the total score of SCL-90 of college students ($t = -0.34 \sim -0.28; P < 0.01$), the negative parenting style was significantly positively correlated with the total score of SCL-90 ($t = 0.41 \sim 0.48; p < 0.01$). (2) Psychoticism and neuroticism play a partial intermediary role between parents' emotional warmth and mental health, and neuroticism, psychoticism and introversion and introversion play a partial intermediary role between father and mother's rejection, father's punishment, excessive protection and mental health. Conclusion: parental rearing style can affect the mental health of college freshmen through their personality tendency.

Keywords: Mental health, Parenting style, The personality, College freshmen

父母教育卷入和中学生创造性自我效能感: 掌握目标与批判性思维的链式中介作用

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摘要 随着创新型国家建设, 促进中学生创造性自我效能感不仅符合新课程改革对培养创新素质的要求, 还关系着祖国的未来, 备受教育界的关注。众多研究者以学校教育为切入点, 探讨教师及各学科教学对培养

中学生创造性自我效能感的影响。而根据生态系统理论,家庭也是学生最直接的教育环境之一,其中父母教育卷入在家庭教育中扮演着重要的角色,但是很少有研究探讨父母教育卷入对培养中学生创造性自我效能感的影响及其内部机制。因此,本研究探讨父母教育卷入与中学生创造性自我效能感之间的关系,并进一步探究掌握目标和批判性思维在其关系中的链式中介作用。本研究采用创造性自我效能感问卷、父母教育卷入问卷、掌握目标问卷、批判性思维倾向问卷对 802 名深圳市中学生进行调查。结果表明:(1)父母教育卷入、创造性自我效能感、掌握目标和批判性思维两两之间呈显著正相关;(2)父母教育卷入对中学生创造性自我效能感具有直接预测作用;(3)掌握目标和批判性思维在父母教育卷入对中学生创造性自我效能感的影响中起链式中介作用。研究结果进一步揭示父母教育卷入对创造性自我效能感的作用机制,为培养中学生创造性自我效能感,提供理论依据。

关键词 父母教育卷入,创造性自我效能感,掌握目标,批判性思维

Parental Involvement and Students' Creative Self-efficacy: The Serial Mediation Role of Mastery Goal and Critical Thinking

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Abstract: With the construction of an innovative country, promoting the creative self-efficacy of middle school students not only meet the requirements of the new curriculum reform to cultivate innovative quality. Many researchers take school education as the starting point to explore the influence of teachers and various subjects on cultivating students' creative self-efficacy. However, according to ecosystem theory, family is one of the most direct educational environments for students. The core of family education is the involvement of parental education. But, few studies have explored the internal mechanism of parental education involvement affecting the creative self-efficacy of middle school students. Therefore, this study explores the relationship between parental education involvement and creative self-efficacy of middle school students, and further explores the Serial Mediation role of mastery goals and critical thinking. in order to explore the relationship between parental education involvement, creative self-efficacy, mastery of goals and critical thinking, 802 middle school students were investigated by using creative self-efficacy questionnaire, parental education involvement questionnaire, mastery goal questionnaire and critical thinking tendency questionnaire. The results showed that: (1) there was a significant positive correlation between parental involvement, creative self-efficacy, mastery goal and critical thinking; (2) parental involvement directly predicted middle school students' creative self-efficacy; (3) mastery of goal and critical thinking played a chain intermediary role in the influence of parental involvement on middle school students' creative self-efficacy. The results further reveal a positive feedback of parental involvement on creative self-efficacy, and provide theoretical basis for cultivating creative self-efficacy of middle school students.

Keywords: parental involvement, creative self-efficacy, mastery goal, critical thinking

青少年网络成瘾的三年追踪研究

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摘 要 目的: 调查深圳初中阶段青少年网络成瘾现状、发展变化及其预测因素。方法: 随机选取深圳 5 所中学, 采用青少年网络成瘾量表、中国积极青少年发展量表、中国家庭功能测评量表、青少年学业适应不良量表以及人口学变量调查问卷, 进行为期三年每年一测的追踪研究, 最终有效被试共 1301 人。结果: 深圳初中青少年三年网络成瘾发生率分别为:14.4%、15.5%、14.7%。此外, 积极青少年发展、家庭功能和学业适应

不良与青少年网瘾存在显著地即时性和延时性相关 ($p<0.01$)；青少年积极发展、家庭功能和学业适应不良均在不同程度上显著地预测了青少年初中三年的网络成瘾情况 ($p<0.05$)。结论：深圳初中阶段青少年网瘾现象普遍，且网瘾在青少年初中三年时间内具有相对稳定性。那些自身积极发展、拥有良好功能的家庭且学业适应良好的青少年产生更少的网瘾问题，本研究启示我们解决青少年的网瘾问题要考虑青少年自身的积极发展，青少年的家庭功能以及青少年在校的学业适应问题等多方面因素。

关键词 青少年，网络成瘾，预测因素，追踪研究

A three-year longitudinal study on Internet Addiction among adolescents

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Abstract: Objective: The present study investigated the prevalence and psychosocial correlates of Internet addiction in Shenzhen adolescents using a longitudinal design. **Method:** Three waves of data were collected over 3 years from students in 5 secondary schools in Shenzhen. Young's 10-item Internet Addiction Test, Chinese Positive Youth Development Scale, Chinese Family Assessment Instrument, Academic Maladaptation Scale and Demographic variables questionnaire were used. **Results:** ① The adolescents met the criterion of Internet addiction were 14.4% ,15.5% and 14.7% over past three years. ② In addition, positive youth development, family function, and bad academic adaptation are significantly associated with immediacy and latency in adolescent Internet addiction ($p<0.01$). ③ Using different measures at Wave 1 to predict Internet addiction at Wave 3, it was found that positive youth development and good family functioning indicators negatively predicted Internet addictive behaviors over time; bad academic maladaptation predicted higher probability of having Internet addiction ($p<0.05$). More precisely the more positive developmental qualities, the more well-functioning families, and less academic maladaptation, the less likely adolescents to report Internet addiction. **Conclusions:** The phenomenon of internet addiction among teenagers in Shenzhen junior middle school is common and relatively stable. This study enlightens us that paying attention to the academic adaptation of teenagers, promoting their positive development and strengthening their family functions can become the direction of preventing and reducing the Internet addiction of teenagers in Shenzhen.

Keywords: Adolescents, Internet addiction, Prediction, Longitudinal design

疫情期间个体注意控制与焦虑水平的关系： 躯体关注和认知关注的中介作用

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摘要 2020年1月以来，新型冠状病毒肺炎疫情迅速蔓延，作为一种突发性公共卫生事件，此次疫情对民众的心理健康造成较大影响，导致民众出现了焦虑、恐慌、强迫行为等，尤其是引起了较大范围的焦虑。焦虑对个体的日常工作、学习和生活具有重要影响。已有研究表明，个体的注意控制水平与其焦虑水平存在关系，同时注意控制能力也会影响个体的焦虑敏感性。本研究旨在探讨在疫情防控时期个体的焦虑敏感性在注意控制和个体焦虑水平之间的作用，以便深入了解注意控制与焦虑的内在联系，从而为焦虑的预防和干预提供参考。研究采用注意控制量表（ATTC）、焦虑敏感指数量表3版中文版（ASI-3）和抑郁-焦虑-压力量表简本中文版（DASS-21），在2020年2月-3月间通过网络取样选取有效被试464人（平均年龄为21.55，标准差为4.00，其中389名女性）进行施测。结果分析发现：（1）各变量之间均存在显著相关，具体表现为，注意控制与躯体关注、认知关注以及焦虑呈负相关，注意控制能力越低的人躯体关注、认知关注水平越高，同时表现出更高的焦虑程度。（2）躯体关注和认知关注在注意控制与焦虑之间存在显著的中介效应。整个研究

表明, 较好的注意控制能力有助于降低个体在疫情期间的躯体关注与认知关注两个维度的焦虑敏感性, 进而降低个体的焦虑水平。

关键词 注意控制, 躯体关注, 认知关注, 焦虑, 中介作用

Anxiety regarding COVID-19 related to attention control: The mediating role of physical concern and cognitive concern

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Abstract: Since January 2020, the COVID-19 has spread rapidly. As an emergent public health event, the epidemic has a significant impact on the mental health of the population, it has led to anxiety, panic, compulsive behavior, etc. Especially the epidemic has caused widespread anxiety, which is important to individuals' daily work, study and life. It has been found that the attention control is related to the level of anxiety, and attention control also affects the level of anxiety sensitivity. In order to deeply understand the mechanism of attention control, so as to provide reference for the prevention and intervention of anxiety, this study explored the role of anxiety sensitivity, especially the physical concern and cognitive concern dimensions, between attention control and anxiety level at this particular time. A total of N = 464 valid participants (mean age = 21.55 years, SD = 4.00; n = 389 female) was selected through online sampling between February and March, 2020. They were tested by the Attention Control Scale (ATTC), the Anxiety Sensitivity Index-3 (ASI-3) and the Depression Anxiety Stress Scale (DASS-21) (Chinese Version). The results showed that: (1) There are significant correlations between the different variables. People with lower attention control ability have a higher level of physical concern and cognitive concern, at the same time showed more anxiety. (2) Physical concern and cognitive concern have a significant mediating effect between attention control and anxiety. The results suggest that better attention control helps to reduce anxiety sensitivity in both the physical and cognitive concern dimensions during the epidemic, which in turn reduces an individual's anxiety level. In sum, current study indicates that attention control is negatively correlated with physical concern, cognitive concern and anxiety and physical and cognitive concern play a mediating role between attention control and anxiety.

Keywords: attention control, physical concern, cognitive concern, anxiety, mediating effect

教养干预对幼儿父母育儿结局的影响：一项系统综述及 meta 分析

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摘要 背景: 幼儿时期, 父母的育儿行为会显著影响儿童的后续发展。目前已经进行了许多干预研究来改善育儿结局, 包括减少育儿压力, 提高育儿自我效能, 以及防止儿童虐待等强制性育儿行为。然而, 缺乏系统评价来综合这些研究的证据。目的: 本研究的目的是评估教养干预改善育儿结局的有效性。方法: 我们首先在 PubMed、Web of Science、Cochrane Library、Scopus、PsycINFO、CINAHL 等 6 个数据库中进行文献检索, 随后进行系统综述并使用随机效应模型进行 meta 分析。根据不同的亚组分组条件 (父母参与情况、干预计划、干预持续时间、干预结束和干预后第一次测量之间的时间间隔、胎龄) 进行多次亚组分析, 探索结果异质性。结果: 最终, 共 27 项研究符合系统综述的纳入标准, 其中 19 篇文章 (n=2,179) 包含足够可用的 meta 分析数据。与对照组相比, 教养干预减少了育儿压力 (标准化均数差 [SMD]=-0.31, 95%可信区间 [CI]=[-0.58, -0.03], P=0.03, 研究个数=18)。但我们发现干预组与对照组之间的育儿自我效能不存在统计学差异 (标准化均数差 [SMD]=1.22, 95% 置信区间 [CI]=[-0.50, 2.94], P=0.16, 研究个数 = 3)。亚组分析表明, 在针对不同胎龄儿童的父母的干预研究中, 早产儿父母与其他儿童的父母之间的干预效果存在差异。根

据干预结束时与干预后第一次测量时间点之间的时间间隔分组, ≤1 个月的研究的总效应与其他研究之间存在差异, 除此之外, 未发现其他亚组间存在统计学上的显著差异。结论: 教养干预有望改善育儿压力, 其中非早产儿人群可能受益更多。

关键词 父母教养, 教养压力, 自我效能, 儿童虐待, meta

Effectiveness of interventions on parenting outcomes among parents of very young children: A systematic review and meta-analysis of randomized controlled trials

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Abstract: *Background :* Parenting in very early childhood can significantly impact child development. Many intervention studies have been conducted to improve parenting outcomes, including reducing parenting stress, improving parenting self-efficacy, and preventing coercive parenting practice such as child maltreatment. However, there is lack of systematic review to synthesize evidence from such studies.

Objectives: The aim of this study was to assess the effectiveness of interventions on improving parenting outcomes.

Methods: Literature retrieval was carried out in six databases, including PubMed, Web of Science, Cochrane Library, Scopus, PsycINFO and CINAHL. We conducted a systematic review and meta-analysis using random effects model. Subgroup analyses were conducted to test the effect of several moderators (parental involvement, intervention programs, intervention duration, the time lag between the end of intervention and first post-intervention measurement, gestational age) in explaining the heterogeneity of the results.

Results: Twenty-seven studies met the inclusion criteria for the systematic review, of which 19 articles (n=2,179) contained sufficient data for the meta-analysis. Compared to the control groups, parenting interventions reduced parenting stress (standardized mean difference [SMD]=-0.31, 95% confidence interval [CI] = [-0.58, -0.03], P=0.03, studies=18). But we found no difference in parenting self-efficacy between groups (standardized mean difference [SMD]=1.22, 95% confidence interval [CI] = [-0.50, 2.94], P=0.16, studies=3). Subgroup analysis showed that the effectiveness of interventions differed significantly between studies among parents with premature children and the other studies, and between studies of which the first post-intervention measurement was carried out within one month after end of the intervention and the other studies. We did not find statistically significant differences of the pooled effect size across the other moderators.

Conclusion: parenting interventions promise improvement in parenting stress and not premature may benefit more.

Keywords: parenting, stress, self-efficacy, parenting intervention, meta-analysis

青少年文化自信的量表编制 及其在文化社会化与亲社会倾向的中介作用

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摘 要 在当今竞争愈加激烈的国际社会, 文化软实力在国家综合国力中的重要性日益凸显。坚定文化自信, 有助于中华优秀传统文化的传承和创新, 进而增进人民群众对国家的认同和归属。青少年时期是生理和心理快速发展的阶段, 其思想及行为极易受到外部文化的影响, 形成良好的文化自信, 对培养青少年的爱国情怀, 良好的社会适应行为以及社会的稳定发展具有重要作用。文化自信是个体对中华民族文化的积极态度及情感。本研究以青少年为研究对象, 研究一探索了文化自信的结构, 并自编了青少年文化自信量表, 在此基础上, 研究二采用自编的青少年文化自信量表, 考察 617 名青少年文化自信的发展水平和特点, 以及文化自信在文

化社会化与亲社会倾向之间的中介作用。研究一结果显示：（1）探索性因素分析后，量表最终被保留 3 个因子，共 15 道题目。（2）在验证性因素分析中， $\chi^2 = 421.300$ ， $p < 0.001$ ， $\chi^2/df = 4.84$ ，CFI=0.948，TLI=0.937，RMSEA=0.085，文化自信量表三维度模型拟合指标良好。（3）文化自信量表的内部一致性系数为 0.948，文化偏爱、文化认同及文化践行三个分量表的内部一致性系数分别为 0.918、0.926、0.901。研究二结果表明：低年级的青少年文化自信水平显著高于高年级的青少年文化自信水平（ $F=2.659$ ， $p < 0.05$ ），性别、民族身份在青少年文化自信水平上没有显著性差异。文化社会化、文化自信和亲社会倾向三者具有高度相关，在控制了年级、民族身份背景、性别后，青少年文化自信在文化社会化和亲社会倾向之间起显著的中介作用（effect = 0.285，95%CI = [0.163, 0.458]）。鉴于此，可得出：（1）文化自信的结构由文化偏爱、文化认同、文化践行三个因素构成，以此编制的文化自信问卷符合心理测量学标准，可以作为文化自信的有效测量工具。（2）不同年级的青少年在文化自信水平上存在显著差异，在横断数据中呈现出青少年文化自信水平随着年级升高而下降的趋势。（3）文化自信在文化社会化与青少年亲社会倾向之间起着中介作用。该研究结果可为青少年文化自信的量化研究提供可靠的测评工具，为广大教育工作者从文化社会化和文化自信的角度提高青少年亲社会行为提供重要的理论借鉴。

关键词 文化自信，家庭文化社会化，同伴文化社会化，亲社会倾向

The preparation of adolescents' cultural confidence Scale and its mediating role in cultural socialization and pro-social tendency

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Abstract: In today's increasingly competitive international society, the importance of cultural soft power in a country's comprehensive national strength is increasingly prominent. Strengthening cultural confidence is conducive to the inheritance and innovation of China's fine history and culture, and thus enhancing the people's identity and belonging to the nation and country. Adolescents is a period of rapid physical and psychological development, and its thoughts and behaviors are easily influenced by external culture. The formation of good cultural confidence plays an important role in the cultivation of adolescents' patriotism, good social adaptation and stable social development. Cultural confidence is an individual's positive attitude and emotion towards Chinese culture. . Adolescents as the research object, the first study would explored the structure of cultural confidence, and the adolescents' cultural confidence scale. On this basis, the second would used the cultural confidence scale to test the 617 adolescents' cultural confidence level and characteristics, and the mediation role of cultural confidence between the cultural socialization and the pro-social tendencies. The results of first study showed that: (1) After exploratory factor analysis, the scale was retained with 3 factors and a total of 15 questions. (2) In the confirmatory factor analysis, $\chi^2 = 421.300$ ， $p < 0.001$ ， $\chi^2/df = 4.84$ ，CFI=0.948，TLI=0.937，RMSEA=0.085，and the fitting indexes of the three-dimension model were good. (3) the α coefficient of the questionnaire on cultural confidence was 0.948, and the internal consistency coefficient of the three sub-scales of cultural preference, cultural identity and cultural practice were 0.918, 0.926 and 0.901. The second study showed that the lower grades' cultural confidence level was higher than higher grades. Gender and ethnic identity had no significant influence on the cultural confidence. Cultural socialization, cultural confidence and pro-social tendency were highly correlated. After controlling grade, national identity background and gender, adolescent cultural confidence played a significant mediating role (effect = 0.285, 95%CI = [0.163, 0.458]) between cultural socialization and pro-social tendency. It could be concluded that : (1) the structure of cultural confidence was composed of three factors: cultural preference, cultural identity and cultural practice. The cultural confidence questionnaire conformed to the standards of psychometric, and could be used as an effective measurement tool for cultural confidence. (2) There were significant differences in the cultural confidence among different grades. The cross-sectional data showed that the cultural confidence of teenagers tended to decline with the rise of grade. (3) Cultural confidence plays an mediation role between cultural socialization and prosocial tendency of adolescents. The

results of this study could provide a reliable evaluation tool for the quantitative research of adolescent cultural confidence, and provided an important theoretical reference for educators to improve adolescents pro-social behavior from the perspective of cultural socialization and cultural confidence.

Keywords: cultural confidence, the cultural socialization of family, the cultural socialization of peer, pro-social tendencies, adolescent

唐宋杰出科学家的创造力成就及其影响因素——一项历史测量学研究

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摘要 历史测量法是研究历史人物创造力的首选方法。已有研究采用历史测量法探讨了影响唐宋时期文学家创造力成就的重要因素，结果发现，智力早慧、宗教信仰与移民迁徙是创造力成就的关键因素，但这些影响因素是否具有跨领域的一致性？文学家追求感性而科学家讲究理性，这两类杰出历史人物的发展特征和创造力成就的影响因素是否相同？在前人研究的基础上，我们以 55 名中国唐宋杰出科学家为研究对象，尝试探讨以下问题：（1）中国唐宋科学领域杰出人物的精神疾病与成长逆境等因素对其创造力成就有何预测作用，与文学家的结论是否相同；（2）在中国唐宋杰出科学家身上，可否验证在西方杰出人物中出现的“精神疾病与成长逆境”之间的“均衡”现象；（3）是否存在显著影响唐宋科学家创造力成就的其他变量。结果发现：（1）成长逆境和精神疾病的作用在唐宋科学家身上并不明显，这与文学家身上的结论有所差异；（2）移民迁徙和宗教信仰对唐宋科学家的创造力成就具有显著影响，但在唐朝和宋朝的作用方式不同；（3）在中国唐宋杰出科学家中，并不存在成长逆境与精神疾病对创造力成就影响的“均衡”现象。

关键词 杰出人物，创造性成就，成长逆境，历史测量学

Creative Achievement and Factors of Eminent Scientists in Tang and Song Dynasties: A Historiometric Study

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Abstract: The creative achievements of the eminent genius in Chinese history have become increasingly interested in the domain of creativity, the issue arises of how eminence and creativity is to be measured. Up to now, plenty of studies show that historiometry was precisely appropriate for the scientific study of the genius. Meanwhile, developmental adversity and the “madness-to-genius link” have been hypothesized to relate to creative achievement because they can facilitate unusual cognitive patterns. However, this theory has only been tested on mainly western eminent samples. Do connection between diversifying experiences and creative achievement still exists in the context of eastern culture, or whether there are other factors? In this paper, we applied the historiometric methods to this conjecture, which is examined on a significant sample of 55 eminent scientists in Chinese Tang and Song dynasties. Compared to the western-culture samples, Chinese scientists showed lower mental illness rates and smaller “developmental adversity” effect. Furthermore, mental illness does not significantly predict Chinese scientists’ creative outcome. While other diversifying experiences such as religious beliefs and migration have a positive relation to eminence and creative achievement. The results show that tendencies toward mental illness and developmental adversity predict eminence might not have intercultural consistency, yet the inference warrants further research using other eminent creators in Chinese history.

Keywords: creative achievement, historiometry, mental disease, adversity

汉语阅读中词切分研究进展

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摘要 词切分是指读者在文本阅读过程中将词从句子或语篇中切分出来, 以促进文本阅读与加工的过程。由于中文与西文在书写形态和语言学特征上差异巨大, 因此汉语词切分的机制有其独有特点。本文对近 20 年来汉语阅读过程中词切分研究成果进行总结发现: 词间空格作为视觉线索可以帮助读者进行词切分; 词素熟悉性和词素位置作为词素单元层级上的切分依据可以和词间空格共同作用于词切分; 词意识作为读者在长期阅读基础上形成的词切分依据受到词性的调节; 词汇预期作为高水平语言因素可作为词切分的依据影响正常阅读中早期的词汇预览加工; 汉语阅读中存在两种词切分现象, 一种发生在词 n 处, 另一种发生在词 $n+1$ 处, 两种切分过程中字词加工均遵循交互激活假设, 切分词 n 反映注视阶段的字词加工, 在这个过程中字词加工的交互激活特点表现为字词同等相互影响, 符合词汇加工晚期阶段精确识别词汇细节的特点; 切分词 $n+1$ 反映预览阶段的字词加工, 在这个过程中字词加工的交互激活特点更多表现为词汇加工影响字加工, 符合词汇加工早期阶段从整体上粗略识别词汇的特点; 重叠歧义词切分遵循多重激活假设, 其中被激活单词之间的竞争机制符合竞争假设, 左侧词汇在这一竞争中具有优势, 此外, 重叠歧义词的切分受到词频, 语境的影响。

关键词 汉语阅读, 词切分, 词汇加工, 眼动

Advances in Word Segmentation During Chinese Reading

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Abstract: Word segmentation refers to the process by which readers segment words from sentences or sentences in the process of text reading to facilitate text reading and processing. Due to the huge differences in writing morphology and linguistic characteristics between Chinese and Western languages, the mechanism of Chinese word segmentation has its own characteristics. This article summarizes the research results of word segmentation in the process of Chinese reading in the past 20 years and found that spaces between words can help children, adults and international students to learn words as a visual cue; Morpheme familiarity and morpheme position as the basis for segmentation at the morpheme unit level can act together with the space between words in word segmentation; Word consciousness as the basis for word segmentation formed by readers on the basis of long-term reading is adjusted by the syntactic categories of words; Vocabulary expectations, as a high-level language factor, can be used as a basis for word segmentation to affect the early vocabulary preview processing in reading; There are two word segmentation phenomena in Chinese reading, one occurs at word n , and the other occurs at word $n + 1$. The interactive activation feature of word processing in the process of segmenting word n is manifested in that character processing and word processing are equally affected by each other, and the interactive activation feature of word processing in the process of segmenting word $n + 1$ is more manifested as word processing affecting character processing; overlapping ambiguous word segmentation exists on the left Segmentation preference, moreover lapping ambiguous word segmentation is affected by word frequency and context.

Keywords: Chinese reading, word segmentation, lexical processing, eye movement

测试促进中学生的后续学习：流体智力的调节作用

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摘要 以往研究证明成年人中存在前向测试效应, 即与重复学习相比, 对已学习知识进行测试能够降低该部分知识在新知识学习过程中的前摄干扰, 促进成年人对后续新知识的学习和记忆。但是少有研究探讨初中

生和高中生中是否同样存在前向测试效应，更少有研究考察该效应在青少年阶段的年龄差异以及个体能力对该效应的影响。本研究检验初中生和高中生的前向测试效应，并在两个群体内部探究个体流体智力对该效应的调节作用。共有 132 名初中生和 218 名高中生参与了本研究。所有被试学习四个词表并被告知最后会统一进行自由回忆测试。前三个词表初次学习后，重学条件的被试均再次学习词表，而测试条件的被试则接受了 3 次即时测试；词表 4 初次学习后，两个条件的被试均接受即时测试。词表 4 即时测试的成绩显示，初中生和高中生均表现出前向测试效应，即测试条件的成绩高于重学条件，具体表现为正确回忆率的提升和入侵回忆数的降低，且与高中生相比，初中生的前向测试效应更大。个体的流体智力对该效应存在一定的调节作用，在初中生或高中生群体内部，低流体智力的个体均比高流体智力的个体从测试中获益更多，但是仅表现为更显著的入侵回忆数的降低。本研究以中学生为被试再次验证了测试能够通过前摄干扰的释放促进后续知识的学习、记忆，年龄差异的存在表明初中生获得的增益可能源自认知和动机两个途径。而低流体智力个体从测试中获益更大，对当今的教育实践具有一定的启示。

关键词 前向测试效应，流体智力，个体差异，年龄差异，青少年

Testing Enhances Subsequent Learning in Junior and Senior High School Students: The Moderating Role of General Fluid Intelligence

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Abstract: Previous studies have demonstrated that testing enhanced subsequent learning in adults by reducing proactive interference. However, little research focused on whether junior and senior high school students shared the same benefit of testing, and less research examined age differences of this effect in adolescence and the moderating role of individual ability simultaneously. In the current study, we tested forward testing effect in junior ($n = 132$) and senior ($n = 218$) high school students and investigated whether such effect was moderated by general fluid intelligence. All the participants studied four word lists anticipating a final free-recall test. For list 1 to list 3, participants restudied the same list or took an immediate test after first study. For list 4, all the participants were tested immediately when they finished first study. Results revealed that, compared to the restudying condition, immediate testing of list 1 to list 3 enhanced list 4 recall and reduced the number of prior-list intrusions in both junior high school and senior high school students. And the benefit of testing was more significant in junior high school students than senior high school students. Additionally, we verified the moderating role of general fluid intelligence. For both junior high school and senior high school participants, individuals with lower general fluid intelligence benefited more from testing of prior lists, and they reported less list 1 to list 3 intrusions in the immediate test of list 4 if they received tests of prior lists. While the enhancement of testing diminished or even disappeared in the high fluid intelligence participants. These results confirmed release from proactive interference theory of forward testing effect in junior and senior high school students and suggested junior high school students might benefit from testing through both cognitive and motivational approaches. And the moderating role of general fluid intelligence offered some enlightenment to educational practice.

Keywords: Forward testing effect, General fluid intelligence, Individual difference, Age difference, Adolescent

拖延行为、网络囤积行为及网络自我扩展与心理困扰的关系：有调节的中介效应分析

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摘 要 拖延是一个长期存在的普遍心理行为现象,对个体的生活起居和社会活动均存在负面影响。在其众多负面影响中,已有研究表明,拖延行为作为引发个体焦虑、抑郁等心理困扰的潜在因素,威胁着个体的心理健康。拖延行为与个体的心理困扰之间存在密切关系,研究者从网络囤积行为等不同的视角对拖延行为导致个体心理困扰的作用机制进行了研讨,但少有学者从网络自我扩展的视角讨论拖延行为对心理困扰的影响。随着互联网的普及和网络信息的广泛传播,个体的网络囤积行为逐渐引发关注,与现实自我扩展相对应的网络自我扩展概念也为研究者所提出。在深入研究的过程中,研究者认为有必要从多因素整合的视角,同时探讨网络囤积行为和网络自我扩展在拖延行为与心理困扰关系中的作用机制,以进一步揭示拖延行为与焦虑抑郁之间的复杂关联。因此,为探讨拖延行为对心理困扰的影响及其作用机制,本研究构建了一个有调节的中介模型,重点考察了网络囤积行为在二者关系中的中介作用以及网络自我扩展的调节作用。以 789 名大学生为被试($M=20.80$ 岁, $SD=1.72$),采用问卷法对其拖延行为、网络囤积行为、网络自我扩展及心理困扰进行调查。结果表明:(1)拖延行为与网络囤积行为、心理困扰呈显著正相关,与网络自我扩展呈显著负相关,而网络囤积行为与网络自我扩展和心理困扰均呈显著正相关;(2)拖延行为不仅能够显著直接预测心理困扰,而且能够通过网络囤积行为的中介作用对心理困扰产生间接预测作用;(3)拖延行为对心理困扰的作用受到网络自我扩展的调节,低程度网络自我扩展群体更容易因为拖延行为而产生心理困扰,且网络囤积行为的中介作用能够被网络自我扩展调节,即网络囤积行为的中介作用在低程度网络自我扩展群体中更加显著。研究结果有助于揭示拖延行为对心理困扰的影响及其作用机制,对维护和促进个体的心理健康具有积极意义。

关键词 拖延行为, 心理困扰, 网络囤积行为, 网络自我扩展

The Relationship Between Procrastination, Online Hoarding, and Online Self-expansion and Psychological Distress: Moderated Mediating Effect Analysis

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Abstract: Procrastination is a common psychological behavior phenomenon which has existed for a long time and has negative effects on individuals' daily life and social activities. Among its many negative effects, existing studies have shown that as a potential factor causing individual anxiety, depression and other psychological disturbances, procrastination behavior threatens individual mental health. There is a close relationship between procrastination behavior and individual psychological distress. Researchers have studied the mechanism of psychological distress caused by procrastination behavior from different perspectives such as online hoarding behavior, but few scholars have discussed the effect of procrastination behavior on psychological distress from the perspective of online self-expansion. With the popularization of the Internet and the wide dissemination of network information, individuals' network hoarding behavior has gradually attracted attention, and the concept of network self-expansion, which corresponds to the real self-expansion, has also been proposed by researchers. In the process of further research, researchers believe that it is necessary to explore the mechanism of online hoarding behavior and online self-expansion in the relationship between procrastination behavior and psychological distress from the perspective of multi-factor integration, so as to further reveal the complex relationship between procrastination behavior and anxiety and depression. Therefore, in order to explore the effect of procrastination on psychological distress and its mechanism, this study constructed a moderated mediating model, focusing on the mediating role of online hoarding behavior and the moderating role of network self-expansion. A total of 789 college students ($M = 20.80$ years old, $SD = 1.72$) were selected to investigate their procrastination behavior, online hoarding behavior, online self-expansion and psychological distress. The results showed that : (1) procrastination was significantly positively correlated with online hoarding and psychological distress, and negatively correlated with online self-expansion, while online hoarding was significantly positively correlated with both online self-expansion and psychological distress; (2) Procrastination not only directly predicted psychological distress, but also indirectly predicted psychological distress

through the mediating effect of online hoarding behavior; (3) procrastination is the function of psychological distress network self-expansion of adjustment, low degree of network self-expansion groups are more likely to produce psychological distress due to procrastination, and hoarding intermediary role can be network self-expansion adjustment, namely network hoarding intermediary role in the low level network self-expansion group is more significant. The results of this study help to reveal the effect of procrastination on psychological distress and its mechanism, which is of positive significance for maintaining and promoting individual mental health.

Keywords: procrastination behavior, psychological distress, online hoarding behavior, network self-expansion

家庭社会经济地位与青少年积极冒险行为：心理资本和自我控制的链式中介作用

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摘 要 青少年期是儿童向成年人过渡的一个关键时期，同时也是个体冒险行为的高发期，尤其是消极冒险行为给青少年身心健康造成的负面影响，一直以来是研究者所关注的重点。然而积极冒险行为作为社会可接受的冒险行为，其行为后果轻微，是个体经过一定准备、采取相应保护措施后做出的行为，有益于个体身心健康发展，如登山、滑雪等身体运动、上台表演、参加演讲比赛等公开场合活动。以往研究大多关注消极冒险行为，忽略了积极冒险行为为青少年带来的积极影响，甚至有些行为会被家长、教师视为娱乐而扼杀了青少年的正常发展需要。其实，参与积极冒险行为的体验经历不仅能减轻青少年抑郁、焦虑等内化症状，还能培养青少年抵御挫折、积极面对挑战和克服困难的勇气和毅力，以此提升社会适应能力。因此，本研究基于生态系统理论和家庭投资理论，拟考察家庭社会经济地位与青少年积极冒险行为的关系以及心理资本和自我控制的中介作用。采用 MacArthur 主观社会经济地位量表、积极心理资本问卷、自我控制量表和青少年冒险问卷-冒险行为量表对 1198 名青少年（平均年龄 15.68 岁，男生 587 人）进行调查，结果表明：（1）家庭社会经济地位、心理资本、自我控制和积极冒险行为两两相关显著，且家庭社会经济地位能显著正向预测青少年积极冒险行为；（2）家庭社会经济地位可分别通过心理资本和自我控制的中介作用影响青少年积极冒险行为；（3）心理资本和自我控制在家庭社会经济地位与青少年积极冒险行为之间起链式中介作用。本研究结果揭示了影响青少年积极冒险行为的关键因素及其内部机制，为今后合理引导青少年参与积极冒险行为提供了理论支持和实证依据。

关键词 家庭社会经济地位，心理资本，自我控制，积极冒险行为，青少年

Family Socioeconomic Status and Adolescents' Positive Risk-taking Behavior: The Chain Mediating role of Psychological Capital and Self-control

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Abstract: Adolescence is a critical period for the transition from children to adults, and it is also a period of high incidence of individual risk-taking behavior. In particular, the negative impact of negative risk-taking behavior on adolescents' physical and mental health has always been the focus of researchers. However, positive risk-taking behavior, as a socially acceptable risk-taking behavior, has relatively minor consequences. It is an individual's behavior after certain preparations and corresponding protective measures. It is beneficial to the adolescents' physical and mental health, such as mountaineering, skiing and other physical sports, perform on stage and participate in speech contests and other public events. Previous studies have mostly focused on negative risk-taking behavior, ignoring the positive impact of positive risk-taking behavior on adolescents, and even some behaviors are regarded as

entertainment by parents and teachers and stifle the normal development needs of adolescents. In fact, the experience of participating in positive risk-taking behavior can not only relieve adolescents' internalized symptoms such as depression and anxiety, but also cultivate the courage and perseverance of adolescents to resist setbacks, positively face challenges and overcome difficulties, thereby enhancing their social adaptability. Therefore, based on the ecosystem theory and family investment theory, this study investigated the relationship between family socioeconomic status and adolescents' positive risk-taking behavior, as well as the mediating role of psychological capital and self-control. The MacArthur subjective socioeconomic status scale, positive psychological capital questionnaire, self-control scale, and adolescent risk-taking questionnaire-risk behavior scale were used to survey 1198 adolescents ($M_{age}=15.68$, 587boys). The results showed that: (1) Family socioeconomic status, psychological capital, self-control are significantly correlated with positive risk-taking behavior, and family socioeconomic status can significantly positively predict adolescents' positive risk-taking behavior; (2) Family socioeconomic status can influence adolescents' positive risk-taking behavior through the independent mediating role of psychological capital and self-control; (3) Family socioeconomic status can influence adolescents' positive risk-taking behavior through the chain mediating role of psychological capital and self-control. These results reveal the important factors and internal mechanisms that influence adolescents' positive risk-taking behavior, and provide theoretical support and empirical evidence for rationally guiding adolescents to participate in positive risk-taking behavior.

Keywords: family socioeconomic status, psychological capital, self-control, positive risk-taking behavior, adolescents

大学生心理健康素养潜在类别及其在心理弹性、应对方式上的差异

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摘要 目的：心理健康素养是个体在促进自身及他人心理健康，应对自身及他人心理疾病方面所养成的知识、态度和行为习惯。心理健康素养的提升是改善大学生心理健康的重要途径。本研究旨在了解大学生心理健康素养现状，并探索其与心理健康的重要保护性因素如心理弹性、积极应对方式及危险性因素如消极应对方式之间的关系。方法：选取在校大学生 10583 名，使用国民心理健康素养问卷、心理弹性量表（CD-RISC）、简易应对方式问卷（SCSQ）进行测评。采用潜在剖面分析探究心理健康素养的潜在类别，并探讨心理健康素养潜在类别与心理弹性、应对方式的关系。结果：大学生心理健康素养可分为低水平组（7.94%）、中等水平组（62.72%）和高水平组（29.34%）3 种潜在类别。不同潜在类别的大学生在性别、年级、居住地、父母受教育程度、家庭社会经济地位上差异均有统计学意义（ $P<0.01$ ）。心理健康素养潜在类别与心理弹性、应对方式水平密切相关。大学生心理健康素养得分与心理弹性得分（ $r=0.398$, $P<0.01$ ）、积极应对方式得分（ $r=0.419$, $P<0.01$ ）正相关，与消极应对方式得分（ $r=-0.102$, $P<0.001$ ）负相关。不同潜在类别大学生心理弹性、应对方式各维度得分差异均有统计学意义（ $P<0.01$ ）。结论：以个体为中心的潜在剖面分析基于心理健康素养的本质特征将大学生分类，揭示了大学生在不同心理健康素养维度上反应特征的差异及各类别人数的比重，有利于进一步研究不同潜在类别大学生群体的特点，面向不同亚群体提出针对性干预措施，促进大学生心理弹性的提升及积极应对策略的使用。

关键词 大学生心理健康素养，心理弹性，应对方式，潜在剖面分析

Latent classes of mental health literacy and its differences in psychological resilience and coping style in college students

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Abstract: Objective: Mental health literacy is the knowledge, attitude and behavior tendency developed by individuals with regard to promoting and coping with their own and others' mental health related issues. The promotion of mental health literacy is an important way to improve the mental health of college students. The purpose of this research is to describe the status of mental health literacy of college students and explore its relationship with protective factors of mental health such as psychological resilience, positive coping style and risk factors such as negative coping style. **Methods:** 10583 college students attend this study. They were assessed with the Mental Health Literacy Questionnaire for Chinese adults, Connor-Davidson Resilience Scale (CD-RISC) and Simplified Coping Style Questionnaire (SCSQ). Latent profile analysis was used to explore the latent classes of mental health literacy. The research also explores the relationship between the latent classes of mental health literacy with psychological resilience and coping style. **Results:** The mental health literacy of college students can be divided into three latent classes: low level group (7.94%), medium level group (62.72%) and high level group (29.34%). There were statistically significant differences in gender, grade, home address, parents' education level and family socioeconomic status among different latent classes of college students ($P < 0.01$). The latent classes of mental health literacy are closely related to psychological resilience and coping style. The scores of mental health literacy were positively correlated with the scores of psychological resilience ($r=0.398$, $P < 0.01$) and positive coping style ($r=0.419$, $P < 0.01$), negatively correlated with negative coping style ($r = -0.102$, $P < 0.01$). There were statistically significant differences of different latent classes in each dimension of psychological resilience ($P < 0.01$) and coping style ($P < 0.01$). **Conclusion:** Latent profile analysis takes individual as the core and divides the college students based on the essential characteristics of mental health literacy, reveals the difference in reaction characteristics of college students in different dimensions of mental health literacy and the proportion of different latent classes, which is beneficial to further research on the characteristics of different latent classes of college students, put forward the targeted intervention for different subgroups and facilitate the promotion of psychological resilience as well as the use of positive coping strategies in college students.

Keywords: College students' mental health literacy, psychological resilience, coping style, latent profile analysis

父母自我概念清晰性、夫妻关系满意度与亲子关系质量： 主客体互倚性分析

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摘 要 依据家庭系统理论，家庭中的任意一方不仅会对自己所处的双人关系产生影响，还会影响另外两方之间的关系。例如，父母自身特质可能会同时影响自己和伴侣的亲子关系。自我概念清晰性是个体自我认知的一致性和稳定性的标志，已有研究发现其对个体内变量及个体间关系都存在显著影响。然而，目前尚未有研究考察父母双方的自我概念清晰性对彼此亲子关系的影响。此外，个体的自我概念清晰性对夫妻关系质量具有显著预测作用，而父母夫妻关系质量会“溢出”至亲子关系或与亲子关系质量互为“补偿”。因此，本研究旨在研究父母自我概念清晰性对亲子关系质量的影响，以及夫妻关系满意度在其中可能的中介作用。

研究采用方便取样法对 368 对广东省中小学学生父母（父亲 $M_{age} = 41.46$, $SD = 5.58$; 母亲 $M_{age} = 38.83$, $SD = 5.34$ ）进行了问卷调查，并采用主客体互倚性模型对这些成对数据进行了分析。结果发现：（1）父母的自我概念清晰性对自己（主体效应）以及对伴侣（客体效应）感知到的亲子关系质量具有显著的正向影响；（2）父亲报告的夫妻关系满意度部分中介父母自我概念清晰性对亲子关系质量的主体效应；（3）父亲对夫妻关系的满意程度完全中介父母自我概念清晰性对亲子关系的客体影响。本研究结果为家庭是一个统合且复杂的系统的主张以及父母夫妻关系对亲子关系存在“溢出”效应的假说提供了支持。同时对家庭干预也具有启示意义——通过提高父母双方的自我概念清晰性，能够提高夫妻关系和亲子关系的质量，从而使家庭功能良性且健康。

关键词 自我概念清晰性，家庭系统，夫妻关系，亲子关系，主客体互倚性模型

Parents' Self-Concept Clarity, Marital Satisfaction and Parent-Child Relationship Quality: Actor-Partner Interdependence Analysis

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Abstract: According to the family system theory, any member of the family will not only affect one's own relationships with other members, but also the relationships among the other members. For example, parents' attributes may influence the parent-child relationship of both themselves and their partners. Self-concept clarity, as an indication of the internal consistency and temporal stability of an individual's self-beliefs, has an impact on both intrapersonal and interpersonal variables. However, no studies have examined the associations between parental self-concept clarity and their own and spouses' parent-child relationship yet. In addition, it has been found that people's self-concept clarity was related to the quality of their romantic relationship, and parents' marital relationship would *spill over* to or *compensate* for their relationships with the children. Therefore, the present study aimed to examine whether parents' self-concept clarity was associated with parent-child relationship quality of themselves and their spouses, as well as the mediating role of marital satisfaction playing in these associations.

Using the convenient sampling method, this study conducted a questionnaire survey on 368 pairs of parents of primary and middle school students in Guangdong Province ($M_{age} = 41.46$, $SD = 5.58$ for fathers; $M_{age} = 38.83$, $SD = 5.34$ for mothers). By adopting the Actor-Partner Interdependence Model (APIM) to analyze the dyadic data, the results showed that: (1) parental self-concept clarity had a significant positive impact on the quality of parent-child relationship perceived by themselves (actor effects) and their partner (partner effects); (2) the marital satisfaction reported by father partially mediated the actor effects of parental self-concept clarity on the parent-child relationship quality; (3) the father's marital satisfaction completely mediated the partner effects of parental self-concept clarity on the parent-child relationship quality. These findings support the proposition that family is an integrated and complex system and the hypothesis that parents' marital relationship is positively related to their parent-child relationships. Moreover, the results are also enlightening for family interventions, that practitioners should help parents improve their self-concept clarity to enhance their marital and parent-child relationships and healthy family functioning.

Keywords: self-concept clarity, family system, marital relationship, parent-child relationship, actor-partner interdependence model

教师自主支持对高中生网络学习投入的影响：自主动机与主动性人格的作用

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摘要 作为一种被大众广泛接受的学习形式, 网络学习不仅打破了传统课堂学习的时空限制, 而且提供了更丰富的学习资源, 因而成为课堂教学的有效补充。但与此同时, 学习者在进行网络学习时存在学习投入少, 学习效果差等问题。在线学习投入不仅有助于提高学习满意度, 减少孤独感, 还能显著预测学习成绩。因此, 探究网络学习投入的影响因素和作用机制, 对改善学生网络学习具有重要意义。本研究基于自我决定理论、自主动机模型和人-环境匹配理论, 考察高中生感知到的教师自主支持对其网络学习投入的影响, 以及自主动机和主动性人格在其中的作用。采用学习气氛量表、学业自我调节量表、主动性人格量表和网络学习投入量表对 1480 名高中生进行施测, 并使用 SPSS 20.0 宏程序构建一个有调节的中介模型。结果发现: (1) 教师自主支持显著正向预测网络学习投入; (2) 自主动机在教师自主支持与学习投入间起部分中介作用; (3) 主动性人格调节教师自主支持→自主动机→学习投入这一中介路径的前半段, 主动性人格水平越高, 教师自主支持对自主动机的预测作用越大; (4) 主动性人格调节教师自主支持对学习投入的直接影响, 教师自主支持能够直接正向预测高主动性人格学生的学习投入, 但不能直接预测低主动性人格学生的学习投入。结果启示

我们：（1）教师的自主支持能够提高高中生的自主动机和网络学习投入；（2）相比于低主动性人格学生，自主支持型的教学环境与高主动性人格的学生更适配，其自主动机和网络学习投入更高。（3）对于主动性人格较低的学生，应给予更具体的学习指导，如教授自我调节的学习策略，指导他们做出选择，鼓励其主动克服困难等。

关键词 教师自主支持，自主动机，主动性人格，网络学习投入

Effect of Teacher's Autonomy Support on High School Students' Online Learning Engagement: The Roles of Autonomous Motivation and Proactive Personality

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Abstract: With the development of information technology, online learning has been widely accepted by learners. While bringing us convenience, it also exposed some drawbacks, such as poor learning efficiency, low online learning engagement. Students' online learning engagement associated with learning satisfaction, and significantly predicted their academic performance. So, it is significant for further intervention to explore the predictors and mechanism of online learning engagement. This study constructed a moderated mediation model to examine the effect of teachers' autonomy support on high school students' online learning engagement and the role of autonomous motivation and proactive personality.

Learning climate scale, academic self-regulation scale, proactive personality scale and online learning engagement scale were administered to 1480 high school students. Participants aged from 14 to 19 years old (mean age=16.2 years, SD = 0.86) with 615 boys and 874 girls.

Data analysis was performed using Mplus8.3 and Process macro program of SPSS 20.0. All variables were standardized. The correlation analysis shows that teachers autonomy support, students' autonomous motivation, proactive personality and online learning engagement are positively correlated respectively. We took grade and gender as control variables. The testing of moderated mediation model showed that: (1) Teachers' autonomy support significantly and positively predicted online learning engagement; (2) Autonomous motivation partially mediated the relationship between teachers' autonomy support and learning engagement; (3) Proactive personality moderated the mediating effect of autonomous motivation, with the stronger effect for students with higher level of proactive personality; (4) Proactive personality moderated the direct influence of teacher's autonomy support on learning engagement. For students with high proactive personality, teacher's autonomy support directly and positively predicted their learning engagement, while for ones with low proactive personality, the predictive effect of teacher's autonomy support on learning engagement was not significant.

Keywords: teachers' autonomy support, autonomous motivation, proactive personality, online learning engagement

心理韧性是否有助于减少学生的学业倦怠症状？一项元分析

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摘 要 随着社会的发展，学生的学业倦怠已经成为世界各国学校所普遍面临的问题。因此，本研究的目的是通过元分析探讨心理韧性是否有助于缓解我国学生的学业倦怠症状，并研究心理韧性与学业倦怠关系的变化趋势。此外，本研究评估了心理韧性与学业倦怠的性别差异以及以往研究中可能存在的偏倚问题，包括发表偏倚、小研究偏倚、灰色文献偏倚和下降效应。通过文献检索以及筛选流程，本研究最终纳入元分析共 34 项研究，共 81 项效应量，总样本量为 22474 人。研究结果显示，在中国背景下心理韧性与学业倦怠呈负相关。

学生的学业倦怠水平不存在性别差异,而心理韧性水平可能存在性别差异,男生的心理韧性水平高于女生。本研究未发现发表偏倚和小研究偏倚的证据,但发现了学业倦怠的灰色文献偏倚的潜在证据,即发表在期刊的有关学业倦怠的研究所报告的效应量倾向于高于硕博论文所报告的效应量,需后续研究验证。此外,本研究发现,心理韧性领域可能存在下降效应,即心理韧性的效应量随着出版年份的增加而显著下降。这种下降现象可能是由于随着社会和文化的发展,个体更加关注个性发展,而集体行为在减少,导致学生适应集体和环境的能力下降。同时,本研究通过亚组分析发现,在个人层面也存在类似的下降效应,即心理韧性可能随着个体年龄增长而下降,这可能与学生使用不成熟的防御机制来应对压力有关。因此,本研究建议,随着学生的成长和学业压力的增加,家长应更加关注青少年的心理状态,积极引导他们在面对困难时使用成熟的防御机制,并提供家庭支持,这有利于提高学生的心理韧性水平,有助于减少学业倦怠症状。

关键词 学业倦怠,心理韧性,性别差异,下降效应,灰色文献偏倚

Does resilience help in reducing burnout symptoms among Chinese students? A Meta-analysis

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Abstract: As society has evolved, student burnout has become a common problem in schools around the world, including in China. Therefore, the purpose of the current study is to explore whether resilience is related to student burnout in China and to examine the changing trend of resilience and student burnout. Moreover, we will assess gender differences and possible biases, including publication biases, small-study biases, grey literature biases, and decline effects. This meta-analysis included 34 studies, with a total of 81 effect sizes and a total sample size of 22,474. We found that resilience was negatively correlated with student burnout in the Chinese context. We found evidence of grey literature bias in student burnout, which needs to be verified by subsequent studies. However, we found that there were decline effects in resilience, possibly because as culture evolves, people become more focused on themselves, and collective behaviours are declining, leading to a decrease in their ability to adapt to the collective and the environment. We also found similar decline effects at the individual level; that is, resilience might decrease with individual age stages (from the primary to college stage), which might be related to the use of immature defence mechanisms against stress by students.

Keywords: Student burnout, Resilience, Gender difference, Decline effect, Grey literature bias

基于文献计量分析的认知诊断应用研究述评

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摘要 认知诊断评估 (Cognitive Diagnosis Assessment, CDA) 作为新一代测量理论的核心,在教育评价中表现出巨大的发展潜力。从理论上讲,CDA 可以获得更具细粒度的诊断信息,从而为补救教学提供更具针对性的指导。但在实际应用方面尚处于萌芽阶段,还存在许多不足。为探究国内外认知诊断应用研究的现状及发展趋势,本研究对收录在国内、国外学术期刊中的 122 篇认知诊断应用研究文献 (1993 年 ~ 2020 年) 进行计量学分析。结果表明: (1) CDA 应用研究的年文献总量呈逐年递增的趋势,英文文献的年发文量自 2009 年开始增多,而中文文献数量从 2016 年起才表现出发展的趋势,且英文文献的年均发文量高于中文文献; (2) CDA 的应用领域较为广泛,具有跨结构域的适用性,文献中最常见的测量结构有数学和英语阅读,分别占 36% 和 26%;此外还涉及临床诊断等新领域的应用; (3) 应用研究中属性数量的差异较大,最少评估 3 个属性,最多评估 27 个属性,平均值为 8.08,标准差为 4.42; (4) 应用研究中样本量的差异也较大,约有 60% 的研究样本量在 500 以上,样本群体较为丰富,包括了从学前儿童到大学生各年龄段的被试; (5) 大多数应用研究采用事后分析获得诊断信息,即 53% 的应用研究所使用的工具是非诊断性测验;测验项目的长度差异较大,

最少有 5 个项目，最多有 87 个项目，平均值为 30.78，标准差为 16.98；（6）项目测量学特征的估计在应用研究中常被忽视，仅有 41% 的研究估计了项目的难度，55% 的研究估计了区分度；其中最常见的指标是通过率和 IDI 指标；（7）构建测验 Q 矩阵的常见方法有专家评定法、文献调查法和口语报告法，分别占 75%、67% 和 27%；（8）测验 Q 矩阵的验证常被忽视，仅 48% 的文献对初始 Q 矩阵进行了定量分析；（9）应用研究中常用的测量模型有 RSM、DINA 和 G-DINA 模型，分别占 28%、16% 和 16%；（10）模型资料的拟合检验被忽视，超过一半的应用研究未检验模型与资料是否匹配；最常见的拟合评估类型是项目拟合，其次是整体绝对和相对拟合，分别占 22%、20% 和 20%；（11）个体诊断结果的报告较少，仅 12% 的文献提供了个体诊断报告单；（12）多数应用研究未对诊断结果的信度和效度进行验证。

关键词 认知诊断评估，应用研究，文献计量分析

Applications of Cognitive Diagnosis Assessment: A Literature Review based on Bibliometric Analysis

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Abstract: As the core of the new generation of test theory, cognitive diagnosis assessment (CDA) has great potential in educational evaluation. In theory, CDA can provide more fine-grained diagnostic information to guide remedial instruction more specifically. However, it is still in its infancy in practical application, and there are still many deficiencies. In order to explore the present situation and development tendency of cognitive diagnosis application research, the article conducts a bibliometric analysis of the literature amount, subject contents, subject distribution, 122 cognitive diagnosis application research literatures (1993 ~ 2020) collected in domestic and foreign academic journals were analyzed by bibliometric method. The results are as follows. (1) The annual total literature of CDA application research showed a rapid growth, foreign literature began to increase in 2009 and Chinese literature in 2016, the number of foreign literature was higher than that of Chinese literature; (2) CDA is applied in a wide range of fields. Mathematics and English reading are the most common ones in the literature, accounting for 36% and 26% respectively. In addition, it also involves the application of clinical diagnosis and other new fields; (3) There was a large difference in the number of attributes, with a minimum of 3 attributes and a maximum of 27 attributes, the mean value was 8.08 and the standard deviation was 4.42; (4) There is also a large difference in sample size. About 60% of the studies have a sample size of more than 500, and the sample groups are rich, including subjects of all ages from preschool children to college students; (5) The length of test items ranged from at least 5 items to 87 items with a mean value of 30.78 and a standard deviation of 16.98, and 53% of the studies used non-diagnostic tests. (6) The estimation of project measurement characteristics is often neglected in applied research. Only 41% of studies estimated project difficulty and 55% estimated the degree of distinction, the most common indicators are the pass rate and IDI; (7) The common methods to construct test Q matrix include expert evaluation, literature survey and oral report, accounting for 75%, 67% and 27% respectively; (8) The verification of the Q matrix was neglected, and only 48% of the literature conducted quantitative analysis of the initial Q matrix; (9) Commonly used measurement models are RSM, DINA and G-DINA, accounting for 28%, 16% and 16% respectively; (10) Model - data fitting test is ignored, more than half of the applied research did not test whether the model and data fit; The most common type of fit assessment is item fit test, followed by overall absolute fit test and relative fit test, accounting for 22%, 20% and 20% respectively; (11) Individual diagnosis results were rarely reported, only 12% of literatures provided individual diagnosis report cards for students or teachers; (12) The applied researches were carried out in many disciplines but most researches failed to report diagnostic reliability and validity.

Keywords: Cognitive diagnostic assessment, application research, bibliometric analysis

“酸葡萄”或“绿草地”？考研失败大学生在目标评估上的差异

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摘要 “酸葡萄”心理指个体失败后贬低目标价值的现象; “绿草地”心理指个体失败后提升目标价值的现象。以往研究采用直觉智力任务, 发现成人在失败后会在情绪上产生“酸葡萄”心理, 而非“绿草地”心理。本研究旨在考察考研失败大学生在情绪和认知上是否产生“酸葡萄”心理, 以及耐挫心理是如何影响“酸葡萄”心理的。选取 114 名考研大学生, 在考研前一周填写《大学生耐挫心理量表》(白学军, 都旭, 牛宏伟, 郝嘉佳, 2020), 并报告其对报考院校的评价(即“您对报考院校的评价”, 采用 10 点量表, 0=非常不满意, 9=非常满意)和对将来考研成功的感恩预期(即“如果考研成功, 您的感恩程度”, 采用 10 点量表, 0=一点也不感恩, 9=非常感恩)。在考研结果公布后一周再次邀请被试填写《大学生耐挫心理量表》, 考研成功大学生($n=42$)报告对报考院校的评价(同考研前), 考研失败大学生($n=72$)报告对报考院校的评价(同考研前)和对下次考研成功的感恩预期(即“如果下次考研取得成功, 您的感恩程度”, 采用 10 点量表, 0=一点也不感恩, 9=非常感恩)。

以报考院校评价得分为因变量, 经 2 (考研结果: 成功、失败) $\times 2$ (时间点: 考研前、考研后) 的混合实验设计方差分析, 结果发现: 考研结果和时间点的交互作用显著 ($F_{(1,107)}=8.27, p=0.005$)。对于考研成功大学生, 考研前、后的报考院校评价得分无显著差异。对于考研失败大学生, 考研后的报考院校评价得分低于考研前的。以考研失败大学生的感恩预期为因变量, 经配对样本 t 检验发现: $t_{(71)}=4.01, p<0.001$ 。考研失败大学生在考研后对下次考研成功的感恩预期低于考研前对考研成功的感恩预期。表明大学生在经历考研失败后, 情绪和认知上均会产生“酸葡萄”心理。

将考研失败大学生前、后测感恩预期得分的差值作为“酸葡萄”程度的指标, 考察高、低耐挫大学生的“酸葡萄”心理是否存在差异。经独立样本 t 检验发现: $t_{(70)}=-2.51, p=0.014$ 。高耐挫大学生的“酸葡萄”程度强于低耐挫大学生。表明“酸葡萄”心理受到耐挫心理的影响。

关键词 酸葡萄心理, 考研, 失败, 耐挫心理, 目标评估

Sour grapes or greener grass? Goal evaluation of undergraduates who failed in the Graduate Entrance Examination

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Abstract: The "sour grapes" effect refers to the phenomenon that individuals devalue their goals after encountering failure. The "green grass" effect refers to the phenomenon that individuals elevate their goals after failure. Previous study used a cognitive task, and confirmed that adults produced "sour grapes" rather than "greener grass" in emotions after encountering failure. The current study aimed to investigate whether undergraduates who failed in the Graduate Entrance Examination produce "sour grapes" in emotions and cognition, and how perseverance affects "sour grapes" effect. One week before the Graduate Entrance Examination, 114 undergraduates were selected to complete the undergraduate perseverance scale (Bai, Du, Niu, & Hao, 2020). They were asked to report their evaluation of the registered institutions (i.e., "Your evaluation of the registered institutions") on a 10-point scale, (0 = very dissatisfied, 9 = very satisfied) and their gratitude expectations for the future success of the Graduate Entrance Examination (i.e., "How grateful you would be if you succeeded in the Graduate Entrance Examination") on a 10-point scale, (0 = not grateful at all, 9 = very grateful). One week after the outcome of the Graduate Entrance Examination were published, participants were asked to complete the undergraduate perseverance scale again. The participants who succeeded in the Graduate Entrance Examination ($n = 42$) were asked to report their evaluation of the registered institutions (same as the pre-test), while participants who failed in the Graduate Entrance Examination ($n=72$) were asked to report their evaluation of the registered institutions (same as the pre-test) and their gratitude expectations of the success in the

next Graduate Entrance Examination (i.e., "If you succeed in the next Graduate Entrance Examination, how grateful you will be" on a 10-point scale, (0 = not grateful at all, 9 = very grateful).

For the evaluation of the registered institutions, An ANOVA of 2 (outcome of the Graduate Entrance Examination: success, failure) $\times$ 2 (time point: before and after the Graduate Entrance Examination) mixed experimental design was used. The results showed that the interaction was significant ($F_{(1,107)}=8.27, p=0.005$). For the participants who succeed in the Graduate Entrance Examination, there was no significant difference between the scores of evaluation of the registered institutions before the Graduate Entrance Examination and those after the Graduate Entrance Examination. For the participants who failed in the Graduate Entrance Examination, the scores of evaluation of the registered institutions after the Graduate Entrance Examination were lower than those before the Graduate Entrance Examination. For the gratitude expectations for the future success of the Graduate Entrance Examination, the paired sample t test showed that the scores of gratitude expectations after the Graduate Entrance Examination were lower than those before the Graduate Entrance Examination, $t_{(71)}=4.01, p<0.001$. It reveals that undergraduates are "sour grapes" in emotions and cognition after experiencing failure in the Graduate Entrance Examination.

The difference scores of gratitude expectation (i.e., were computed as post-test minus pre-test score) of undergraduates who failed in the Graduate Entrance Examination were used to characterize the degree of sour grapes. The difference in the degree of sour grapes between undergraduates with high and low perseverance was examined. The independent sample t -test showed that the degree of sour grapes of undergraduates with high perseverance was higher than that of undergraduates with low perseverance, $t_{(70)}=-2.51, p=0.014$. The result reveals that the degree of "sour grapes" is affected by undergraduates' perseverance.

Keywords: sour grapes, graduate entrance examination, failure, perseverance, goal evaluation

留守儿童的情绪与行为状况:基于长处和困难量表的 meta 分析

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摘要 目的: 运用 meta 分析的方法来分析对比中国留守儿童与非留守儿童情绪与行为状况, 及其影响因素。方法: 检索中国知网 (CNKI)、万方数据库、维普、PubMed、Springer、Web of science、EBSCO 等数据库从 2005 年至 2020 年的运用长处和困难量表 (SDQ) 调查中国留守儿童情绪和行为状况的文献, 并进行 meta 分析。结果: 总共纳入 23 篇文献, 总样本量 34310 人, 留守儿童与非留守儿童在长处和困难量表 (SDQ) 总分及各维度的合并效应量达到显著 ($d=0.173, p<0.01$), 表明农村留守儿童情绪与行为水平低于农村非留守儿童。且留守儿童群体间的情绪与行为水平存在性别差异, 留守女童和留守男童在困难总分上不存在显著差异, 但在不同维度上存在显著差异, 相比于留守男孩, 留守女孩更多的是存在情绪问题, 而留守男孩更多的是表现在行为方面的问题, 在亲社会行为维度上, 留守女孩得分显著高于留守男孩。异质性检验提示纳入文献明显异质 ($Q=90.79, I^2=75.8\%$), 进一步亚组分析发现小学留守儿童与初中留守儿童在困难总分与各维度上虽然不存在显著差异, 但小学留守儿童在这些得分上均略高于初中留守儿童。而经济欠发达内陆地区的留守儿童在困难总分及困难维度的得分显著高于经济较发达沿海地区的留守儿童。结论: 留守儿童情绪和行为水平差于非留守儿童, 经济状况作为重要的影响因素。

关键词 留守儿童, 情绪问题, 行为问题, meta 分析

The Emotion and Behaviour of Left-behind Children in China:A Meta-Analysis Based on Strengths and Difficulties Scale

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Abstract: Objective: to analyze and compare the emotional and behavioral status of left behind children and non left behind children in China and its influencing factors by using meta-analysis. Methods: searched CNKI, Wanfang database, VIP, PubMed, Springer, webofscience, EBSCO and other databases from 2005 to 2020 to investigate the studies that focus on emotional and behavioral status of left behind children in China by using the strengths and Difficulties Scale (SDQ). Results: a total of 23 studies were included, with a total sample size of 34310. The combined effect of strengths and Difficulties Scale (SDQ) and dimensions of left behind children and non left behind children was significant ($d = 0.173$, $P < 0.01$), indicating that the emotional and behavioral level of left behind children in rural areas is lower than that of non left behind children in rural areas. Compared with the left behind boys, the left behind girls have more emotional problems, while the left behind boys have more behavioral problems The scores of children were significantly higher than those of left behind boys. The heterogeneity test showed that the included literature was significantly heterogeneous ($q = 90.79$, $I^2 = 75.8\%$). Further subgroup analysis found that the total score and dimensions of difficulties of left behind children in primary school and junior high school were not significantly different, but the scores of left behind children in primary school were slightly higher than those of left behind children in junior middle school. However, the scores of the left behind children in economically underdeveloped inland areas are significantly higher than those in economically developed coastal areas. Conclusion: the level of emotion and behavior of left behind children is worse than that of non left behind children. Economic status is an important influencing factor.

Keywords: left-behind children, emotional problem, behavioral problem, meta-analysis

学龄前儿童对体贴行为的理解及其发展机制

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摘 要 我们生活在一个高度社会化的世界。即便我们没有与他人直接互动, 我们自身的行为也很有可能对他人产生间接的影响, 我们把这种给他人间接地带来收益的行为称作体贴的亲社会行为。以往有关儿童对亲社会行为理解的研究主要探究儿童对于助人、分享等直接的亲社会行为的理解, 尚未有研究探究儿童对间接的亲社会行为的理解和评价。本研究中, 我们探究学龄前儿童对体贴行为的理解: 儿童在评价他人行为的时候, 是否会考虑到行为可能对他人产生的潜在影响? 是否能够分清体贴行为和不体贴行为? 儿童对于体贴行为的理解与其它重要的社会认知能力(如, 心理理论、分享行为、执行功能等)的发展是否存在关系? 本研究共招募 100 名 4-6 岁儿童来探究这些问题。在体贴行为理解任务中, 我们让儿童比较两个故事人物在水果加餐情境中的表现。其中一个人物在自己拿一个水果的时候给排在后面的人留下了一个选择(即, 表现出体贴行为), 而另一个人物在相似的情境中则没有给后面的人留下选择(即, 表现出不体贴行为), 我们询问儿童认为这两个人物哪个更好。除此之外, 儿童还参与了心理理论任务(即, 错误信念)、分享任务(从 5 个贴纸中给他人分享一定数量的贴纸)、和执行功能(日/夜 Stroop 任务)。结果发现, 其一, 随年龄发展, 儿童逐渐理解体贴的亲社会行为, 逐渐认为留给他人选择的人物比没有留给他人选择的人物更好。具体来说, 4 岁和 5 岁儿童的回答与随机水平没有显著差异, 而 6 岁儿童的回答显著高于随机水平。其二, 当控制了年龄之后, 儿童对于体贴行为的理解与其心理理论能力呈显著正相关, 与分享行为和执行功能均没有显著相关。综上所述, 在 4-6 岁之间, 儿童对于体贴行为的理解逐渐成熟, 且其理解受心理理论发展的影响, 但与亲社

会倾向（如，分享）及综合的认知功能（如，执行功能）没有明显的关系。本研究对于探究儿童对于亲社会行为的理解和评价及其发展机制有重要意义。

关键词 社会认知发展，体贴行为理解，心理理论，学龄前儿童发展，亲社会行为

Preschoolers' Understanding of Considerate Actions and its Developmental Mechanisms

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Abstract: We live in a highly interdependent world. Even if we do not directly interact with others, our own behaviors can have an indirect impact on others. Such behaviors that indirectly bring benefits to others are defined as considerate actions. Previous research on children's understanding of prosocial behaviors focused on children's understanding of direct pro-social behaviors such as helping and sharing. Little is known about children's understanding and evaluation of considerate actions. In this study, we explored preschoolers' understanding of considerate actions: Do children consider the potential impact one's behaviors can have on others when making evaluations on such actions? Can they distinguish between considerate behaviors and inconsiderate behaviors? Is children's understanding of considerate actions related to other important social cognitive capacities (e.g. theory of mind, sharing behaviors, and executive functioning)? A total of 100 children aged 4-6 were recruited in this study. In the considerateness understanding task, children were asked to compare two story characters both of whom were to choose snack at the snack time. One of the characters left a choice for the person waiting behind when he took a fruit for herself (i.e., being considerate), while the other character in a similar situation leaves no choice for the person waiting behind (i.e., being inconsiderate). Children were then asked which of these two characters was nicer. In addition, children are also administered theory-of-mind tasks (i.e., false beliefs, hidden emotion), sharing tasks (sharing a certain number of stickers from 5 stickers), and executive functions (i.e., Day/Night Stroop tasks). We found the following findings. First, with age increase, children increasingly understand considerate actions, rating the character who left a choice for others as nicer than the character who left no choice. Specifically, while responses of 4- to 5-year-olds were not different from chance, 6-year-olds significantly favor the considerate character. Second, when controlling for age, children's understanding of considerate actions was significantly positively correlated with their theory-of-mind, but was not correlated with their sharing behaviors or executive functioning. In summary, between the ages 4 and 6, children's understanding of considerate actions gradually develops, and such understanding is influenced by the development of theory of mind, but not by prosociality (e.g., sharing) and general cognitive capacities (e.g., executive function). This research is of great significance to explore children's understanding and evaluation of prosocial behaviors and its developmental mechanism.

Keywords: social cognitive development, considerate actions, theory of mind, preschoolers, prosocial behaviors

“眼见为实”还是“服从权威”？ ——高权威旁观者在场情境下有无结果反馈对幼儿选择性信任的影响

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摘 要 反馈具有调节功能，反馈信息能够促使学习者证实或调整原有的自我评价,从而调节学习行为。在选择性学习的过程中，给予幼儿一定的反馈信息，将有助于幼儿更好地进行信息选择。但是以往选择性学习的研究中，尤其是基于旁观者在场的有关选择性学习的研究，并未将旁观者的指示信息是否正确这一结果反馈给被试。根据社会影响理论，社会互动中他人的权威性会影响个体在多大程度上受他人影响。因此，本研究拟将高权威性旁观者提示信息的正确性反馈给被试，以进一步探究高权威性旁观者在场情境下结果反馈对不

同年龄幼儿选择性学习的影响。本研究在“玩具屋”游戏模式下,选取了94名3-5岁幼儿,探究高权威旁观者在场且有无结果反馈的情况下对3-5岁幼儿选择性信任的影响。实验结果表明:(1)反馈情境主效应显著,相比于没有反馈的情况,有反馈的情况下幼儿更多的会选择先前信息提供者提供的位置。(2)年龄的主效应显著,4、5岁的儿童更多的会选择去信息提供者选择的位置寻找贴纸,3岁的儿童更多的会选择高权威性旁观者赞同的地点寻找贴纸;(3)年龄和反馈情境的交互作用不显著。实验结论是:“玩具屋”游戏模式下,3-5岁幼儿已经基于结果反馈的正确性来进行选择性信任。4、5岁的幼儿更愿意相信“眼见为实”,而3岁的幼儿更愿意“服从权威”。

关键词 反馈信息,旁观者因素,选择性信任,“玩具屋”游戏模式

"Seeing is believing" or "obeying authority"? ——The influence of outcome feedback on children's selective trust in the presence of high authority bystanders

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Abstract: Feedback has the function of regulation, feedback information can promote learners to confirm or adjust the original self-evaluation, so as to adjust the learning behavior. In the process of selective learning, giving children some feedback information will help them to make better information selection. However, the previous studies on selective learning, especially those based on the presence of bystanders, did not provide feedback to the participants on whether the bystanders' instructions were correct. According to social influence theory, the authority of others in social interaction influences the extent to which individuals are influenced by others. Therefore, this study intends to feedback the correctness of the high authoritative bystander's cue information to the participants, so as to further explore the influence of the result feedback on the selective learning of children of different ages in the presence of high authoritative bystander. In this study, 94 children aged 3-5 years were selected in a "dollhouse" game mode to explore the effect of high authority bystanders with no feedback on their selective trust. The experimental results showed that:(1) the main effect of feedback situation was significant. Compared with the situation without feedback, children were more likely to choose the position provided by the correct information provider in the case of feedback. (2) The main effect of age was significant. Children aged 4 and 5 were more likely to choose the location chosen by the correct information provider to look for stickers, while children aged 3 were more likely to choose the location approved by the authoritative onlookers. (3) The interaction between age and feedback situation was not significant. The conclusion of the experiment is that in the "dollhouse" game mode, children aged 3-5 have already conducted selective trust based on the correctness of the result feedback. Four and five years old were more likely to believe "seeing is believing", while three-year-olds were more likely to "obey authority".

Keywords: feedback information, Bystander factor, Selective trust; "Dollhouse" game mode

中学生关联感及其与家庭功能、核心自我评价、 主观幸福感的关系研究

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摘 要 自心理学产生以来,从精神分析理论到进化心理学理论,不同的心理学理论大多都把自主需要、胜任需要与关联需要视为重要的心理需求。根据自体心理学理论,社会联结感起始于生命早期,发展贯穿一生。然而中学阶段是个体生理和心理(认知,情感,行为)均有比较强烈变化的一个阶段,尤其表现在青少年的自我意识的觉醒。与此同时,人际交往与社会适应也在其生活与学习中扮演着越来越重要的角色,目前在这

几方面也出现一些新变化，与学校、家庭、社会的关联感，核心自我评价以及家庭功能这三大因素在他们的生活与学习中变得日益重要。基于这些变化，青春期个体的关联感和核心自我评价在性质、内容、表现方式上都呈现出与以往显著不同的特点。

本研究采用了 Hawkley 修订过的 UCLA 孤独修订量表、Lee 和 Robbins 编制的《社会联结量表（修订版）》、家庭功能评定量表（FAD）、杜建政等人（2012）修订的中文版《核心自我评价量表》、Diener 等人（1985）编制的《生活满意度》量表和黄丽等人修订的《正性负性情绪量表》对中学阶段的 737 名学生进行问卷发放，回收有效问卷 687 份，对其中这四者关系进行了深入且系统的分析与研究。由于笔者在大学期间对青少年犯罪的关注与资料收集，发现青少年关联感、核心自我评价以及家庭功能等因素，原生家庭以及青少年与周围事物的关联感极大程度影响着个体身心发展与变化，因此，中学生关联感及其与家庭功能、核心自我评价、主观幸福感的关系研究就变得尤其重要。在社会性发展的起始阶段，良好的关联感会带给中学生更多与周围环境的良好互动，满足他们对归属感的需求，同时作为一种人际关系的因素，关联感也能促使中学生更好地适应学习环境。中学生在学校感受到更多的社会联结，就会促进更多的积极参与，进而促进其积极发展，减少其问题行为的出现。

关键词 中学生，关联感，核心自我评价，家庭功能，主观幸福感

A Study on Middle School Students' Sense of Relevance and Its Relationship with Family Function, Core Self-evaluation, and Subjective Well-being

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Abstract: Since the emergence of psychology, from psychoanalytic theories to evolutionary psychology, most of the different psychological theories regard the need for autonomy, competence and association as important psychological needs. According to the theory of self-psychology, the sense of social connection starts in the early stage of life and develops throughout the life. However, the middle school stage is a stage where the individual's physiology and psychology (cognition, emotion, behavior) have relatively strong changes, especially in the awakening of adolescents' self-consciousness. At the same time, interpersonal communication and social adaptation are also playing an increasingly important role in their life and study. At present, there are some new changes in these aspects. The sense of connection with school, family and society, core self-evaluation and family function are becoming increasingly important in their life and study. Based on these changes, adolescent individuals' sense of association and core self-evaluation have shown significantly different characteristics from the past in terms of nature, content, and performance.

This study adopted the revised UCLA Loneliness Scale (Revised by Hawkley), the Social Association Scale (revised), the Family Functioning Rating Scale (FAD), the Chinese version of the Core self-assessment Scale (Diener), which was revised by Du Jianzheng et al. (2012) The life Satisfaction Scale compiled by Et al. (1985) and the positive and Negative emotion Scale revised by Huang Li et al. (1985) issued questionnaires to 737 students in middle school, and recovered 687 valid questionnaires. The relationship among these four students was analyzed and studied in an in-depth and systematic way. Due to the author during the period of university focus on juvenile crime and data collection, adolescents' perception of associated core self-evaluation and the functional factors, such as native families and youth involvement with the surroundings are heavily affects the individual body and mind development and change, therefore, high school student association and its core self-evaluation and family function The relationship between subjective well-being becomes particularly important. In the initial stage of social development, a good sense of connection will bring middle school students more good interactions with the surrounding environment and meet their needs for a sense of belonging. At the same time, as a factor of interpersonal

relationship, the sense of connection can also encourage middle school students to become more adapt well to the learning environment. Middle school students feel more social connections in school, which will promote more active participation, thereby promoting their active development and reducing the appearance of problem behaviors.

Keywords: Middle school students, sense of association, core self-evaluation, family function, subjective well-being

后疫情时代下幼儿教师生存质量与抑郁的关系：基于潜在剖面分析

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摘 要 2020 年的新冠疫情给人们的身心健康以及社会发展都带来了不可逆的影响，许多幼儿教师出现了生活质量下降、焦虑、情绪崩溃、睡眠障碍乃至抑郁等等症状。教师在社会发展中起着至关重要的作用，一个国家的质量取决于教育的质量，而教育的质量又取决于优质的教师。2018 年《关于学前教育深化改革规范发展的若干意见》明确提出要“提升幼儿园教师社会地位”、“待遇保障进一步提高”、“职业吸引力明显增强”。生存质量是指不同个体关于他们的各方面生活状况的一种主观体验。幼儿教师作为小孩子的启蒙者，身上的责任重压力大，关注他们的生存质量以及抑郁的情况至关重要。因此，本研究采用潜在剖面分析的方法来探究幼儿园教师生存质量的潜在类别及其主要的人口学特征，在充分考虑教师群体异质性的情况下，进一步探索生存质量与抑郁的关系并提出相关建议。

本研究采用问卷法对广州市某区幼儿园 4754 名在职幼儿园教师进行了调查。使用潜在剖面分析方法探究幼儿教师生存质量情况的潜在类别及其预测因素，并进一步比较不同潜类别教师在抑郁情况上的差异。结果显示潜在剖面分析得到三种类型：低水平生存质量组（占 27.4%），中等水平生存质量组（占 46.6%）以及高水平生存质量组（占 26.0%）。以“高水平生存质量组”为参照组，使用 R3STEP 程序构建包含预测因子的混合回归模型，发现年龄、教龄、婚姻情况、生育情况、职称和职务是“低水平生存质量”和“中等水平生存质量”的共性负向预测因子，在编情况、是否受高等教育以及抑郁总分是“低水平生存质量”的显著正向预测因子。结论：幼儿教师的生存质量水平具有明显分类特征，且与抑郁得分关系密切。建议应该针对不同类别的人口学特征以及抑郁情况，设计实施分层分类的干预方案，并成立专门的生存质量小组。

关键词 幼儿教师，生存质量，抑郁，潜在剖面分析

The relationship between quality of life and depression of preschool teachers in the post-epidemic era: based on potential profile analysis

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Abstract: The COVID-19 epidemic in 2020 has brought irreversible effects on people's physical and mental health as well as social development. Many preschool teachers have suffered from symptoms such as decreased quality of life, anxiety, emotional breakdown, sleep disorders and even depression. Teachers play a vital role in the development of society. The quality of a country depends on the quality of its education, which in turn depends on the quality of teachers. *Several Opinions on Deepening Reform and Standardizing Development of Preschool Education*(2018) emphasized the need to "enhance the social status of kindergarten teachers", "further improve the treatment guarantee" and "enhance the occupational attraction significantly". Quality of life refers to a subjective experience of different individuals about their various aspects of life. As the enlighteners of children, preschool teachers have heavy responsibilities and great pressure on them. It is very important to pay attention to teacher's quality of life and depression. Therefore, this study used the method of potential profile analysis to explore the potential categories of kindergarten teachers' quality of life and its main demographic characteristics, and further explored the relationship between quality of life and depression under the condition of fully considering the heterogeneity of teacher groups, and put forward relevant suggestions.

In this study, 4754 in-service kindergarten teachers in a district of Guangzhou were investigated by questionnaire. Potential profile analysis was used to explore the potential categories and predictors of preschool teachers' quality of life, and to further compare the differences in depression among teachers of different potential categories. The results showed that there were three types of potential profile analysis: low quality of life group (27.4%), medium quality of life group (46.6%) and high quality of life group (26.0%). Taking the "high quality of life" group as the reference group, a mixed regression model containing predictors was constructed by using R3STEP program. It was found that age, teaching age, marital status, procreation status, professional title and position were common negative predictors of "low quality of life" and "medium quality of life". Authorized strength, education background, and total depression score were significant positive predictors of low quality of life. Conclusion: The quality of life of preschool teachers has obvious classification characteristics, and is closely related to depression scores. For different categories of demographic characteristics and depression, It is suggested that hierarchical interventions should be designed and implemented, and special quality of life teams should be established.

Keywords: preschool teacher, quality of life, depression, potential profile analysis

高年级小学生共情与社交焦虑的关系： 同伴关系、师生关系的中介作用

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摘要 前人研究表明共情与社交焦虑密切相关,但两者之间内在机制还不明确。本文对共情和社交焦虑关系做进一步研究,并深入探讨同伴关系、师生关系在二者关系中的潜在中介作用,采用人际反应指数量表(IRI)、青少年社会交往焦虑量表(SAS-A)、同伴关系满意度量表和师生关系问卷对共情、社交焦虑、同伴关系和师生关系进行测量。被试为294名六年级学生($M_{age}=12.44$ 岁, $SD=0.586$,男生139人,女生155人)。研究结果表明:(1)共情与社交焦虑显著负相关($r=-0.219, p<0.001$)。(2)同伴关系完全中介作用($\beta=-0.122, p<0.001$)和师生关系完全中介作用($\beta=-0.089, p<0.001$)。(3)同伴关系在二者关系中的中介效应量(0.555)大于师生关系在二者关系中的中介效应量(0.405)。上述结果表明,提升高年级小学生的共情能有效减少学生的社交焦虑。此外,促进同伴和师生关系可以缓解高年级小学生的社交焦虑。

关键词 共情,社交焦虑,同伴关系,师生关系,中介作用

The relationship between empathy and social anxiety in senior primary school students:the mediating role of peer relationship and teacher-student relationship

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Abstract: Previous studies have shown that empathy is closely related to social anxiety, but the internal mechanism of the relationship between empathy and social anxiety is not clear. The present study investigated this association more deeply, exploring the potential mediating role played by peer relationship and teacher-student relationship. 294 sixth graders ($M_{age}=12.44$ years old, $SD=0.586$, 139 boys, 155 girls) were investigated by Interpersonal Reactivity Index (IRI), Social Anxiety Scale for Adolescents (SAS-A), peer relationship satisfaction scale and teacher-student relationship questionnaire. The results showed that: (1) there was a significant negative correlation between empathy and social anxiety ($r=-0.219, P<0.001$). (2) The peer relationship plays a complete mediating role ($\beta=-0.122, P<0.001$). The teacher-student relationship also plays a complete intermediary role ($\beta=-0.089, p<0.001$). (3) Comparing the mediating effect of peer relationship and teacher-student relationship in empathy and social anxiety, it is found that the mediating effect of peer relationship (0.555) is greater than that of teacher-student relationship (0.405). The

above results show that the improving empathy can effectively reduce students' social anxiety. In addition, promoting the peer relationship and teacher-student relationship can reduce the social anxiety of senior pupils.

Keywords: empathy, social anxiety, peer relationship, teacher-student relationship, mediation

疫情期间个体注意偏向与心理健康的关系：焦虑敏感性的中介作用

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摘要 新型冠状病毒肺炎席卷全球, 对个体生活的各个方面如安全、健康、福祉等都产生了很大的影响, 进而会对个体的心理造成巨大的影响, 使其产生焦虑、抑郁、恐慌等负面情绪。本研究基于已有研究, 考察了消极注意偏向对焦虑、抑郁情绪的影响, 并进一步探讨焦虑敏感性躯体关注和认知关注在其中的中介作用, 以期对个体的焦虑、抑郁情绪的预防和干预提供理论支持和实证依据, 减轻本次疫情对个体造成的负面情绪。本研究采用中文版积极/消极注意偏向量表、焦虑敏感指数量表 3 版和抑郁—焦虑—压力量表, 对 460 人进行调查, 采用 SPSS22.0 软件对调查结果进行分析。结果显示: (1) 消极注意偏向可显著预测个体的焦虑与抑郁情绪; (2) 消极注意偏向可分别通过躯体关注、认知关注影响个体的焦虑、抑郁情绪。总之, 本研究考察了个体对消极信息注意偏向作用于焦虑、抑郁情绪的中介机制, 探讨了焦虑敏感躯体关注和认知关注的中介作用, 对缓解突发公共卫生事件中个体的负性情绪具有一定的理论和实践意义。在心理健康方面, 可以通过注意偏向训练改善个体对消极信息的注意偏向, 从而帮助缓解个体的焦虑、抑郁情绪, 对个体心理健康管理和负性情绪的缓解都具有重要意义, 为促进个体身心健康发展水平提供了有价值的资料。

关键词 焦虑敏感, 躯体关注, 认知关注, 心理健康

The relationship between attention bias and mental health during the COVID-19 pandemic: the mediating role of anxiety sensitivity

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Abstract: COVID-19 sweeps the world, and has a great impact on all aspects of individual life, such as safety, health, and well-being. These effects will also have a huge impact on the psychopathology, causing anxiety, depression, panic and other negative emotions. In this study, we examined the impact of negative bias on anxiety and depression, and further explored the mediating role of physical and cognitive concerns. Study implications are relevant to intervention for anxiety and depression, and the impact of COVID-19 on negative emotions. In this study, 460 non-clinical participants from China were surveyed during the 2020 COVID-19 pandemic. We administered the Attention to Positive and Negative Information Scale, Anxiety Sensitivity Index-3, and Depression Anxiety Stress-21 Scale to investigate the influence of negative attention bias, physical and cognitive anxiety sensitivity on anxiety and depression symptoms during the pandemic. The results showed that: (1) negative attention bias was associated with anxiety and depression symptoms; (2) physical and cognitive anxiety sensitivity mediated relations between negative attention bias and both anxiety and depression. In conclusion, this study investigated attention to negative information bias applied to the mediation mechanism of anxiety, depression. This paper discussed the mediating effect of physical concerns and cognitive concerns, and it has certain theoretical and practical significance to relieve individual negative emotions in public health emergencies. In terms of mental health, attention bias training can be used to improve attention bias to negative information, so as to help alleviate anxiety and depression. It is of great significance to individual mental health management and the remission of negative emotions, and provides valuable information for the promotion of individual physical and mental health development.

Keywords: anxiety sensitivity, physical concerns, cognitive concerns, mental health

互动问题解决过程中的计划和探索行为——基于潜在剖面分析

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摘要 互动问题解决能力是 21 世纪人类生存的核心素养之一 (OECD, 2014; Binkley et al., 2012)。已有研究分别发现了计划和探索行为在互动问题解决过程中的重要作用 (Eichmann et al., 2019; Eichmann et al., 2020)。本研究将采用“以人为中心”的方法识别学生计划和探索行为的不同模式, 并比较不同模式学生的背景变量、问题解决的开放程度以及问题解决的表现。

本研究采用 PISA2012 中国上海“空调”任务第一小题的过程数据进行分析, 有 262 人 (64.2%) 成功作答, 146 人 (35.8%) 失败。本研究从过程数据中提取动作总次数、控制变量法使用次数占比和问题重置次数占比作为探索行为的指标, 计划行为则通过作答总反应时以及作答记录中的最长间隔时占比、最长间隔时的起始时间占比以及间隔时的变异系数表征。潜在剖面分析方法用以实现学生聚类, 采用 BIC 和 ICL 两个指标确定类别数。

成功解题学生分为高效解决组 (Profile 1, 188 人) 和成功探索组 (Profile 2, 74 人), 在 7 个行为指标上都表现出显著差异。高效解决组学生在更短时间和更少的动作行为中表现出更多的控制变量行为、降低认知负荷的重置行为以及作答初始阶段的计划行为。虽然在背景变量和态度变量上没有显著差异, 但高效解决组学生的问题解决表现 (577.67) 要显著高于成功探索组 (534.73)。成功探索组虽然未能充分展现策略, 但探索过程中可能产生了学习, 从而成功作答该题目。

失败学生可以分为探索组 (Profile 3, 64 人)、策略组 (Profile 4, 68 人) 和消极组 (Profile 5, 14 人), 三组学生的行为指标上也存在显著差异。探索组表现出更多的探索行为但计划时间少, 策略组在失败学生中采用的控制变量法行为、重置行为和初始计划行为的占比更高, 而消极组学生则几乎没有动作记录。三组中策略组学生的问题解决表现最高 (481.85), 其次为探索组 (464.66), 最后为消极组 (415.40)。三组之间不存在显著的背景变量和态度变量差异。

总的来说, 有策略且充分的探索行为以及作答初始阶段的计划行为对互动问题的成功解决起到重要作用。将学生进行聚类可以得到更多诊断信息, 判断学生在互动问题解决过程中的具体薄弱点。

关键词 互动问题解决, 过程行为, PISA2012, 潜在剖面分析, 日志数据

The Planning and Exploratory Behaviors in Complex Problem Solving: A Latent Profile Approach

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Abstract: The ability of complex problem solving (CPS) is one of the essential requirements of the 21st century human (OECD, 2014; Binkley et al, 2012). Previous research has highlighted the roles of planning and strategic exploration as role parts in CPS (e.g., Eichmann et al., 2019; Eichmann, et al., 2020). This study aims to investigate students' profile regarding exploratory and planning behaviors via a person-centered approach. The profiles were compared in terms demographic variables, openness in problem solving and CPS performance.

This study used the Shanghai (China) dataset in PISA 2012 including student survey data, CPS performance data, and log data of “climate control” task. Students were divided into the success group (262 students, 64.2%) and failure group (146 students, 35.8%) depending on whether they received the full credit on the first question of “climate control” or not. The process data was recorded in log data.

Three exploration indicators were derived from the log data to represent different aspects of exploratory behaviors, that is the total click number, the percentage of the VOTAT strategy records out of the total click number, and the percentage of reset number out of the total click number. Four planning indicators were formed: total

response time, the percentage of the longest response time of the total time, the percentage of the time when longest response time occurred of the total time and the coefficient of variance of time. Gender and ESCS were considered as demographic variables, and openness from questionnaire data is regarded as an attitude variable, with CPS performance was represented by the first plausible value. The latent profile analysis (LPA) was conducted. Evaluation criteria for model comparison were BIC and ICL.

Two distinct profiles were identified in the success group and labeled as proficient solvers (Profile 1, $n = 188$) and successful explorers (Profile 2, $n = 74$), respectively, with significant mean differences on all seven indicators. Proficient solvers who had the highest CPS ability level demonstrated multiple exploratory strategies such as VOTAT, the used of resetting to release cognitive load and the initial planning. The CPS score of proficient solvers (577.67) was higher than successful explorers (534.73), however, there were no significant differences in both demographic variables and attitude variable. It seems that learning occurred during successful explorers' exploration, which led to a successful solution.

Three different profiles were found in the failure group and labeled as exploring (Profile 3, $n = 64$), strategic (Profile 4, $n = 68$) and disengaged (Profile 5, $n = 14$) profiles, respectively, with significant mean differences on seven indicators. Among the three profiles, the exploring students were active in exploring but spent less time (in percentage) in planning. Strategic students used more strategies in terms of VOTAT, resetting, and initial planning. Disengaged students barely engaged in problem solving. The strategic profile had the highest CPS score (464.66), followed by the exploring (481.85), and the disengaged (415.40) profile. There were no significant differences in both demographic variables and attitude variable among three profiles.

To sum up, strategic and sufficient explorations as well as initial planning all contributed to the successful solution of the current CPS task. Students' profile membership yields more diagnostic information than the scores on each dimension.

Keywords: complex problem solving, process behavior, PISA2012, latent profile analysis, log data

信任感、亲子冲突对青少年抑郁的影响：一项交叉滞后研究

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摘 要 对 652 名青少年进行间隔两年的追踪研究，通过交叉滞后的方法探讨信任感、亲子冲突和青少年抑郁之间的相互作用。结果发现，基于理论建立的四种模型之中，稳定性模型、症状驱动模型、情感驱动模型及素质-应激模型中，其中修订后的情感驱动模型的拟合最好，意味着先前的信任感可以显著预测随后的信任感和青少年抑郁，先前的抑郁可以显著预测随后的青少年抑郁，而先前的抑郁不能显著地预测随后的信任感，先前的亲子冲突可以预测随后的亲子冲突。研究表明信任感和青少年抑郁的相互关系，揭示了信任感和青少年抑郁间的作用机制。

关键词 信任感，亲子冲突，青少年抑郁，交叉滞后，CFPS

Trust, Parent-child Conflict and Teenage Depression: A Longitude Study

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Abstract: A two-year follow-up study was conducted on 652 adolescents to explore the interaction between trust, parent-child conflict and adolescent depression through a cross-lag method. The results found that among the four models based on theory, among the fundamental model, symptom-driven model, emotion-driven model, and

quality-stress model, the emotion-driven model fits best, meaning the prior trust can significantly negatively predict the subsequent depression of adolescents and the trust, while the prior depression cannot significantly predict the subsequent trust, and the prior parent-child conflict can predict the subsequent parent-child conflict. Studies have shown the causal relationship between trust and depression in adolescents, revealing the mechanism of the network between trust and depression in adolescents.

Keywords: Trust, Parent-child Conflict, Teenage Depression, CFPS, Cross-lag

特岗教师职业认同的性别、任教学段和学历差异：元分析

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摘要 职业认同是特岗教师做好本职工作的心理基础，是决定特岗教师职业发展质量好坏的关键。特岗教师的职业认同越高，越不会出现职业离职倾向，同时，提高特岗教师的职业认同也有助于缓解特岗教师职业倦怠，降低其离职率，提升其留任率。因此研究特岗教师的职业认同对农村教育持续健康发展具有十分重要的意义。从“特岗计划”提出到如今，十五年时间里，教育学和心理学学者采用实证研究范式开展了特岗教师职业认同及其与职业幸福感、工作投入、离职倾向等关系的研究，也取得了大量研究成果，为“特岗计划”更加科学、理性、有效地实施提供了实证依据。但系统梳理关于特岗教师职业认同领域的研究发现，特岗教师职业认同总体水平高低存在争议，并且相关研究也存在因调查地域、测量工具、数据处理等诸多方面的一致而带来的结果不尽相同的问题。因此本研究，采用元分析技术考察我国特岗教师职业认同总体水平以及与性别、任教学段、学历的关系。在中国知网等数据库以“特岗教师”和“职业认同”为关键词检索 2009 年 1 月-2021 年 5 月的相关文献，共筛选其中 17 篇文献、2755 名特岗教师纳入研究。采用随机效应模型进行数据处理，得到以下结果：（1）我国特岗教师职业认同的整体水平处于较高水平；（2）特岗教师职业认同与性别、任教学段相关显著，与学历相关不显著；（3）男性特岗教师的职业认同水平低于女性特岗教师，小学及以下学段特岗教师的职业认同水平高于小学以上学段特岗教师；（4）特岗教师职业认同与性别、任教学段不受调查地域、测量工具、出版时间的调节。

关键词 特岗教师,职业认同,随机效应模型,元分析

A Meta Analysis of Gender, Teaching Period and Educational Background Differences in Professional Identity of Special Post Teachers

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Abstract: Professional identity is the psychological basis for special post teachers to do their job well, and it is the key to determine the quality of special post teachers' professional development. At the same time, improving the professional identity of special post teachers also helps to alleviate their job burnout, reduce their turnover rate and improve their retention rate. Therefore, it is of great significance to study the professional identity of special post teachers for the sustainable and healthy development of rural education. In the past 15 years since the "special post plan" was put forward, educators and psychologists have adopted the empirical research paradigm to carry out the research on the professional identity of special post teachers and its relationship with professional well-being, work engagement, turnover intention, etc., and have also made a lot of research results, which provides an empirical basis for the more scientific, rational and effective implementation of the "Special Post Plan". However, a systematic review of the research in the field of special post teachers' professional identity shows that the overall level of special post teachers' professional identity is controversial, and the results of the relevant research are not the same due to the inconsistency of survey area, measurement tools, data processing and many other aspects. Therefore, this study uses

meta-analysis technology to investigate the overall level of professional identity of special post teachers in China and its relationship with gender, teaching period and educational background. In CNKI and other databases, "special post teachers" and "professional identity" were used as keywords to search the relevant literature from January 2009 to may 2021. A total of 17 articles and 2755 special post teachers were selected for the study. The results are as follows: (1) the overall level of professional identity of special post teachers in China is at a high level; (2) The professional identity of special post teachers is significantly correlated with gender and teaching period, but not with education background; (3) The professional identity level of male special post teachers is lower than that of female special post teachers, and the professional identity level of primary school and below special post teachers is higher than that of primary school and above special post teachers; (4) Professional identity, gender and teaching period of special post teachers are not regulated by survey area, measurement tools and publishing time.

Keywords: Special post teachers, Professional identity, Random effect model, Meta analysis

青少年家庭教养方式对社会适应的影响：情绪智力的中介作用

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摘要 本研究基于中国山东的 274 名中学生，探究了家庭教养方式、情绪智力与社会适应三个变量间的关系，其中社会适应能力，指个体为了与环境取得和谐的关系而产生的心理和行为的变化，它是个体与各种环境因素连续而不断改变的相互作用过程，通过“领域-功能”模型可将社会适应分为四个基本适应领域（自我适应、人际适应、行为适应和环境适应）和积极、消极两种功能状态；家庭教养方式指父母对养育子女的态度和教育方式，包括拒绝、偏爱和过度保护三个维度；情绪智力是一种加工情绪信息的能力，它包括准确地评价自己和他人的情绪，恰当地表达情绪，以及适应性地调控情绪的能力，包括自我情绪评估、他人情绪评估、情绪调节、情绪利用四个维度。在中国山东省德州市乐陵中学初一、初二、初三的中学生中分层随机抽样选择被试，采用 SPSS 26.0 进行数据处理和统计分析，并进行共同方法偏差统计检验，验证了情绪智力对教养方式和社会适应之间的关系的中介作用，并研究了被试所处年级对变量之间关系的影响。研究结果表明，家庭教养方式显著预测情绪智力和社会适应，同时情绪智力与社会适应之间存在显著正相关，情绪智力对教养方式和社会适应的关系起部分中介作用。此外，被试的年级（年龄）在情绪智力和社会适应、教养方式和社会适应的关系中均没有起到显著的调节作用，原因可能为被试仅为 7-9 年级的初中生，年龄在 12-15 岁之间，年龄范围过小，故统计分析的结果不显著。本研究为发展与教育心理学研究领域的后续实验提供了理论基础和研究证据的支持，并且在与年龄相关的研究中，也提供了可供探索的空间，并对未来的研究方向进行了展望。

关键词 家庭教养方式，社会适应，情绪智力，青少年

The Influence of Parenting Styles of Adolescents on Their Social Adjustment: The Mediating Role of Emotional Intelligence

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Abstract: Based on 274 adolescents in junior high school in Shandong, China, this study examined the relationship among three variables of parenting styles (including three dimensions of rejection, favouritism and overprotection), emotional intelligence and social adjustment, demonstrated the mediating effect of emotional intelligence on the relationship between parenting style and social adjustment, and examined the influence of grade level on the relationship between variables. The results revealed parenting style significantly predicts emotional intelligence and social adjustment, and there is a significant positive correlation between emotional intelligence and social adjustment. Emotional intelligence played a partial mediating role in the relationship between parenting style and social adjustment. This study provides theoretical basis and evidence support for subsequent researches in the field of

development and educational psychology, and also provides space for exploration in age-related studies. Suggestions for future directions were discussed.

Keywords: parenting style, social adjustment, emotional intelligence, adolescents

中小学生过度使用互联网与学业成绩的关系研究

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摘要 随着信息化时代的到来, 互联网给我们带来了无数的便利, 但与此同时, 也给我们的生活和学习带来了一定的危害。尤其是对于自制力较差的青少年来说, 过度使用互联网对其身心的影响更大。本研究探讨中小学生过度使用互联网与数学成绩的关系, 并进一步分析影响二者相关的影响因素。研究采用整群随机抽样方法, 通过网络形式对青岛市四年级、八年级的学生行问卷调查, 共计抽取全市 18649 名四年级学生、12553 名八年级学生参与研究, 包括三部分。研究问题 1: 使用雷雳、杨洋编制的《青少年病理性互联网使用量表》进行四年级和八年级学生过度使用互联网情况调查, 同时采用一场标准化数学测试对四年级和八年级学生进行测试, 分析中小学生过度使用互联网和数学成绩在人口学变量上的差异; 研究问题 2: 分析四、八年级学生过度使用互联网与学业成绩之间的关系; 研究问题 3: 依据社会认知理论从行为因素、环境因素和个体因素三方面探讨四、八年级学生过度使用互联网对数学成绩影响的主要机制。研究结果表明: 四年级和八年级男女生在过度使用互联网方面均存在显著性差异, 具体表现为男孩的过度使用互联网倾向高于女生; 四年级男女生在数学成绩上存在显著性差异, 具体表现为四年级男孩数学成绩优于女生, 八年级男孩和女生数学成绩不存在显著性差异。1. 四年级和八年级学生过度使用互联网与数学成绩之间均存在显著的负向相关关系, 具体表现为四年级学生二者相关不存在性别差异, 八年级学生二者相关存在性别差异, 男生高于女生。2. 四年级学生过度使用互联网对数学成绩具有独立影响作用, 八年级学生过度使用互联网对数学成绩的影响不具有独立影响作用, 其受到等多种因素的干扰, 环境因素(如人际关系、教师支持等)对八年级女生过度使用互联网与学业成绩的影响更大, 个体因素(如自我效能感)对八年级男生女生的过度使用互联网与数学成绩的关系影响均十分显著。本研究有助于发现中小学生过度使用互联网和学业成绩之间的年级和性别差异, 帮助家长和教师针对不同年龄段的学生采取一定的措施缓解其负面影响。

关键词 中小学生, 过度使用互联网, 学业成绩

A Study on the Relationship between Excessive Use of the Internet and Academic Achievements of Primary and Middle School Students

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Abstract: With the advent of the information age, the Internet has brought us countless conveniences, but at the same time, it has also brought certain harm to our lives and studies. Especially for young people with poor self-control, excessive use of the Internet has a greater impact on their body and mind. This research explores the relationship between the excessive use of the Internet and mathematics performance of primary and middle school students, and further analyzes the related factors that affect the two. The study adopts a cluster random sampling method and conducts a questionnaire survey of Qingdao City's fourth and eighth grade students through the Internet. A total of 18,649 fourth-grade students and 12,553 eighth-grade students in the city were selected to participate in the research, including three parts. Research question 1: Use the "Adolescent Pathological Internet Use Scale" compiled by Lei Li and Yang Yang to investigate the excessive use of the Internet among students in fourth and eighth grades. At the same time, a standardized math test is used to test students in fourth and eighth grades. Analyze the differences in demographic variables between primary and middle school students' overuse of the Internet and mathematics scores;

Research Question 2: Analyze the relationship between the fourth and eighth grade students' overuse of the Internet and their academic performance; Research Question 3: Based on social cognitive theory from behavioral factors , Environmental factors, and individual factors to explore the main mechanism of the impact of the fourth and eighth grade students' excessive use of the Internet on their mathematics performance. Research indicates: 1. There are significant differences in the overuse of the Internet between male and female students in the fourth and eighth grades. The specific manifestation is that boys have a higher tendency to overuse the Internet than girls; there are significant differences in mathematics performance between male and female students in fourth grade, which is specifically shown in four Boys in grades are better than girls in mathematics, and there is no significant difference in mathematics scores between boys and girls in eighth grade. 2. There is a significant negative correlation between the overuse of the Internet and mathematics scores between the fourth and eighth grade students. The specific performance is that there is no gender difference in the relationship between the fourth and eighth grade students, and there is a gender difference in the relationship between the eighth grade students and boys. Higher than girls. 3. Excessive use of the Internet by fourth-grade students has an independent effect on mathematics performance, and the excessive use of the Internet by eighth-grade students does not have an independent impact on mathematics performance. Support, etc.) has a greater impact on the overuse of the Internet and academic performance of eighth grade girls. Individual factors (such as self-efficacy) have a significant impact on the relationship between the overuse of the Internet and mathematics performance of eighth grade boys and girls. This research helps to discover the grade and gender differences between the excessive use of the Internet and academic performance of primary and secondary school students, and helps parents and teachers take certain measures to alleviate the negative effects of students of different ages.

Keywords: Primary and Middle school students, excessive use of the Internet, academic performance

留守儿童社会支持与心理资本的关系： 亲社会行为与情绪调节的链式中介作用

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摘要 由于各种原因造成父母双方或一方流动到其他地区，而孩子留在户籍所在地并因此不能和父母双方共同生活的儿童被称为留守儿童。造成留守儿童出现更多心理问题的最大原因是其面对的现实问题，即父母支持的严重缺失。研究发现，与非留守儿童相比，留守儿童感知到的父母关爱更少，对家庭领域的需要得不到满足，被父母所爱的需要更加强烈。所谓积极心理资本是指个体在处理事件和问题时所表现出积极的心理品质或心理状态，是一个综合包容的心理结构，具有可开发、可培育的类状态特质。有研究表明，“积极心理资本能够很好地促进学业成就、心理健康、人际关系和社会适应，具有跨文化特性并适用多种群体”。社会支持与个体心理健康有着直接密切的关系，它在缓解个体心理压力、消除个体心理障碍、增进个体心理健康等方面具有重要的影响作用。本研究旨在探索留守儿童社会支持与心理资本的关系，并进一步考察亲社会行为与情绪调节的中介作用，以探讨其中的影响机制。

本研究在安徽省各地农村地区的中小学进行问卷调查。采用《领悟社会支持量表》（PSSS）、《亲社会行为量表》、《情绪调节量表》、《心理资本量表》作为测量工具。对有效数据进行分析后发现：（1）留守儿童心理资本、社会支持、亲社会行为、情绪调节之间存在显著正相关关系。（2）链式中介效应检验表明，社会支持可以预测留守儿童的心理健康；同时存在三条间接路径：社会支持通过亲社会行为和情绪调节的链式中介作用影响留守儿童的心理健康；社会支持通过亲社会行为影响留守儿童的心理健康；社会支持通过情绪调节影响留守儿童的心理健康。

通过了解社会支持对留守儿童的心理健康的影响，以及亲社会行为与情绪调节的中介机制的作用，未来研究将继续探索促进留守儿童心理健康的方式。同时，研究有利于未来提出留守儿童心理健康发展更有针对性的措施，具有重要的现实意义。

关键词 社会支持，心理资本，亲社会行为，情绪调节，留守儿童

The Relationship between social support and psychological capital of left-behind children: The chain mediating effect of prosocial behavior and emotion regulation

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Abstract: Children whose parents or parents move to other areas due to various reasons are called left-behind children because their children remain in their registered residence and cannot live with their parents. The biggest reason for left-behind children to have more psychological problems is the real problem they face, namely the serious lack of parental support. The study found that compared with non-left-behind children, left-behind children perceive less care from their parents, have unmet needs in the family field, and have a stronger need to be loved by their parents. The so-called positive psychological capital refers to the positive psychological quality or psychological state displayed by individuals when dealing with events and problems. It is a comprehensive and inclusive psychological structure with developable and cultivated state-like characteristics. Studies have shown that "positive psychological capital can well promote academic achievement, mental health, interpersonal relationships and social adaptation, and has cross-cultural characteristics and is applicable to multiple groups". Social support has a direct and close relationship with individual mental health, which plays an important role in alleviating individual psychological pressure, eliminating individual psychological barriers and improving individual mental health. The purpose of this study is to explore the relationship between social support and psychological capital of left-behind children, and to further investigate the mediating effect of prosocial behavior and emotion regulation, so as to explore the influencing mechanism. This study conducted a questionnaire survey in primary and secondary schools in rural areas of Anhui province. Comprehension Social Support Scale (PSSS), prosocial Behavior Scale, Emotion regulation Scale and psychological Capital Scale were used as measurement tools. After analyzing the effective data, it is found that : (1) there is a significant positive correlation between psychological capital, social support, prosocial behavior and emotional regulation of left-behind children. (2) The chain mediating effect test shows that social support can predict psychological capital of left-behind children; There are also three indirect paths: social support influences the psychological capital of left-behind children through the chain mediating effect of prosocial behavior and emotion regulation; Social support influences the psychological capital of left-behind children through prosocial behaviors; Social support influences the psychological capital of left-behind children through emotional regulation. By understanding the impact of social support on the psychological capital of left-behind children and the role of the mediating mechanism of pro-social behavior and emotion regulation, future research will continue to explore ways to promote the mental health of left-behind children. At the same time, the study will help put forward more targeted measures for the mental health development of left-behind children in the future, which has important practical significance.

Keywords: social support, psychological capital, prosocial behavior, emotional regulation, left-behind children

科学态度与科学成绩的关系：一项三水平元分析

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摘要 随着科学技术的进步与发展, 科学教育逐渐成为重要的学习领域。除了关注科学成绩外, 培养学生对科学的积极态度也是科学教育的重要目标之一。近年来, 科学态度与科学成绩的关系成为了研究者感兴趣

的主题,但尚未得出一致的结论。一些研究发现科学态度与科学成绩呈显著正相关,而另一些研究则发现科学态度与科学成绩呈弱相关且不显著,甚至两者呈负相关。本研究运用元分析技术探讨了科学态度与科学成绩之间的关系,并通过调节效应分析考察文章发表类型、年级、地区、科学态度类型、科学成绩测量工具及文章发表年份的调节作用。通过系统地文献检索,共纳入 24 篇初始研究,包含 85 个效应量和 51793 名被试。由于大部分初始研究报告了多个相关的效应量,本研究选取三水平元分析对数据进行分析。结果发现科学态度与科学成绩之间总体上存在中等程度的正相关($r = 0.244, p < 0.001$),调节效应分析的结果表明科学态度类型的调节作用显著,科学自我效能感与科学成绩($r = 0.343$)的相关系数显著大于科学兴趣与科学成绩之间的相关($r = 0.194$)、以及与社会方面相关的科学态度与科学成绩之间的相关($r = 0.166$)。但文章发表类型、年级、地区、科学成绩测量工具和文章发表年份的调节作用不显著。研究结果表明科学态度与科学成绩关系密切,对科学态度的干预和科学成绩的提高具有重要意义,未来的研究仍需要关注其它变量在科学态度与科学成绩关系中的调节作用。

关键词 科学态度,科学成绩,三水平元分析,调节效应分析

The Relationship between Attitude towards Science and Academic Achievement in Science: A Three-level Meta-Analysis

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Abstract: With the development of science and technology, science education has gradually become an important field of learning. In addition to focusing on academic achievement in science, one of the purposes of science education is to develop a positive attitude towards science. In recent years, researchers have shown an increased interest in the attitude-achievement relationship in science, but there is still no consistent conclusion. Some studies found that the attitude towards science and science achievement correlated positively, while other studies revealed that the relationship between attitude towards science and science achievement was either quite weak, statistically non-significant, or even negative. In this study, we conducted a meta-analysis to investigate the relationship between attitude towards science and academic achievement in learning science, and to explore if some study characteristics (e.g. publication type, grade, region, type of attitude, measures of science achievement and publication year) could have contributed to the inconsistent findings with regard to this relationship as observed in the research literature. As multiple dependent effect sizes were reported in most studies, we used the three-level meta-analysis method to analyze the data. A total of 24 primary studies, 85 effect sizes, and 51,793 participants were identified through systematic literature search. The results revealed that there was an overall positive and moderate relationship between attitude towards science and learning achievement in science ($r = 0.244, p < 0.001$). Furthermore, the results further found that this association was influenced by type of attitude and the strength of the correlation between science performance and self-efficacy about science ($r = 0.343$) was stronger than that of interest ($r = 0.194$), and societal relevance of attitude towards science ($r = 0.166$). However, the moderating effects of publication type, grade, region, measures of science achievement and publication year were not significant. Taken together, the findings clearly indicate that the attitude towards science is closely related to science achievement, and provide insights for the intervention of science attitude and the improvement of science achievement. Other potential moderator variables should be considered in the future to further investigate the heterogeneity across studies.

Keywords: attitude towards science, science achievement, three-level meta-analysis, moderator analysis

基于事后分析的高中生数学学业能力认知诊断

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摘要 高中数学学业水平考试是衡量学生数学学业能力发展水平的重要依据。运用认知诊断技术对高中生数学学业能力进行诊断, 可以从微观层面对学生的数学认知结构、学习策略等进行细致诊断分析。已有相关研究大多集中于顺向的数学能力认知诊断测验 Q 矩阵标定、试卷编制及大规模测评, 但是基于已有学业水平考试的标准化试题与实测数据, 进行逆向的 Q 矩阵标定和知识状态诊断分析的研究还相对较少。

本研究从某省 2019 年 12 月高中数学学业水平考试中随机抽取 5000 名考生为被试, 首先通过试题、教材、课程标准的内容、结构、目标进行一致性分析, 并结合试题双向细目表的考查重点, 确定了包括数学基础知识(A1)、函数初步(A2)、几何直观与空间想象(A3)、数学统计与建模(A4)、三角函数(A5)和函数应用(A6)等 6 个关键数学认知属性的测验 Q 矩阵, 然后采用自编 R 语言程序选择模型-数据拟合较好的 GDINA 模型($\max X^2=115.28$, $rmsea=0.029$)进行测验参数估计、属性掌握概率、知识状态诊断等一系列分析。

结果表明:(1)该省 2019 年 12 月高中数学学业水平考试卷的整体内部一致性信度很好(Cronbach's $\alpha=0.91$), 试题平均难度为中等偏低水平($b=-0.63$), 平均区分度为中等偏高水平($a=2.00$); 考生的数学学业能力 θ 均值为 0.025, 标准差为 0.968, 基本符合正态分布形态(偏度为-0.017, 峰度为-0.673)。(2)考生对关键认知属性的掌握概率依次为 $A1(p=0.70)>A2(p=0.42)>A4(p=0.39)>A3(p=0.37)>A6(p=0.31)>A5(p=0.29)$, 考生最主要的认知模式有“111111(25.8%, 1290 人)”、“000000(30.5%, 1525 人)”、“100000(24.4%, 1220 人)”、“111100(4.0%, 200 人)”、“111101(2.5%, 125 人)”、“100100(2.2%, 110 人)”和“110100(2.1%, 105 人)”, 即考生对数学基础知识的掌握程度最好, 对函数初步、几何直观与空间想象、数学统计与建模等属性的掌握相对较弱, 对三角函数和函数应用等属性的掌握程度是最弱的。基于以上分析, 学校应进一步强化学生的基础性数学学力训练, 并有针对性地对函数初步、函数应用、三角函数等几个关键认知属性进行补救教学。

关键词 认知诊断, 事后分析, 高中学业水平考试, 数学学业能力, GDINA 模型

The Cognitive Diagnosis of High School Students Mathematics Learning Ability Based on Afterward Analysis

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Abstract: High school mathematics proficiency examination is an important basis for measuring the development of students' mathematics learning ability. With cognitive diagnostic technique in diagnosing and analyzing the mathematics learning ability of high school students, it is possible to conduct detailed diagnostic analysis on the students' mathematical cognitive structure and learning strategies from the microscopic level. Most of the existing related researches focus on the forward Q matrix calibration, test paper preparation and large-scale evaluation of the mathematical ability cognitive diagnostic test, but there are relatively few researches on reverse Q matrix calibration and knowledge state diagnosis analysis on the basis of the standardized test questions and measured data of the existing academic proficiency test.

In the study, the sample of 5000 candidates was randomly selected from the high school mathematics academic proficiency test in a certain province in the December of 2019. First, with the analysis of the consistency of the content, structure, and objectives of the test questions, textbooks, and curriculum standards, combined with the examination focus of the two-way detailed list of test questions, the Q matrix of six key mathematical cognitive attributes is settled, which includes basic knowledge of mathematics (A1), preliminary function (A2), geometric intuition and spatial imagination ability (A3), mathematical statistics and modeling ability (A4), trigonometric

function (A5), and function application (A6). Next, the GDINA model with better data fitting(max $X^2=115.28$, rmsea=0.029) is selected by self-made R language program, and the model is used to make a series of analysis on test parameter estimation, attribute mastery probability and knowledge state diagnosis.

The results show that: (1) The overall internal consistency of the provincial high school mathematics test papers in the December 2019 is highly reliable(Cronbach's $\alpha=0.91$), and the average difficulty of the test questions is moderately low ($b=-0.63$), the average discrimination is moderately high($a=2.00$); the average value of candidates' mathematical learning ability θ is -0.007 , and the standard deviation is 0.967 , which basically conforms to the normal distribution (skewness is -0.017 , kurtosis is 0.673). (2) The probabilities of the candidates' mastery of key cognitive attributes are $A1(p=0.70) > A2(p=0.42) > A4(p=0.39) > A3(p=0.37) > A6(p=0.31) > A5(p=0.29)$, the primary cognitive patterns of candidates are "111111 (25.8%, 1291 persons)", "000000 (30.5%, 1524 persons)", "100000 (24.4%, 1218 persons)", "110011 (4.0%, 201 persons)", "110111 (2.5%, 125 persons)", "100001 (2.2%, 109 persons)" and "110001 (2.1%, 105 persons)", that is, the candidates' attribute ability of the basic knowledge of mathematics is the best, the attribute ability of function preliminary, geometric intuition and spatial imagination, mathematical statistics and modeling is relatively weak, and the attribute ability of triangle functions and function application is the weakest. Based on the above analysis, the school should further strengthen the students' basic mathematics training, and provide targeted remedial teaching on the key cognitive attributes of function preliminary, function applications, triangle functions.

Keywords: Cognitive Diagnosis, Afterward Analysis, High School Proficiency Examination, Mathematics Learning Ability, GDINA Model

肥胖儿童的学业成绩：工作记忆和注意力的作用

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摘要 近年来, 儿童肥胖增长趋势迅猛。肥胖不仅影响儿童的身心健康, 造成焦虑、抑郁等不良心理倾向, 同时也对其学业成绩造成极大影响。本文通过 2 个研究来考查不同体重儿童的学业成绩差异以及工作记忆和注意力在其中的作用。研究 1 选取北京市某小学 4-6 年级学生 316 名, 使用问卷来调查儿童的人口学变量、学业成绩、身高体重、饮食情况等, 以探查不同体重儿童学业成绩之间存在的差异。研究 2 从研究 1 的 316 名被试中选取肥胖、超重以及正常体重儿童共 144 名作为研究对象, 使用《工作记忆量表》、《注意力测验》来测量被试的工作记忆和注意力。考察工作记忆以及注意力在不同体重儿童上存在的差异, 以及工作记忆和注意力对肥胖儿童学业成绩产生的影响。本研究得到如下结论,

- 1、肥胖儿童学业成绩、工作记忆以及注意力显著低于正常体重儿童。
- 2、儿童每周体育活动时长与学业成绩呈正相关, 儿童每周食用快餐频率与学业成绩呈负相关。
- 3、肥胖儿童工作记忆和注意力对学业成绩存在显著影响。其中, 肥胖通过影响儿童的注意力, 进而作用于儿童的学业成绩。

关键词 肥胖儿童, 学业成绩, 工作记忆, 注意力

Academic achievement of obese children: the roles of work memory and attention

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Abstract: In recent years, childhood obesity has increased rapidly. Obesity not only affects children's physical health, and causes anxiety, depression, and other unhealthy psychological tendencies, but also greatly affects children's academic performance. Therefore, this study uses two empirical studies to examine the difference between the

academic performance of children of different weights and the impact of working memory and attention on the academic performance of obese children. Study 1 selected 316 primary students in Beijing from grades 4 to 6 and used a self-compiled questionnaire to investigate demographic variables, academic performance, height and weight, and diet of children to explore the differences in the academic performance of children of different weights. Study 2 explored the differences in working memory and attention of children of different weights, and the effect of working memory and attention on the academic performance of children. This research has the following conclusions,

1. The academic performance, working memory, and attention of obese children are significantly lower than those of normal-weight children.

2. The length of children's weekly physical activity is positively correlated with academic performance, and the frequency of children's weekly fast-food consumption is negatively correlated with academic performance.

3 Working memory and attention of obese children have a significant impact on academic performance. Among them, obesity affects children's attention, which in turn affects children's academic performance.

Keywords: obese children, academic performance, working memory, attention

大学生网络成瘾变迁的横断历史研究

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摘要 网络是一把双刃剑, 网络的迅速普及给人们带来便利, 也带来了一些不利影响, 比如网络成瘾。纵观以往研究, 研究者对大学生网络成瘾率进行了考察, 但不同时段不同地域的横断研究可能导致各个研究结果的差异, 也可能存在年代效应, 即大学生网络成瘾水平可能会随着年代的变迁而发生变化。可见, 以往研究忽略了大学生网络成瘾的年代差异, 无法回答大学生网络成瘾水平随着年代变迁是加剧还是降低这一变化趋势。因此, 为探讨我国大学生网络成瘾的纵向发展趋势, 本研究拟采用横断历史研究法来考察近 15 年来我国大学生网络成瘾的整体变迁情况。此外, 大量研究表明, 男生比女生更容易发生网络成瘾行为, 本研究将从宏观纵向的角度对大学生网络成瘾的性别差异进行验证。研究者指出, 根据横断历史研究得出的定量数据确定心理变迁趋势, 借助每年公布的社会发展指标, 可以确定社会变迁对心理量的影响。因此, 本研究拟采用互联网普及率和国家经济发展状况来考察社会因素对大学生网络成瘾水平的影响。通过筛选, 对 2004-2018 年间 48 篇采用台湾学者陈淑慧等人编制的中文网络成瘾量表 (CIAS-R) 测量我国大学生网络成瘾的研究报告进行分析, 考察网络成瘾水平随年代的整体变化趋势及其性别差异, 以及社会变迁与网络成瘾水平之间的关系。结果显示, 从整体变化来看, 近 15 年来大学生网络成瘾水平的得分大致上升了 0.30-0.85 个标准差, 大学生网络成瘾总分及各因子得分均呈现上升趋势, 变化幅度大致为中等程度; 大学生网络成瘾的变化趋势存在显著的性别差异, 即女大学生网络成瘾水平的变化趋势显著上升, 男大学生网络成瘾水平变化不显著; 大学生网络成瘾与互联网普及率、国家经济发展状况存在显著相关, 社会变迁能有效预测大学生网络成瘾水平。

关键词 网络成瘾, 横断历史研究, 社会变迁, 大学生

A Cross-temporal Meta-analysis of Changes in College Students' Internet Addiction

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Abstract: The Internet is a double-edged sword. While the Internet brings convenience to people, it also brings some adverse effects, such as Internet addiction. In the present study, a lot of researchers are investigating the rate of Internet addiction. However, cross-sectional studies in different periods and different regions may lead to differences in the results of various studies, and there may also be a chronological effect. The level of college students' Internet addiction may change with time. It can be seen that previous studies have ignored the chronological differences of

college students' Internet addiction and cannot answer the changing trend of whether the level of college students' Internet addiction increased or decreased with the change of time. Therefore, in order to explore the longitudinal development trend of Internet addiction among college students, this study intends to use a Cross-temporal Meta-analysis method to investigate the overall changes in Internet addiction among college students in the past 15 years. In addition, studies have shown that male students are more likely have Internet addiction behaviors than female students. This study will verify the gender differences in Internet addiction among college students from a longitudinal perspective. The researchers pointed out that according to the quantitative data from Cross-temporal Meta-analysis to determine the psychological change trend, with the help of the social development indicators published every year, the influence of social changes on the psychological quantity can be determined. Therefore, this study intends to use the Internet penetration rate and the level of economic development to investigate the impact of social factors on the level of Internet addiction among college students. Through screening, there were 48 papers using the Chinese Internet Addiction Scale (CIAS-R) compiled by Taiwan scholar Chen Shuhui to measure Internet addiction among college students from 2004 to 2018. The results show that, the total scores of college students' Internet addiction levels and various factors have shown an upward trend, with a roughly moderate degree of change. There are significant gender differences in the changing trend of Internet addiction among college students, the changing trend of female students' Internet addiction level has increased significantly, while the level of male students' Internet addiction has not changed significantly; The Internet addiction of college students is significantly related to the Internet penetration rate and the state of national economic development, and social change can effectively predict the level of Internet addiction of college students.

Keywords: internet addiction, cross-temporal meta-analysis, social changes, college students

感觉寻求对中学生欺凌行为的影响：一个有调节的中介模型

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摘要 校园欺凌事件日益受到社会的关注，了解校园欺凌发生的内在机制对于预防校园欺凌有着重要意义。感觉寻求是个体是对多变化的、新异的、复杂的和强烈的感觉和体验的寻求，感觉寻求是导致中学生问题行为的一个重要原因，校园欺凌作为中学生问题行为的一种，感觉寻求在中学生欺凌行为中的作用值得关注；同时，班级氛围也会影响校园欺凌，集体效能感作为衡量班级氛围的一个重要指标，它在欺凌行为中的影响同样值得关注。本研究主要探讨中学生感觉寻求、集体效能感以及欺凌行为之间的关系，同时对性别在其中的调节作用进行检验。

采用整体抽样的方法，选取云南省某地三所中学初一至初三年级 825 名学生，其中男生 386 人，女生 439 人，使用《感觉寻求量表》、《集体效能信念量表》、《主动性攻击与反应性攻击问卷》等工具收集数据，利用 SPSS、MPLUS 统计软件对数据资料进行分析，主要检验集体效能感在感觉寻求与中学生欺凌行为之间的中介作用，以及该作用是否受到性别因素的调节。结果表明：（1）感觉寻求、集体效能感与校园欺凌三个变量之间存在显著相关，其中感觉寻求与校园欺凌呈显著正相关（ $r=0.287$ ， $p<0.05$ ），集体效能感与校园欺凌呈显著正相关（ $r=0.204$ ， $p<0.05$ ），感觉寻求与集体效能感之间呈现显著正相关（ $r=0.138$ ， $p<0.05$ ）；（2）集体效能感在感觉寻求与中学生欺凌行为之间起部分中介作用；（3）性别对集体效能感的中介作用具有调节效应，性别调节了中介作用的后半路径。感觉寻求对中学生欺凌行为的影响是有调节的中介效应，感觉寻求直接影响中学生欺凌行为，也通过集体效能感进而影响校园欺凌，男生群体中感觉寻求通过集体效能影响校园欺凌的效应更大。

关键词 中学生，感觉寻求，欺凌，集体效能感

Influence of sensation seeking on bullying in middle school students: a moderated mediation model

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Abstract: School bullying is attracted more and more attention from the society. It is important for us to understand the internal mechanism of school bullying, then we can prevent it. Sensation seeking means the person want to find varied, new and different, complex and strong feelings and experiences. Sensation seeking is an important cause for middle school students' problem behavior. As a kind of problem behavior in middle school students, the role of sensation seeking in bullying deserves our attention; At the same time, class atmosphere also affects school bullying. As an important indicator to measure class atmosphere, collective efficacy also deserves our attention. The purpose of this study is to investigate the relationship among sensation-seeking, collective efficacy and bullying in middle school students, and to examine the moderating effect of gender.

825 students are selected from grade one to Grade three in three middle schools in Yunnan Province, including 386 boys and 439 girls, we collect data by using Sensation Seeking Scale, Collective Efficacy Belief Scale and Proactive and Reactive Aggression Questionnaire. SPSS and MPLUS software are used to analyze the data. The research mainly examines the mediating effect of collective efficacy between sensation-seeking and bullying in middle school students, and whether the effect is regulated by gender factors. Results show that: (1) the correlation among sensation seeking, collective efficacy and bullying are significant, sensation seeking has positive correlation with bullying($r=0.287, p<0.05$), the collective self-efficacy has positive correlation with bullying($r=0.204, p<0.05$), sensation seeking has positive correlation with the collective efficacy($r=0.138, p<0.05$). (2) Collective efficacy plays a partial mediating role between sensation-seeking and bullying in middle school students; (3) the mediation of collective efficacy is moderated by gender, and gender regulates the latter half path of mediating effect. The influence of sensation seeking on the bullying in middle school students is a moderated mediation effect. Sensation seeking directly affects the bullying in middle school students, and also it affects the bullying through collective efficacy. In the group of male students, the influence of sensation seeking on the bullying is greater through collective efficacy.

Keywords: Middle school students, Sensation seeking, Bullying, Collective efficacy

团体箱庭游戏对小学流动儿童情绪调节能力的干预

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摘要 随着现代社会的不断发展, 流动儿童越来越成为社会瞩目的一个研究目标, 在流动儿童的背后, 有家庭因素也有社会因素, 通过问卷调查探索这种“流动”会对小学阶段儿童的情绪调节产生什么影响。研究发现这些流动儿童进入小学后, 会产生学校适应问题, 这些适应有来自老师的、有来自同伴的、也有来自于自己本身的, 那么笔者关注的就是这部分儿童自身内部的情绪调节问题。根据皮亚杰认知发展阶段性理论, 这部分年龄阶段的孩子处于具体形象阶段, 表现为以自我为中心, 并且借助象征物等具体事物表达自己, 因此我们借助了心理学中的重要治疗工具——团体箱庭, 来对这部分儿童进行干预, 游戏是儿童的天性, 达到小学低年级后, 儿童逐渐转为规则性游戏阶段, 因此借助箱庭游戏的方式, 对他们在学校里的的情绪调节能力进行干预, 透过儿童在箱庭上的操作看儿童心理的本质, 对流动儿童的情绪调节能力产生影响。情绪是伴随人们的思维产生的, 情绪上或者心理上的困扰是由于不合理的、不合逻辑的思维所造成的, 为此, ABC 理论的提出者艾利斯宣称: “人的情绪不是由某一诱发事件的本身所引起, 而是由经历了这一事件的人对这一事件的解释和评价所引起的。”在了解流动儿童的基本情况过程中, 我们也会根据这个理论来反观儿童对于自己所经历事件的看法, 在后续运用对流动儿童情绪调节能力做干预的时候, 会将这个理论融入箱庭游戏中。在这

过程中, 我们也会发现什么样的箱庭游戏主题可以对目标儿童的情绪调节能力产生积极影响, 通过箱庭给儿童设置不同的主题, 让儿童参与进箱庭游戏中, 让他们在自定或者固定的环境里摆放材料, 从材料中可以推理出他们对学校的态度以及对周边同学、老师的看法, 然后根据儿童箱庭游戏阶段特点和成人的有效参与互动, 发现问题解决问题。这是本次研究的第二个重点所在。

关键词 流动儿童, 团体箱庭游戏, 情绪调节能力

The Intervention of Group Box Game on the Emotional Regulation Ability of Primary School Migrant Children

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Abstract: With the continuous development of modern society, migrant children have increasingly become a research target of social attention. Behind migrant children, there are family factors and social factors. Through questionnaire surveys, we will explore how this kind of "mobility" affects primary school children. What effect does the adjustment have. Research has found that these migrant children will have school adaptation problems after entering elementary schools. These adaptations come from teachers, peers, and themselves. Then the author is concerned about the internal emotional regulation of these children. According to Piaget's theory of stages of cognitive development, children at this age are in the stage of concrete images, behave as self-centered, and express themselves with the help of specific things such as symbols. Therefore, we use important therapeutic tools in psychology. ——Group box courts to intervene in this part of children. Play is the nature of children. After reaching the lower grades of elementary school, children gradually turn to the regular game stage. Therefore, with the help of box court games, they can regulate their emotions in school. Intervention is performed to see the nature of children's psychology through children's operations on the box court, which has an impact on migrant children's ability to regulate emotions. Emotions are generated with people's thinking. Emotional or psychological distress is caused by irrational and illogical thinking. For this reason, Ellis, the proponent of the ABC theory, declared: "People's emotions are not caused by certain A precipitating event is caused by itself, but caused by the interpretation and evaluation of the event by the people who have experienced it. "In the process of understanding the basic situation of migrant children, we will also reflect on this theory. Children's views on the events they have experienced will incorporate this theory into the box garden game when they are subsequently used to intervene in the ability of migrant children to regulate their emotions. In this process, we will also discover what kind of box garden game themes can have a positive impact on the target child's emotional regulation ability. Through the box garden, children can be set up with different themes, so that children can participate in the box garden game, allowing them to decide on their own or The materials are placed in a fixed environment. From the materials, they can infer their attitudes toward the school and their views toward the surrounding students and teachers. Then, according to the characteristics of children's box game stage and the effective participation and interaction of adults, problems can be found and solved. This is the second focus of this research.

Keywords: Migrant children, Group box game, Emotional Regulation Ability

儿童害羞对内化问题行为的预测：父母教养行为的调节作用

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摘 要 害羞是发展心理学家研究的重要气质特征之一, 是内化问题行为的风险因素, 儿童的害羞常与一些消极的发展结果正相关。同时, 发展是个体与情境动态互动的结果, 家庭作为儿童早期社会化的主要场所, 通过父母日常与孩子的互动, 父母教养行为对于儿童内化问题行为的发展有着重要的影响。本研究采用追踪设计, 希望能够探究儿童 2 岁时的害羞气质对于 4 岁时内化问题行为的预测, 并且探索父母教养行为是否能够

调节害羞对内化问题行为的预测关系。本研究的被试为 66 名儿童，分别在儿童 2 岁和 4 岁通过问卷收集儿童害羞、父母教养行为和儿童内化问题行为信息。结果显示，2 岁时儿童害羞、教养行为中的保护性、拒绝性维度可以显著预测 4 岁时的内化问题行为。保护性和拒绝性的教养行为调节了害羞气质对内化问题行为的影响，并且二者的调节模式相似：对于高保护性组和高拒绝性组来说，害羞对于内化问题行为有显著影响；对于低保护性组和低拒绝性组来说，害羞对于内化问题行为没有显著影响。研究结果能为儿童早期害羞的发展干预及教养行为的选择方面提供指导，例如对害羞儿童给予更多的关注，父母可以选择更加支持性的积极教养行为，在日常育儿实践中减少过度保护性、拒绝性的态度、过分苛责的行为等。

关键词 害羞，内化问题行为，父母教养行为，父母保护性，父母拒绝性

The prediction of children's shyness to internalizing problems: The moderating role of parenting behaviors

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Abstract: Shyness is one of the important temperament characteristics studied by developmental psychologists, and it is a risk factor for internalizing problems. Children's shyness is often positively correlated with some negative development results. Meanwhile, development is the result of dynamic interaction between individual and situation. Family environment is the main place of early socialization of children. Through parents' daily interaction with their children, the parenting behavior plays an important role in the development of children's internalizing problems. In this study, we used the longitudinal design to explore the prediction of shyness at the age of 2 for internalizing problems at the age of 4, and to explore whether the parenting behavior plays a moderating role in this prediction process. The subjects of this study were 66 children. The information about shyness, parenting behaviors and internalizing problems of the children was collected by questionnaire at the time when the children were 2 and 4 years old. The results showed that shyness at the age of 2, protection and rejection dimensions in parenting behaviors could significantly predict internalizing problems at the age of 4. The influence of shyness on internalizing problems is significantly moderated by the parental protection and rejection, and their moderating models are similar: for the high protective group and the high rejective group, shyness has a significant influence on the internalizing problem; for the low protective group and the low rejective, shyness has no significant influence on the internalizing problem. The results can provide guidance for the developmental intervention of shyness in early childhood and the choice of parenting behaviors. For example, pay more attention to shy children, and parents can choose more supportive and positive parenting behavior, and reduce excessive protective, rejective attitude and overly critical behavior in daily parenting practice.

Keywords: shyness, internalizing problems, parenting behavior, parental protection, parental rejection

认知重评影响前瞻记忆的实验研究

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摘要 本研究通过两个实验，确定认知重评对基于时间和基于事件前瞻记忆加工的影响。实验一为 2（图片情绪效价：正性、负性）× 2（情绪调节策略：自由观看、认知重评）的混合实验设计，探究认知重评对基于事件的前瞻记忆的影响。其中情绪调节策略为被试间变量。因变量为背景任务和基于事件前瞻任务的正确率与反应时。结果显示，图片情绪效价对基于事件前瞻记忆的成绩有不同的影响，与负性效价相比，正性效价的前瞻记忆成绩更好；不同的情绪调节策略对基于事件前瞻记忆的表现影响不同，与自由观看组相比，认知重评组的前瞻记忆成绩更低。实验二为 2（图片情绪效价：正性、负性）× 2（情绪调节策略：自由观看、认知重评）的混合实验设计，探究认知重评对基于时间的前瞻记忆的影响。其中情绪调节策略为被试间变量。

因变量为背景任务和基于时间前瞻任务的正确率与反应时。结果显示,正负性效价图片对基于时间前瞻记忆的成绩影响不同,与负性效价相比,正性效价的前瞻记忆成绩更好;两种不同的情绪调节策略对基于时间前瞻记忆的表现影响不同,自由观看组的前瞻记忆成绩优于认知重评组。

研究结果支持了前瞻记忆的预备注意加工与记忆加工理论,为明确前瞻记忆的加工机制提供了进一步的证据。

关键词 认知重评, 前瞻记忆, 情绪, 情绪调节策略

A study on the Influence of Cognitive Reappraisal on Prospective Memory

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Abstract: This study explored the impact of cognitive reappraisal on event-based prospective memory and time-based prospective memory through two experiments. Experiment 1 was a mixed design of 2 (emotion valence: positive, negative) $\times$ 2 (emotion regulation strategy: simply view, cognitive reappraisal), to explore the impact of cognitive reappraisal on event-based prospective memory. Emotion valence is between-subject variables. The dependent variables were the accuracy rate and the reaction time of background tasks and event-based prospective tasks. The results showed that emotional valence had different effects on prospective memory performance. Compared with negative valence, positive valence had better prospective memory performance. Different emotion regulation strategies had different effects on the performance of prospective memory. Compared with the simply-view group, the cognitive reappraisal group had a lower prospective memory performance. Experiment 2 was a mixed design of 2 (emotion valence: positive, negative) $\times$ 2 (emotion regulation strategy: simply view, cognitive reappraisal), to explore the impact of cognitive reappraisal on time-based prospective memory. Emotion valence is between-subject variables. The dependent variables were the accuracy rate and the reaction time of background tasks and time-based prospective tasks. The results showed that emotional valence had different effects on prospective memory performance. Compared with negative valence, positive valence had better prospective memory performance. Emotion regulation strategies had different effects on the performance of prospective memory. The simply-view group had a better prospective memory performance than the cognitive reappraisal group.

The above results support preparatory attentional processes and memory processes theory, and confirm further evidence for exploring the mechanism of prospective memory.

Keywords: cognitive reappraisal, prospective memory, emotion, emotion regulation strategy

特质焦虑对中学生学业成绩的影响： 生命意义感和自我控制的中介作用

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摘要 焦虑是个体即将面临某种威胁或不利后果时所产生的紧张、忧虑、烦躁等不愉快的情绪,特质焦虑是焦虑倾向稳定且持久的人格特征,高特质焦虑个体倾向将接受任务感知为威胁。特质焦虑普遍存在于中学生群体中,阻碍了情绪调节能力的发展、加速了拖延行为的产生、削弱了抑制控制功能。已有研究探讨了学科学业焦虑、状态焦虑与学业成绩之间的关系,但特质焦虑作为人格特质对学业成绩影响可能更为持久。注意偏向理论指出高特质焦虑个体倾向于将更多的注意力资源分配给对厌恶性后果的担忧和无关刺激,这不仅导致较低的生命意义感,还降低对学业任务的自我控制。生命意义感是个体感知生活意义、觉察生命内涵的程度,其功能之一是加强自我控制能力,生命意义使个体能够依据文化标准思考长远目标,进而调整自身的情绪和行为应对学业任务。自我控制是个体通过调控情绪、行为和思维而对不恰当行为施加影响的一种能力。

鉴于目前缺乏特质焦虑对学业成绩影响及作用机制的相关研究。本研究探讨特质焦虑“如何影响”中学生的学业成绩，重点考察生命意义感和自我控制在二者关系中的链式中介作用。本研究采用特质焦虑、生命意义感、自我控制问卷对 1412 名中学生进行调查，并收集近两次的考试成绩。结果显示：（1）特质焦虑、生命意义感、自我控制、学业成绩两两之间显著相关；（2）生命意义感和自我控制在特质焦虑与学业成绩的关系中分别起部分中介作用；（3）生命意义感和自我控制在特质焦虑与学业成绩之间起链式中介作用。研究结果强调了特质焦虑不仅可以直接影响学业成绩，还可以通过生命意义和自我控制的间接作用施加影响，有助于为特质焦虑中学生提升学业成绩制定科学方案。

关键词 中学生，特质焦虑，学业成绩，自我控制，生命意义感

Trait Anxiety and Middle School Students' Academic Achievement: Mediating Effects of Self-control Meaning in Life

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Abstract: Anxiety is an unpleasant emotion such as tension, anxiety and irritability when an individual is about to face some threat or adverse consequences. Trait anxiety is a stable and lasting personality characteristic of anxiety tendency. Individuals with high trait anxiety tend to perceive task acceptance as a threat. Trait anxiety generally exists in middle school students, which hinders the development of emotion regulation ability, accelerates the generation of procrastination behavior and weakens the function of inhibition and control. Studies have explored the relationship between academic anxiety, state anxiety and academic achievement, but trait anxiety, as a personality trait, may have a more lasting impact on academic achievement. Attention bias theory points out that individuals with high trait anxiety tend to allocate more attention resources to worry about the malignant consequences of aversion and irrelevant stimuli, which not only leads to a lower meaning in life, but also reduces their self-control over academic tasks. The meaning in life is the degree to which individuals perceive the connotation of life. One of its functions is to strengthen self-control. The meaning in life enables individuals to think about long-term goals according to cultural standards, and then adjust their emotions and behaviors to deal with academic tasks. Self-control is the ability which influence inappropriate behavior by regulating emotion, behavior and thinking. There is lacking that trait anxiety affects academic performance.

The present research explores how trait anxiety "affects" middle school students' academic performance, focusing on the chain mediating role of meaning in life and self-control. A sample of 1412 subjects was enrolled in the present research to fill out the Trait Anxiety Inventory, Meaning Life Questionnaire and Middle School Students' Self-control Ability Questionnaire. trait anxiety, sense of meaning of life and self-control questionnaire, and the test scores of nearly two times were collected. The results showed that: (1) trait anxiety, meaning in life, self-control and academic achievement were significantly correlated; (2) meaning in life and self-control played a partial mediating role in the relationship between trait anxiety and academic achievement; (3) meaning in life and self-control had a chain-mediated effect between trait anxiety and academic achievement. The results emphasize that trait anxiety can not only directly affect academic performance, but also exert influence through the indirect effect of meaning in life and self-control, which is helpful to formulate a scientific plan for improving academic performance of middle school students with trait anxiety.

Keywords: Middle school students, Trait anxiety, Academic achievement, Self-control, Meaning in life

中学生儿童期逆境的发生状况：基于潜在类别分析的结果

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摘要 目的:了解中学生儿童期逆境的潜在类别,并探讨各类别在性别、父亲受教育程度、母亲受教育程度等人口学变量上的分布差异及与抑郁、焦虑敏感和生活满意度的关系。方法:选取中部地区某省多个县市的初中、普高、中职、职高共计12所学校,每个学校每个年级随机抽取一个班发放线上问卷,共收集4909份问卷,其中有效问卷共4807份,回收有效率为97.92%。被试年龄在12~18岁,平均为14.80±1.47岁。采用修订的儿童期逆境问卷(ACE-IQ)、儿童抑郁障碍自评量表(DSRSC)、儿童中文版焦虑敏感性指数量表(CASI-C)和生活满意度问卷(SWLS)进行调查。对儿童期逆境进行潜在类别分析,对不同类别在性别、父亲受教育程度等人口学变量上的分布差异进行检验,比较不同儿童期逆境中学生在情绪指标上得分的差异。结果:①中学生的儿童期逆境可分为多重逆境组(6.15%),家庭内暴力组(7.61%),低逆境组(51.88%),家庭外暴力组(6.30%)和家庭缺失组(28.06%)5个潜在类别。②不同儿童期逆境类型在性别、父亲受教育程度、母亲受教育程度和长期居住地上的分布比例存在显著差异($P<0.001$)。家庭内暴力组 and 多重逆境组中男生的分布比例均高于女生(9.0% vs. 6.3%, $P<0.001$; 6.9% vs. 5.4%, $P<0.001$)。低逆境组中女生的分布比例高于男生(53.0% vs. 50.8%, $P<0.001$)。低逆境组中父亲受教育程度更高的中学生的分布比例高于父亲受教育程度更低的中学生(62.8% vs. 58.8%, $P<0.001$; 58.8% vs. 48.3%, $P<0.001$)。低逆境组中母亲受教育程度更高的中学生的分布比例高于母亲受教育程度更低的中学生(59.2% vs. 58.2%, $P<0.001$; 58.2% vs. 50.2%, $P<0.001$)。低逆境组中长期居住地在城市的中学生所占比例高于长期居住地在乡镇的中学生(58% vs. 52.1%, $P<0.001$),长期居住地在乡镇的中学生的分布比例高于长期居住地在农村的中学生(52.1% vs. 44%, $P<0.001$)。③不同儿童期逆境类型中学生在抑郁、焦虑敏感和生活满意度得分上差异均有统计学意义(均 $P<0.001$),与其他4组相比,多重逆境组中学生的抑郁和焦虑敏感指数得分均较高,生活满意度得分均较低。结论:中学生的儿童期逆境具有明显分类特征;不同类别的中学生在部分社会人口学变量的分布上存在差异,且与抑郁、焦虑敏感和生活满意度关系密切,应当根据不同类别制定针对性干预措施。

关键词 儿童期逆境, 中学生, 潜在类别分析, 情绪问题

Prevalence of adverse childhood experiences in Chinese middle school students: Based on latent class analysis

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Abstract: Objective: To investigate the potential types of in middle school students, and distribution difference of different types on variables such as gender, father's level of education, mother's level of education and the relationship with depression, anxiety sensitivity and life satisfaction. Methods: A total of 12 schools including junior middle schools, general high schools, secondary vocational schools and vocational high schools were selected from a province in central China. A class was randomly selected from each grade of each school to issue online questionnaires. A total of 4909 questionnaires were collected, of which a total of 4807 were effective, with a recovery efficiency of 97.92%. A total of 4861 middle school students from 12 schools in a province of Central China were recruited and assessed with the revised Adverse Childhood Experiences – International Questionnaire (ACE-IQ), Depression Self-Rating Scale for Children (DSRSC), Childhood Anxiety Sensitivity Index in Children (CASI-C) and Satisfaction with Life Scale (SWLS). Latent class analysis was used to identify adverse childhood experiences class, and then analyzed the distribution of latent class among gender, father's level of education, mother's level of education and long-term residence, and the scores of sentiment indicators were compared between groups. Results: ① The results revealed that the adverse childhood experiences of middle school students could be divided into five types: multiple adversity group (6.15%), domestic violence group (7.61%), low adversity group (51.88%), outside

family violence group (6.30%) and family absence group (28.06%). ② There were significant differences in distribution of different types on gender, father's level of education, mother's level of education and long-term residence ($P<0.001$). The proportion of boys in the domestic violence group and the multiple adversity group was higher than that of girls (9.0% vs. 6.3%, $P<0.001$; 6.9% vs. 5.4%, $P<0.001$). The distribution of girls in the low adversity group was higher than that of boys (53.0% vs. 50.8%, $P<0.001$). The distribution of middle school students whose father's level of education was higher in the low adversity group was higher than that of middle school students whose father's level of education was lower (62.8% vs. 58.8%, $P<0.001$; 58.8% vs. 48.3%, $P<0.001$). The distribution of middle school students whose mother's level of education was higher in the low adversity group was higher than that of middle school students whose father's level of education was lower (59.2% vs. 58.2%, $P<0.001$; 58.2% vs. 50.2%, $P<0.001$). In the low adversity group, the proportion of middle school students whose long-term residence was in cities was higher than that in towns (58% vs. 52.1%, $P<0.001$), and the proportion of middle school students whose long-term residence was in towns was higher than that in rural areas (52.1% vs. 44%, $P<0.001$). ③ The five types exhibited significant differences in the scores of depression, anxiety sensitivity and life satisfaction ($P<0.001$). Compared with the other four groups, the scores of depression and anxiety sensitivity of middle school students with multiple adversity were higher, and the scores of life satisfaction were lower. Conclusion: The adverse childhood experiences of middle school students has obvious classification characteristics. There are differences in the distribution of some social demographic variables among different categories of middle school students, and they are closely related to depression, anxiety sensitivity and life satisfaction. Therefore, targeted intervention measures should be formulated.

Keywords: the adverse childhood experiences, middle school students, potential category analysis, emotional problems

初一年级学生数学焦虑与父母内隐智力观的关系

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摘 要 学业发展与个体发展息息相关，父母及个体的内隐智力观皆是个体学业发展的影响因素。数学是一门重要学科，其为个体学业发展的一个重要方面，数学焦虑能够影响个体的数学成绩。以往研究关注了内隐智力观与学业成就的关系，父母内隐智力观与个体数学焦虑的关系还需进一步探讨。因此本研究采用问卷法探讨初一年级学生数学焦虑与其父母内隐智力观的关系，并考察学生内隐智力观的中介作用以及性别的调节作用。研究以 179 名初一年级学生（男 85 人，女 94 人）为被试，使用《儿童数学焦虑量表》中文版（MASC）与自译的《个体智力观念量表》（PCI）分别考察学生数学焦虑、学生及父母（父亲或母亲）的内隐智力观。结果显示：（1）初一年级男生与女生的学生数学焦虑、学生内隐智力观、父母内隐智力观差异不显著；（2）在初一女生中，父母内隐智力观显著正向预测学生内隐智力观，学生内隐智力观显著负向预测学生数学焦虑；（3）在初一男生中，父母内隐智力观显著正向预测学生内隐智力观、显著负向预测学生数学焦虑，学生内隐智力观显著负向预测学生数学焦虑，其中学生内隐智力观起部分中介作用。以上结果表明：（1）初一年级学生内隐智力观能够对学生数学焦虑产生影响；（2）在初一年级男生中，父母内隐智力观能够通过学生内隐智力观对学生数学焦虑产生影响。

关键词 数学焦虑，内隐智力观，青少年

The Relationship between Math Anxiety of the First Grade of Junior High School Students and Their Parents' Implicit Theories of Intelligence

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Abstract: Academic development is closely related to individual development. Parents and the individual's implicit theories of intelligence are all influencing factors for individual's academic development. Math is an important subject. It is an important aspect of individual academic development. Math anxiety can affect individual mathematics performance. Previous studies have focused on the relationship between implicit theories of intelligence and academic achievement. The relationship between parents' implicit theories of intelligence and individual mathematical anxiety needs to be further explored. Therefore, this study uses a questionnaire method to explore the relationship between the first grade of junior high school students' math anxiety and their parents' implicit theories of intelligence. This study also examines the mediating role of students' implicit theories of intelligence and the moderating role of gender. The study took 179 first-year students (85 males and 94 females) as the participants. The Chinese version of the Mathematics Anxiety Scale for Children (MASC) and the self-translated Personal Conceptions of Intelligence Scale (PCI) were used to investigate separately. Students' math anxiety, students and parents (father or mother)'s implicit theories of intelligence. The results showed that: (1) There was no significant difference in math anxiety, students' implicit theories of intelligence, and parents' implicit theories of intelligence between boys and girls in the first grade of junior high school; (2) Among the girls in the first grade of junior high school, the parents' implicit theories of intelligence was significantly positively predicted students' implicit theories of intelligence, students' implicit theories of intelligence significantly negatively predicts students' math anxiety; (3) Among the boys in the first grade of junior high school, parents' implicit theories of intelligence significantly positively predicts students' implicit theories of intelligence, and significantly negatively predicts students' math anxiety, the students' implicit theories of intelligence view significantly negatively predicts students' math anxiety, and the students' implicit theories of intelligence view plays a part of the mediating role. The above results show that: (1) the implicit theories of intelligence view of the first grade of junior high school students can affect the students' math anxiety; (2) among the boys in the first grade of junior high school, the parents' implicit theories of intelligence can affect the students' math anxiety through the students' implicit theories of intelligence.

Keywords: math anxiety, implicit theories of intelligence, adolescents

被欺凌者的应对方式及影响因素

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摘 要 近年来, 校园欺凌现象越来越普遍, 这已经成为全社会亟待解决的问题。根据 2016 年教育部政策法规司对全国 29 个县 104825 名中小学生的抽样调查发现, 校园欺凌发生率为 33.36%。2017 年, 联合国教科文组织《校园暴力和欺凌》中的数据显示, 32.5% 的学生遭到过校园欺凌。其中, 30% 的人选择沉默, 全球每年都有 2.46 亿学生因欺凌而痛苦。已有研究表明遭受欺凌对青少年的生理、认知、情绪、行为等有消极作用, 多种压力已经对青少年心理健康水平产生了较大影响, 如若再遭受校园欺凌, 那对他们而言犹如雪上加霜, 不利于其健康成长。应对方式又称为应对机制, 作为应激事件与身心反应的中间环节, 对个体心理健康有不容忽视的重要影响。当校园欺凌发生时, 应对方式起着至关重要的作用。因此, 本研究从被欺凌者的应对机制及表现、影响被欺凌者应对方式的 因素研究入手, 探讨被欺凌者的合理应对方式, 以为欺凌受害者提供自我应对水平。被欺凌者面对欺凌的应对方式有: 积极的应对方式 (问题解决、求助)、消极的应对方式 (逃避、发泄、幻想、忍耐、自责)、中性的应对方式 (合理化)。影响被欺凌者应对欺凌的因素除年龄、性别等人口学变量外, 主要包括: 乐观、自尊、心理复原力、归因方式、生活满意度、社会支持等。本文从提升自信, 树立正确的自我认知; 引导宣泄, 学会积极的情绪调节; 及时求助, 与他人建立信任关系; 加强防范, 培养应对能力与沟通技巧四个方面提出建议, 使被欺凌者学会合理的应对策略, 为进一步防治校园欺凌提供新视角。

关键词 被欺凌者, 应对方式, 影响因素

Coping Styles and Influencing Factors of Victims in Bullying

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Abstract: In recent years, campus bullying is becoming more and more common, which has become an urgent problem for the whole society. According to a sample survey of 104825 primary and secondary school students in 29 counties of China in 2016, the department of policies and regulations of the Ministry of Education found that the incidence of bullying on campus was 33.36%. In 2017, data from UNESCO's *School Violence and Bullying* showed that, 32.5% of students have been bullied on campus. Among them, 30% choose to be silent, and 246 million students around the world feel pain because of bullying every year. Studies have shown that being bullied has negative effects on adolescents' physiology, cognition, emotion and behavior. A variety of pressures have had a great impact on the mental health level of teenagers. If they are bullied on campus, it will be worse for them, which is not conducive to their healthy growth. Coping style, also known as coping mechanism, as an intermediate link between stress events and physical and mental reactions, has an important impact on individual mental health. When campus bullying occurs, coping style plays a crucial role. Therefore, this study starts from the coping mechanism and performance of the bullied and the factors influencing the coping style of the bullied to explore the reasonable coping style of the bullied in order to provide the level of self-coping for the victims of bullying. The coping styles of bullied people are as follows: positive coping style (problem solving, help seeking), negative coping style (retreat, vent, fantasy, endure, self blame), neutral coping style (rationalization). In addition to demographic variables such as age and gender, the factors that influence the victim's coping with bullying include optimism, self-esteem, resilience, attribution style, life satisfaction and social support. This paper puts forward suggestions from four aspects: improving self-confidence, establishing correct self-recognition; guiding catharsis and learning positive emotion regulation; timely seeking help and establishing trust relationship with others; strengthening prevention, cultivating coping ability and communication skills, so as to make the victims learn reasonable coping strategies and provide a new perspective for further prevention and control of campus bullying.

Keywords: Victims of bullying, Coping styles, Influencing factors

初中生积极心理资本、应对方式与校园欺凌的关系研究

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摘要 2020年两会,李亚兰、李贤义等多位代表提出议案,呼吁社会关注校园欺凌。中国青年报社社会调查中心于2018年1月对2022名受访者进行的一项调查显示,59.4%的受访者都经历或目睹过中小学生欺凌事件。由此可见,对校园欺凌现象的防治是全社会的一个重要课题。应对方式作为应激事件与身心反应的中间环节,对个体心理健康有不容忽视的重要影响。当校园欺凌发生时,学生的应对方式起着至关重要的作用。此外,积极心理学与组织行为学的研究,促进了积极心理资本理论的诞生,而积极心理学理论体系的具体、科学和现实性等都对欺凌行为的预防和矫治研究起重要作用。因此,本研究旨在明确当前初中生积极心理资本、应对方式与校园欺凌的现状,分析三者间的潜在关系,并探讨积极心理资本和应对方式对校园欺凌的作用,为校园欺凌的防治及提出切实可行的教育建议提供理论指导。通过问卷调查法,采用Olweus儿童欺负问卷(初中版)、青少年学生心理资本问卷、中学生应对方式问卷,以四所中学的500名初中生作为研究对象进行调查。研究结果表明:(1)初中生积极心理资本、应对方式与校园欺凌在人口统计学变量上存在差异;(2)初中生积极心理资本、应对方式、校园欺凌三个变量,两两之间存在相关关系。初中生校园欺凌水平与其积极应对方式呈负相关,与其消极应对方式呈正相关;初中生校园欺凌水平与其积极心理资本水平(及各个因子间)呈负相关;初中生积极应对方式与其积极心理资本水平(及各个因子间)呈正相关,而消极应对方式与其积极心理资本水平(及各个因子间)呈负相关;(3)初中生的应对方式在积极心理资本和校园欺凌之间起中介作用,即:积极心理资本既可以直接影响校园欺凌,也可通过应对方式间接影响校园欺凌。

凌。建议从帮助学生提高积极心理资本和运用正确应对方式的角度,开展心理健康教育课程与活动,进一步预防校园欺凌的发生,确保学生健康快乐的成长。

关键词 初中生,积极心理资本,应对方式,校园欺凌

A Study on the Relationship Between Positive Psychological Capital, Coping Style and School Bullying of Junior High School Student

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Abstract: In 2020, Li Yalan, Li Xianyi and other representatives put forward a motion calling on the society to pay attention to school bullying in Two sessions. A survey of 2022 respondents conducted by the social survey center of China Youth Daily in January 2018 showed that 59.4% of the respondents had experienced or witnessed bullying incidents among primary and secondary school students. Therefore, the prevention and control of campus bullying is an important issue for the whole society. As an intermediate link between stress events and physical and mental reactions, coping style has an important impact on individual mental health. When campus bullying occurs, students' coping style plays an important role. In addition, the research of positive psychology and organizational behavior has promoted the birth of the theory of positive psychological capital. The concrete, scientific and realistic theoretical system of positive psychology plays an important role in the prevention and treatment of bullying behavior. Thus, this study aims to clarify the current situation of junior high school students' positive psychological capital, coping style and campus bullying, analyze the potential relationship among the three, and explore the role of positive psychological capital and coping style on campus bullying, so as to provide theoretical guidance for the prevention and treatment of school bullying and put forward practical educational suggestions. Through the questionnaire survey method, using the Olweus Bully/Victim Questionnaire (junior high school version), Psychological Capital Questionnaire for Adolescent Students (PCQAS), Coping Style Scale of Middle School Students (CSSMSS), 500 junior high school students from four middle schools were investigated. The results show that: (1) Positive psychological capital, coping style and campus bullying among middle school students are differences in demographic variables; (2) Positive psychological capital, coping style and campus bullying of junior high school students are correlated. The results show that the level of campus bullying is negatively correlated with positive coping styles, and positively correlated with negative coping styles; the level of campus bullying is negatively correlated with the level of positive psychological capital (and various factors); the positive coping style of junior high school students is positively correlated with the level of positive psychological capital (and various factors), while the level of negative coping style is negatively correlated with the level of positive psychological capital (and various factors); (3) The coping style of junior high school students plays a mediating role between positive psychological capital and campus bullying, that is, positive psychological capital can not only directly affect campus bullying, but also indirectly affect campus bullying through coping styles. It is suggested to carry out mental health education courses and activities from the perspective of helping students improve their positive psychological capital and using correct coping styles, so as to further prevent the occurrence of campus bullying and ensure the healthy and happy growth of students.

Keywords: Junior high school students, Positive psychological capital, Coping style, School bullying

校园受欺凌与中学生外化问题行为的关系：冷酷无情特质的中介作用和亲子亲合的调节作用

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摘 要 青少年期是个体由儿童阶段向成人阶段过渡的关键时期,相较于儿童期,它是个体吸烟、饮酒、逃学等外化问题行为急剧增加的时期。相关调查显示,国内青少年外化问题行为的检出率已达 6.9%,而且还呈现出逐渐上升的趋势。为了切实保护青少年的身心健康发展,本研究基于校园欺凌背景下,探讨中学生外化问题行为的产生机制,以期为中学生心理健康促进工作提供理论依据。本研究采用校园欺凌行为量表、青少年问题行为自评量表、亲子亲合量表和冷酷无情特质量表,对辽宁省 362 名学生进行问卷调查。采用 SPSS 25.0 对数据进行分处理和分析,探讨校园受欺凌与中学生外化问题的关系以及冷酷无情特质和亲子亲合的作用。在控制性别和年级后,研究结果表明:(1)校园受欺凌对中学生的外化问题行为具有正向预测作用,即受校园欺凌越多的学生越容易出现外化问题行为。(2)冷酷无情特质在校园受欺凌与外化问题行为之间起中介作用,即校园受欺凌通过影响中学生的冷酷无情特质进而影响其外化问题行为(3)母子亲合调节该中介模型的直接路径。具体而言,中学生的母子亲合水平越低,校园受欺凌对中学生外化问题行为的正向预测作用越强。本研究验证了校园受欺凌对中学生外化问题行为的负面影响,并基于交互作用模型揭示了外化问题行为产生的心理机制。研究结果提示教师和家长针对遭受校园欺凌的学生及时进行心理疏导,防止其形成消极人格,进而削弱校园受欺凌对外化问题行为的影响。

关键词 校园受欺凌,外化问题行为,冷酷无情特质,亲子亲合

The relationship between campus bullying and externalizing problem behaviors of middle school students: the mediating role of callous-unemotional trait and the moderating role of parent-child affinity

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Abstract: Adolescence is a key period for individuals to transition from childhood to adulthood. Compared with childhood, it is a period when individuals' externalized problem behaviors such as smoking, drinking and truancy increase sharply. According to the survey, the detection rate of externalizing problem behavior among Chinese teenagers has reached 6.9%, and is on the rise. In order to effectively protect the physical and mental health development of adolescents, this study explored the mechanism of externalizing problem behavior of middle school students in the context of school bullying, in order to provide theoretical basis for the mental health promotion of middle school students. In this study, 362 students in Liaoning province were surveyed by the school bullying Behavior Scale, self-rating Adolescent problem Behavior Scale, Parent-child Affinity Scale and callousness Trait Scale. SPSS 25.0 was used for data processing and analysis to explore the relationship between bullying in school and externalization problems of middle school students, and the role of callousness and parent-child affinity. After controlling for gender and grade, the results showed that : (1) being bullied in school positively predicted the externalizing problem behaviors of middle school students, that is, the more students were bullied in school, the more likely they were to externalize problem behaviors. (2) The trait of callousness mediates the relationship between bullying in school and externalizing problem behaviors, that is, bullying in school influences the externalizing problem behaviors of middle school students through the trait of callousness. (3) The direct path of mother-child bonding moderates the mediation model. Specifically, the lower the mother-child bonding level of middle school students, the stronger the positive prediction effect of bullying on middle school students' externalizing problem behavior. This study verifies the negative impact of bullying on externalizing problem behaviors of middle school students, and reveals the psychological mechanism of externalizing problem behaviors based on the interaction model. The results suggest that teachers and parents should provide psychological counseling to the bullied students in time to prevent them from forming negative personality and thus weaken the influence of bullying on externalizing problem behaviors.

Keywords: campus bullying, externalized problem behavior, callous-unemotional trait, parent-child affinity

运动兴趣对留守学生心理健康的重要性及提升策略

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摘要 目前留守学生心理健康问题逐年加重, 而体育锻炼对心理问题的治疗和心理健康的促进作用与效果已得到大量的证实, 如今更是成为国内外对心理问题治理的常用手段。运动兴趣的提升对留守学生心理健康水平的促进有着直接的影响, 运动兴趣可以让留守学生对体育锻炼富有积极性, 促进他们形成运动习惯, 增加运动量, 从而提升他们的心理健康水平。对留守学生运动兴趣的提升可以从教师、校园环境、家庭和社会等多方面着手。教师与学校及家庭必须在思想上重视学生对运动兴趣的培养, 给予学生更多体育锻炼的课外时间。教师要提升自身素质和创新意识, 创新教学形式, 对体育课程内容加以游戏性和竞赛性。对运动的表现, 老师要给学生多加肯定与表扬及鼓励。校园要对体育氛围做出渲染, 大力对体育运动进行宣传, 广泛开展思想教育, 让学生了解到运动的重要性。多举办竞技和趣味性运动, 让体育运动变得游戏化和趣味化, 使学生从中获取愉快的体验。在体育课程中, 让学生拥有获得感和成就感, 从而让学生产生运动兴趣。在体育设施上, 学校要对运动场地和体育器材进行充足的保障, 改善与完善体育运动的条件。体育锻炼对促进留守学生心理健康具有十分重要的意义, 对留守学生应采用不同的方法, 从多个视角出发, 多措并举地使学生的运动兴趣浓厚起来, 从而提高他们的体育锻炼量, 促进留守学生的心理健康发展。

关键词 运动兴趣, 心理健康, 体育锻炼

大学生对人工智能机器人的态度:基于心智感知理论

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摘要 随着科学技术的腾飞, 人工智能机器人 (以下简称机器人) 作为人工智能的主要载体在人们日常生活中的应用领域越来越广泛。未来几年, 人与机器人的互动将会像现在的人与人互动一样, 成为我们日常生活的一部分。那么人们对机器人的态度到底如何? 什么因素影响人们态度的动态变化呢? 心智感知是指人们对其他实体心理能力的感知, 包括两个维度, 即感受性和能动性。心智感知理论整合了经典的恐怖谷理论、媒体等同理论和拟人化理论, 对机器人感受性、能动性的感知会对消极态度产生不同影响。本研究基于心智感知理论, 旨在探讨大学生对机器人心智感知的基本情况, 及其对对机器人态度的影响并进一步探讨了解程度和专业类别的调节作用。本研究采用心智感知问卷(Mind perception Scale)、对机器人消极态度量表(Negative Attitudes towards Robots Scale)、人工智能的了解程度访谈和心智感知二维坐标模型, 对 339 名大学生进行问卷调查及访谈。使用 SPSS 进行数据处理与分析, 通过简单斜率分析进一步对调节效应进行检验。在控制了性别、年龄等因素后, 结果发现: (1) 对人工智能有中等程度了解的人最多, 有 283 人, 占 83.5%; (2) 对机器人的心智感知负向预测消极态度; (3) 对人工智能的了解程度和专业类别在对机器人感知与消极态度的关系中起调节作用, 高了解程度缓解了两者的关系; 与理工科相比, 文史类对机器人的心智感知对消极态度的预测作用更大; (4) 大学生对期待的及未来的机器人感知水平存在矛盾认知, 被试期望的机器人在能动性($M_{X1}=9.82$)、及被试认为未来的机器人在能动性($M_{X2}=9.50$)上可以与人类能动性($M_{X3}=10$)媲美, 但被试期望的机器人在感受性($M_{Y1}=7.19$)、及被试认为未来的机器人在感受性($M_{Y2}=7.64$)要比人类感受性($M_{Y3}=10$)低一些, 且低于相应机器人的能动性。研究结果表明对机器人的心智感知水平和对人工智能的了解程度都会影响对机器人的态度, 人们对未来人工智能机器人不同方面的发展存在矛盾的态度, 未来研究应该更加关注个体因素对对机器人态度的影响以及人与人工智能机器人的关系。

关键词 人工智能, 机器人, 了解程度, 对机器人的态度, 心智感知

College Students' attitude towards artificial intelligence robots: Based on the theory of mind perception

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Abstract: With the science and technology to take off, as the main carrier of artificial intelligence, artificial intelligence robot (later referred to as robot) is more and more widely in the field of the application of the people's daily life. In the next few years, the interaction between human and robots will become a part of our daily life just like the current human interaction. Then what's people's attitude towards robots? What factors influence the dynamic change in attitudes? Mental perception refers to the perception of the psychological ability to other entities, there are two dimensions, they are experience and agency. Mind perception theory of integration of the classic theory of the uncanny valley, media equivalent theory and the theory of anthropomorphic, Perception of the experience and the agency of robots will have different influence on negative attitude. Based on the theory of mind perception, this study aimed to explore the basic situation of College Students' mind perception of robots and its impact on their attitude towards robots, and further explored the moderator effect of understanding degree and professional category. In this study, 339 college students were investigated and interviewed by using the Mind perception Scale, Negative Attitudes towards Robots Scale, interviewed on the understanding of artificial intelligence and two-dimensional coordinate model of mind perception. Using SPSS for data processing and analysis, through a simple slope analysis further regulating effect on inspection. After controlling for factors such as gender, age, and the results showed that: (1) Most people had a moderate understanding of AI, 283, accounting for 83.5%; (2) The mind perception level of robots negatively predicted the negative attitude towards robots. (3) The results showed that the degree of understanding of AI and professional category played a moderating role in the relationship between robots' mind perception and negative attitude, and high degree of understanding alleviated the relationship between them. Compared with science and engineering, the mind perception of arts and history on robots had a greater predictive effect on negative attitude; (4) College students had contradictory cognition to the mind perception level of robots that they expected and robots in the future. The participants expected that the robots' agency ($M_{X1} = 9.82$) and future robots' agency ($M_{X2} = 9.50$) could be comparable to human's agency ($M_{X3} = 10$), but the participants expected that the robots' experience ($M_{Y1} = 7.19$) and future robots' experience ($M_{Y2} = 7.64$) were lower than human's experience ($M_{Y3} = 10$), and lower than the corresponding robots' agency. The results showed that the level of mind perception of robots and the level of understanding of AI will affected the attitude towards AI robots, people had contradictory attitudes towards the future development of artificial intelligence robots in different aspects, future research should pay more attention to the influence of individual factors on robot attitude and the relationship between human and artificial intelligence robots.

Keywords: artificial intelligence (AI), robot, understanding level, attitudes towards robots, mind perception

亲子间教育期望差异对临考学生积极情感的影响： 亲子沟通与学业自我效能感的中介作用

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摘要 目的：探究亲子间教育期望差异对临考学生积极情感的影响，以及亲子沟通和学业自我效能感在其中的作用。**方法：**选取积极情感量表、亲子沟通量表和学业自我效能感量表，对 545 名初三、高三学生进行问卷调查。**结果：**（1）初三、高三学生感知到的父母教育期望与自我教育期望存在差异，感知父母教育期望略高于自我教育期望（ $t = 2.79, df = 544, p < 0.01$ ）；（2）在控制了性别、年级、独生状况、父母最高受教育水平之后，亲子间教育期望差异不能直接预测积极情感，但可以通过亲子沟通、学业自我效能感间接预测积极

情感；（3）亲子间教育期望差异的方向不同，其影响积极情感的路径也不同。具体而言，当感知父母教育期望低于自我教育期望时，可通过学业自我效能感的独立中介作用正向预测学生的积极情感，效应量为 44.28%；当感知父母期望高于自我教育期望时，可通过亲子沟通的独立中介作用、学业自我效能感的独立中介作用以及亲子沟通和学业自我效能感的链式中介作用负向预测学生的积极情感，效应量分别为 34.72%、61.80%及 10.42%。**结论：**亲子间教育期望差异可通过亲子沟通、学业自我效能感的中介作用影响学生的积极情感，且差异的方向对于亲子间教育期望差异是增加还是减少学生的积极情感具有关键性作用，这对临考学生亲子互动及考前心理调适具有一定的指导意义。

关键词 亲子间教育期望差异，积极情感，亲子沟通，学业自我效能感

The Relationship between Parent-child Discrepancies in Educational Expectations and Middle School Students' Positive Affection: Mediating Roles of Parent-child Communication and Academic Self-efficacy

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Abstract: Objective: In order to explore the relationship between parent-child discrepancies in educational expectations and candidates' positive affection and the mediating role of parent-child communication and academic self-efficacy in it. **Methods:** The Positive Affection Scale, Parent-Child Communication Scale and Academic Self-Efficacy Scale were selected to conduct a questionnaire survey on 545 Junior 3 and 3 Senior students. **Results:** (1) There is a difference between the parents' educational expectations and self-education expectations perceived by junior 3 and senior 3 students, and the perceived parents' educational expectations are slightly higher than the self-education expectations. (2) After controlling students' gender, grade, only child status and parents' highest level of education, parent-child discrepancies in educational expectations cannot directly predict positive affection, but can indirectly predict positive affection through parent-child communication and academic self-efficacy. (3) The direction of the difference in educational expectations between parents and children is different, and the path that affects positive affection is also different. Specifically, when perceived parental expectations are lower than students' own expectations, it may positively predict students' positive affection through the independent mediating role of academic self-efficacy; In contrast, when perceived parental expectations are higher than students' own expectations, it may negatively predict students' positive affection through the independent mediating role of parent-child communication, the independent mediation role of academic self-efficacy, as well as the chain mediating role of parent-child communication and academic self-efficacy. **Conclusion:** Parent-child discrepancies in educational expectations can affect the candidates' positive affection through the mediating effect of parent-child communication and academic self-efficacy, and the direction of the difference plays a key role in whether the difference in educational expectations between parents and children increases or decreases their positive affection. This result has some guiding significance for parent-child interaction and psychological adjustment of students in Junior 3 and Senior 3 in China.

Keywords: Parent-child discrepancies in educational expectations, Positive affection, Parent-child communication, Academic self-efficacy

疫情防控下青少年体育锻炼与运动友谊质量的关系研究

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摘要 研究目的：疫情防控工作经过全国各族人民、各行各业共同努力下，得到了有效的控制。在不放松疫情防控工作的前提下，探讨疫情防控下青少年参加体育锻炼对运动友谊质量的发展的影响。习近平总书记

多次强调体育锻炼对提高青少年身心健康的重要意义,号召广大青少年积极参与体育锻炼来增强体质、锻炼意志、规范文明行为,提升个人修养。运动友谊质量作为学生身心发展的重要方面,增强其友谊质量水平,也是培养学生与人交往能力得关键。体育不仅能够育体,还能育心,通过体育锻炼可以促进青少年身心发展推动友谊质量不断提高。

研究方法: 问卷调查法、文献资料法、访谈法。

研究结果: (1) 疫情下的体育锻炼更有利于产生较高的友谊质量。锻炼者的锻炼积极性得到提高,对体育锻炼的认知得到了极大的改观,锻炼强身健体目的性有所加强。(2) 参加体育锻炼会使锻炼者产生更多社会性交流,使锻炼者的交往能力不断提高,从而体育锻炼能带来良性交往和互动能更好促进运动友谊质量的提高。(3) 疫情下的心理状态容易情绪化、产生焦虑感等不良情绪,通过体育锻炼的带来良好氛围文化和快乐体验开始慢慢冲淡不良情绪,运动友谊质量也不断加强和改善。(4) 参加体育锻炼能加强青少年的体育道德、体育精神和体育品格,可以多元化端正青少年的三观,促进心理健康发展。

研究建议: 鼓励青少年积极参与体育锻炼,帮助青少年在体育锻炼过程中提高友谊质量水平,不仅可以增强青少年的体质健康,更可以提高青少年的身心健康,缓解学业压力。既增加了青少年之间的交往,也增进了友谊,同时还拓展了自身的人际交往能力,让青少年学习和生活中的压力和负面情绪得到宣泄,增添了创造和分享身边快乐的事情的机会,进而带动青少年在日常生活中积极帮助他人人与人和睦共处,对改善青少年的友谊质量具有重要意义。

关键词 体育锻炼, 运动友谊质量, 青少年

儿童期心理虐待与大学生婚姻期待的关系: 生命史策略的中介作用

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摘要 面对“快餐式爱情”、持续上涨的离婚率等现象,分析问题成因,探究解决措施,使大学生树立正确的婚恋观、良好地指导自己的婚恋行为显得尤为重要。许多家庭治疗师实践证明,通过感知个体的婚姻期待可以对未来婚姻质量进行预测或调整,因此,婚姻期待的研究对大学生的婚恋观的引导以及婚姻质量的预测有着重要的实践意义。同时,婚姻期待受多方面因素的影响,其中个体早期经历的影响不容忽视,如父母冲突、父母离异等。此外,童年经历影响个体生命史策略的形成,塑造个体在成年后的适应性行为。不同的生命史策略的繁衍生育行为不同,伴侣行为包括伴侣个数、性行为次数等也不同。

本研究旨在探讨儿童期心理虐待与大学生婚姻期待的关系以及生命史策略的中介作用。采用儿童心理虐待量表、Mini-K 量表、大学生婚姻期待问卷对 486 名大学生进行测试,用 SPSS26.0, Amos21.0 进行分析,结果发现:(1) 大学生的儿童期心理虐待分别与生命史策略和关系期待存在显著负相关。大学生的生命史策略与婚姻期待存在显著正相关,与伴侣期待和关系期待均存在显著正相关。(2) 儿童期心理虐待对关系期待的直接效应显著。(3) 儿童期虐待通过生命史策略对婚姻期待间接效应显著。最后得出结论:儿童期心理虐待与生命史策略对关系期待有着显著的预测能力,生命史策略在其中起中介作用。

关键词 儿童期心理虐待, 进化心理学, 生命史策略, 婚姻期待, 关系期待

Childhood psychological abuse and marriage expectation of college students: the mediating role of life history strategy

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Abstract: In the face of the phenomenon of "fast food love" and the continuously rising divorce rate, it is particularly important to analyze the causes of the problems and explore the solutions so as to make the college students establish a correct view of love and marriage and guide their own love and marriage behavior. The practice of many family therapists has proved that the future marriage quality can be predicted or adjusted by perceiving the individual's marriage expectation. Therefore, the study of marriage expectation has important practical significance to guide

college students' view of marriage and love and predict marriage quality. At the same time, marriage expectation is influenced by many factors, among which the influence of individual's early experience can not be ignored, such as parental conflict, parental divorce and so on. In addition, childhood experiences influence the formation of life history strategies and shape the adaptive behavior of individuals in adulthood. Different life history strategies have different reproductive behaviors, as well as different partner behaviors, including the number of partners and the number of sexual behaviors.

The purpose of this study was to explore the relationship between childhood psychological abuse and marital expectation of college students and the mediating role of life history strategies. The child psychological abuse scale, mini-k scale and marriage expectation questionnaire were used to test 486 college students, and SPSS26.0 and Amos21.0 were used to analyze the results. The results showed that : (1) there was a significant negative correlation between childhood psychological abuse and life history strategy and relationship expectation, respectively. The life history strategy of college students is significantly positively correlated with marriage expectation, partner expectation and relationship expectation. (2) The direct effect of childhood psychological abuse on relationship expectation is significant. (3) The indirect effect of childhood abuse on marriage expectation through life history strategy is significant. The results showed that childhood psychological abuse and life history strategy had significant predictive power on relationship expectation, and life history strategy played a mediating role.

Key words: childhood psychological abuse, evolutionary psychology, life history strategy, marriage expectation, relationship expectation

多级评分认知诊断题组模型

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摘 要 当前, 在各种心理与教育测验中, 常常使用多个项目隶属于同一个材料的题组形式来考察被试能力, 如阅读理解题、完型填空题以及数学测验中的解答题, 题组附属的项目一般由二级评分项目、多级评分项目, 或二者混合构成。但是现有的认知诊断题组模型都是二级评分模型, 对二级评分题组项目有较好的处理能力, 但是倘若仍然使用二级评分模型拟合多级评分数据, 却会导致信息的丢失, 造成被试能力估计有误。为了满足现实测验考察需求, 提高对多级评分题组估计准确性, 弥补现有模型对多级评分题组数据处理的不足, 本文尝试将多维题组效应引入一般化分部评分认知诊断模型(GPCDM), 开发出多级评分诊断题组模型(PCDTM), 并基于贝叶斯 MCMC 算法实现参数估计。通过模拟研究, 探究 PCDTM 在作答数据中是否包含题组效应、样本容量、题目数量、题目质量四种条件下的表现, 研究结果表明: (1)忽视题组效应, 会降低题目参数估计精度和被试判断率; (2)随着样本容量增加, 题目数量增加, 题目质量提高, 被试参数估计精度提升与题目参数估计精度提高; (3)PCDTM 能有效处理题组效应参数; (4)无论作答数据是否含有题组效应, PCDTM 均能提供较好的参数估计结果。再分别使用两个模型处理 2012 年数学大规模测评数据, 结果表明带题组的实证数据与 PCDTM 的拟合与参数估计结果更好。总体而言, PCDTM 具有普适性。

关键词 认知诊断, 多维题组, 多级评分, GPCDM, MCMC

Polytomous Cognitive Diagnosis Testlet Model

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Abstract: Testlet have been widely used in various educational tests, such as National College Entrance Examination, SAT, TOEFL, PISA to examine participants' ability. The existing cognitive diagnosis models (CDM) that can handle the effect of testlet effect are only suitable for dichotomous responses data only, while there are many polytomous responses data in psychology, pedagogy and sociology, such as short answer questions, reading comprehension, essays, Likert scales, etc. Especially in China, many dichotomous responses data are often mixed with polytomous

responses data. Although researchers have proposed a variety of polytomous CDMs, such as Sequential GDINA model, General Polytomous Diagnosis Model (GPDM); General Partial Credit Diagnostic Model (GPCDM). However, none of the above-mentioned polytomous models can deal with testlet effects, making it impossible to analyze polytomous data contains testlets. It can be seen that the current CDMs that can process testlets are not suitable for polytomous data, and the existing polytomous CDMs cannot handle the testlet effect. The polytomous diagnostic models and the testlet response models are still in the independent research stage.

To solve this issue, the present research proposed the Polytomous Cognitive Diagnosis Testlet Model (PCDTM), was developed based on GPCDM. This new integrated model not only suitable for dichotomous responses data and polytomous responses data, but also can handle within-item multidimensional testlet effects.

One study based on simulated data and one empirical study based on a large-scale assessment data which has 7 testlets, some items were loaded on more than one testlets, indicating within-item multidimensional testlet effects were existed. In simulation study 1, we considered sample size (1000, 2000), item quality (high, low), number of items (20, 40) and whether the response data includes testlet effect would affect the accuracy of item and person parameter estimation. In addition, compare the parameter estimation results of PCDTM and GPCDM. Simulation study uses average attribute correct classification rate (AACCR) and pattern correct classification rate (PCCR) to evaluate the accuracy of the subjects, and uses RMSE and Bias to estimate the parameter estimation results. In empirical study 2 which analyzed real large-scale math test results, PCDTM and GPCDM were modeled and estimated. All analysis was conducted by R, using Markov Chain Monte Carlo estimation (MCMC), which is convenient, easy to operate and widely used in cognitive diagnosis.

Results of simulation 1 indicated that: (1) ignoring testlet effect would result in biased item parameter estimations and worse person classification rates. (2) As the sample size, the number of items, and the quality of items improves, the estimation bias of the PCDTM participant parameters and parameter estimation increases. (3) PCDTM can deal with the testlet effect effectively. (4) Regardless of whether the response data contains testlet effects, PCDTM can provide better parameter estimation results with little difference, indicating that PCDTM has strong universality. And the empirical research results show that PCDTM fits better to the testlet assessment, and can also obtain the testlet effect value of the test.

In conclusion, PCDTM is feasible and flexible. Using PCDTM can not only be suitable for polytomous data, but can also effectively deal with testlet effects, and even if items are all independent, the model can still obtain decent parameter estimation results similar to GPCDM. But when the test does not include testlet effect, it is best to use GPCDM, which can reduce the number of parameter estimation time.

Keywords: cognitive diagnosis, multidimensional testlet, polytomous, GPCDM, MCMC

儿童期心理虐待对青少年手机依赖的影响： 表达抑制与孤独感的链式中介

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摘 要 儿童期心理虐待是指监护人对儿童采取的一种长期的、具有损害性的不当行为，遭受过儿童期心理虐待的个体更易产生焦虑抑郁等内化情绪问题、也更易产生攻击行为与手机依赖等外化问题。许多研究表明，儿童期心理虐待会导致个体手机依赖倾向增加，但是儿童期心理虐待具体是如何影响青少年手机依赖尚未完全明了。本研究探索了儿童期心理虐待对青少年手机依赖的影响及表达抑制策略与孤独感在二者关系中的作用机制。研究采用儿童期心理虐待量表、手机依赖量表、情绪调节量表、孤独感量表，对 873 名中学生进行调查。结果表明：（1）在控制了无关变量后，儿童期心理虐待与手机依赖呈显著正相关（ $r=0.395$, $p<0.001$ ），与表达抑制、孤独感呈显著正相关（ $r=0.273$, $r=0.354$, $p<0.001$ ），表达抑制、孤独感与手机依赖呈显著正相关（ $r=0.259$, $r=0.262$, $p<0.001$ ），表达抑制与孤独感呈显著正相关（ $r=0.323$, $p<0.001$ ）。（2）儿童期心理虐待能通过表达抑制和孤独感的中介作用对青少年手机依赖产生影响，且该中介作用包含了三条路径：表达抑制的

单独中介作用($\beta=0.12$, BootLLCI=0.0587, BootULCI=0.204), 孤独感的单独中介作用($\beta=0.09$, BootLLCI=0.0343, BootULCI=0.1884) 以及表达抑制-孤独感的链式中介作用($\beta=0.02$, BootLLCI=0.0077, BootULCI=0.0456)。结论: 儿童期心理虐待可以显著正向预测青少年手机依赖; 儿童期心理虐待对青少年手机依赖的影响包含三条路径: 表达抑制的单独中间作用、孤独感的单独中介作用、表达抑制与孤独感的链式中介作用。

关键词 儿童期心理虐待, 手机依赖, 孤独感, 表达抑制

Effect of Childhood psychological abuse on Mobile phone dependence in adolescents: The chain mediation of Expressive suppression and Loneliness

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Abstract: Childhood psychological abuse is a kind of long-term and harmful improper behavior taken by guardians to children. Individuals who have suffered from childhood psychological abuse are more likely to have internalized emotional problems such as anxiety and depression, it is also easier to generate externalization problems such as attack behavior and mobile phone dependence. Many studies have shown that childhood psychological abuse can lead to the increase of individual mobile phone dependence. However, it is still unclear how childhood psychological abuse affects adolescents' mobile phone dependence. This study explored the influence of childhood psychological abuse on adolescents' mobile phone dependence and the mechanism of expression inhibition strategy and loneliness in their relationship. 873 middle school students were investigated with childhood psychological abuse scale, emotion regulation scale, middle school students' mobile phone dependence scale and UCLA loneliness scale. Results: (1) After controlling for unrelated variables, there was a significant positive correlation between childhood psychological abuse and mobile phone dependence($r=0.395$, $p<0.001$), was a significant positive correlation with expression inhibition and loneliness($r=0.273$, $r=0.354$, $p<0.001$), there was a significant positive correlation between expression inhibition, loneliness and mobile phone dependence($r=0.273$, $r=0.354$, $p<0.001$); (2) By the mediating model analyzing, expression suppression and loneliness play a chain mediating role in childhood psychological abuse and mobile phone dependence. Conclusions: Childhood psychological abuse experience can increase adolescents' mobile phone dependence, and it can also increase adolescents' mobile phone dependence through the indirect effects of expression suppression and loneliness.

Keywords: childhood psychological abuse, mobile phone dependence, loneliness, expressive suppression

受欺负对初中生主动性和反应性攻击的影响：道德推脱和性别的作用

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摘要 青少年的攻击行为是备受研究者关注的社会现象。攻击行为会对青少年的身心健康造成短期或长期的负面影响。已有研究发现, 青春期攻击行为的峰值出现在初中时期。因此, 有必要对攻击行为的产生机制进行探讨, 从而为初中生攻击行为的预防和干预提供实证支持和理论依据。本研究基于广义紧张理论和一般攻击模型, 探讨受欺负和初中生主动性与反应性攻击之间的关系, 道德推脱在这一关系中的中介作用以及性别的调节作用。研究采用追踪研究设计, 选取我国中部地区某城市七所学校的 2533 名八年级学生, 开展了间隔半年的两次测查。结果表明: (1) 在控制了 T1 的攻击行为后, 受欺负可以显著正向预测 T2 的主动性攻击($p<0.001$)和反应性攻击($p<0.001$)。(2) 道德推脱在受欺负和主动性、反应性攻击之间均起到部分中介作用, 道德推脱的中介作用分别占总效应的 50.47%和 43.96%。(3) 主动性攻击的中介模型还受到性别的调节, 在女生中受欺负对道德推脱的预测作用更强, 在男生中道德推脱对主动性攻击的预测作用更强。在反应性攻击的中介模型中, 性别的调节作用不显著。本研究的结果提示, 相关教育工作者要特别关注受欺负青

少年的道德推脱水平,对这些青少年在道德认知方面进行有效的疏导和干预,有利于切断受欺负和攻击行为之间的联系。

关键词 受欺负,主动性攻击,反应性攻击,道德推脱,性别

Effects of bully victimization on proactive and reactive aggression in early adolescence: The role of moral disengagement and gender

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Abstract: Aggression in adolescence is a widespread problem. It can have a short-term or long-term negative impact on adolescents' physical and mental health. The peak of adolescents' aggressive behavior occurs in junior high school. It is necessary to explore the mechanism of aggressive behavior, so as to provide empirical support and theoretical basis for the prevention and intervention of aggressive behavior in junior high school. Based on general strain theory and general aggression model, the current study aimed to investigate the relationship between bully victimization and proactive/reactive aggression in early adolescence, the mediating effect of moral disengagement and the moderating effect of gender. A sample of 2533 middle students was followed up for six months and examined for two waves. The results showed that: (1) Bully victimization at wave 1 could significantly and positively predict proactive aggression($p < 0.001$) and reactive aggression($p < 0.001$) at wave 2. (2) Moral disengagement mediated the relationship between victimization and proactive/reactive aggression. The mediating effects of moral disengagement account for 50.47% and 43.96% of the total effects, respectively. (3) The mediating effect of moral disengagement in the link between victimization and proactive aggression was moderated by gender. For girls, the relationship between victimization and moral disengagement was stronger. For boys, the relationship between moral disengagement and proactive aggression was stronger. The results of the present study suggest that relevant educators should pay attention to the level of moral disengagement of adolescents. Intervening adolescents' moral cognition will help cut off the link between bully victimization and aggressive behavior.

Keywords: bully victimization, proactive aggression, reactive aggression, moral disengagement, gender

中国大学生智能手机成瘾的风险因素：基于 GEE 模型的纵向研究

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摘要 背景:随着现代科学技术的进步,智能手机的使用越来越普遍。大学生智能手机成瘾已经成为当代社会的一大公共健康问题。本研究旨在探讨中国大学生智能手机成瘾的潜在风险因素并提出有针对性的干预措施和建议。方法:本研究于2019年3月至2020年9月在中国广东省某高校进行,共有11704名大学生参与了基线调查,并在6个月和18个月以后进行了第二次和第三次追踪调查。自评问卷用于评估智能手机成瘾、社交焦虑、抑郁症状、孤独感、学业压力、专业兴趣、家庭冲突和人口统计学特征。采用广义估计方程(GEE)模型来确定与智能手机成瘾相关的风险因素。结果:总体而言,65.9%的大学生在基线时报告有智能手机成瘾,58.0%和52.7%的大学生在T2和T3时报告有智能手机成瘾。单因素分析结果显示,智能手机成瘾与性别、独生子女、居住地、抑郁症状、社交焦虑、孤独感和专业兴趣有关。GEE模型的结果显示,居住地(OR=0.909, $p<0.025$)、抑郁症状(OR=1.593, $p<0.001$)、社交焦虑(OR=2.435, $p<0.001$)、孤独感(中:OR=2.555, $p<0.001$ 高:OR=5.232, $p<0.001$)、学业压力(OR=1.192, $p=0.018$)、专业兴趣(OR=1.113, $p=0.008$)和家庭冲突(中:OR=1.333, $p<0.001$ 高:OR=1.596, $p<0.001$)均是中国大学生智能手机成瘾的风险因素。结论:我国大学生智能手机成瘾与多种社会人口学因素和心理因素有关。针对大学生群体提出有效的心理干预有助于降低智能手机成瘾的风险。而智能手机成瘾与其风险因素之间特定的关联的潜在机制有待深入探讨。

关键词 大学生 智能手机成瘾 风险因素 GEE 模型

Risk factors of smartphone addiction among Chinese college students: A prospective longitudinal study based on GEE model

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Abstract: Background: Smartphone addiction in college students has been a major public health concern in modern society, which may also lead to adverse health outcomes. The current study aimed to examine the potential risk factors of smartphone addiction in Chinese college students. Methods: A longitudinal study was conducted between March 2019 and September 2020 in Guangdong, China. A total of 11,704 college students who participated in the baseline survey and were followed up 6 months or 12 months later were included in the analyses. Self-administered questionnaires were used to assess smartphone addiction, social anxiety disorders, depressive symptoms, loneliness, academic stress, professional interests, family conflicts and demographic characteristics. Generalized estimating equation (GEE) model was performed to determine the risk factors associated with smartphone addiction. Results: Overall, 65.9% of college students reported smartphone addiction at baseline, and 58.0% and 52.7% reported similar behavior at T₂ and T₃. The bivariate analysis indicated that smartphone addiction was associated with gender, number of children in family, residence, depression, social anxiety, loneliness and professional interests at both survey time points. The GEE results showed the residence (OR=0.909, p=0.025), depression (OR=1.593, p<0.001), social anxiety (OR=2.435, p<0.001), loneliness (moderate: OR=2.555, p<0.001 severe: OR=5.232, p<0.001), academic stress (OR=1.192, p=0.018), professional interests (OR=1.113, p=0.008) and family conflicts (moderate: OR=1.333, p<0.001 severe: OR=1.596, p<0.001) were risk factors of smartphone addiction in Chinese college students. Conclusions: Smartphone addiction in Chinese college students was related with several socio-demographic and mental factors. Psychological interventions targeting to students in college are helpful for reducing the risk of smartphone addiction. And the potential mechanisms for the specific associations between smartphone addiction and its risk factors should be further investigated.

Keywords: College students, smartphone addiction, risk factors, GEE model

歧视知觉与青少年问题性网络使用的关系： 学校联结、自尊的中介作用

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摘要 近年来，网络已成为当代青少年重要的信息获取途径、沟通交流的桥梁及休闲娱乐的平台。然而过度的网络使用行为可能引发问题性网络使用的风险。问题性网络使用（Problematic Internet Use, PIU）是指对个体心理健康、社会适应、学习或工作等方面造成消极后果的网络使用行为。问题性网络使用者通常会感到无法控制和强迫性的使用网络，这一行为可能导致青少年出现认知功能受损、社交困难、抑郁焦虑等情绪障碍，也可能增加其出现攻击等外化问题的风险。研究数据显示，青少年群体中问题性网络使用的现象十分普遍。因此，有必要对问题性网络使用的影响因素及具体发生机制进行全面深入探讨。广义紧张理论认为，同伴交往中感知的歧视很可能作为压力源诱发个体产生多种消极的情绪反应，并导致个体出现各类非适应性的行为（如问题性网络使用）去应对上述消极情绪体验。心理（自尊）或社会资本（学校联结）水平较低的青少年可能选择过度使用网络作为应对歧视的不良适应策略。因此，歧视知觉可以认为是青少年问题性网络使用的预测指标。此外，歧视知觉与问题性网络使用之间的潜在机制尚未得到充分研究。本研究旨在探讨歧视知觉与青少年问题性网络使用的关系以及学校联结、自尊在其中的中介作用。

采用歧视知觉问卷、问题性网络使用诊断工具、学校联结问卷与 Rosenberg 自尊量表对广东省某地两所中学共 1052 名青少年（ $M_{age}=14.95$, $SD=1.66$, 男性占 45.30%）进行施测。结果显示：（1）青少年的问题性网络使用检出率为 12.64%；（2）由低家庭经济收入引发的歧视知觉可显著正向预测青少年的问题性网络使用；（3）歧视知觉通过学校联结和自尊的中介作用对青少年问题性网络使用产生作用，这一中介作用包含

了三条路径：学校联结和自尊的单独中介作用以及二者的链式中介作用。研究揭示了歧视知觉与青少年问题性网络使用的关系及潜在的中介机制，结果对青少年问题性网络使用的干预具有一定参考价值。

关键词 歧视知觉，问题性网络使用，学校联结，自尊，中介作用

The Relationship between Perceived Discrimination and Problematic Internet Use: The Mediating Effects of School Connectedness and Self-esteem

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Abstract: In the last decade, Internet is becoming an important access to information, a bridge for communication, and a platform for entertainment to adolescents. However, excessive Internet use may lead to the occurrence of Problematic Internet Use (PIU). PIU refers to excessive use of the internet that causes psychological, social, school and/or work difficulties in a person's life. The negative consequences of PIU on adolescents' adjustment are clear. Specifically, PIU is related to adolescents' academic problems, social withdrawal, depressive or anxiety symptoms, and externalizing problems. Previous research has also indicated that the incidence of PIU is relatively high among Chinese adolescents. Thus, exploring the influencing factors and underlying mechanisms of adolescents' PIU are necessary for targeted intervention to reduce PIU. According to the general strain theory, perceived discrimination is a kind of pressures for adolescents, which may lead to a variety of stress reactions (e.g., negative emotions, social alienation). For adolescents with low levels of psychological or social capital, excessive use of internet is a maladaptive strategy to cope with discrimination. Thus, perceived discrimination was hypothesized to be a predictor of adolescents' PIU. Furthermore, the underlying mechanisms linking perceived discrimination to adolescents' PIU have not fully examined. The present study aimed to test the potential mediating effects of school connectedness and self-esteem on the association between perceived discrimination and adolescents' PIU.

A total of 1052 adolescents ($M_{age} = 14.95$, $SD = 1.66$) in Guangdong Province was recruited to participate in this study. Adolescents' perceived discrimination was measured by the perceived discrimination questionnaire. The revised school connectedness questionnaire was used to assess adolescents' school connectedness. The self-esteem scale (SES) developed by Rosenberg was used to measure adolescents' self-esteem. Adolescents' problematic Internet use was assessed with questionnaire for screening of PIU. All the measures have good reliability and validity. Data was analyzed using SPSS 23.0 and *Mplus* 8.0. A bias-corrected bootstrapping method was used to calculate the mediating effects of school connectedness and self-esteem in the relationship between perceived discrimination and adolescents' PIU.

The prevalence of adolescents' PIU was 12.64% in our study. Perceived discrimination was positively associated with PIU, supporting our hypothesis. A bias-corrected bootstrapping analyses have indicated that the indirect effects of perceived discrimination on PIU through school connectedness and self-esteem were significant. The indirect paths included: (I) Perceived discrimination $\rightarrow$ school connectedness $\rightarrow$ adolescents' PIU, (II) Perceived discrimination $\rightarrow$ self-esteem $\rightarrow$ adolescents' PIU, and (III) Perceived discrimination $\rightarrow$ school connectedness $\rightarrow$ self-esteem $\rightarrow$ adolescents' PIU. The mediating effects were .02, .04, and .01, respectively. These mediation effects were accounted for 58.93% of the total effect.

In summary, our results suggested that perceived discrimination is a risk factor of adolescents' PIU. Furthermore, school connectedness and self-esteem might be potential mediators on the association between perceived discrimination and adolescents' PIU. These findings provide preliminary evidence to indicate how perceived discrimination and PIU are associated during adolescence and highlight further effective interventions for adolescents'

PIU. Programs that aim to decrease discrimination among peer interaction and improve adolescents' school connectedness and self-esteem are crucial for preventing PIU.

Keywords: perceived discrimination, problematic Internet use, school connectedness, self-esteem, mediator

大学生抑郁水平对网络去抑制的影响： 网络社会支持的中介和网络自我效能感的调节作用

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摘要 近年来，网络已成为人们日常交流的重要渠道。网络去抑制指个体在网络上可自由地表现出面对面对交往中较少或不会出现的言行。在消极情绪下，个体极有可能使用网络进行倾诉分享等良性行为或谩骂攻击等恶性行为，以此来减轻负性体验或补偿心理需要。抑郁作为一种严重的消极情绪表现，以往研究证实，与网络去抑制呈显著正相关。而两者间具体的影响机制有待进一步探究。同时，在网络互动中，外在因素会对个体的言行产生重要影响。其中，网络社会支持指个体在网络活动中感受到他人给予支持性力量的情况。本研究推测，具有抑郁倾向的个体在网络活动中通过获取他人的支持性力量进一步提升了网络去抑制程度。此外，网络自我效能感是个体网络使用行为的重要促进因素。高网络自我效能感的个体在抑郁体验下会更可能使用网络进行情绪宣泄。因此，本研究将考察网络社会支持在抑郁和网络去抑制间的中介作用，及网络自我效能感在抑郁对网络去抑制影响上的调节作用。

在四川多所高校共选取 461 名在读大学生参与研究。使用流调抑郁量表、网络社会支持量表、网络自我效能感量表和网络去抑制量表调查了被试的抑郁水平、网络社会支持、网络自我效能感和网络去抑制程度。其中，网络去抑制量表分为良性去抑制和恶性去抑制两个维度。对所得数据使用 SPSS 22.0，及其插件 PROCESS 3.5 中的 Model 5 进行数据分析与处理。

结果：（1）独立样本 t 检验表明，农村生源大学生的抑郁水平显著高于城市大学生。（2）抑郁对网络去抑制起显著正向预测作用。（3）网络社会支持在抑郁对网络去抑制的影响中起中介作用。（4）对高网络自我效能感的个体来说，抑郁水平对网络去抑制的正向预测作用更大。

研究结果有助于解释抑郁影响网络去抑制的作用机制。结果提示，对大学生的抑郁水平，尤其是农村生源的大学生，仍需加强关注。同时，干预网络社会支持是有效影响抑郁预测网络去抑制的重要途径。另外，对高网络自我效能感的个体来说，更要关注抑郁水平对网络去抑制的正向影响。

关键词 抑郁，网络去抑制，网络社会支持，网络自我效能感，大学生

The Influence of Depression Level of College Students on Online Disinhibition: The Mediation Effect of Internet Social Support and the Moderating Effect of Internet Self-efficacy

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Abstract: In recent years, the Internet has become an important way for people's daily communication. Online disinhibition means that individuals can freely say and do things in cyberspace that they would not ordinarily say and do in the face-to-face situation. Under negative emotions, individuals are likely to use the Internet to perform benign behaviors such as confiding and sharing or toxic behaviors such as verbal abuse, in order to alleviate negative experiences or compensate for psychological needs. Previous studies have confirmed that depression is positively correlated with online disinhibition. However, the specific mechanism of college students' depression on online disinhibition needs to be further explored. At the same time, in the Internet interaction, external factors will have an important impact on the words and deeds of individuals. Internet social support refers to the situation that an individual feels the supportive power given by others in network activities. This study speculates that depressive level can positively predict online disinhibition through Internet social support. In addition, internet self-efficacy is a

promoting factor of individual Internet use behavior. Individuals with high Internet self-efficacy are more likely to use the Internet for emotional venting when experiencing depression. Therefore, this study will examine the mediating effect of Internet social support on depression and online disinhibition, and the moderating effect of Internet self-efficacy on depression and online disinhibition.

A total of 461 college students were selected from different universities in Sichuan to participate in the study. Using the epidemiological depression scale, the Internet social support scale, the Internet self-efficacy scale, and the online disinhibition scale to investigate the participants' depression level, Internet social support, Internet self-efficacy and the degree of online disinhibition. Among them, the online disinhibition scale is divided into two dimensions: benign disinhibition and toxic disinhibition. SPSS 22.0 and model 5 in PROCESS 3.5 were used for data analysis.

Results: (1) Independent sample t-test showed that the depression level of college students living in rural areas was significantly higher than that of urban students. (2) Depression has a significant positive predictive effect on online disinhibition. (3) Internet social support plays a mediating role in the effect of depression on online disinhibition. (4) For individuals with high Internet self-efficacy, the positive predictive effect of high depression level on online disinhibition is greater.

The results help to explain the mechanism of depression affecting online disinhibition. The results suggest that more attention should be paid to the depression level of college students, especially those from rural areas. At the same time, the intervention of Internet social support is an important way to effectively affect the relationship of depression on online disinhibition. In addition, for individuals with high Internet self-efficacy, we should pay more attention to the positive effect of depression on online disinhibition.

Keywords: depression, online disinhibition, internet social support, internet self-efficacy, college students

读英文更容易走神：阅读模式和语言对心智游移的影响

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摘要 心智游移（mind wandering）是指阅读时注意从当前外部任务转移到内部体验的过程。已有研究证明心智游移对阅读理解有消极作用，采用朗读模式可能会减少心智游移现象。本研究采用探针检测方法，考察在不同的阅读模式下，中国大学生阅读中英文文本时的心智游移现象。实验采用 2（阅读模式：朗读，默读）×2（语言：中文，英文）混合实验设计，其中，阅读模式为被试间变量，语言为被试内变量。因变量是心智游移频率和阅读理解正确率。在中国日报的双语新闻栏目选择 4 篇中文新闻文章及其对应的英文文章（共 8 篇）作为实验材料，37 名非英语专业的中国大学生参与实验。结果发现：（1）无论是朗读模式还是默读模式，阅读的语言影响心智游移频率，即阅读英文材料比阅读中文材料更容易发生心智游移；但是，阅读模式不影响心智游移频率。（2）阅读模式和阅读理解成绩的关系受语言的影响，对于英文材料，朗读组的阅读理解正确率高于默读组，对于中文材料，默读组的阅读理解正确率高于朗读组；（3）与阅读中文材料相比，阅读英文材料更容易在文本的开头位置报告自己发生了与内容有关的心智游移，但是这种与内容有关的心智游移并不能促进阅读理解。研究结果表明，对于英语不熟练的中国大学生，阅读英文材料比阅读中文材料更容易出现心智游移现象；朗读不能降低中英文阅读时的心智游移频率；朗读可以促进对英文文本的理解，但妨碍中文文本的阅读理解。

关键词 阅读模式，中文，英文，心智游移，文本阅读

More Mind Wandering when reading English: The Effects of Reading Modes and Language on Mind wandering

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Abstract: Mind Wandering is the process of shifting attention from the current external task to the internal experience during reading. Previous studies have shown that mind wandering has a negative effect on reading comprehension, and reading aloud may reduce mind wandering. The purpose of this study is to investigate the mind wandering of Chinese college students under different reading models. The experiment adopted a 2 (reading mode: oral reading, silent reading) $\times$ 2 (language: Chinese, English) mixed design, in which the reading mode was the between-subjects factor, and the language was the within-subjects factor. The dependent variables were the frequency of mind wandering and the accuracy of reading comprehension. In the bilingual news column of China Daily, four Chinese news and their corresponding English news (8 news in total) were selected as experimental materials, and 37 Chinese college students who were not English majors participated in the experiment. The results showed that : (1) no matter reading aloud or silently, the language affected the frequency of mind wandering, that is, English reading was more prone to mind wandering than Chinese reading. However, reading modes did not affect the frequency of mind wandering. (2) The relationship between reading modes and reading comprehension scores was influenced by language. For English materials, the reading comprehension accuracy of the oral reading group was higher than that of the silent reading group. For Chinese materials, the reading comprehension accuracy of the silent reading group was higher than that of the oral reading group. (3) Compared with reading Chinese news, reading English news is more likely to report that they had content-related mind wandering at the beginning of the text, but the content-related mind wandering does not promote reading comprehension. The results show that for Chinese college students who are not proficient in English, reading English materials is more likely to have mind wandering than reading Chinese materials. Reading aloud can't reduce the frequency of mind wandering both in Chinese and English; Reading can promote the comprehension of English text, but hinder the comprehension of Chinese text.

Keywords: reading mode, Chinese, English, mind wandering, text reading

正念减压训练对优秀运动员睡眠质量的干预研究：不执著的中介作用

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摘要 目的：良好的睡眠质量能让大脑和身体得到充分的休息、恢复。睡眠不足容易引起注意力、专注力及记忆力减退等症状的发生，严重者甚至诱发精神错乱等疾病。对于优秀运动员而言，睡眠质量的好坏会影响其身体机能的状态与竞技能力的发挥。正念减压训练作为一种新型心理干预方式，已在治理临床心理疾病、改善生活品质等方面得到广泛的应用。本研究旨在探明正念减压训练改善优秀运动员睡眠质量，以及不执著在其中的中介作用，以期优秀运动员的身体恢复、心理调节等提供理论参考。方法：本研究招募沈阳体育学院大学生运动员（二级及二级以上）84名被试，采取随机对照实验设计，将被试随机分为干预组与对照组。最终有76名被试完成本研究（正念训练组37名、对照组39名），其中正念减压组每周进行一次正念减压训练，共持续8周，对照组不采取干预措施。干预前后，两组被试填写五因素正念度量表（FFMQ）、简版不执著量表（NAS）、匹兹堡睡眠指数量表（PSQI）。结果：8周干预后，FFMQ、PSQI、NAS总分干预后 (134.51 ± 18.51) 分， (4.20 ± 2.08) 分， (74.65 ± 18.86) 分均低于干预前 (123.67 ± 13.57) 分， (5.63 ± 2.57) 分， (83.35 ± 21.03) 分]，（均 $P < 0.01$ ），而对照组干预前后各项得分差异均无统计学意义（均 $P > 0.05$ ）。结论：正念减压训练对优秀运动员睡眠质量的改善有显著效果，不执著是二者关系的中介变量。

关键词 正念减压训练，优秀运动员，睡眠质量，不执著

Intervention of mindfulness stress reduction training on sleep quality of excellent athletes: the intermediary role of non-attachment

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Abstract: Objective: Good sleep quality can let the brain and body get full rest and recovery. Lack of sleep is easy to cause the occurrence of attention, concentration and memory loss and other symptoms, serious people and even induce insanity and other disorders. For excellent athletes, the quality of sleep will affect their physical function and the play of competitive ability. As a new psychological intervention mode, mindfulness stress reduction training has been widely used in the treatment of clinical psychological diseases and improving the quality of life. The purpose of this study is to explore the stress reduction training to improve the sleep quality of outstanding athletes and the intermediary role of not persistent in them, in order to provide theoretical reference for the physical recovery and psychological adjustment of outstanding athletes. Methods: This study recruited 84 students (Grade II and above) and controlled subjects into intervention and control groups. Finally, 76 subjects completed the study (37 in the mindfulness training group and 39 in the control group), of which the mindfulness decompression group was trained once a week for 8 weeks. Before and after intervention, both groups completed the five-factor mindfulnessMetric (FFMQ), Brief Non-persistence Scale (NAS), and Pittsburgh Sleep Quantity Table (PSQI). Results: After 8 weeks of intervention, FFMQ, PSQI, NAS total score $[(134.51 \pm 18.51), (4.20 \pm 2.08), (74.65 \pm 18.86)]$ were all below pre-intervention $[(123.67 \pm 13.57), (5.57), (83.35 \pm 21.03)]$, ($P < 0.01$), with no statistical difference (both $P > 0.05$). Conclusion: mindfulness stress reduction training improves the sleep quality of excellent athletes. Nonpersistence is the intermediary variable of the relationship.

Keywords: mindfulness decompression training, excellent athletes, sleep quality, non-attachment

家庭内部冲突与青少年心理健康问题的关系： 睡眠问题的纵向中介作用

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摘 要 目的：家庭内部冲突会影响青少年的心理健康，但其内部机制尚不清楚。为了解决这一问题，本研究采用追踪设计探讨家庭内部冲突与青少年内外化问题的关系，同时考察睡眠质量在两者间的作用机制。方法：本研究采用家庭环境量表-亲密度分量表（FES-CV）、匹兹堡睡眠质量指数量表（PSQI）、儿童抑郁障碍自评量表（DSRS）、儿童焦虑情绪障碍筛查量表（SCARED）、长处与困难问卷学生版（SDQ）及一般人口学变量对广东省 932 名初中生（ $M = 13.25, SD = 0.66$ ）进行为期三年的 3 次追踪调查。每次调查的时间间隔为 12 个月。结果：①相关分析发现：T1 阶段的家庭内部冲突与 T3 阶段的内化问题（抑郁和焦虑）和外化问题相关显著；T2 阶段的睡眠质量与 T1 阶段的家庭内部冲突、T3 阶段的内化问题（抑郁和焦虑）和外化问题相关显著。②在控制了 T1 阶段的睡眠质量、内外化问题与人口学变量后，T1 阶段的家庭内部冲突正向预测 T2 阶段的睡眠质量，并且 T2 阶段的睡眠质量在 T1 阶段的家庭内部冲突和 T3 阶段的内化问题（抑郁和焦虑）和外化问题间起完全中介作用。此外，睡眠质量中介作用并无明显的性别差异。结论：睡眠质量在家庭内部冲突和青少年心理健康关系中发挥着重要作用。当青少年卷入家庭内部冲突时，通过改善其睡眠质量，可有效降低其内外化问题的发生风险。

关键词 家庭内部冲突，睡眠质量，心理健康，纵向研究，青少年

The Influence of Intra-family Conflict on Mental Health Problems in Chinese Adolescents: the Longitudinal Mediating Role of Sleep Problems

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Abstract: Objectives: This study investigated the mediating role of poor sleep quality in the effect of intra-family conflict on mental health problems for adolescents using three-years longitudinal study. Methods: In this study, we recruited 932 (M_{age} at baseline=13.25 years, $SD=0.66$) adolescents from two junior high school in Guangzhou city. The Family Environment Scale Chinese Version (FES-CV), the Pittsburg Sleep Quality Index (PSQI), the Depression Self-Rating Scale (DSRS), the Screen for Child Anxiety Related Emotional Disorders (SCARED) and the Strengths and Difficulties Questionnaire (SDQ) were used as research tools. The intervals were 12 months apart. Results: After adjusting for sleep quality, mental health problems and family demographics at wave 1 (T_1), ①The T_1 intra-family conflict was correlated with internalizing symptoms (including anxiety symptoms and depression symptoms) at wave 3 (T_3) and externalizing symptoms at wave 3 (T_3). The T_2 sleep quality was related to intra-family conflict at Wave 1 (T_1), internalizing symptoms (including anxiety symptoms and depression symptoms) at wave 3 (T_3) and externalizing symptoms at wave 3 (T_3). ②The T_1 intra-family conflict significantly positively predicted sleep quality at wave 2 (T_2), and T_2 sleep quality played a complete mediating role in the influence of T_1 intra-family conflict and internalizing symptoms (including anxiety symptoms and depression symptoms) at wave 3 (T_3). ③ T_2 sleep quality completely mediated the association between T_1 intra-family conflict and externalizing symptoms at wave 3 (T_3). In addition, this mediation of sleep quality was consistent across gender. Conclusions: Sleep quality was an important mediator in explaining the relationship between intra-family conflict and mental health problems in adolescents. Prevention and intervention programs aimed at improving their sleep quality may be critical to prevent mental health problems when adolescents are involved in family conflict.

Keywords: intra-family conflict, sleep quality, mental health, longitudinal study, adolescent

累积家庭风险对学前儿童外化问题的影响及机制：跨性别一致性检验

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摘要 选取 182 名学前儿童 (111 名男孩) 及其母亲为研究对象, 考察累积家庭风险对学前儿童外化问题的影响及其函数关系, 揭示执行功能在两者关系中的认知机制以及性别在上述路径中的调节效应。结果发现:

(1) 累积家庭风险正向预测儿童的外化问题, 二者呈线性关系; (2) 执行功能的中介作用显著, 即累积家庭风险通过儿童的执行功能进而影响其外化问题; (3) 性别在累积家庭风险对儿童外化问题的直接效应以及执行功能的中介效应中的调节作用不显著。另外, 累积风险方法的使用和线性结果的发现有利于我们更精准地识别出高风险儿童, 并提示应该对威胁儿童发展的家庭风险进行全面干预, 因为消除儿童学前阶段的任何风险, 都有利于减少外化问题的产生。同时, 未来研究应该进一步探究累积家庭风险与儿童严重的外化问题 (如犯罪行为) 之间可能的非线性模式及其触发点或阈值, 揭示压倒儿童心理健康的最后一根稻草, 以期为高风险儿童针对性的干预工作提供更丰富的理论与实践指导。最后, 累积家庭风险对于不同性别学前儿童的外化问题具有相同的影响路径, 因此为减少儿童的外化问题, 除了全面干预儿童家庭中的风险因素, 也要注重加强所有儿童自身层面的执行功能发展。研究结果为相关理论模型提供了证据, 并为有效预防与干预学前儿童的外化问题提供了现实指导。

关键词 累积家庭风险, 外化问题, 执行功能, 性别一致性

The Effects of Cumulative Family Risk on Externalizing Problem in Preschool Children and its Mechanism: A Cross-gender Congruence Test

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Abstract: This study, which included 182 preschoolers (111 boys) and their mothers, investigated the effects of cumulative family risk on externalizing problem and its functional relationship. We not only revealed the cognitive mechanism of executive function, but also the moderating effect of gender on the above pathway. The results showed that: (1) The prediction of children's externalizing problem on cumulative family risk is linear and positive; (2) Executive function played a significant mediating role, and it meant the children's externalizing problem is affected by cumulative family risk because of executive function; (3) Gender had no significant moderating effect on the direct effect of cumulative family risk on children's externalizing problem and the mediating effect of executive function. In addition, the use of the cumulative risk method and the discovery of linear results help us more accurately identify high-risk children, and suggest that we should conduct comprehensive interventions on family risks that threaten children's development, because eliminating any risks in children's preschool stage is beneficial to reducing the appearance of externalizing problem. At the same time, future research should further explore possible non-linear patterns and trigger points or thresholds between cumulative family risks and children's serious externalizing problem (such as criminal behavior). Finally, cumulative family risk has the same influence path on the externalizing problem of different genders. Therefore, in order to reduce children's externalizing problem, in addition to comprehensive interventions in children's family risk factors, we should also focus on strengthening the executive functions of all children. The results of this study provided evidence for relevant theoretical models, and provided practical guidance for effective prevention and intervention of preschool children's externalizing problem.

Keywords: Cumulative Family Risk, Externalizing Problem, Executive Function, Transgender Consistency

中学教师胜任力、心理授权与职业幸福感的关系研究

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摘要 时代的发展和教育本身运行的规律,使得教师承担的角色日趋复杂,其心理健康状态与生活质量水平日益受到人们的关注,而其职业幸福感是衡量心理状态与生活质量的重要因素。教师的职业幸福感是指教师在教育教学中,对实现自己的职业理想、体味人生价值并获得自身发展的精神愉悦状态的主观体验。不仅影响教师个人的教学质量、自身发展、心理健康水平等方面,更潜移默化地影响着学生的学习热情、人格品质、价值观等诸多方面。但是,教师的职业幸福体验并不乐观。造成教师“不幸福”的原因既包括外在因素,也涉及到内部因素:如教师胜任力有待提高,难以产生工作绩效,教师的胜任力是指教师的人格特征、知识和在不同教学背景下所需要的教学技巧及教学态度的综合,已有研究表明教师的胜任力不仅对职业幸福感产生重要影响,而且对其具有一定的预测作用。从更大的范围来分析,社会、学校文化大背景下的教师难以感受到足够的属于自己角色的自主和决定的权力,即心理授权不足,心理授权是个体对授权所体验到的心理状态或认知过程,这个过程包括工作意义、自我效能感、自我决定力和工作影响四个方面。以往研究发现教师职业幸福感与心理授权相关显著。本研究为了解中学教师胜任力、心理授权与职业幸福感的现状,探讨三者之间的关系,并有针对性提出有效的建议。通过方便取样的方法,选取280名中学教师作为测试对象,采用《教师胜任力调查问卷》、《心理授权量表》和《教师职业幸福感问卷》进行测试。研究结果显示:(1)中学教师的胜任力、心理授权和职业幸福感处于中等水平;(2)中学教师的胜任力、心理授权和职业幸福感在性别、年龄、教龄等人口学变量上均存在显著差异;(3)胜任力、心理授权与职业幸福感存在显著的两两相关关系($p < 0.01$);(4)分析中介检验模型,发现中学教师胜任力作用于职业幸福感的过程中,心理授权起完全中介作用。结论:中学教师胜任力会影响心理授权,心理授权进而影响中学教师职业幸福感。本研究致力于对教师的人文关怀,有助于增强教师整体素质,促进教师专业化发展,对于如何促使教师最大限度地发挥个体潜在力量、获得最佳工作绩效的同时,获得更高的职业幸福感具有非参考价值。

关键词 中学教师, 胜任力, 心理授权, 职业幸福感

A study on the Relationship Between Competency, Psychological Empowerment and Professional Well-being of Middle School Teachers

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Abstract: With the development of The Times and the law of the operation of education itself, the role of teachers is becoming more and more complex, and their mental health and quality of life are attracting more and more attention, and their occupational happiness is an important factor to measure their psychological state and quality of life. The professional happiness of teachers refers to the subjective experience of teachers to realize their career ideal, appreciate the value of life and obtain the spiritual pleasure state of their own development in education and teaching. It not only affects teachers' teaching quality, self-development, mental health level and other aspects, but also influences students' learning enthusiasm, personality quality, values and other aspects subtly. However, the occupational happiness experience of teachers is not optimistic. The cause of teachers "not happy" includes both external factors, also involves the internal factors: such as teachers' competency, difficult to produce performance, teachers' competence is refers to the teacher's personality, knowledge and under the background of different teaching need comprehensive teaching skills and teaching attitude, existing research shows that teachers' competence is not only important influence on vocational happiness, but also for its role has certain prediction. According to the analysis of larger scope of society, school culture against the background of teachers feel hard enough belongs to his role of autonomy and decision power, namely the psychological authorization, psychological authorization is an individual's psychological state to authorized by experience or cognitive process, this process includes work significance, self-efficacy, self-determination and impact from four aspects. Previous studies have found that teachers' occupational happiness is significantly related to psychological empowerment. In order to understand the status quo of middle school teachers' competence, psychological empowerment and occupational happiness, this study discussed the relationship among the three and put forward effective Suggestions. Through the convenient sampling method, 280 middle school teachers were selected as the test subjects, and the teacher Competence Questionnaire, Psychological Authorization Scale and Teacher Occupational Happiness Questionnaire were used for the test. The results show that : (1) the competence, psychological empowerment and occupational happiness of middle school teachers are in the middle level; (2) There are significant differences in the competency, psychological empowerment and occupational happiness of middle school teachers in demographic variables such as gender, age and teaching age; (3) There were significant pair correlation between competence and psychological empowerment and occupational happiness ($P < 0.01$); (4) By analyzing the mediation test model, it is found that psychological authorization plays a completely mediating role in the process of applying the competence of middle school teachers to occupational happiness. Conclusion: The competence of middle school teachers will affect psychological authorization, and psychological authorization will affect the occupational happiness of middle school teachers. This study is devoted to the humanistic care of teachers, which can help to improve the overall quality of teachers and promote the professional development of teachers. It has non-reference value for how to make teachers give full play to their individual potential strength, obtain the best job performance and obtain higher professional happiness.

Keywords: Middle school teachers, Competence, Psychological empowerment, Professional well-being

马基雅维利主义对成人初显期学生的关系攻击的影响： 控制感的中介作用

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摘 要 关系攻击是指以控制或伤害他人为目的，操纵或破坏同伴之间的人际关系或情感的行为。例如，使用孤立某个人、散布谣言破坏他人名声等方式来达到伤害或控制他人的目的。媒体报道、学校或生活环境的

风气 and 干预、社会认知、规范信念、个体在团体中的被接纳程度都是影响关系攻击的主要因素。18 至 29 岁是向成人时期的过度，更是探索自我、充满变化性的独特时期，学者将这段时期命名为“成人初显期”，尤其是处于这个年龄段的学生群体，他们建立人际关系及维护方式都还处于不完全成熟阶段。以往研究关系攻击针对的大多为未成年人，因此，对成年学生群体的关系攻击特征进行探索还是非常值得的。关系攻击的操纵关系伤害他人这一特性与马基雅维利主义人格善于控制、操纵的特性相吻合，马基雅维利主义的标志性特征就是操纵他人、对他人没有太多的同情心和情感、讲究实用主义、狡猾甚至是没有道德的。由于马基雅维利主义个体善于使用人际操纵策略，所以，为了达到自己的目的，会采用恶意的策略去进行人际交往。控制感是个体对自身能力、努力程度等内部因素作用于事件发展及其结果的一种评估和判断过程中感知控制感是引起攻击行为不可忽视的原因，以往研究发现马基雅维利主义人格特质明显的个体，其关系攻击水平更高，因此，在此基础上，进一步探索控制感在马基雅维利主义对成人初显期学生群体的关系攻击影响起到的作用。在本研究中，使用《马基雅维利主义人格量表》、《控制感中文修订版量表》、《关系攻击量表》对 600 名 18-29 岁的学生群体进行测量发现：（1）处于成人初显期的学生群体，女生的关系攻击水平显著高于男生；（2）个体受教育程度越高，其关系攻击水平越低；（3）个体马基雅维利主义水平越高，控制感降低时，其关系攻击水平显著提高。

关键词 马基雅维利主义，关系攻击，控制感，成人初显期

The Influence of Machiavellianism on the Relational Aggression of Students in the Emerging Adulthood: The Mediating Role of Control

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Abstract: Relationship aggression refers to the behavior of manipulating or destroying interpersonal relationships or emotions between peers for the purpose of controlling or harming others. For example, use methods such as isolating a certain person, spreading rumors to damage the reputation of others to achieve the purpose of harming or controlling others. Media reports, school or living environment ethos and interventions, social cognition, normative beliefs, and the acceptance of individuals in groups are all major factors affecting relationship attacks. The age of 18 to 29 is a transition to adulthood, and it is a unique period of self-exploration and full of change. Scholars named this period as "the first stage of adulthood", especially for students in this age group. They establish interpersonal relationships. Relationships and maintenance methods are still in the incompletely mature stage. In the past, most researches on relationship attacks targeted minors. Therefore, it is worthwhile to explore the characteristics of relationship attacks among adult students. The characteristic of manipulating relationships and hurting others is consistent with the character of Machiavellianism, which is good at controlling and manipulating. The hallmark feature of Machiavellianism is manipulating others, not having much sympathy and emotion for others, and being practical Doctrine, cunning and even immoral. Since Machiavellian individuals are good at using interpersonal manipulation strategies, they will use malicious strategies to carry out interpersonal communication in order to achieve their own goals. The sense of control is an assessment and judgment process of the individual's own ability, effort level and other internal factors on the development of the event and its consequences. Perceived control is the cause of aggressive behavior that cannot be ignored. Previous studies have found that Machiavellianism has obvious personality traits. Individuals have a higher level of relationship attack. Therefore, on this basis, we will further explore the role of control in Machiavellianism's influence on the relationship attack of the early adult students. In this study, using the "Machiavellian Personality Scale", "Chinese Revised Control Sense Scale", and "Relational Attack Scale" were used to measure 600 18-29 year-old students and found that: (1) In the initial stage of adult students, the level of relational aggression of girls is significantly higher than that of boys; (2) the higher the level of individual education, the lower the level of relational aggression; (3) the higher the level of individual Machiavellianism, the lower the sense of control At that time, the level of relationship attack increased significantly.

Keywords: Machiavellianism; Relational Aggression; Control; Emerging Adulthood

青少年智能手机成瘾引起获得感“钝化”？： 公正世界信念与感恩的序列中介作用

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摘要 “获得感”一词是由习近平总书记在2015年中央全面深化改革领导小组第十次会议中首次提出,并且在之后会议和报告中被多次强调的重要概念。获得感是指个体在获取某种利益之后,内心深处所产生的一系列主观感受,是一种满足和幸福的积极情绪体验。然而青少年群体中依然存在获得感“钝化”现象,即俗语中所说的“身在福中不知福”。对于青少年来说,智能手机成瘾是该群体中普遍存在的行为问题。探讨青少年智能手机成瘾对获得感的影响,对青少年的心理以及社会化发展具有重要意义。

本研究主要基于社会认知理论,探讨青少年智能手机成瘾与获得感的关系,并在此基础上建构了序列中介效应模型,考察公正世界信念与感恩的中介作用。采用整群随机抽样的方法对广东省、山西省、河南省、江苏省、湖南省的11所高校及河南省和湖南省的6所中学共3104名学生进行问卷调查,结果显示:(1)智能手机成瘾、公正世界信念、感恩与获得感两两显著相关;(2)在控制了性别、年龄、家庭社会经济地位、主观社会经济地位后,智能手机成瘾对获得感具有显著的负向预测作用;(3)公正世界信念和感恩在智能手机成瘾与获得感之间起中介作用。具体而言,智能手机成瘾通过三条路径影响获得感,一是公正世界信念的中介作用;二是感恩的中介作用;三是公正世界信念与感恩的序列中介作用。以上结果表明,智能手机成瘾对获得感具有一定影响,是引起获得感“钝化”的重要因素,并且这种影响是通过公正世界信念和感恩的共同作用形成的。

关键词 智能手机成瘾, 获得感, 公正世界信念, 感恩, 青少年

Does Adolescent Smartphone Addiction cause "Passivation" of Sense of Gain?: Serial Mediating Effect of Belief in a Just World and Gratitude

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Abstract: The term "sense of gain" was first proposed by General Secretary Xi Jinping at the 10th meeting of the Central Leading Group for Comprehensively Deepening Reform in 2015, and has been emphasized many times in subsequent meetings and reports. The sense of gain refers to a series of subjective feelings generated deep inside an individual after obtaining certain benefits, which is a positive emotional experience of satisfaction and happiness. However, there is still a phenomenon of "passivation" of the sense of gain among adolescents, which is a popular saying that they do not know the blessing when they are in it. For adolescents, smartphone addiction is a common behavioral problem in this group. It is of great significance for adolescents' psychological and social development to explore the influence of adolescents' smartphone addiction on their sense of gain.

Based on social cognition theory, the present study aimed to explore the effect of adolescents' Smartphone addiction on sense of gain, and the mediating role of belief in a just world and gratitude. The cluster random sampling method was used to conduct a questionnaire survey on 3104 students from 11 universities in Guangdong, Shanxi, Henan, Jiangsu and Hunan provinces and 6 middle schools in Henan and Hunan provinces. Results indicated that :(1) There were significant correlations among smartphone addiction, belief in a just world, gratitude and sense of gain; (2) At the control of gender, age, family socioeconomic status, and subjective socioeconomic status, smartphone addiction could predict sense of gain. (3) Just world belief and gratitude played mediating roles between smartphone addiction and sense of gain. In particular, smartphone addiction affected sense of gain through three paths: the separate mediation effect of just world belief; the separate mediation effect of gratitude; the serial mediation effect of belief in a just world and gratitude. These findings suggest that smartphone addiction has a certain influence on the

sense of gain, which is an important factor causing the "passivation" of the sense of gain, and this influence is formed through the joint effect of belief in a just world and gratitude.

Keywords: smartphone addiction; belief in a just world; gratitude; sense of gain; adolescents

家庭累积风险对学前儿童攻击行为的影响及内在机制

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摘要 儿童早期攻击行为（包括关系攻击和外显攻击）与家庭中风险因素密切相关。依据累积风险模型，风险因素具有协同发生性；儿童经历的家庭风险因素越多，出现攻击行为的可能性越高。因此，了解累积家庭风险对学前儿童关系攻击和外显攻击的影响是十分必要的。此外，依据生命史理论，经历累积家庭风险的儿童更倾向于采取“快策略”，这将降低其执行功能水平，进而导致儿童出现更多的攻击行为。基于此，本研究以129名（男78名， $M_{\text{年龄}} = 5.45$, $SD = 0.75$ ）学前儿童及其父母为研究对象，采用了间隔1年的追踪设计考察了T1时累积家庭风险对T2时儿童关系攻击和外显攻击的影响，及T2时儿童执行功能的中介作用和儿童性别的调节作用。数据采用SPSS25.0和Amos24.0进行分析。结果发现：（1）累积家庭风险能够显著正向预测男孩的关系攻击及外显攻击，且累积家庭风险与两种攻击行为之间函数关系均为线性模式；但累积家庭风险对女孩的预测作用并不显著。（2）家庭累积风险显著降低学前期男孩执行功能水平，进而增加其外显攻击和关系攻击。研究表明，学前期男孩面对的累积家庭风险因素越多，出现关系攻击和外显攻击的可能性越高，并且执行功能会在上述关系中起到中介作用。因此，全面地降低学前儿童面对的家庭风险因素，提高执行功能水平是减少学前期男孩出现关系攻击和外显攻击的重要着手点。

关键词 累积家庭风险，执行功能，关系攻击，外显攻击，性别

The Effect and Mechanism of Cumulative Family Risks on Preschoolers' Aggressive Behavior

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Abstract: Family risk factors play important role in preschoolers' aggression (including relational and overt aggression). According to the cumulative risks model, family risk factors are always co-occurring, and the greater the number of risk factors, the greater the prevalence of aggression. Therefore, it is necessary to examine the effect of cumulative family risks on preschoolers' aggression. Additionally, based on life history strategy theory, children who face multiple family risks prefer fast strategies, which hinder the development of their executive functions. And it has been proved that lower executive functions lead to more aggression. Based on the above background, a total of 129 preschoolers (78 boys, $M_{\text{age}} = 5.45$, $SD = 0.75$) and their parents were recruited as participants, and a one-year longitudinal study was used to explore the effect of cumulative family risks at T1 in children's relational and overt aggression at T2, and the mediating role of children's executive functions at T2 as well as the moderating role of child gender. SPSS25.0 and Amos 24.0 were used to analyze the data. Results showed that: (1) cumulative family risks significantly predicted relational and overt aggression of boys, rather than that of girls, and the functional forms of cumulative family risks and two types of aggression fitted liner model. (2) children's executive functions mediate the relations between cumulative family risk and boys' relational and overt aggression. These findings indicate that the more cumulative family risks boys confront, the more relational and overt aggression they will have, and that cumulative family risks can indirectly affect boys' aggression through their executive functions in their preschool years. As a result, it could be effective to reduce boys' aggression in preschool years by reducing family risk factors globally, and improve their executive functions.

Keywords: cumulative family risks, executive functions, relational aggression, overt aggression, gender

大学生网络受欺负与内化问题的关系：一个有调节的中介作用

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摘要 随着信息化的迅速发展,大学生群体使用网络非常普遍。有研究发现,有很多大学生在电子信息交流过程中反复受到其他个体的欺负,网络受欺负会对受欺负者的身心状态产生诸多负面影响。大学时期正是脱离家庭,走向自主与独立的阶段,易出现心理适应问题,因此大学生网络受欺负现状及其负面影响备受关注。本研究使用网络受欺负量表、应对自我效能感量表、中国大学生心理健康筛查量表、情绪调节问卷对来自武汉市两所高校共 1454 名大学生进行问卷调查,删除不认真作答和不完整问卷,共删除 39 份,最终得到有效问卷 1415 份。目的在于探讨大学生网络受欺负、应对自我效能感、认知重评和内化问题的关系,并探索应对自我效能感在大学生网络受欺负和内化问题之间的中介效应,认知重评在大学生网络受欺负和应对自我效能感之间的调节效应。使用 SPSS 24.0 和 Mplus 7.4 对数据进行统计分析,得出以下结论:(1)大学生网络受欺负能正向预测内化问题。(2)加入应对自我效能感作为中介变量后,大学生网络受欺负的预测作用依然显著:应对自我效能感在大学生网络受欺负与内化问题间具有部分中介作用。(3)认知重评在大学生网络受欺负和应对自我效能感之间的调节作用显著,当遭受网络欺负事件时,相比认知重评水平低的大学生,认知重评水平高的大学生在经历了网络欺负事件后,其应对自我效能感水平下降地更加缓慢,缓冲了网络受欺负对于大学生自我效能感的影响。本研究探究了大学生网络受欺负正向预测内化问题的内在机制,并从大学生自身方面、学校方面和家庭方面提出了相应的对策和建议,目的在于降低大学生遭受网络欺负事件后的内化问题,促进他们的身心发展。

关键词 网络受欺负, 内化问题, 应对自我效能感, 认知重评

The relationship between College Students' Cyber-Victimization and internalization problems: A moderating mediator

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Abstract: With the rapid development of information technology, it is very common for college students to use the Internet. Some studies have found that many college students are repeatedly bullied by other individuals in the process of electronic information communication. Cyber-Victimization will have many negative effects on the physical and mental state of the bullied. College is the stage of leaving the family and moving towards autonomy and independence, and psychological adaptation problems are easy to occur. Therefore, the current situation of college students being bullied online and its negative effects have attracted much attention. This study used the Internet bullying Scale, coping self-efficacy scale, Chinese College Students' Mental Health Screening Scale and emotional regulation questionnaire to conduct a questionnaire survey on 1454 college students from two universities in Wuhan. A total of 39 incomplete and unserious questionnaires were deleted, and 1415 valid questionnaires were obtained. The purpose of this study is to explore the relationship between cyber-victimization, coping self-efficacy, cognitive reappraisal and internalization, and explore the mediating effect of coping self-efficacy between cyber-victimization and internalization, and the moderating effect of cognitive reappraisal between cyber-victimization and coping self-efficacy. SPSS 24.0 and Mplus 7.4 were used to statistically analyze the data, and the following conclusions were reached :(1) cyber-victimization of college students positively predicted internalization problems. (2) After the inclusion of coping self-efficacy as a mediating variable, the prediction effect of cyber-victimization was still significant: coping self-efficacy partially mediated the relationship between cyber-victimization and internalization

problems. (3) The moderating effect of cognitive reappraisal on the relationship between cyber-victimization and coping self-efficacy of college students was significant. When subjected to cyber-victimization, college students with high cognitive reappraisal level experienced a slower decline in coping self-efficacy than those with low cognitive reappraisal level. Cushioning the influence of online bullying on college students' self-efficacy. This study explored the internal mechanism of college students' internalization problems positively predicted by cyber-victimization, and put forward corresponding countermeasures and suggestions from the aspects of college students themselves, school and family, aiming at reducing the internalization problems of college students suffering from online bullying and promoting their physical and mental development

Keywords: Cyber-Victimization, internalization problems, coping self-efficacy, cognitive reappraisal

眼睛注视如何影响基金购买中的风险决策？

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摘要 近些年来，互联网理财行业快速发展，人们的经济意识日渐增强，对互联网使用较为熟练的年轻人正成为互联网理财消费的重要群体。年轻用户虽然在数量上占据优势，但在实际收益方面的表现却逊于中老年投资者，这在一定程度上反映了年轻投资者在理性决策方面存在的不足。以往研究表明，眼睛注视作为极其常见的社会线索之一，对促进理性决策具有一定作用。因此，为更好地了解年轻用户在线上投资的决策偏好与影响因素，探索降低年轻人在风险情境下非理性决策的方法，本研究采用改编自“亚洲疾病问题”的基金购买框架任务，在北京地区招募 133 名平均年龄 23.50 岁的年轻被试参与实验，考察不同情绪类型的眼睛注视与框架类型（获益框架，损失框架）对年轻人框架效应及风险倾向的影响。结果发现，所有被试均表现出框架效应，且消极注视增强了被试的框架易感性，即消极眼睛组被试的框架效应显著强于非消极眼睛组。同时，所有被试在损失框架下的风险寻求倾向均高于获益框架条件，消极注视仅在损失框架下促进了被试的风险寻求行为。上述结果表明，不同情绪类型的眼睛注视线索会与框架类型对个体的风险决策产生共同作用。这也为促进个体的理性决策提供了新的思路，即通过适当操纵社会线索影响投资者的风险决策，从而达到降低框架效应，促进投资者理性消费的目的。

关键词 眼睛注视，框架效应，风险决策，基金投资

Influence of eye gaze on risky decision-making in fund investment

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Abstract: In recent years, the rapid development of online financial management attracts lots of new investors to join in, especially young people. How to make rational decisions in fund investment remains an unsolved problem. Previous studies have suggested that eye gaze made sense in sustaining prosocial behavior and promoting rational decision making. However, most studies focused on the effect of the watching eye, ignoring the fact that eye gaze often comes with emotion in real life. Given the importance of emotion in the decision-making process, in the present study, we hypothesized that 1) comparing to the control group, eye gaze might decrease ones' framing effect, especially positive eye gaze; 2) emotional eye gaze might influence ones' decision-making process, decision makers preferred deliberative processes when being watched; 3) emotional eye gaze might affect ones' risk-seeking tendency under different frames, being related to sensitivity to loss, positive eye gaze might decrease ones' risk-seeking behavior under the loss frame, and negative eye gaze was just the opposite.

To test above the hypotheses and explore how emotional eye gaze influences young investors' framing effect in fund investment, 133 healthy young participants with a mean age of 23.50 years were recruited and randomly assigned to four groups to perform the fund decision-making task. The present study created fund decision scenarios

adopted from the “Asian Disease Problem” paradigm, and further explored the possible influence of emotional eye gaze on risk-seeking tendency and different frame (e.g., gain/loss). Eye movement measures, such as the number of fixations, were used to explore participants’ attention allocation to decision materials.

The results on framing effect showed that the main effect of eye gaze was significant, which suggested that the framing effect was influenced by emotional eye gaze. Follow-up analyses revealed that the framing effect of the negative eye gaze group was significantly larger than that of the non-negative eye gaze groups (i.e., positive and neutral eye gaze group). Neutral eye gaze would significantly reduce the frame susceptibility comparing to the negative eye gaze group and the control group. In addition, there was no significant difference between the control group and the positive eye gaze group and negative eye gaze group, respectively. Considering participants’ risk-seeking tendency, the main effect of the frame was significant, suggesting that all participants exhibited framing effect. Moreover, the interaction between eye gaze (negative/positive/neutral eye gaze group and control group) and frame (gain/loss) was significant. Moreover, negative eye gaze nudged participants towards risk-seeking behaviors, and non-negative eye gaze decreased risk-seeking relatively in the loss frame, and there was no difference among the four groups in the gain frame.

In conclusion, the present study confirmed that social cues (e.g., eye gaze) would interact with frame type to influence ones’ rational decision-making and risk-seeking behaviors. To be more specific, neutral eye gaze and positive eye gaze led to relatively congruent decision-making and more risk aversion behaviors, but negative gaze raised risk-seeking behaviors. Our findings highlight the importance of emotional social gaze in decision making.

Keywords: eye gaze, framing effect, risky decision-making, fund investment

电子媒体使用与 3-5 岁儿童社交-情绪发展的关系

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摘要 社交-情绪发展是指儿童与他人进行积极互动所需技能的发展和有效调节情绪的能力的发展。儿童早期是情绪和行为问题发生的关键时期,应及时对儿童社交-情绪发展进行筛查并确定影响儿童社交-情绪问题行为发生的因素。根据 Sameroff 交互作用模型,儿童社会-情绪发展受到儿童自身特征、家庭因素、科技微环境等因素持续动态交互作用的影响。随着科技的发展,电子媒体(电视、手机、电脑等)的出现正逐渐改变着亲子交互的环境,并对儿童的发展产生着重要的影响。本研究旨在探究不同电子媒体使用习惯与 3-5 岁儿童社交-情绪发展的关系。采用自编一般人口学问卷、儿童电子媒体使用调查问卷和《年龄与发育进程问卷:社交-情绪(第 2 版)》,由儿童父母报告完成,调查儿童 1069 名,结果发现:1) 3~5 岁儿童社交-情绪发展可疑迟缓率 20.9%,其中 3、4、5 岁组迟缓率分别为 30.9%、21.8%、17.7%,3 岁组迟缓率显著低于 5 岁组($\chi^2=11.699$, $P=0.003$),男生迟缓率显著高于女生(23.9% vs 17.5%; $\chi^2=6.545$, $P=0.011$),低 SES 组迟缓率显著高于高 SES 组(27.4% vs 15.4%; $\chi^2=8.919$, $P=0.012$);2) 儿童电子媒体使用率 99.4%,5 岁组每天平均使用时间>1 小时人数显著高于 3 岁组(31.9% vs 18.5%; $\chi^2=10.966$, $P=0.004$),高 SES 组比低 SES 组更多观看教育类内容的视频(73.6% vs 49.5%; $\chi^2=25.147$, $P<0.000$)、更常针对观看内容进行亲子互动(49.0% vs 32.1%; $\chi^2=11.915$, $P=0.003$)、更少同时使用多台媒体(10.6% vs 19.4%; $\chi^2=7.146$, $P=0.028$);3) 电子媒体使用影响儿童社交-情绪发展,使用时间>1 小时/天组的迟缓率高于<1 小时/天组(28.5% vs 17.6%; $\chi^2=15.457$, $P<0.000$)、同时使用多台媒体组迟缓率高于不同时使用组(31.3% vs 19.0%; $\chi^2=11.670$, $P=0.001$),常观看教育类内容组迟缓率低于不常观看组(16.1% vs 28.5%; $\chi^2=23.292$, $P<0.000$)、常针对观看内容与父母进行亲子互动组迟缓率低于不常互动组(12.8% vs 26.2%; $\chi^2=27.768$, $P<0.000$)。

关键词 学前儿童, 社交-情绪, 问题行为, 电子媒体使用

Electronic media use and social-emotional development in children aged 3-5 years

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Abstract: Social-emotional development refers to the development of skills necessary for children to interact positively with others and the ability to regulate emotions effectively. Early childhood is a critical period for the onset of emotional and behavioral problems.. It is necessary to screen the social and emotional development of children in time and determine the factors affecting the occurrence of social and emotional problems in children. According to the Sameroff interaction model, children's social-emotional development is influenced by the continuous dynamic interaction of children's characteristics, family factors, and science and technology microenvironment. With the development of science and technology, the appearance of electronic media (TV, mobile phone, computer, etc.) is gradually changing the parent-child interaction environment, and has an important impact on children's development. The purpose of this study was to explore the relationship between different electronic media use habits and social-emotional development of children aged 3-5 years. Using the self-compiled general demographic questionnaire, the Children's Electronic media use questionnaire and the Ages & Stages Questionnaires: Social-Emotional (ASQ:SE-2), the survey was completed by the parents of 1069 children. The results showed that:1) The suspected social-emotional developmental delay of children aged 3 to 5 was 20.9%, among which the delay rate of 3, 4 and 5 years group was 30.9%, 21.8% and 17.7%, respectively. The retardation rate of 3 years old was significantly lower than that of 5 years old ($\chi^2=11.699$, $P=0.003$), more boys than girls had scores above the cut-off (23.9% vs 17.5%; $\chi^2=6.545$, $P=0.011$), the delay rate of low SES group was significantly higher than that of high SES group (27.4% vs 15.4%; $\chi^2=8.919$, $P=0.012$);2) Electronic media usage rate of children is 99.4%, average daily use time of 5-year-old group more than 1-hour was significantly higher than the 3-year group (31.9% vs 18.5%; $\chi^2=10.966$, $P=0.004$), the high SES group watched more educational videos than the low SES group (73.6% vs 49.5%; $\chi^2=25.147$, $P<0.000$), more frequent parent-child interaction for watching content (49.0% vs 32.1%; $\chi^2=11.915$, $P=0.003$), less use of multiple media at the same time (10.6% vs 19.4%; $\chi^2=7.146$, $P=0.028$);3) Electronic media use affects children's social-emotional development, use time more than 1 hour/day group had a higher delay rate than less.1 hour/day group (28.5% vs 17.6%; $\chi^2=15.457$, $P<0.000$), the delay rate of the group using multiple media at the same time was higher than that of the group not using media at the same time (31.3% vs 19.0%; $\chi^2=11.670$, $P=0.001$), the delay rate of the group who often watched educational content was lower than that of the group who rarely watched educational content (16.1% vs 28.5%; $\chi^2=23.292$, $P<0.000$), the delay rate of the group who frequently interact with their parents for watching content was lower than that of the group who rarely interact with their parents (12.8% vs 26.2%; $\chi^2=27.768$, $P<0.000$).

Keywords: preschool children, social-emotional, behavioral problem, electronic media use

大学生人际关系与社交能力的关系：一个多重中介模型

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摘要 人际关系是指人在交往过程中心理上的直接联系和距离, 是社会人群因交往而构成的相互依存和相互联系的社会关系, 反映了个人寻求满足及社会需求的心理状态, 同样也是当代大学生社会交往的基础, 是其日常生活必不可少的一环。大学时期是社会性及心理逐渐成熟的重要时期, 对于人际关系的需要尤为强烈。更重要的是, 人际关系问题也是当代大学生在自身发展过程中面临的主要困扰之一, 与大学生的社交能力的发展紧密相连。人际关系是否影响大学生的社交能力以及如何影响的问题引起研究者的关注。对此, 研究者认为积极心理资本是解释人际关系对社交能力影响作用机制的切入点, 积极心理资本可以为大学生社交能力

的发展提供心理支持。基于此,本研究拟深入探究人际关系与社交能力发展之间的关系机制,以及积极心理资本在其中的作用。研究者采用人际关系综合诊断量表、青年学生社交能力评定问卷、积极心理资本问卷,对济南的 633 名大学生进行调查。结果表明:(1)大学生人际关系对其社交能力有正向预测作用;(2)大学生人际关系、积极心理资本及社交能力之间均存在显著的正相关关系;(3)在大学生人际关系与社交能力的关系中,积极心理资本存在多重中介效应,大学生人际分别通过自我、韧性和乐观间接预测社交能力水平。具体而言,在大学生人际关系对社交能力的预测关系中,积极心理资本扮演着多重中介角色。研究结果强调了人际关系不仅能直接影响大学生社交能力的水平,还可以通过积极心理资本的间接作用对大学生社交能力产生影响;不仅有助于揭示大学生人际关系与社交能力关系中的内在影响因素,还能为促进大学生社交能力发展提供了新的发展路径与参考意见,为缓解大学生社交焦虑提供了心理干预指导。

关键词 人际关系, 社交能力, 积极心理资本

The Relationship between Interpersonal Relationship and Social Ability of College Students: A Parallel Mediation Model

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Abstract: Interpersonal relationship refers to the direct psychological contact and distance between people in the process of communication. It is an interdependent and interrelated social relationship formed by social groups due to communication, which reflects the psychological state of individuals seeking satisfaction and social needs. It is also the foundation of contemporary college students' social communication and an indispensable part of their daily life. College is an important period for social and psychological maturity, and the need for interpersonal relationships is particularly strong. More importantly, interpersonal relationship is also one of the main problems faced by contemporary college students in their own development process, which is closely related to the development of college students' social ability. Whether interpersonal relationship affects college students' social ability and how to influence it has attracted researchers' attention. Therefore, researchers think that positive psychological capital is the starting point to explain the mechanism of interpersonal relationship's influence on social ability, and positive psychological capital can provide psychological support for the development of college students' social ability. Based on this, this study intends to deeply explore the relationship mechanism between interpersonal relationship and social ability development, and the role of positive psychological capital in it. The researcher investigated 633 college students in Jinan by using the Comprehensive Diagnostic Scale of Interpersonal Relationship, Social Ability Assessment Questionnaire of Young Students and Positive Psychological Capital Questionnaire. The results show that: (1) college students' interpersonal relationship can positively predict their social ability; (2) There is a significant positive correlation among interpersonal relationship, positive psychological capital and social ability of college students; (3) In the relationship between college students' interpersonal relationship and social ability, positive psychological capital has multiple mediating effects, and college students' interpersonal relationship indirectly predicts the level of social ability through self, resilience and optimism. Specifically, positive psychological capital plays multiple mediating roles in the predictive relationship between interpersonal relationship and social ability of college students. The results emphasize that interpersonal relationship can not only directly affect the level of college students' social ability, but also have an impact on college students' social ability through the indirect effect of positive psychological capital. It not only helps to reveal the internal influencing factors in the relationship between interpersonal relationship and social ability of college students, but also provides a new development path and reference for promoting the development of college students' social ability, and provides psychological intervention guidance for relieving college students' social anxiety.

Keywords: Interpersonal Relationship, Social competence, Positive psychological capital

父母教育期望、领悟社会支持、学业情绪 对高中生学习投入的影响研究

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摘 要 中国人向来注重家庭, 注重子女教育, 望子成龙是中国家庭的普遍期待。家长对子女的未来发展充满希望, 对子女的教育有许多期盼。调查表明, 目前我国有超过三分之一的中学生学习投入不足, 学习投入的不足会直接影响学习质量和效率。高中生正处于青春期, 父母、教师和同伴是对其发展产生关键影响的重要他人, 家庭、社会等因素是影响青少年身心发展的重要方面, 个体在遇到困境或者情绪困扰时, 也经常会向其寻求帮助。

本研究从父母教育期望的角度对高中生的学习投入进行一系列调查, 采用父母教育期望量表、领悟社会支持量表、学业情绪量表与学习投入量表对 550 名高一至高三的学生进行问卷调查, 考察高中生父母教育期望、领悟社会支持、学业情绪与学习投入的状况, 检验高中生父母教育期望与学习投入的关系, 并进一步探究领悟社会支持与学业情绪在其中所起的链式中介作用, 以阐述父母教育期望对学习投入的影响机制。通过 SPSS22.0、Mplus7.4 对数据进行统计处理与分析, 得出如下研究结果: (1) 高中生的父母教育期望、领悟社会支持、学业情绪与学习投入的整体水平较好; (2) 父母教育期望、领悟社会支持、学业情绪、学习投入在性别、年级、是否独生、以及父母文化教育程度等人口学变量上存在差异; (3) 高中生父母教育期望可以正向预测学习投入; (4) 领悟社会支持、学业情绪在父母教育期望对学习投入上起链式中介作用。

通过对研究结果分析得出以下结论: (1) 父母教育期望的适度提高有助于高中生学习投入的提升; (2) 合理范围内, 提高父母教育期望, 可以增强学生的领悟社会支持与学业情绪, 进而提升高中生的学习投入。

关键词 父母教育期望, 领悟社会支持, 学业情绪, 学习投入

A Study on the Influence of Parents' Educational Expectation, Perceived Social Support and Academic Emotion on High School Students' Study Engagement

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Abstract: Chinese people always pay attention to family and their children's education. It is the common expectation for parents to hope their children can become dragon and phoenix. Parents are full of hope for their children's future development, so they naturally have many expectations for their children's education. The survey shows that more than one third of middle school students have insufficient investment on learning, which will inevitably affect the quality and efficiency of learning. Senior high school students are in adolescence, and parents, teachers and peers are important others who have a key impact on their development. Family, society and other factors are important aspects that affect teenagers' physical and mental development. When individuals encounter difficulties or emotional distress, they often seek help from them.

This study makes a series of investigations on high school students' study investment from the perspective of parents' educational expectations. A questionnaire survey was conducted among 550 students from Grade One to Grade Three by using Parent Education Expectation Scale, Perceived Social Support Scale, Academic Emotion Scale and Study Engagement scale to investigate the status of parents' education expectation, perceived social support, academic emotion and study engagement of senior high school students, to test the relationship between parents' education expectation and study engagement, and to further explore the chain intermediary role of perceived social support and academic emotion, so as to explain the influence mechanism of parents' education expectation on study

engagement. Through SPSS22.0 and Mplus7.4, the data are statistically processed and analyzed, and the following research results are obtained:

The overall level of high school students' parents' educational expectation, perceived social support, academic emotion and study engagement study engagement is good; (2) Parents' educational expectation, perceived social support, academic emotion, and study engagement are different in demographic variables such as gender, grade, whether they are only children, and parents' cultural education level; (3) High school students' parents' educational expectation can positively predict their study engagement; (4) Comprehension of social support and academic emotion play a chain mediating role in parents' educational expectation and study engagement.

Through the analysis of the research results, the following conclusions are drawn: (1) Moderate improvement of parents' educational expectation is helpful to the promotion of high school students' learning investment; (2) In a reasonable range, raising parents' educational expectations can enhance students' understanding of social support and academic emotions, and then enhance high school students' study engagement.

Keywords: parents' educational expectation, perceived social support, academic emotion, study engagement

大学生敬畏感对冒险行为的影响：自我控制的中介作用

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摘 要 冒险行为对大学生身心健康的发展十分不利，会阻碍其个性、社会性的发展。敬畏感作为一种重要的积极情绪，它对于冒险行为的影响机制尚未得到充分研究。近些年来，随着对自我控制的研究逐渐深入，研究者发现敬畏感与自我控制、自我控制与冒险行为之间存在着紧密联系。所以，本研究用问卷调查和实验法探讨敬畏感对冒险行为的影响，并考察了自我控制在其中的中介作用。预实验要求在实验室条件下，选取30名被试观看9段视频，选取了能够有效诱发敬畏感的实验材料。研究一以553名大学生为研究对象，用包含有敬畏情绪的特质性积极情绪量表、自我控制量表、特定领域风险评估成人版问卷进行了问卷测量；研究二在实验室中，采用2(自我控制：高自我控制 vs 低自我控制) × 3(情绪：高敬畏感 vs 低敬畏感 vs 中性情绪)组间实验设计，因变量为气球冒险任务下所测量的得分，对被试的行为进行了测量。结果发现(1)敬畏感与自我控制之间呈显著性正相关，敬畏感与自我控制、冒险行为之间呈显著负相关，(2)自我控制在敬畏感与冒险行为之间起部分中介作用，具体来说，敬畏感通过自我控制影响大学生冒险行为。上述研究结果显示，敬畏感作为一种积极情绪，可以通过自我控制的中介作用，减少大学生的冒险行为。

关键词 敬畏感，冒险行为，自我控制

The Influence of Awe on the risk-taking behavior in College Students: The Mediating role of the Self-control

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Abstract: The risk-taking behavior is very harmful to the development of physical and mental health of college students, and will hinder their personality and social development. As an important positive emotion, the influence mechanism of awe on the risk-taking behavior has not been fully studied. In recent years, with the deepening of the research on the self-control, researchers have found a close relationship between awe and the self-control, and between the self-control and the risk-taking behavior. Therefore, this paper explored the influence of awe on risky behavior by questionnaire and experiment, and examined the mediating role of self-control. In the pre-experiment, 30 subjects were selected to watch 9 videos under laboratory conditions, and experimental materials that could effectively induce the sense of awe were selected. In the first study, 553 college students were selected as the study

subjects, and the questionnaires were measured by Dispositional Personality Emotions Scales (DPES), Self-control Scale (SCS), and Domain-Specific Risk-Taking (Adult)Scale—RT scale. In study 2, participants' behavior was measured in a 2 (the self-control: high self-control vs low self-control) x 3 (emotion: high awe vs low awe vs. neutral emotion) intergroup design in the laboratory. The dependent variable was the score measured under the balloon adventure task. The results showed that (1) there was a significant positive correlation between the sense of awe and self-control, and a significant negative correlation between the sense of awe and self-control and risk-taking behavior. (2) the self-control played a partial mediating role between the sense of awe and risk-taking behavior. Specifically, the sense of awe influenced the risk-taking behavior of college students through self-control. The above research results show that the sense of awe, as a positive emotion, can reduce the risk-taking behavior of college students through the mediation of self-control.

Keywords: awe, risk-taking behaviors, self-control

高中生家庭教养方式、亲子依恋、心理弹性与手机依赖的关系研究

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摘要 中国互联网络信息中心第45次调查报告显示,截止到2020年3月,我国网民规模为9.04亿,手机网民规模达到8.97亿,占比高达99.3%。截止到2019年,我国未成年网民规模为1.75亿。研究显示,青少年的手机依赖比率在30%以上。高中生处于青春期后期并且面临着人生重要转折的高考,因此,高中生的手机使用和手机依赖成了全社会关注的议题。手机依赖是个体由于过度使用手机,对其心理、生理和社会功能等造成负面影响的不良行为。如长时间使用手机会造成颈椎受伤、睡眠困难、视力下降等生理问题,也会产生对手机强烈的、持续的渴求感与依赖感,进而发展为成瘾行为。研究表明,手机依赖的影响因素包括人口学、家庭、社会、学校等外部因素,也包括内在的个体心理因素,发生机制是外部因素通过内在的个体心理因素影响手机依赖。本文的核心是寻找影响高中生手机依赖的决定性外部因素和起桥梁作用的心理因素及其作用机制。研究表明,家庭教养方式是影响个体问题行为形成和发展主要因素之一,且家庭教养方式通过依恋风格间接影响手机依赖。良好的家庭教养方式造就了优质的亲子依恋,进而促进青少年心理弹性的发展,心理弹性水平高的个体更不容易出现手机依赖等问题行为。本研究综合家庭因素、个体心理因素对高中生手机依赖行为的影响,采用中学生手机依赖量表、父母教养方式量表、心理弹性问卷、亲子依恋问卷对某省4所学校的600名高中生进行问卷调查,找出高中生家庭教养方式、亲子依恋、心理弹性和手机依赖四者间的关系及作用机制。结果表明:(1)不同类型的家庭教养方式对高中生手机依赖有直接影响(2)亲子依恋能负向预测高中生手机依赖(3)心理弹性能负向预测高中生手机依赖(4)亲子依恋、心理弹性在高中生家庭教养方式与手机依赖间存在链式中介作用。这一结果证明,家庭和学校应该关注当今手机低龄化社会背景下的高中生手机依赖情况,注重从家庭和学生个体两方面来降低高中生的手机依赖程度,养成正确的手机使用习惯,促进其身心健康发展。

关键词 家庭教养方式, 亲子依恋, 心理弹性, 手机依赖

Research on the relationship among senior high school students' family parenting style, parent-child attachment, resilience and mobile phone dependence

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Abstract: According to the 45th survey report of China Internet Network Information Center, as of March 2020, the number of Internet users in our country was 904 million, and the number of mobile Internet users reached 897 million, accounting for 99.3%. As of 2019, the number of underage Internet users in our country is 175 million. Studies have

shown that teenagers' mobile phone dependence rate is over 30%. High school students are in the late adolescence and are facing the college entrance examination of an important turning point in their lives. Therefore, high school students' mobile phone use and mobile phone dependence have become issues of concern to the whole society. Mobile phone dependence is an unhealthy behavior that causes negative effects on the psychological, physical and social functions of individuals due to excessive use of mobile phones. For example, long-term use of mobile phones can cause physical problems such as cervical spine injury, sleep difficulties, and decreased vision. It will also produce a strong and continuous sense of craving and dependence on mobile phones, and then develop addictive behaviors. Studies have shown that the influencing factors of mobile phone dependence include external factors such as demography, family, society, and school, as well as internal individual psychological factors. The mechanism is that external factors affect mobile phone dependence through internal individual psychological factors. The core of this article is to find the decisive external factors that affect high school students' mobile phone dependence and the psychological factors that act as bridges and their mechanisms. Researches showed that family parenting style is one of the main factors that affect the formation and development of individual problem behaviors, and family parenting styles indirectly affect mobile phone dependence through attachment style. Good family parenting style create high-quality parent-child attachment, which in turn promotes the development of adolescents' resilience. Individuals with high resilience levels are less likely to have problem behaviors such as mobile phone dependence. This study integrated family factors and individual psychological factors on the mobile phone dependence behavior of high school students. The Mobile Phone Dependence Questionnaire for middle school students, Parenting Style Questionnaire, Resilience Scale for Chinese Adolescents, and the Parent-child Attachment Questionnaire were used to survey 600 high school students in 4 schools in a Province. To find out the relationship and mechanism of family parenting style, parent-child attachment, resilience, and mobile phone dependence among high school students. The results showed that: (1) Different types of family parenting style have a direct impact on high school students' mobile phone dependence (2) Parent-child attachment can negatively predict high school students' mobile phone dependence (3) Resilience can negatively predict high school students' mobile phone dependence (4) Parent-child attachment and resilience have a chain mediating role between the family parenting style and mobile phone dependence of high school students. This result proved that under the social background of the younger age of mobile phones, families and schools should pay attention to the mobile phone dependence of high school students, reducing the mobile phone dependence of high school students from both the family and individual two sides. Develop correct mobile phone usage habits and promote their physical and mental health.

Keywords: family parenting style, parent-child attachment, resilience, mobile phone dependence

青少年问题行为研究综述

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摘 要 近年来, 中小学心理健康教育已经引起国家高度重视, 青少年问题行为也受到许多研究者的关注。据已有的文献可知, 青少年问题行为产生的影响因素及其干预措施, 对我们了解这一问题具有非常重要的意义。因此本文主要从青少年问题行为的概念起源及相关概念界定、分类、相关影响因素、干预措施等方面对青少年问题行为进行了综述。自 20 世纪 20 年代美国学者 Wickman 提出“问题行为”这一概念以来, 就受到国内外的普遍关注。国外的青少年问题行为主要指的是不健康的、危险的, 甚至对生命构成威胁的行为, 国内则指的是青少年在社会化过程中, 由于社会适应不良而出现偏离社会规范的行为。这些在青少年群体中出现的问题行为一般可以分为两类: 内隐性问题行为(如焦虑、抑郁等心理性行为)和外显性问题行为(如违纪、攻击等扰乱性行为)。根据生态系统理论来看, 导致青少年问题行为产生的原因与其微系统和中系统有很大关系。研究证明, 青少年的问题行为受其性别、人格特征、家庭环境、学校环境、社区环境的影响。目前对于青少年问题行为的干预研究主要集中在认知行为疗法、人本主义疗法和家庭系统治疗中。但是已有的研究

中仍旧存在一些不足,例如,国内在研究青少年问题行为的影响因素时多聚焦于家庭和学校方面,而关于社区方面的研究甚少,我们在未来的研究中可以深入该方面的研究,以此为我们在做青少年工作时提供思路,有针对性地促使青少年群体身心健康发展。

关键词 青少年, 问题行为, 研究现状

Literature Review of Adolescent Problem Behavior

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Abstract: In recent years, mental health education in primary and secondary schools has attracted great attention of the state, and adolescent problem behavior has also attracted the attention of many researchers. According to the existing literature, the influencing factors and intervention measures of adolescent problem behavior are of great significance for us to understand this problem. Therefore, this paper summarizes the concept origin, definition, classification, related influencing factors and intervention measures of adolescent problem behavior. Since the American scholar Wickman put forward the concept of "problem behavior" in the 1920s, it has attracted widespread attention at home and abroad. Foreign teenagers' problem behaviors mainly refer to unhealthy, dangerous and even life-threatening behaviors, while domestic ones refer to teenagers' behaviors that deviate from social norms due to poor social adaptation in the process of socialization. These problem behaviors in adolescent groups can generally be divided into two categories: implicit problem behaviors (such as psychological behaviors such as anxiety and depression) and explicit problem behaviors (such as disturbing behaviors such as discipline violation and attack). According to the ecosystem theory, the causes of adolescent problem behavior are closely related to its micro system and mesosystem. Research shows that adolescents' problem behavior is affected by their gender, personality characteristics, family environment, school environment and community environment. At present, the intervention research on adolescent problem behavior mainly focuses on cognitive behavior therapy, humanistic therapy and family system therapy. However, there are still some deficiencies in the existing research. For example, when studying the influencing factors of adolescent problem behavior in China, most of them focus on family and school, while there is little research on community. We can go deep into this research in future research, so as to provide ideas for us to work with adolescents, Promote the physical and mental health development of young people.

Keywords: Adolescents, Problem behavior, Research status

2004 至 2018 年青少年孤独感变迁的横断历史研究

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摘要 随着改革开放, 中国政治、经济和文化都发生了翻天覆地的变化, 青少年的孤独感也可能随之发生改变。孤独感是指自己所期望的交往水平与实际的交往水平产生差距时的一种主观心理感受或体验。而青少年期是孤独感发生、发展的高危期, 青少年的孤独感体验要比其他任何年龄阶段更为常见。那么在过去几十年中我国青少年孤独感到底发生了怎样的变化呢? 通过对青少年孤独感研究的文献进行分析和整理, 有助于我们把握青少年孤独感产生发展的影响因素, 厘清青少年孤独感变迁的基本发展模式。然而现有研究缺少针对青少年孤独感的纵向比较, 为了探讨我国青少年孤独感水平随年代变化的趋势及其与社会指标之间的关系, 本研究采用横断历史研究的方法, 对 2004 至 2018 年间的 33 篇采用邹泓编制的青少年孤独感量表测量我国青少年孤独感的有关文献 (共 25933 名青少年) 进行元分析。结果发现: (1) 孤独感均值在 2004 至 2018 年间增加了 8.15 (效果量 d 为 0.48), 这说明我国青少年孤独感水平有明显的上升趋势; (2) 对样本量进行加权后, 年代可以解释我国青少年孤独感均值 42% 的变异; (3) 城镇化水平 ($r=0.65, p<0.01$)、消费水平指数 ($r=0.64, p<0.01$)、网络普及率 ($r=0.61, p<0.01$)、离婚率 ($r=0.67, p<0.01$) 和犯罪率 ($r=0.66, p<0.01$) 与青少年孤独

感呈显著正相关,这说明高城镇化水平、高消费指数、高网络普及率、高离婚率和高犯罪率都有可能是青少年孤独感变化的预测因子。

关键词 青少年,孤独感,横断历史研究,社会变迁

A Cross-Temporal Meta-Analysis of changes in adolescents' loneliness in 2004-2018

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Abstract: With the reform and opening up, China's politics, economy and culture have undergone tremendous changes, and the loneliness of adolescents may also change. Loneliness is a kind of subjective psychological feeling or experience when there is a gap between the expected level of communication and the actual level of communication. The adolescence is a high-risk period for the occurrence and development of loneliness, and the experience of loneliness of adolescents is more common than any other age. So in the past few decades, what changes have taken place in the sense of loneliness of adolescents in China? Through the analysis and collation of the literature on adolescent loneliness, we can grasp the influencing factors of the generation and development of adolescent loneliness, and clarify the basic development mode of adolescent loneliness. However, there is a lack of longitudinal comparison on adolescent loneliness. In order to explore the changing trend of adolescents' loneliness level with age and its relationship with social indicators, by utilizing the cross-temporal meta-analysis, the present study analyzed 33 studies (25933 adolescents) which investigated Chinese adolescent loneliness with the Zou Hong's adolescent loneliness scale during 2004-2018. The results show that: (1) the average loneliness increased by 8.15 from 2004 to 2018 (the effect d is 0.48), which indicates that the loneliness level of Chinese adolescents has an obvious upward trend; (2) After weighting the sample size, age can explain 42% of the variation in the mean loneliness of Chinese adolescents; (3) The level of urbanization ($r=0.65, P<0.01$), consumption level index ($r=0.64, P<0.01$), internet penetration rate ($r=0.61, P<0.01$), divorce rate ($r=0.67, P<0.01$) and crime rate ($r=0.66, P<0.01$) were significantly positively correlated with adolescents' loneliness, which indicated that high urbanization level, high consumption index, high internet penetration rate, high divorce rate and high crime rate may be the predictors of the change of adolescents' loneliness.

Keywords: adolescents, loneliness, cross-temporal meta-analysis, social changes

快乐表情影响婴儿面孔种族偏好

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摘要 面孔信息既包括变化特质(如表情),也包括不变特质(如种族、性别)。成人研究中发现,面孔加工中两类属性会相互影响,存在同时加工。而在婴儿期面孔加工发展研究中,这两类面孔属性加工发展研究大多是分别进行探讨,两者之间的关系研究探讨较少。已有研究发现,3个月婴儿偏好本族面孔,9个月婴儿偏好他族面孔,婴儿在1岁以内表现出面孔种族识别的知觉窄化现象。也有研究发现,婴儿对本族和他族面孔的知觉加工偏向与情绪效价相联结。例如,9个月婴儿将本族面孔与积极情绪相关联,他族面孔与消极情绪相关联,3个月婴儿对种族和情绪效价之间则不存在这种联结。然而,表情是否影响婴儿面孔种族的知觉加工尚不清楚,本研究期望探讨快乐表情是否影响婴儿面孔种族偏好的发展。本研究采用视觉配对比较范式,配对呈现亚洲和非洲的女性面孔,分为中性表情和快乐表情两个条件。两个条件的材料选用相同身份的面孔,招募3个月和9个月的中国婴儿各32名,随机分配到中性表情和快乐表情条件。以婴儿的注视时间比例为指标,采用单样本 t 检验,考察婴儿对本族面孔的注视比例是否与随机水平存在显著差异。结果发现,在中性表情条件下,3个月婴儿偏好本族面孔,9个月婴儿偏好他族面孔,与以往研究一致;而在快乐表情条

件下, 3 个月和 9 个月婴儿均未表现出种族偏好。研究结果表明, 快乐表情会影响婴儿的面孔种族偏好, 面孔的变化属性与不变属性的加工在婴儿期存在联系。

关键词 婴儿, 面孔加工, 表情, 种族偏好

The Influence of Happy Expression on Race Preferences in Infancy

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Abstract: Face information includes variant attributes (e.g., emotional expression) and invariant attributes (e.g., race and gender). Many studies have found that the two types of attributes interact with each other in face processing in adult. However, little is known about the interaction between the two kinds of attributes in infant. Previous studies have found that 3-month-old infants demonstrate a significant preference for own-race faces, 9-month-old infants demonstrate a preference for other-race faces. And there are associations between face race and music emotional valence in the first year of life. 9-month-old infants can associate own-race faces with positive emotions, and other-race faces with negative emotions, while 3-month-old infants have no such association between race and emotional valence. But it is not clear whether facial expressions can change the perceptual processing of facial race in infants. This study aims to explore whether happy expressions can change the development of facial race preference in infants by a visual preference paradigm. We used Asian and African female faces displaying neutral or happy expression to test 3- and 9-month-old Chinese infants' preference to faces of different race in two expression conditions. The results showed that in the neutral expression condition, 3-month-old infants preferred own-race faces and 9-month-old infants preferred other-race faces, which was consistent with previous studies; However, in the happy expression condition, 3-month-old and 9-month-old infants did not show racial preference. The results show that happy expression can influence the infants' racial preference, and the processing of variant and invariant attributes of faces is related in infancy.

Keywords: infant, face processing, happy expression, race preference

课程学习经历提升青少年社会参与素养：链式中介效应

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摘要 社会参与素养是学生发展核心素养的一部分, 集中反映了社会对学生发展的要求与指向。培养学生的社会参与素养, 旨在培养学生应具备的, 能够适应终身发展和社会发展需要的必备品格和关键能力。依据各国学生发展核心素养的要求, 利他品格和社会参与能力是社会参与素养的重要组成部分。对于青少年来说, 以培养社会参与素养为核心的特色课程学习是提高其社会参与品格和能力的重要途径。而课程实践经验及其效果检验更是核心素养培育是否具有生命力的关键所在。依据发展资源的堆积假设, 课程学习数量（外部资源）的累积效应是促进社会参与素养的基础, 同时课程情感体验（内部资源）是课程学习数量累积效应实现的有效支撑, 继而成为激发个体公共服务动机, 提升社会参与素养的关键。因此本研究基于学校的研究范式, 以上海市某中学为样本学校, 以全部在读高中生为研究对象, 采用自编课程学习经历问卷、公共服务动机问卷、利他行为问卷以及青少年领导力问卷, 考察社会参与特色课程学习经历对青少年社会参与素养的影响机制。结果显示: (1) 利他行为和领导力两问卷二阶因子模型指标拟合良好, 可合并为社会参与素养得分; (2) 修学的特色课程门数（量）、情感体验（质）、公共服务动机和社会参与素养两两显著正相关; (3) 情感体验和公共服务动机在课程学习数量和社会参与素养间发挥完全中介作用; (4) 未能发现基础课程成绩在链式中介中起调节作用。研究为通过加强课程情感体验进而提升青少年核心素养提供了积极启示。

关键词 社会参与素养, 课程学习经历, 情感体验, 公共服务动机, 基于学校的研究

Course Experience Improving Social Participation Competencies: A Chain Mediation Analysis

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Abstract: Social participation competencies is a part of core competencies. To develop students' social participation competencies refers to the project to develop the necessary qualities and key capacities of students in the life-long sense of development required by society. For teenagers, learning characteristic courses which aimed at cultivating social participation competencies is an important way to enhance the attitude and abilities of social participation. And examining the effectiveness of the courses is the key to cultivate social participation competencies. A high school in Shanghai offers characteristic courses of social participation competencies for the whole school which provides a vivid sample for this study. Therefore, this study adopts the school-based research paradigm and takes a high school in Shanghai as a sample to explore the specific mechanism of emotional experience (quality) and public service motivation between the number of characteristic courses studied (quantity) and social participation competencies.

A total of 1115 students participated in this survey. There were 528 males and 587 females. They filled out questionnaires regarding course experience, public service motivation and social participation competencies. All of the measures showed good reliability and validity. Among them, the questionnaire of social participation competencies which covered two questionnaires of altruistic behavior and leadership. We analyzed the second order factors, the results showed that the model fitted well ($\chi^2/df=11.58$, $NFI=.87$, $IFI=.88$, $CFI=.88$, $RMSEA=.09$).

Data were analyzed with SPSS 22.0 and PROCESS. Results showed there was no obvious common methods bias using the confirmatory factor analysis. The Process plug-ins was used to analyze the chain mediating effect of emotional experience and public service motivation.

The results indicated that (1) there was a statistically significant positive relationship between the number of characteristic courses studied and emotional experience($r = .08$, $p < .05$), the number of characteristic courses studied and public service motivation($r = .10$, $p < .05$), the number of characteristic courses studied and social participation competencies($r = .19$, $p < .01$). Furthermore, there was a statistically significant positive relationship between emotional experience and public service motivation($r = .37$, $p < .01$), emotional experience and social participation competencies($r = .29$, $p < .01$). In addition, there was a statistically significant positive relationship between public service motivation and social participation competencies($r = .68$, $p < .01$). (2) Emotional experience and public service motivation played a fully mediating role in the relationship between the quantity and social participation competencies. The chain mediating effect accounted for 5.72% of the total effect, 95% *CI*: [.00, .12]. (3) Academic achievement did not play a moderating role in the chain mediation.

These findings suggest that learning characteristic courses can improve students' social participation competencies. At the same time, emotional experience and public service motivation play an important role in this process. The learning of characteristic courses of social participation competencies requires the accumulation of courses and the mobilization of the deep emotional experience, so as to promote the promotion of public service motivation, and provide the cognitive source, emotional source and power source for the formation of social participation competencies.

Keywords: social participation competencies, course experience, emotional experience, public service motivation, school-based research

数字技术影响大学生的三重自我建构: 行为和 ERP 的证据

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摘 要 自我建构是自我领域的重要概念, 指个体从自我和他人之间关系的角度来理解自我的认知结构。自我至少包括个体、关系和集体自我三种基本形式, 即三重自我建构。三重自我建构会对个体的认知方式、情绪反应等产生影响, 可见系统考察大学生的三重自我建构具有重要的现实意义。截止 2020 年 3 月, 数字技术的普及率达 64.5%, 数字原住民和数字移民是在数字技术时代下产生的典型且相对普遍的两类人群。数字原住民假说指出, 数字原住民和数字移民在数字技术环境中具有不同的反应模式, 具体表现为数字原住民积极适应并逐渐发展出与环境相匹配的认知和行为特质, 而数字移民被动适应数字化新环境并且仍继续保持原来的认知、思维习惯等。数字原住民和数字移民具有的不同反应模式是否会塑造不同的自我建构呢? 目前数字技术对自我的影响引起研究者关注, 但是少有研究从三重自我建构的视角去考察数字技术对自我的影响。同时, 情境性假设指出, 不同的环境会影响个体的自我建构, 而数字技术作为一种环境变量, 对个体的三重自我建构有何影响呢? 为回答以上问题, 本研究首先采用数字原住民量表对 642 名大学生进行筛选, 最终选取数字原住民 (行为实验: 20 名; ERP 实验: 24 名) 和数字移民 (行为实验: 20 名; ERP 实验: 24 名) 为研究对象, 并采用内隐启动范式从行为和脑电活动上考察数字技术如何影响大学生的三重自我建构及其神经机制。研究表明: (1) 三重自我建构中, 个体自我始终占优势地位; 关系自我和集体自我的相对加工优势取决于加工阶段, 早期阶段关系自我比集体自我更具加工优势, 晚期阶段两者间没有显著差异。 (2) 数字技术影响三重自我建构: 与数字移民相比, 数字原住民可以更快地获取自我相关信息; 数字技术会削弱个体对个体自我相关刺激的识别和加工。总之, 本研究证实并丰富了三重自我建构理论, 同时在情境性假设的基础上丰富了数字原住民假说。

关键词 数字技术, 三重自我建构, 内隐启动范式, 情境性假设

The Effect of Digital Technology on College Students' Tripartite Self-construct: Evidence from behavior and ERP

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Abstract: Self has been one of the important and intensive research topic in psychology. Among this topic, Self-construction is an important concept, which refers to an individual's understanding of the cognitive structure of self from the perspective of the relationship between self and others. According to the tripartite model of self-construal, self includes individual self, relational self and collective self and they have different effects on cognition, emotion, motivation and social behavior. Therefore, it is of great significance to systematically investigate the tripartite self-construct of individuals. As of March 2020, the penetration rate of digital technology has reached 64.5%. Digital natives and digital immigrants are two typical and relatively common groups in the digital age. Digital natives hypothesis indicated there were different response patterns between digital natives and immigrants: digital natives actively adapted and gradually developed cognitive and behavioral traits that matched the environment, while digital immigrants passively adapted to the new digital environment and still maintained their original cognitive and

thinking habits. Did the different response patterns of digital natives and digital immigrants shape different self-construct? The researchers pay more attention to the digital technology's impact on self-construct, but few researchers examined digital technology's impact on self from the perspective of the tripartite self-construct. Situational primacy hypothesis indicated that different environment will affect the self-construct, and digital technology is a kind of environment variables. How did it affect the individual's the tripartite self-construct? Therefore, 642 participants completed the Chinese version of the Digital Natives Assessment Scale (C-DNAS) firstly, and finally recruited 44 digital natives (behavioral experiment: 20; ERP experiment: 24) and 44 digital immigrants (behavioral experiment: 20; ERP experiment: 24) in the present study. The implicit priming paradigm was adopted to test the differences on tripartite self-construct between digital natives and digital immigrants from the perspective of behavior and ERP. The results showed: (1) Individual self is always dominant while the comparative advantage of the relational self and the collective self depends on the processing stage. In the early stage, the relational self has an advantage over the collective self in the early stage, while there is no significant difference between them in the later stage. (2) Digital technology influences the tripartite self-construct. Digital natives reached self-related information more quickly than digital immigrants and digital technology weakened the recognition and processing of individual self-related stimuli. In conclusion, the present study confirmed and enriched the tripartite self-construct and enriched the digital native hypothesis on the basis of the situational hypothesis.

Keywords: Digital Technology, The Tripartite Self-construct, Implicit Priming Paradigm, Situational Primacy Hypothesis

专制型教养方式对儿童执行控制的影响：基于静息态脑电的研究

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摘要 在不同的教养方式中，专制型教养反映出父母提供较少的温暖和支持，且加以更多控制和监管，这种行为约束了儿童的认知发展，对儿童的执行控制能力产生不良影响。以往研究较为充分地探讨了父母教养方式对儿童认知的影响，但对其背后的神经生物学机制知之甚少，尤其是缺乏大脑静息状态神经活动的电生理证据。在定量脑电图参数中，个体 α 峰值频率（iAPF）是人类放松清醒状态下的主要振荡频率，被认为是大脑结构和认知功能成熟的最佳标志。目的：本研究旨在利用行为学方法和脑电技术，从认知心理学和神经生物学两个方面考察父母教养方式与儿童执行控制的关系。方法：研究采用注意网络测试（ANT）范式和父母教养方式问卷，对 40 名 8-11 岁儿童的执行控制网络及其父母的专制型教养方式进行评估，并选取与认知能力相关的静息状态脑电指标：iAPF，对儿童的脑电数据进行分析 and 验证。结果：分层回归分析发现，在控制了孩子的年龄和父母的社会经济地位之后，专制型教养方式显著负向预测儿童的执行控制网络得分和 iAPF。结论：父母专制型教养方式对儿童的执行控制能力产生消极影响，同时在脑电中反映出儿童大脑神经结构发育的相对迟缓。研究扩展了以往关于父母教养方式对儿童认知能力影响的研究，并提供了神经机制水平的证据，具有启发性意义。

关键词 专制型教养，注意网络测验，执行控制，静息态脑电

The effect of authoritarian parenting on children's executive control: a study based on resting EEG

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Abstract: Among different parenting styles, authoritarian parenting reflects that parents provide less warmth and support, and more control and supervision. This behavior restricts children's cognitive development and has a negative impact on children's executive control ability. Although previous studies have fully explored the effect of parenting styles on children's cognitive abilities, little is known about the neurobiological mechanisms behind it,

especially the lack of electrophysiological evidence of neural activity in the resting state of the brain. Among the quantitative EEG parameters, the individual alpha peak frequency (iAPF) is the dominant oscillation frequency during relaxed wakefulness, and is considered to be the best signature of brain architectural and cognitive functional maturation. Purpose: The purpose of this study is to investigate the relationship between parenting styles and children's executive control from two aspects of cognitive psychology and neurobiology by using behavioral methods and electroencephalography technology. Methods: The study used the Attention Network Test (ANT) paradigm and the parenting questionnaire to evaluate the executive control network of 40 children aged 8-11 and the authoritarian parenting style of their parents, and select the resting state EEG index related to cognitive ability: iAPF to analyze and verify children's EEG data. Results: Hierarchical regression analysis found that after controlling for the children's age and parents' socioeconomic status, the authoritarian parenting significantly negatively predicts the children's executive control network and iAPF. Conclusion: The study shows that the authoritarian parenting style of parents has a negative impact on children's executive control, and at the same time exhibits a developmental lag of children's brain neural structure in EEG. This study extends previous studies on the effect of parenting styles on children's cognitive abilities and provides evidence on the level of neural mechanisms.

Keywords: authoritarian parenting, attention network test, executive control, resting EEG

青少年目睹父母婚姻暴力与网络欺凌： 自我控制的中介作用和父母心理控制的调节作用

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摘要 婚姻暴力是全球性的社会问题，对个体和家庭具有重要影响，青少年目睹父母婚姻暴力与其内外化问题密切相关。本文采用问卷法对 1670 名中小學生进行调查，运用结构方程模型考察自我控制在目睹父母婚姻暴力与网络欺凌间的中介作用和父母心理控制的调节作用，同时等组比较了该模型的性别和年级差异。结果发现：（1）在控制了性别和年级后，目睹父母婚姻暴力能够显著正向预测青少年的网络欺凌；（2）自我控制能够显著中介目睹父母婚姻暴力与网络欺凌的关系；（3）父母心理控制能够显著地调节目睹父母婚姻暴力与网络欺凌的关系，即父母心理控制增加了目睹父母婚姻暴力对网络欺凌的正向预测作用；（4）自我控制和父母心理控制的有调节的中介模型存在显著的性别和年级差异，男生比起女生更容易受到目睹父母婚姻暴力的影响。因此，一方面揭示了目睹父母婚姻暴力对青少年个体的不良影响，同时也为家庭教育提供指导，为了青少年个体的身心健康发展，婚姻暴力的社会治理和干预十分必要。

关键词 目睹父母婚姻暴力，网络欺凌，自我控制，父母心理控制，青少年

Witnessing Parental Marital Violence and Cyberbullying in Adolescents: Self-control as a Mediator and Parental Psychological Control as a Moderator

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Abstract: Marital violence is a globally social problem, which has an important impact on individuals and families. Teenagers' witnessing parental marital violence is closely related to internalized and externalized problems. This study examined whether self-control mediated the relation of witnessing parental marital violence and cyberbullying and the moderating role of psychological control. 1670 primary and middle school students participated in the cross-sectional investigation. The results showed that: (1) After controlling gender and grade, witnessing parental marital violence significantly and positively predicted cyberbullying; (2) Self-control partially mediated the relation between witnessing parental marital violence and cyberbullying; (3) Parental psychological control moderated the

relationship between witnessing parental marital violence and cyberbullying. Specifically, parental psychological control increased the positive predictive effect of witnessing parental marital violence on cyberbullying; (4) Structural equation multi-group analysis showed a significant gender and grade differences of the model. Boys are more vulnerable to witnessing marital violence than girls. On the one hand, this study reveals the impact of marital violence on adolescents, on the other hand, it provides guidance for family education. For the physical and mental health of adolescents, it is necessary to intervene marital violence.

Keywords: Witnessing Parental Marital Violence, Cyberbullying, Self-control, Parental Psychological Control, Adolescents

父母严厉管教对儿童内化问题行为的影响：自尊的中介作用及友谊质量的调节作用

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摘 要 目的：探讨父母严厉管教对儿童内化问题行为的影响及其内在作用机制。方法：采用亲子冲突解决策略量表、儿童行为核查量表、自尊量表以及友谊质量问卷，在石家庄市某公立学校抽取 973 名四到六年级儿童及其父母进行测试。结果：（1）父母心理攻击和体罚与儿童自尊呈显著负相关，与儿童内化问题行为均呈显著正相关，儿童自尊与其内化问题行为均呈显著负相关；（2）父母心理攻击和体罚均显著正向预测儿童内化问题行为；（3）儿童自尊在父母心理攻击和体罚与儿童内化问题行为之间起中介作用；（4）友谊质量在父亲严厉管教对儿童内化问题行为的影响中起调节作用，但不能调节母亲严厉管教对儿童内化问题行为的影响。结论：父母严厉管教能直接预测儿童内化问题行为，也能通过自尊的中介作用影响儿童内化问题行为。在高友谊质量下，父亲心理攻击和体罚对儿童内化问题行为的影响更大。

总之，本研究同时考虑父亲和母亲两种严厉管教方式（心理攻击、体罚）对儿童的影响，较为全面地探讨了父母严厉管教对儿童内化问题行为的作用机制，对改进父母教养方式、预防和减少儿童内化问题行为的发生提供启示。

关键词 父母严厉管教，内化问题行为，自尊，友谊质量

Parental Harsh Discipline and Children's Internalizing Problem Behavior: The Mediating Effect of Self-Esteem and the Moderating Effect of Friendship Quality

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Abstract: Objective: This study aims to explore the relationship between parental harsh discipline and children's internalizing problem behavior and uncover its underlying mechanism. Method: The Chinese version of the Parent-Child Conflict Resolution Strategy Scale, the Child Behavior Checklist, the Self-esteem Scale and the Friendship Quality Questionnaire have been performed to investigate 973 children from grade 4 to grade 6 in a public school in Shijiazhuang City and their parents. Results: (1) Paternal and maternal harsh discipline (psychological aggression and corporal punishment) are negatively correlated with children's self-esteem, and are positively correlated with children's internalizing problem behavior. Child self-esteem is negatively correlated with children's internalizing problem behavior. (2) Parental psychological aggression and corporal punishment positively predict children's internalizing problem behavior. (3) Children's self-esteem mediates the relationship between parental harsh discipline and children's internalizing problem behavior. (4) Friendship quality moderates the relationship between fathers' harsh discipline and children's internalizing problem behavior, but doesn't moderate the relationship between mothers' harsh discipline and children's internalizing problem behavior. Conclusions: Parental harsh discipline not

only directly predicts children's internalizing problem behavior, but also affects children's internalizing problem behavior through the mediating effect of self-esteem. For cases with high friendship quality, fathers' harsh discipline (psychological aggression and corporal punishment) has a stronger influence on children's internalizing problem behavior.

In this research, the effects of both paternal and maternal harsh discipline (psychological aggression and corporal punishment) on children have been considered. It may contribute to a better understanding of the effect of parental harsh discipline. Moreover, it can also provide constructive suggestions for preventing and reducing children's internalizing problem behavior.

Keywords: Harsh discipline, Internalizing problem behavior, Self-esteem, Friendship quality

儿童的声誉理解及声誉对其社会行为的影响研究综述

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摘要 不同领域的成人声誉研究已经取得了一些成果，随着儿童社会性发展研究的深入，声誉与儿童社会行为之间的关系也逐渐受到关注。儿童会依据情境中有关自己的声誉线索，采用声誉管理策略以进行印象管理；也会依据他人的声誉调整自己对于他人的态度和行为。若能利用声誉使得儿童的社会行为更加规范，这将对儿童人际关系、自我管理等方面的发展具有重要意义。因此，本文主要从声誉的概念起源及相关概念辨析、儿童声誉理解的发展规律、声誉的作用、研究不足与展望等方面进行综述。声誉是指个体给外界留下的与道德有关的印象，个体也会在这一过程中得到他人共同的评价、态度和期望。儿童对声誉的理解有一个发展过程：2岁初露声誉理解的萌芽，3岁形成初步声誉理解，5岁能够基本形成声誉理解并为声誉管理做出努力，8岁儿童才能够明确声誉管理意识。声誉线索可以在一定程度上促进儿童的亲社会行为，如合作行为、分享行为等；声誉可促进儿童的公平行为的发展，改善和规范儿童行为。但已有研究存在一些不足，例如，声誉研究少有不同民族及跨文化研究，声誉线索的呈现较少考虑到儿童也存在不同的社会关系。另外，随着认知心理学和认知神经科学的发展，可以使用脑电、眼动这些精密的实验设备来对声誉理解与管理的内在机制进行探究，以及从不同角度入手探究声誉理解与管理的心理机制。

关键词 声誉，声誉理解，亲社会行为，公平，行为规范

A Review of Children's Reputation Understanding and the Influence of Reputation on Their Social Behaviors

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Abstract: Some results have been achieved in different fields of adult reputation researches, with the deepening of the children's social development researches, the relationship between the behavior and reputation has also been paid more and more attention gradually. Children will use reputation management strategies to manage impressions according to their own reputation cues in the situation; they also adjust their attitudes and behaviors towards others according to their reputation. It is significantly meaningful for children's development of interpersonal relationship and self-management, if we could utilize reputation to make children's social behaviors more normative. Therefore, this paper mainly reviews the origin of the concept of reputation and the discrimination of related concepts, the law of the development of children's understanding of reputation, the roles of reputation, and the shortages and prospects of the existing researches. Reputation is defined as the impression related to morality left to the outside world, and individuals acquire others' common evaluations, attitudes and expectations as well. Children's understanding of reputation spans a long period of childhood, from the beginning of reputation understanding at the age of 2, to the initial formation of reputation understanding at the age of 3, to the basic formation of reputation understanding and efforts for reputation management at the age of 5, and until the age of 8, children could make clear awareness of

reputation management. Reputation cues can promote children's prosocial behaviors to some extent, such as cooperative behaviors, sharing behaviors and so on. Reputation can promote the development of children's fair behavior, improving and regulating children's behaviors. However, there are some shortcomings in the existing researches. For example, there are few researches on reputation of different nationalities and cross-cultures, and the presentation of reputation clues is less considering that children also have different social relations. In addition, with the development of cognitive psychology and cognitive neuroscience, delicate experimental equipment such as EEG and eye movement can be used to explore the internal mechanism of reputation understanding and management, as well as the psychological mechanism of reputation understanding from different perspectives.

Keywords: reputation, reputation understanding, prosocial behaviors, fairness, behavior norms

农村初中生领悟社会支持与心理韧性的关系： 一般自我效能感的中介作用

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摘 要 埃里克森的发展阶段表明，初中生正处于学龄前期向青年期的过渡阶段，此时他们在面对环境适应、人际关系、学业压力等应激事件时往往无所适从，不知道该如何处理往往会影响他们的心理健康。而且，社会上关于初中生“自杀”及“校园暴力”等事件层出不穷，使得人们不断加强对初中生心理健康的重视。未成年人是祖国的希望，是社会不断进步的力量，他们的健康成长和文化水平对于国家及社会的发展意义重大，因此如何有效提高初中生应对困难和危险的能力一直受到人们的关注。而农村初中生处于社会的边缘地带，正值生理和心理迅猛发展的关键期，更容易出现各种心理问题，提高心理韧性则对他们今后成长、成才作用重大。以往的研究发现，领悟社会支持、一般自我效能感与心理韧性之间存在两两相关的关系，这三者的结合，对青少年度过“关键时期”的作用方式发挥着非常大的作用。因此，为了考察领悟社会支持、一般自我效能感与心理韧性之间的关系，采用领悟社会支持量表、一般自我效能感量表和青少年心理韧性量表，对河南省310名农村初中生进行问卷调查。结果：(1)农村初中生在一般自我效能感上存在显著性别差异。(2)农村初中生在领悟社会支持、一般自我效能感和心理韧性两两之间均存在显著正相关。(3)一般自我效能感在领悟社会支持和心理韧性中起到部分中介作用。结论：农村初中生领悟社会支持和一般自我效能感对心理韧性有正向预测作用。

关键词 农村初中生，领悟社会支持，一般自我效能感，心理韧性

Rural Junior Middle School students' understanding of the relationship between Social support and Psychological resilience: the mediating role of General self-efficacy

Abstract: Sven-goran eriksson's stage of development shows that junior high school students is in the transition from preschool to adolescent phase, they in the face of environmental adaptation relationship academic pressures often disoriented when stress events, such as don't know how to deal with tend to influence their mental health Moreover, about suicide in junior high school students and campus violence in society Events such as emerge in endlessly, make people continuously strengthen to the attention of the junior middle school students mental health Minors is the hope of the motherland, is the power of social progress, countries for their healthy growth and culture level and the development of the society is of great significance, so how to improve the junior middle school students the ability to cope with difficulties and danger has been attracting the attention of people The countryside junior middle school students in the fringes of society, during the critical period of physical and psychological rapid development, more prone to all kinds of psychological problems, improve the mental toughness to their future growth up relevant previous studies have found that understanding social support General self-efficacy and mental toughness between two the relationship between the two related, the combination of all three for teenagers The way the critical period

works plays a very big role .So in order to investigate the relationship between perceived social support, general self-efficacy and resilience, 310 rural middle school students were randomly investigated by using the perceived social support scale, general self-efficacy scale and resilience scale. Results: (1) There were significant gender differences in the general sense of self-efficacy among rural middle school students. (2) There was a significant positive correlation between rural middle school students in perceived social support, general self-efficacy and resilience. (3) The general self-efficacy plays a partial intermediary role between perceived social support and resilience. Conclusion: Rural middle school students understand that perceived social support and general self-efficacy have positive predictive effects on resilience.

Keywords: Rural middle school students; Perceived social support; General self-efficacy; Resilience

童年期受虐个体对消极情绪面孔注意偏向及神经机制

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摘要 儿童虐待包括了在亲密关系中的各种关于身体、情感或性的虐待与忽视。受虐待的儿童会经历一系列的社会情感破坏, 会导致对情绪和社会刺激的处理方式发生变化, 在识别情绪面孔时表现出对愤怒、恐惧等消极情绪面孔的高敏感性和过度关注。相对于其他情绪面孔, 消极情绪面孔会更快地捕获个体的注意, 即对消极情绪面孔的注意偏向。回顾以往研究发现, 相较于正常个体, 有童年期虐待经历的儿童和成人均存在对消极情绪面孔的过度注意偏向, 尤其是对愤怒面孔。这说明在受虐个体成长的每个阶段, 对消极情绪面孔的注意偏向都可能存在。本文分析了受虐个体产生这种注意偏向的心理因素和神经机制。在心理因素方面, 有童年期虐待经历的个体在情绪调节上出现困难以及注意控制水平较低。在神经机制方面, fMRI 研究显示, 受虐个体对消极情绪面孔的注意偏向与杏仁核、前额叶皮层、前扣带回皮层和胼胝体的结构、功能以及脑去结构之间的连接性异常有关, 涉及情感的脑区普遍表现为体积的减小以及对消极情绪信息过于敏感, 有较大幅度的激活。经历童年期虐待的个体对消极情绪面孔的注意偏向增加了其患心理障碍的风险, 但目前有关童年期受虐个体的注意偏向机制的研究还比较少, 对其注意偏向在时间进程上的变化还不太清楚。未来研究应多关注受虐个体注意偏向在时间进程上的特点, 以及这种特点和未来可能产生的心理疾病之间的关系。另外, 目前大多数的神经影像学研究采用的是感兴趣区域的方法, 未来研究应采用全脑分析的方法, 更为全面的了解童年期虐待所导致的神经发育异常。最后, 对消极情绪面孔的注意偏向作为童年期受虐个体产生心理疾病的一个途径, 在个体产生心理疾病之前采取一定的早期干预措施, 改善注意偏向, 会降低受虐个体患上这些心理疾病的可能性。因此未来研究可以从这方面入手, 引导个体多关注生活中的积极事物, 为预防童年期虐待后可能产生的心理疾病发展新的干预方向。

关键词 童年期虐待, 消极情绪面孔注意偏向, 心理因素, 神经机制

中学生学业支持与学业投入的关系：一个有调节的中介模型

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摘要 中学生正处于发展的关键时期, 此时青少年最主要的一个任务是学习, 学业投入的程度可以预测中学生的学习成绩, 提升学生的学业成就, 可见学业投入对于中学生的发展至关重要的。总结文献综述, 国内外对于学业投入的研究已经相对成熟, 均表明来自环境的支持与学业投入存在显著相关, 也会呈现正向预测作用。随着心理学的发展尤其是积极心理学的产生及国内学生发展核心素养的推进, 充足的学业支持为中学生营造一个良好家庭、班级和同学的心理和物理环境, 有利于中学生的自尊水平, 增加对学业的投入程度, 因而研究学业投入的内在影响机制对于中学生的身心健康和学业进步具有重要意义。本研究根据文献综述假设班级氛围调节学业支持、自尊和学业投入中介模型的后半路径, 不同的班级氛围会影响自尊和学业投入的程度, 以河北石家庄市和衡水市的 648 名中学生为被试, 采用问卷调查法验证潜调节结构方程模型。结果发现: (1) 中学生的学业支持对学业投入显著相关, 且学业支持正向预测学业投入。(2) 自尊与学业支持和

学业投入显著相关,且学业支持正向预测自尊,自尊正向预测学业投入,同时自尊在学业支持和学业投入的关系中起中介作用。(3)班级氛围可以正向预测中学生的学业投入水平,且班级氛围调节学业支持、自尊和学业投入这一中介模型的后半路径。

关键词 学业支持,学业投入,自尊,班级氛围

The Relationship Between Academic Support and Academic Engagement of Middle School Students: A Moderated Mediation Model

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Abstract: Middle school students are in a critical period of development. At this time, one of the most important tasks of teenagers is learning. The degree of academic engagement can predict the academic performance of middle school students and improve their academic achievements. It can be seen that academic engagement is crucial for the development of middle school students. Summarizing the literature review, the research on academic engagement at home and abroad has been relatively mature, which shows that there is a significant correlation between environmental support and academic engagement, and it will also present a positive predictive effect. With the development of psychology, especially the emergence of positive psychology and the promotion of the core quality of domestic students' development, adequate academic support creates a good psychological and physical environment for middle school students' families, classes and classmates, which is conducive to the self-esteem level of middle school students and increases the degree of investment in their studies. Therefore, the research on the internal influence mechanism of academic engagement has an impact on the physical and mental health of middle school students And academic progress is of great significance. Based on the literature review, this study assumes that class climate regulates the second half path of the mediating model of academic support, self-esteem and academic engagement, and different class atmosphere will affect the degree of self-esteem and academic engagement. 648 middle school students from Shijiazhuang and Hengshui in Hebei Province were selected as subjects, and the latent regulatory structural equation model was verified by the questionnaire survey. The results show that: (1) academic support of middle school students is significantly related to academic engagement, and academic support positively predicts academic engagement. (2) Self-esteem was significantly correlated with academic support and academic engagement, and academic support positively predicted self-esteem and self-esteem positively predicted academic engagement. Meanwhile, self-esteem played a mediating role in the relationship between academic support and academic engagement. (3) Class climate can positively predict the level of middle school students' academic engagement, and class climate regulates the second half of the mediating model of academic support, self-esteem, and academic engagement.

Keywords: Academic support, Academic engagement, Self-esteem, Class atmosphere

自恋、自尊和攻击行为的中介模型：内隐自尊的调节作用

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摘 要 **目的** 了解中小学生的内隐自尊、外显自尊、自恋与攻击行为的现状,并根据精神动力学面具模型和自我中心被威胁学说探讨自恋、内隐自尊及外显自尊和攻击行为之间的关系。**方法** 抽取四川省三座城市进行问卷发放和内隐联想测试,共 117 名 10—16 岁的中小学生完成问卷和实验。研究工具采用自恋人格问卷、自尊量表和中文版 Buss & Perry 攻击量表以及 E-Prime 编写的内隐联想测验。**结果** (1)根据自尊量表得分判断,低自尊者占 35.6%,高自尊者占 11.9%。内隐自尊 D 值得分低于 0 分者占 13.9%,高于 1 分者占 10.9%。(2)

男性攻击行为量表得分高于女性 ($p<0.05$)。(3)内隐自尊与外显自尊、自恋、显性自恋、隐性自恋以及攻击行为所有维度均不相关($p>0.05$)。外显自尊与显性自恋显著正相关($p<0.01$),与隐性自恋相关不显著($p>0.05$),与攻击行为部分维度显著负相关($p<0.01$)。自恋所有维度和攻击行为所有维度显著正相关($p<0.01$)。(4)外显自尊在自恋和攻击行为之间的中介作用显著($p<0.01$),95%置信区间为[-0.461, -0.102]。(5)内隐自尊在自恋和外显自尊的关系上起调节作用($p<0.05$),Index 的95%置信区间为[-0.148, -0.017]。**结论** 自恋通过外显自尊影响攻击行为,内隐自尊在自恋和外显自尊中起到调节作用,并且在内隐自尊较高的情况下调节作用显著。自恋、外显自尊和内隐自尊共同构成的不稳定、不一致的自我评价是影响攻击行为的主要因素。

关键词 内隐自尊,外显自尊,自恋,攻击行为

The mediating model of narcissism, self-esteem and aggressive behavior: the moderating effect of implicit self-esteem

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Abstract: Objective The study aimed to investigate the current situation of narcissism, implicit self-esteem, explicit self-esteem and aggressive behavior of adolescents, according to the psychodynamic mask model and the threatened egotism model, to explore the influence of gender on the relationship among the four variables. **Methods** A sample of 117 students aged 10-16 was recruited to complete the questionnaire and the experiment. Narcissistic personality questionnaire, self-esteem scale, Chinese version of buss Perry aggression scale and implicit association test written by E-Prime were used as research tools. **Results** (1) According to the score of self-esteem scale, low self-esteem accounted for 35.6%, high self-esteem accounted for 11.9%. The implicit self-esteem D score was lower than 0 in 13.9% and higher than 1 in 10.9%. (2) The score of male aggressive behavior scale was higher than female ($p<0.05$). (3) Implicit self-esteem was not correlated with explicit self-esteem, narcissism and aggressive behavior ($p>0.05$). There was a significant positive correlation between explicit self-esteem and overt narcissism($p<0.01$), but no significant correlation between explicit self-esteem and implicit self-esteem($p>0.05$), and a significant negative correlation between explicit self-esteem and some dimensions of aggressive behavior($p<0.01$). There was a significant positive correlation between all dimensions of narcissism and all dimensions of aggressive behavior ($p<0.01$). (4) The mediating effect of explicit self-esteem between narcissism and aggression was significant($p<0.01$), and the 95% confidence interval was [-0.461, -0.102]. (5) Implicit self-esteem moderates the relationship of narcissism and explicit self-esteem($p<0.05$), the 95% confidence interval of index was [-0.148, -0.017]. **Conclusion** Narcissism affects aggressive behavior through explicit self-esteem, implicit self-esteem plays a moderating role in narcissism and explicit self-esteem, and the moderating role is significant when the implicit self-esteem is high. The unstable and inconsistent self-evaluation composed of narcissism, explicit self-esteem and implicit self-esteem is the main factor influencing aggressive behavior.

Keywords: Implicit self-esteem, Explicit self-esteem, Narcissism, Aggressive behavior

变革认知与情绪、变革管理对教师参与学校变革行为的影响

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摘要 教育系统的可持续变化在很大程度上依赖于学校组织变革的能力,教师作为实施学校变革的关键群体必须随着组织变革而改变。学校变革对教师是一个典型的情感事件,而教师积极参与变革是学校变革的关键因素之一。对变革的意义认知和情绪体验是教师变革参与行为的重要决定因素,变革认知和变革情绪在引导、促进或抑制变革参与行为方面同等重要。根据情感事件理论和认知评价理论教师变革情绪活动受到变革认知活动的指导,这使得教师可以了解学校变革的意义,从而做出适当的有价值变革行为。学校管理者对教师的变革沟通、支持和授权以及为教师营造一个良好的组织氛围,从而能够从认知上和情感上影响教师,是

调节组织变革中教师主动变革行为的主要途径。本研究以 615 名中国上海教师为对象,考察了变革认知与情绪、变革管理对中国教师参与学校变革行为的影响。结构方程模型分析表明:(1)变革认知对教师主动变革行为具有显著的正向预测作用。(2)中介效应检验表明,积极情绪和消极情绪在变革认知和主动变革行为之间存在双重中介作用。(3)有调节的中介效应检验进一步表明,变革管理调节了双重中介的前半段。本研究验证了教师个体层面、学校组织层面因素对主动变革行为的联合作用,对教师的主动行为的干预具有一定的指导意义。

关键词 学校变革,教师变革参与,变革认知,教师情绪,变革管理

The influence of change cognition and emotion and change management on teachers' participation in school change behavior

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Abstract: Sustainable changes in the education system rely heavily on the ability of the school to organize change, and teachers as a key group to implement school change must change with organizational change. School change is a typical emotional event for teachers, and their active participation in change is one of the key factors in school change. Cognition of change and emotional experience are important determinants of teacher change participation behavior, and changing cognition and changing emotions are equally important in guiding, promoting or inhibiting change participation behavior. According to emotional event theory and cognitive evaluation theory, Teachers' emotional activities are guided by change cognitive activities, which enables teachers to understand the meaning of school change and so as to make appropriate valuable change behavior. School managers 'communication, support and authorization of teachers and create a good organizational atmosphere for teachers, so that they can cognitive and emotionally influence teachers, which is the main way to adjust teachers' active change behavior in organizational change. Based on 615 teachers in Shanghai, China, this study examined the effects of change cognition and emotion, and change management on Chinese teachers' participation in school change behavior. Structural equation model analysis shows that :(1) change cognition has a significant positive predictive effect on teachers' active change behavior. (2) The mediating effect test showed that positive emotions and negative emotions had dual mediating effects on change cognition and active change behavior. (3) Moderated mediating effect test further shows that change management moderates the first half of dual mediating. This study verifies the combined effect of the factors at the individual level of teachers and the school organization level on the active change behavior, and has a certain guiding significance for the intervention of teachers' active behavior.

Keywords: school change, teacher change participation, change cognition, teacher emotions, change management

(2) “博士研究生论坛—发展与教育心理学”展贴报告

疫期从网络受欺负到网络欺负他人： 自我构念的中介作用及孤独感的调节作用

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摘 要 新冠肺炎疫情常态化阶段,大学生使用互联网的时间相对增多,网络欺负这一新型欺负问题也变得更多。本研究旨在探讨网络受欺负和网络欺负之间的关系以及自我构念在其中的中介作用和孤独感在其中的调节作用。以武汉市 1125 名大学生为研究对象,采用问卷法对其网络受欺负、网络欺负、自我构念(互依自我和独立自我)、孤独感进行调查。结果表明:①网络受欺负正向预测网络欺负;②只有互依自我在网络受欺负对网络欺负的影响中起部分中介作用;③网络受欺负对网络欺负的直接作用和互依自我在二者中的

中介作用均会受到孤独感的调节,相对于孤独感水平低的个体,直接效应和中介效应在孤独感水平高的个体中更强。本研究揭示了疫情期间网络受欺负与网络欺负的部分作用机制,有助于有针对性地制定网络欺负的干预和预防措施。

关键词 网络受欺负,网络欺负,自我构念,孤独感

The Relationship Between Cybervictimization and Cyberbullying among College Students under the Svere Epidemic Situation: The Mediating Role of Self-Construals and the Moderating Effect of Loneliness

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Abstract: As COVID-19 prevention and control becomes more regular, college students spend more time using the Internet, and cyberbullying, a new type of bullying, becomes more and more problematic. This study aims to investigate the the relationship between cybervictimization and cyberbullying as well as the the mediating effect of self-construals and the moderating effect of loneliness in this relation. One thousand one hundred and twenty-five college students from some universities in Wuhan, China, were investigated to examine this hypothetical model. They were asked to complete the cyberbullying scale, loneliness scale, interdependent and independent self-construal. The results indicate the following: (1)cybervictimization significantly positively predict their cyberbullying;(2)only interdependent self-construal partially mediated the relationship between cybervictimization and cyberbullying; and(3)the direct effect of cybervictimization on cyberbullying and the mediation effect of interdependent self-construal were moderated by loneliness, with these effects being much stronger among college students high on loneliness. This study reveals some mechanisms of cybervictimization and cyberbullying during the epidemic period, which is helpful to develop targeted intervention and prevention measures for reducing the occurrence of cyberbullying.

Keywords: cybervictimization, cyberbullying, self-construal, loneliness

导师支持与研究生学习投入的关系：链式中介分析

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摘 要 学习投入(learning engagement)是指学生为了表现好并取得预期成果所付出的努力,对研究生学术生涯的成长和发展具有不可忽视的重要作用。研究者们发现影响学习投入的因素有许多,其中包括个体因素(如学术激情)和成长过程中的学校环境(如导师支持)。但已有研究仅考察了导师支持对学习投入的直接作用,导师支持对学习投入的内在作用机制尚不清楚。针对已有研究的不足,同时基于合作学习理论,本研究构建了一个链式中介模型,以考察导师支持和学习投入的关系及同伴互助学习与和谐学术激情的中介作用。本研究以 567 名研究生为被试,采用问卷法对个体感知到的导师支持、学习投入、同伴互助学习与和谐学术激情进行测查。结果发现:(1)导师支持、学习投入、同伴互助学习与和谐学术热情均存在显著正相关。(2)控制性别和教育背景后,研究生感知到的导师支持显著正向预测学习投入。(3)同伴互助学习与和谐学术激情在导师支持与学习投入的关系间起中介作用,且该中介作用包含三条路径:同伴互助学习的单独中介作用、和谐学术激情的单独中介作用以及同伴互助学习-和谐学术激情的链式中介作用。本研究不仅有助于深化关于研究生学习投入的认识,而且有助于更全面地了解学生学习投入的作用机制,并对研究生学习投入的培养有一定的指导意义。

关键词 导师支持,学习投入,同伴互助学习,和谐学术激情,研究生

The Effect of Perceived Supervisor Support on Postgraduate's Learning Engagement: A Chain Mediating Model

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Abstract: Previous research has documented the critical effect of perceived supervisor support on learning engagement. However, few studies have focused on the mediating mechanisms underlying this relationship. Drawing on cooperative learning theory, this study constructs a chain mediating model to examine whether peer-assisted learning and harmonious academic passion mediates the relationship between perceived supervisor support and learning engagement among Chinese postgraduates. A total of 567 postgraduates [female = 52.0% (n = 295); male = 48.0% (n = 272)] were recruited to participate in this study and completed self-report measures of perceived supervisor support, learning engagement, peer-assisted learning and harmonious academic passion. The results suggest that there was a significantly positive correlations among perceived supervisor support, learning engagement, peer-assisted learning and harmonious academic passion. After controlling for the effect of gender and education background, perceived supervisor support still had a significantly positive effect on learning engagement. Postgraduate's learning engagement was affected by perceived supervisor support partly through 3 different pathways: a) the mediating role of peer-assisted learning, b) the mediating role of harmonious academic passion, and c) the chain mediating role of both peer-assisted learning and harmonious academic passion. The present research contributes to a more comprehensive insight into the mechanism of learning engagement. Finally, we discuss important theoretical and practical implications of these findings.

Keywords: perceived supervisor support, learning engagement, peer-assisted learning, harmonious academic passion, postgraduates

开放性人格与社交网站使用的关系： 感知媒介丰富性的中介作用与自我监控的调节作用

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摘要 使用社交网站沟通交流、维系人际关系是现代生活的重要组成部分,然而社交网站使用存在“双刃剑”效应,主动性使用和被动性使用常常导致截然相反的后果。由于社交网络本质上是由人与人之间的互动驱动的,若想真正理解这一“双刃剑”效应就必须明确社交网站用户的人格光谱。作为大五人格模型中代表对经验的开放性的基本人格特质,开放性人格与广义的互联网使用有着稳定的关联模式,但以往研究显示其与社交网站使用低相关甚至不相关。这可能是因为先前研究者未考虑到开放性人格对主、被动社交网站使用可能存在方向相反的影响。此外,以往研究也忽视了近年来社交网站使用终端与使用情景发生的重大变革,对社交网站“媒介”功能的更新迭代缺乏关注,鲜少将其视为开放性人格影响社交网站使用的关键环节。因此,本研究基于媒介丰富性理论,采用主、被动社交网站使用的分类概念对 563 名大学生进行了问卷调查,解答了开放性人格“能否影响”、“如何影响”社交网站使用以及“何时影响更大”这三个问题。结果显示:(1)开放性人格显著正向预测主动社交网站使用、负向预测被动社交网站使用;(2)感知媒介丰富性在开放性人格与主动社交网站使用之间起部分中介作用(中介效应占比为 48.73%),但未在开放性人格与被动社交网站使用之间发挥中介作用;(3)自我监控可以调节“开放性人格→感知媒介丰富性→主动社交网站使用”这一中介效应的后半段,高自我监控者的中介效应强于低自我监控者。(4)自我监控还可以调节开放性人格与被动社交网站使用之间的关系,高自我监控者的开放性人格显著负向预测被动社交网站使用,低自我监控者则不显著。研究厘清了高开放性群体从社交网站使用中获益的具体方式,又阐明了该方式背后蕴含的心理机制——即感知媒介丰富性所起的中介作用,还从社会认知视角考察了自我监控在上述机制中作为边界条件的重要作用,兼具理论和实践意义。

关键词 开放性人格, 感知媒介丰富性, 自我监控, 主动社交网站使用, 被动社交网站使用

Openness Personality and Social Networking Sites Use: the Mediating Role of Perceived Media Richness and the Moderating Role of Self-monitoring

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Abstract: Using social networking sites to communicate and maintain interpersonal relationships is an important part of modern people's life. However, the use of social networking sites is a double-edged sword that the active and passive use will lead to opposite consequences. Since social networks are essentially driven by human interaction, a true understanding of this phenomenon requires a clear understanding of the personality structure of users on social networking sites. As the basic personality trait representing openness to experience in the Big Five personality model, openness to experience has a stable correlation pattern with generalized Internet use, but previous studies have shown that it has low correlation or even no correlation with the use of social networking sites. This may be illustrated by previous researchers did not consider that openness may have opposite effects on active and passive use. In addition, previous studies have also ignored the significant changes that the terminals and usage scenarios of social networking sites in recent years, and have insufficient understanding of the "media" attribute of social networking sites. Therefore, based on the media richness theory, this study conducted a questionnaire survey among 563 college students to explore whether, how and when openness affects the use of social networking sites. The results showed that : (1) Openness significantly positively predicted active social networking sites use, and negatively predicted passive social networking sites use. (2) Perceived media richness played a partial mediating role in the relationship between openness and active social networking sites use (the mediating effect ratio was 48.73%). (3) Self-monitoring moderated the second half path of the mediating effect of "openness - perceived media richness - active social networking sites use", and the mediating effect of high self-monitoring participants is stronger than of low self-monitoring participants. (4) Self-monitoring moderates the relationship between openness and passive social networking sites use. Openness of high self-monitoring participants significantly negatively predicted passive social networking sites use, while low self-monitoring participants did not. This study not only clarifies the specific ways in which high openness groups benefit from the use of social networking sites, but also clarifies the internal psychological mechanism by which openness influences the use of social networking sites. It also examines the important role of self-monitoring as a boundary condition in the above mechanisms from the perspective of social cognition.

Keywords: openness, perceived media richness, self-monitoring, active social networking sites use, passive social networking sites use

睡眠质量对大学生创造力的影响：执行功能的中介作用

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摘要 创新型人才是我国建设社会主义现代化强国的重要资源, 提升大学生的创造力水平作为当前我国教育体系的重要任务, 备受教育领域及全社会的关注。**目的** 了解大学生创造力水平, 探索睡眠质量与大学生创造力的相关性及其执行功能的中介作用。**方法** 采用方便抽样方法, 于2020年12月~2021年3月间抽取哈尔滨市某医科大学在读本科生进行调查。采用威廉斯创造力倾向量表(WCS)评估被试创造力水平。睡眠质量采用失眠严重程度指数量表(ISI)进行测量。More-odd shifting任务被用来测量被试的执行功能。**结果** 研究共纳入68名被试, 其中男21人, 女47人, 年龄20.33±1.08岁。大学生创造力得分为111.74±16.47, 转换代价为72.23±41.93。睡眠质量、执行功能与创造力负相关($r=-0.656$, $p<0.001$; $r=-0.565$, $p<0.001$) ;

睡眠质量与执行功能呈正相关 ($r=0.486$, $p<0.001$)。中介效应检验显示, 执行功能在大学生睡眠质量与创造力间起部分中介作用, 中介效应值为 -0.668 , $95\%CI[-1.417, -0.192]$, 中介效应占比 23.9% 。**结论** 睡眠质量并非直接影响创造力, 而是通过降低执行功能间接抑制创造力。执行功能与创造力有着密切的关系, 提高大学生主观睡眠质量以及注重执行功能训练是提升创造力的重要手段, 本研究不仅为改善大学生创造力提供了实验证据, 还丰富了积极心理学相关理论。

关键词 创造力, 大学生, 睡眠质量, 执行功能

The relationship between sleep quality and Creativity on College Students: the mediating role of executive function

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Abstract: **Background** Innovative talents are an important resource for China to build a socialist modern power. As an important task of China's current education system, improving the creativity level of college students has attracted much attention in the field of education and the whole society. **Objective** To understand the creativity level of college students, and explore the correlation between sleep quality and college students' creativity and the intermediary role of executive function. **Methods** Used the convenient sampling method, undergraduates from a Medical University in Harbin were selected for investigation from December 2020 to March 2021. Williams Creativity Tendency Scale (WCS) was used to evaluate the creativity level of the subjects. Sleep quality was measured by insomnia severity index (ISI). The more odd shifting task was used to measure the subjects' executive function. **Results:** A total of 68 subjects were included in the study, including 21 males and 47 females, aged 20.33 ± 1.08 years. The score of College Students' creativity was 111.74 ± 16.47 and the conversion cost was 72.23 ± 41.93 . Sleep quality and executive function were negatively correlated with creativity ($r=-0.656$, $P<0.001$; $r=-0.565$, $p<0.001$); There was a positive correlation between sleep quality and executive function ($r=0.486$, $P<0.001$). The mediating effect test showed that executive function played a partial mediating role between College Students' sleep quality and creativity. The mediating effect value was -0.668 , $95\% CI [-1.417, -0.192]$, and the mediating effect accounted for 23.9% . **Conclusion** Sleep quality does not directly affect creativity, but indirectly inhibits creativity by reducing executive function. Executive function is closely related to creativity. Improving college students' subjective sleep quality and paying attention to executive function training are important means to improve creativity. This study not only provides experimental evidence for improving college students' creativity, but also enriches the relevant theories of positive psychology.

Keywords: Creativity, College students, Sleep quality, Executive function

成长型心智模式对研究生心理繁荣和学习投入的影响

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摘要 尽管大量研究表明成长型心智模式能对个体表现产生积极影响, 但成长型心智模式对个体心理状态和学习表现的内在作用机制尚不明确。基于自我决定理论, 构建了成长型心智模式影响个体表现的整合模型, 尤其考察了成长型心智模式影响个体心理繁荣和学习投入的中介机制及边界条件。研究1采用问卷研究, 通过分析研究生的调查数据 ($N=544$), 研究结果表明: (1) 心理资本和自主动机分别在成长型心智模式与心理繁荣、成长型心智模式与学习投入之间存在显著的中介作用; (2) 导师支持感正向调节了成长型心智模式与心理资本、自主动机的关系, 即当学生感知到更高水平的导师支持时, 成长型心智模式与心理资本、自主动机的正向关系更强; (3) 导师支持感还正向调节了心理资本和自主动机的中介作用, 即当学生感知到更高水平的导师支持时, 心理资本和自主动机的中介作用更强。研究2采用质性研究, 搜集了不同学段学生的访谈资料 ($N=15$), 不仅再次支持了研究1中的部分研究发现, 还进一步揭示了成长型心智模式对个体心理繁

荣和学习投入更为复杂的影响过程。本研究从自我决定理论视角揭示了成长型心智模式影响学生心理状态和学习表现的作用机制，为成长型心智模式与个体表现的关系研究提供了更加全面的视角。

关键词 成长型心智模式，导师支持，心理资本，自主动机，心理繁荣，学习投入

I Think, Therefore I Am: Exploring the Effect of Growth Mindset on Postgraduate's Psychological Flourishing and Learning Engagement

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Abstract: Although research has shown that a growth mindset exerts a positive impact on individual performance, it remains unclear why and how growth mindset influences one's psychological state and learning. Specifically, drawing on self-determination theory, we hypothesize that a growth mindset is positively related to individuals' psychological flourishing via enhancing their psychological capital. Furthermore, a growth mindset also stimulates individuals' autonomous motivation, which is associated with higher levels of learning engagement. We further propose that supervisor support will moderate the positive relationship between growth mindset and (a) psychological capital and (b) autonomous motivation, such that the positive relationship will be stronger (vs. weaker) when students perceive higher (vs. lower) levels of perceived supervisor support. Moreover, we also argue that the indirect relationship between growth mindset and (a) psychological flourishing and (b) learning engagement through (a) psychological capital and (b) autonomous motivation may be moderated by supervisor support, such that the indirect effects may be stronger when perceived supervisor support is higher than when it is lower. Results from a survey (study1) of 544 postgraduates support these hypotheses. We also conduct a qualitative study (study2) with 15 students from different degrees; results provide a more nuanced understanding of how growth mindset shapes individuals' subsequent psychological flourishing and learning engagement. This study enriches the literature of mindset-performance link by theorizing and empirically validating the complex effects of growth mindset on individual performance and recommends future research directions.

Keywords: growth mindset, perceived supervisor support, psychological capital, autonomous motivation, psychological flourishing, learning engagement

农村小学生数学元认知对学业成绩的影响： 学业倦怠与主观生活质量的链式中介作用

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摘要 城乡义务教育发展落差是我国教育领域发展不平衡和不充分的重要体现，也是当前推动城乡基本公共服务均等化亟待解决的重大问题。由于城乡二元结构体制，我国各地经济社会发展不平衡，致使不同地区教育发展不均衡，学生学业成绩存在较大差异，尤以城乡差异最为突出，严重制约社会公平与正义的实现，影响和谐社会的建设与发展。数学元认知，个体对数学认知活动的自我意识和自我监控，它以元认知知识为基础，并在对数学认知过程的评价、控制和调节中显示出来，对数学认知过程发挥知晓、支配、决策、监控的作用，是影响学业成绩的认知变量。本研究拟探索学业倦怠和主观生活质量在数学元认知和学习成绩之间的中介作用，了解农村小学生数学元认知对成绩影响的可能机制。本研究使用小学生数学元认知问卷、学业倦怠问卷和主观生活质量问卷对 1600 名农村小学生进行调查。采用 process 方法考察学业倦怠和主观生活质量在之间的链式中介作用。结果发现小学生数学元认知能正向预测学业成绩 ($\beta=0.15, p<0.001$)，负向预测学业倦怠 ($\beta=-0.41, p<0.01$)，也能正向预测主观生活质量 ($\beta=0.34, p<0.001$)；学业倦怠能负向预测主观生活质量 ($\beta=-0.48, p<0.001$)，也能负向预测学业成绩 ($\beta=-0.11, p<0.001$)。在控制了性别、地区后，学

业倦怠和主观生活质量分别中介了在小学生数学元认知和学业成绩之间的关系，且两者在数学元认知和学业成绩间起着链式中介作用。学业倦怠和主观生活质量可以揭示小学生数学元认知和学业成绩的内在机制。

关键词 农村小学生,数学元认知,学业倦怠,主观生活质量

The effect of Mathematical meta-cognition on achievement of rural primary school students: The chain-mediating role of academic burnout and subjective quality of life

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Abstract: The gap in the development of compulsory education between urban and rural areas is an important embodiment of the imbalance and inadequacy of the development of education in China. It is also a major issue that needs to be solved to promote the equalization of basic public services between urban and rural areas. Due to the urban-rural dual structure system, the economic and social development in different parts of our country is not balanced, resulting in the uneven development of education in different regions, and there are great differences in students' academic performance, especially in urban and rural areas, which seriously restricts the realization of social fairness and justice, and affects the construction and development of a harmonious society. Mathematical meta-cognition, the self-awareness and self-monitoring of individuals' mathematical cognitive activities, is based on the meta-cognitive knowledge, and is shown in the evaluation, control and adjustment of mathematical cognitive process. It plays the role of knowing, controlling, decision-making and monitoring of mathematical cognitive process, and is a cognitive variable that affects academic achievement. This study aims to explore the mediating role of academic burnout and subjective quality of life between mathematical meta-cognition and academic performance, and to understand the possible mechanism of the influence of mathematical meta-cognition on academic performance of rural pupils. In this study, 1600 rural primary school students were investigated by mathematical meta-cognition questionnaire, academic burnout questionnaire and subjective quality of life questionnaire. The process method was used to investigate the chain mediating effect between academic burnout and subjective quality of life. The results showed that mathematical meta-cognition could positively predict academic achievement ($\beta=0.15, p < 0.001$), negatively predict academic burnout ($\beta=-0.41, p < 0.01$), and positively predict subjective quality of life ($\beta=0.34, p < 0.001$). Academic burnout was a negative predictor of subjective quality of life ($\beta=-0.48, p < 0.001$) and of academic achievement ($\beta=-0.11, p < 0.001$). After controlling for gender and region, academic burnout and subjective quality of life mediated the relationship between mathematical meta-cognition and academic achievement of primary school students, respectively, and they played a chain mediating role between mathematical meta-cognition and academic achievement. Academic burnout and subjective quality of life can reveal the internal mechanism of elementary students' mathematical meta-cognition and academic achievement.

Keywords: Rural primary school students, Mathematical meta-cognition, Academic burnout; Subjective quality of life

中国听力障碍者心理研究进展

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摘要 为了更好的帮助听力障碍者克服听力减退带来的困难,促进其康复与融入主流社会,以及为今后的研究提供参考思路,本文以在特殊教育学与心理学领域最具影响力的5本中文核心期刊----《中国特殊教育》、《心理学报》、《心理科学》、《心理科学进展》与《心理发展与教育》作为文献检索来源,以询证研究路径对国内听力障碍者心理研究相关的文献进行检索与筛选,最后得到51篇目标文献。为了解当前中国听力障碍者心理研究的信息,本文从文献的分布与发展趋势、文献研究方法、研究被试、研究内容与结果四个方面对目标文献进行了分析,并提出笔者的建议。文献分析后发现听力障碍者心理相关文献数量不足,分布不均,发表量波动大;研究类型以实证研究为主,研究多为量化研究,但量化与质性结合的研究严重不足;研究被试社会角色单一,几乎全为学生,而且对幼儿与中老年听力障碍者心理关注不足;研究内容丰富,但听力障碍相关人员的心理健康未得到足够关注。在总结与分析25年的中国听力障碍者心理研究文献的基础上,今后的研究者应该更关注中国听力障碍者的心理,理论与实践相结合,拓展研究对象的社会角色与年龄跨度,在关注听力障碍者本身的心理的同时,也关注听力障碍相关人员的心理健康。

关键词 听力障碍者, 心理, 研究进展

Advances in the Research into Psychology of People with Hearing Impairment

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Abstract: In order to help the people with hearing impairment to overcome the difficulties caused by hearing loss better, promote their rehabilitation and integration into the mainstream society, and provide reference ideas for future research, this article is based on the five most influential Chinese core journals----*Chinese Journal of Special Education*, *Acta Psychologica Sinica*, *Journal of Psychological Science*, *Advances in Psychological Science*, *Psychological Development and Education* in the field of special education and psychology as the source of literature search. In this paper, the literature related to the psychological research of hearing impairment in China was searched and screened with the approach of evidence-based path, and 51 target literature were obtained. In order to understand the current information of the psychological research on the hearing impairment in China, this paper analyzed the target literature from four aspects: the distribution and development trend of the literature, the research method, the participants, the research content and the results, and putted forward the author's suggestions. After literature analysis, it was found that the number of literature related to hearing impairment is insufficient, the distribution is uneven, and the published quantity fluctuates greatly. The research type is mainly empirical research, most of the research is quantitative research, but the combination of quantitative and qualitative research is seriously insufficient; The social role of the participants is single, almost all of them are students, and the psychological attention of preschool children and middle-aged and old people with hearing impairment is insufficient. The research content is rich, but the psychological health of people related to the people with hearing impairment has not been paid enough attention. In summary and analysis of 25 years' psychological research of people with hearing impairment in China, researchers should pay more attention to China's psychology of people with hearing impairment, combine theory with practice, to expand the research participants of social role and age span, focusing on the psychology of people with hearing impairment, also pay attention to the psychological health of people related to the people with hearing impairment in the future.

Keywords: People with hearing impairment, Psychology, Advances in research

父母反应方式与儿童幸福感的关系：有调节的中介模型

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摘要 父母反应方式是指父母面对孩子成功或失败时的反应方式, 可以分为两种: 一是失败导向反应——当孩子表现不佳时, 父母可能会很重视这次失败, 行动上会鞭策孩子努力学习, 以求改进; 当孩子表现很好时, 父母可能认可他们的成功, 但会关注孩子的失误之处。另一种是成功导向反应——无论孩子表现怎样, 父母都会强调孩子的成就, 即无论孩子成绩好坏, 父母都会关注孩子答对的题目。父母对孩子成败的反应方式属于父母教养方式中的行为范畴, 是学习相关的父母教养方式, 属于儿童发展的重要微观系统——家庭环境。有研究发现父母面对孩子成败的反应方式, 会影响孩子的情绪适应和成绩。为进一步探讨父母反应方式对儿童幸福感的影响及其内在机制, 本研究基于生态系统理论和家庭系统理论, 使用父母反应方式量表、亲子亲密度量表、友谊质量问卷、幸福感指数量表, 对 686 名小学生进行调查。结果表明: (1) 失败导向反应能直接负向预测儿童幸福感, 成功导向反应能直接正向预测幸福感, 且两者都能通过亲子关系的中介作用对其产生影响; (2) 亲子关系的中介作用(后半段路径)受到友谊质量的调节, 即随着友谊质量水平的提高, 亲子关系在两种父母反应方式对幸福感的影响中的中介效应都降低。友谊质量与亲子关系对儿童幸福感的共同作用符合“补偿”模型。研究结果揭示了父母反应方式对儿童幸福感的影响及其作用机制, 对儿童幸福感的提升也有一定的指导意义。我们既可以通过增进亲子关系的良性发展来提升儿童幸福感, 也可以通过提高儿童同伴关系质量来促进儿童幸福感。

关键词 父母反应方式, 幸福感, 亲子关系, 友谊质量, 儿童

Parents' Response style and Well-being among Children: Moderated Mediation Effect

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Abstract: Parents' Response style refers to the way parents respond to children's performance which include failure-oriented and success-oriented responses to children's performance. Failure-oriented parents may make a big deal out of children's failure, including urging them to work harder when children do poorly. They may also endorse their success but concentrate on what children missed when children do well. Success-oriented parents may emphasize children's accomplishments, regardless of their performance (e.g., highlight what children did correctly when they have done well or poorly). Parents' responses to children's performance belong to the behavior of parenting style which is the parenting related to learning, also belong to the important microsystem of children's development, namely family environment. Some studies found that parents' responses to children's performance can affect children's emotional adaptation and performance. In order to further explore the influence of parents' response style on children's well-being and its internal mechanism, using Parents' Responses to Children's Performance Scale, Buchanan scale of closeness to parents, Friendship Quality Questionnaire and Campbell Index of Well-being, our study investigated 371 pupils based on ecological systems theory and family system theory. The results showed that: (1) failure-oriented responses negatively predicted children's well-being and success-oriented responses positively predicted well-being, significantly. The testing of mediation effect suggested that parent-child relationship played a partial mediating role between parents' responses and children's well-being. (2) The testing of moderated mediation effect further indicated that friendship quality regulated the second half of "failure-oriented responses or success-oriented responses → parent-child relationship → well-being". That is, with the improvement of the quality of friendship, the mediating effect of parent-child relationship on the influence of the two ways of parents' responses

on well-being reduced. The influence of parent-child relationship and peer relationship on children's well-being conformed with the compensation model. The results revealed how the parents' response style influenced children's well-being which had some inspiration on cultivating children's well-being. We could improve children's well-being by promoting the benign development of parent-child relationship, or improving the quality of peer relationship.

Keywords: Parents' Response style, well-being, parent-child relationship, friendship quality, children

创伤经历对农村留守儿童创伤反应的影响效应

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摘要 目的: 探究创伤经历对农村留守儿童创伤性反应的影响作用以及领悟社会支持的中介效应和应对方式的调节效应。方法: 采用埃森创伤问卷、领悟社会支持量表、应对方式量表和创伤事件影响量表对 1030 名农村留守儿童进行调查。结果: ①创伤经历与领悟社会支持($r=-0.15, p<0.001$)、应对方式($r=-0.06, p<0.001$)显著负相关、与创伤性反应($r=0.34, p<0.001$)显著正相关, 创伤经历对创伤性反应具有显著正向影响效应($\beta=0.35, p<0.001$); ②中介效应检验表明, 领悟社会支持中介作用的置信区间为 $[0.01, 0.03]$; ③应对方式对领悟社会支持在创伤经历与创伤性反应的中介后半段具有调节作用($\beta=0.35, t=-2.50, p<0.05$)。结论: 创伤经历对留守儿童创伤性反应的影响受到领悟社会支持的中介作用, 同时应对方式调节了领悟社会支持与创伤性反应之间的关系。

关键词 农村留守儿童, 创伤经历, 领悟社会支持, 应对方式, 创伤性反应

The Effect of Traumatic Experience on Traumatic Response of Left-behind Children in Rural Areas

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Abstract: Objective: To explore the influence of traumatic experience on traumatic response of left-behind children in rural areas and the mediating effect of understanding social support and the moderating effect of coping style. **Methods:** 1030 left-behind children in rural areas were investigated by Essen Trauma Questionnaire, Comprehending Social Support Scale, Coping Style Scale and Impact Scale of Traumatic Events. **Results:** ①Traumatic experience was significantly negatively correlated with perceived social support ($r=-0.15, p<0.001$) and coping style ($r=-0.06, p<0.001$), and positively correlated with traumatic response ($r=0.34, p<0.001$). Traumatic experience had a significant positive effect on traumatic response ($\beta=0.35, p<0.001$). ②The mediating effect test showed that the confidence interval of perceiving the mediating effect of social support was $[0.01, 0.03]$. ③Coping style had a moderating effect on perceived social support in the second half of the mediator between traumatic experience and traumatic response ($\beta=0.35, t=-2.50, p<0.05$). **Conclusion:** The influence of traumatic experience on left-behind children's traumatic response is mediated by perceived social support, and coping style moderates the relationship between perceived social support and traumatic response.

Keywords: left-behind children, traumatic experience, understanding social support, coping style, traumatic response

社会治理视角下的老年心身疾病成因研究

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摘要 积极应对人口老龄化, 事关我国经济社会的和谐稳定。加快养老服务工作, 需要各级政府、社会各界付出更多的热情和精力。目前我国养老机构多停留在解决老人看管和衣食温饱的初级水平, 面对空巢老人不断增多、老年心身疾病不断增加的现实, 如何针对老年人的精神需求提供高质量的养老服务, 有待于更深入的探索。

有调查表明, 当前我国老年疾病患者中 50%-80% 是源自于心理疾病, 而约 70% 的心理疾病是由于老年人缺少精神关怀所引起的。关注老年人心身健康, 对导致老年心身疾病的心理社会因素进行准确有效的探索、并对心身健康的概念进行科学界定已经成了社会发展的客观刚需。以心养身, 拥有蓬勃向上的精气神, 以心养心, 涵养时代发展所需要的知情意, 顺势而为, 顺势作为, 心身一元, 身心和合, 已然成了心身健康的盎然意蕴。

呵护老年人的幸福晚年, 满足老年人日益增长的文化、精神和自我价值的追求, 让他们安享晚年、体面地老去, 把他们的冷暖挂在心头, 知老尊老, 创造一个老年友好型社会, 让老有所乐、老有所为的愿望照进现实, 不仅有助于推动我国老年人“五老政策”在医疗、养老、教育、休闲、作为等方面的建设, 切实有效的提高老年人的生活质量, 而且可以极大地延长老年人口红利的收获期, 减轻社会保障的压力, 使老年人成为“银色产业”发展的动力和社会进步的积极推力。同时, 也可以让后来人有可期的未来, 让亿万正在奋斗的人们可以感受到奋斗的价值。

关键词 社会治理, 治理能力, 积极老龄化, 心身疾病, 心身健康

Research on the Causes of Psychosomatic Diseases of the Elderly from the Perspective of Social Governance

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Abstract: Actively dealing with the problem of aging population makes great difference to the harmony and stability of China's economy and society. To speed up the work of the elderly care service needs more enthusiasm and energy from governments at all levels and from all walks of life. At present, China's elderly care institutions mostly stay at the primary level of providing care, clothing and food. In the face of the increasing number of empty nesters and the increasing psychosomatic diseases of the elderly, how to provide high-quality elderly care services for the spiritual needs of the elderly needs to be further explored.

Some surveys show that 50% to 80% diseases of the elderly patients in our country are related to the psychological problems, and about 70% of which are caused by the lack of spiritual care. It has become an objective requirement of social development to pay attention to the psychosomatic health of the elderly, to explore the psychosocial factors leading to psychosomatic diseases of the elderly accurately and effectively, and to scientifically define the concept of psychosomatic health. Cultivating one's healthy body with healthy mind and developing vigorous spirit contribute to harmonizing body and mind and have become the natural implication of mental and physical health.

It is of great importance to take care of the elderly people's happiness and meet their growing pursuit of culture, spirit and self-worth so that they can enjoy their old age in peace and dignity. Keeping their warmth and cold in mind,

knowing about and respecting the elderly, creating an elderly friendly society and turning their wishes into reality will not only help to promote the construction of "five policies" for the elderly in medical treatment, pension, education, leisure, as well as other aspects, but also can effectively improve the life quality of the elderly, and can extend the harvest period of the elderly demographic dividend, reduce the pressure of social security, and make the elderly become the driving force of the development of "silver industry" and the positive thrust of social progress. At the same time, it can also make future generations have a promising future so that hundreds of millions of people who are struggling can feel the value of struggle.

Key words: social governance, governance capacity, active aging, psychosomatic diseases, psychosomatic health

家庭仪式对青少年的心理价值及其效能提升

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摘 要 随着时代发展, 生活节奏较快, 个体面临许多挑战性的安排, 例如新冠疫情, 但如果家庭成员仍然有机会聚在一起共进餐, 一起计划假期, 并接纳生命周期的转变, 这些活动都会对青少年的发展带来积极的影响。这些活动是发展家庭仪式的背景, 是有意义的特殊事件, 并具有一个家庭共享的象征意义。家庭仪式是家庭成员按照一定规范, 在家庭内部开展的较为稳定的互动行为模式, 包括了语言和行动的重复, 反映了家庭过程的共同结构。

家庭仪式对于青少年心理健康、家庭凝聚力以及家庭价值观的传递都有积极意义, 还可以抵抗焦虑、抑郁等不良情绪, 抵御贫穷、患病等负面事件的影响。家庭仪式可以促进青少年的心理健康, 当青少年感到与家庭有联系, 但不受家庭约束时, 与心理社会成熟相关的发育过程会蓬勃发展, 在家庭仪式上的低投入导致了青少年更多的使用心理健康服务。家庭共有的仪式往往被视为一种社交活动, 这种社交活动可以连接家庭成员之间的关系, 家庭仪式可以维持家庭秩序, 形成稳定感, 提升青少年对家庭的归属感、认同感、凝聚力。家庭仪式可以向下一代灌输孝道和教育的价值观。家庭仪式有助于青少年抵御焦虑、抑郁等不良情绪, 抵抗外在诱惑, 有助于青少年情绪调节能力的发展。团聚的家庭仪式可以支撑外出务工家庭度过压力和不规律的时期, 患病的家庭成员、贫穷的家庭, 酗酒的父母, 以及父母离婚等事件对家庭成员的影响都是负面的, 但家庭仪式可以作为保护因子, 缓解、稀释这些负面的家庭事件。要提升家庭仪式的效能, 首先要设定明确的家庭仪式目标, 并要发挥组织者和参与者的主体性, 家庭仪式的形式和方法要丰富, 而且要追求家庭仪式背后的深层内涵。

关键词 家庭仪式, 青少年, 心理价值, 效能提升

The Psychological Value and Efficacy Enhancement of Family Rituals to Youth

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Abstract: With the development of the times and the rapid pace of life, individuals are faced with many challenging arrangements, such as the new crown epidemic, but if family members still have the opportunity to gather together to eat together, plan vacations together, and accept life cycle changes, these activities will be beneficial. The development of young people has a positive impact. These activities are the background of the development of family rituals, are meaningful special events, and have a symbolic meaning of family sharing. Family rituals are relatively stable interactive behavior patterns carried out by family members within the family in accordance with certain norms, including the repetition of language and actions, reflecting the common structure of the family process.

Family rituals have positive meanings for the transmission of adolescents' mental health, family cohesion and family values. They can also resist negative emotions such as anxiety and depression, and resist the influence of negative events such as poverty and illness. Family rituals can promote the mental health of adolescents. When adolescents feel connected to the family but are not restricted by the family, the developmental process related to psychosocial maturity will flourish. The low investment in family rituals leads to more use by the adolescents Mental health services. The ritual shared by the family is often regarded as a kind of social activity. This social activity can connect the relationship between family members. Family rituals can maintain family order, form a sense of stability, and enhance the youth's sense of belonging, identity and cohesion to the family. Family ceremonies can instill the values of filial piety and education to the next generation. Family rituals help young people resist anxiety, depression and other bad emotions, resist external temptations, and help young people develop their emotional regulation ability. Family reunion ceremonies can support migrant families through stressful and irregular periods. Sick family members, poor families, alcoholic parents, and parental divorce have a negative impact on family members, but family rituals It can be used as a protective factor to alleviate and dilute these negative family events. To enhance the effectiveness of family rituals, we must first set clear goals of family rituals, and give play to the subjectivity of organizers and participants. The forms and methods of family rituals should be enriched, and the deep connotations behind family rituals should be pursued.

Keywords: Family Rituals; Youth; Psychological Value; Efficacy Enhancement

5.38“硕博论坛应用心理学”大会展贴报告

(1) “硕士研究生论坛—应用心理学”展贴报告

团体活动对射击运动员心境状态和流畅状态的影响

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摘要 本研究以安徽省射击运动管理中心的 33 名射击运动员为研究对象, 在 2020 年冬训期间, 开展 8 周的团体活动课, 研究团体活动对射击运动员心境状态和流畅状态的影响。团体活动参照《团体心理辅导》等(樊富珏, 2010), 内容包括团体信任和凝聚力的培养, 自信心训练, 自我成长与探索等。使用《POMS 心境状态量表》和《流畅状态量表 FSS》对运动员的心境状态和流畅状态进行测量。在团体活动进行的第一周、第四周和最后一周进行前中后三次的测试。所得数据结果运用 spss22.0 统计软件进行统计分析。同时, 为了确定团体活动的对射击运动员的适用性, 在活动进行的第二周和最后一周, 邀请运动员填写活动的感受和建议, 大部分运动员都表示团体活动很有趣, 对自己的心理有一定的帮助。最终, 有 29 名队员完整参加了活动并完成了心理测试。

结果: 经过对心境状态三次测验结果进行单因素方差分析后发现, 队员在愤怒 ($F(2, 81), P=0.022$)、疲劳 ($F(2, 81), P=0.038$) 以及总体心境状态 (TMD) ($F(2, 81), P=0.023$) 的三次测量结果差异显著, 自信测量结果的差异边缘显著 ($F(2, 81), P=0.059$), 紧张、抑郁、精力、慌乱得分差异不显著。队员在行为-意识融合 ($F(2, 86), P=0.001$), 准确的反馈 ($F(2, 86), P=0.026$), 控制感 ($F(2, 86), P=0.020$), 总体流畅状态差异显著 ($F(2, 86), P=0.008$)。挑战-技能平衡、清晰的目标、注意力集中于当前任务、自我意识丧失、时间变换、享受的体验差异不显著。

结论: 经过 8 周的团体活动, 证明团体活动可以降低运动员的愤怒, 疲劳, 提升运动员的自信, 最终改善运动员的心境状态。在行为-意识融合、准确的反馈、控制感方面得分增加, 整体流畅状态有所提升。团体活动是一种简单, 高效的心理辅导方式, 今后可以在运动队进行推广。

关键词 团体活动, 射击运动员, 心境状态, 流畅状态

The influence of team activities on the state of mind and fluency of shooting athletes

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Abstract: To research the influence of team activities on the state of mind and fluency of shooting athletes, this study took 33 shooting athletes from Anhui Shooting Sports Management Center as the research object. During the winter training in 2020, an 8-week team activity class was carried out. Group activities include the cultivation of group trust and cohesion, self-confidence training, self-growth and exploration, etc. POMS Mood State Scale and Fluency State Scale FSS were used to measure the mood state and fluency state of the athletes. Three tests were conducted during the first, fourth and final week of group activities. The obtained data were analyzed by SPSS22.0 statistical software. At the same time, in order to determine the applicability of team activities to shooting athletes, athletes were invited to fill in their feelings and suggestions during the second and last week of the activities. Most of the athletes said that team activities were interesting and helpful to their psychology to some extent. In the end, 29 of the team members took the full course and completed the psychological test.

Results: Through one-way ANOVA on the results of three tests of mood state, it was found that the three measurements of anger ((F (2,81), P=0.022), fatigue ((F (2,81), P=0.038) and general mood state (TMD) ((F (2,81), P=0.023) were significantly different. The difference margin of confidence measurement results was significant (F (2,81), P=0.059), but there were no significant differences in scores of nervousness, depression, energy and fluster. There were significant differences in players' overall fluency ((F (2,86), P=0.008) in behavior-consciousness fusion ((F (2,86), P=0.001), accurate feedback ((F (2,86), P=0.026), and sense of control ((F (2,86), P=0.020). Challenges - balance of skills, clear goals, focus on the task at hand, loss of self-awareness, time shifts, no significant differences in experience enjoyment.

Conclusion: after 8 weeks of group activities, it is proved that group activities can reduce athletes' anger, fatigue, improve their self-confidence, and finally improve their state of mind. Scores increased in behavior-consciousness integration, accurate feedback, and sense of control, and overall fluency improved. Group activity is a simple and efficient way of psychological counseling, which can be popularized in sports teams in the future.

Keywords: group activity, shooting athletes, mood state, smooth state

恐慌在焦虑-抑郁症状网络中的重要性： 新冠疫情调查的纵向网络分析

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摘要 目的: 新冠肺炎疫情给人们带来了巨大的心理冲击, 焦虑和抑郁情绪并存现象普遍。网络分析认为心理障碍的症状之间存在复杂的交互作用, 将心理障碍看作症状之间相互作用的结果, 为理解焦虑和抑郁共病提供了新的视角。本研究拟采用网络分析的方法 (包括正则化偏相关网络和有向无环图), 考察新冠肺炎疫情期间一般人群中焦虑和抑郁症状网络的结构及变化。**方法:** 本研究采用医院焦虑抑郁量表, 在新冠肺炎疫情的高峰期 (2020.2.7-2020.3.13) 和高峰后期 (2020.5.8-2020.6.24) 对 533 名国内普通民众进行了网络匿名问卷调查。**结果:** 在疫情高峰期和疫情高峰后期, 分别有 22.3% 和 17.8% 的被试处于焦虑-抑郁状态 (焦虑和抑郁分量表得分均 ≥ 8 分)。从疫情高峰期到疫情高峰后期, 被试焦虑、抑郁得分显著下降 ($p < .001$, $d = 0.15$)。正则化偏相关网络显示, 焦虑和抑郁症状在疫情高峰和高峰后期均高度交织, 网络结构和整体强度随时间保持稳

定。在网络中,恐慌具有高中心性,情绪低落具有高中心性和高桥梁中心性。在有向无环图中,恐慌位于网络最顶端,引发了其他症状;心境低落也位于网络中因果关系的上游。**讨论:**在新冠肺炎疫情期间,恐慌和低落情绪在焦虑-抑郁情绪的产生和维持中可能发挥了重要作用。及时缓解恐慌与低落情绪,可能有助于抑制焦虑-抑郁共病的发生和发展,可能是未来突发公共卫生事件早期的重要干预目标。

关键词 新冠肺炎疫情,焦虑,抑郁,恐慌,网络分析

The Importance of Panic in Comorbid Anxiety-Depression Symptoms among Chinese General Population during COVID-19 Pandemic: Two Longitudinal Network Analyses

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Abstract: Anxiety and depression symptoms commonly occurred together during COVID-19 pandemic. The network approach provided a novel perspective to explore anxiety-depression symptoms as a causal system of interacting symptoms. The current study examined the associations between anxiety and depression symptoms in 533 participants at the peak of pandemic (February 7th, 2020, to March 13rd, 2020) and the post-peak stage (May 8th, 2020, to June 24th, 2020), respectively, by the Hospital Anxiety and Depression Scale. Two complementary network models (i.e., graphical LASSO and directed acyclic graph, DAG) were utilized. The results showed that anxiety and depression were highly intertwined both at outbreak and after peak, and the structure as well as overall strength of network were stable across time. Meanwhile, *panic* was central in graphical LASSO and lied at the top of DAG. *Sad mood* emerged as both a central and bridge node. These findings indicated that *panic* and *sad mood* may play an important role in the development and maintenance of anxiety-depression symptoms during COVID-19 pandemic. Reducing *panic* and *sad mood* may assist with preventing anxiety and depressive symptoms and may be an important early intervention target for public health emergencies in the future.

Keywords: COVID-19, anxiety, depression, panic, network analysis

负性认知偏向对医学生自杀意念的短期纵向影响： 需要挫败和自杀行为态度的中介调节效应

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摘要 目的: 探讨负性认知偏向对医学生自杀意念的影响, 以及需要挫败和自杀行为态度在二者关系中的作用机制。方法: 采用负性认知加工偏向问卷、需要挫败量表、自杀意念量表以及自杀行为态度问卷, 先后间隔一个月对 4231 名在校医学生进行分批调查。结果: (1) 负性认知偏向能够显著正向预测医学生的自杀意念; (2) 需要挫败部分中介负性认知偏向与医学生自杀意念间的关系; (3) 自杀行为态度调节了医学生负性认知偏向通过需要挫败影响自杀意念的中介过程。对自杀行为持反对态度时, 负性认知偏向和需要挫败对自杀意念的影响较小, 对自杀行为持赞同态度时, 负性认知偏向和需要挫败对自杀意念的影响较大。结论: 负性认知偏向既可以直接影响医学生的自杀意念, 也可以通过需要挫败对其产生间接影响, 对自杀行为抱持的赞同态度增强了负性认知偏向和需要挫败对医学生自杀意念的影响。

关键词 负性认知偏向, 自杀意念, 需要挫败, 自杀行为态度

Short term longitudinal effects of negative cognitive bias on suicide ideation of medical students: mediating and moderating effects of need frustration and attitude towards suicidal behavior

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Abstract: Objective: To explore the effect of negative cognitive bias on suicidal ideation of medical students and the mechanism of need frustration and attitude towards suicidal behavior in their relationship. Methods: A total of 4231 medical students were investigated by using the negative cognitive processing bias questionnaire, the need frustration scale, the suicide ideation scale and the attitude towards suicide behavior questionnaire. Results: (1) Negative cognitive bias can significantly and positively predict medical students' suicidal ideation; (2) Need frustration partially mediates the relationship between negative cognitive bias and medical students' suicidal ideation; (3) Attitude toward suicidal behavior moderates the mediating process of medical students' negative cognitive bias influencing suicidal ideation through need frustration. When medical students hold a negative attitude towards suicide, negative cognitive bias and need frustration have less influence on suicide ideation; When medical students hold a positive attitude towards suicide, negative cognitive bias and need frustration have more influence on suicide ideation. Conclusion: Negative cognitive bias can not only directly affect medical students' suicidal ideation, but also indirectly affect it through need frustration. The positive attitude towards suicide behavior enhances the influence of negative cognitive bias and need frustration on medical students' suicidal ideation.

Keywords: Negative cognitive bias, suicidal ideation, need frustration, attitude towards suicidal behavior

出柜与 LGB 群体的心理健康：一项基于全国样本的研究

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摘要 相比正常的异性恋群体，LGB 群体（即男同性恋、女同性恋和双性恋群体）的心理健康状况往往处于更高的风险之中。过往的研究表明，出柜（即向他人袒露自己的性取向）或能够让 LGB 群体更好地整合自我认知，接受来自外界的真挚反馈和支持，从而更好地自我接受，提升其心理健康水平。然而，出柜带来的影响与个体选择出柜的环境息息相关，在支持程度较差的环境中，出柜反而可能带来更为负面的心理疾病风险。在过去的研究中，较少有研究关注中国 LGB 群体在不同环境中出柜的影响。因此，本研究首先旨在探索不同日常情境中，中国 LGB 群体出柜带来的心理健康影响。其次，有鉴于过往文献指出性取向会带来不同心理健康影响，尤其是同性恋群体和双性恋群体存在明显差异，本研究也旨在比较同性恋群体和双性恋群体在出柜及其影响因素的异同。本研究通过滚雪球问卷法，通过国内各大性少数平台和社群，在全国范围内收集了 8093 份有效问卷，对出柜对象、抑郁水平、孤独水平、自杀意念等因素进行了调查。结果发现，中国 LGB 群体倾向于向密友出柜，在家庭和外部环境中出柜意愿较低。在密友圈和在学校中出柜对 LGB 群体的心理健康有更好的保护性作用。在工作环境中出柜更多是对同性恋群体的心理健康有保护作用，而对双性恋群体没有显著影响。在家庭环境出柜对同性恋群体，尤其是男同性恋群体的心理健康有明显的负面作用，但同样对双性恋群体没有显著影响。研究结果表明，出柜与中国 LGB 群体的心理健康存在相关关系，需要更多的努力来营造支持性环境，从而更好地促进 LGB 群体的心理健康。

关键词 同性恋，双性恋，出柜，心理健康，出柜环境

Disclosure and LGB's mental health: A Chinese nation-wide study

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Abstract: Background: Research suggested that disclosure is one of the key factors influencing LGB's mental health, while less was known about the association between disclosure and mental health in Chinese context. **Objective:** This study aimed to explore the association between disclosure in different social contexts and mental health outcomes in Chinese LGB individuals. **Methods:** From 31 Chinese provinces/municipalities, 8,093 LGB individuals (Mage=22.04) were recruited to completed an online survey regarding disclosure and their mental health. **Result:** Disclosing to close friends and in school was positively associated with better mental health status of LGB individuals. Disclosing in workplace was also positively associated with better mental health, but for homosexuality only; no such significant association was found among bisexual people. However, disclosing to family could bring out negative outcomes in mental health for homosexuality, especially for gay individuals. **Conclusions:** The association between disclosure and mental health in Chinese LGB individuals largely varied by the daily contexts and sex orientations.

Keywords: Disclosure, Sex minority, Minority stress, Mental health, China

高中生未来时间态度与学习投入： 过去时间态度与学业自我效能感链式中介作用

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摘要 近年来，越来越多的研究开始关注个体时间洞察力如何影响个体的心理变量。时间洞察力是指个体对时间的认知、情感体验和行动倾向表现出的人格特征。它与学习动机、学业表现等心理现象存在着密切的相关。学习投入是高中生学习的重要指标之一，它不仅能够正向预测学生学业成绩，还能够预测个体未来在职业的发展。目前有研究发现未来时间洞察力能够正向预测学习投入，但对未来时间洞察力是如何影响当下的学习投入的心理机制尚不清楚。学习自我效能感是影响学习投入的核心因素。而自我效能感的发展又是基于时间框架中进行的。因此，本文采用中文版时间态度量表、学业自我效能感量表和学习投入量表，对 450 名在校高中生进行测量，以探讨未来时间态度与学习投入的关系以及过去时间态度和学业自我效能感的作用。结果发现：首先，过去积极时间态度和学业自我效能感在未来积极时间态度与学习投入间的链式中介作用显著，具有统计学意义。但过去消极时间态度和学业自我效能感在未来消极时间态度与学习投入中的链式中介作用不显著；其次，学业自我效能感在未来时间态度与学习投入间的中介作用均显著。但过去时间态度在未来时间态度与学习投入间的中介作用不稳定。最后，未来的研究可以深入探讨过去时间态度是如何影响学业效能感，并进一步探讨两者如何在未来时间态度与学习投入中起作用的。

关键词 未来时间态度，过去时间态度，学习投入，学业自我效能感，链式中介

The Role of Past Time Attitude and Academic Self-efficacy in the Relationship between Future time Attitude and Study Engagement in High School: A Serial Mediation Model

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Abstract: In recent years, more and more researches have focused on how individual time perception affects individual psychological variables. Time insight refers to the personality characteristics of individuals' cognition, emotional experience and action tendency towards time. It is closely related to learning motivation, academic

performance and other psychological phenomena. Learning engagement is one of the important indicators of high school students' learning. It can not only positively predict students' academic performance, but also predict individuals' future career development. At present, some researches have found that future time insight can positively predict learning engagement, but the psychological mechanism of how future time insight influences present learning engagement is still unclear. Learning self-efficacy is the core factor that affects learning engagement. And the development of self-efficacy is based on the time frame. To explore the relationship between future time attitude and learning engagement, as well as the role of past time attitude and academic self-efficacy, 450 high school students were measured by the Chinese version of Time Attitude Scale, Academic Self-efficacy Scale and Learning Engagement Scale. The results showed that: first, the total indirect effect of future positive through past positive time attitude and academic self-efficacy on learning engagement had a significant link between future positive time attitude and learning engagement was statistically significant. However, the total indirect effect of negative positive through past negative time attitude and academic self-efficacy on learning engagement was not significant. Secondly, academic self-efficacy has a significant mediating effect on the relationship between future time attitude and learning engagement. However, the mediating effect of past time attitude on future time attitude and learning engagement was not significant. Finally, future research can explore how past time attitude affects academic efficacy, and further explore how past time attitude and academic efficacy play a role in future time attitude and learning engagement.

Keywords: Future Time Attitude, Past Time Attitude, Learning Engagement, Academic Self-efficacy, Chain Mediation

反刍思维对大学生网络游戏成瘾的影响：抑郁和化身认同的中介作用

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摘要 网络游戏成瘾会给个体的身心健康带来负面影响，目前已经成为世界性公共卫生问题。网络游戏成瘾的风险因素包括反刍思维、抑郁、化身认同等，但是其具体作用机制尚不明确。探讨大学生网络游戏成瘾的成因，对未来控制和干预网络游戏成瘾具有重大的理论和实践意义。本研究基于认知-行为模型和自我差异理论，构建了链式中介模型，采用反刍思维量表、游戏成瘾量表、抑郁量表、化身认同量表对 648 名在校大学生（平均年龄 20.09 岁，男生 346 人）进行测试，探讨了反刍思维对网络游戏成瘾的影响及其作用机制。结果表明：（1）网络游戏成瘾的性别差异显著，男生得分显著高于女生；（2）反刍思维、抑郁、化身认同和网络游戏成瘾两两呈显著正相关；（3）在控制了性别、年龄和平均每周玩网络游戏时间后，反刍思维仍显著正向预测网络游戏成瘾；（4）反刍思维可以通过三条路径的间接作用影响网络游戏成瘾：一是抑郁情绪的独立中介作用，二是化身认同的独立中介作用，三是抑郁和化身认同的链式中介作用。所以，反刍思维不仅可以直接影响大学生的网络游戏成瘾，还可以通过抑郁、化身认同的多重中介对网络游戏成瘾产生影响。本研究揭示了反刍思维与大学生网络游戏成瘾的关系及其作用机制，为大学生网络游戏成瘾的预防和干预提供了新视角。

关键词 网络游戏成瘾，反刍思维，抑郁，化身认同

The Impact of Rumination on College Students' Internet Game Addiction: The Mediation of Depression and Avatar Identification

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Abstract: Internet game addiction (IGA) will have negative effects on individuals physical and mental health, and has become a worldwide mental health problem. Research has indicated that rumination, depression and avatar identification are the risk factors of IGA, but little know about the mechanisms underlying. Therefore, this paper discusses the causes and the formation mechanism of IGA, which can effectively prevent and intervene the problems

of the IGA. It can also provide theoretical and practical value to IGA. Based on cognitive-behavior model and self-discrepancy theory, this study constructed a chain mediation model to test the mediating effects of depression and avatar identification in the association between rumination and IGA. Data were collected using RRS, IGA Questionnaire, SDS, Player-Avatar Identification (PAI). A sample of 648 college students ($M_{age}=20.09$ years, 346 males) anonymously responded to questionnaires. Results showed that: (1) Male students score significantly higher than female students in IGA. (2) There was a significant positive correlation between rumination, depression, avatar identification and IGA. (3) In the control of gender, age and average number of hours per week spent playing online games, rumination could still positively predict IGA. (4) Rumination affects IGA through three paths: the independent mediation of depression, the independent mediation of avatar identification, and the chain mediation of depression and avatar identification. Therefore, rumination not only directly affects IGA of college students, but also affects IGA through the multiple mediation of depression and avatar identification. This study uncovered the mechanism underlying the relationship between rumination and IGA. Our results may provide new perspective for the prevention and intervention of college students' IGA.

Keywords: Internet game addiction (IGA), Rumination, Depression, Avatar identification

医院内部服务补救现状 及其对医护人员工作倦怠和离职意愿的影响研究

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摘要 内部服务补救是指组织通过一系列努力消除承担外部服务补救工作的内部员工可能产生的负面情绪,使其对未来抱有希望和处理顾客抱怨。已有文献缺乏对医疗卫生行业内部服务补救的相关研究。目的:调查医院内部服务补救现状,探讨医院内部服务补救对医护人员工作倦怠和离职意愿的影响,为稳定医院优质人才队伍提供依据。方法:以自编医院内部服务补救调查问卷、工作倦怠量表(通用版)、离职意愿量表为工具,采用分层方便抽样法在四川省抽取不同等级医院共610名医护人员进行问卷调查,运用单因素分析、相关分析和路径分析进行统计分析。结果:1)医院内部服务补救总平均得分为(3.30±0.77),各维度平均得分分别为医院支持(3.39±0.86),抱怨管理(3.47±0.88),决策授权(3.03±0.85);2)医护人员医院内部服务补救得分在职业、性别、医院等级、年龄、学历、工作年限和聘用形式上差异具有统计学意义($P<0.05$),护士总分及各维度得分高于医生,女性抱怨管理维度得分高于男性,三级医院医护人员抱怨管理维度得分低于其他医院医护人员,40-49岁和≥50岁医护人员医院支持维度得分高于20-29岁医护人员,专科和本科学历医护人员总分及医院支持、抱怨管理维度得分高于硕士及以上医护人员,工作年限高的医护人员总分及各维度得分高于工作年限较低的医护人员,正式聘用的医护人员总分及抱怨管理、决策授权维度得分高于未定聘用形式的医护人员;3)医院内部服务补救各维度与工作倦怠、离职意愿呈负相关($r=-0.112\sim-0.431$, $P<0.01$),工作倦怠各维度与离职意愿呈正相关($r=0.291\sim0.579$, $P<0.01$);4)工作倦怠在医院内部服务补救和离职意愿之间起部分中介作用,中介效应为0.28,占总效应的57.2%。结论:医院内部服务补救整体处于中等水平,职业、性别、医院等级、年龄、学历、工作年限和聘用形式是医护人员感知医院内部服务补救的影响因素,医院内部服务补救能直接负向影响工作倦怠和离职意愿,还能以工作倦怠为中介间接影响离职意愿。

关键词 医护人员, 医院内部服务补救, 工作倦怠, 离职意愿

Research on the status quo of internal service recovery in hospitals and its impact on job burnout and turnover intention of medical staff

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Abstract: Internal service remediation refers to the organization through a series of efforts to eliminate the possible negative emotions of internal employees who undertake external service remediation work, so that they can hope for the future and deal with customer complaints. The existing literature lacks relevant research on internal service remediation in the medical and health industry. Purpose: To investigate the status quo of hospital internal service remediation, explore the impact of hospital internal service remediation on job burnout and willingness to quit of medical staff, so as to provide a basis for stabilizing the hospital's high-quality talent team. Methods: Using self-compiled hospital internal service recovery questionnaire, job burnout scale (universal version), and turnover intention scale as tools, a stratified convenience sampling method was used to select a total of 610 medical staff from different levels of hospitals in Sichuan Province to conduct a questionnaire survey. Use single factor analysis, correlation analysis and path analysis for statistical analysis. Results: 1) The total average score of hospital internal service recovery was (3.30 ± 0.77) , and the average scores of each dimension were hospital support (3.39 ± 0.86) , complaint management (3.47 ± 0.88) , decision-making authorization (3.03 ± 0.85) ; 2) The medical staff's hospital internal service recovery scores differed statistically in terms of occupation, gender, hospital grade, age, education, working years, and employment form ($P<0.05$). The total score of nurses and the scores of all dimensions were higher than those of doctors, and women complained about management. The dimensional score is higher than that of males. Medical staff in tertiary hospitals complain that the management dimensional score is lower than that of other hospitals. Medical staff aged 40-49 and ≥ 50 have higher scores on the hospital support dimension than medical staff aged 20-29, as well as specialist and undergraduate medical staff. The total score of staff and hospital support and complaint management dimensions are higher than that of medical staff with a master's degree or above, the total scores of medical staff with high working years and the scores of all dimensions are higher than those of medical staff with low working years, and the total scores and complaints of officially hired medical staff. The scores of management and decision-making authorization are higher than those of medical staff with undetermined forms of employment; 3) The various dimensions of hospital internal service remedy are negatively correlated with job burnout and willingness to quit ($r=-0.112\sim-0.431$, $P<0.01$), and various dimensions of job burnout It is positively correlated with turnover intention ($r=0.291\sim0.579$, $P<0.01$); 4) Job burnout plays a partial mediating role between the hospital's internal service recovery and turnover intention. The mediating effect is 0.28, accounting for 57.2% of the total effect. Conclusion: The hospital's internal service recovery is at a medium level as a whole. Occupation, gender, hospital grade, age, education, working years and employment form are the influencing factors of medical staff's perception of the hospital's internal service recovery; the hospital's internal service recovery can directly negatively affect job burnout And the willingness to leave, but also indirectly affect the willingness to leave with job burnout as an intermediary.

Keywords: medical staff, hospital internal service recovery, job burnout, willingness to leave

体型负面评价对女大学生限制性饮食的影响:肥胖恐惧的中介作用

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摘要 由于近年来,在社交媒体,新闻报道,广告等对“减肥”“瘦身”理念的过度营销下,女性被社会压力和媒体信息淹没,减肥成为年轻女性日常交流中常见的话题之一,为减肥而出现的少食、节食以及由此可能引发的过度饮食、暴饮暴食等饮食失调行为问题也接踵而来。饮食失调中最常见的适应不良行为就是限制性饮食,因此本研究选取限制性饮食为因变量。大量研究表明体型外表受到负面评价,会让个体知觉到沮丧与焦虑,为避免这些负面感受,个体通常会采取极端手段(如运动过量、节食)以减少他人对自己的批评。因此本研究选择体型负面评价作为自变量。同时选取肥胖恐惧为中介变量,以期进一步考察体型负面评价与女大学生限制性饮食之间的内在作用机制。

本研究拟采用随机取样法,选取内蒙古、山西,辽宁,黑龙江四省的1000名女大学生为被试进行问卷调

查。预计发放问卷 1000 份,拟选取被试的平均年龄在 18~24 岁之间。研究工具将使用限制性饮食问卷,并修订体型负面评价问卷,修订肥胖恐惧问卷。探究体型负面评价对女大学生限制性饮食行为的影响,并进一步探究肥胖恐惧在体型负面评价对女大学生限制性饮食影响中的中介作用。并基于研究结果,对女大学生问题饮食行为以及饮食障碍的预防和干预提出建议和意见。

关键词 体型负面评价,女大学生,限制性饮食,肥胖恐惧

The influence of body shape negative evaluation on restrictive diet of female college students: the mediating effect of fear of fat

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Abstract: In recent years, due to the excessive marketing of the concept of "weight loss" and "weight loss" in social media, news reports, advertisements, etc., women have been overwhelmed by social pressure and media information. Weight loss has become one of the common topics in the daily communication of young women. Eating disorder behavior problems such as undereating, dieting, overeating and overeating that may be caused by this have also followed one after another. The most common maladaptive behavior in eating disorders is restrictive diet, so this study selected restrictive diet as the dependent variable. A large number of studies have shown that negative evaluations of body appearance can make individuals feel frustrated and anxious. To avoid these negative feelings, individuals usually take extreme measures (such as excessive exercise, dieting) to reduce others' criticism of themselves. Therefore, this study chooses the negative evaluation of body shape as the independent variable. At the same time, the obesity fear is selected as an intermediary variable, in order to further investigate the internal mechanism of the negative evaluation of body shape and the restrictive diet of female college students. This study intends to use random sampling to select 1,000 female college students from Inner Mongolia, Shanxi, Liaoning, and Heilongjiang as the subjects to conduct a questionnaire survey. It is estimated that 1,000 questionnaires will be distributed, and the average age of the subjects to be selected will be between 18 and 24 years old. Research tools will use restrictive diet questionnaires, revised body shape negative evaluation questionnaires, and revised obesity fear questionnaires. To explore the influence of negative body shape evaluation on restrictive dietary behaviors of female college students, and further explore the mediating role of obesity fear in the influence of negative body shape evaluation on restrictive dietary behaviors of female college students. Based on the results of the research, suggestions and opinions on the prevention and intervention of problematic eating behaviors and eating disorders of female college students are put forward.

Keywords: body shape negative evaluation, restrictive diet, female college students, fear of fat

情绪加工对基于动作预期的结果加工的影响

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摘要 目的: 基于动作预期的结果加工是指个体利用线索对动作结果进行预期, 在实际结果出现时, 将先前预期与实际结果进行比较的过程。预期反应-结果模型(predicted response-outcome, PRO)解释了内侧前额叶皮层(medial prefrontal cortex, mPFC)和前扣带回皮层(anterior cingulate cortex, ACC)在整个过程中的预测、评估、冲突监控的作用, 而情绪加工的脑区也会涉及 mPFC 和 ACC 的参与。基于动作预期的结果加工本质上是一种认知控制, 研究发现, 负性情绪会损害认知控制, 但该影响会随着情绪在整个任务中得到的认知资源多少而发生变化。根据两者加工存在相同的脑区以及情绪影响认知控制, 本研究旨在探讨情绪刺激与动作结果同时呈现时, 情绪效价对基于动作预期的结果加工的影响, 并预测该影响可能会随着情绪加工得到的认知资源多少而不同。方法: 38 名(女性 24 名, $M = 21.32$, $SD = 0.44$)来自上海体育学院的在校生观看一段乒乓球发球视频(终止到“球-拍”接触后一帧, 50 帧率)后, 形成球落点的预期, 之后同时呈现情绪与结果

刺激,要求被试判断结果刺激与先前预期是否一致。采用 2(线索视频与结果刺激落点一致性:一致、不一致) $\times$ 3(情绪效价:负性、中性、正性)被试内设计,记录正确率与反应时,比较不同情绪效价对于结果加工的影响。结果:不一致相对于一致条件引起更大的反应时($p < 0.001$),负性情绪相对于中性刺激会引起更大的反应时($p = 0.01$),说明负性情绪会削弱结果加工绩效。同时,一致性与效价发生交互作用,一致条件下,主任务认知负荷小,情绪分配到较多资源时,负性情绪相对于中性引起更大的反应时($p = 0.011$),即负性情绪损害结果加工表现,而在不一致条件下,主任务认知负荷大,情绪分配到较少认知资源时,负性与中性引起的反应时无差异,这说明情绪对结果加工的影响会受到认知资源的调控。结论:当情绪刺激得到足够多的认知资源时,情绪加工才会影响基于动作预期的结果加工。

关键词 情绪,结果加工,认知资源

The influence of emotion on the outcome processing based on action anticipation

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Abstract: Purpose: The outcome processing based on action anticipation refers to the process in which individuals use clues to anticipate the action outcome, and when the actual outcome appears, the previous anticipation is compared with the actual outcome. The predicted response-outcome (PRO) model explains the prediction, evaluation, and conflict monitoring of the medial prefrontal cortex (mPFC) and anterior cingulate cortex (ACC) throughout the process. The role of the emotional processing brain areas will also involve the participation of mPFC and ACC. The outcome processing based on action anticipation is essentially a kind of cognitive control. Researchers have found that negative emotion can impair cognitive control, but this effect will change with the amount of cognitive resources that emotion obtains in the entire task. Based on the overlapping brain areas in the two processes and emotional effect on cognitive control, this study aims to explore the effect of emotional valence on the processing of outcome based on action anticipation when emotional stimuli and action outcome are presented simultaneously, and predict that the impact may vary with the amount of cognitive resources obtained from emotional processing. Method: 38 students (24 females, $M = 21.32$, $SD = 0.44$) from the Shanghai University of Sport watches a table tennis serve video (terminated one frame after the "ball-bat" touch, 50 frame rate) to form the anticipation of the ball's landing point then presented with emotion and outcome stimulus simultaneously. Subjects are required to judge whether the outcome stimulus is consistent with the previous anticipation. Using 2 (the congruency of cue video and outcome stimulus: congruent, incongruent) $\times$ 3 (emotional valence: negative, neutral, positive) within the subject design, when recording the correct rate and RT, compare the effects of different emotional valence on outcome processing. Results: When incongruency causes a greater RT than congruency condition ($p < 0.001$), negative emotion causes a greater RT than neutral stimuli ($p = 0.01$), indicating that negative emotion will weaken the outcome processing performance. At the same time, congruency interacts with valence. Under congruency condition, when the cognitive load of the main task is small, and emotion is allocated more resources, negative emotion causes a greater RT than neutral ($p = 0.011$), that is negative emotion impairs the performance of outcome processing. Under incongruency condition, the cognitive load of the main task is large and emotion is allocated to fewer cognitive resources, there is no difference between the RT caused by negative and neutral, which shows that the influence of emotion on outcome processing will be regulated by cognitive resources. Conclusion: When emotional stimuli is obtained enough cognitive resources, emotional processing will affect the outcome processing based on action anticipation.

Keywords: emotion, outcome processing, cognitive resources

幼师情绪对疾病症状和工作满意度的影响：情绪枯竭的中介作用

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摘要 以往的研究表明, 幼儿教师感知到的职业压力比其他学段教师感知到的职业压力更大。就幼师而言, 作为一个特殊的教育行业工作者, 高压、重负荷的工作影响着幼师的情绪, 过多的情绪资源消耗催化幼师产生情绪枯竭, 同时也成为教师身心健康逐渐恶化的重要原因。这也恰恰说明幼师的情绪对他们的身心健康至关重要, 情绪枯竭可能在其中起着中介作用。然而, 目前尚不清楚情绪如何通过情绪枯竭影响幼儿教师的疾病症状和工作满意度。因此本研究旨在探讨幼师情绪对幼师疾病症状和工作满意度的影响机制, 尤其关注情绪枯竭的中介作用。本研究采用教师情绪量表(TES)、职业情绪枯竭量表、疾病症状量表和工作满意度量表对 1997 名幼师进行了调查。结果发现: (1) 幼儿教师的快乐情绪负向影响疾病症状、正向影响工作满意度, 这些影响作用可以通过降低情绪枯竭这一中介实现; (2) 幼儿教师的愤怒情绪正向影响疾病症状, 负向影响工作满意度, 这些影响作用可以通过提高情绪枯竭的中介实现; (3) 幼儿教师的焦虑情绪正向影响疾病症状并完全通过提高情绪枯竭实现, 但不影响工作满意度。研究结果说明常伴有愤怒、焦虑情绪的幼师更有可能出现身体上的疾病症状, 出现身体功能的恶性循环。此外, 焦虑对工作满意度没有显著的影响可能是由于在幼师中发现的整体焦虑水平较低以及焦虑的独特性质。本研究结果对幼儿教师身心健康有重要意义, 因此本研究结果启示幼儿教育工作者可以通过增加幼师的快乐, 减少幼师的愤怒和焦虑, 从而有效地降低情绪枯竭的程度, 提高幼师的身体健康和工作满意度。

关键词 幼儿园教师, 教师情绪, 情绪衰竭, 疾病症状, 工作满意度

The influence of kindergarten teachers' emotions on illness symptoms and job satisfaction: The mediating role of emotional exhaustion

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Abstract: Previous studies have shown that the occupational pressure perceived by kindergarten teachers is greater than the occupational pressure perceived by teachers in other stages. As far as kindergarten teachers are concerned, as a special education industry worker, high-pressure and heavy-duty work affects kindergarten teachers' emotions. Excessive consumption of emotional resources catalyzes kindergarten teachers' emotional exhaustion, at the same time, it has also become an important reason for the gradual deterioration of teachers' physical and mental health. This also precisely shows that the emotions of kindergarten teachers are crucial to their physical and mental health, and emotional exhaustion may play an intermediary role among them. However, it is not clear how emotions affect preschool teachers' illness symptoms and job satisfaction through emotional exhaustion. Therefore, the current study aims to examine the effects of kindergarten teachers' emotions on their illness symptoms and job satisfaction, focusing particularly on the mediating role of emotional exhaustion. We measured 1,997 kindergarten teachers by using Teacher Emotion Scale (TES), Occupational Emotional Exhaustion Scale, Illness Symptoms Scale, and Job Satisfaction Scale. Results revealed that enjoyment negatively related to illness symptoms and positively associated with job satisfaction, which was mediated by depressing emotional exhaustion. Anger positively related to illness symptoms and negatively related to job satisfaction, which was mediated by increasing emotional exhaustion. Anxiety positively related to illness symptoms, which was mediated by increasing emotional exhaustion, but it showed no impact on job satisfaction. We found teachers' emotions influence kindergarten teacher's illness symptoms and job satisfaction, which mediated by emotional exhaustion. These results highlight the functions of the emotions in teacher's physical and mental health.

The results of the study indicate that kindergarten teachers who are often accompanied by anger and anxiety are more likely to have physical disease symptoms and a vicious circle of physical function. In addition, the insignificant effect of anxiety on job satisfaction may be due to the lower overall anxiety level found in kindergarten teachers and

the unique nature of anxiety. The results of this research are of great significance to the physical and mental health of kindergarten teachers. Therefore, the results of this research enlighten that preschool educators can increase the happiness of kindergarten teachers and reduce their anger and anxiety, thereby effectively reducing the degree of emotional exhaustion and improving kindergarten teachers' Physical health and job satisfaction.

Keywords: kindergarten teachers, teachers' emotions, emotional exhaustion, illness symptoms, job satisfaction

中国跨性别与性别未定者自杀意念的影响因素：一项全国性研究

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摘要 背景:以往研究发现，跨性别和性别未定者(以下简称跨性别者)是自杀意念的高风险人群，基于此，考察该群体自杀意念的风险因素至关重要。本研究旨在探究中国跨性别者过去一年自杀意念的发生率及相关影响因素，并且从中国文化背景出发，探索婚姻压力对跨性别者自杀意念的影响。

方法:本研究数据来源于中国性与性别少数群体心理健康与亲密关系调查的数据，对来自全国 31 个省市共 9238 名被试进行分析，其中跨性别者为 977 人。本研究考察人口学变量、心理健康、自杀意念、身份认同冲突、对无法变更身份证件性别的焦虑和婚姻压力等自杀意念的影响因素，并通过多因素 logistic 回归模型，发现跨性别者自杀意念的风险因素。

结果:总体来看，中国性与性别少数群体自杀意念的发生率为 53.8%，其中跨性别者自杀意念的发生率为 69.4%。在控制人口学因素后，跨性别者比顺性别性倾向少数群体有更高的抑郁风险和自杀意念。logistics 回归分析发现，跨性别者自杀意念的风险因素有抑郁风险、对生理性别的厌恶、对无法变更身份证件性别的焦虑和拥有被迫进入婚姻的经历。而随着年龄增大，跨性别者的自杀意念有显著降低。

结论:本研究首次从社会文化角度考察中国跨性别者的自杀意念及其相关因素。研究以期为心理和临床干预提供有用的理论基础。

关键词 跨性别者，性别未定者，自杀意念，风险因素，中国

What Are the Risk Factors for Suicidal Ideation among Transgender and Gender Non-conforming Individuals? A Chinese National Population Study

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Abstract: Background: It was found that transgender and gender non-conforming (TGNC) individuals are at high risk of suicidal ideation. Therefore, it is critical to examine risk factors for their suicidal ideation, especially from a cultural-specific perspective. The present study aimed to understand the prevalence of past-year suicidal ideation and the related risk factors in a nationwide sample of Chinese TGNC people.

Methods: The data was obtained from Chinese Sexual Minority Psychological Health Survey (CSMPHS), a national online survey of sexual minority in China. Totally 9,238 participants across 31 provinces and municipalities of China were analyzed in this study, and 977 of them were TGNC individuals. Participants' demographic information, mental health, suicidal ideation, inner sexuality conflict, anxiety about gender-concordant identity documents and coercive marriage experience were collected. Logistic regression was used to explore the potential risk factors for suicidal ideation.

Results: First, of the full sample, the rate of past-year suicidal ideation was as high as 53.8% among the Chinese sexual minority individuals. The prevalence of suicidal ideation was 69.4% among the Chinese TGNC individuals. After controlling for demographic factors, TGNC individuals were more likely to report higher rates of depression symptoms and suicidal ideation than their cisgender sexual minority counterparts. For TGNC people, depression,

aversion to the biological sexuality, anxiety about gender-concordant identity documents and coercive marriage experience were significantly associated with increased risk of suicidal ideation, while older age were negatively associated with suicidal ideation.

Conclusions: This is the first nationwide study to examine Chinese TGNC individuals' suicidal ideation and related factors from a sociocultural perspective. The findings are expected to provide a useful theoretical basis for psychological and clinical intervention.

Keywords: Transgender, Gender non-conforming, Suicidal ideation, risk factor, China

孕产妇抑郁认知反应水平发展轨迹的潜类别增长模型及其影响因素的研究

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摘要 目的 初步探索孕产妇抑郁认知反应变化水平的潜在类别, 并考察不同潜在类别的发展轨迹和群体异质性, 及影响认知反应水平发展轨迹亚群体分类的影响因素, 从而为孕产妇制定个性化的干预及抑郁风险管理策略奠定基础。**方法** 选取 2020 年 9 月至 2021 年 3 月在福建省福州市、莆田市、泉州市 4 所三级甲等医院产科门诊及产科住院部就诊的符合纳排标准的 344 例孕妇作为研究对象。将第一阶段 344 例 EPDS 总分 ≤ 12 分的孕晚期妇女在产后 1 周、产后 6 周分别 2 次随访后, 具有完整资料的 321 例作为纵向研究的研究对象。调查工具为自制的孕晚期、产后 1 周、产后 6 周的一般情况调查问卷、LEIDS-RR-CV 和 EPDS。采用问卷星在线调查方法收集资料。应用 Mplus 7.0 软件对数据进行分析, 采用潜类别增长模型分析 LEIDS-RR-CV 总分变化趋势; 应用 SPSS 26.0 软件对 LEIDS-RR-CV 潜在类别分布影响因素进行统计分析; 其中, 计量资料用均数 $\pm$ 标准差 ($\bar{x} \pm s$) 描述, 计数资料用频数和百分比 (%) 描述, 不同组别的孕产妇 LEIDS-RR-CV 潜在类别分布比较的单因素分析采用 χ^2 检验和 Mann-Whitney 检验, 孕产妇 LEIDS-RR-CV 潜在类别分布的多因素分析采用无序多分类 Logistic 回归分析。以 $P < 0.05$ 为差异有统计学意义。**结果** 潜类别分析结果显示孕产妇存在 3 种不同的抑郁认知反应发展变化轨迹, 即“一般增长组”(17.2%)、“快速增长组”(22.1%)和“稳定组”(60.7%)。无序多分类 Logistic 回归分析结果显示, 文化程度、独生女、妊娠合并糖尿病 3 个变量是抑郁认知反应潜类别的影响因素 ($P < 0.05$)。在模型 1 中, 大学及以上文化组比初中及以下文化组的“一般增长组”比例较高, “稳定组”比例较低; 伴发妊娠合并糖尿病比未伴发妊娠合并糖尿病的“一般增长组”比例较高, “稳定组”比例较低。在模型 2 中, 独生女比非独生女的“快速增长组”比例较高, “稳定组”比例较低。**结论** 福建省孕产妇在围生期认知反应发展趋势存在群体异质性, 可分为“一般增长组”、“快速增长组”和“稳定组”。受教育程度较高、独生女、妊娠合并糖尿病是孕产妇认知反应水平增高的危险因素。提示医务工作者须尽早筛查孕产妇认知反应并针对孕产妇不同类别的反应水平制定个体化、分层次干预方案, 以降低认知脆弱, 避免不良健康结局的出现。

关键词 孕产妇, 抑郁认知反应, 发展轨迹, 潜类别增长模型

The development trajectory of cognitive reactivity on the LCGM and its influencing factors among pregnant and maternal women

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Abstract: Objective: To explore the potential categories of the CR level of postpartum depression, and to investigate its development trajectory and group heterogeneity of different potential categories, and their influencing factors. Both of which provide the reference for the development of tailoring intervention or risk management strategies. **Methods:** From September 2020 to March 2021, a total of 344 pregnant women who met the standard of discharge

were recruited by the convenient sampling method, from the obstetrical clinic and obstetrical inpatient department of four Tertiary (level 3) hospitals in Fuzhou, Putian, and Quanzhou, Fujian Province, China. Late pregnant women with EPDS score less than or equal to 12 in the first stage ($n=344$) were followed up twice at 1 week and 6 weeks after delivery. Finally, 321 women completed the following tools through the Wenjuanxing online platform, including the self-made socio-demographic or clinical characteristic questionnaire (including late pregnancy, 1-week, and 6-week postpartum respectively), the LEIDS-RR-CV, and EPDS. The Mplus7.0 and SPSS26.0 software were used to analyze the data. The potential category growth model was used to analyze the changing trend of the total score of LEIDS-RR-CV. The measurement data were described by mean $\pm$ standard deviation ($\bar{x} \pm s$), and counting data were described by frequency and percentage (%). The Chi-square test and Mann-Whitney test were used to analyze the potential categories of CR among different characteristics of women. The disordered multiple classification Logistic regression analysis was used to analyze the influencing factors of potential categories of CR. The difference was statistically significant ($P < 0.05$). **Results:** The results of latent category analysis showed that there were three different developmental tracks of CR in pregnant women, namely, "general growth group" (17.2%), "rapid growth group" (22.1%), and "stable group" (60.7%). The results of disordered multi-classification logistic regression analysis showed that education level, an only child, and gestational diabetes mellitus were the influencing factors of latent categories of depression CR. In model 1, the proportion of the "general growth group" in the university and above education group was higher than that in junior high school and below education group, and the proportion of "stable group" was lower than that in junior high school and below education group. The proportion of the "general growth group" with pregnancy with diabetes was higher than that without pregnancy with diabetes, and the proportion of the "stable group" was lower. In model 2, the proportion of the "fast growth group" of an only child is higher than that of a non-only child, while the proportion of the "stable group" is lower. **Conclusions:** There is group heterogeneity in the development trend of perinatal CR of pregnant women in Fujian Province, which can be divided into "general growth group", "rapid growth group" and "stable group". Higher level of education, an only child, and pregnancy complicated with diabetes are the risk factors for the increase of CR level of pregnant women. It is suggested that medical workers should screen the CR of pregnant women as soon as possible and develop tailoring intervention programs according to the different CR types of pregnant women, so as to reduce cognitive vulnerability and avoid the occurrence of adverse health outcomes.

Keywords: Maternal, Cognitive Reactivity, Development trajectory, Latent Category Analysis

不合规任务对小学教师群体工作疏离的影响：领导成员交换关系与情感承诺的链式中介作用

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摘要 随着教育的改革, 教师的工作压力越来越大, 过大的压力会使个体对工作产生疏远、隔离的状态。目的: 研究不合规任务对于小学教师群体工作疏离的影响以及领导成员交换关系和情感承诺在其中的链式中介作用。方法: 采用不合规任务量表、工作疏离量表、领导成员交换关系量表和组织承诺当中的情感承诺分量表对贵州省 40 多所小学与初中各科的 900 名教师进行调查。结果: ①不合规任务与领导成员关系、情感承诺呈显著负相关, 与工作疏离呈显著正相关, 领导成员交换关系与情感承诺呈显著正相关, 与工作疏离呈显著负相关, 情感承诺与工作疏离呈显著负相关。②回归分析显示, 不合规任务显著正向预测工作疏离、负向预测领导成员交换关系, 领导成员交换关系正向预测情感承诺, 负向预测工作疏离, 情感承诺负向预测工作疏离。③用 bootstrap 对链式中介模型进行检验显示, 领导成员交换关系与情感承诺的链式中介效应显著[0.01, 0.04]。结论: 不合规任务通过领导成员交换关系和情感承诺的链式中介作用对工作疏离产生影响, 其中领导成员交换关系能提高员工的情感承诺进而缓解不合规任务对工作疏离的影响。

关键词 不合规任务, 领导成员交换关系, 情感承诺, 工作疏离

The impact of non-compliant tasks on the Work alienation: Chain mediation of leader-member exchange relationships and emotional commitments

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Abstract: With the reform of education, teachers' work pressure is increasing. Excessive pressure will cause individuals to become alienated and isolated from work. Purpose: To study the influence of non-compliant tasks on the work estrangement of primary school teachers and the chain-like mediating role of leadership exchange relationships and emotional commitments. Methods: Using the non-compliant task scale, the job distancing scale, the leader-member exchange relationship scale, and the emotional commitment subscale among organizational commitments, a survey of 900 teachers in various subjects in more than 40 elementary and junior high schools in Guizhou Province was conducted. Results: ① Non-compliant tasks were significantly negatively correlated with leader-member relationships and emotional commitments, and significantly positively correlated with work alienation. Leadership-member exchange relationships were significantly positively correlated with emotional commitments, and significantly negatively correlated with work alienation. There is a significant negative correlation between work alienation. ② Regression analysis shows that non-compliant tasks significantly positively predict work estrangement and negatively predict the exchange relationship between leaders and members. Leadership exchange relationships positively predict emotional commitment, negatively predict work estrangement, and emotional commitment negatively predict work estrangement. ③ Testing the chain mediation model with bootstrap shows that the chain mediation effect of the exchange relationship and emotional commitment between leaders and members is significant [0.01,0.04]. Conclusion: Non-compliant tasks have an impact on work alienation through the chain-like intermediary effect of leader-member exchange relationships and emotional commitments. Leader-member exchange relationships can increase employees' emotional commitments and thereby alleviate the impact of non-compliant tasks on work alienation.

Keywords: Non-compliant tasks, leader-member exchange relationships, emotional commitments, Work alienation

高中生互联网使用偏好的潜剖面分析

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摘要 我国学生网民群体激增, 互联网有利也有弊, 使用方式和特点是其产生积极效益的重要保障。目的: 了解高中生互联网使用的潜在类别及其与人口学变量的关系。方法: 选取 1804 名高中生(男 805 人, 女 999 人, 年龄 16-19 岁), 采用互联网使用偏好问卷(IUP)进行测试, 对高中生互联网使用偏好特征进行潜剖面分析。采用 R3STEP 法的 logistic 回归分析探讨高中生互联网使用偏好与人口学变量的关系。结果: 潜剖面分析结果支持 2 个潜类别的模型, 分别定义为“高频率类别”(C1, 36.25%)和“低频率类别”(C2, 63.75%); 多组潜剖面分析结果显示男女的互联网使用偏好剖面图差别不大, 进一步差异分析显示, 男生和女生在高频率组的得分差异显著($t=2.11, P<0.05$)。以高频率类别为参照组, 进行多项式 Logistic 回归, 显示年级($OR=1.51, P<0.001$), 是否单亲($OR=1.38, P<0.05$), 是否重点班($OR=1.31, P<0.05$)是高中生低频率类别的共性预测因子。结论: 高中生互联网使用偏好存在不同特征的亚类别群体, 年级、是否单亲, 是否重点班是其重要的预测因素, 应重点关注“高频率类别”高中生的互联网使用偏好, 进行及时的干预。

关键词 互联网使用偏好, 潜在剖面分析, 高中生

A latent profile analysis of Internet use preferences of high school students

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Abstract: The group of student netizens in our country has proliferated, and the Internet has both advantages and disadvantages. Ways and characteristics of using the Internet are important guarantees for its positive benefits.

Purpose: To understand the potential profiles of Internet use by high school students and their relationship with demographic variables. **Methods:** 1804 high school students (805 males and 999 females, aged 16-19 years) were selected and tested using the Internet Usage Preference Questionnaire (IUP), and the latent profile analysis of the characteristics of high school students' Internet usage preferences was carried out. Logistic regression analysis using R3STEP method was used to explore the relationship between high school students' Internet use preference and demographic variables. **Results:** The results of the latent profile analysis support two latent categories, which are defined as "high frequency category" (C1, 36.25%) and "low frequency category" (C2, 63.75%); the results of multiple sets of latent profile analysis show that men and women are There is little difference in the profile of Internet use preference. Further analysis of the difference shows that the scores of boys and girls in the high frequency group are significantly different ($t=2.11, P<0.05$). With the high frequency category as the reference group, a polynomial logistic regression was performed to display grade ($OR=1.51, P<0.001$), whether it was single parent ($OR=1.38, P<0.05$), and whether it was a key class ($OR=1.31, P<0.05$). Common predictors of low frequency categories(C1) for high school students. **Conclusion:** There are subcategories with different characteristics of high school students' Internet usage preferences. Grade, single parent, and key class are important predictors. We should focus on the Internet usage preferences of high school students in the "high-frequency category" and carry out timely intervention.

Keywords: Internet usage preferences, latent profile analysis, high school students

贵州省 Z 地易地扶贫搬迁初中生学校适应现状

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摘要 目的: 易地扶贫搬迁取得初步成效, 对搬迁群体后续的扶持工作如何取得长效机制是更重要, 更艰巨的长期任务。搬迁学生的学校适应关乎其学业及身心健康, 关注搬迁初中生的学校适应, 为搬迁后续的教育保障工作提供有力的实证参考依据。方法: 采用人口学信息以及学校适应量表对贵州省某县某安置点学校整群抽样, 得到有效数据 741 份, 其中搬迁学生 355 名(男=166, 女生=189), 非搬迁学生 386 份(男=221, 女=165)。结果: ①搬迁学生与非搬迁学生整体学校适应的均值和标准差分别为 $3.43\pm0.56, 3.33\pm0.56$; ②搬迁学生在整体学校适应以及学习适应、师生适应上显著高于非搬迁学生 ($t=2.27, 2.60, 2.71, P<0.05$); ③搬迁女生的环境适应水平显著高于男生 ($t=-3.44, P<0.001$), 而自我评价适应显著低于男生 ($t=3.53, P<0.001$); ④初一年级搬迁学生整体学校适应水平及其各维度适应水平显著高于初二年级搬迁学生 ($t=4.10, 4.29, 3.07, 3.85, P<0.001, 2.08, 2.10, P<0.05$); ⑤搬迁学生学校适应在是否独生上不存在显著差异; ⑥搬迁半年到一年学生的师生适应显著高于搬迁半年以下的学生, 搬迁两年以上学生的师生适应显著高于搬迁半年以下、一年到两年的学生 ($F=3.94, P<0.01$)。结论: 易地扶贫搬迁初中生学校适应处于中等偏上水平, 搬迁学生的学校适应水平高于非搬迁学生, 搬迁女生的环境适应显著好于男生, 初一年级搬迁学生学校适应水平高于初二搬迁学生, 搬迁年限越久, 搬迁学生的师生适应越好。

关键词 学校适应, 搬迁与非搬迁差异, 搬迁年级与时长差异, 易地扶贫搬迁初中生

School adaptation situation of junior high school students in relocation site in a county in Guizhou Province

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Abstract: Objective: The Poverty-alleviation relocation has achieved preliminary success. How to make the relocation follow-up assistance work to obtain a long-term effect mechanism is a more important, more difficult task. The school adaptation of the relocated students is related to their academic and physical and mental health. Pay attention to the school adaptation of the relocated junior high school students, and provide a strong empirical reference for the follow-up education guarantee work after the relocation. Methods: Using demographic information and school adaptation scales to sample a cluster of schools in a relocation site in a county in Guizhou Province, 741 valid data were obtained, including 355relocated students (male=166, female=189) and 386 non-relocated students (Male=221, Female=165). Results: ①The mean and standard deviation of the total school adaptation of relocated students and non-relocated students are 3.43 ± 0.56 and 3.33 ± 0.56 respectively. ②Relocated students are significantly higher than non-relocated students in total school adaptation, learning adaptation, and teacher-student adaptation ($t=2.27, 2.60, 2.71, P<0.05$). ③The level of environmental adaptation of relocated female students was significantly higher than that of male students ($t=-3.44, P<0.001$), and the self-evaluation adaptation was significantly lower than that of male students ($t=3.53, P<0.001$). ④The total and dimensional school adaptation level of the relocated students in the first grade is significantly higher than that of the relocated students in the second grade ($t=4.10, 4.29, 3.07, 3.85, P<0.001, 2.08, 2.10, P<0.05$). ⑤There is no significant difference in the school adaptation of the relocated students in whether they are only children; ⑥The teacher-student adaptation of the relocated students from half a year to one year is significantly higher than that of the students relocated less than half a year, and the teacher-student adaptation of the students relocated for more than two years is significantly higher than Students who are relocated for less than half a year and one to two years ($F=3.94, P<0.01$). Conclusion: The school adaptation level of Poverty-alleviation relocation junior high school students is at the upper-middle level. The school adaptation level of relocated students is higher than that of non-relocated students. The environmental adaptation level of relocated girls is significantly better than that of boys. The school adaptation level of relocated students in the first grade is higher than that in the second grade relocated students. The longer the relocation period, thebetter the teachers-students adaptation.

Keywords: School adaptation, differences between relocation and non-relocation, differences in grades and relocation time, The Poverty-alleviation relocation junior high school student

双职工夫妻的工作/家庭个人网络使用态度对工作家庭平衡的影响： 基于行动者-对象互依性模型

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摘 要 移动互联网的普及使得人们在生活中越来越依赖各式各样的移动通讯工具来处理工作领域与非工作领域中的各项事务,从而出现了跨领域的心理与行为。随着积极心理学的兴起,在工作中使用通讯工具处理非工作事宜逐渐被意识到是一个建设性的行为。工作/家庭个人网络使用态度是指职工对在工作中使用通讯工具等个人网络处理与当下工作无关的非工作活动时所持有的一种态度倾向,主要包括处理个人私事或是家庭领域突发状况和未完成的家庭事务等与个人及家庭相关的活动。有研究推测,职工在工作中使用通讯工具处理个人或家庭事务能够促进工作与家庭角色的整合。同时,作为一种新兴的工作行为,工作/家庭个人网络使用态度的后续效应并不局限于个体层面,还可能影响员工重要他人的生活。对于双职工夫妻而言,夫妻双方同时工作并采取在工作中使用通讯工具处理非工作事宜是一种常见的现象,他们的工作家庭平衡更有可能是一种相互影响的结构。因此,本研究基于行动者-对象互依性模型,以双职工夫妻为研究对象,考察工作/家庭个人网络使用态度对自身以及配偶工作家庭平衡的影响。采用工作/家庭个人网络使用态度量表和工作家庭平

衡量表对 260 对中国职工进行问卷调查, 运用 SPSS24.0 和 Mplus8.0 对数据进行统计分析。研究发现: (1)夫妻双方的工作/家庭个人网络使用态度($r=0.53, p < 0.001$)和工作家庭平衡($r=0.57, p < 0.001$)分别具有一致性; (2)夫妻各自的工作/家庭个人网络使用态度($a_{\text{丈夫}}=0.25, a_{\text{妻子}}=0.32, p < 0.001$)均对自身工作家庭平衡有正向预测效应; (3)丈夫的工作/家庭个人网络使用态度对配偶工作家庭平衡有积极效应($p_{\text{丈夫对妻子}}=0.07, p < 0.05$)。结论: 个体、组织和社会都应该重视工作/家庭个人网络使用态度所带来的积极后效, 从而提高双职工夫妻平衡工作与家庭的能力, 进而帮助该群体的心理健康发展和积极社会适应。

关键词 工作/家庭个人网络使用态度, 工作家庭平衡, 双职工夫妻, 行动者-对象互依性模型

The Influence of Dual-Employee Couples' Attitudes towards Work/Family Personal Web Usage on Work Family Balance: Based on The Actor-Partner Interdependence Model

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Abstract: The popularization of the mobile Internet makes people increasingly rely on various mobile communication tools in their lives to process various affairs in the work and non-work fields, resulting in psychological behaviors that cross fields. With the rise of positive psychology, the use of communication tools to deal with non-work matters at work has gradually been realized as a constructive behavior. Work/family personal web usage attitudes refers to the attitude that employees have when they use communication tools and other personal web at work to handle non-work activities that are not related to the current work, mainly including handling personal private affairs or family emergencies or personal and family-related activities such as unfinished family affairs. Studies have speculated that the use of communication tools to handle personal or family affairs by employees at work can promote the integration of work and family roles. At the same time, as an emerging work behavior, the follow-up effect of work/family personal web usage attitudes is not limited to the individual level, but may also affect the lives of important others of employees. For dual-employee couples, it is a common phenomenon that both spouses work at the same time and use communication tools to deal with non-work matters at work, and their work family balance is more likely to be a structure of mutual influence.

Therefore, this study extended the work/family personal web usage attitudes framework from the individual to couple, and examined the actor and partner effects of work/family personal web usage attitudes on work family balance in dual-employee couples based on the actor-partner interdependence model. A total of 260 dual-employee couples completed measures of the work/family personal web usage attitudes, and work family balance. SPSS 24.0 and software Mplus8.0 were used to analyze the data. The results showed that (a)the dyad had significant congruence in work/family personal web usage attitudes ($r=0.53, p < 0.001$)and work family balance ($r=0.57, p < 0.001$), respectively;(b) work/family personal web usage attitudes ($a_h = 0.25, a_w = 0.32, p < 0.001$) had significant actor effects on work family balance within the dyad;(c) husband's work/family personal web usage attitudes had a significant partner effect on wife's work family balance ($p_h = 0.07, p < 0.05$), while wife's work/family personal web usage attitudes did not show a significant partner effect on husband's work family balance ($p > 0.05$).Conclusion: Individuals, organizations, and society should pay attention to the positive after-effects of work/family personal web usage attitudes, so as to improve the ability of dual-employee couples to balance work and family, thereby helping the group's mental health development and positive social adaptation.

Keywords: work/family personal web usage attitudes, work family balance, dual-employee couples, the actor-partner interdependence model

一般营养知识问卷 (GNKQ) 的本土化修订及有效性检验

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摘要 营养知识被定义为营养教育者创建的一种科学结构, 表示“个体对食物与营养信息的认知过程”, 且被证实是影响健康饮食的一个重要决定因素。当今中国居民因饮食模式错误而导致的肥胖问题日益严峻。为响应《健康中国 2030 规划》, 评估居民膳食模式, 提高全民健康素养的任务迫在眉睫。本研究旨在编定一份适用于中国成人居民的一般营养知识问卷, 并检验其心理统计学的信效度。从而为提高全民健康素养的紧迫任务提供一个科学、有效的中国居民营养知识评估工具。

本研究采用文献综述、翻译-回译、专家评估、和评价表面效度的方式修订原版问卷, 通过条目难度和区分度删除无效条目, 最后通过结构效度、聚合效度、内部一致性和重测信度检验中文版一般营养知识问卷的信效度。

278 名 18 岁以上成人完成中文版 GNKQ 问卷, 其中 71 名大学生完成两周后的重测任务。根据题目难度和区分度删除题目后, 中文版 GNKQ 包含 32 题, 68 个条目, 总体内部一致性系数为 0.885, 重测信度为 0.769。营养相关专业组得分显著高于非营养相关专业组。各人口学变量的聚合效度与已有研究一致, 女性、教育水平较高的被试得分显著高于男性和教育水平较低的被试。修订后的中文版 GNKQ 有良好的信效度, 符合测量学要求。除此以外, 结果表明, 体重控制组与无体重控制组得分差异不显著, 说明目前我国成年居民营养知识有限, 在选择食物时无法有效参考《中国居民膳食指南》, 因此有必要评估我国成年居民的营养知识水平, 进而提高全民健康素养, 达成《健康中国 2030 规划》。

关键词 一般营养知识问卷, 成人, 信度, 效度

Development and Validity of a General Nutrition Knowledge Questionnaire (GNKQ) for Adults in China

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Abstract: Nutrition knowledge is defined as a scientific structure created by nutrition educators, which means "the individual's cognitive process of food and nutrition information", and it has been proven to be an important determinant of healthy eating. Nowadays, the obesity problem of Chinese residents due to wrong dietary patterns is becoming more and more serious. In response to the "Healthy China 2030 Plan", the task of evaluating residents' dietary patterns and improving the health literacy of the whole people is urgent. The purpose of this study is to compile a general nutritional knowledge questionnaire suitable for Chinese adult residents and test the reliability and validity of its psychological statistics. So as to provide a scientific and effective nutritional knowledge assessment tool for Chinese residents for the urgent task of improving the health literacy of the whole people.

This study revised the original questionnaire using literature review, translation-back translation, expert evaluation, and surface disinfection evaluation. Invalid entries were deleted through entry difficulty and discrimination. Finally, structural validity, aggregate validity, internal consistency and retesting were used to test the reliability and validity of the Chinese version of the General Nutrition Knowledge Questionnaire.

278 adults over the age of 18 completed the Chinese version of the GNKQ questionnaire, of which 71 college students completed the retest task two weeks later. After deleting the questions based on the difficulty and discrimination of the questions, the Chinese version of GNKQ contains 32 questions and 68 items. The overall internal consistency coefficient is 0.885 and the test-retest reliability is 0.769. The score of nutrition-related professional group was significantly higher than that of non-nutrition-related professional group. The aggregate validity of each demographic variable is consistent with existing studies. The scores of women and subjects with

higher education levels are significantly higher than those of men and subjects with lower education levels. The revised Chinese version of GNKQ has good reliability and validity and meets the requirements of metrology. In addition, the results show that there is no significant difference in the scores between the weight control group and the weight uncontrol group, indicating that the current adult residents in our country have limited nutritional knowledge and cannot effectively refer to the "Chinese Residents Dietary Guidelines" when choosing food. Therefore, it is necessary to evaluate the adult residents in my country To improve the health literacy of the whole people and reach the "Healthy China 2030 Plan".

Keywords: general nutrition knowledge questionnaire, adults, reliability, validity

癌症患者失志的影响因素：系统评价

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摘要 背景: 失志是癌症患者常见但未被解决的心理困扰。研究表明, 失志对癌症患者自杀意念的预测效力强于抑郁, 且可能会降低其生活质量。目前关于癌症患者失志影响因素的研究呈逐渐增长趋势, 但研究结论尚存在争议。**目的:** 本研究旨在对癌症患者失志影响因素进行系统综述。**方法:** 系统检索 PubMed, Ovid, EMBASE, PsycINFO, CINAHL, Cochrane Library, Web of Science, Scopus, 中国生物医学数据库, 中国知网和万方数据库 11 个中英文数据库, 检索时间截止至 2020 年 12 月 31 日。补充搜索 Google Scholar 及相关参考文献。研究纳入使用失志量表报告的癌症患者失志影响因素的文献。由三名受过培训的研究人员使用澳大利亚 JBI 循证卫生保健中心对现况调查类研究的真实性评价表独立评估研究质量。以 Engel 的生物-心理-社会模式为框架提取数据。因纳入研究中研究结果的异质性, 只进行了定性描述而非定量综合。该系统评价已在 PROSPERO 注册 (CRD42021251155)。**结果:** 共检索出 968 篇文章, 最终纳入 50 项研究, 含 10723 名癌症患者; 其中 75% 为混合癌症类型, 其余为乳腺癌、肝癌等类型。70% 研究发表于近 5 年。高质量研究 9 项, 中等质量研究 37 项。共提取了 69 个失志影响因素, 其中, 生理因素 (n=13) 中, 生理症状数量是失志常见的影响因素; 心理因素 (n=25) 中, 包括消极心理因素 (如抑郁、焦虑、心理痛苦、尊严、自杀意念) 和积极心理因素 (如希望); 社会因素 (n=20) 中, 社会支持和生活质量是失志的负向预测因子; 其他因素中 (n=11), 术后时长会影响失志。年龄、性别、文化程度等 18 个因素尚存争议。治疗类型、并发症等 14 个因素与失志无关。另外 27 个因素如生命意义、加速死亡态度等虽被报告与失志有关, 但均仅有 1~2 篇文献报道。**结论:** 本综述提示癌症患者的失志是生理、心理和社会因素相互作用的结果。在制定与开展关于癌症患者失志的干预措施时, 需要考虑癌症患者的生理症状数量、抑郁、焦虑、心理痛苦、尊严、自杀意念、希望、社会支持、生活质量和术后时长。需要更多高质量的证据来明确癌症患者的影响因素, 尤其是积极心理因素。

关键词 癌症, 失志, 影响因素, 生物-心理-社会模式, 系统评价

The influencing factors for demoralization in cancer patients: a systematic review

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Abstract: Background: Demoralization is a common and unsolved psychological distress encountered by cancer patients. Studies showed that demoralization has a strong prediction power on suicidal ideation than depression and may worsen the quality of life for cancer patients. At present, there is a growing trend of study on the influencing factors of demoralization in cancer patients. However, these studies' conclusions are controversial. **Purpose:** This

systematic review aims to identify the influencing factors for demoralization in cancer patients. **Methods:** PubMed, Ovid, EMBASE, PsycINFO, CINAHL, Cochrane Library, Web of Science, Scopus, Chinese Biomedical Medicine Database, Chinese National Knowledge Infrastructure, and Wanfang Database were systematically searched from database inception to 31 December 2020. Supplementary searches were also performed on Google Scholar and relevant references. Studies reported the influencing factors for demoralization measured by Demoralization Scale in cancer patients were included. The quality of studies was independently evaluated by three trained researchers using the JBI Critical Appraisal Checklist for Studies Reporting Prevalence Data. The data extraction was based on the Bio-Psycho-Social Model proposed by Engel. Given the heterogeneity of the study outcome, a qualitative synthesis was conducted rather than a quantitative synthesis. This study has registered on PROSPERO (CRD42021251155). **Results:** Of 968 records identified, 50 studies were finally included in the systematic review with a total of 10723 participants. 75% of studies were mixed cancer types, the rest were breast cancer, liver cancer and so on. 70% of studies were published in recent five years. Regarding study quality, nine studies have high quality, and 37 studies have moderate quality. The results showed that a total of 69 factors were extracted finally. Among the biological factors(n=13), the number of physical symptoms was the common influencing factor for demoralization. Among the psychological factors(n=25), negative psychological factors (includes depression, anxiety, psychological pain, dignity, suicidal ideation) and positive psychological factors (includes hope) were crucial factors that influenced cancer patients' level of demoralization. Among the social factors(n=20), social support and quality of life were negative predictors of demoralization. Among the other factors(n=11), postoperative time could affect demoralization. It is controversial that the 18 factors (e.g. age, gender, educational level etc.) are influencing factors for demoralization. 14 factors (e.g. type of treatment, complication etc.) were not associated with demoralization. 27 factors (e.g. global meaning, attitudes toward hastened death etc.) were associated with demoralization, but all reported by one or two studies. **Conclusions:** The review indicates that demoralization is a product interactive influenced by physical, psychological, and social factors of cancer patients. That is, when design demoralization-reducing intervention, we need to take the number of physical symptoms, depression, anxiety, psychological pain, dignity, suicidal ideation, hope, social support, quality of life and postoperative time into account. Therefore, more high-quality evidence needs to further confirm the influencing factors for demoralization in cancer patients, especially the limited evidence of positive psychological factors.

Keywords: Cancer, Demoralization, Influencing factors, Bio-Psycho-Social Model, Systematic review

中国 COVID-19 期间大学生运动的潜在轨迹类别和对心理健康的影响： 一个为期 15 个月的 4 次重复测量

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摘要 目标: COVID-19 对心理健康有着前所未有的负面且持久影响。体育锻炼(PE)对抑郁症状有明显的影
响, 但国内很少有研究考察 COVID-19 期间 PE 对抑郁症状的长期影响。因此, 本研究旨在探讨中国大学生在
COVID-19 期间 15 个月 4 次运动的成长轨迹, 这有助于阐明不同群体轨迹对抑郁症状的不同影响。 **方法:** 从
2020 年 3 月到 2021 年 6 月对中国大学生进行了 4 次重复测量, 收集参与者 (N=10762) 的运动和抑郁症状信
息 (使用病人健康问卷抑郁量表, PHQ-9)。采用混合增长模型 (GMM) 研究参与者在 4 波的 PE 变化轨迹,
并使用运动轨迹组来识别不同亚组的抑郁症状变化。通过 Kruskal-Wallis 检验确定运动轨迹组之间人口统计学
变量的差异, 通过重复测量方差分析确定不同运动水平下抑郁症状的差异。 **结果:** 共有 10762 名中国大学生
完成了所有调查。通过 GMM 确定了四个运动轨迹组: 低水平组 (7%)、中等水平组 (60%)、高水平组 (31%)

和高增长组（2%）。在低水平组中，所有四次调查的运动水平都较低。在中等水平组中，该组的发展轨迹相对稳定。在高水平组中，参与者锻炼的时间较长。在高增长组中，运动轨迹呈现持续上升的趋势。社会人口学变量中的性别、心理咨询史、COVID-19 的预防信念、COVID-19 的预防措施与潜在轨迹组的预测因素有关。高水平组的个体更可能有较少的抑郁症状。与低水平组相比，高增长组更有可能报告更少的抑郁症状。**结论：**在紧张的公共卫生事件的长期影响下，这些发现可以从运动的角度为大学生的心理健康干预提供参考。具体来说，抑郁症状较少的人可能受益于较高的运动水平。

关键词 体育锻炼，抑郁症状，COVID-19，大学生，混合增长模型

Latent Trajectory Classes of Exercise and impact on mental healthy from College Students during COVID-19 in China: a 15 months 4 waves repeated measure

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Abstract: Objective: COVID-19 has unprecedented negative and lasting effects on mental health. Physical exercise (PE) has a significant effect on depressive symptoms, yet few studies in China have examined the long-term effects of PE on depression symptoms during COVID-19. Therefore, the current study aims to explore exercise growth trajectories of Chinese college students during COVID-19 in 15 months 4 waves, which help to clarify the different impact of distinct groups trajectories on depression symptoms. **Methods:** A 4 time repeated measurement was conducted from March 2020 to June 2021 among Chinese college students, which collects participants (N=10762) information on PE and depressive symptoms (using the Patient Health Questionnaire, PHQ-9). Growth mixture modelling (GMM) were employed to examine changes in PE of participants in 4 waves and the exercise trajectory group was used to identify subgroups of individuals with different trajectories of change in depression symptoms. Differences in demographic variables between exercise trajectory group were determined by Kruskal-Wallis tests and differences in depression at different exercise levels were determined by repeated measures ANOVA. **Results:** A total of 10762 College Students in China completed all the surveys. Four exercise trajectory classes were identified by GMM: the low level group (7%), the mid-average group (60%), the high level group (31%), and the highly increased group (2%). In the low level group, the level of exercise was lower in all four surveys. In the mid-average group, the development trajectory of this group is relatively stable. In the high level group, participants exercised for a longer period of time. In the highly increased group, the exercise trajectory showed a continuous upward trend. The sociodemographic variables of males, Psychological Counseling History, prevented belief of COVID-19, preventive measures of COVID-19 were associated with predictors of the latent trajectory groups. Individuals in high level group were more likely to have less depression symptoms. The highly increase group were more likely to report slight depression symptoms compared with the low level group. **Conclusion:** These findings can inform mental health interventions for college students from a exercise perspective under the long-term impact of stressful public health events. Specifically, people with fewer depressive symptoms may benefit from higher levels of exercise.

Keywords: Physical Exercise, Depression; COVID-19, College Students, Growth mixture modeling

高自闭特质个体欺骗决策与诚实决策的神经机制比较

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摘要 参与及识别欺骗是重要的社会交往手段和技巧, 以往研究发现自闭症谱系障碍患者 (Autism Spectrum Disorder, ASD) 一般难以习得该技巧。由于 ASD 的谱系性质, 我们推测高自闭特质 (Autistic traits, ATs) 个体可能在欺骗决策过程和反馈的奖赏加工中表现出非典型性。为了验证该假设, 本研究采用主动欺骗的抛硬币范式, 以 18 名高自闭特质个体 (包括 6 个男生, 12 个女生) 和 18 名低自闭特质个体 (包括 7 个男生和 11 个女生) 为研究对象, 通过一组脑电实验, 旨在对高自闭特质个体进行人际交互情境下欺骗决策和反馈奖赏加工的电生理机制的非典型进行考查。实验一开始前通过假被试和指导语的方式为被试设置人际交互的实验情境, 实验开始后要求被试通过按键的方式向对手传递真实或虚假的信息, 使对手无法准确预测硬币的位置从而获得奖励 (对手猜对则造成损失)。实验二则要求被试与对手进行合作, 诚实地向对手指出硬币所在的位置, 从而获得奖励。研究重点关注反馈相关负波 (Feedback-related negativity) 和 P3。ERP 结果显示: (1) 与欺骗决策相比, 无论高自闭特质个体还是低自闭特质个体, 在诚实决策时都诱发了振幅更高的 P3; (2) 在进行欺骗决策时, 高自闭特质个体的 P3 振幅显著低于低自闭特质个体; (3) 与低自闭特质个体相比, 高自闭特质个体在反馈阶段诱发了更高的 FRN, P3 则显著低于低自闭特质个体。研究结果表明, 高自闭特质个体在面对欺骗决策时经历了更大的认知资源消耗, 且在面对损失和奖赏时表现出更低的敏感性。研究结果对于解释高自闭特质个体社交层面的损伤机制和促进 ASD 个体的社会化、提高社会适应能力和社会互动的质量等方面均有一定的参考价值。

关键词 自闭特质, 自闭谱系障碍, 欺骗, 奖赏加工

Comparison of Neural Mechanisms between Deception Decision and Honesty Decision of Individuals with High Autistic Traits

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Abstract: Participation and identification of deception are important means and skills for social interaction. Previous studies have found that it is generally difficult for patients with Autism Spectrum Disorder (ASD) to acquire this skill. Due to the spectrum nature of ASD, we speculate that individuals with highly autistic traits (ATs) may be atypical in the process of deceptive decision-making and reward processing of feedback. To test this hypothesis, a coin-toss paradigm of active deception was used in this study. 18 individuals with high autistic traits (including 6 male and 12 female) and 18 individuals with low autistic traits (including 7 male and 11 female) were selected as subjects. A group of ERPs experiments were conducted to examine the atypical electrophysiological mechanisms of deception decision-making and feedback reward processing in the context of interpersonal interaction among individuals with high autistic traits. Before the beginning of the experiment, the experimental situations of interpersonal interaction were set for the subjects through the sham subjects and instruction words. After the beginning of the experiment, the subjects were required to transmit real or false information to the opponent by pressing the key, so that the opponent could not predict the position of the coin accurately and thus received the reward (the subject would lose if opponent guessed correctly). In the second experiment, the subjects were required to cooperate with their opponents and honestly point out the position of the coin to the opponent, so as to obtain a reward. The research focuses on

Feedback-related negativity and P3. The results of ERP showed that: (1) Compared with decision-making stage of deception, no matter high autistic or low autistic individuals, they induced P3 with higher amplitude in honest decision-making; (2) When making deception decisions, the P3 amplitude of individuals with high autistic traits is significantly lower than that of individuals with low autistic traits; (3) Compared with the individuals with low autistic traits, the individuals with high autistic traits induced higher FRN in the feedback stage, while P3 was significantly lower than that of the individuals with low autistic traits. The results show that individuals with high autistic traits experience greater consumption of cognitive resources when facing deception decisions, and show lower sensitivity when facing loss and reward. The results of the study have certain reference value in explaining the injury mechanism of individuals with high autism spectrum traits at the social level, promoting the socialization of individuals with ASD, and improving the social adaptability and the quality of social interaction.

Keywords: Autistic Traits, Autism Spectrum Disorder, Deception, Reward Processing

多运动，爱自己：大学生身体活动水平和自我关怀与抑郁的关系

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摘要 背景: 身体活动水平(PA)和自我关怀(SC)与个体的心理健康密切相关。然而, 大多数研究单独探究其各自与心理健康的关系, 这可能会忽略它们的交互作用。本研究旨在探讨 PA 和 SC 对抑郁症状的独立、联合和加性交互作用。方法: 采用横断面研究, 线上招募 1846 名中国大学生填写国际体育活动问卷简表、自我关怀量表简表和病人健康问卷抑郁量表。采用 logistic 回归模型研究低 PA (LPA) 和低 SC (LSC) 对抑郁症状的独立和联合作用, 并评估 LPA 和 LSC 对抑郁症状的加性相互作用。结果: 在控制 PA 和 SC 彼此的影响后, LPA (OR = 1.47 [1.16-1.86]) 和 LSC (OR = 5.74 [3.89-8.45]) 均独立与抑郁症状的发生相关。同时具有 LPA 和 LSC 会产生加性交互作用, 带来相对超额风险, 大大增加了患抑郁症状的几率 (OR = 10.95 [6.15, 19.49]; RERI = 2.92 [0.37, 5.47]; AP = 0.27 [0.08, 0.46])。结论: LPA 和 LSC 同时存在可能会产生更高的抑郁症状风险。未来的研究和临床干预可以结合 PA 和 SC 来开发更好的方法来减少抑郁症状。

关键词 身体活动, 自我关怀, 抑郁, 交互作用, 大学生

Exercise more and love yourself: The role of physical activity and self-compassion in depression symptoms among Chinese college students

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Abstract: Background: Physical activity and self-compassion were closely related to individual's mental health. However, most existed researches studied them independent relationship with mental health, which might omit their interaction towards outcome variable. This study aimed to investigate the independent, combined, and additive interaction associations of physical activity (PA) and self-compassion (SC) with depression symptoms. Methods: In a cross-sectional study, 1846 Chinese college students completed the International Physical Activity Questionnaire

Short Form, the Self-compassion Scale-Short Form, and the 9-item Patient Health Questionnaire. Independent and combined roles of a low level of PA (LPA) and SC (LSC) on depression symptoms were examined by logistic regression models. Additive interaction between LPA and LSC was estimated. Results: Both LPA (OR = 1.47 [1.16-1.86]) and LSC (OR = 5.74 [3.89-8.45]) were independently associated with higher probability of having depression symptoms. Combining LPA and LSC led to an additive interaction and greatly increased the odds of depression symptoms (OR = 10.95 [6.15, 19.49]; RERI = 2.92 [0.37, 5.47]; AP = 0.27 [0.08, 0.46]). Conclusions: Having LPA and LSC concurrently may develop profoundly higher risk for depression symptoms. Future research and clinical intervention could integrate PA and SC to find a better way to resist depression symptoms.

Keywords: physical activity, self-compassion, depression, interaction, college students

简版人际关系能力量表在中国青少年群体中的信效度检验

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摘要 背景和目的: 人际关系能力对青少年的心理健康和积极发展具有重要的作用, 然而评估青少年人际能力的问卷, 尤其简版问卷仍较为缺乏。因此, 本研究旨在检验简版人际关系能力量表 (ICQ-15) 在中国青少年群体中的信效度, 为评估青少年人际关系能力研究提供有效工具。方法: 用简版人际关系能力量表中文版对 1708 名青少年进行测试。采用幸福感量表 (WHO-5)、简版心理韧性量表 (CD-RS)、广泛性焦虑量表 (GAD-7)、抑郁量表 (PHQ-9) 作为简版人际关系能力量表的效标。对数据进行项目分析、验证性因素分析、效标效度、信度分析以及多群组分析。结果: 项目分析的结果显示 ICQ-15 中文版题总相关和区分度良好。验证性因素分析结果显示, 五因子 (即主动性、自我维护、坦诚、冲突管理以及情感支持) 拟合的所有指标均达到可接受水平 (CFI=0.948, TLI=0.932, RMSEA=0.075)。总量表的 Cronbach's α 系数为 0.926, 各分量表的 Cronbach's α 系数在 0.731~0.926 之间, 分半信度为 0.892。效标效度分析结果显示, 中文版 ICQ-15 与 WHO-5 以及 CD-RS 呈显著正相关 ($r = 0.511, r = 0.528, ps < 0.001$), 与 PHQ-9 呈显著负相关 ($r = -0.323, p < 0.001$)。多群组分析结果显示, 在增加限定条件后, 在男女、成年人与未成年人群组中, 拟合指标 CFI、TLI 和 RMSEA 的变化值均小于 0.03, 可以认为中文版 ICQ-15 在这些群体中具有测量不变性。结论: 简版人际关系能力量表具有良好的心理测量学指标, 可以在中国青少年群体中使用, 作为青少年人际关系能力研究的科学工具。

关键词 人际关系能力评估, 青少年, 信度, 效度

Validation of the Interpersonal Competence Questionnaire-Short form among Chinese youth

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Abstract: Background and objectives: interpersonal competence plays an important role in the mental health and positive development among youth, but validated scales for the assessment of youth's interpersonal competence, especially brief ones, remain scanty. Therefore, the purpose of this study is to test the reliability and validity of the Brief Interpersonal Competence Questionnaire (ICQ-15) in Chinese adolescents and provide scientific tools for the study of youth' interpersonal competence. Methods: A sample of 1708 adolescents finished the Chinese version of the Short Interpersonal Competence Questionnaire, the WHO-Five Well-Being Index (WHO-5), 10-item

Connor-Davidson Resilience Scale (CD-RS-10) and Patient Health Questionnaire-9 (PHQ-9) were used as the criterion. The data were analyzed by item analysis, confirmatory factor analysis, criterion validity, reliability analysis and multi-group analysis. Results: The results of project analysis showed that the total correlation and discrimination of the Chinese version of ICQ-15 were good. Confirmatory factor analysis showed that all indicators fitted by the five factors (Initiation of relationship, Negative assertion, Disclosure of personal information, Emotional support, Conflict management) with acceptable index fit (CFI = 0.948, TLI = 0.932, RMSEA = 0.075). The Cronbach's α coefficient of ICQ-15 is 0.926, and the split-half reliability was 0.892. The Cronbach's α coefficient of the five subscales ranged from 0.731 to 0.926. The results of criterion validity analysis showed that the Chinese version of ICQ-15 was positively correlated with WHO-5 and CD-RS ($r = 0.511$, $r = 0.528$, $ps < 0.001$), and negatively correlated with PHQ-9 ($r = -0.323$, $p < 0.001$). The results of multi-group analysis showed that, after adding the limiting conditions, the change values of the fit indexes CFI, TLI and RMSEA are less than 0.03 between men and women, adults and non-adults suggesting the measurement invariance of the Chinese version of ICQ-15 was acceptable. Conclusion: The Interpersonal Competence Questionnaire - Short Form displayed good psychometric properties, and can be used in Chinese youth as a scientific tool for the interpersonal competence assessment.

Keywords: interpersonal competence assessment, adolescents, reliability, validity

中文版青少年自我关怀量表(SCS-Y)的信效度检验

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摘要 自我关怀与心理健康关系密切, 近年来对自我关怀的研究快速增加, 但以往评估自我关怀的量表在青少年群体中适用性较差。本研究旨在将新近开发的英文版青少年自我关怀量表(SCS-Y)翻译成中文, 并在中国青少年中进行信效度检验, 以期丰富青少年自我关怀的评估工具。共有 1708 名被试填写了中文版的 SCS-Y 量表、简版 Connor-Davidson 心理韧性量表(CD-RISC-10)、世界卫生组织幸福感指数量表(WHO-5)、病人健康问卷抑郁量表(PHQ-9)、广泛性焦虑障碍量表(GAD-7)、简版人际关系能力量表(ICQ-15)及罗森伯格自尊量表(RSES)。本研究依次对数据进行了题总相关、区分度、效标效度、结构效度和一致性信度的分析。使用验证性因素分析(CFA)与探索性结构方程模型(ESEM)对 SCS-Y 量表的结构进行验证。依次建立一阶六因子 CFA、一阶六因子 ESEM、双因子 CFA、双因子 ESEM、二重双因子 CFA、二重双因子 ESEM 六个模型进行对比。统计分析结果表明, 中文版 SCS-Y 的题总相关($r = 0.27 \sim 0.63$, $ps < 0.001$)与区分度($t = 8.5 \sim 31.33$, $ps < 0.001$)均良好。中文版 SCS-Y 量表得分与 CD-RISC-10 ($r = 0.61$)、WHO-5 ($r = 0.54$)、ICQ-15 ($r = 0.42$)、RSES ($r = 0.65$)得分呈显著正相关($ps < 0.001$); 与 PHQ-9 ($r = -0.56$)及 GAD-7 ($r = -0.55$)得分呈显著负相关($ps < 0.001$)。CFA 和 ESEM 模型结果表明, 由原量表的六个分量表(自我善待、自我评判、共通人性、隔离、正念、过度沉迷)作为六个组因子, 同时由自我关怀作为一般因子的双因子探索性结构方程模型(bifactor ESEM)的拟合最佳(CFI = 0.992, TLI = 0.972, RMSEA = 0.052, SRMR = 0.009, 一般因子平均载荷 $\lambda = 0.42$)。总量表 Cronbach's α 系数为 0.82。研究结果表明 SCS-Y 的中文版具有较高的效标关联效度、结构效度以及内部一致性信度, 具有良好的心理测量学属性, 能够作为评估青少年自我关怀水平的有效工具。

关键词 自我关怀, 青少年, 中文版, 信度, 效度

Validation of the Chinese Version of Self-Compassion Scale for Youth (SCS-Y)

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Abstract: Self-Compassion is closely related to mental health. Recent studies on self-compassion witnessed a rapid growth, whereas the validated assessment tool of self-compassion among youth is still limited. The purpose of this study is to translate the newly developed English version of the Self-Compassion Scale for Youth (SCS-Y) into Chinese and conduct validity and reliability tests, to enrich the assessment tools for self-compassion in youth. A total of 1,708 participants filled out the Chinese version of SCS-Y, brief form of Connor-Davidson Resilience Scale (CD-RISC-10), WHO-5 Well-being Index (WHO-5), Patient Health Questionnaire-9 (PHQ-9), General Anxiety Disorder Questionnaire-7 (GAD-7), brief form of Interpersonal Competence Questionnaire (ICQ-15) and Rosenberg Self-Esteem Scale (RSES). This study analyzed the item-total correlation, discrimination, concurrent validity, structural validity and internal consistency reliability. The structural validity of the SCS-Y is examined by confirmatory factor analysis (CFA) and exploratory structural equation modelling (ESEM). Six models of first-order six-factor CFA and ESEM, bifactor CFA and ESEM, and two-bifactor CFA and ESEM are established for comparison. Statistical analysis shows that the item-total correlation of SCS-Y ($r = 0.27\sim 0.63$, $ps < 0.001$) and differentiation ($t = 8.5\sim 31.33$, $ps < 0.001$) are acceptable. The scores of SCS-Y significantly positively correlated with the scores of CD-RISC-10 ($r = 0.61$), WHO-5 ($r = 0.54$), ICQ-15 ($r = 0.42$) and RSES ($r = 0.65$) ($ps < 0.001$), and negatively correlated with the PHQ-9 ($r = -0.56$) and GAD-7 ($r = -0.55$) ($ps < 0.001$), indicating satisfactory concurrent validity. The bifactor ESEM with a general self-compassion factor and six subscale factors (self-kindness, self-judgment, common humanity, isolation, mindfulness and over-identification) fits SCS-Y the best (CFI = 0.992, TLI = 0.972, RMSEA = 0.052, SRMR = 0.009, mean of general factor loadings is 0.42). The findings demonstrate that the Chinese version of SCS-Y has good psychometric properties, and can be used as an effective measure to assess youth's self-compassion.

Keywords: self-compassion, youth, Chinese version, validity, reliability

新冠疫情后大学生抑郁情绪变化及影响因素

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摘要 新冠疫情的爆发给人民群众的心理健康带来了极大的影响, 其中抑郁问题较为严重。以往对于新冠疫情后大学生心理健康的研究多局限于横断描述, 纵向研究尚为缺乏。因此, 本研究旨在通过对 717 名大学生的抑郁情绪进行为期半年的追踪调查, 探究其抑郁情绪的变化, 并基于生态系统理论探究其影响因素。研究于 2020 年 5 月 (T1) 和 2020 年 11 月 (T2) 采集了参与者的人口统计学信息, 如年龄、性别、是否独生子女、家庭结构, 主观家庭社会经济地位 (SES)、居住地等。此外使用病人健康问卷抑郁量表 (PHQ-9), 简版国际身体活动水平问卷 (IPAQ-SF), 简版自我关怀问卷 (SCS-SF), 心理韧性量表 (CD-RISC-10) 来评估被试的抑郁、身体活动、自我关怀和心理韧性水平。本研究对两次测量的抑郁的分值和依据不同截断值划分的抑郁程度进行相关样本 t 检验和卡方检验。使用分层回归的方式, 探究个体因素、家庭社会因素和生理心理因素对抑郁症状及其变化的影响。研究结果表明, T2 抑郁显著较 T1 抑郁分值低, 总体抑郁检出下降。横向上, 更高的 SES, 居住在城市, 高心理韧性、自我关怀和身体活动水平对 T1 抑郁有负向预测作用。纵向上, 在控制 T1 抑郁后, 女性, 低心理韧性, 和低自我关怀水平正向预测 T2 抑郁; 低 SES 和低身体活动水平边缘显著预测 T2 抑郁。研究结果提示女性, 低 SES 可能是大学生抑郁的风险因素, 而高心理韧性, 自我关怀和身体活动水平或为其保护因素。本研究结果对相关抑郁干预方案的设计和开展提供一定的启示。

关键词 新冠, 抑郁, 大学生, 纵向研究

Depressive symptoms among Chinese college students after the outbreak of COVID-19: Prevalence, changes, and correlates

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Abstract: The outbreak of COVID-19 has affected people's psychological well-being, and the problem of depression is especially prominent. Previous researches regarding the mental health of college students after COVID-19 were mostly limited to cross-sectional descriptions, with longitudinal studies limited. Therefore, the purpose of this study is to explore the changes of depression through a six-month follow-up survey of 717 college students, and to investigate its correlated factors based on ecosystem theory. The study collected the data of participants in May 2020 (T1) and November 2020 (T2), such as demographic information (age, gender, whether they are the only child, family structure, subjective family socio-economic status (SES), place of residence, etc). In addition, the Patient Health Questionnaire-9 (PHQ-9), the short version of the International Physical Activity Questionnaire (IPAQ-SF), Self-Compassion Scale-short form (SCS-SF) and the 10-item Connor-Davidson Resilience Scale (CD-RISC-10) were used to assess depression, physical activity, self-compassion and psychological resilience. Relevant sample *t*-test and Chi-square test were performed to examine the difference of PHQ-9 scores and the prevalence of various severity of depression measured two time points. Hierarchical regression was used to explore the effects of individual factors, family social factors as well as physiological and psychological factors on depressive symptoms and their changes. The results showed that the depression score of T2 was significantly lower than that of T1, with the incidence of overall depression decreased. Concurrently, higher SES, living in cities, high psychological resilience, self-compassion and physical activity level negatively predict T1 depression. Longitudinally, after controlling T1 depression, women, low psychological resilience, and low level of self-compassion positively predicted T2 depression. Besides, low SES, and low physical activity level marginally predicted T2 depression. The findings suggest that being female and low SES may be risk factors for depression among college students, while high psychological resilience, self-compassion and physical activity levels may protective factors against depression.. The results of this study provide some enlightenment for future design and implementation of depression intervention programs.

Keywords: COVID-19 pandemic, depression, college students, longitudinal study

看不见的伤口：3877 名有心理虐待经历青少年心理健康问题及相关因素分析

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摘 要 心理虐待是全球较为普遍的公共卫生问题，然而目前国内关于针对青少年心理虐待的研究仍然有限。本研究基于大样本，探讨有心理虐待经历青少年抑郁症状、焦虑症状和网络成瘾的患病率及其相关因素。研究通过广西青少年心理健康调查（线上）收集资料。参与者报告了其社会人口学信息（包括性别、年龄、是否独生子女、居住地、家庭结构等），以及其社会支持、自我关怀、儿童期不良经历、抑郁、焦虑和网络成瘾的情况。本研究中，3877 名中国青少年（平均年龄 13.96 岁，标准差 1.71，年龄范围 10~18 岁，女性占 59.4%）在是否频繁经历过心理虐待（情感虐待和情感忽视）的题项上做肯定性回答，纳入后续统计分析。接着，以社会人口和心理因素为自变量，抑郁症状、焦虑症状和网络成瘾（作为二元变量）为因变量，使用二元 Logistic 回归检验其之间的关系。结果显示，抑郁症状、焦虑症状和网络成瘾的患病率分别为 66.5%、54.9%和 45.1%。与男性相比，女性出现抑郁和焦虑症状的几率更高。学业不良和家庭结构不完整是抑郁症状、焦虑症状和网络成瘾的主要危险因素。值得注意的是，自我关怀和社会支持对抑郁症状、焦虑症状和网络成瘾有显著的保护作用。与城市中的同龄人相比，受到心理虐待的农村青少年有更高的网络成瘾可能性。本研究发现有心理虐待经历的青少年抑郁症状、焦虑症状和网络成瘾的发生率较高，应予以重视。提升其自我关怀和社会支持水平可能为这一特殊群体的有效干预方式。

关键词 心理虐待，青少年，抑郁症状，焦虑症状，网瘾

Unseen wounds: The prevalence and correlates of mental health problems among 3877 psychologically maltreated Chinese adolescents

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Abstract: Background: Psychological maltreatment (PM) was highly prevalent around the world, being a serious public health concern. Studies remain limited pertaining to Chinese adolescents with PM. This study aimed to investigate the prevalence and correlates of depression symptoms, anxiety symptoms, and internet addiction among psychologically maltreated Chinese adolescents based on large sample size. **Methods:** Data were collected through the Guangxi Youth Mental Health Survey (online). Participants were invited to their sociodemographic information (i.e., gender, age, sibling[s], residence, family structure). The Chinese Social Support Rating Scale and Self-compassion Scale - Short Form were applied to access social support and self-compassion. The Chinese version of Adverse Childhood Experiences was utilized to measure life adversities. Depression symptoms, anxiety symptoms, and internet addiction were assessed by Patient Health Questionnaire - 9, General Anxiety Disorder - 7, and Young's 10-item internet addiction scale, respectively. 3877 Chinese adolescents (mean age = 13.96 years, SD = 1.71, age range: 10~18, 59.4% female) who answer affirmatively on items whether frequently or very frequently experienced PM were selected for further analysis in the present study. Logistic regressions (depression symptoms, anxiety symptoms, and internet addiction as binary variable, respectively) were used to examine the association between sociodemographic and psychological factors and mental health problems. **Results:** The prevalence of depression symptoms, anxiety symptoms and internet addiction were 66.5%, 54.9%, and 45.1%, respectively. Logistic regression results show that compared with males, females are associated with a higher odds of depression and anxiety symptoms. Low academic performance and from non-intact family are significant risk factors for the onset of depression symptoms, anxiety symptoms, and internet addiction. Notably, self-compassion and social support are significant protective factors against depression symptoms, anxiety symptoms and internet addiction. Compared with peers in the urban areas, psychologically maltreated adolescents in the rural areas showed a higher likelihood of having internet addiction. **Conclusions:** The prevalences of depression symptoms, anxiety symptoms, and internet addiction were high among adolescents with psychological maltreatment experiences, which should be addressed properly. Self-compassion and social support were protective factors and could be a way of intervention towards this unique group.

Keywords: Psychological maltreatment, adolescents, depression symptoms, anxiety symptoms, internet addiction.

正念训练对注意控制的影响：心智游移的中介作用

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摘要 研究目的：正念训练是一种有目的将注意力集中于当下感受、情绪等觉察状态的心理调节方式，可以引导个体对身体当下的感觉、思绪等保持觉知。目前比较常见的观呼吸和身体扫描相结合的正念训练方式有助于增强个体的注意功能，心智游移作为中介变量可以起到关键作用。正念训练通过增加在对当下任务的投入，可以有效减少心智游移程度从而提升注意力。线下正念训练无法明确适合不同人群的训练时长和类型，且缺乏统一的正念训练程序，限制了正念训练的推广性和可重复检验性。移动健康采用在线方式进行干预打破传统正念训练时间、经验不统一的限制。前人经随机对照试验得出正念软件 Headspace 的在线干预效果较好。

本文将采用易用性和干预效果更好的正念软件 Headspace 进行干预，结合不同类型、不同时间的正念训练方式检验正念训练的效果，便于人们选择更适合自己的正念训练。

研究方法：采用随机实验法检验正念训练对注意控制影响及心智游移的中介作用。实验 1 探究不同类型的短期正念训练对心智游移和注意控制的影响；实验 2 探究长期正念训练对心智游移和注意控制的影响。

研究结果：（1）短期观呼吸正念训练比身体扫描更能增加个体的注意控制：简单效应分析发现观呼吸组在心智游移和注意控制任务上的错误率均显著低于身体扫描组， $p < 0.05$ ；（2）长期正念训练比短期正念训练对个体注意控制的改善更为显著：长期正念训练组 Stroop 任务上正确数 69.19 ± 1.80 ，反应时 552.62 ± 82.12 ，均优于短期正念训练 Stroop 任务正确数 69.13 ± 1.06 ，反应时 551.17 ± 111.00 ；（3）正念训练可以减少个体心智游移程度，进而提升注意控制功能。本研究探讨了正念训练对注意控制的改善作用，检验了不同类型、不同时长正念干预效果的差异性；验证心智游移在正念训练和注意控制间的中介作用，正念训练能减少个体的心智游移程度进一步提升注意控制功能。

关键词 正念训练，注意控制，心智游移

The effect of mindfulness training on attention control: the mediating role of mind wandering

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Abstract: Mindfulness training is a kind of psychological adjustment method which aims to focus on the current feelings, emotions and other awareness states. It can guide individuals to maintain awareness of the current feelings and thoughts of the body. At present, mindfulness training combined with breath observation and body scanning is more common, which helps to enhance the attention function of individuals. Mind wandering, as a mediating variable, can play a key role. Mindfulness training can effectively reduce the degree of mind wandering and improve attention by increasing the investment in the current task. Offline mindfulness training can't define the training duration and type suitable for different groups, and lacks a unified mindfulness training procedure, which limits the popularization and repeatability of mindfulness training. Mobile health uses online intervention to break the limitation of traditional mindfulness training time and experience. Previous randomized controlled trials showed that the online intervention effect of mindfulness software headspace was better.

In this paper, the mindfulness software headspace, which is easy to use and has better intervention effect, will be used to intervene. Different types of mindfulness training methods with different duration will be used to test the effect of mindfulness training, so as to facilitate people to choose more suitable mindfulness training.

Methods: a randomized experiment was conducted to examine the mediating effect of mindfulness training on attention control and mind wandering. Experiment 1 explored the effects of different types of short-term mindfulness training on mind wandering and attention control; Experiment 2 explored the effects of long-term mindfulness training on mind wandering and attention control.

Results: (1) Short-term mindfulness training can increase individual attention control more than body scanning: simple effect analysis showed that the error rate of mind wandering and attention control tasks in the breathing group was significantly lower than that in the body scanning group ($P < 0.05$) (2) Long term mindfulness training improved individual attention control more significantly than short-term mindfulness training: the correct number of Stroop task and response time in long-term mindfulness training group were 69.19 ± 1.80 and 552.62 ± 82.12 , which were better than those in short-term mindfulness training group (3) Mindfulness training can reduce the degree of individual mental wandering, and then improve the function of attention control. This study explored the effect of mindfulness training on attention control, and tested the differences of the effects of different types and different times of long mindfulness intervention; To verify the intermediary role of mental migration between mindfulness training and attention control. Mindfulness training can reduce the degree of individual mental migration and further improve the function of attention control.

Keywords: mindfulness training, Pay attention to control, mind wandering

正念训练对不同人群的心理效益的系统综述和神经机制研究

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摘要 正念训练是心理学名称，随着学者们对其的不断探讨，正念训练的研究结果不仅仅是停留在口头上或是直观表述，而是更多结合 ERP、fMRI 等技术进行数据采集；相比于前人对于专业领域运动员的研究或是将正念训练应用于临床的康复治疗，本文通过总结归纳正念训练对于不同人群（专业运动员、器质性疾病人群、心理性疾病人群、普通锻炼人群）的心理效益，以及相关的大脑神经机制的改变，进而形成更加系统的正念训练对于不同人群的系统综述。

正念训练对于不同人群的心理效益：正念训练对于专业领域运动员可以显著提升运动员的身体流畅性、增加自我的唤醒水平、以及帮助运动员获得最佳的运动表现力。相比于专业运动领域运动员，正念训练对于器质性疾病人群，正念训练可以帮助他们减轻对自身疾病的疲乏感；对于心理性疾病人群，正念训练可以作为心理疾病康复治疗的一个适当补充，降低心因疾病的发病率和复发率；正念训练对于体育锻炼者而言，可以帮助锻炼人群，提升运动过程中愉悦感、降低心理惰性。

正念训练对于神经机制影响：正念训练所带来的改变有大脑结构上的改变，也有大脑功能上的改变。随着正念训练的进行，正念经验越丰富的受试者大脑皮层厚度越厚，正念训练可以引起右侧前脑导、右侧海马和左侧皮层厚度的改变。全脑分析发现后扣带回皮层、颞叶-顶叶交界处和小脑等脑区灰质也明显增加。此脑区涉及学习、记忆加工、情绪调节、观点采择等功能；正念训练可以激活与注意过程相关的脑区；增强与正性情绪相关的左侧前额叶活动性；减少与抑郁、焦虑、压力有关的杏仁核灰质密度，即便是短期的训练者，也会存在相应脑区的改变。

关键词 正念训练，心理效益，神经机制

A systematic review of the psychosocial benefits of mindfulness training in different populations and a study on the neural mechanisms

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Abstract: Mindfulness training is the name of psychology. With the continuous discussion of scholars on it, the research results of mindfulness training are not only kept in oral or intuitive expression, but also more combined with ERP fMRI and other technologies for data collection. Compared with previous studies on professional athletes or the application of mindfulness training in clinical rehabilitation treatment. This paper summarized the effects of mindfulness training on different groups of people (Professional athlete, People with organic diseases, People with psychological diseases,) General exercise group, General exercisers), and related changes in brain neural mechanisms, thus forming a more systematic review of mindfulness training for different groups.

Psychological benefits of mindfulness training for different populations: For professional athletes, mindfulness training can significantly improve their physical fluency, increase their self-arousal level and help athletes to achieve the best athletic performance. For people with organic illnesses, mindfulness training can help them feel less fatigued about their illness than professional sports athletes. For people with mental illness, mindfulness training can be used as an appropriate supplement to the rehabilitation treatment of mental illness and reduce the incidence and recurrence rate of psychogenic disease. For physical exercisers, mindfulness training can help exercise people, improve their feelings of pleasure during exercise and reduce mental inertia.

Effects of mindfulness training on neural mechanisms: Changes brought by mindfulness training include brain structure changes and brain function changes. With the practice of mindfulness training, the subjects with more experience in mindfulness training had thicker cerebral cortex. Mindfulness training could cause changes in the thickness of right hippocampus and left cortex of the right forebrain. Whole brain analysis showed that there was also significant increase in gray matter in the temporal-parietal junction of the posterior cingulate cortex and in the

cerebellum, an area of the brain involved in learning, memory, processing, emotion regulation, idea selection and other functions. Mindfulness training can activate brain regions related to attention process. Increased activity in the left prefrontal lobe associated with positive emotions. Reducing the density of gray matter in the amygdala, which is associated with depression, anxiety and stress, was associated with changes in the same brain region even in short-term exercisers.

Keywords: Mindfulness training, Psychological benefits, Nervous system

基于列线图构建护生非自杀性自伤风险预测模型

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摘要 目的: 非自杀性自伤 (non-suicidal self-injury, NSSI) 行为在青少年群体中多发, 已成为严重的公共健康问题。关注 NSSI 行为, 进一步了解 NSSI 的危险因素对提供有效的预防和早期干预策略至关重要。然而在以往的研究中, NSSI 行为的高危因素多是采用 Logistic 回归分析的方法筛选, 无法提供更直观、更快捷的 NSSI 行为风险评价指标。而列线图可以解决这一问题。护生作为护理行业后备军, 与今后护理行业的发展密切相关, 关注其心理健康对个人发展乃至对护理质量的提高均具有重要意义。因此, 本研究旨在调查护生非自杀性自伤的发生率, 构建预测护生 NSSI 行为发生风险的列线图模型。方法: 采取便利抽样的方法, 对山东省某三所高职院校 1965 名在校护生进行问卷调查, 问卷内容包括自编社会人口学调查问卷、青少年自我伤害行为问卷、父母教养方式问卷、多伦多述情障碍量表中文版、Rosenberg 自尊量表。采用 1:3 倾向评分匹配来平衡有 NSSI 组与无 NSSI 组的协变量, 应用逐步二元 Logistic 回归探究产生 NSSI 行为的相关因素, 并基于列线图构建护生 NSSI 发生风险预测模型。结果: 本研究中护生的 NSSI 行为检出率为 14.9%。Logistic 回归分析表明识别情感障碍 ($OR=1.077, P<0.001$)、描述情感障碍 ($OR=1.094, P=0.025$)、外向性思维 ($OR=1.071, P=0.013$) 对护生的 NSSI 行为有正向预测作用, 母亲鼓励自主 ($OR=0.917, P<0.001$)、父亲关爱 ($OR=0.941, P<0.001$)、自尊 ($OR=0.954, P=0.007$) 负向预测护生的 NSSI 行为。构建的列线图经验证区分度和可靠性良好 (校准曲线与标准曲线接近, ROC 曲线下面积为 0.76)。结论: 识别情感障碍、描述情感障碍及外向性思维是护生 NSSI 行为的危险因素, 父亲关爱、母亲鼓励自主及自尊是护生 NSSI 行为的保护因素。构建的风险预测列线图模型有助于直观评价护生出现 NSSI 行为的危险, 有利于尽早制定预防干预策略, 减少 NSSI 发生。

关键词 护生, 非自杀性自伤, 述情障碍, 父母教养方式, 自尊

Development of Nomogram Model for Prediction of Non-suicidal Self-injury in Nursing Students

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Abstract: Objective Non-suicidal self-injury (NSSI) is common among adolescents and has become a serious public health problem. Focusing on NSSI and understanding the risk factors for NSSI is critical to providing effective prevention and early intervention strategies. However, in previous studies, most of the high-risk factors of NSSI behavior were screened by Logistic regression analysis method, which could not provide more intuitive and faster risk assessment indicators for NSSI behavior. The nomogram can solve this problem. Nursing students, as the reserve force of nursing industry, are closely related to the development of nursing industry in the future. It is of great significance to pay attention to their mental health for their personal development and even for the improvement of nursing quality. Therefore, this study aims to investigate the incidence of non-suicidal NSSI in nursing students and build a nomogram model to predict the risk of the occurrence of NSSI behavior in nursing students. Method The survey of 1965 nursing students was conducted by convenience sampling method. The questionnaire contents

included adolescent self-injurious behavior questionnaire, Parental Bonding Instrument, Toronto Alexithymia Scale-20 and Rosenberg Self-Esteem Scale. According to NSSI questionnaire cutoffs, participants were divided into the NSSI group and the non-NSSI group. Propensity score matching was used to balance covariates between the two groups. Stepwise binary logistic regression was used to explore the correlative factors of NSSI. The nomogram model for prediction the occurrence of NSSI was constructed based on the regression coefficients of the correlative factors. Results The detection rate of NSSI in nursing students was 14.9%. Logistic regression analysis showed that difficulty in identifying feelings (OR = 1.077, $P < 0.001$), difficulty in describing feelings (OR = 1.094, $P = 0.025$) and external oriental thinking (OR = 1.071, $P = 0.013$) were risk factors for the occurrence of NSSI behavior of nursing students, and maternal encourage autonomy (OR = 0.917, $P < 0.001$), the paternal care (OR = 0.941, $P < 0.001$) and self-esteem (OR = 0.954, $P = 0.007$) were the protective factors for the occurrence of NSSI of nursing students. The established nomogram model had good discriminability and reliability (calibration curve close to the standard curve, area under the ROC curve 0.76). Conclusion Difficulty in identifying feelings, difficulty in describing feelings and external oriental thinking were risk factors for NSSI behavior of nursing students. Maternal encourage autonomy, the paternal care and self-esteem were protective factors for NSSI behavior of nursing students. The established risk prediction nomogram model is helpful to directly evaluate the risk of the occurrence of NSSI behavior in nursing students, and is conducive to the early formulation of preventive intervention strategies to reduce the occurrence of NSSI.

Keywords: Nursing students, Non-suicidal self-injury, Alexithymia, Parenting styles, self-esteem

“恩威并施型”领导对员工创新绩效的跨层影响： 员工韧性和权力距离取向的作用

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摘要 由于当今复杂多变的内外部环境, 领导者需要采取双元矛盾策略以平衡组织内部的不同需求。仁慈与威权两个维度来源于我国源远流长的历史积淀——家长式领导, 这种既聚仁慈又富威权的领导模式则称之为“恩威并施型”领导。当仁慈与威权两种领导风格都呈现适度水平时, 这种作为根植于中国本土文化的特色双元领导模式, 能够成为改善员工工作行为以及提高员工工作绩效的积极因素。但以往的研究表明, “恩威并施型”领导对下属创新绩效的影响机制并不明确, 为了弥补这些不足, 本研究通过引入工作需求-资源模型, 探索了中国特色文化情境下的“恩威并施型”领导对员工创新绩效的跨层次影响路径。采用多层线性模型(HLM)对两个时间点的数据进行分析, 发现: (1) “恩威并施型”领导与员工创新绩效呈正相关; (2) 员工韧性在“恩威并施型”领导和员工创新绩效之间承担中介作用; (3) 权力距离取向在“恩威并施型”领导和员工创新绩效之间承担调节作用。研究结果表明, 领导者采取恩威并施的管理行为能够使下属产生积极的认知评价, 并相应地调整自己的心理状态, 提高韧性水平, 从而提升员工的创新绩效。同时, 低权力距离取向的员工, “恩威并施型”领导与员工创新绩效的正相关关系越强。以上结果丰富了“恩威并施型”领导跨层作用的认识, 对双元领导、员工韧性和创新绩效等研究领域都有一定的启发意义。

关键词 “恩威并施型”领导, 员工创新绩效, 员工韧性, 权力距离取向

The multilevel influence of authoritarian-benevolent leadership on employee innovative performance: The role of employee resilience and power distance orientation

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Abstract: Due to today's complex and changing internal and external environment, leaders need to adopt a dual and contradictory strategy to balance the different needs within the organization. The two dimensions of benevolence and

authoritarianism are derived from China's long history of paternalistic leadership, which can be called authoritarian-benevolent leadership. And when both benevolent and authoritative leadership styles are at the right level, this dual leadership model, which is rooted in Chinese culture, can be a positive factor in improving employee behavior and performance. However, previous studies have shown that the mechanism of authoritarian-benevolent leadership on the innovative performance of subordinates is not clear. In order to remedy these deficiencies, this study explores the multilevel influence of authoritarian-benevolent leadership on employees' innovative performance in a Chinese cultural context by introducing the job demand-resource model. A hierarchical linear model (HLM) was used to analyze the data at two time points and it was found that: (1) authoritarian-benevolent leadership is positively related to employee innovative performance; (2) Employee resilience plays a mediating role between authoritarian-benevolent leadership and employee innovative performance; (3) Power distance orientation moderates the relationship between authoritarian-benevolent leadership and employee innovative performance. The results of this study show that leaders who adopt the management behaviors of authoritarian-benevolent can make subordinates have positive cognitive evaluation, adjust their psychological state accordingly, and improve their resilience level, thus enhancing their innovative performance. At the same time, for employees with low power distance orientation, the positive correlation between authoritarian-benevolent leadership and employee innovative performance is stronger. The above results enrich the understanding of the multilevel influence of authoritarian-benevolent leadership, and have some enlightening significance for the research fields of ambidextrous leadership, employee resilience and innovative performance.

Keywords: authoritarian-benevolent leadership, employee innovative performance, employee resilience, power distance orientation

不同类型毒品成瘾者风险决策特点

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摘要 毒品一直以来不论是对个体的身心健康还是对社会的安定都有着极大的危害。毒品虽然可以给人带来短暂的虚无的无上快感, 而同时带来的巨大损失也是显而易见的。当个体需要在多个既有一定概率带来收益又有一定概率带来损失的选项中做出决策时, 这就是客观条件不能完全确定的情况, 而这项决策也就带有风险性, 在这种情况下做出的决策也就是风险决策。是否要冒着身心受损甚至是被抓入狱的严重后果吸毒, 就是一种风险决策。本研究对于风险决策特点的研究, 可以对毒品成瘾者为何选择吸毒这一问题的解答提供新的思路, 为毒品成瘾者的循证矫治提供科学证据。本次调研共收集到 233 名强制戒毒的毒品成瘾者, 以及 116 名正常人作为对照组的实验数据资料, 使用多种实验范式, 即河内塔任务、气球模拟风险任务、GO-GO 任务、杯子任务四种实验范式, 更加客观准确地对不同类型毒品的成瘾者抑制控制能力, 以及在收益和风险情境下会做出的不同风险决策进行测试。研究发现, 不同种类的毒品成瘾者在抑制控制能力上存在显著差异, 冰毒组的抑制控制能力显著低于对照组, 甲卡西酮组和海洛因组则无显著差异; 在收益情境下, 各成瘾组与对照组相比表现出显著的风险偏好, 风险中性和风险不利试次中, 各成瘾组的被试选择风险选项的比例显著高于对照组, 在损失情境下则无显著差异。

关键词 成瘾, 抑制控制, 风险决策

保险公司员工团队学习氛围与工作积极性的关系： 抗逆力和职业认同的中介作用

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摘要 目的: 探讨保险公司员工团队学习氛围与工作积极性的关系, 以及抗逆力和职业认同在二者关系中的作用机制。**方法:** 采用问卷法对整群抽样的湖南省 Z 保险公司的 447 名员工进行调查。**结果:** (1)在控制了性别、年龄后, 保险公司员工团队学习氛围、抗逆力和职业认同呈两两显著正相关, 且三者均与工作积极性呈显著正相关;(2)保险公司员工团队学习氛围通过抗逆力、职业认同的单独中介作用对工作积极性产生影响, 同时还会通过抗逆力和职业认同的链式中介作用对其工作积极性产生影响。本研究揭示了保险公司员工团队学习氛围与工作积极性的关系及其作用机制, 从抗逆力和职业认同两个不同方向入手, 为更好地促进提高员工工作积极性和企业发展提供了建议。

关键词 团队学习氛围, 工作积极性, 职业认同, 保险公司

The relationship between the learning atmosphere and the motivation of the insurance company's employees: the mediation of resistance and professional identity

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Abstract: Objective: To explore the relationship between team learning atmosphere and work enthusiasm of employees in insurance companies, as well as the mechanism of the relationship between resilience and professional identity. **Methods:** A questionnaire survey was conducted among 447 employees of Z Insurance Company in Hunan Province. **Results :**(1) After controlling for gender and age, the learning atmosphere, resilience and professional identity of insurance company employees were significantly positively correlated, and the three were significantly positively correlated with work enthusiasm;(2) The team learning atmosphere of insurance company employees has an impact on their work enthusiasm through the single mediating effect of resilience and professional identity, and also has an impact on their work enthusiasm through the chain mediating effect of resilience and professional identity .This study reveals the relationship between team learning atmosphere and work enthusiasm of insurance company employees and its mechanism. Starting from two different directions of resilience and professional identity, it provides suggestions for better promoting the work enthusiasm of employees and the development of the company.

Keywords: Team learning atmosphere, Work enthusiasm, Professional identity, Insurance company

父母心理控制与青少年寻求意义感的关系： 学校联结的中介作用

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摘要 青少年阶段是一个特殊阶段, 在这个阶段的学生不仅生理在成熟, 心理也在慢慢发展, 尤其是自我意识正在逐渐成型, 他们希望能够自己去探索人生的意义和价值, 但在家长、老师、学业和升学等各方面的压力下, 学生的心理承受能力面临着巨大的挑战, 任何改变都能让学生产生焦虑、不安情绪, 甚至还会出现生命感危机, 生命意义感是维持个体心理健康的保护因子, 能够有效预测身体健康, 生活满意度和幸福指数, 相反缺失生命意义感将会给个体带来迷茫、抑郁, 甚至损害社会功能。本研究基于自我决定理论以及意义感维持模型考察父母心理控制、青少年寻求意义感和学校联结的关系, 采用父母心理控制量表、生命意义感量表和学校联结量表对 327 名初中生进行问卷调查。结果显示: (1) 父母心理控制、寻求意义感和学校联结两两相关显著, (2) 学校联结在父母心理控制与寻求意义感之间具有中介作用。研究结果揭示了父母心理控制对青少年寻求意义感的作用机制, 并为对青少年寻求意义感的干预有一定指导意义。

关键词 父母心理控制, 寻求意义感, 学校联结, 青少年

Relationship between parental psychological control and adolescents seeking sense of meaning: The intermediary role of school connections

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Abstract: The adolescent stage is a special stage, in this stage of students not only physiological maturity, psychology is also slowly developing, especially self-consciousness is gradually taking shape, they hope to explore the meaning and value of life, but under the pressure of parents, teachers, academic and higher education, students' psychological tolerance is facing great challenges, any change can make students anxious, restless, and even life sense crisis, life sense is the protection factor to maintain individual mental health, Being able to effectively predict physical health, life satisfaction and happiness index, on the contrary, the lack of sense of meaning in life will bring confusion, depression, and even damage to social function. Based on the theory of self-decision and the maintenance model of sense of meaning, this study examined the relationship between parents' psychological control, teenagers' search for sense of meaning and school connection, and surveyed 327 junior high school students using parents' psychological control scale, life significance scale and school connection scale. The results showed that: (1) parental psychological control, sense of seeking meaning and school connection are significantly related, and (2) school connection has an intermediary role between parental psychological control and seeking sense of meaning. The results reveal the mechanism of parents' psychological control in seeking sense of meaning for adolescents, and have some guiding significance for the intervention of adolescents seeking sense of meaning.

Keywords: parental psychological control, seeking sense of meaning, school connection, adolescents

社会规范对选择性信息偏差的影响

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摘要 选择性信息偏差(selective exposure bias)指的是个体倾向于偏好那些与自己的立场相同的信息, 同时贬低相悖的信息, 其主要以信息选择和信息评价的差异作为指标。尽管对选择性信息偏差的心理动机有丰富的讨论, 但却缺少了从人们所处的社会情景去考虑这个问题。

本研究通过两个实验操纵描述性社会规范(即多数人的行为), 使用造句任务启动合作或竞争心态, 探究社会规范对选择性信息偏差的影响和合作心态的调节作用, 同时进一步探索选择性信息偏差对态度极端度的影响。实验一从网络招募被试 164 名, 发现一致性信息寻求不符合社会规范时, 个体选择一致性信息的倾向减少, 同时选择性信息偏差使个体的态度更加两极分化; 实验二招募网络被试 144 名, 发现只在合作心态下, 非社会规范才会减少信息选择的选择性信息偏差, 而社会规范和合作心态都不影响个体信息评价的选择性信息偏差。研究表明: 1)当寻求一致信息不符合社会规范时, 处于合作心态的个体会减少选择一致性信息的偏好; 2)无论寻求一致性信息是否符合社会规范, 个体都会产生信息评价的选择性信息偏差; 3)选择性信息偏差会增强态度的两极分化。本研究试图将社会影响为一种新的动机来解释选择性信息偏差产生的原因。

关键词 选择性信息偏差, 描述性社会规范, 合作心态, 信息评价

The Effect of Social Norms on Selective Exposure Bias

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Abstract: Selective exposure bias refers to the tendency to predominantly seek out attitude-consistent information and avoid attitude-inconsistent information. It mainly takes the difference of information selection and information evaluation as the index. Although researchers have proposed and tested several underlying psychological factors that

might contribute to this tendency, the potential role of social influence has not been addressed. Two studies investigated how and when descriptive social norms (the behavior of the majority of people) influenced people's selective exposure bias, and the cooperative or competitive mindset was primed by the sentence-making task in order to explore the moderating effect of cooperative mindset, as well as further explore the effect of selective information bias on the attitude extremity. In Study 1, 164 participants were recruited from the Internet, and it was found that participants' selective exposure bias was reduced when the bias was portrayed as non-social normative (vs. social normative), while selective information bias would make individuals' attitudes more polarized. In Study 2, 144 participants were recruited from the Internet, and the results showed that only under cooperative mindset, non-social norms could reduce the selective information bias of information selection, while social norms and cooperative mindset did not have an effect on the selective information bias of individual information evaluation. The results show that: 1) non-social norms could reduce the preference of cooperative individuals to choose consistent information; 2) the preference of evaluating consistency information didn't affected by social norms ;3) selective information bias could enhance the polarization of attitudes. This study regarded social influence as a new motive of selective exposure bias.

Keywords: selective information bias, descriptive social norms, cooperative mindset, information evaluation

抑郁症外显和内隐情绪性反应抑制缺损及其与快感缺失的关系

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摘要 反应抑制常用于抑制功能的研究,是指个体抑制不符合当前情境需要的反应能力。抑制控制与情绪加工能力可能会相互竞争认知资源。一方面,抑制功能缺损可能会使抑郁症患者处于持续性的负性心境状态;另一方面,抑郁情绪以及快感缺失也可能使抑郁症患者对情绪刺激的抑制能力下降。研究发现,抑郁患者对非情绪性刺激的反应抑制功能的缺损。但抑郁症患者对情绪性刺激的反应抑制能力,由于实验范式和刺激材料的不同,研究结论不一。另外,情绪刺激的加工除了外显加工,还有在前注意阶段的内隐加工。它比外显加工更能体现对情绪信息自动化加工的早期过程。因此,从内隐加工的视角探究个体对情绪性刺激的反应抑制能力,可能更有助于抑郁高危个体的早期识别和干预。然而,目前对抑郁症患者在内隐条件下的反应抑制能力如何,是否有不同于外显加工的特点,相关研究尚少。为弥补当前研究的不足,本研究拟对抑郁症患者外显、内隐情绪性反应抑制的特点及其与快感缺失的关系进行系统的考察。

本研究采用情绪面孔停止信号任务(SST)测评38名MDD患者及40名健康个体在外显及内隐条件下的反应抑制能力。采用Chapman社会和躯体快感缺失量表(CSAS&CPAS)评估快感缺失程度,采用汉密尔顿抑郁量表(HRSD-24)评估患者抑郁程度。采用混合模型方差分析统计组内和组间的差异。在SST中,停止信号延迟时间(SSD)随被试按键成绩自动调整,成功抑制则下一个SSD增加50ms来提高抑制难度,失败则减少50ms来降低抑制难度。停止信号延迟时间(SSRT)是SST的核心指标,其值越大表明反应抑制能力越差。

结果显示,在外显任务中,抑郁症组的SSRT大于对照组,而成功抑制率(PI)、SSD、正确按键反应时(GoRT)均小于对照组。在内隐任务中,抑郁症组的SSRT大于对照组,而PI、SSD均小于对照组;相关分析显示,抑郁症组外显、内隐条件下的SSRT与快感缺失得分呈正相关。

所以,抑郁症患者在外显和内隐条件下的情绪性反应抑制能力均存在缺损,该缺损可能与其快感缺失的严重程度有关。

关键词 抑郁症, 快感缺失, 反应抑制, 内隐情绪, 外显情绪

Deficits of Explicit and Implicit Emotional Response Inhibition in Major Depressive Disorder and Its Relationship with Anhedonia

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Abstract: Response inhibition is commonly used in the study of inhibitory functioning and refers to an individual's ability to inhibit responses that do not match the needs of the current situation. Previous studies have found that inhibitory control and emotional processing capacity may compete with each other for cognitive resources. On the one hand, deficits in inhibitory function may leave depressed individuals in a persistent negative state of mind; on the other hand, depressed mood as well as pleasure deficits may also leave depressed individuals with reduced inhibitory capacity to respond to emotional stimuli. Previous studies have found deficits in response inhibition to non-emotional stimuli in depressed individuals. However, the ability of depressed individuals to inhibit responses to emotional stimuli has been studied with varying findings due to differences in experimental paradigms and stimulus materials. In addition, the processing of emotional stimuli has implicit processing in the preattentive phase in addition to the extrapyramidal processing. It is more representative of the early processes that automate the processing of emotional information than is the case for episodic processing. Therefore, exploring an individual's ability to inhibit responses to emotional stimuli from the perspective of implicit processing may be more useful for early identification and intervention of individuals at high risk of depression. However, there is a paucity of research on how depressed individuals' response inhibition capacity under implicit conditions differs from that of extrapolated processing. To address the gaps in current research, the present study proposes to systematically examine the characteristics of extrapersonal and implicit emotional response inhibition in depressed patients and its relationship with pleasure deficits.

Our study used the emotional face stop signal task (SST) to measure response inhibition in 38 patients with MDD and 40 healthy individuals in both explicit and implicit conditions. The Chapman Social and Somatic pleasure deficit scales (CSAS & CPAS) were used to assess the degree of pleasure deficit and the Hamilton Depression Scale (HRSD-24) was used to assess the degree of depression in patients. A mixed-model ANOVA was used to count the differences within and between groups. In the SST, the stop signal delay (SSD) was automatically adjusted with the subject's keystroke performance, with successful inhibition increasing the next SSD by 50ms to increase inhibition difficulty, and failure decreasing it by 50ms to decrease inhibition difficulty. The stop signal reaction time (SSRT) is the core metric of the SST, with larger values indicating poorer response inhibition.

The results showed that in the episodic task, the SSRT of the depression group was greater than that of the control group, while the probability of inhibition (PI), SSD, and go signal reaction time (GoRT) were all smaller than those of the control group. In the implicit task, the SSRT of the depression group was greater than that of the control group, while PI and SSD were smaller than those of the control group; correlation analysis showed that SSRT in the depression group was positively correlated with pleasure deficit scores in the extrapyramidal and implicit conditions.

Our study found that patients with major depression disorder have deficits in emotional response inhibition in both the extrapersonal and implicit conditions, and this deficit may be related to the severity of their pleasure deficits.

Keywords: Major depressive disorder, Anhedonia, Response inhibition, Implicit emotion, Explicit emotion

深圳中小學生 24 小時活動水平及其與內外化問題的關係

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摘要 目的: 一天的時間由各種強度的身體活動組成, 包括睡眠、靜態行為和身體活動, 由於不同類型的活動分別會給身心帶來不同的影響, 不同的時間分配模式可能會對處於發展關鍵期的兒童青少年的身心健康有著重要影響。根據得到多國認可的加拿大兒童青少年 24 小時活動指南, 本研究旨在調查國內兒童青少年活動水平, 並探討其與內外化問題的關係, 以期為我國完善符合國情的活動指南提供依據。**方法:** 本研究採用分層抽樣方法選取來自深圳 9 個學區 135 所學校的中小學生進行問卷調查, 收集中高強度身體活動、屏幕使用和睡眠的時長、抑鬱和焦慮症狀 (內化問題)、抽煙喝酒打架行為 (外化問題) 和社會人口學資料, 最終獲得包含 67281 名中小學生 (平均年齡 13.0 歲; 51.9% 男生, 48.1% 女生; 41.5% 小學生, 40.3% 初中生, 18.1% 高中生) 的有效樣本。採用廣義線性模型分析 24 小時活動水平與內外化問題的關係, 並探究兩者關係是否因性別和學段而異。**結果:** 基於總體樣本, 我們發現 (1) 只有 1.7% 的學生同時達到三條指南, 沒有达标和仅达标 1 條的比例最多, 分別為 28.7% 和 54.6%; (2) 指南达标數與抑鬱症狀、焦慮症狀、喝酒和打架行為的關係呈現出劑量效應, 即达标數越多, 被試報告相應內外化問題的可能性越小; (3) 相比於沒有达标任一指南, 仅达标 1 條指南時, 仅达标睡眠或屏幕時長指南均與抑鬱症狀、焦慮症狀呈顯著負相關, 仅达标中高強度身體活動或屏幕時間指南均與抽煙、打架行為呈顯著負相關, 仅达到任一指南均與喝酒行為呈顯著負相關; 仅达标 2 條指南時, 达标任意兩條指南均與抑鬱症狀呈顯著負相關, 达标睡眠和屏幕時間指南均與焦慮症狀、抽煙、喝酒、打架行為呈顯著負相關; 同时达标 3 條指南與本研究中五種內外化問題的发生均呈顯著負相關。此外, 24 小時活動水平及其與內外化問題的具体關係因性別和學段而異。**結論:** 完全達到 24 小時活動指南推薦量的深圳中小學生極少, 而達到指南的活動水平與內外化問題的发生总体上呈顯著負相關, 具体關係因性別和學段而異。

关键词 兒童青少年, 身體活動, 睡眠, 靜態行為, 內外化問題

24-hour movement behaviors among 67,281 Chinese children and adolescents: Associations with internalizing and externalizing problems

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Abstract: Objective: A typical day consists of various intensity activities, including sleep, sedentary behavior, and physical activities, and different types of activities have different associations with health outcomes. For children and adolescents in the critical period of development, time allocation patterns may have important impacts. Based on the Canadian 24-hour movement guideline for children and adolescents recognized by many countries, this study aimed to investigate the prevalence of meeting recommendations in the guideline among Chinese children and adolescents and explore associations between meeting the guideline with internalizing and externalizing problems, and thus to provide certain implications for improving the physical activity guideline in line with national conditions in China. **Methods:** 135 primary and middle school students from 9 school districts in Shenzhen were selected by stratified sampling to conduct a questionnaire survey. Data of moderate- and high-intensity physical activity, screen use and sleep time, depression and anxiety symptoms (internalizing problem), smoking, drinking, and fighting behavior (externalization problem), and sociodemographic variables were collected. Finally, 67281 primary and middle school students were obtained (average age 13.0 years old; 51.9% boys and 48.1% girls; 41.5% primary school students, 40.3% junior middle school students, and 18.1% high school students). Generalized linear models were used to

analyze the associations between meeting the guideline with internalizing and externalizing problems, and to explore whether the associations varied according to gender and grade. **Results:** Based on the overall sample, we found that (1) only 1.7% of the students met three recommendations at the same time, and the students who met none or only one recommendation accounted for the largest proportion, 28.7% and 54.6%, respectively; (2) The associations between the number of recommendations met and depression symptoms, anxiety symptoms, drinking and fighting behavior showed a dose-response pattern, that is, the more the number of recommendations met, the less likely the students were to report the corresponding internalizing and externalizing problems; (3) Compared with meeting none recommendation, when only one recommendation was met, meeting only the sleep or screen time recommendation were significantly correlated with lower odds of depression symptoms and anxiety symptoms, and meeting only the moderate- and high-intensity physical activity or screen time recommendation were significantly correlated with lower odds of smoking and fighting, and meeting any one recommendation was significantly correlated with drinking; when only two recommendations were met, any two guidelines were significantly correlated with lower odds of depression symptoms, and meeting sleep and screen time recommendations were significantly correlated with lower odds of anxiety symptoms, smoking, drinking and fighting; meeting all three recommendations was significantly correlated with lower odds of five internalizing and externalizing problems in this study. Furthermore, the associations between meeting the guideline with internalizing and externalizing problems varied between genders and grades. **Conclusion:** Few students in Shenzhen fully meet the 24-hour movement guideline, while meeting the 24-hour movement guideline was significantly correlated with lower odds of internalizing and externalizing problems generally, and the specific relationships varied with gender and grade.

Keywords: children and adolescents, physical activity, sleep, sedentary behavior, internalizing and externalizing problems

COVID-19 疫情期间大学生抑郁症状的发展轨迹：自我关怀和心理韧性的保护作用

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摘要 目的: 新冠疫情期间, 公众的心理健康问题突显, 尤以抑郁症状较为典型。持续的抑郁症状可能导致一系列更为严重的后果, 如自伤和自杀行为。已有研究表明, 处于发展关键期的青年大学生是抑郁症状的高发人群。然而, 目前关于大学生在疫情期间不同阶段的抑郁症状的发展轨迹研究仍十分有限。因此, 本研究旨在考察自新冠疫情爆发以来大学生抑郁症状的发展轨迹, 并探究自我关怀和心理韧性的保护作用。**方法:** 于 2020 年 2 月邀请国内大学生被试进行线上问卷调查, 收集抑郁症状、自我关怀、心理韧性和社会人口学等信息。随后分别在 5 月、8 月、11 月及 2021 年 2 月邀请同一批大学生完成抑郁症状的测量。最终共有来自 23 个省(市)的 494 名大学生完成了 5 次测量(基线年龄为 20.41 ± 1.74)。首先采用重复测量方差分析对抑郁症状的总体轨迹进行分析。然后采用潜变量增长混合模型探究抑郁症状发展轨迹中的亚群组。最后采用 logistic 回归模型, 控制社会人口学因素, 检验自我关怀和心理韧性水平对抑郁轨迹发展轨迹的预测效应。**结果:** (1) 5 次测量中, 抑郁症状的总体水平呈现先升高后降低的发展趋势, 其中 2020 年 8 月的抑郁症状水平最高, 2020 年 11 月的抑郁症状水平显著下降; (2) 存在三个轨迹亚群组: 高危组(占比 15.8%, 抑郁症状的初始水平较高且不断升高)、好转组(占比 4.9%, 抑郁症状的初始水平较高但持续下降)和健康组(占比 79.4%, 抑郁症状保持稳定的低水平); (3) 与健康组相比, 自我关怀水平较低的被试更可能归于高危组和好转组, 心理韧性水平较低的被试更可能归于高危组。**结论:** 疫情期间大学生的抑郁轨迹具有群体异质性, 提高自我关怀和心理韧性的水平可预防和缓解抑郁症状的发生。

关键词 抑郁症状, 发展轨迹, 自我关怀, 心理韧性, 大学生

Self-compassion and resilience make us stronger: Trajectories of depression symptoms among Chinese college students during the COVID-19 pandemic

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Abstract: Purpose: During the COVID-19 pandemic, mental health problems have been a public health concern, especially depression symptoms. Persistent depression symptoms may lead to a series of detrimental outcomes and are highly related to self-injury and suicidal behavior. College students, in the critical period of development, are a high incidence group of depression symptoms. There is growing evidence supporting a clear association between the COVID-19 pandemic and mental health (e.g., depression) among young adults, such as college students. However, little is known about the trajectories of depression symptoms among young adults at different stages of the pandemic. Therefore, the purpose of this longitudinal study is to investigate the development trajectories of depression symptoms and explore the protective effects of self-compassion and resilience on college students since the outbreak of the pandemic. **Methods:** In February, we invited domestic college students to participate in the online survey to collect depression symptoms, self-compassion, resilience, and sociodemographic information. Then, the same group of college students was invited to complete the measurement of depressive symptoms in May, August, November, and February 2021. Finally, a total of 494 college students from 23 provinces (cities) completed five measurements (baseline age 20.41 ± 1.74). Firstly, the overall trajectory of depression symptoms was analyzed by repeated measurement analysis of variance. Then, the latent growth mixed model was used to explore the subgroups in the development trajectory of depression symptoms. Finally, a logistic regression model was used to test the predictive effect of self-compassion and resilience on the development track of depression after adjusting for sociodemographic factors. **Results:** (1) Among the five measurements, the level of depression symptoms increased first and then decreased. The level of depression symptoms was the highest in August 2020 and decreased significantly in November 2020; (2) There are three subgroups: high-risk group (accounting for 15.8%, the initial level of depression symptoms was high and rising), recovery group (accounting for 4.9%, the initial level of depression symptoms was high but declining) and healthy group (accounting for 79.4%, and the depression symptoms remained at a stable low level); (3) Compared with the healthy group, the participants with a lower level of self-compassion were more likely to belong to the high-risk group and the recovery group, and the participants with a lower level of resilience were more likely to belong to the high-risk group. **Conclusions:** Group heterogeneity exists in the depression trajectories of college students during the pandemic. Improving the level of self-compassion and resilience can help to prevent and alleviate the development of depression symptoms.

Keywords: depression symptoms, trajectory, self-compassion, resilience, college students

具身情绪启动对抑郁倾向个体注意偏向的影响

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摘要 对负性刺激的注意偏向是抑郁症状产生、持续和发展的重要认知因素。如果能够采取一定的方式改变抑郁个体对消极刺激的注意偏向, 就有可能缓解抑郁个体的抑郁症状。来自临床和日常生活的观察, 抑郁个体存在着悲伤的面部表情(愁眉苦脸)和消极的身体姿势(身体蜷缩), 而这种特殊的面部表情和身体姿势又进一步加重了抑郁个体的抑郁情绪体验和对外界的消极认知, 即更倾向于注意负性刺激。具身情绪的观

点为情绪调节引入了新的思路, 具身情绪是在个体无意识的情况下产生的, 不需要耗费认知资源, 无需意志

努力, 因此其对情绪的调节作用更为有效。当个体感到愉快时, 会面带笑容, 手舞足蹈, 身体扩张, 这种面部表情的变化(笑逐颜开)和身体姿势的改变(身体扩张)可能会进一步加强个体的愉快情绪体验和对外界的积极认知, 即可能使其对负性刺激的注意偏向减弱。基于以上的分析, 本研究在探讨抑郁倾向个体的注意偏向特点的基础上, 进一步研究面部具身启动和姿势具身启动对抑郁倾向个体注意偏向的影响。实验 1 通过点探测范式探讨抑郁倾向个体的注意偏向特点, 结果发现, 和对照组相比, 抑郁倾向个体存在对悲伤面孔的注意偏向, 表现为对悲伤面孔的反应时更长, 更难解除注意。实验 2 和 3 在实验 1 基础上, 考察了具身情绪启动对抑郁倾向个体的注意偏向的影响。实验 2 和 3 分别采用面部表情和身体姿势操控范式, 考察启动的具身情绪对抑郁倾向个体注意偏向的影响。结果均发现: 消极具身情绪启动组的平均反应时均显著长于无启动组, 表明消极的面部表情和身体姿势操控均使抑郁倾向被试的探测反应显著变慢。并且在消极情绪启动条件下, 被试表现出了对负性情绪刺激的注意偏向。本研究证明了具身情绪启动可以改变抑郁倾向个体对负性悲伤刺激的注意偏向。

关键词 抑郁倾向, 注意偏向, 具身情绪启动

Influence of embodied emotion priming on attentional bias of individuals with depression tendency

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Abstract: Individuals' attentional bias to negative stimuli plays an important role in the occurrence, maintenance and development of their depressive symptoms. Depressive individuals often exhibit sad facial expressions and negative body postures (e.g. body curling) in daily life. The negative facial expressions and body postures further aggravate their depressive emotional experience and negative cognition. That is, they are more inclined to pay attention to negative stimuli. The research of embodied emotion introduces a new idea for emotional regulation. Embodied emotion is at the level of unconsciousness, without consuming cognitive resources and needing no effort, so it may be effective to regulate emotion. For example, when an individual feels happy, he/she may smile, dance and expand his/her body. The change of facial expression and body posture (body expansion) may further strengthen his/her happy emotional experience and positive cognition, that is, may weaken his/her attention bias to negative stimuli. Thus, this study first explored the attentional bias to negative stimuli in individuals with depressive tendencies, and further studied the effects of facial and postural embodied priming on attentional bias of individuals with depressive tendencies.

In the present study, participants were screened using the Depression Scale (CES-D) and the Beck Depression Scale-2 Chinese (BDI-II-C). The participants with BDI-II-C scores equal to or above 15 and having not meet the diagnostic criteria of depression were selected as the depressive tendency group. The participants with BDI-II-C scores less than 15 and CES-D scores less than 20 were as the control group. In Experiment 1, there were 61 participants, among which 31 in the depressive tendency group and 30 in the control group. All participants completed the emotional detection task. In Experiment 2, 90 participants with depressive tendencies were recruited and randomly assigned to three groups. In each group, an embodied emotion priming (positive priming / negative priming / no priming) was manipulated. In Experiment 3, 60 subjects with depressive tendency were recruited and randomly assigned to two groups with two different types of embodied emotion priming (positive priming / negative priming) manipulating. All subjects completed the face or body posture control paradigm and the emotion detection task.

The results of Experiment 1 showed that the depressive tendency individuals inclined to pay attention to sad faces, indicated by their responses to sad faces being longer and shifting attention from sad faces more difficultly. Experiments 2 and 3 further investigated the effects of facial embodied emotion priming and postural embodied emotion priming on depressive individuals' attentional bias. The results of both experiments consistently showed that the depressive tendency participants' reaction time under the negative embodied emotion priming condition was

significantly longer than that of the no-priming group, suggesting that the negative facial expression and body posture manipulation significantly slowed down the detection reaction of the depressive tendency participants. Participants showed attentional bias to negative emotion stimuli.

In conclusion, this study found that depressive individuals had attentional bias to negative stimuli. Both facial expression manipulation and body posture manipulation can affect the attentional bias of depressive individuals.

Keywords: Depression Tendency, Attentional Bias, Embodied Emotion regulation

基于心理健康课程的大学生心理健康素养干预研究

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摘要 近些年, 公众精神疾病的患病率不断上升, 治疗负担也日益加重。以往的研究发现, 公众对心理知识了解不够、对待心理疾病态度消极以及寻求心理帮助的意愿薄弱, 都会导致实际求助行为的减少, 这也是心理健康素养缺失的体现。心理健康素养是人们维护心理健康、正确应对心理疾病的能力, 对于个人和社会都有重要意义。由于大多数心理疾病都可以在 25 岁前发现及早干预治疗, 提高青年人心理健康素养显得尤为重要。

教学干预是提高心理健康素养的有效方式, 但目前国内在此方面的实证研究较少。为检验大学生心理健康素养课程对大学生心理健康素养的教学干预效果, 选取武汉某高校 1574 名大一新生, 分为实验组和对照组。实验组学生接受为期八周教学干预, 对照组学生不接受教学干预, 在教学开始前及结束后对两组学生的心理健康素养水平进行问卷调查及数据分析。自变量为是否实施以提升心理健康素养为目的的心理健康教育课程, 因变量为学生自我报告的心理健康素养水平, 同时将心理问题的自我效能、心理求助态度作为效标变量, 确认教学干预的有效性。

结果发现: 以提升心理健康素养为目的的心理健康教育课程可以有效提升大学生的心理健康素养水平、处理心理问题的自我效能感以及心理求助态度。研究结果证实了心理健康素养的教学干预的有效性, 为完善大学生心理健康素养的课程建设提供参考和实证依据。

关键词 心理健康素养, 处理心理问题的自我效能, 心理求助态度, 教学干预

Research on intervention of college students' mental health literacy based on mental health courses

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Abstract: In recent years, the prevalence rate of public mental illness is rising, the cost and the burden of treatment is increasing. Previous studies have found that insufficient public understanding of psychological knowledge, the negative attitude towards mental illness and the weak willingness to seek psychological help all lead to the decrease of actual help-seeking behavior, which is also a reflection of the lack of mental health literacy. Mental health literacy is the ability to maintain their mental health and correctly deal with mental illness, which is of great significance to both individuals and society. Since most mental disorders can be identified and treated by age 25, it is important to improve the mental health literacy of young people.

Teaching intervention is an effective way to improve mental health literacy, however, there are few empirical studies in China. In order to test the teaching intervention effect of college students' mental health literacy experiment course on college students' mental health literacy, 1574 freshmen from a university in Wuhan are selected, divided

into the experimental group and the control group. Students in the experimental group received an eight-week teaching intervention, while students in the control group did not receive the teaching intervention. Before and after the teaching, the mental health literacy level of students in the two groups was measured by questionnaires. The independent variable is whether to implement the mental health education course teaching intervention for the purpose of improving mental health literacy, and the dependent variable was the level of self-reported mental health literacy. Meanwhile, the self-efficacy of psychological problems and the attitude towards psychological help-seeking are taken as the standard variables to confirm the effectiveness of the teaching intervention.

The results show that mental health education courses aimed at improving mental health literacy could effectively improve the level of mental health literacy, the self-efficacy in dealing with psychological problems and the attitude towards psychological help-seeking. The results of the study confirmed the effectiveness of the teaching intervention of mental health literacy, and provide a reference and empirical basis for improving the curriculum construction of college students' mental health literacy.

Keywords: Mental health literacy, Self-efficacy in dealing with psychological problems, Attitude towards psychological help-seeking, Teaching intervention

锻炼对情绪调节能力影响的元分析研究

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摘要 目的：通过量化分析系统地评价锻炼对情绪调节能力的影响，探讨锻炼的物理要素与情绪调节能力之间的关系，进而为情绪调节困难人群提供合理的运动方案，为今后基于情绪效益的运动处方的制定提供理论参考。方法：计算机检索国内外数据库，搜索所有体育锻炼与情绪调节的相关文献，由两位研究人员按照纳入和排除标准独立筛选文献、提取资料 and 评价文献质量，二者出现分歧时由第三方进行判定，保证所得结果的客观有效性。利用元分析软件 Review Manager 5.3 进行数据分析。结果：锻炼可以有效提高情绪调节的能力，效果量接近中等[$SMD=0.45, 95\%CI(0.32, 0.57), P=0.00$]；锻炼对情绪调节的三个维度（反刍调节、感觉唤醒、感觉评价）均有积极影响，其中对感觉唤醒的影响最大，[$SMD=0.49, 95\%CI(0.33, 0.64), P=0.00$]；亚组分析显示，在锻炼周期方面，单次锻炼和长期锻炼均能有效改善情绪调节能力且差异不显著；在锻炼强度方面，中等强度和低强度的体育锻炼均能有效改善情绪调节能力且差异不显著；在锻炼人群方面，健康和亚健康人群的情绪调节能力均受到锻炼的积极影响且差异不显著；在单次运动时长方面，30min 及以下时，对情绪调节能力的影响没有显著意义，而锻炼达 30min 以上时，可以明显改善个体情绪调节能力。结论：体育锻炼可以提高情绪调节能力，运动强度、周期以及不同人群均无显著调节效应。这提示我们体育锻炼对大多数人群情绪调节能力的提高都有积极作用，个体可以根据自身情况选择合适的锻炼周期及强度，但单次运动时间最好达 30min 效果才更加显著。

关键词 体育锻炼，情绪调节能力，反刍调节，感觉唤醒，感觉评价

A Meta-analysis Research on the Influence of Exercise on Emotion Regulation Ability

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Abstract: Objective: To systematically evaluate the influence of exercise on emotion regulation ability through quantitative analysis, explore the relationship between physical elements of exercise and emotion regulation ability, and then provide a reasonable exercise plan for people with difficulty in emotional regulation, and provide future exercise prescriptions based on emotional benefits. The formulation provides theoretical reference. Methods: Computer searched domestic and foreign databases, searched all related literatures on physical exercise and emotion

regulation, two researchers independently screened the literature according to the inclusion and exclusion criteria, extracted the data and evaluated the quality of the literature. When the two diverged, the third party would make judgments, To ensure the objective validity of the results obtained. Meta-analysis software Review Manager 5.3 was used for data analysis. Results: Exercise can effectively improve the ability of emotion regulation, and the effect is close to medium [SMD=0.45, 95%CI (0.32, 0.57), P=0.00]; the three dimensions of exercise on emotion regulation (rumination regulation, sensory arousal, sensation Evaluation) have positive effects, of which the greatest impact on sensory arousal, [SMD = 0.49, 95% CI (0.33, 0.64), P = 0.00]; subgroup analysis shows that in terms of exercise cycle, single exercise and Long-term exercise can effectively improve the ability of emotional regulation and the difference is not significant; in terms of exercise intensity, both medium- and low-intensity physical exercise can effectively improve the ability of emotional regulation and the difference is not significant; in the exercise population, the difference between healthy and unhealthy people Emotion regulation ability is positively affected by exercise and the difference is not significant; in terms of the duration of a single exercise, 30 minutes or less has no significant effect on the emotional regulation ability, while exercise for more than 30 minutes can significantly improve the individual's emotional regulation ability . Conclusion: Physical exercise can improve the ability to regulate emotions, and exercise intensity, cycle, and different groups of people have no significant regulating effect. This suggests that physical exercise has a positive effect on the improvement of the emotional regulation ability of most people. Individuals can choose the appropriate exercise cycle and intensity according to their own conditions, but the effect of a single exercise time of 30 minutes is more significant.

Keywords: Physical exercise, emotion regulation ability, rumination regulation, sensory arousal, sensory evaluation

被动性社交网站使用与攻击的关系： 错失焦虑与自我控制的作用

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摘 要 近年来随着社交网站的普及，其使用方式受到了研究者广泛的关注。被动性社交网站使用被证明是一种消极的使用方式，会带来消极的结果，如错失焦虑、攻击行为等。攻击是指有意的指向他人的伤害或破坏性行为，在大学生群体中较为常见。攻击行为会对大学生的心理社会适应产生消极影响，且大学生攻击行为已经成为公共卫生问题之一。错失焦虑是被动性社交网站使用的显著后果，且会导致自我控制能力的下降，进而产生攻击行为。以往研究多数关注的是被动性社交网站使用与心理健康的关系，很少有与行为有关的研究。本研究基于问题行为理论和有限自制力理论，探讨被动性社交网站使用与攻击的关系以及错失焦虑和自我控制的中介作用。采用被动性社交网站使用量表、错失焦虑量表、自我控制量表和攻击量表对 822 名大学生进行施测。结果发现：（1）被动性社交网站使用与错失焦虑和攻击呈显著正相关，与自我控制呈显著负相关，错失焦虑与自我控制呈显著负相关，与攻击呈显著正相关，自我控制与攻击呈显著负相关；（2）被动性社交网站使用对攻击具有显著的正向预测作用；（3）错失焦虑和自我控制分别在被动性社交网站使用对攻击的预测中起中介作用；（4）错失焦虑和自我控制在被动性社交网站使用对攻击的预测中起链式中介作用。研究结果强调了错失焦虑和自我控制在被动性社交网站使用预测攻击行为中的重要作用，为被动性社交网站使用影响攻击行为提供了实证支持。在实践上，对减少被动性社交网站使用对大学生产生的消极影响具有重大意义，启发大学生正确使用社交网站，客观看待社交网站上的信息，减少通过社交网站中社会比较导致的消极情绪，提高自我控制能力，引导大学生树立正确的社交网站使用观。

关键词 被动性社交网站使用，错失焦虑，自我控制，攻击

The relationship between passive social network site use and attack:the mediating effect of fear of missing out and self-control

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Abstract: In recent years, with the popularity of social network site, its usage has attracted wide attention from researchers. Passive use of social network site has been proved to be a negative way of use, which will bring negative results, such as fear of missing out, aggressive behavior, etc. Attack refers to intentionally hurtful or destructive behavior directed at others, which is common among college students. Aggressive behavior will have a negative impact on the college students' psychosocial adaptation, and the aggressive behavior of college students has become one of the public health problems. Fear of missing out is a significant consequence of the use of passive social network site, and it can lead to a decline in self-control, which in turn leads to aggressive behavior. Most previous studies have focused on the relationship between passive social network site use and mental health, and there are few behavior-related studies. Based on the problem-behavior theory and the theory of limited self-control, this study explores the relationship between passive social network site use and attack, and the mediating effect of fear of missing out and self-control. The passive social network site use scale, the fear of missing out scale, the self-control scale, and the Buss-Perry scale were used to test 822 college students. The results showed that: (1) Passive social network site use was significantly positively correlated with fear of missing out and aggression, and significantly negatively correlated with self-control; fear of missing out was significantly negatively correlated with self-control, and significantly positively correlated with aggression, self-control is significantly negatively with aggression; (2) Passive social network site use has a significantly positively predictive effect on attack; (3) Fear of missing out and self-control respectively play an intermediary role in the prediction of attack by passive social networking site use; (4) Fear of missing out and self-control play a chain-like intermediary role in the prediction of attacks on passive social networking sites. The results of the study emphasize the important role of fear of missing out and self-control in predicting aggressive behavior when using passive social network site, and provide empirical support for the influence of passive social network site use on aggressive behavior. In practice, it is of great significance to reduce the negative impact of passive social network site usage on college students. Inspired college students to use social network site correctly, view the information on social network site objectively, reduce negative emotions caused by social comparisons in social network site, improve self-control ability, and guide college students to establish a correct view of using social network site.

Keywords: passive social network site use, fear of missing out, self-control, attack

制造业员工人工智能焦虑的成因及干预研究

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摘要 随着我国人口红利消失、土地红利下降以及环境问题日益突出, 劳动密集型的传统制造产业面临许多挑战, 在产业结构水平、自主创新能力、资源利用效率、信息化程度等方面与发达国家尚存在明显差距。我国制造业面临低成本国家和发达国家的双重挤压。传统制造业要想保持可持续发展和维持竞争优势, 必须进行转型升级, 在“中国制造”向“中国智造”转型和发展过程中, 传统制造业必须要与人工智能进行深度融合, 制造业与人工智能的融合在各细分行业形成了领军者、追赶者和探索者三大梯队的基本格局。人工智能的应用能大大提高生产效率, 也可以将员工从程序化的工作和繁重的体力劳动中解放出来, 但是人工智能的应用从不同程度上给员工带来某些压力和困扰, 甚至对使用人工智能产生心理焦虑。本文章从组织行为学角度理清了人工智能焦虑的概念, 从媒体宣传、工作替代、工作挑战、学习挑战、情感交流以及机器人主体地位诉求等几个方面探究了员工人工智能焦虑产生的原因, 并从成因预防这个角度提出了重新分配工作任务, 提供人工智能相关培训等措施, 另外还专门从EAP角度提出了具体的对策和建议, 帮助制造业的员工减轻人工智能焦虑, 减少企业在转型过程中带来的不必要的损失, 帮助经济和社会快速发展。

关键词 制造业, 人工智能焦虑, 成因, EAP

Study on the Causes and Intervention of Artificial Intelligence Anxiety in Manufacturing Employees

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Abstract: With the disappearance of demographic dividend, the decline of land dividend and the increasingly prominent environmental problems in China, labor-intensive traditional manufacturing industries are facing many challenges, and there is still an obvious gap between China and developed countries in terms of industrial structure level, independent innovation ability, resource utilization efficiency and informationization degree. Our country's manufacturing industry faces double squeeze from low cost country and developed country. To maintain sustainable development and competitive advantage, the traditional manufacturing industry must undergo transformation and upgrading. In the process of transformation and development from "made in China" to "Intelligent manufacturing in China", the traditional manufacturing industry must be deeply integrated with artificial intelligence. The integration of manufacturing and artificial intelligence has formed a basic pattern of three echelons of leaders, catchers and explorers in each subsector. The application of artificial intelligence can greatly improve production efficiency and liberate employees from programmed work and heavy manual labor. However, the application of artificial intelligence brings some pressure and trouble to employees to varying degrees and even produces psychological anxiety about using artificial intelligence. This article figures out the concept of artificial intelligence anxiety from the perspective of organizational behavior, explores the causes of artificial intelligence anxiety of staffs from several aspects such as media publicity, work substitution, work challenges, learning challenges, emotional communication, and the robot subjectivity demands, and puts forward some countermeasures such as reassigning work tasks and providing artificial intelligence-related training. In addition, specific countermeasures and suggestions are put forward from the perspective of EAP to help manufacturing employees reduce AI anxiety, reduce unnecessary losses brought by enterprises in the process of transformation, and promote the rapid development of the economy and society.

Keywords: Manufacturing industry, Artificial intelligence anxiety, Causes, EAP

默认选项设置及其变式促进疫苗接种

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摘要 当今世界仍然处于 COVID-19 大流行疫情下, 疫情不仅对人类生命安全造成严重威胁, 而且带来了巨大的经济社会成本。接种疫苗是预防病毒传播最有效的途径, 然而, 新冠疫苗在世界范围的接种覆盖率仍不足以建立对病毒的群体免疫屏障。本研究将默认选项设置及其变式应用于疫苗接种政策中, 以期寻找增强民众疫苗接种意愿的有效助推手段。本研究采用组间设计, 在全国范围内通过网络问卷的方式收集数据, 被试 ($N = 2215$) 被随机分配至 7 种疫苗接种的政策情境(不设置默认选项的选择参加政策, 默认接种的选择退出政策及其五种变式), 探究不同政策情境下人们的接种意愿和态度评价。结果发现: (1) 默认接种政策及其四种变式(教育变式、机会变式、反馈渠道变式、社会规范变式)比传统选择参加政策提高了接种意愿, 教育变式下被试的接种意愿最高; (2) 与不设置默认选项相比, 设置默认选项的接种政策并没有降低人们对该政策的态度评价, 其中教育变式还增加了人们对政策的信任评价、道德评价、感知选择自由, 降低了感知操纵性。 (3) 进一步的研究显示, 受教育水平调节了疫苗接种政策与接种意愿间的关系, 但性别、年龄和新冠疫情的风险知觉则没有起到调节作用, 即对于受教育水平低的人群, 教育变式和机会变式比不设置默认选项更有效。综上所述, 默认选项设置及其变式能有效提升接种意愿, 其中教育变式对疫苗接种意愿的助推效果最好, 而

且还能在一定程度上提升人们对于助推政策的评价。本研究的开展对公共卫生管理者有针对性地制定疫苗接种政策、促进民众接种意愿提供了较好的心理学理论依据。

关键词 疫苗接种, 默认选项, 选择参加, 选择退出, 变式

Default Setting and its Variants Promote COVID-19 Vaccinations

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Abstract: The world today is still under the COVID-19 pandemic, which threatens human life and costs a lot socially and economically. Vaccine uptake is the most effective method to prevent infection and transmission of the virus. However, global vaccination coverage has not been sufficient to achieve herd immunity. The present study applied standard default setting and its variants on vaccination policy, in order to identify the effective nudge of promoting COVID-19 vaccinations. Adopting a between-subjects design, we conducted data online through a network questionnaire nationwide. A total of 2215 participants were randomly assigned to one of the seven vaccination policies, including an opt-in policy without default option, an opt-out policy with vaccination as the default option, and five variants of opt-out policy. The results showed that: (1) there was higher vaccination willingness in standard opt-out condition and other four variants (education variant, social norm variant, feedback channel variant, opportunity variant) than that in opt-in condition; among all the policies, participants had the highest willingness to vaccinate under the education variant. (2) Policies with default settings did not weaken people's attitude towards vaccination policies and policymakers, compared with opt-in policy. Besides, the education variant even increased people's trust in policymakers, ethical evaluation, perceived freedom of choice, and decreased perceived manipulation. (3) Further analysis revealed that education level moderated the relationship between the vaccination policy and vaccination willingness, but gender, age, and risk perception of COVID-19 did not play moderating roles. The education variant and the opportunity variant were more effective than the policy without default options for the group with a low level of education. In conclusion, default Setting and its variants can effectively promote vaccination uptake, in which the education variant has the best effect on increasing willingness to vaccinate, and it can also improve people's attitude towards nudging policies to a certain extent. Our findings provided new psychological evidence for public health managers to formulate vaccination policies and promote COVID-19 vaccinations in a targeted manner.

Keywords: vaccination uptake, default options, opt-in, opt-out, variant

工作投入对家庭幸福感的影响：基于溢出-交叉视角

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摘要 现有研究中, 学者们对于工作投入对员工自身的幸福感造成何种影响并未达成共识。同时工作投入对工作家庭互动的影响并不局限于个体层面, 还可能影响员工重要他人(比如配偶)的生活。从夫妻乃至整个家庭层面考察工作投入的后续效应, 有助于更全面地认识工作对员工家庭生活的影响。溢出-交叉模型(spillover-crossover model)为探讨上述问题提供了很好的视角。本研究基于溢出-交叉模型, 从夫妻二元体角度探讨个体的工作投入体验如何通过工作→家庭冲突感受溢出至家庭领域, 影响员工自身的家庭幸福感, 并通过社会互动交叉影响配偶的家庭幸福感, 进一步配偶的家庭幸福感又会影响员工的家庭幸福感, 较好地解释了工作投入对员工自身及其配偶家庭幸福感的影响与发生机制。

本研究收集了来自北京、上海、重庆、杭州等多个内地发达城市的 98 对双职工夫妻的有效配对数据, 采用 SPSS26.0 和 AMOS24.0 进行数据分析。结构方程模型分析结果显示: (1)工作投入对员工自身家庭幸福感具有显著正向影响; 但工作投入对配偶家庭幸福感的正向影响不显著。(2)工作投入通过抑制工作→家庭冲突

进而提升其自身的家庭幸福感。(3)家庭幸福感在夫妻之间存在显著的直接交叉影响。(4)夫妻任何一方的工作投入均可通过积极影响自身的家庭幸福感进而提升另一方的家庭幸福感。研究揭示了员工从高度工作投入中体验到的积极情绪,不仅能在个体内(intra-individual)溢出到家庭领域从而改善生活质量,而且能通过个体间(inter-individual)的直接交叉效应进一步提升夫妻双方对整个家庭系统功能的积极评价。结论既是对工作投入之于双职工夫妻家庭幸福感重要意义的实证揭示,也是对资源-获取-发展观(resource-gain- development)的有益补充。

关键词 工作投入, 家庭幸福感, 工作→家庭冲突, 溢出-交叉模型, 双职工夫妻

The impact of employee work engagement on family happiness: A spillover - crossover perspective

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Abstract: In existing studies, scholars do not reach a consensus on the impact of work engagement on employees' own family happiness. At the same time, the influence of work engagement on work-family interaction is not limited to the individual level, but may also affect the life of significant others (such as spouse) of the employee. Studying the follow-up effects of work engagement from the perspective of husband and wife and even the whole family is helpful to understand the influence of work on employees' family life more comprehensively. Spillover-crossover model provides a good perspective for discussing the above problems. This study aims to explore how the individual experience of work engagement spillovers to the family domain through work to family conflict, affect employee's own family happiness, and further influence the spouse's family happiness through social interaction, in turn, spouse's family happiness will affect employee family happiness. This paper better explains the influence and mechanism of work engagement on the family happiness of employees and their spouses from the perspective of dual-earner couples.

In this study, valid matching data of 98 pairs of dual-earner couples from Beijing, Shanghai, Chongqing, Hangzhou and other developed cities in mainland China were collected, and SPSS26.0 and AMOS24.0 were used for data analysis. The results of structural equation model analysis indicated that : (1) work engagement had a significant positive impact on employees' family happiness; in contrast, the positive effect of work engagement on spouse's family happiness was not significant. (2) Work engagement can improve its own family happiness by inhibiting work to family conflict. (3) There is a significant direct crossover effect of family happiness between husbands and wives. (4) Work engagement of either spouse can positively affect their own family happiness and thus improve the spouse's family happiness. The research reveals that the positive emotions experienced by employees from high work engagement can not only spillover into the intra-individual and improve the quality of life in the family. Moreover, the inter-individual crossover effect can further enhance the positive evaluation of the whole family system function of the couple. The conclusion is not only an empirical revelation of the significance of work engagement to the family happiness of dual-earner couples, but also a beneficial supplement to the resource-gain-development theory.

Keywords: work engagement, family happiness, work to family conflict, spillover-crossover model, dual-earner couples

超越自然：虚拟现实中的恢复性环境

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摘要 恢复性环境指对人类不断消耗的身心资源和能力有恢复与更新效果的环境设置。自上个世纪 80 年代起, 恢复性环境的研究逐渐走入人们的视野, 并广泛应用于环境心理学、环境设计、城市规划等领域。近年来, 随着虚拟现实技术的拓展, 国内外研究者们已尝试在虚拟现实环境中构筑人工的恢复性环境, 并利用核磁共振

(fMRI)、心电传感器 (ECG)、皮电传感器 (SC) 等现代医疗客观检测技术及恢复性感知量表 (PRS) 等主观评价手段探究了虚拟现实环境的恢复性效果。

本文从 (1) 恢复性环境的经典理论及研究进展 (2) 虚拟现实环境中恢复性环境的恢复性效果 (3) 真实恢复性环境与虚拟现实环境中恢复性环境的比较 (4) 虚拟现实环境中恢复性环境的影响因素 (5) 评价与展望入手, 对各类虚拟现实环境中恢复性环境的研究做了回顾和梳理。

结果发现 (1) 虚拟现实环境中恢复性环境对情绪、压力、定向注意等同样具有良好的恢复效果。在沉浸感、存在感等变量得以控制的精细化条件下, 恢复效果与真实环境接近。(2) 恢复性环境并不局限于经典恢复性环境理论中的自然环境, 部分城市环境同样具有较好的恢复性, 场景的恢复性效果与知觉时长、场景依恋等变量呈相关关系。(3) 虚拟现实环境中恢复性环境与正念训练、情景暴露等心理治疗技术结合后, 恢复效果良好。但现有研究所应用的场景主要集中于单一的自然环境和城市环境, 而虚拟现实环境可先于现实环境进行构筑, 可设置超越现实场景的环境, 未来的研究可着重于探究此类场景是否具有恢复性, 这对揭示恢复性环境的核心因素有着帮助。

关键词 恢复性环境, 虚拟现实, 压力, 注意

Beyond Nature: Restorative Environments in virtual reality

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Abstract: Restorative environment refers to the environment setting that has the effect of restoring and renewing the physical and mental resources and abilities that human beings constantly consume. Since the 1980s, the research on restorative environment has gradually come into people's view, and has been widely applied in environmental psychology, environmental design, urban planning and other fields. In recent years, with the expansion of virtual reality technology, researchers at home and abroad have tried to build artificial recovery environment in virtual reality. The restorative effect of virtual reality environment was investigated by using modern medical objective detection techniques such as fMRI, ECG, SC and subjective evaluation methods such as PRS.

Restorative environment this paper (1) the classic theory and research progress of restorative (2) virtual reality environment of the restorative effect (3) the real restorative environment compared with virtual reality restorative environment (4) the influence factors of recovery in the virtual reality environment (5) evaluation and prospect of the study of all kinds of virtual reality restorative environment do the review and comb.

The results show that (1) the restorative environment in virtual reality also has a good recovery effect on emotion, stress, directed attention, etc. Under the fine-grained conditions under which variables such as immersion and presence can be controlled, the recovery effect is close to the real environment. (2) Restorative environment is not limited to the natural environment in the classical restorative environment theory. Some urban environments also have good restorative, and the restorative effect of scenes is correlated with variables such as perceptual duration and scene attachment. (3) The restorative environment in virtual reality combined with psychological therapy techniques such as mindfulness training and situational exposure has a good recovery effect. But institute of existing application scenario is mainly focused on a single natural environment and city environment, the virtual reality environment can be used to build ahead of realistic environment and can be set up beyond the reality environment, manage to make do in the future study is more important than explore whether such scenarios have restorative, it has a help to reveal the core element of the restorative environment.

Keywords: restorative environment, virtual reality, stress, attention

完美主义对抑郁水平的影响：以目标调整为中介

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摘要 根据自我调节理论(Carver & Scheier, 1999,2000)，人们为实现个人目标而奋斗，目标会增强人们的生命意义感，因此目标对心理健康非常重要。有研究表明目标调整与更高的幸福感水平、更少的抑郁感和更强的人生目标感相关(Wrosch et al.,2003)。完美主义是一种在学习工作生活中总是追求十全十美，并且经常会对自己有批判性负面评价的人格特质。通常来说，当完美主义倾向的个体一味追求定下的高目标，却不考虑如果无法实现该目标需要承担的不良后果时，就更容易出现心理不适，如焦虑抑郁等负面的情绪。有研究发现，在抑郁患者症状的出现、维持和迁移过程中，完美主义在其中都是一个重要原因(张斌等,2013)。

本研究探究目标调整在完美主义和抑郁水平之间的关系，并通过改变完美主义倾向者的目标调整策略，以降低抑郁情绪的不良影响。被试来自两个样本：样本一以班为单位对 500 名学生进行间隔两个月的集体调查；样本二依据自愿原则对 570 名学生进行调查。使用贝克抑郁量表第 2 版、Slaney 近乎完美主义量表修订版、目标调整量表构建中介模型。

结果显示：（1）目标脱离对抑郁的主效应不显著，目标再参与的主效应显著，目标再参与高的个体抑郁程度低，目标脱离和目标再参与的交互作用显著；（2）大学生的目标调整能力与抑郁倾向是相互影响，互为因果的；（3）完美主义能显著预测抑郁，目标调整在完美主义和抑郁之间起部分中介作用。

因此，目标再参与对个体的抑郁水平起着至关重要的作用，高目标脱离且低目标再参与的大学生与抑郁关系最密切。另外，大学生的目标调整能力与抑郁倾向是相互影响，互为因果的。目标调整在完美主义与大学生抑郁之间起中介作用。

关键词 自我调节理论，目标调整，完美主义，抑郁水平

The Effect of Perfectionism on Depression level: Mediated by Goal Adjustment

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Abstract: According to self-regulation theory (Carver & Scheier, 1999,2000), goals are important for mental health because they enhance people's sense of meaning in life as they strive to achieve personal goals. Studies have shown that goal adjustment is associated with higher levels of happiness, less depression and a stronger sense of purpose in life (Wrosch et al.,2003). Perfectionism is a kind of personality trait that always pursues perfection in study, work and life, and often has a critical and negative evaluation of oneself. Generally speaking, when individuals with perfectionism tendency blindly pursue a high goal without considering the negative consequences they will bear if they fail to achieve the goal, they are more likely to suffer from psychological discomfort, such as anxiety and depression. Studies have found that perfectionism plays an important role in the occurrence, maintenance and migration of symptoms in patients with depression (Zhang Bin et al.,2013).

This study explored the relationship between goal adjustment and depression level, and reduced the negative effects of depression by changing the goal adjustment strategies of perfectionist tendencies. The participants came from two samples: Sample one conducted a collective survey of 500 students in a class at a two-month interval; and sample two conducted a survey of 570 students on a voluntary basis. The mediation model was constructed using baker Depression Scale (2nd edition), Slaney Near-Perfectionism Scale (revised edition), and Goal Adjustment Scale.

The results showed that : (1) The main effect of goal disengagement on depression was not significant, but the main effect of goal reengagement was significant. Individuals with high goal reengagement had low depression, and the interaction between goal disengagement and goal reengagement was significant. (2) The goal adjustment ability and depression tendency of college students are mutually influenced and mutually cause-and-effect; (3) Perfectionism

can significantly predict depression, and goal adjustment plays a partial mediating role between perfectionism and depression.

Therefore, goal reengagement plays a critical role in an individual's depression level, high goal disengagement and low goal reparticipation college students are most closely related to depression. In addition, the goal adjustment ability and depression tendency of college students are mutually influenced, and each other is causal. Goal adjustment plays a mediating role between perfectionism and depression in college students.

Keywords: Self-regulation theory, Goal adjustment, Perfectionism, Depression level

关系型领导如何带来员工建言？双过程模型检验

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摘要 随着数字化时代的到来,企业的外部环境在不断地变化,仅仅依靠管理层的智慧往往无法解决所有问题,因此员工的建言显得尤为重要。近几年如何激发员工的建言行为颇受学术界的关注,而关于员工建言行为形成机制的理论研究亟需进一步完善。本研究基于刺激-有机体-反应(stimulus-organism-re-sponse)经典理论框架,结合自我决定理论和社会交换理论构建员工建言行为内在机制理论模型。运用 SPSS.23 和 Amos.24 对 407 名员工的两阶段时间滞后问卷调查分析表明:关系型领导既能直接对员工的促进型建言行为和抑制型建言行为产生正向显著作用,同时能通过显著影响员工的角色宽度自我效能感,进而间接显著影响员工促进型建言和抑制型建言行为的形成。另外,感知资质过剩仅在关系型领导与员工的促进型建言行为之间具有中介作用。中介效应检验显示:关系型领导到员工的促进型建言行为产生过程中,角色宽度自我效能感和感知资质过剩均存在部分中介作用,包括四条具体影响路径;关系型领导到员工的抑制型建言行为产生过程中,仅角色宽度自我效能感存在部分中介作用,包括两条具体影响路径。本研究验证了员工建言行为(促进型建言和抑制型建言)的影响机制,拓展了员工建言行为影响机制的整合理论研究。最后,为激发员工的建言行为提供了理论和实践指导。

关键词 关系型领导,感知资质过剩,角色宽度自我效能感,促进型建言,抑制型建言

How does Relational Leadership lead to Employee's Voice Behavior? A Dual-Process Model Examination

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Abstract: With the advent of the digital era, the external environment of enterprises is constantly changing. It is often impossible to solve all problems only by relying on the wisdom of manager. Therefore, employee's voice behavior is particularly important. In recent years, how to stimulate employee's voice behavior has attracted academic attention, and the theoretical research on the mechanism of employee's voice behavior needs to be further improved. Based on the classical framework of stimulus-organism-response theory, this study combined the self-determination theory and social exchange theory to construct a theoretical model of the mechanism of employee's voice behavior. A two-wave time-lag questionnaire survey of 407 employees using SPSS.23 and AMOS.24 shows that: Relational leadership not only has a positive and significant effect on employees' promotive voice and prohibitive voice behavior, but also has a significant impact on employee's role breadth self-efficacy, and then indirectly significantly affects the formation of employee's promotive voice and prohibitive voice. In addition, perceived overqualification only mediates the relationship between relational leadership and promotive voice of employee. The mediating test further proves that both role breadth self-efficacy and perceived overqualification play an important part mediating role in the process from relational leadership to promotive voice, including four specific influence pathways. And only role breadth self-efficacy has partial mediating effect in the process from relational leadership to prohibitive voice, including two specific influence pathways. This study verifies the mechanism of employee's voice behavior (promotive voice and

prohibitive voice), expands the theoretical research on the mechanism of employee's voice behavior. provides theoretical and practical guidance for stimulating employee's voice behavior. At last, this study provides theoretical and practical guidance for stimulating employee's voice behavior.

Keywords: relational leadership, perceived overqualification, role breadth self-efficacy, promotive voice, prohibitive voice

正念训练对冬季两项运动员在射击运动中的竞赛焦虑干预研究

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摘要: 1) 研究目的: 冬季两项运动是越野滑雪与射击运动的有机结合, 动静联动造就了冬季两项运动的独特魅力, 也让这项比赛极具观赏性。冬季两项运动独特的规则使得心理素质成为了其极为重要的制胜因素, 要求着运动员有着极强的心理自控能力, 在面对滑行能力不占优势的情况, 能够稳定情绪, 在射击中反败为胜。因此, 怎样提升心理素质, 进行一定的心理干预成为了现下冬季两项运动发展中需研究的重点, 探寻正确有效且与冬季两项运动特点相契合的心理训练方法, 成为了当前亟待解决的问题。正念训练走入竞技体育视野恰好能很好的解决这一问题, 正念训练是近年来在临床医学、临床心理学及运动竞技比赛中都逐渐兴起的心理干预疗法, 众多实验表明正念训练有很好的提高运动员有效注意及抵抗外界干扰能力的效果, 在竞技比赛中使运动员在赛场上优秀发挥, 提高竞技成绩。2) 研究方法: 文献资料法: 主要通过知网等学术网站以及校图书馆, 查阅关于正念、心境、冬季两项运动等相关文献为此次论文的撰写打好的基础。问卷调查法: 根据实验设计内容的需要, 选取需要使用到的权威量表, 在实验开始之前, 首先对被试运动员进行问卷调查, 正念训练之后再对实验组和对照组进行问卷调查, 最后剔除漏课、量表不全等学生的数据。本文使用量表共有 2 个, 《正念五维度量表》、《BFS 心境量表》实验法: 被试运动员分为两组, 实验组和对照组, 实验组的射击训练融入正念训练干预, 为期八周; 对照组进行正常的射击训练, 得出结果进行分析。数理统计法: 用 SPSS17.00 对收集到的实验数据和问卷进行独立样本 T 检验、配对样本 T 检验、相关分析和回归分析。3) 研究结果: 通过八周的实验发现 1.正念训练有助于冬季两项运动员在射击训练过程中达到心境平和的状态, 有利于增进心境积极因子的作用, 降低消极因子的作用, 从而使心境水平得到提高, 心境状态得到平和有效的降低了竞赛焦虑。2.在正念训练干预下心境水平有所提高, 竞赛焦虑明显得到了缓解, 运动员射击成绩在心境的变化下有所提高, 从而可以获得技能的学习和成绩的提高, 这对运动员在射击运动的训练中有很大的帮助。3.经过正念干预后运动员在滑行之后明显减少了射击失误率。4) 研究结论: 1.正念训练能够使运动员心境水平有所提高, 从而获得更加平和的心态。2.正念训练有效缓解竞赛焦虑, 提高射击成绩。3.正念训练能有效提高心理素质从而减少射击失误率。

关键词 正念训练, 冬季两项, 竞赛焦虑

Research on Intervention of Mindfulness Training on Competition Anxiety of Biathlon Athletes in Shooting Sports

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Abstract: 1) Research purposes: Biathlon is an organic combination of cross-country skiing and shooting. The dynamic and static linkage creates the unique charm of biathlon, and also makes this competition very enjoyable. The unique rules of biathlon make the psychological quality an extremely important winning factor, requiring athletes to have strong psychological self-control ability, and be able to stabilize their emotions in the face of the situation where the sliding ability is not dominant, and turn defeat into victory in shooting. Therefore, how to improve the psychological quality and carry out certain psychological interventions has become the focus of research in the development of biathlon. The search for a correct and effective psychological training method that is compatible with

the characteristics of biathlon has become a problem that needs to be solved urgently. Mindfulness training can solve this problem well in the field of competitive sports. Mindfulness training is a psychological intervention therapy that has gradually emerged in clinical medicine, clinical psychology and sports competitions in recent years. Numerous experiments have shown that mindfulness training is very good. The effect of improving the ability of athletes to effectively pay attention and resist external interference, make athletes perform well on the field in competitive competitions, and improve athletic performance. 2) Research method: literature method: mainly through academic websites such as CNKI and school libraries, to consult related literature on mindfulness, mood, biathlon, etc., to lay a good foundation for the writing of this paper. Questionnaire survey method: According to the needs of the experimental design content, select the authoritative scale that needs to be used. Before the experiment starts, first conduct a questionnaire survey on the tested athletes, and then conduct a questionnaire survey on the experimental group and the control group after mindfulness training, and finally eliminate Data of students who missed classes, incomplete scales, etc. There are two scales used in this article, the "Five Dimensions of Mindfulness Scale" and the "BFS Mood Scale" experimental method: the athletes are divided into two groups, the experimental group and the control group. The shooting training of the experimental group is integrated into the mindfulness training intervention for a period of time. Eight weeks; the control group received normal shooting training, and the results were analyzed. Mathematical statistics: Use SPSS17.00 to perform independent sample T test, paired sample T test, correlation analysis and regression analysis on the collected experimental data and questionnaires. 3) Research results: Through an eight-week experiment, it was found that 1. Mindfulness training can help biathlon athletes achieve a state of peace of mind during shooting training, which is conducive to enhancing the role of positive mood factors, reducing the role of negative factors, and so on. The mood level is improved, and the mood state is calmed and effectively reduces competition anxiety. 2. Under the intervention of mindfulness training, the level of mood has been improved, competition anxiety has been obviously alleviated, and the shooting performance of athletes has been improved under the change of mood, so as to obtain skill learning and performance improvement. It is of great help in sports training. 3. After the intervention of mindfulness, the athletes significantly reduced the shooting error rate after sliding. 4) Research conclusions: 1. Mindfulness training can improve the athlete's mood level, thereby obtaining a more peaceful state of mind. 2. Mindfulness training effectively relieves competition anxiety and improves shooting performance. 3. Mindfulness training can effectively improve mental quality and reduce shooting errors.

Keywords: mindfulness training, winter biathlon, competition anxiety

大学生佛系心理与其学业投入的关系研究

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摘 要 佛系心理是当代大学生常见的一种心理现象，与其学业投入联系紧密。近年来，学术界对佛系心理研究逐渐关注，但对于佛系心理内涵、维度及测量方法仍缺乏标准的认识。**目的** 编制大学生佛系心理评定量表，探究大学生佛系心理与其学习投入和学业倦怠的关系。**方法** 本文首先通过对文献的系统梳理和对 14 名大学生的半结构化访谈，根据 Nvivo12 Plus 三级编码，提炼出佛系心理内涵及维度，开发相应的测量量表。其次，采用方便取样法，在西南地区的 8 所高校对 806 名大学生进行问卷调查，通过对调查数据进行描述性统计、相关分析和回归分析，探究大学生佛系心理与其学习投入和学业倦怠的关系。**结果** （1）最终的《大学生佛系心理量表》由遵从自我性、随缘性、目标与渴望、压力调节四个维度，17 个条目组成，各因子平均值均介于 0.40~0.53，均大于该因子与其他因子相关系数，Cronbach's α 系数为 0.86；（2）大学生佛系心理在性别和年级方面差异显著，男生比女生整体上更佛系($t=7.84, p<0.01$)，大四的学生比其他几个年级更加佛系($F=11.48, p<0.01$)；（3）佛系心理整体上与学习投入相关不显著，但其四个维度均能显著预测学习投入，目标与渴望维度负向预测学习投入，其他三个维度均正向预测学习投入（学习投入= $47.400-1.325*$ 目标与渴望 $+0.804*$ 压力调节 $+0.365*$ 遵从自我性 $+0.428*$ 随缘性）；（4）佛系心理与学业倦怠呈显著正相关($r=.139, p<0.01$)，目标与渴望、压力调节和随缘性对学业倦怠的影响都是显著的，但遵从自我性对学业倦怠影响不显著。**结论** （1）

利用大规模问卷调查数据进行探索性因子分析与验证性因子分析,结果表明,开发的测量量表具有较好的信效度;(2)大学生佛系心理对其学业投入具有一定影响,既有积极影响又有消极影响。本研究结果启示我们应辩证地看待大学生佛系心理,对待那些“佛系青年”注重引导积极的“佛系”亚文化传播方向的同时,需要为他们提供自由的思想空间。

关键词 佛系心理,学习投入,学业倦怠

情感自主性对青少年抑郁的影响:父母教养方式的调节作用

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摘要 青少年抑郁是一个值得研究的重要问题。情感自主性指青少年设法摆脱对家庭的婴儿式纽带联系的程度,被认为是青少年在青春期发展过程中“个体化”的一个重要方面。在青春期这一特殊发展阶段,伴随着明显的生理发展,情感自主性也随之快速发展,并对青少年心理适应产生重要影响。本研究旨在探讨青少年抑郁与情感自主性之间的关系,以及在情感自主性和抑郁症状的关系中,父母教养方式是否起到了调节作用及其调节模式。本研究使用了上海市Y区青少年心理健康研究数据库中2017、2018两年配对数据,涵盖50所中学的初高中生,其中初中每个年级随机抽取2个自然班,高中每个年级随机抽取1个自然班。最终有效配对数据为3152,基于2018年数据,平均年龄为13.99岁($SD = 1.23$),其中女生占51.2%,男生占48.8%。研究采用青春期内源性压力量表中的情感自主性量表、病人健康问卷抑郁量表(PHQ-9)和父母教养方式问卷进行评估。结果显示:(1)青少年抑郁症状呈现出明显的年级和性别差异,高中生抑郁程度显著高于初中生,女生抑郁程度显著高于男生;(2)抑郁症状与情感自主性呈显著正相关,与父母关爱、鼓励自主均呈显著负相关,与父母控制呈显著正相关;(3)纵向数据的回归和调节分析结果表明,情感自主性对青少年抑郁症状有显著的正向预测作用,且该作用会受到父母教养方式的调节,母亲鼓励自主和父亲关爱在情感自主性对青少年抑郁症状的影响中都有显著的负向调节作用,即母亲鼓励自主程度越高,父亲关爱程度越高,情感自主性对青少年抑郁的负面影响越小。研究表明,情感自主性的发展会对青少年心理适应造成负面影响,使抑郁症状更严重,而母亲鼓励自主和父亲关爱两种教养方式是情感自主性对青少年抑郁负面影响中的保护性因素。青少年追求情感自主性是身心发展到该阶段的必然现象,但对父母所习惯的教养方式和亲子相处模式是一种挑战。母亲适当减少约束,鼓励孩子自主发展,父亲更多承担家庭教养责任,多关爱孩子,都有助于预防青少年抑郁的产生。

关键词 情感自主性,抑郁,父母教养方式,青少年

The Effect of Emotional Autonomy on Adolescent Depression: The Moderating Role of Parenting Styles

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Abstract: Adolescent depression is an important issue worth studying. Emotional autonomy refers to the extent to which an adolescent manages to break away from infant-like ties to his or her family and is considered an important aspect of “individualization” during adolescent development. During this particular developmental stage of adolescence, emotional autonomy develops rapidly along with significant physical development and has important implications for adolescent psychological adjustment. The purpose of this study was to investigate the relationship between adolescent depression and emotional autonomy, and whether parenting styles play a moderating role in the relationship between emotional autonomy and depressive symptoms and the pattern of moderation. This study used the paired data of 2017 and 2018 from the Adolescent Mental Health Research Database in Y District of Shanghai, covering middle and high school students from 50 schools. Two administrative classes were randomly selected from each grade of middle school and one administrative class from each grade of high school. The final valid matching

data was 3152. Based on the data in 2018, the average age was 13.99 ($SD = 1.23$), among which 51.2% were female and 48.8% were male. The study was used the Emotional Autonomy Subscale of Adolescent Endogenous Stress Scale, the nine-item Patient Health Questionnaire depression scale (PHQ-9), and the Parental Bonding Instrument (PBI) to make assessment. The results showed that (1) adolescent depressive symptoms showed significant grade and gender differences, with high school students being significantly more depressed than middle school students and girls being significantly more depressed than boys; (2) depressive symptoms were significantly positively related to emotional autonomy, negatively related to parental care and encouragement of autonomy, and positively related to parental control; (3) the regression and moderating analyses of the longitudinal data showed that emotional autonomy had a significant positive predictive effect on adolescent depressive symptoms, and this effect was moderated by parenting styles, and both maternal encouragement of autonomy and paternal care had a significant negative moderating effect on the effect of emotional autonomy on adolescent depressive symptoms. The findings suggest that the development of emotional autonomy negatively affects adolescents' psychological adjustment and makes depressive symptoms more severe, and that two parenting styles, maternal encouragement of autonomy and paternal care, are protective factors in the negative impact of emotional autonomy on adolescents' depression. The pursuit of emotional autonomy by adolescents is an inevitable phenomenon at that stage of physical and mental development, but it is a challenge to the parenting style and parent-child relationship pattern that parents are used to. Mothers should reduce the constraint of their children appropriately and encourage them to develop autonomously, and fathers should take more responsibility for family parenting and care more for their children. Both of which can help prevent adolescent depression.

Keywords: emotional autonomy, depression, parenting styles, adolescent

大学生人际关系敏感影响因素的元分析

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摘要 **研究背景:** 已有大量学者围绕大学生人际关系敏感进行相关研究, 然而众多研究结果并不一致。某些因素(如性别、认知方式等)的作用大小及作用方向存在差异, 缺乏理论剖析框架。为此, 本研究试图通过元分析对已有的研究进行定量综合分析, 以期进一步明晰各影响因素的作用大小及其之间的关系。**研究方法:** 使用中国知网、维普和万方数据库, 以“大学生”、“人际关系敏感”为关键词, 共检索文献 207 篇, 最终纳入 59 篇。纳入标准: (1) 人际关系敏感的测量为 SCL-90; (2) 同一影响因素的研究数量 2 项及以上; (3) 提供相关系数或可转化为 r 的参数, 如 t 、 p 等; (4) 未使用干预措施。本研究选取的影响因素包括人口学变量(性别、独生、专业、生源地、贫困、留守经历)、个体认知方式(使用 Frost 多维完美主义量表和特质应对方式问卷分别测量完美主义和应对方式)以及人格(使用 EPQ 测量), 使用 Comprehensive Meta-Analysis 3.0 软件中的随机效应模型, 选取效果量 r 进行分析。**研究结果:** (1) 人口学变量的结果显示, 性别、独生与大学生人际关系敏感呈显著相关, 其中女生、非独生子女得分更高; 与贫困呈显著正相关, 即贫困程度越高, 其人际关系越敏感; (2) 个体认知方式的结果显示, 大学生人际关系敏感与 Frost 多维完美主义量表维度的担心错误、疑虑性、父母期望和个人标准得分均呈显著正相关, 与条理性得分呈负相关; 与特质应对方式问卷的消极应对方式得分呈显著正相关, 积极应对方式得分呈显著负相关; (3) 人格的结果显示, 大学生人际关系敏感与精神质、神经质得分呈显著正相关, 与内外向得分呈显著负相关。**结论及建议:** (1) 性别、独生、贫困和人格等因素对大学生人际关系敏感有显著影响, 因此对女生、非独生子女、贫困生及内向、精神质和神经质得分较高的学生, 教师应予以更多积极关注; (2) 完美主义和应对方式属于个体认知方式, 教师可通过传授学生积极应对冲突、降低错误担忧和疑虑等心理辅导策略, 以及适当调整父母期望和个人标准来改善其人际关系敏感。

关键词 大学生, 人际关系敏感, 元分析, 影响因素

College students' interpersonal relationship sensitivity: A meta-analysis of its influencing factors

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Abstract: **Background:** Many researchers have conducted related studies on interpersonal sensitivity of college students, but no consistent results have been obtained. Some factors (such as gender, cognitive style) are different in the effect sizes and directions, and lack of theoretical analysis framework. Therefore, this study attempted to make a quantitative synthesis of existing studies with meta-analysis to further clarify the effect sizes and relationship between these factors. **Method:** Using "college students" and "interpersonal sensitivity" as the key words to search literatures in the CNKI, CQVIP and WAN-FANG databases, 207 literatures were searched and 59 literatures were included in the meta-analysis. The inclusion criteria were that: (1) Interpersonal sensitivity was measured by SCL-90; (2) More than 2 studies of the same influencing factor; (3) Provide correlation coefficients or parameters that can be transformed into r , such as t , p ; (4) No intervention was used. The research select influencing factors include demographic variables (i.e., gender, only-child, major, origin, poverty, left-behind experience), individual cognitive style (CFMPS and TCSQ were used to measure perfectionism and coping style, respectively) and personality (measured by the EPQ). The random effect model of Comprehensive Meta-Analysis 3.0 was used for analysis, and the effect size is r . **Results:** (1) The results of demographic variables found that interpersonal sensitivity was significantly correlated with gender and only-child, among which female students and the only-child students with higher scores; poverty was significantly positive correlated with interpersonal sensitivity, i.e., the higher the poverty degree, the more sensitive the interpersonal relationship. (2) The results of individual cognitive style showed that interpersonal sensitivity was significantly positive correlated with the score of worry error, doubt, parental expectation and personal standard, and negatively correlated with the score of organization. There was a significant positive correlation with the score of negative coping style, and a significant negative correlation with the score of positive coping style. (3) The results of personality showed that interpersonal sensitivity was positively correlated with the score of EPQ-P and EPQ-N, and negatively correlated with the score of EPQ-E. **Conclusion and Suggestions:** (1) Some factors such as gender, only-child, poverty and personality have significant influence on interpersonal sensitivity of college students. Therefore, teachers should pay more positive attention to female students, non-only-child, poor students and students with higher scores of introversion, psychoticism and neuroticism. (2) For the individual cognitive style, teachers can teach students some psychological counseling strategies to improve their interpersonal sensitivity, such as positive ways to deal with conflicts, reducing false worries and doubts, appropriately adjust parents' expectation and personal standards.

Keywords: College students, Interpersonal sensitivity, Meta-analysis, Influencing factors

“溢出”还是“特异”？上行社会比较对跨期决策的影响

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摘要 通过三个研究探讨了上行社会比较对跨期决策的影响，并发现了金钱领域跨期决策的特异效应。此外大量社会信息都有可能影响我们的决策结果，而这些上行社会比较大多都是被动、状态性的，本研究则希望进一步验证在主动的、特质性的层面是否有相似的结果。研究1通过问卷初步探讨了上行社会比较和跨期决策的影响，并发现相对剥夺感在两者间的中介作用；研究2通过实验室研究对上行社会比较对不同领域跨期决策的影响进行因果性推论，发现上行社会比较对跨期决策的影响仅限于金钱领域（域内），对食物、

环境等领域（域外）没有影响，即特异效应，并发现了特质性和状态性上行社会比较的交互作用；研究3通过单词评定和回忆任务试从不同角度进行探讨金钱领域的特异效应，发现比于没有启动上行社会比较的个体来说，那些进行启动了的个体对于金钱领域词汇（域内）表现出了更多的注意和记忆，但在非金钱领域（域外）没有发现这一现象，同时也发现了特质性和状态性上行社会比较的交互作用，即上行社会比较仅仅影响金钱领域的跨期决策，可能是个体在上行社会比较后对金钱的敏感性更强导致的。三个研究逐层递进，发现了上行社会比较也是跨期决策的影响因素之一，为未来社会治理及干预，从而改善个体跨期决策能力提供了一定的理论依据。

关键词 上行社会比较，跨期决策，溢出效应，特异效应

Spillover or Specificity ?

The impact of upward social comparison on Intertemporal decision

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Keywords: In this paper we explored the impact of upward social comparison on intertemporal decision, and discovered the specificity effects of intertemporal decision in the money field. In addition, a large amount of social information may affect our decision-making results, and most of these upward social comparisons are stateful. This study hopes to further verify whether there are similar results at the trait level. Study 1 preliminarily explores the influence of upward social comparison and intertemporal decision through questionnaires, and finds the mediating effect of relative deprivation between the two; Study 2 conducted a causal inference on the influence of upward social comparison on intertemporal decision in different fields through laboratory research, and found that the influence of upward social comparison on intertemporal decision is limited to the money domain (in-domain), but this influence has an impact on the food and environmental domains (out-of-domain) has no effect, that is specificity effect, and found the interaction of trait and state of upward social comparison; Study 3 explored the specificity effects of the money field from different perspectives through word assessment and recall tasks. We found that compared with the individuals who were not primed the upward social comparison, those individuals who were primed showed more attention and memory for the word of the money domain (in-domain), but this phenomenon was not found in the non-money domain (out-of-domain). At the same time, the interaction of trait and state of upward social comparisons has also been discovered. Because of the stronger sensitivity of individuals to money after the upward social comparison, upward social comparison only affects intertemporal decision in the monetary field. The three studies progressed step by step, and found that upward social comparison is also one of the influencing factors of intertemporal decision, providing a certain theoretical basis for future social governance and intervention, thereby improving individual intertemporal decision-making ability.

Keywords: Upward social comparison, Intertemporal decision, Spillover effect, Specificity effect

大学生相对剥夺感对网络欺负的影响： 反刍思维和道德推脱的作用

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摘 要 当代大学生是网络使用最频繁的一个群体，且大多数研究者关注相对剥夺感对于传统欺负行为的影响，因此本研究欲将传统攻击行为的研究进一步推广至网络欺负的层面，探讨大学生相对剥夺感对于网络欺负的影响及其作用机制，从而增加其普适性。本研究采用相对剥夺感量表、网络欺负量表、反刍思维量表以及道德推脱量表对 630 名大学生进行施测。结果表明：(1)相对剥夺感对于网络欺负有直接的显著正向影响，并间接通过反刍思维对网络欺负产生影响，即反刍思维起中介作用；(2)道德推脱可以调节这一中介作用的后

半路径, 以及相对剥夺感影响网络欺负的直接路径。具体来说, 高道德推脱水平时, 相对剥夺感和反刍思维均可以显著正向预测网络欺负行为, 但是在低道德推脱水平时, 相对剥夺感和反刍思维对网络欺负行为的预测均不显著。总之, 四者构成了一个有调节的中介模型。本研究的研究结果进一步印证了网络欺凌模型, 即相对剥夺感产生的消极情绪及认知体验, 会影响个体反刍思维的过程及结果, 当个体对反刍思维持续沉浸时, 会富有攻击性, 对这种攻击性行为正向的态度不断习得并强化, 最终进一步导致网络欺负行为的增加, 且这一过程中道德推脱起到了调节作用。该结果有助于了解网络欺负的影响因素, 从而加强未来的干预, 减少或改善网络欺负这一社会问题。

关键词 相对剥夺感, 网络欺负, 反刍思维, 道德推脱

The impact of relative deprivation of college students on cyberbullying:

The role of rumination and moral disengagement

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Abstract: Nowadays, college students are the group that uses the Internet most frequently, and most researchers pay attention to the influence of relative deprivation on traditional bullying behavior. This research intends to further extend the research of traditional aggressive behavior to the level of cyberbullying, thereby increasing its universality. This present study aimed to explore the relationship among relative deprivation, rumination, moral disengagement and cyberbullying, by surveying 630 college students with Relative Deprivation Scale, Rumination Scale, Cyberbullying Scale and Moral Disengagement Scale. The results showed that: (1) Relative deprivation had a significant direct effect on cyberbullying and rumination played a mediating role between them; (2) Moral disengagement moderated the relation between relative deprivation and cyberbullying students, and also moderated the relation between rumination and cyberbullying, that is, there was a significant positive relation between relative deprivation and cyberbullying or rumination and cyberbullying under the high moral disengagement level, however, there was a non-significant relation between relative deprivation and cyberbullying or rumination and cyberbullying under the low moral disengagement level. The results of this study further confirm The Barlett Gentile cyberbullying model, that is, the negative emotions and cognitive experience produced by the relative deprivation will affect the process and results of the individual's rumination. When the individual continues to be immersed in the rumination, the individual will be aggressive and negative. This positive attitude towards aggressive behavior is continuously learned and strengthened, which eventually leads to an increase in cyberbullying behavior, and moral disengagement plays a moderating role in this process. Research reveals the impact of relative deprivation on cyberbullying and its internal mechanism, which helps to understand the influencing factors of cyberbullying, so as to strengthen future intervention and reduce or improve the social problem of cyberbullying.

Keywords: Relative deprivation, Cyberbullying, Rumination, Moral disengagement

正负性情绪抑制加工对抑郁发作的预测作用

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摘要 背景: 认知理论推测负性情绪刺激的抑制损害可能是抑郁发作的核心机制。抑郁个体的负性情绪抑制特征, 及其对抑郁发作是否有预测作用尚不清楚。研究目的: 探讨抑郁当前发作、完全缓解以及从未有过抑郁发作的亚临床抑郁个体正、负性情绪抑制加工能力特征及差异, 该能力对抑郁发作的预测作用。

方法: 通过两阶段抑郁障碍病例筛查法, 从 7333 名大学生中筛选出: (1) 抑郁障碍 (n=41)、(2) 完全缓解 (n=34) 和 (3) 亚临床抑郁 (n=64), 完成词-面孔 Stroop 任务, 要求被试对叠加在情绪面孔上的情绪词进行反应, 并完成抑郁、焦虑量表。随后半年、一年完成临床访谈和追踪。情绪抑制加工能力通过情绪 Stroop

效应量衡量, 包括 (a) 促进效应 (相对于中性面孔, 一致的情绪面孔对反应的加快) 和 (b) 干扰效应 (相较于中性面孔, 冲突的情绪面孔对反应的干扰), 采用 logistic 回归分析该能力对抑郁发作史的判别、抑郁发作的预测。

结果: (1) 一般指标: (a) 情绪 Stroop 效应显著, 不一致条件下反应时变慢 ($F=33.63, p<0.001$), 正确率降低 ($F=26.11, p<0.001$); (b) 正常个体中出现的积极情绪偏向未观察到 ($F=2.11, P>0.05$); (c) 抑郁障碍组反应时显著较慢 ($F=96.08, p<0.001$)。 (2) 情绪 Stroop 效应: (a) 愉快词条件下促进效应差异边界显著 ($F=2.52, P=0.085$), (b) 愉快词条件下悲伤面孔干扰效应差异显著 ($F=3.96, p=0.021$); 两两比较提示, (a) 指标完全缓解组 ($31.63\text{ms} \pm 45.88$) 大于亚临床组 ($10.21\text{ms} \pm 46.35$), (b) 指标 (-10.12 ± 53.62) 小于亚临床组 (24.81 ± 54.45); 比较愉快词条件下反应时, 愉快词-中性面孔条件完全缓解组慢于亚临床组, 其他条件无显著差异。 (3) 判别和预测作用: (a) 愉快词条件下悲伤面孔干扰效应能识别有无抑郁发作史 ($OR=0.992, P=0.019$) (b) 悲伤词条件下愤怒面孔干扰效应可预测一年后的抑郁发作 ($OR=1.006, P=0.035$)。

结论: 抑郁个体的积极情绪加工缺失? ; 抑郁当前发作个体情绪抑制加工能力相对受损; 完全缓解个体对积极目标刺激的关注弱于亚临床个体, 抑制中性干扰刺激的能力降低; 负性情绪的抑制加工损害可预测抑郁的发作。

关键词 抑郁, 情绪抑制加工, 词-面孔 Stroop 范式

The Predictive Effect of Positive and Negative Emotion Inhibition Processing on Depressive Episode

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Abstract: Background: Cognitive theory speculates that the inhibition and control impairment of negative emotional stimuli may be the core mechanism of depressive episodes. However, the control characteristics of negative emotion inhibition in depressed individuals and whether it has a predictive effect on depressive episodes is still unclear. Purpose: To explore the characteristics and differences of positive and negative emotion inhibitory processing ability in depressed individuals with current onset, complete remission individuals and subclinical depressed individuals who never had a depressive episode, and the predictive effect of this ability on depressive episodes.

Methods: Through the two-stage depressive disorder case screening method, 7333 college students were screened out: (1) depressive disorder ($n=41$), (2) complete remission ($n=34$) and (3) subclinical depression ($n=64$). Participants are required to complete the word-face Stroop task, respond to emotional words superimposed on emotional faces, and complete the depression and anxiety scale. Complete the clinical interview and follow-up after half a year and one year later. Emotion suppression processing ability is measured by the amount of emotional Stroop effect, including (a) facilitation effect (compared to neutral faces, consistent emotional faces speed up the reaction) and (b) distraction effects (compared to neutral faces, conflicting emotional faces interfere with reactions). Logistic regression was used to analyze the ability of Emotion suppression processing ability to discriminate the history of depressive episodes and predict depressive episodes.

Results: (1) General indicators: (a) The emotional Stroop effect is significant, the reaction time becomes slower under inconsistent conditions ($F=33.63, p<0.001$), and the accuracy rate is reduced ($F=26.11, p<0.001$); (b) The positive emotional bias that occurs in healthy individuals has not been observed ($F=2.11, P>0.05$); (c) The reaction time of the depression group was significantly slower ($F=96.08, p<0.001$). (2) Emotional Stroop effect: (a) The facilitation effect is boundary significant different under the happy word condition ($F=2.52, P=0.085$), (b) The sad face distraction effect is significantly different under the happy word condition ($F=3.96, p=0.021$); pairwise comparison suggests that (a) index in the complete remission group ($31.63\text{ms} \pm 45.88$) is greater than the subclinical group ($10.21\text{ms} \pm 46.35$), (b) index (-10.12 ± 53.62) is less than the subclinical group (24.81 ± 54.45); Comparing the response time under the happy word condition, the happy word-neutral face condition complete remission group was

slower than the subclinical group, and there was no significant difference in other conditions. (3) Discrimination and prediction: (a) The distraction effect of the sad face under the happy word condition can identify the history of depression ($OR=0.992$, $P=0.019$) (b) The distraction effect of angry faces under the condition of sad words can predict a depressive episode one year later ($OR=1.006$, $P=0.035$).

Conclusion: Depressed individuals have a lack of positive emotional processing; individuals with current episodes of depression have relatively impaired emotional suppression processing capabilities. Completely remission individuals' attention to positive target stimuli is weaker than that of subclinical individuals, and their ability to inhibit neutral interference stimuli is reduced; the inhibitory processing damage of negative emotions can predict the onset of depression.

Keywords: Depression, Word-Face Stroop task, Emotional inhibition processing

自我控制与决策：自我损耗对决策行为的影响及补偿

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摘 要 个体决策过程涉及了许多复杂的高级认知活动，是多种信息共同加工后表现在行为上的结果。其中自我损耗对决策的影响已受到广大学者的关注。目前已有许多研究关注自我损耗与决策行为之间的关系，当个体处于自我损耗状态时，个体不会进行复杂的认知加工，心理能量大大减弱，个体自我控制能力下降，从而更倾向于直觉决策风格，其决策的理性程度下降。本文通过对国内外关于自我损耗与决策的相关研究文献进行整理和总结，归纳自我损耗的理论模型、现有研究范式、影响后效、心理机制及其他因素在自我损耗对决策行为影响的补偿作用。经过梳理分析，得出以下结论：（1）现有研究发现从自我损耗对决策的影响主要存在于：冲动决策、风险决策以及跨期决策当中。（2）现有研究发现积极情绪的诱发、自我肯定的启动、动机水平的激发以及榜样启动都能有效补偿自我损耗对决策行为的影响。（3）未来研究可增加一定时间间隔的追踪后测并结合眼动技术精确探索其作用时间以及探究自我损耗对不同决策情景的影响的一致性。（4）未来可基于资源分配理论、过程模型理论、机会成本理论进行研究。（5）未来研究不仅要控制情绪动机的影响，还应排除人格特质的影响并且扩展被试群体尝试进行跨文化研究。（6）未来研究应提高生态效度，结合VR技术模拟真实决策情景。

关键词 自我损耗，自我控制，决策，补偿

有无留守经历对大学生防御机制和焦虑的影响

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摘 要 目的：探究有无留守经历大学生的防御机制和焦虑是否存在差异。并探究防御机制和焦虑的关系，在有留守经历大学生中防御机制是否为焦虑的危险因素。**方法：**选取有留守经历被试 71 人，无留守经历大学生 200 人进行防御机制量表(Defense Style Questionnaire, DSQ)和焦虑自评表(Self-rating Anxiety Scale, SAS)，进行对比研究有无留守经历大学生焦虑和防御机制间的差异和防御机制对焦虑的影响。**结果：**有无留守经历大学生在焦虑和成熟防御方式上存在差异(焦虑： $t=6.848$ ；成熟防御机制： $t=2.689$ ， p 均 <0.01)。在防御方式的差异比较中有无留守经历大学生在防御方式中的幻想、压抑、升华、解除和期望上存在显著差异(依次为 $t=2.279$ ； $t=2.558$ ； $t=1.966$ ； $t=2.326$ ； $t=3.795$ ， p 均 <0.05)。在有留守经历大学生中，解除这一防御机制对焦虑存在显著正相关关系，并且解除是焦虑的预测因素($\beta=0.248$ ， $p<0.05$)。**结论：**留守经历对大学生焦虑和

成熟防御机制有影响,有留守经历的大学生越易焦虑,且成熟型防御机制使用较少。有无留守经历大学生使用防御机制的不同主要集中在幻想、压抑、升华、解除和期望这五种方式上。在防御机制和焦虑的关系上,大学生使用解除这一种防御机制是焦虑的危险因素。

关键词 留守经历,大学生,防御机制,焦虑

Effects of left behind experience on defense mechanism and anxiety of College Students

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Abstract: Objective: To explore whether there are differences in defense mechanism and anxiety among college students with or without left behind experience. And explore the relationship between defense mechanism and anxiety, and whether defense mechanism is a risk factor of anxiety among college students with left behind experience. Methods: 71 subjects with left behind experience and 200 college students without left behind experience were selected for Defense Style Questionnaire (DSQ) and self rating Anxiety Scale (SAS). The differences between anxiety and defense mechanism of college students with or without left behind experience and the influence of defense mechanism on anxiety were compared. Results: there were differences in anxiety and mature defense style between college students with and without left behind experience (anxiety: $t = 6.848$; Mature defense mechanism: $t = 2.689$, $p < 0.01$). In the comparison of the differences of defense styles, there are significant differences in fantasy, depression, sublimation, release and expectation of college students with or without left behind experience ($t = 2.279$ in turn; $t = 2.558$; $t = 1.966$; $t = 2.326$; $t = 3.795$, $p < 0.05$). Among the college students with left behind experience, the release of this defense mechanism has a significant positive correlation with anxiety, and release is a predictor of anxiety ($\beta = 0.248$, $p < 0.05$). Conclusion: left behind experience has an impact on College Students' anxiety and mature defense mechanism. College students with left behind experience are more likely to be anxious, and mature defense mechanism is less used. The differences of defense mechanisms used by college students with or without left behind experience mainly focus on five ways: fantasy, depression, sublimation, release and expectation. In the relationship between defense mechanism and anxiety, the use of this defense mechanism by college students is a risk factor of anxiety.

Keywords: left behind experience, college student, defense mechanism, anxious

大学生英语自我效能感与英语成绩的关系研究

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摘要 研究目的:对某高校大学生的英语自我效能感与英语成绩之间的关系进行调查研究,旨在理论上进一步丰富英语自我效能感与英语成绩的相关性研究,实践上更深刻地了解大学生的英语学习状况并有针对性地提出提高英语自我效能感的有效措施。

研究方法:研究主要采用心理测验法。选取某高校大学生300人,填写英语自我效能感量表,收回295份有效问卷(其中男生90人,女生205人;大一152人,大二143人)。该问卷主要涉及5个维度,即积极信念维度、消极信念维度、自我信念策略维度、方法应用策略维度和外部环境策略维度。通过相关分析和回归分析方法分析他们在性别、年级和专业特征上的英语自我效能感差异,以及英语自我效能感与英语成绩间的相关性。统计软件选用SPSS20.0。

研究结果:(1)大学生的英语自我效能感($p < 0.05$)和信念策略维度($p < 0.01$)在性别上呈差异显著,男生均低于女生;(2)大学生的积极信念维度($p < 0.05$)和方法应用策略维度($p < 0.05$)在年级上呈差异显著。

著,大二均高于大一;(3)大学生的英语自我效能感和各维度在专业上无显著差异;(4)大学生的英语自我效能感及各维度与英语成绩均呈显著正相关(P 值均 <0.001);(5)经逐步一元回归分析表明,英语学习主要受到英语自我效能感、信念策略和积极信念策略的影响(预测力分别为21.6%、15.2%、14.3%)。

研究结论:大学生的英语自我效能感及各维度对英语成绩具有积极的相关性。可以通过设置合理的学习目标,采用多样化的英语学习策略,营造积极的家庭环境,培养学生积极的归因方式和榜样示范鼓励大学生的途径来提高大学生的英语自我效能感。

关键词 大学生,英语自我效能感,英语成绩,关系研究

A Study on the Relationship between English Self-efficacy and English Achievement of College Students

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Abstract: Research purpose: For a university students' English self-efficacy and the relationship between the English study, aims to further enrich theoretically English self-efficacy and the correlation of English study, practice more deeply understand the status of the college students' English learning and puts forward effective measures to improve English self-efficacy.

Methods: Psychological test was adopted in this study.300 college students from a certain university were selected to fill in the English self-efficacy scale, and 295 valid questionnaires were collected (90 male students and 205 female students;152 as a freshman and 143 as a sophomore).The questionnaire mainly involves five dimensions, namely positive belief dimension, negative belief dimension, self-belief strategy dimension, method application strategy dimension and external environment strategy dimension. Correlation analysis and regression analysis were used to analyze their differences in English self-efficacy in terms of gender, grade and major characteristics, as well as the correlation between English self-efficacy and English performance. SPSS20.0 was used as the statistical software.

The results showed that:(1) College students' English self-efficacy ($p<0.05$) and belief strategy ($p<0.01$) there was a significant difference between male and female, and male was lower than female;(2)The positive belief dimension of college students ($p<0.05$) and method application strategy dimension ($p<0.05$) showed significant difference in grades, and sophomore was higher than freshman;(3)There is no significant difference in college students' English self-efficacy and various dimensions.(4)College students' English self-efficacy and its various dimensions are significantly positively correlated with their English scores ($P<0.001$);(5)The stepwise regression analysis shows that English learning is mainly influenced by English self-efficacy, belief strategy and positive belief strategy (the predictive power is 21.6%, 15.2% and 14.3%, respectively).

Conclusion: College students' English self-efficacy and various dimensions have a positive correlation with their English scores. It is suggested that students' English self-efficacy can be improved by setting reasonable learning goals, adopting diversified English learning strategies, creating a positive family environment, cultivating students' positive attribution style and encouraging students by example.

Keywords: college students, English self-efficacy, English achievement, relationship research

因子分析中先验方差对局部依赖性检测的影响

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摘要 在心理学、教育学和组织行为学等领域,研究者常用问卷方式测量个体的人格、智力等潜在变量。但由于问卷内容的设置(如,测量条目相似的表述)以及施测环境的局限(如,测试时间过短)等因素的影响,对样本数据建模时,不可避免会违反潜变量建模的局部独立性假设,即给定了潜变量的取值后,仍存在其他因素

导致条目存在相关关系,存在局部依赖性问题。贝叶斯结构方程模型(Bayesian Structural Equation Modeling, BSEM)的方法可以释放残差协方差矩阵非对角线元素严格为0的假设,为检测局部依赖性问题提供了思路,避免了传统使用修正指数(Modification Index, MI)时,模型容易过拟合、修正过程繁琐等一系列问题。目前关于BSEM检测局部依赖性的研究仍相当有限,针对局部依赖性问题,研究者通常对残差协方差参数设置逆Wishart分布,关于如何选择先验方差以及不同先验方差设置对参数估计结果的影响都有待进一步的探索。

本研究基于单因子验证性因子分析模型,通过蒙特卡洛模拟研究的方法,探究当数据类型为连续和二分时,在测量条目数量、样本量、因子载荷参数设置的不同条件下,针对残差协方差参数,不同先验方差的逆Wishart分布对BSEM检测不同程度的局部依赖性问题的影响。研究结果显示,对于连续数据,先验方差越大,局部依赖性检测的一类错误就越低;对于二分数数据,先验方差的设置主要影响真实存在局部依赖性问题的残差协方差参数的估计准确性。此外,两个实证研究的结果进一步具体展示和验证了模拟研究结果的有效性。本研究深入地探究了不同先验方差的BSEM模型在检测局部依赖性问题时的表现,并基于模拟研究的结果,针对不同的数据条件,为研究者在实际应用中的先验方差选择提供了一定的参考与建议。

关键词 局部依赖性问题,贝叶斯结构方程模型,残差协方差矩阵,逆Wishart分布

The Influence of Prior Variance on the Detection of Local Dependence in Factor Analysis

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Abstract: Questionnaires are often applied to measure individual's personality, intelligence, and other latent variable on the research fields of psychology, education and organization behavior. Confirmatory factor analysis (CFA) is often conducted to investigate the relationships between items in the questionnaire and the latent factors. Local independence is an essential assumption in latent variable modeling. But in reality, due to the settings of questionnaires' content and restriction of testing environment, there are other factors influencing the relations between items, which is referred as local dependence. Bayesian structural equation modeling (BSEM) is a newly developed method, which can be used to deal with local dependence. It avoids the problems caused by modification index, which is used to free strict restriction, such as overfitting and awkward model modifications. Inverse Wishart distribution is a commonly used prior for the covariance matrix. The research about how to select proper prior variances and the influence of different prior variances on the results of parameter estimation is still limited.

To explore the effects of different prior variances in detecting the different levels of local dependence, a series of simulation studies are conducted for continuous data and dichotomous data respectively under the one-factor model with different sample sizes, item numbers and factor loadings. To sum up, for continuous data, larger prior variance of residual covariance results in less Type I error in detecting the local dependence. And for dichotomous data, prior variance of residual covariance mainly affects the estimation accuracy of the residual covariance parameters with real local dependence. Two real data sets were analyzed to verify the simulation results again. In applied researches, different prior variances should be chosen cautiously according to different situations. The present study investigates the effect of BSEM with different prior variance in detecting different local dependence in depth, in the hope of providing a guidance for applied researchers.

Keywords: Local dependence, Bayesian structural equation modeling, Residual covariance matrix, Inverse Wishart distribution

急性高强度间歇运动对抑郁症状大学生的影响研究

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摘要 抑郁是目前全世界共同关心的公共卫生问题，是大学生常见的心理健康问题。大学生长期处于抑郁症状下，会导致工作效率下降、情绪低落、学习能力下降等，且易产生自杀等消极想法。运动相较于药物治疗，具有成本低、抗抑郁效果好的多靶点治疗效果。目前，长期运动对抑郁大学生的影响研究较多，但急性运动的实证研究相对较少。目的：通过急性高强度间歇运动，通过观察抑郁症状大学生实验前、后抑郁评分量表（SDS）得分及各脑区功率值的变化，以探究急性运动对抑郁症状大学生情绪及偏侧化的影响效果，以期为抑郁大学生进行长期运动提供依据。方法：采用抑郁自评量表（SDS）筛选出抑郁症状大学生学生共 50 名，随机分为实验组（25 人）和对照组（25 人），实验组进行急性高强度间歇跑台运动（90%HRmax，高强度 2min；70%HRmax 慢跑或快走 3min；交替 4 组，共 20min），对照组不进行任何运动干预，分别采集实验前、后两组大学生 SDS 量表评分及静息态脑电地形图，比较运动干预前后得分及脑区功率值变化。结果：急性高强度间歇运动对抑郁症状大学生抑郁评分降低存在显著效益（ $t=4.03$ ， $p<0.01$ ），对照组无显著性差异（ $t=1.69$ ， $p=0.11$ ）；抑郁症状大学生大脑左侧 α 频段功率值下降，右侧 α 频段功率值上升，额叶左右偏侧化得到改善； β 频段总功率值下降； θ 频段功率值下降，左侧顶区和枕区功率值上升。结论：急性高强度间歇运动可有效改善大学生的抑郁症状，且能诱导大脑正性情绪的激发，降低负性情绪的加工。

关键词 抑郁症状，大学生，急性高强度间歇运动，脑电

Study on the effect of acute high-intensity interval exercise on college students with depressive symptoms

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Abstract: Depression is currently a public health problem of common concern all over the world, and a common mental health problem for college students. Undergraduates suffering from depressive symptoms for a long time can lead to decreased work efficiency, depression, decreased learning ability, etc., and are prone to negative thoughts such as suicide. Compared with drug therapy, exercise has low cost and good antidepressant effect. At present, there are many studies on the effect of long-term exercise on depressed college students, but there are relatively few empirical studies on acute exercise. Purpose: Through acute high-intensity intermittent exercise, by observing the changes in the Depression Rating Scale (SDS) scores and the power values of each brain area of college students with depressive symptoms before and after the experiment, to explore the effect of acute exercise on the mood and lateralization of college students with depressive symptoms. The effect is expected to provide a basis for long-term exercise for depressed college students. Method: A total of 50 college students with depressive symptoms were selected using the Self-Rating Depression Scale (SDS), and they were randomly divided into an experimental group (25 students) and a control group (25 students). The experimental group performed acute high-intensity intermittent treadmill exercises (90 %HRmax, high-intensity 2min; 70%HRmax jog or brisk walking for 3min; alternate 4 groups, 20min in total), the control group did not undergo any exercise intervention, and the SDS scale scores and resting EEG of the two groups of college students were collected before and after the experiment. Topographic maps, compare the scores and brain power changes before and after exercise intervention. Results: Acute high-intensity interval exercise has a significant effect on the reduction of depression scores of college students with depressive symptoms ($t=4.03$, $p<0.01$), but there is no significant difference in the control group ($t=1.69$, $p=0.11$); the left side of the brain of college students with depressive symptoms is α . The power value of the frequency band decreases, and the power value of the alpha band on the rear side increases, and the lateralization of the frontal lobe is improved; the total power value of the β band decreases; the power value of the θ band decreases, and the power value of the left top and occipital regions increases. Conclusion: Acute high-intensity interval exercise can effectively improve the depressive symptoms of college students, and can induce the stimulation of positive emotions in the brain and reduce the processing of negative emotions.

Keywords: Depressive symptoms, college students, acute high-intensity intermittent exercise, EEG

发展性阅读障碍儿童 Stroop 任务的事件相关电位 (ERP) 研究

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摘要 目的: 发展性阅读障碍 (developmental dyslexia, 简称 DD) 是由神经系统问题导致的特殊的学习障碍, 其主要表现为在字词的解码、阅读和拼写方面的困难。以前的研究发现了 DD 儿童的抑制性缺陷, 但我们对 DD 儿童 (尤其是对汉语发展性阅读障碍儿童) 的神经机制了解较少。因此我们采用双盲对照试验, 研究 DD 儿童和典型发育儿童在进行 Stroop 颜色词测试时的 ERP 成分的差异。方法: 采用瑞文推理测验、小学生识字量测验、《学习困难筛查量表》和《儿童阅读障碍量表》筛查 17 名 DD 儿童 (其中 9 名男童, 8 名女童, 平均年龄为 11.41 ± 0.93 岁) 组成实验组; 在同一所学校选取 17 名典型发育儿童 (其中 9 名男童, 8 名女童, 平均年龄为 11.47 ± 0.52 岁) 作为控制组。选用 2 (被试) $\times$ 2 (刺激类型) 混合实验设计, 分别进行 Stroop 任务 (共 240 个试次, 其中色词一致任务为 120 个试次, 色词不一致任务为 120 个试次) 同时记录行为数据及脑电 EEG 数据。结果: 行为数据显示两组儿童在 Stroop 任务上的反应时和正确率存在显著差异, 控制组的正确率高于实验组, 控制组的反应时短于实验组。在 ERP 结果中, DD 儿童在一致的试次上显示较大的 P2 (Fz、FCz、Cz) 和 P3b (CPz、Pz、Oz) 波幅, 而典型发育儿童在不一致的试次上显示较大的 P2 和 P3b 波幅, 两组儿童在 Stroop 任务上显示出了相反的大脑激活模式。结论: 发展性阅读障碍儿童的抑制能力较差, 这种较差的抑制能力可能与他们的大脑激活模式异常有关。

关键词 发展性阅读障碍, Stroop, 事件相关电位, 抑制功能

An event-related potential (ERP) study of the Stroop task in children with developmental dyslexia

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Abstract: OBJECTIVE: Developmental dyslexia (DD) is a specific learning disability caused by neurological problems that manifest as difficulties in word decoding, reading, and spelling. Previous studies have identified inhibitory deficits in DD children, but we know less about the neural mechanisms of DD children (especially in children with developmental dyslexia in Chinese). We therefore used a double-blind controlled trial to investigate the differences in ERP components between DD children and typically developing children when performing the Stroop Color Word Test. METHODS: Seventeen DD children (9 boys and 8 girls, mean age 11.41 ± 0.93 years) were screened by the Raven's Standard Progressive Matrices, the Elementary School Literacy Test, the Pupil Rating Scale Revised Screening for Learning Disabilities (PRS), and the Dyslexia Checklist for Chinese Children (DCCC) as the experimental group; 17 typically developing children (9 boys and 8 girls, mean age 11.47 ± 0.52 years) as the control group. A mixed experimental design of 2 (subjects) $\times$ 2 (stimulus types) was selected, and the Stroop test was performed separately (a total of 240 trials, including 120 congruence trials and 120 incongruence trials.) Behavioral data and EEG data were also recorded. RESULTS: The behavioral data showed significant differences in response time and accuracy between the two groups on the Stroop test, with typically developing children having a higher accuracy and shorter response time than DD children. In ERP results, DD children showed larger P2 (Fz, FCz, Cz) and P3b (CPz, Pz, Oz) waveforms on the congruence trials, whereas typically developing children showed larger P2 and P3b waveforms on the incongruence trials, and the two groups showed opposite patterns of brain activation on

the Stroop task. CONCLUSION: DD children have poor inhibitory function, and this poor inhibition may be related to their abnormal brain activation patterns.

Keywords: developmental dyslexia, Stroop, event-related potentials, inhibitory function

成长型思维对银行职工心理健康的影响：工作激情的中介效应

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摘 要 新冠肺炎（COVID-19）是一次重大突发性公共卫生事件，除了对人的躯体健康造成的巨大威胁外，也会对人的心理健康造成不同程度的影响。疫情常态化使银行职工长期处于慢性应激状态，严重影响其心理健康。成长型思维是影响个体心理健康的关键要素，具有成长型思维的个体在面对挫折或挑战时，具有更强的恢复性。员工的心理健康可能也与工作激情有关，企业员工全身心投入其负责的工作任务中，可有效缓解自身的心理健康。本研究将探讨工作投入、成长型思维对银行员工心理健康的影响。

采用整体抽样的方法，选取中国人民银行湖北省分行的 1648 名员工为对象，进行问卷调查。平均年龄 42.7 岁，其中疫情期间本人感染新冠肺炎 12 名，家人感染新冠肺炎 16 名。问卷主要包含《思维模式量表》、《工作投入度量表》和《心理健康量表》，使用 Spss、Mplus 软件对数据进行整理分析。

研究表明：（1）疫情期间本人感染新冠肺炎和疫情期间家人感染新冠肺炎的员工心理健康水平显著低于普通员工。（2）心理健康、工作投入和思维模式三个变量之间存在显著相关关系。其中心理健康与工作投入存在显著正相关（ $r=0.457$, $p<0.01$ ）；思维模式与心理健康（ $r=-0.384$, $p<0.01$ ）和工作投入（ $r=-0.435$, $p<0.01$ ）存在显著负相关。（3）工作投入的子维度工作热情在思维模式与心理健康之间起部分中介作用，即思维模式既可以直接影响银行员工的心理健康，也通过工作热情对银行员工心理健康产生影响。

企业管理者注重员工心理健康，可以从增加工作热情及培养成长型思维模式来促进员工的心理健康，提升企业凝聚竞争力。

关键词 银行职工，心理健康，成长型思维，工作激情

The Influence of Growth Mindset on the Mental Health of Bank Employees: The Mediating Effect of Work Passion

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Abstract: Covid-19 is a major public health emergency. In addition to the great threat to people's physical health, it will also have varying degrees of impact on people's mental health. The normalization of the epidemic situation makes bank employees in a state of chronic stress for a long time, which seriously affects their mental health. Growth Mindset is a key element that affects an individual's mental health. Individuals with Growth Mindset are more resilient when faced with setbacks or challenges. The mental health of employees may also be related to their work passion. Employees of an enterprise can devote themselves to their work tasks, which can effectively relieve their mental health. This research will explore the impact of work engagement and growth-oriented thinking on the mental health of bank employees.

Using the overall sampling method, 1648 employees of the Hubei branch of the People's Bank of China were selected as subjects to conduct a questionnaire survey. The average age is 42.7 years old. During the epidemic, 12 people were infected with new coronary pneumonia and 16 from their family members were infected with new coronary pneumonia. The questionnaire mainly includes the "Thinking Mode Scale", "Work Involvement Scale" and "Mental Health Scale". The data are sorted and analyzed using SPSS and Mplus software.

Studies have shown that: (1) The mental health of employees who were infected with COVID-19 during the epidemic and their family members were infected with COVID-19 during the epidemic was significantly lower than

that of ordinary employees. (2) There is a significant correlation between the three variables of mental health, work engagement and thinking mode. Among them, mental health is significantly positively correlated with work engagement ($r=0.457$, $p<0.01$); thinking patterns are significantly correlated with mental health ($r=-0.384$, $p<0.01$) and work engagement ($r=-0.435$, $p<0.01$) Negative correlation. (3) The sub-dimension of work engagement. Work enthusiasm plays a part of the mediating role between thinking mode and mental health. That is, thinking mode can directly affect the mental health of bank employees, and it can also affect the mental health of bank employees through work passion.

Business managers pay attention to the mental health of employees. They can increase their work enthusiasm and cultivate a growth mindset to promote the mental health of employees and enhance the company's cohesive competitiveness.

Keywords: Bank employee, mental health, growth mindset, work passion

大学生人格特征与学业拖延的关系：手机依赖的中介作用

摘要 目的:调查当代大学生手机依赖和学业拖延的现状,探讨大学生人格特质、手机依赖及学业拖延三者之间的关系,并进一步研究手机依赖在人格特质对学业拖延的中介效应。**方法:**采用中国“大五”人格问卷简版(CBF-PI-B)、手机依赖指数量表(MPAI)和Aitken学业拖延量表(API)对河北省内某高校大学生以班级为单位进行整体施测。**结果:**本次共调查共收回问卷455份,男性182例,女性273例,均为大一到大四的在校生,其中,78.02%的大学生表现出手机依赖的倾向,手机依赖平均分为 46.09 ± 0.461 ,学业拖延的平均分为 50.03 ± 0.381 ,其中,手机依赖和学业拖延分别在在性别(50.15 ± 0.636 vs 49.67 ± 0.466) (51.29 ± 0.656 vs 50.37 ± 0.461)、独生子女(50.37 ± 0.658 vs 49.62 ± 0.462)、(50.48 ± 0.713 vs 50.88 ± 0.441)生源地(50.55 ± 0.631 vs 449.38 ± 0.466) (50.01 ± 0.661 vs 51.30 ± 0.439)三个因素上差异不显著($P>0.05$),在专业方面差异显著,手机依赖和学业拖延方面,文史均显著高于理工和医学(49.56 ± 1.277 vs 45.17 ± 0.913 vs 45.74 ± 0.579) (53.39 ± 1.013 vs 50.71 ± 0.788 vs 50.23 ± 0.477) ($P<0.05$);手机依赖和学业拖延神经质以及宜人性维度存在显著正相关(均 $P<0.05$),其中,具有手机依赖倾向的大学生在学业拖延和神经质维度得分显著高于非手机依赖组(均 $P<0.05$);学业拖延和神经质维度存在显著正相关($P<0.05$),学业拖延与宜人性、严谨性、开放性、外向性维度存在显著负相关(均 $P<0.05$)。手机依赖在神经质对学业拖延的关系中起完全中介作用,在严谨性对学业拖延的关系中起部分中介作用,中介效应为2.2%。**结论:**(1)手机依赖在神经质维度对学业拖延的关系中起完全中介作用。(2)手机依赖在严谨性维度对学业拖延的关系中起部分中介作用。

关键词 人格特质,手机依赖,学业拖延,大学生

The relationship between College students' Personality characteristics and academic procrastination: the mediating role of Mobile phone dependence

Abstract: Objective: To investigate the current situation of mobile phone addiction and academic procrastination among contemporary college students, explore the relationship among personality traits, mobile phone addiction and academic procrastination, and further study the mediating effect of mobile phone addiction on personality traits on academic procrastination. **Methods:** The Chinese "Big Five" Personality Questionnaire (CBF-PI-B), the Mobile Phone addiction Index (MPAI) and the Aitken Academic Prohibition Scale (API) were used to measure the students in a college in Hebei Province. **Results:** A total of 455 questionnaires were collected in this survey, including 182 males and 273 females, all of whom were freshmen to seniors. Among them, 78.02% of college students showed a tendency to rely on mobile phones, with an average score of 46.09 ± 0.461 for mobile phone addiction and 50.03 ± 0.381 for academic delay. Mobile phone addiction and academic procrastination were significantly higher in gender (50.15 ± 0.636) Vs 49.67 ± 0.466) (51.29 ± 0.656 vs 50.37 ± 0.461), the only child (50.37 ± 0.658 vs 49.62 ± 0.462), (50.48 ± 0.713 vs 50.88 ± 0.441), the place of origin (50.55 ± 0.631) Vs 449.38 ± 0.466) (50.01 ± 0.661 vs

51.30±0.439), there was no significant difference in the three factors ($P>0.05$), there was significant difference in the major, mobile phone dependence and academic procrastination, Literature and history were significantly higher than science and technology (49.56±1.277 vs45.17±0.913 vs45.74±0.579) and science and medicine (53.39±1.013vs50.71±0.788 vs50.23±0.477) ($P<0.05$). There was a significant positive correlation between mobile phone addiction and academic procrastination, neuroticism and agreeability (all $P<0.05$). The scores of academic procrastination and neuroticism of college students with mobile phone addiction tendency were significantly higher than those of non-mobile phone addiction group (all $P<0.05$). There was a significant positive correlation between academic procrastination and neuroticism ($P<0.05$), and a significant negative correlation between academic procrastination and agreeableness, conscientiousness, openness and extraversion (all $P<0.05$). Mobile phone addiction was a complete mediator for neuroticism and a partial mediator for conscientiousness, with a mediating effect of 2.2%. **Conclusion:** (1) Mobile phone addiction was a complete mediator in the relationship between neuroticism and academic procrastination. (2) Mobile phone addiction played a partial mediating role in the relationship between conscientiousness and academic procrastination.

Keywords: Personality characteristics, Academic procrastination, Mobile phone addiction, College students

心理健康素养与积极应对方式的关系：有调节的中介

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摘 要 目的: 近年来, 心理健康素养的议题在国家政策层面和学术探讨的层面得到了广泛的关注。与此同时, 之前的研究提示, 心理健康素养与其他变量之间的关系研究较少; 在维持和促进心理健康过程中, 哪些变量发挥了调节或中介作用, 作用效果如何, 有待进一步探讨。因此, 结合国内外相关研究进展, 本文旨在探索心理弹性在心理健康素养与积极应对方式之间的中介作用, 以及性别在其中起到的调节作用。方法: 采用整群抽样法, 以武汉某高校 10579 名大学生和研究生为研究对象, 使用一般人口学资料调查问卷、国民心理健康素养问卷、简易应对方式量表、Connor-Davidson 心理弹性量表中文版进行问卷调查, 通过 Mplus8.3 构建结构方程模型。结果: ①男女两性在心理健康素养、心理弹性和积极应对方式方面均存在显著差异。②心理健康素养与心理弹性、积极应对方式呈显著正相关, 心理弹性与积极应对方式呈显著正相关。③心理健康素养显著正向预测积极应对方式; 心理弹性在心理健康素养与积极应对方式之间起部分中介作用, 中介效应占总效应的比重为 55.56%; 性别在心理健康素养→心理弹性的路径中起调节作用, 相比于男性, 心理健康素养的提升能更好地提升女性的心理弹性。结论: 心理健康素养既能直接影响积极应对方式, 也能通过提升心理弹性间接作用于积极应对方式; 该中介模型存在显著的性别差异, 未来的心理健康教育工作应对男性有所侧重。**关键词** 心理健康素养, 应对方式, 心理弹性, 结构方程模型

The Relationship between Mental Health Literacy and Positive Coping Style: Moderated Mediating Effect

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Abstract: Objective: In recent years, the issue of mental health literacy has been widely concerned both in national policy and in academic discussions. However, few previous studies focus on the relationship between mental health literacy and other factors. In the process of maintaining and promoting mental health, which factor plays a moderating or mediating role, and what the effect is, remains to be further explored. Therefore, based on relevant research, this paper aims to explore the mediating role of resilience between mental health literacy and positive

coping style, and the differences caused by gender. Method: By using cluster-sampling method, 10579 college students and postgraduates from a university in Wuhan were collected. The structural equation model was constructed by means of MPLUS8.3, using general demographic questionnaire, National Mental Health Literacy Questionnaire, Simple Coping Style Scale and Connor-Davidson Resilience Scale. Results: ① There are significant differences between men and women in mental health literacy, resilience and positive coping style. ② Mental health literacy is positively correlated with resilience and positive coping style, and resilience is positively correlated with positive coping style. ③ Mental health literacy significantly positively predicts positive coping style. Resilience partially mediates the relationship between mental health literacy and positive coping style, and the mediating effect accounts for 55.56% of the total effect. Gender plays a moderating role in the path from mental health literacy to resilience. Compared with men, the promotion of mental health literacy can better promote women's resilience. Conclusion: Mental health literacy can not only directly affect positive coping style, but also indirectly affect positive coping styles by improving resilience. There are significant gender differences in this model, and the future work of mental health education should focus on men.

Keywords: mental health literacy, coping style, resilience, structural equation model

陶行知教育理论在心理学方向的应用

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摘要 陶行知的教育理论一直在教育学当中被广泛的探讨与实践, 且收获颇丰, 具有现实意义。从近些年各大高校尤其是各大名校频发的自伤及自杀事假, 以及居高不下的抑郁现状来看, “空心病”是当下教育及心理学科所面临的巨大挑战。“空心病”的形成与社会及经济快速发展, 学校及家庭教育模式没有及时根据社会现状做出调整, 导致学生主体情感需要及学习根本目标及意义模糊或缺失息息相关, 这就要求教育工作者必须重新考虑教育的模式要符合当下社会的需求。陶行知在 1945 年发表的《创造的社会教育论纲》, 曾提出“社会教育与学校教育要打成一片”, 但这一理论在当时并未引起重视。从社会需要的角度出发, 探讨学习的意义和目的, 是解决“空心病”的有效手段。这就要求我们从社会心理学及心理学的基础相关理论来探讨陶行知教育理论符合现代层面的应用方法与理论意义, 并且对于中国本土教育理论的科学化和学科交叉的应用有着重要的影响。本文将从基础心理学中主要的四大流派理论, 行为主义、精神分析、认知心理以及人本主义的主要理论, 以及社会心理学层面班杜拉的相关学习理论, 结合陶行知的社会教育论及社会教育论, 探讨陶行知教育理论的可行性及应用, 旨在更好的使心理学与教育学相结合, 提高教育质量与心理应用。

关键词 陶行知, 空心病, 社会教育, 学科交叉, 心理应用

Application of Tao Xingzhi's educational theory in psychology

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Abstract: Tao Xingzhi's educational theory has been widely discussed and practiced in pedagogy, and it has a lot of harvest and practical significance. In recent years, the frequent NSSI, suicide and personal leave in universities, especially in prestigious universities, as well as the current situation of high depression, "hollow disease" is the biggest challenge facing education and psychology. The formation of the hollow "disease" and social and economic rapid development, school and family education mode without timely according to the situation of social adjustment, cause the students emotional needs and learning fundamental goal and the significance of fuzzy or missing, this requires education workers must reconsider education mode to conform to the current needs of society. Tao Xingzhi proposed that "social education and school education should be integrated" in his "Outline of Creative Social Education" published in 1945, but this theory did not attract attention at that time. To explore the meaning and purpose of learning from the perspective of social needs is an effective means to solve the "hollow disease". This requires us to explore the application method and theoretical significance of Tao Xingzhi's education theory in

accordance with the modern level from the basic theories of social psychology and psychology, and has an important impact on the scientific and interdisciplinary application of Chinese local education theory. This article will mainly from the basic psychology of four schools theory, behaviorism, psychoanalysis, cognitive psychology, and the main theory of humanism, and the level of social psychology bandura relevant learning theory, combined with the tao xingzhi's life education deals with society, so to explore the feasibility and application of tao's education theory, aims to better make the combination of psychology and pedagogy, Improving the quality of education and psychological application.

Keywords: Tao Xingzhi, Hollow disease, Social education, Interdisciplinary, Psychological application

善良人格对择偶偏好的影响： 社会支配倾向和矛盾性别偏见的链式中介作用

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摘 要 人格在择偶中被认为是最重要的因素之一，人们对人格特质的重视也逐年呈上升趋势。同类匹配理论认为个体在择偶中更容易选择与自己相似的伴侣，但研究大多集中于外部因素，少有关于择偶中人格方面的研究。本研究拟在同类匹配理论背景下探讨中国人善良人格对择偶个性偏好的影响，并考察社会支配倾向和矛盾性别偏见的中介作用机制。以川渝等地八所高校共 1537 名在校大学生为研究对象，其中男大学生 395 人，女大学生 1142 人；文史类大学生 822 人，理工类大学生 715 人；独生子女 647 人，非独生子女 890 人；生源是城市 719 人，非城市 818 人，并使用中国人善良人格量表、择偶个性偏好量表、社会支配倾向量表、矛盾性别偏见量表进行问卷调查。结果发现，中国人善良人格、择偶个性偏好、社会支配倾向、矛盾性别偏见两两显著相关。中国人善良人格可以显著预测择偶个性偏好，也可以通过社会支配倾向和矛盾性别偏见的链式中介作用预测择偶个性偏好。个体在择偶中对个性的重视程度受到自身特质的影响：中国人善良特质越高，其在择偶中对伴侣个性就越重视；且个体的择偶个性偏好也受到社会支配倾向和矛盾性别偏见的影响，丰富了同类匹配理论中关于择偶中人格特质相似性的影响机制，为未来关于人格和择偶之间研究提供了实证基础。

关键词 善良人格，社会支配倾向，矛盾性别偏见，择偶个性偏好

The Impact of Virtuous Personality on University Students ' Personality Dimension of Mate Preferences: Chain Mediating Effect of Social Dominance Orientation and Ambivalent Sexism

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Abstract: Personality is considered to be one of the most important factors in mate preference, and people's attention to personality traits is also increasing year by year. Similar matching theory believes that individuals are more likely to choose partners similar to themselves in mate preference, but most studies focus on external factors, and there are few studies on personality in mate preference. This study intends to explore the impact of Chinese virtuous personality on mate preference under the background of similar matching theory, and examine the mediating mechanism of social dominance orientation and ambivalent sexism. A total of 1537 college students from eight universities in Sichuan and Chongqing were studied, including 395 males and 1142 females. 822 students majoring in arts and 715 students majoring in science. Only child 647, non-only child 890. The Chinese Virtuous Personality Scale, Personality Dimension of Human Mate Preferences Scale, Social Dominance Orientation Scale and Ambivalent Sexism Inventory were used for questionnaire survey. The results show that Chinese virtuous personality, personality dimension of human mate preferences, social domination orientation and ambivalent sexism are

significantly correlated. Chinese virtuous personality can significantly predict personality dimension of human mate preferences, and can also predict personality dimension of human mate preferences through the chain mediating effect of social dominance orientation and ambivalent sexism. Individuals' attention to personality in mate selection is affected by their own characteristics: the higher the Chinese virtuous personality, the more attention they pay to partner personality in mate preference. The individual's personality preference is also affected by social dominance orientation and ambivalent sexism, which enriches the influence mechanism of personality traits similarity in mate selection in similar matching theory, and provides an empirical basis for future research on personality and mate preference.

Keywords: Chinese virtuous personality, Social dominance orientation, Ambivalent sexism, Personality dimension of mate preferences

迎难而上还是贬低目标？ 高低自我威胁情境下自尊和感恩对预期幸福的影响机制

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摘要 在与其他人共同面对未来目标时，人们是倾向于像阿 Q 一样运用“精神胜利法”来自我安慰嘲弄、贬低可能无法实现的未来目标？还是“得不到的永远在骚动”、“物以稀为贵”，迎难而上、目标越难以实现越能增加这一目标的预期价值？

幸福是个“比较级”，根据社会比较理论，现实中缺少自我评价的标准时，个体倾向于通过与相似他人进行比较来减少不确定感。根据认知失调理论，态度与行为不一致时会引起个体的心理紧张，即自我受到威胁的一种体现，即使比较对象在特定属性上与自我相似，竞争感和比较对象隐含的标准也可能使个体倾向于关注自我与比较对象之间的能力差异，使个体知觉到自我与标准是相异的，从而引发自我威胁。个体在不同程度的自我威胁下对自我价值的评估、对社会和他人恩惠的感知以及对完成未来目标的预期幸福并不会完全一致，因此高低自我威胁情境下自尊、感恩和预期幸福会有哪些差异？产生这些差异的机制又是什么？

本文通过 2 个研究探讨高低自我威胁情境下个体对未来目标的评价以及自尊和感恩对预期幸福的影响机制。研究一通过错误反馈操纵自我威胁，进行 2（错误反馈情境：高成绩、低成绩）×3（预期幸福水平：较高、中等、较低）列联表的卡方检验，结果发现：低自我威胁情境下，个体会保持对未来目标的高评价，并且对难度的感知与完成任务后的预期幸福成正比；研究二对在高低自我威胁情境下分别通过虚拟的智力测验成绩反馈操纵自我威胁，结果发现：（1）高自我威胁情境下，个体对于难度的感知与自身成绩不相关，而低自我威胁情境下对难度的感知与自身成绩显著负相关；（2）高自我威胁情境下，自尊在错误反馈与预期幸福之间起中介作用、感恩能够调节“错误反馈-自尊-预期幸福”中介机制的前半路径，而低自我威胁情境下不存在自尊的中介作用和感恩的调节作用。上述结果为认识高低自我威胁情境下自尊和感恩对预期幸福的影响机制，并在此基础上探究如何摆脱社会比较带来的认知失调提供了新的证据和思路。

关键词 自我威胁，社会比较，预期幸福，自尊，感恩

Rise to the challenge or belittle the goal? The effect mechanism of self-esteem and Gratitude on expected happiness in high and low self-threat situations

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Abstract: When facing future goals with others, do people tend to use the Mr.Q spirit-satisfied method to comfort themselves, ridicule, and belittle future goals that may not be achieved? Or "can't get forever in turmoil", "A thing is valued if it is rare.", the more difficult to achieve the goal can increase the expected value of this goal?

Happiness comes from comparison. According to social comparison theory, when there is no standard for self-evaluation in reality, individuals tend to reduce their uncertainty by comparing themselves with others who are similar to them. According to the theory of cognitive dissonance, the inconsistent attitude and behavior can cause individual psychological tension. Even if more objects on the specific properties similar to self, implied in the sense of competition and comparative object standard might make individuals tend to focus on ability differences between self and comparative object, make the individual perceived self and standard is different, which can lead to self-threat. Under different levels of self-threat, individuals' assessment of self-worth, their perception of social and other people's benefits, and their expected happiness to achieve future goals are not completely consistent. So what are the differences in self-esteem, gratitude, and expected happiness between high and low self-threat situations? What are the mechanisms that produce these differences?

In this study, two studies were conducted to investigate the effects of self-esteem and gratitude on expected happiness in high and low self-threat situations. The results of study 1 indicated that under the low self threat situation, individuals keep goal for the future high evaluation, and the perceived difficulty is proportional to the expected after happiness. The results of study 2 indicated that (1) In the high self-threat situation, the perception of difficulty was not correlated with the individual's own achievement, while in the low self-threat situation, the perception of difficulty was significantly negatively correlated with the individual's own achievement; (2) In the high self-threat situation, Self-esteem mediated the association between error feedback and predicted happiness, and gratitude moderated the first half of the "error feedback - self-esteem - predicted happiness" mediation, while in the low self-threat situation, there is no such effects. These results provide new evidence and ideas for understanding the mechanism of self-esteem and gratitude on expected happiness and exploring how to get rid of cognitive dissonance caused by social comparison.

Keywords: Self-threat, Social comparison, Predicted happiness, Self-esteem, Gratitude

The effect of sensation seeking on pedestrians crossing in a VR street: A developmental perspective

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Abstract: The relationship between sensation seeking and risk-taking behavior has been generally confirmed. However, it still keeps unknown about what is the effect of sensation seeking on pedestrian behaviors and whether there is consistency across ages. This study explored the effects of sensation seeking on pedestrian crossing among children, adolescents and adults. 209 children (10-13 years old), adolescents (14-17 years old) and adults (20-24 years old) with high and low level of sensation seeking were selected according to their sensation seeking scores. A 3 (age groups: children, adolescents, adults) $\times$ 2 (sensation seeking groups: high, low) $\times$ 2 (vehicle speed: fast, slow) $\times$ 2 (vehicle distance: far, near) mixed experimental design was used. The dependent variables were the decision-making and behaviors of crossing in the virtual traffic situation. The results showed that children's start delay was significantly longer than that of adults and adolescents. Children returned back more frequently when vehicles were travelling fast while adolescents and adults returned more frequently when vehicles were travelling slowly. Children low in sensation seeking missed more opportunities than adolescents and adults when the vehicles traveled quickly; adolescents high in sensation seeking missed more opportunities than that of children and adults when vehicles were travelling slowly; regardless of the speed of the vehicle, pedestrians low in sensation seeking tended to miss more opportunities than those high in sensation seeking; children missed more opportunities to cross when vehicles were travelling quickly, while adolescents and adults missed more opportunities to cross when the vehicles were travelling slowly. Adolescents low in sensation seeking ran more often than those who high in sensation seeking, no matter when vehicles were travelling quickly or slowly; children ran more frequently when vehicles were travelling fast than

were travelling slowly; adults low in sensation seeking ran more often when they faced vehicles travelling more slowly than when they faced vehicles travelling more quickly. In high sensation seeking group, adolescents were nearly hit more frequently than children when the vehicles travelled quickly from close distance apart, and adolescents and adults suffered more nearly hits in this traffic situation than when the vehicles travelled slowly from close distance apart, while children high in sensation seeking suffered more nearly hits when the vehicles travelled quickly further apart than when the vehicles travelled slowly at greater distance apart. Adolescents were more likely to be hit than children and adults, adolescents high in sensation seeking were hit more frequently than those low in sensation seeking. The conclusions are as follows: pedestrian's skill improves with age increasing, and the effect of sensation seeking on pedestrian behaviors across age groups was different. Sensation seeking level would have more significant effect on children and adolescents' pedestrian behavior, but has little effect on adults.

Keywords: Pedestrians, Crossing the road, Sensation seeking, Development, Virtual reality technology

罪犯自杀的内隐态度测量及干预

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摘要 基于罪犯自杀的预防在中国监狱有着重要作用，当前研究通过测量罪犯被试自杀的内隐态度，进行结构化认知行为干预，达到进一步降低罪犯自杀风险的目的。研究1利用Beck自杀意念量表筛查被试，然后进行自我伤害想法和行为访谈，将被试分为自杀态度积极组和正常组，进行死亡/自杀内隐联想测验，结果发现，自杀态度积极组被试对死亡/自杀属性词与自我的关系更敏感；研究2针对研究1中的自杀态度积极组被试采用12周的结构化认知行为干预之后，进行死亡/自杀内隐联想测验，结果显示，与小组干预之前的效应D值差异显著。实验结果表明，死亡/自杀内隐联想测验和结构化的认知行为干预能够更加有效的降低罪犯的自杀风险发生。

关键词 罪犯，自杀预防，内隐联想测验，认知行为干预

Measurement of Implicit Suicide Attitudes and Intervening Among Criminals

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Abstract: The prevention of criminal suicide plays an important role in Chinese prisons. The current research aims to further reduce the risk of criminal suicide by measuring the implicit attitude of criminal subjects towards suicide and conducting structured cognitive behavior intervention. In Study 1, Beck suicidal ideation scale was used to screen subjects, and then self injury thoughts and behaviors were interviewed. The subjects were divided into positive suicidal attitude group and normal group. The implicit association test of death / suicide was carried out. The results showed that the subjects in positive suicidal attitude group were more sensitive to the relationship between death / suicide attribute words and self; In Study 2, after 12 weeks of structured cognitive behavioral intervention, the subjects in the positive suicide attitude group in Study 1 were tested for death / suicide implicit association test. The results showed that the effect D value was significantly different from that before the group intervention. The results show that death / suicide implicit association test and structured cognitive behavior intervention can more effectively reduce the risk of suicide.

Keywords: Criminals, suicide prevention, implicit association test, cognitive behavioral intervention

自我控制与欺诈脆弱性关系的元分析

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摘要 欺诈是全球范围内普遍存在且日益严重的问题，个人和社会都为此承担了巨大的成本。已有研究表明，欺诈行为影响了数百万人，每年给消费者造成上百亿元的损失。而欺诈本身的隐蔽性，使得研究者很难发现或直接触及诈骗者。因此，针对受害者的欺诈脆弱性研究近年来受到了广泛关注。此外，自 Schreck (1999) 提出自我控制是受害脆弱性的来源后，越来越多的研究试图从犯罪学的一般理论——自我控制理论出发，探讨自我控制在解释欺诈脆弱性中的作用。尽管多项研究显示自我控制对于解释欺诈脆弱性确实具有重要作用，但也有部分研究发现了不一致的结果。考虑到现有关于自我控制与欺诈脆弱性关系的研究已经趋于成熟，本研究通过元分析的方法对相关文献进行了综合评估。我们把 28 篇原始研究纳入元分析，产生了 32 个独立样本，93 个效应值，样本总量为 45863。结果显示，自我控制与欺诈脆弱性之间存在显著的负相关 ($r = -0.080$, $p < 0.01$)，并且这种相关性具有极强的稳健性，不受关键变量测量、研究特征（研究设计、发表状态等）、样本特征（样本类型、年龄、性别分布、国家）等因素的影响。这表明自我控制能够显著负向预测欺诈脆弱性，即自我控制能力越低的个体，其欺诈脆弱性更高（越容易遭受欺诈），并且这种关系是相当“普遍”的。此外，我们发现部分调节变量的观察数仍不足，因此未来研究可以重点关注特定欺诈类型、欺诈脆弱性的衡量方式、自我控制影响欺诈脆弱性的机制、自我控制与重复欺诈受害的关系等方面。综上，本研究系统性地揭示了自我控制与欺诈脆弱性的关系，发现了未来研究可能的方向；从实践角度也为欺诈预防提供了重要的参考。

关键词 欺诈脆弱性，自我控制，元分析

A Meta-Analysis on the Relation Between Self-Control and Fraud Vulnerability

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Abstract: Fraud is a widespread and increasingly serious problem across the globe. Both individuals and society bear huge costs for it. Studies have shown that fraud affects millions of people and causes billions of dollars in losses to consumers every year. The concealment of fraud makes it difficult for researchers to detect or directly contact fraudsters. Therefore, research on the vulnerability of victims to fraud has received extensive attention in recent years. In addition, since Schreck (1999) proposed that self-control was the source of vulnerability to victimization, more and more studies have attempted to explore the role of self-control in explaining fraud vulnerability from the perspective of the general theory of criminology -- the theory of self-control. Although multiple studies have shown that self-control does play an important role in explaining fraud vulnerability, some studies have found inconsistent results. Considering that the existing research on the relationship between self-control and fraud vulnerability has become mature, this study used meta-analysis to comprehensively evaluate the relevant literatures. We included 28 original studies into the meta-analysis, resulting in 32 independent samples, 93 effect sizes, and a total sample size of 45863. The results show that there is a significant negative correlation between self-control and fraud vulnerability ($r = -0.080$, $p < 0.01$). This correlation has strong robustness and is not affected by the key variable measurement and research characteristics (e.g., research design, publication status), sample characteristics (e.g., sample type, age, gender distribution, country) and other factors. It suggests that self-control can significantly negatively predict fraud vulnerability, that is, the individuals with lower self-control ability have higher fraud vulnerability (the more vulnerable to fraud), and this relationship is quite "universal". In addition, we found that the number of observations of some moderator variable is still insufficient. Therefore, specific types of fraud, the measurement method of fraud vulnerability, the mechanism by which self-control affects fraud vulnerability, and the relationship between self-control and repeated fraud victimization can be the focus of future research. In summary, this study systematically reveals the relationship between self-control and fraud vulnerability, and discovers possible directions for future research. It also provides an important reference for fraud prevention from a practical perspective.

Keywords: fraud vulnerability, self-control, meta-analysis

思政课堂教学下大学生创造力培养的路径研究

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摘要 如何更好的为国家培养出德才兼备、全面发展、具有创造性水平的大学生, 是每一个教育者在努力思考与探索的主题。作为高校培养人才的思政课程, 《思想道德与法治》在引领大学生树立正确世界观、人生观、与价值观的同时, 也对大学生所应具备的创造性提出了明确的要求, 是德育与创造性培育的统一。但在具体的教学实践中, 却往往存在着对创造性关注较弱、重思想轻方法等现实问题。为此, 本研究拟将德育教育与大学生的创造性培养相融合, 采用教学实验的方法, 探索思政课堂教学下的大学生创造力培养的路径。研究假设: 思政课堂教学是大学生创造性培养的良好路径。思政课堂教学对大学生创造力的培养不仅能显著提升大学生的创造性水平, 还能进一步增加学生德育水平的提升。研究内容: 本研究由两个实验部分组成。实验一, 采用调查法分别从教师与学生的角度, 对当前《思想道德与法治》课程教学的内容、方法、技术、效果等进行了详细的考察。实验二, 在对实验一的调查结果进行总结分析的基础上, 采用教学实验的方法, 按照控制组、实验组, 前测、后测教学实验设计进行教学干预。在教学任务完成后, 对学生的教学效果进行评估。研究结果: 在学期末的课程学业测试与创造力测试总分中, 实验组成绩显著高于对照组。实验组与对照组被试在创造性意识维度差异不显著, 但实验组被试具有更高的创造性技巧与创造性潜移能力。实验组被试在对道德与创造力的关系协调中更加灵活。研究结论: 融入创造力培养的《思想道德与法治》课程的教学模式会影响大学生创造力以及课程的实效性, 这一研究结论为提升大学生创造力水平以及增强高校《思想道德与法治》课程实效性提供新的思路和方法。

关键词 创造力, 大学生, 德育

Research on the Path of Cultivating College Students Creativity under Ideological and Political Course

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Abstract: It is a question that how to cultivate college students with good quality, morality and creativity, lots of educators are thinking and exploring. *Ideology, Morality and Rule of Law* not only guides college students to establish a correct world outlook, outlook on life and values, but also puts forward clear requirements for the creativity that college students should have. *Ideology, Morality and Rule of Law* is the unity of moral and creative cultivation. However, there are often some practical problems in the concrete teaching practice, for example, teachers pay weak attention to students' creativity. They emphasis on thought ,but neglect methods. Therefore, the study intends to integrate moral education with creative cultivation. Adopting to the method of teaching experiment to study the means to promote college students' creativity under the Ideological and Political course. Research Hypothesis: Ideological and Political course is a good path for cultivating creative ability of college students. Ideological and Political course not only can significantly improve the creative level of college students, but also further enhance the level of moral education of students. Research Content: This study consists of two experimental parts. Experiment 1 adopt to survey method, making a detailed investigation on the contents, methods, techniques and current effects of *Ideology, Morality and Rule of Law* from the perspectives of teachers and students. Experiment 2 based on the summary and analysis of Experiment 1, using the method of teaching experiment to divide students into the control group and the experimental group, and carrying out experiment of the pretest and post-test. After completing the teaching task, evaluating the effect of teaching result. Results: The scores of the experimental group are significantly higher than those of the control group in the academic test and creative test. There was no significant difference between the experimental group and the control group in the dimension of creative consciousness, but the

experimental group have higher creative skills and creative latent ability. Students in the experimental group are more flexible in coordinating the relationship between morality and creativity. Research conclusion: The teaching mode of *Ideology, Morality and the Rule of Law* with creativity training will affect the creativity of college students and the effectiveness of the course. This research conclusion provides new ideas and methods for improving the creativity of college students and enhancing the effectiveness of *Ideology, Morality and the Rule of Law*.

Keywords: creativity, college students, moral education

权力感影响自我控制：心理机制与边界条件

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摘要 权力感是指个体对影响他人和避免他人影响的能力的感知, 自我控制指的是个体有意识控制冲动行为、抵制满足直接的需要和愿望、执行能带来长期利益的目标指向行为的能力。研究表明权力感会影响自我控制, 但影响的方向和机制却不尽相同。本研究通过梳理相关研究, 归纳出权力感对自我控制包括目标导向活动、情绪调节、越轨行为、消费行为、坚持和健康行为方面的影响和心理机制及边界条件。一方面在目标导向活动、情绪调节、越轨行为、坚持和健康行为方面, 权力感有助于自我控制的提高, 权力感对自我控制的促进存在两种潜在认知机制: 一是权力感提高个体的解释水平, 降低个体对即时回报的偏好, 从而克服暂时诱惑, 实现延迟满足, 有利于实现长远目标; 二是权力感提高个体的认知灵活性, 降低因为分心带来的自我资源损耗程度, 提高了认知效率, 促进自我控制的实现。但另一方面, 权力感对个体的消费行为影响却存在不一致的结论, 权力感高的个体对享乐品表现出理性消费, 然而当享乐目标被激活时其更容易出现非理性消费。权力感对自我控制的影响可能受到权力动机、社会价值取向、自我构念、权力的稳定性和合法性、权力的期望等因素的调节。另外, 权力的趋近-回避理论和社会距离理论, 在解释权力感和自我控制关系时出现了相矛盾的结论, 未来需要进一步的研究和探讨, 不断检验和完善权力的相关理论。

关键词 权力感, 自我控制, 解释水平, 认知灵活性

Effect of Power on Self-Control: Psychological Mechanism and Boundary conditions

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Abstract: The sense of power refers to the individual's perception of the ability to influence others and avoid the influence of others. Self-control refers to the individual's ability to consciously control impulsive behavior, resist meeting direct needs and wishes, and implement goal oriented behavior that can bring long-term benefits. Research shows that the sense of power will affect self-control, but the direction and mechanism of influence are different. By combing the relevant studies, this study summarizes the impact of the sense of power on self-control, including goal oriented activities, emotional regulation, deviant behavior, consumption behavior, persistence and health behavior, as well as the psychological mechanism and boundary conditions. On the one hand, in terms of goal oriented activities, emotion regulation, deviant behavior, persistence and healthy behavior, the sense of power contributes to the improvement of self-control. There are two potential cognitive mechanisms for the promotion of self-control by the sense of power: first, the sense of power improves the individual's interpretation level and reduces the individual's preference for immediate return, so as to overcome the temporary temptation and achieve delayed satisfaction, Conducive to achieving long-term goals; Second, the sense of power improves individual cognitive flexibility, reduces the loss of self resources caused by distraction, improves cognitive efficiency and promotes the realization of self-control. On the other hand, there are inconsistent conclusions about the impact of a sense of power on individual consumption behavior. Individuals with a high sense of power show rational consumption of hedonic goods. However, when the hedonic goal is activated, they are more prone to irrational consumption. The influence of power sense on self-control may be regulated by power motivation, social value orientation, self construction, power stability and legitimacy, power expectation and so on. In addition, the approach-avoidance theory and social distance theory of power have contradictory conclusions in explaining the relationship between sense of power and self-control. Further research and discussion are needed in the future to constantly test and improve the relevant theories of power.

Keywords: sense of power, self-control, construal level, cognitive flexibility

新高考视域下的高中生生涯认知特征及提升路径探析

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摘要 随着我国新高考改革持续推进,生涯规划教育受到社会各界的广泛关注,广大中学师生面临着诸多有关生涯教育与规划辅导的理论和实践问题,诸如学校如何主动适应新高考改革?如何引导学生探索自我,发现并发展自身优势与特长?学生如何规划学业?如何选择选考科目?如何报考什么专业和大学?未来如何发展?等等,而要解决这些重大困惑或事项,亟需有一种科学的生涯发展理论来指导,学校也亟需构建内外部、多主体协同的生涯教育指导体系。为推动高中学校主动适应新高考改革,有效开展高中生生涯教育,促进学生生涯健康发展,本文通过文献研究方法和对学校生涯教育情况的调研,对生涯认知理论进行拓展,阐释了生涯认知与新高考改革的关系及其重要意义,从理论上探讨高中生生涯认知内涵,创新性地提出并阐述了高中生生涯认知的五大结构,即自我认知、学业认知、专业认知、职业认知和生涯规划元认知等,揭示五大认知的本质与形成特征。在此基础上从学校内外部、社会多主体协同的视角阐述了实现高中生生涯认知能力提升的五大路径:(1)加强家校合力与专业引领,提升高中生的自我认知能力;(2)融合学科教学与生涯教育,增强高中生的学业规划能力;(3)建立大学专业信息咨询服务平台,提高高中生的专业认知程度;(4)强化职业生涯规划辅导,提高高中生的职业认知能力;(5)重视元认知技能训练,促进高中生的生涯规划元认知。以期为学校开展生涯教育,促进学生生涯发展提供理论依据与实践路径,为高校培养和输送更多的多元化创新人才,推进基础教育转向素质教育,实现基础教育高质量发展,促进教育公平。

关键词 新高考,高中生,生涯认知,提升路径

Analysis on the Career Cognitive Characteristics and Its Improvement Paths of High School Students from the Perspective of New College Entrance Examination

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Abstract: With the continuous progress of China's new college entrance examination reform, career planning education has attracted wide attention from all walks of life. Most middle school teachers and students are faced with many theoretical and practical problems related to career education and planning counseling, such as how do schools actively adapt to the new college entrance examination reform? How to guide students to explore themselves, discover and develop their own advantages and strengths? How do students plan their studies? How to choose elective subjects? How to enter oneself for an examination what major and university? What about the future? And so on. To solve these major perplexities or issues, it is urgent to have a scientific career development theory to guide students, and schools also need to build an internal and external, multi-agent collaborative career education guidance system. To promote high schools actively adapt to the new college entrance examination reform, effectively develop high school career education, promoting the healthy development of students' career in this article, through the method of literature research and investigation on school career education, to expand career cognitive theory, explain the relationship between career cognitive and new college entrance examination reform and its significance, theoretically discusses high school career cognitive connotation, This paper innovatively proposes and expounds five structures of high school students' career cognition, namely self-cognition, academic cognition, professional cognition, career cognition and career planning metacognition, and reveals the essence and forming characteristics of these five cognitions. On this basis, from the perspective of the cooperation between the internal and external bodies of the school and the society, the paper expounds five ways to realize the improvement of high school students' career cognitive ability :(1) strengthening the cooperation between the home and school and the professional guidance to improve the self-cognitive ability of high school students; (2) Integrating subject teaching and career education to

enhance the academic planning ability of high school students;(3) Establishing a professional information consulting service platform in universities to improve the professional awareness of high school students;(4) Strengthening career planning guidance to improve the vocational cognitive ability of high school students;(5) Paying attention to metacognition skills training, promote high school students' career planning metacognition. It is expected to provide theoretical basis and practical path for schools to carry out career education and promote students' career development, train and transport more diversified and innovative talents for colleges and universities, promote basic education to turn to quality-oriented education and realize high-quality development of basic education and promote educational equity.

Keywords: The new college entrance examination, High school students, Career cognition, Ascension path

社交焦虑和歧视知觉对留守儿童青少年生活满意度的影响：自尊、抑郁和孤独的链式多重中介作用

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摘要 目的：由于长期的亲子分离及社会支持系统的不完善，留守儿童青少年较非留守儿童青少年更容易出现心理问题。生活满意度作为积极心理学研究领域主观幸福感的重要组成部分，是评价一个人心理健康的有效指标，现有研究尚缺乏对留守儿童青少年生活满意度潜在影响机制的探讨。本研究基于生物—社会—认知理论模型、心理健康压力模型、社会比较理论等已有理论及研究成果，试图探究留守儿童青少年的自尊、抑郁和孤独在社交焦虑、歧视知觉与生活满意度间的链式中介效应，并验证该模型对留守儿童青少年群体的适用性。方法：本研究采用儿童社交焦虑量表（SASC）、儿童自尊量表（CSES）、儿童孤独量表（CLS）、抑郁自评量表（SDS）、个体歧视知觉量表、多维度学生生活满意度量表（MSLSS）对云南省 789 名留守儿童青少年进行问卷调查，采用 Harman 共同方法偏差检验、Pearson 相关分析、潜变量结构方程模型等统计分析方法，以 SPSS21.0 和 AMOS23.0 统计分析软件对数据进行整理和分析。结果：（1）留守儿童青少年生活满意度的链式中介模型均拟合良好且没有结构差异（ $\chi^2/df=4.27$, $p>0.05$ ）。（2）留守儿童青少年抑郁和孤独感在社交焦虑对生活满意度影响中均起到完全中介作用，在留守儿童青少年的社交焦虑对生活满意度之间，通过抑郁和孤独感产生的总间接效应为-0.24，总效应为-0.25，间接效应占总效应的 96%。（3）留守儿童青少年抑郁和孤独感在歧视知觉对生活满意度影响中均起到完全中介作用，在留守儿童青少年的歧视知觉对生活满意度之间，通过抑郁和孤独感产生的总间接效应为-0.23，总效应为-0.24，间接效应占总效应的 95.8%。结论：（1）抑郁和孤独感在社交焦虑对生活满意度的影响的链式中介作用模型均成立，并在留守儿童青少年中均适用。（2）抑郁和孤独感在歧视知觉对生活满意度的影响的链式中介作用模型均成立，并在留守儿童青少年中均适用。（3）抑郁和孤独感在留守儿童青少年群体中社交焦虑和歧视知觉对生活满意度影响的模型中均起到完全中介。

关键词：社交焦虑，歧视知觉，抑郁，孤独，生活满意度

The Influence of Social Anxiety and Perception of Discrimination on Left-behind Teenagers' Life Satisfaction: The Chained Multiple Mediation of Self-esteem, Depression and Loneliness

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Abstract: With the long-term separation of parents and children and the imperfect social support system, left-behind teenagers are more likely to have psychological problems than non-left-behind teenagers. Life satisfaction is an important part of subjective well-being in the field of positive psychology research, and it is an effective indicator to evaluate a person's mental health. However, existing research still lacks the exploration of the potential impact mechanism of left-behind teenagers' life satisfaction. Therefore, based on the biological-social-cognitive theory

model, mental health stress model, social comparison theory and other existing theories and research results, this research attempts to explore the chain mediation effect of self-esteem, depression and loneliness of left-behind teenagers between social anxiety, perception of discrimination and life satisfaction. It also tries to verify the applicability of the model to left-behind teenagers. This study uses the Social Anxiety Scale for Children(SASC), Child Self-esteem Scale (CSES), Child Loneliness Scale (CLS), Self-rating Depression Scale (SDS), Individual Discrimination Perception Scale, and Multidimensional Student Life Satisfaction Scale (MSLSS) to conduct a questionnaire survey of 789 left-behind teenagers in Yunnan Province, using Harman common method bias, Pearson correlation analysis, latent variable structural equation model and other statistical analysis methods on statistical analysis software SPSS21.0 and AMOS23.0 to organize and analyze the data. The results showed that: (1) The chain mediation models of life satisfaction of left-behind teenagers all fit well and have no structural difference ($\chi^2/df=4.27$, $p>0.05$). (2) Both depression and loneliness of left-behind teenagers play a completely mediating role in the impact of social anxiety on life satisfaction. Between the social anxiety of left-behind teenagers and their life satisfaction, the total indirect effect through depression and loneliness is -0.24, the total effect is -0.25, and the indirect effect accounts for 96% of the total effect. (3) Both depression and loneliness of left-behind teenagers play a completely mediating role in the impact of perception of discrimination on life satisfaction. Between the discrimination perception of left-behind teenagers and their life satisfaction, the total indirect effect produced by depression and loneliness is -0.23, the total effect is -0.24, and the indirect effect accounts for 95.8% of the total effect. Through the results, the conclusion can be drawn that: (1) The chain mediation models of both depression and loneliness in the influence of social anxiety on life satisfaction are established, and both are applicable to left-behind teenagers. (2) The chain mediation models of both depression and loneliness in the impact of perception of discrimination on life satisfaction are established, and both are applicable to left-behind teenagers. (3) Both depression and loneliness play a completely mediating role in the model of the impact of social anxiety and perception of discrimination on life satisfaction among left-behind teenagers.

Keywords: Social anxiety, perception of discrimination, depression, loneliness, life satisfaction

净脏启动对负性道德情绪词加工的影响：具身隐喻视角

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摘 要 具身隐喻理论整合具身认知理论和概念隐喻理论(王继瑛, 叶浩生, 苏得权, 2018), 认为隐喻根植于人类的躯体感知觉(Sheikh, et al., 2013)。“愁眉苦脸”、“笑得很甜”是人们基于感知觉形成的情绪隐喻表征; “君子洁白无瑕”“小人肮脏恶臭”则是个体在净脏感知与道德品质之间架构的隐喻联结。以往研究发现, 道德概念与净脏体验的隐喻表征存在心理现实性(丁凤琴, 王喜梅, 刘钊, 2017)。道德情绪作为道德概念的组成部分(Zhai, Guo, & Lu, 2018), 既属于情绪在道德领域的延伸(王博韬, 魏萍, 2021), 又与环境及个体自身净脏有密切联系。当个体回忆自身不道德事件后, 洗手能够减轻内疚、羞愧等负性道德情绪(Zhong & Liljenquist, 2006)。当个体置身于脏乱、恶臭的环境中时, 负性道德情绪如厌恶会增强(Schnall, Haidt, Clore, & Jordan, 2008)。但以往研究只考察了负性道德情绪与净脏的伴随效应, 并未从具身隐喻视角对二者的联系进行深入探究。本研究基于具身隐喻视角, 采用 2 个实验探讨环境与自身净脏启动对负性道德情绪词加工的影响及其差异。实验 1 采用 Stroop 句子启动范式探讨环境净脏启动对负性道德情绪词加工的影响。结果显示: 相比环境洁净启动, 环境肮脏启动下被试对负性道德情绪词加工更快; 而非道德情绪词在两类启动下的反应时无显著差异。实验 2 采用相同的实验范式考察自身净脏启动对负性道德情绪词加工的影响。结果发现: 相比自身洁净启动, 自身肮脏启动后被试对负性道德情绪词加工更快; 而自身净脏启动对非道德情绪词的反应时没有明显影响。整合实验 1、2 的结果显示, 自身肮脏启动比环境肮脏启动显著加快了负性道德情绪词的反应, 主要表现在羞愧、内疚和尴尬情绪方面。上述结果表明, 肮脏启动促进负性道德情绪词的加工, 使得肮脏身体体验与负性道德情绪概念产生隐喻联结, 且当肮脏体验指向个体自我时, 这种联结效应会更强。该结果可为学校道德情绪干预提供一定的借鉴意义。

关键词：净脏，负性道德情绪，具身认知理论，概念隐喻理论，具身隐喻理论

Influence of clean-dirty priming on the processing of negative moral emotion words: Perspective of embodied metaphor

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Abstract: Embodied metaphor theory, which integrates embodied cognitive theory and conceptual metaphor theory (Wang Jiyong, Ye Haosheng, & Su Dequan, 2018), indicates that metaphor is rooted in people's somatosensory perception (Sheikh, et al., 2013). The idioms "*a weebegone expression*" and "*a sweet smile*" are metaphorical representations of emotions based on individuals' sense of physical experience. "*As pure as confucian ideal (Junzi)*" and "*as dirty as villain*" are metaphorical associations between clean dirty experiences and moral qualities. Previous studies have found that there is psychological reality about the metaphorical representation between moral concepts and clean dirty experiences (Ding Fengqin, Wang Ximei, & Liu Zhao, 2017). As an important factor of moral concept (Zhao, Guo, & Lu, 2018), moral emotion is not only an extension of emotion in the field of morality (Wang Botao & Wei Ping, 2021), but also closely related to the environment and the people's own cleanliness. Studies have shown that washing hand could reduce negative moral emotions, such as guilt and shame, after individuals recalling their immoral deeds (Zhong & Liljenquist, 2006). On the contrary, negative moral emotions such as disgust could be enhanced when making individuals expose to dirty and smelly environment (Schnall, Haidt, Clore, & Jordan, 2008). It can be seen that previous studies have examined the concomitant effect of negative moral emotions and cleanliness, the metaphorical relationship between the two, however, remains unknown. Based on the embodied metaphor view, two experiments of this study were conducted to investigate the effects and differences of environment and self clean-dirty priming on the processing of negative moral emotional words. Experiment 1 was aimed to probe the effect of environment clean-dirty priming on the processing of negative moral emotion words by using stroop sentence priming paradigm. The results showed that participants processed negative moral emotion words faster after environment dirty priming comparing to environment clean priming, while there was no significant difference on the reaction time of nonmoral emotion words under the two primes. Experiment 2 was to explore the effect of self clean-dirty priming on the processing of negative moral emotional words. As predicted, compared with self clean priming, participants processed negative moral emotional words faster after self dirty priming, there was no obvious difference on the reaction time of nonmoral emotional words under both the prime types. We had a comparative analysis of the results of the two experiments and found that self-dirty priming significantly accelerated the response time of negative moral emotion words, which mainly manifested in shame, guilt and embarrassment, compared with environmental dirty priming. The above results indicate that dirty priming promotes the processing of negative moral emotion words that results in metaphorical connection between dirty physical experience and negative moral emotion concept, importantly, the association effect is even stronger when the dirty experience is directed at the individual self. This study may provide a theoretical basis moral emotion intervention in schools.

Keywords: clean and dirty, negative moral emotion, embodied cognitive theory, conceptual metaphor theory, embodied metaphor theory

自悯训练对抑郁症状的干预：效果及其影响因素元分析

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摘 要 背景：大量研究发现，自悯训练能够对缓解抑郁情绪和症状有一定的作用。然而，由于自悯训练的形式多种多样，研究方法不同，使得自悯训练对于抑郁的干预效果量以及哪些因素能够起到效果尚不明确，

为此，本研究通过元分析的方法合并各研究的效果量，揭示自悯训练对抑郁情绪和症状的干预效果，并对影响干预效果的因素进行分析。

方法：在中文数据库（中国知网 CNKI 数据库、万方数字化期刊数据库、维普中文期刊数据库）与英文数据库（Web of Science、Embase、the Cochrane Library、PubMed）中检索 2021 年 5 月之前发表的自悯训练干预抑郁症状的随机对照实验。文献的纳入标准为：（1）所选研究应为随机对照实验设计（RCT），排除单组前后测、多基线设计、个案研究等非 RCT 研究；（2）干预内容应为正念自悯疗法、自悯焦点疗法、慈心禅等以培养自悯为主的方法，将自悯干预成分较低或无自悯训练成分的研究予以排除，如正念认知疗法、接纳承诺疗法等；（3）纳入的文献应为期刊论文，排除会议论文、学位论文等未经同行审议的研究；（4）研究应该报告所使用测量工具，数据报告完整，可提取抑郁测量的效果量，多测量结果的研究也纳入；（5）文章语言为中文和英文。

结果：最终，28 篇研究符合纳入标准。合并效应量发现，自悯训练对于抑郁症状的干预效果 $g=0.423$ （填补发表偏倚后 $g=0.3$ ）。Meta 回归结果表明，当仅考虑单个变量的调节作用时，干预效果受到国家地域、参与者女性比例、对照组类型、脱落率 4 个变量的影响；在多元回归模型中，对照组类型、研究质量对干预效果的调节作用显著。

结论：自悯训练项目对于抑郁症状的干预效果较好，干预效果的差异受到文化、性别、对照组类型、被试脱落率、研究质量的影响。后续研究可以探讨各变量之间存在的交互作用。

关键词 自悯训练，抑郁，干预，元分析

Effectiveness of Self-compassion Training in Intervention for Depression: A Meta-analysis of Effects and Influencing Factors

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Abstract: Background: A large number of studies have found that self-compassion training can have a certain effect on alleviating depression and symptoms. However, due to the various forms of self-compassion training and the different research methods, the intervention effect of self-compassion training on depression and which factors can have an effect is still unclear. For this reason, through meta-analysis, this study combined the effect of each study, revealed the intervention effect of self-compassion training on depression and symptoms, and analyzed the factors influencing the intervention effect. **Methods:** randomized controlled trials of self-compassion training on depressive symptoms published before May 2021 were searched in Chinese database (CNKI database, Wanfang digital journal database, VIP Chinese Journal Database) and English database (web of science, EMBASE, the Cochrane Library, PubMed). The inclusion criteria of the literature are: (1) The selected study should be a randomized controlled experimental design (RCT), excluding non-RCT studies such as single-group pre-test, multiple baseline design, and case studies; (2) The intervention content should be Mindfulness Self-compassion therapy, Self-compassion-focused therapy, Loving-Kindness Meditation and other methods that focus on cultivating self-compassion, and exclude studies with low self-compassion intervention components or no self-compassion training components, such as mindfulness cognitive therapy, acceptance-commitment therapy, etc.; (3) The included literature should be journal papers, excluding conference papers, dissertations and other studies that have not been peer reviewed; (4) The research should report the measurement tools used, the data report is complete, the effect of depression measurement can be extracted, and the results of multiple measurement Research is also included; (5) The language of the article is Chinese and English. **Results:** Finally, 28 studies met the inclusion criteria, and the combined effect size found that the intervention effect of self-compassion training on depressive symptoms was $g=0.423$ ($g=0.3$ after filling in the publication bias). Meta regression results show that when only the moderating effect of a single variable is considered, the intervention effect is affected by four variables: the country, the proportion of female participants, the type of control group, and the dropout rate; in the multiple regression model, the type of control group and the quality of

research had significant moderating effect on the intervention effect. **Conclusion:** The self-compassion training program has a good intervention effect on depressive symptoms. The difference in intervention effect is affected by culture, gender, type of control group, dropout rate of subjects, and research quality. Subsequent research can explore the interactions that exist between the variables.

Keywords: self-compassion training, depression, intervention, meta-analysis

负性情绪对中学生网络过度使用行为的影响：行为抑制和消极应对的链式中介作用

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摘要 网络过度使用行为会对中学生的身心健康、学业功能、人际关系等产生严重消极影响, 负性情绪体验是网络过度使用行为的重要风险因素之一。一方面, 负性情绪可能会降低个体的行为抑制能力, 导致其上网行为失去合理抑制; 另一方面, 个体在负性情绪下, 更有可能采用消极应对方式来回避情绪困扰, 频繁的上网行为便是其做法之一。同时, 行为抑制与消极应对之间也有着密切的联系, 行为抑制能力越低的个体, 其行为冲动性就越强, 应对方式也就越趋于消极。因此, 本研究将重点探讨行为抑制和消极应对在负性情绪对网络过度使用行为影响中的独立中介作用和链式中介作用, 以期深入揭示负性情绪对网络过度使用行为的影响机制, 为减少中学生网络过度使用行为提供有益建议。本研究采用抑郁-焦虑-压力量表、BIS-11 冲动量表-运动冲动性分量表、简易应对方式量表和中文网络成瘾量表, 对 1013 名中学生被试进行问卷调查, 得到有效问卷 896 份。结果表明: (1) 负性情绪、行为抑制、消极应对以及网络过度使用, 所有变量间均存在显著的正相关; (2) 负性情绪对网络过度使用的直接效应显著, 行为抑制和消极应对在负性情绪与网络过度使用之间的中介效应显著, 且行为抑制-消极应对的链式中介作用也显著; (3) 行为抑制的中介效应显著高于消极应对的中介效应和行为抑制-消极应对的链式中介效应, 占比总中介效应的 85.74%。研究结果揭示了负性情绪、行为抑制等心理因素影响青少年网络过度使用行为的内在机制, 并提醒我们除了直接干预青少年负性情绪体验以外, 还可以通过提高他们的行为抑制能力来有效减少其网络过度使用行为的发生。

关键词 负性情绪, 网络过度使用, 行为抑制, 消极应对, 中学生

The Effect of Negative Emotion on Internet Overuse Behavior among Middle School Students: The Chain Mediating Role of Behavioral Inhibitory and Negative Coping

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Abstract: The Internet overuse behavior will have a seriously negative impact on middle school students' physical and mental health, academic function, interpersonal relationship and so on. Specially, negative emotional experience is one of the important risk factors of the Internet overuse behavior. On the one hand, negative emotion may reduce individuals' ability to inhibit behavior, resulting in the loss of reasonable inhibition of Internet behavior; On the other hand, people who experience negative emotion are more likely to use negative coping methods to avoid emotional distress, such as frequently surfing the Internet. Therefore, this study will focus on the independent and chain mediating roles of behavioral inhibitory and negative coping, which in the influence of negative emotion on Internet overuse behavior, so as to deeply reveal the influence mechanism of negative emotion on Internet overuse behavior, and provide useful suggestions for reducing Internet overuse behavior of middle school students. 1013 middle school students were investigated by using Depression, Anxiety and Stress Scale (DASS-21), Barratt Impulsiveness Scale (BIS-11), Simplified Coping Style Questionnaire (SCSQ) and Chinese Internet Addiction Scale (CIAS-R), and 896 valid questionnaires were used. The results revealed that: (1) There were significant positive correlations between any two of these factors among negative emotion, behavioral inhibitory, negative coping and Internet overuse; (2) The

direct effect of negative emotion on Internet overuse was significant, the mediating effect of behavioral inhibitory and negative coping was significant, and the chain mediating effect of behavioral inhibitory and negative coping was also significant; (3) The mediating effect of behavioral inhibitory was significantly higher than mediating effect of negative coping and the chain mediating effect of behavioral inhibitory-negative coping, accounting for 85.74% of the total mediating effect. The results reveal the internal mechanism of the influence of psychological factors such as negative emotion and behavioral inhibitory on adolescents' Internet overuse behavior, and it also reminds us that we can reduce the occurrence of the Internet overuse behavior not only by directly intervening negative emotional experience of adolescents but also improving their behavioral inhibitory ability.

Keywords: negative emotion, internet overuse behavior, behavioral inhibitory, negative coping, middle school students

罹患精神障碍大学生复学面临的问题和应对措施

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摘 要 高校的心理健康工作一直是学生工作的重要组成部分, 而其中对精神障碍大学生的干预工作又是心理危机干预的重要内容。近年来, 随着大学生精神障碍发病率的增加, 越来越多的大学生在精神障碍的康复期重新进入校园学习, 高校患精神疾病复学学生的适应问题也开始受到越来越多的关注。大学阶段是学生从青春晚期过渡到成年期的关键时期, 此阶段人群的精神疾病患病率高、患病后对学业的影响大, 由于精神疾病和心理因素而休学的人数占因病休学人数的比例很高。其复学率随着疾病的种类和干预措施的不同而变化。他们在复学后将会面临许多问题: 1.精神症状和生理不适感 2.污名和歧视 3.学业受挫 4.社交与校园活动参与问题。这些问题会产生很大的痛苦, 增加他们的退学风险, 因此如何帮助这些精神障碍复学生提高其个人应对技巧及外部支持力度以重新适应并融入校园生活成为值得关注的问题, 本文围绕患精神障碍(包括抑郁症、双相障碍、焦虑症、强迫症、精神分裂症等)的大学生复学后面临的问题和应对措施, 梳理国内外已有文献, 明确问题现状, 提出应对和解决建议。

关键词 患精神障碍大学生, 复学, 适应问题, 应对措施

Problems and Countermeasures of college students with mental disorders returning to school

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Abstract: Psychological intervention is an important part of College Students' mental health work. In recent years, with the increasing incidence rate of mental disorders, more and more college students have entered the campus learning in the rehabilitation period of mental disorders. The prevalence of mental illness in the university population is high and has a great impact on their studies. The number of people who suspend school due to mental illness and psychological factors accounts for a high proportion of the number of people who suspend school due to illness. The return to school rate varies with the types of diseases and intervention measures. These people will face many problems after returning to school: 1.Mental symptoms and physical discomfort 2.Stigma and discrimination 3.Academic problems 4.Social and campus participation problems. These problems will make them at greater risk of drop out from school, So how to help these students improve their personal coping skills and external support to adapt and integrate into campus life has become a problem worthy of attention. This paper focuses on the problems

and Countermeasures Faced by college students with mental disorders (including depression, bipolar disorder, anxiety disorder, obsessive-compulsive disorder, schizophrenia, etc.) after returning to school, combs the existing literature at home and abroad, in order to clarify the current situation of the problems and put forward countermeasures and solutions.

Keywords: College students with mental disorder, return to school, adapt, Countermeasures

龙卷风灾民灾后心理评估及创伤后应激障碍情况调查

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摘要 目的 分析 2021 年 5 月 14 日武汉市蔡甸区麦山龙卷风受灾灾民的抑郁、焦虑、失眠、心理创伤情况以及创伤后应激障碍的发生率, 为相关人员灾后对灾民的心理干预提供依据。**方法** 根据受灾严重程度评级进行分组后采用随机抽样问卷调查的方法, 对麦山三个村的受灾村民进行调查, 调查问卷为抑郁症筛查量表(Patient Health Questionnaire-9, PHQ-9); 广泛性焦虑量表(Generalized Anxiety Disorder-7, GAD-7); 失眠严重指数量表(Insomnia Severity Index, ISI); 埃森创伤问卷(Essen Trauma Inventory, ETI), PTSD 诊断工具为 DSM-IV 临床定式访谈(SCID)。调研数据采用 SPSS21.0 统计软件进行分析研究。**结果** 龙卷风受灾灾民有抑郁症状检出率为 39.6%, 有焦虑症状检出率为 47.4%, 有失眠症状检出率为 27.4%, 创伤后应激障碍检出率为 13.6%, 在受灾评级最高的样本中创伤后应激障碍检出率达 28.4%。抑郁、焦虑、失眠、创伤情况与受灾严重程度显著相关($p < 0.01$)。**结论** 龙卷风灾害对受灾灾民的心理方面产生较大影响, 提示在灾后重建过程中, 要进行心理干预, 且应着重注意受灾最严重的区域。

关键词 龙卷风, 心理健康, 创伤后应激障碍

Investigation on post disaster psychological assessment and post-traumatic stress disorder of tornado victims

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Abstract: Objective: to analyze the depression, anxiety, insomnia, psychological trauma and the incidence of post-traumatic stress disorder of the victims of Zhashan tornado disaster in Caidian District, Wuhan on May 14, 2021, so as to provide basis for relevant personnel to provide psychological intervention for the victims after the disaster. **Methods:** after grouping according to the disaster severity rating, the affected villagers in three villages of Zhashan were investigated by random sampling questionnaire. The questionnaires are patient health Questionnaire-9 (PHQ-9); Generalized anxiety disorder-7 (GAD-7); Insomnia severity index (ISI); Essen trauma Inventory (ETI), The diagnostic tool of PTSD is SCID. The survey data were analyzed by spss21.0 statistical software. **Results:** the detection rate of depression, anxiety, insomnia and post-traumatic stress disorder in tornado victims was 39.6%, 47.4%, 27.4% and 13.6%, respectively. Among the samples with the highest disaster rating, the detection rate of post-traumatic stress disorder was 28.4%. Depression, anxiety, insomnia and trauma were significantly correlated with the severity of the disaster ($P < 0.01$). **Conclusion:** the tornado disaster has a great impact on the psychological aspects of the victims, suggesting that psychological intervention should be carried out in the process of post disaster reconstruction, and attention should be paid to the worst affected areas.

Keywords: Tornado disaster, mental health, post-traumatic stress disorder

家庭社会经济地位与大学生生活满意度的关系：学习倦怠的中介作用与性别的调节作用

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摘要 **目的** 探讨学习倦怠在大学生家庭社会经济地位与生活满意度间的中介作用和性别的调节作用，为大学生学习倦怠的预防干预提供科学依据。**方法** 采用家庭社会经济地位问卷、学习倦怠量表和生活满意度量表对随机抽取的云南省某重点大学的 550 名大学生进行调查。**结果** （1）家庭社会经济地位、家庭支持、自我效能感两两均显著相关；男生家庭社会经济地位高于女生（ $M_{男}=0.442$ ， $M_{女}=-0.230$ ， $t=2.098$ ， $p=0.036$ ），学习倦怠高于女生（ $M_{男}=2.829$ ， $M_{女}=2.742$ ， $t=2.203$ ， $p=0.028$ ）；（2）学习倦怠在家庭社会经济地位对生活满意度的影响中起中介作用，效应值为 10.764%；（3）该中介作用受到性别因素的调节，较之男生（ $\beta=-0.051$ ， $t=-0.739$ ， $p=0.460$ ），女生的家庭支持受到家庭社会经济地位的影响作用更为显著（ $\beta=-0.289$ ， $t=-5.447$ ， $p<0.001$ ）；**结论** 学习倦怠和性别在大学生家庭社会经济地位与生活满意度具有中介作用和调节作用，应重视增加家庭资源投入对女大学生学习倦怠的改善作用，并重点关注低家庭社会经济地位女大学生的学习倦怠问题。

关键词 家庭社会经济地位，生活满意度，学习倦怠，性别，大学生

The Relationship between Family Socioeconomic Status and College Students' Satisfaction With Life: The Mediating Role of Learning Burnout and Moderating Role of Gender

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Abstract: Objective The present study constructed a moderated mediation model to examine the effect of Family Socioeconomic Status (FSES) on satisfaction with life for college students. Specifically, the present study examined the mediating role of learning burnout in the relation between FSES and satisfaction with life of college students, and tested whether the indirect effect was moderated by gender. **Methods** A random sample of 550 college students from a key medical university in Yunnan Province was investigated using the Family Socio-economic Status Questionnaire, Learning Burnout Scale and Satisfaction With Life Scale. Data were analyzed using SPSS 23.0 and the SPSS macro-PROCESS. **Results** (1)The FSES, satisfaction with life and learning burnout were both significantly related; The FSES of male families is higher than that of girls ($M_{males}=0.442$, $M_{females}=-0.230$, $t=2.098$, $p=0.036$), and learning burnout is higher than girls ($M_{males}=2.829$, $M_{females}=2.742$, $t=2.203$, $p=0.028$); (2) FSES significantly exerted direct effect on satisfaction with life, and there was indirect effect on satisfaction with life through the mediation of learning burnout as well, which effect value is 10.764%; (3) The indirect effect of learning burnout was moderated by gender, and the effect was stronger for female adolescents ($\beta=-0.289$, $t=-5.447$, $p<0.001$). **Conclusion** The study highlighted the mediating role of learning burnout and the moderating role of gender in the effect of FSES on satisfaction with life. Parents and educators should increase the input of family resources to improve the learning burnout of female college students, and focus on the problem of learning burnout of female college students with low FSES.

Keywords: family socioeconomic status, satisfaction with life, learning burnout, gender, college students

父母教养方式对大学生社会适应性的影响： 拒绝敏感性的中介作用

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摘要 大学生社会适应性是指大学生对不断变化着的社会要求、学习方式、人际关系、外部环境等做出的反应，不断进行心理和行为调整，以顺利完成学业，为步入社会做好充分的准备。已有研究表明，高拒绝敏感性不仅妨碍与人的沟通，还会影响身心健康，同时，也会对个体的社会适应能力产生一定的影响。本研究以拒绝敏感性为中介变量，通过采用父母教养方式问卷（PBI）、拒绝敏感性量表和大学生社会适应性量表对山西省高校的 600 名大学生进行抽样调查，探讨父母教养方式对大学生社会适应性的影响。研究发现：

（1）大学生社会适应性在性别、专业和地域三个方面存在显著差异（ $P < 0.05$ ），具体表现为：男大学生的社会适应能力显著低于女大学生，农村大学生的社会适应能力显著低于城市大学生，工科类大学生的社会适应能力显著低于理科类大学生；（2）父母教养方式各维度均与大学生社会适应性呈负相关，其中过度保护维度和冷漠拒绝维度与大学生社会适应性呈显著负相关，拒绝敏感性与社会适应性呈显著负相关；（3）母亲过度保护教养方式对大学生社会适应性具有负向预测作用（ $r = -0.156$ ），拒绝敏感性和母亲过度保护教养方式的共同作用对大学生社会适应性具有负向预测作用，交互作用显著；母亲关怀教养方式对大学生社会适应性负向预测作用不显著（ $r = -0.082$ ），拒绝敏感性和母亲关怀教养方式的共同作用对大学生社会适应性负向预测作用显著（ $r = -0.100$ ），交互作用显著；（4）引入拒绝敏感性中介变量，母亲过度保护和关怀教养方式对大学生社会适应性的预测作用显著。结论：家庭教养方式中父母过度保护和父亲冷漠拒绝与大学生社会适应性呈显著负相关，母亲过度保护和关怀与拒绝敏感性呈显著正相关；拒绝敏感性在母亲过度保护教养方式与社会适应之间起部分中介作用，在母亲关怀教养方式与社会适应之间起完全中介作用。

关键词 社会适应性，拒绝敏感性，父母教养方式

The influence of parenting style on College Students' social adaptability: the intermediary effect of rejection sensitivity

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Abstract: College Students' social adaptability refers to the response of college students to the changing social requirements, learning methods, interpersonal relationships and external environment, and constantly make psychological and behavioral adjustments, so as to successfully complete their studies and make full preparations for entering the society. Previous studies have shown that high rejection sensitivity not only hinders communication with people, but also affects physical and mental health. At the same time, it will also have a certain impact on individual social adaptability. Taking rejection sensitivity as the intermediary variable, this study conducted a sample survey of 600 college students in Colleges and universities in Shanxi Province by using parental rearing style questionnaire (PBI), rejection sensitivity scale and college students' social adaptability scale to explore the impact of parental rearing style on College Students' social adaptability. The study found that: (1) there were significant differences in college students' social adaptability in gender, major and region ($P < 0.05$). Specifically, male college students' social adaptability was significantly lower than female college students, and rural college students' social adaptability was significantly lower than urban college students, The social adaptability of engineering students is significantly lower than that of science students. (2) All dimensions of parental rearing style were negatively correlated with college students' social adaptability, among which the dimensions of over protection and indifference rejection were significantly negatively correlated with college students' social adaptability, and the sensitivity of rejection was significantly negatively correlated with social adaptability. (3) The overprotective parenting style of mother has a negative predictive effect on College Students' social adaptability ($r = -0.156$). The combined effect of rejection

sensitivity and overprotective parenting style of mother has a negative predictive effect on College Students' social adaptability, and the interaction is significant; Mother's caring parenting style had no significant negative predictive effect on College Students' social adaptability ($r = -0.082$), and the combined effect of rejection sensitivity and mother's caring parenting style had significant negative predictive effect on College Students' social adaptability ($r = -0.100$), with significant interaction. (4) By introducing the mediating variable of rejection sensitivity, maternal overprotection and caring parenting style have a significant predictive effect on College Students' social adaptability. Conclusion: there is a significant negative correlation between parental overprotection and father's indifferent refusal and college students' social adaptability, and a significant positive correlation between mother's overprotection and care and refusal sensitivity; Rejection sensitivity plays a partial intermediary role between mother's overprotective rearing style and social adaptation, and a complete intermediary role between mother's caring rearing style and social adaptation.

Keywords: social adaptation, rejection sensitivity, parenting style

新零工经济时代按需服务平台的劳动控制 对劳动者的心理影响及其应对

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摘要 在新的零工经济时代，按需服务平台作为一种劳动者从业或兼职的重要选择逐渐发展壮大。随着传统就业机会有所减少，劳动者对平台经济的依赖也在进一步地增加。分析这一新颖且快速发展的就业方式给劳动者带来的影响，有利于更加合理地维护劳动者权益并指导平台建立与平台劳动者的和谐关系，从而促进大数据时代网络零工经济的良性发展，对于促进中国零工经济的发展也具有实践启迪。本文以通过应用程序提供服务的按需劳动作为研究对象，对其新的控制特点进行了梳理，并从劳动者层面出发，探讨了这种新的控制特点对劳动者造成的心理影响和劳动者的应对方式。首先，与传统的临时工作相比，所有在线平台公司都具备的一个重要特征是对电子信誉机制的依赖并以此作为劳动控制的重要方式，这使得其对劳动者的控制呈现出新的特点，主要包括算法管理、评价机制和权力不对称三个方面；其次，在分析平台通过新的控制形式实现其管理目标的前提下，本文从公平感下降、情绪劳动加剧、情感支持不足和心理契约构建困难四个方面出发对平台劳动控制给劳动者带来的心理影响进行分析；再次，在总结不同劳动者应对差异的基础上，依据劳动过程理论，本文探讨了平台劳动者通过个人和集体行动应对劳动控制的措施以及所面临的阻碍；最后，本文提出了按需服务平台对劳动者造成的心理影响的未来研究方向，包括平台劳动者多重心理契约的构建等。

关键词 零工经济，按需服务平台，劳动控制，心理影响

Labors' Psychological Impacts and Their Countermeasures under Labor Control of Demand Service Platform in the New Casual Economy Era

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Abstract: In the new era of casual work economy, as an important choice for workers to work or part-time, on-demand service platform is gradually growing. With the decrease of traditional employment opportunities, labor dependence on platform economy is increasing further. Analysis of the impact of this new and rapid development of employment form on workers is conducive to more reasonable protection of workers' rights and interests, and guide the platform to establish a harmonious relationship with platform workers, so as to promote the benign development of network casual work economy in the era of big data, and also has important practical enlightenment for promoting

the development of China's casual work economy. This paper takes the on-demand labor that provides services through applications as the research object, combs its new control characteristics, and discusses the psychological impact of this new control characteristics on workers and workers' coping styles. Firstly, compared with the traditional temporary work, an important feature of all online platform companies is their dependence on the electronic reputation mechanism as an important way of labor control, which makes their control over workers show new characteristics, mainly including algorithm management, evaluation mechanism and power asymmetry. Secondly, on the premise that the platform achieves its management objectives through the new control form, this paper discusses the psychological impact of the new control form on workers from four perspectives: the decline of sense of fairness, the intensification of emotional labor, the lack of emotional support and the difficulty of constructing psychological contract. Thirdly, on the basis of summarizing the coping differences of different workers, according to the labor process theory, this paper sorts out the measures and obstacles for platform workers to deal with labor control through personal action and collective action. Finally, this paper puts forward the future research direction of the psychological impact of on-demand service platform on workers, including the construction of multiple psychological contracts for platform workers.

Keywords: Gig Economy, On-demand Service Platform, Labor Control, Psychological impacts

延长哀伤障碍的诊断评估与治疗研究进展

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摘要 延长哀伤障碍是一种由挚爱的亲人去世引发的病理性哀伤反应, 即丧亲发生6个月后, 丧亲者对逝者长期持久的哀伤, 表现为内疚、愤怒、难以接受死亡、情感麻木、社交回避和退缩等不同的哀伤反应, 这些反应与其所处的文化习俗和宗教传统不相符; 此外, 个体还伴随着剧烈的情感痛苦, 导致社会功能严重受损。本文首先简要回顾了延长哀伤障碍的概念提出及后续发展, 哀伤最先从抑郁当中独立出来, 病理性的哀伤反应开始受到广泛关注, 延长哀伤障碍作为目前最普遍使用的术语之一, 更具有总结性。随后, 本文综述了延长哀伤障碍独立的诊断标准和评估工具, 发现它们都经历了从零散到统一的发展过程, 本文还讨论了不同诊断系统之间的区别与联系, 及其各自的适应性和效用性, 无论是从临床效用还是国际适应性来说, 延长哀伤障碍及其诊断标准都是更具优势的。接下来, 本文对延长哀伤障碍的治疗方法的理论思考和实证研究进行了探讨, 治疗方法有药物治疗和心理治疗, 其中心理治疗包括个体形式和团体形式, 主要以认知行为流派的核心思想为理论指导, 辅以心理动力学疗法。最后, 本文指出, 未来研究应从以下几个方面推进: 1、在循证基础上统一延长哀伤障碍的概念定义与诊断标准, 致力于解决相关争议, 提出标准化的概念界定及一系列诊断指南, 为临床诊断提供依据; 2、诊断评估的跨文化适用性, 结合我国文化和宗教背景探索更具适应性的评估工具; 3、开发和完善治疗方法, 增加其他理论流派在治疗延长哀伤障碍中的应用, 关注个体差异, 提高疗法的普适性和特异性, 或与其他新的技术相结合。

关键词 延长哀伤障碍, 诊断评估, 治疗方法, 综述

Prolonged Grief Disorder: Diagnostic, Assessment, and Treatment

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Abstract: Prolonged grief disorder is a kind of pathological grief reaction caused by loved ones died, the loss occurred after six months, the bereaved of the long lasting sorrow, characterized by guilt, anger, difficult to accept death, emotional numbness, social avoidance. These reactions are not consistent of their culture and customs; In addition, individuals are also accompanied by intense emotional pain, resulting in severe impairment of social

functioning. This paper briefly reviewed the concept of prolonged grief disorder and its subsequent development. Grief was first separated from depression, and pathologic grief began to receive widespread attention. Prolonged grief disorder, as one of the most commonly used terms at present, is more summative. Next, we reviewed the independent diagnostic criteria and assessment tools for prolonged grief disorder, and found that they have all experienced the development process from scattered to unified. We also discussed the differences and connections between different diagnostic systems, as well as their adaptability and effectiveness. Prolonged grief disorder and its diagnostic criteria are more advantageous, both clinically and internationally. Then, we discussed the theoretical thinking and empirical research on the treatment methods of prolonged grief disorder. The treatment includes drug therapy and psychotherapy. The psychotherapy includes individual form and group form, which is mainly guided by cognitive behavior therapy and supplemented by psychodynamic therapy. Finally, this paper points out that future research should be carried out in the following aspects: 1. The concept definition and diagnostic criteria of grief disorder should be extended on an evidence-based basis, and relevant disputes should be resolved. A standardized definition and a series of diagnostic guidelines should be proposed to provide a basis for clinical diagnosis; 2. Cross-cultural applicability of diagnostic assessment, exploring more adaptive assessment tools combined with Chinese cultural and religious background; 3. Develop and improve therapeutic methods, increase the application of other theoretical schools in the treatment of prolonged grief disorder, pay attention to individual differences, improve the universality and specificity of therapy, or combine with other new technologies.

Keywords: Prolong grief disorder, Diagnostic assessment, Treatment, Review

企业行为对核电公众接受度影响初探

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摘要 核电作为一种清洁能源受到广泛重视, 然而日本福岛事故以来, 国内核电行业发展因公众接受度低受到限制, “邻避”现象显著。国内外以往研究指出信任、公众认知、风险感知、收益感知等因素能够影响核电公众接受度, 而这些研究成果对核电企业的指导性不足, 核电企业在公众沟通过程中不能识别出能够改善公众接受度的信息, 更无法开展针对性的优化。企业社会责任理论认为, 消费者愿意给履行社会责任较多的企业以更多的支持。

本研究基于 Carroll 的分类, 将企业社会责任分为四种类型: 经济责任、法律责任、伦理责任和慈善责任, 使用 Maignan 消费者支持社会责任企业意愿量表, 并征求核电公众沟通领域专家意见, 扩展为 21 个题项, 测量公众对核电企业社会责任履行的感知; 以 McAllister 认知与情感信任量表、Slovic 风险感知量表、RijnsoeverFJV 公众认知量表以及国内相关研究成果为基础, 编制了核电公众接受度量表。以秦山核电站周边公众为样本, 共收回有效问卷 211 份, 使用 SPSS 软件进行信效度分析后, 得出公众对核电企业社会责任履行的认知分为法律责任、经济与道德责任两个维度, 核电公众接受度分为信任、公众认知、恐慌风险感知、未知风险感知、收益感知、支持度六个维度。以修正后的量表为依据, 制作了与法律责任、经济与道德责任两个维度相对应的测试视频, 对被试在观看不同视频前后各维度测量结果进行比较。结果显示核电企业履行社会责任对核电公众接受度有正向影响, 其中履行经济与道德责任对核电公众接受度影响更显著。

关键词 企业社会责任, 公众接受度, 核电

A Preliminary Study on the Influence of Corporate Behavior on Public Acceptance of Nuclear Power

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Abstract: As a clean energy, nuclear power has been widely valued. However, since the Fukushima accident in Japan, the development of nuclear power industry has been restricted due to the low public acceptance, and the phenomenon of "NIMBY" is remarkable. Previous studies have shown that trust, public cognition, risk perception, benefit perception can influence public acceptance of nuclear power. But these research results can't guide nuclear power corporate locate helpful information, or carry out targeted optimization. According to the theory of corporate social responsibility, consumers are willing to give more support to enterprises that fulfill more social responsibilities.

Based on the classification of Carroll, this study divided CSR into four types: economic responsibility, legal responsibility, ethical responsibility and charitable responsibility, used Consumers' Perceptions of Corporate Social Responsibilities scale by Maignan, and expanded it to 21 items according experts's opinions, measured public perception of nuclear power corporate social responsibility. Based on McAllister's affect-and-cognition-based trust scale, Slovic's Risk perception Scale, RijnsoeverFJV's public cognition scale and relevant research results, a scale of public acceptance of nuclear power has been prepared. Around Qinshan NPP, a total of 211 effective questionnaires were taken back, which were analysed by SPSS, It is concluded that the public perception of CSR can be divided into two dimensions: legal responsibility, economic and moral responsibility, and the public acceptance of nuclear power can be divided into six dimensions: trust, public perception, panic risk perception, unknown risk perception, benefit perception and support. Based on the revised scale, 2 test videos corresponding to the two dimensions of CSR were produced, and the measurement results of each dimension before and after watching different videos were compared. The results show that the SCR of nuclear power corporate has a positive impact on the public acceptance of nuclear power, and the economic and moral responsibility has a more significant impact on the public acceptance of nuclear power.

Keywords: corporate social responsibility, public acceptance, nuclear power

心理弹性在医学生人格特质与应对方式之间的中介作用研究

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摘 要 目的: 探究医学生心理弹性在人格特质与应对方式关系中的中介作用。方法: 随机抽样法抽取福建省某医学院校 432 名大学生作为研究样本, 使用《Connor-Davidson 心理弹性量表中文版》, 《简易应对方式量表》和《中国大五人格问卷简式版》进行施测, 回收问卷并使用 SPSS 进行数据分析。结果: (1) 在医学生人格特质方面, 男生在严谨性和宜人性维度上得分显著低于女生($t=-3.04, P<0.05$)($t=-5.55, P<0.05$)。 (2) 在应对方式倾向上, 男生显著低于女生 ($t=-3.88, P<0.05$)。 (3) 人格特质、应对方式和心理弹性三者两两相关, 人格特质中神经质分维度与应对方式和心理弹性呈现显著负相关, 宜人性、严谨性、外向性和开放性分维度都与应对方式和心理弹性呈现显著正相关。 (4) 人格特质分维度中的严谨性、外向性、开放性显著正向预测心理弹性 ($t=9.03, 6.64, 7.50, P<0.05$), 神经质显著负向预测心理弹性 ($t=5.73, P<0.05$); 人格特质分维度中的宜人性和严谨性正向预测应对方式倾向 ($t=6.49, 4.80, P<0.05$), 神经质负向预测应对方式倾向 ($t=-6.391, P<0.05$); 心理弹性正向预测应对方式倾向 ($t=10.47, P<0.05$)。 (5) 心理弹性在医学生人格特质和应对方式之间起到显著的部分中介作用, 中介效应为 0.29, 占总效应 49.63%。结论: 医学生人格特质方面, 女生相比男生更容易对他人表现出的同情心和人文关怀, 在大学生活中, 女生也更擅于制定任务和目标、遵守规范和纪律等行为。在应对方式倾向上, 女生相比于男生更容易采取积极应对方式。神经质得分较高的个体其心理弹性较低, 应对方式倾向较为消极。宜人性和严谨性得分较高的个体其心理弹性较高, 应对方式倾向也较为积极。此外, 心理弹性在医学生人格特质和应对方式之间起到显著的部分中介作用。即不同程度的人格特质能直接对应对方式倾向产生影响, 也能通过心理弹性间接影响应对方式倾向。

关键词 心理弹性, 人格特质, 应对方式

The Mediating effect of mental resilience on personality traits and coping styles of medical students

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Abstract: **Objective:** To explore the mediating role of psychological resilience in the relationship between personality traits and coping style of medical students. **Methods:** a total of 432 college students from a medical college in Fujian province were selected as samples by random sampling. The connor-Davidson Resilience Scale (Chinese Version), The Simple Coping Style Scale (SIMPLE Version) and the Big Five Personality Questionnaire (Chinese Version) were used for testing. Questionnaires were collected and data were analyzed by SPSS. **Results:** (1) in the personality traits of medical students, male students scored significantly lower than female students in the dimensions of conscientiousness and agreeableness ($t = -3.04, P < 0.05$)($t = -5.55, P < 0.05$).(2) In terms of coping style tendency, boys were significantly lower than girls ($t = -3.88, P < 0.05$).(3) Personality traits, coping style and mental resilience were correlated in pairs. Neuroticism was negatively correlated with coping style and mental resilience, and agreeableness, conscientiousness, extraversion and openness were positively correlated with coping style and mental resilience.(4) Conscientiousness, extraversion and openness in personality traits significantly positively predicted resilience ($t = 9.03, 6.64, 7.50, P < 0.05$), and neuroticism significantly negatively predicted resilience ($t = 5.73, P < 0.05$). Agreeableness and conscientiousness positively predicted the tendency of coping style ($t = 6.49, 4.80, P < 0.05$), and neuroticism negatively predicted the tendency of coping style ($t = -6.391, P < 0.05$). Mental resilience positively predicted coping style tendency ($t = 10.47, P < 0.05$).(5) Mental resilience played a significant part of the mediating role between personality traits and coping styles of medical students, with the mediating effect of 0.29, accounting for 49.63% of the total effect. **Conclusions:** Female medical students are more likely than male medical students to show empathy and humanistic care for others. In college life, female medical students are better at setting tasks and goals, and observing norms and disciplines. In terms of coping style tendency, girls are more likely to adopt positive coping style than boys. Individuals with higher scores for neuroticism tend to have lower mental resilience and more negative coping styles. Individuals with higher scores of agreeableness and conscientiousness have higher mental resilience and more positive coping styles. In addition, mental resilience plays a significant partially mediating role between personality traits and coping styles of medical students. In other words, different degrees of personality traits can directly affect the coping style tendency, and also indirectly affect the coping style tendency through mental resilience.

Keywords: Mental resilience, personality traits, coping style

我国女性孕早期至孕晚期抑郁的发展轨迹研究

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摘要 目的: 探讨我国女性从孕早期至孕晚期抑郁的发展轨迹。**方法:** 2019年8月至2020年6月, 采用连续纳入和方便取样的方法, 通过自编孕产妇心理健康在线调查系统在北京、江苏、湖南、四川、山东等多家三甲医院对2485名孕妇进行纵向追踪调查。SPSS24.0用于数据存储与描述性分析, Mplus8.3用于构建潜变量增长曲线模型与潜变量增长混合模型。**结果:** 共有531名孕妇完成了孕早、中、晚期三个时间点的调查, 其中孕期抑郁的检出率分别为孕早期31.6%、孕中期23.9%、孕晚期25.6%。潜变量增长曲线模型的结果显示, 孕妇初始抑郁水平存在显著的个体差异(截距因子(α)的均值为10.77, $p < 0.001$; 方差为5.95, $p < 0.001$)。抑郁在整个孕期呈现从孕早期到孕晚期逐渐降低的线性特征, 平均每次测量下降0.48, 但孕妇之间的变化速度不存在显著差异(斜率因子(β)均值为-0.48, $p < 0.001$; 方差为0.13, $p = 0.811$)。根据相关指标将孕期抑郁发展轨迹分为三个潜在类别组:C1 正常缓解组(67.3%)、C2 抑郁风险组(28.5%)与C3 抑郁高危组(4.1%)。

3 个组别的抑郁发展轨迹均存在显著的时间效应：C1 组呈现出从孕早期到孕晚期逐渐降低的趋势；C2 组呈现出从孕早期到孕晚期平稳升高的趋势；C3 组呈现出从孕早期到孕晚期显著升高的趋势。**结论：**孕期抑郁的发展变化具有显著的群体异质性，应针对孕期抑郁不同的发展轨迹开展有效的干预。

关键词 孕期抑郁，发展轨迹，异质性，潜变量增长混合模型

A study on the trajectory of depression in Chinese women from early to late pregnancy

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Abstract: Objective: To explore the developmental trajectory of depressive symptoms in Chinese women from early to late pregnancy. **Methods:** A longitudinal follow-up survey of 2485 pregnant women was conducted in several tertiary hospitals in China from August 2019 to June 2020 using a continuous inclusion and convenience sampling method through a self-administered online maternal mental health survey system. SPSS24.0 was used for data storage and descriptive analysis, and Mplus8.3 was used to construct Latent Growth Curve Models and Latent Growth Mixture Models. **Results:** A total of 531 pregnant women completed the survey at three time points: early pregnancy, mid pregnancy and late pregnancy. The detection rates of depression were 31.6% in early pregnancy, 23.9% in mid-pregnancy and 25.6% in late pregnancy. The results of the latent variable growth curve model showed that there were significant individual differences in the initial depression levels of pregnant women (Means: Intercept (α) = 10.77, $p < 0.001$; Variance: Intercept (α) = 5.95, $p < 0.001$). Depression exhibited a linear pattern of gradual decrease from early to late pregnancy, with an average decrease of 0.48 per measurement, but the change rate did not differ significantly between pregnant women (Means: Slope (β) = -0.48, $p < 0.001$; Variance: Slope (β) = 0.13, $p = 0.811$). The trajectory of depression during pregnancy was divided into three potential groups based on relevant indicators: C1 normal remission group (67.3%), C2 depression risk group (28.5%) and C3 depression high risk group (4.1%). There was a significant temporal effect in all three groups: the C1 group showed a gradual decrease from early to late pregnancy; the C2 group showed a steady increase from early to late pregnancy; and the C3 group showed a significant increase from early to late pregnancy. **Conclusion:** The development of depressive symptoms during pregnancy is significantly group heterogeneous, and effective interventions should be carried out to address the different developmental trajectories of depressive symptoms during pregnancy.

Keywords: Pregnancy Depression, Developmental Trajectory, Heterogeneity, Latent Growth Mixture Modeling

同步 TMS-EEG 揭示背外侧前额叶 rTMS 调控疼痛和感觉皮层的神经可塑性

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摘要 背外侧前额叶（DLPFC）是重复经颅磁刺激（rTMS）镇痛的一个重要刺激靶点。但现有证据表明 DLPFC-rTMS 难以产生持久地镇痛效应。优化 rTMS 镇痛作用的一个突破口是了解其镇痛机制。但现有研究中使用的神经探测手段（即同步 TMS-EMG）仅能观测到运动皮层的神经可塑性变化，这一点极大地制约了前额叶及其他高级皮层的神经可塑性研究。因此，本研究采用同步 TMS-EEG 这一新型的神经探测手段，探索 DLPFC-rTMS 镇痛效应的神经可塑性机制。

本研究为控制组交叉设计，如图一所示，34 名健康成人志愿者分别在两个时间点（间隔>72h，随机顺序）接受单试次 DLPFC-rTMS（10 Hz, 1500 脉冲）或控制组（Sham）干预（伦理编号：20201218）。在每一次干预前后志愿者分别接受冷痛刺激。研究者使用同步 TMS-EEG 对刺激前后前额叶神经的可塑性进行测量。

ANOVA 表明了疼痛的时间主效应, 即 rTMS 和 Sham 刺激均提升了疼痛阈限 ($P_{\text{Bonf}} = 0.037$)。但两者表现出不同的趋势, 经过配对样本 t 检验, 表明 rTMS 组疼痛阈限的提升具有显著性 ($P = 0.024$) 而在 Sham 组未发现显著变化 (图一)。分析 TMS-EEG 数据, 发现了 N45, P60, N120, P200 这些稳定的 TEP 峰值, 这与之前的研究保持一致 (图二)。TMS-EEG 数据也表明, DLPFC 干预增强了刺激部位对侧前额叶的神经活性 (N120), 以及抑制了疼痛诱发部位对侧脑区感觉运动皮层的活动 (N120) (图三)。相关分析表明 N120 时间窗内出现的神经活动具有高度负性相关 (图三), 存在同步活动的可能性。进一步的脑网络分析结果表明, 在 gamma 频段内, 前额叶与中央顶叶 (感觉皮层) 之间存在显著的连接 (图四)。值得注意的是, 这些神经可塑性改变是 DLPFC-rTMS 刺激独有的, 而并不能被 Sham 刺激调控。

本研究采用了新型的神经探测技术探索 DLPFC-rTMS 镇痛的神经可塑性机制。结果表明, DLPFC-rTMS 能够有效调节前额叶的神经可塑性, 并进而在 gamma 频段内调控前额叶与中央顶叶之间疼痛加工的脑网络连接, 从而调节对疼痛的感受性。这些结果将为优化 DLPFC-rTMS 的镇痛效应提供实证基础和指导方向。

关键词 疼痛, 背外侧前额叶, 经颅磁刺激, 同步经颅磁刺激与脑电图技术

Concurrent TMS-EEG to reveal prefrontal rTMS in the modulation of pain experience and somatosensory neuroplasticity

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Abstract: The dorsolateral prefrontal cortex (DLPFC) is an important target for repetitive transcranial magnetic stimulation (rTMS) to reduce pain. However, DLPFC-rTMS tends to be unable to induce long-lasting analgesia, in which understanding its mechanisms of action bears the significance to optimise DLPFC-rTMS analgesia in clinical settings. Concurrent TMS-EEG is able to reveal the neuroplastic changes beyond the motor cortex, such as the prefrontal cortex. This study was therefore designed to investigate prefrontal plastic changes associated with DLPFC-rTMS analgesia.

This study was a cross-over, sham-controlled design. A group of 34 healthy participants received a single trial of DLPFC-rTMS (10 Hz, 1500 pulses) or control group (sham) intervention at two time points (interval > 72h, two groups were randomly arranged, Ethics Code: 20201218). In each experiment, volunteers were required to experience 5 °C cold water before and after the intervention to induce pain. Synchronous transcranial magnetic stimulation and electroencephalogram (TMS-EEG) were used to measure the pain perception and neural plasticity of prefrontal cortex at baseline and after the intervention.

ANOVA showed the main time effect of pain threshold, which indicated DLPFC and sham stimulation both increased the pain threshold ($P_{\text{Bonf}} = 0.037$), however, they showed different trends. Paired sample t-test showed that the pain threshold in rTMS group was significantly increased ($P = 0.024$), but not in sham group (Fig. 1). By analysing TMS-EEG data, we found stable TEP peaks of N45, P60, N120 and P200, which was consistent with previous studies (Fig. 2). TMS-EEG data also showed that DLPFC intervention enhanced the neural activity (N120) of the contralateral prefrontal lobe, and inhibited the activity of the sensorimotor cortex on the opposite side of the pain evoked site (N120) (Fig. 3). Correlation analysis showed that different neural activities in N120 time window were highly negatively correlated (Fig. 3), and there might be synchronous activities. Further brain network analysis showed that there was a significant connection between the prefrontal lobe and the central parietal lobe (sensory cortex) in the gamma band (Fig. 4). It was worth noting that these changes in neural plasticity were unique to DLPFC-rTMS stimulation and cannot be modulated by sham stimulation.

In this study, a novel neural detection technique was used to explore the neural plasticity mechanism of DLPFC-rTMS analgesia. The results showed that DLPFC-rTMS can effectively modulated the neural plasticity of prefrontal lobe, and then regulated the brain network connectivity of pain processing between prefrontal lobe and central parietal lobe in gamma band, so as to regulate the perception of pain. These results will provide an empirical

basis and direction for optimizing the analgesic effect of DLPFC-rTMS.

Keywords: pain, dorsolateral prefrontal cortex, transcranial magnetic stimulation, TMS-EEG

父母心理控制与担忧的关系：核心自我评价与无法忍受不确定性的链式中介作用

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摘要 随着社会竞争的日趋激烈，大学生来自多方面的压力，而这些压力会引发个体的担忧。担忧是种常见的心理过程，是个体对不确定性事件顾虑的一种认知方式，担忧本身是导致个体焦虑的关键因素，过度的和无法控制的担忧是 GAD（一般广泛性焦虑）的一个主要症状。家庭微系统是发展生态学模型中最基础的分析单位，家庭教养方式对子女的成长发展至关重要，过高的父母心理控制会影响个体的心理健康和问题行为的产生。本研究通过探讨父母心理控制与担忧的关系，以及核心自我评价与无法忍受不确定性在其中的作用，为学校和社会开展心理工作提供参考依据，促进青少年心理健康发展。采用父母心理控制、担忧，以及核心自我评价与无法忍受不确定性量表对 739 名大学生进行调查。结果表明：（1）父母心理控制与担忧在性别上存在显著差异，核心自我评价与担忧在独生子女上存在显著差异，核心自我评价在年级上存在显著差异。（2）父母心理控制与无法忍受不确定性、担忧呈显著正相关，父母心理控制与核心自我评价呈显著负相关，核心自我评价与无法忍受不确定性、担忧呈显著负相关，无法忍受不确定性与担忧呈显著正相关。（3）核心自我评价与无法忍受不确定性在父母心理控制与担忧之间起显著的中介作用。具体为三条中介路径：一是核心自我评价的单独中介作用；二是无法忍受不确定性的单独中介作用；三是核心自我评价与无法忍受不确定性的链式中介作用。

关键词 父母心理控制，担忧，核心自我评价，无法忍受不确定性

The Effect of Parental Psychological Control on Worry: The Chain Mediating Role of Core Self-evaluation and Intolerance of Uncertainty

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Abstract: With the increasingly fierce social competition, college students are under pressure from many aspects, and these pressures will cause individual worries. Worry is a common psychological process, it is a cognitive way for individuals to worry about uncertain events. Worry is a key factor leading to anxiety. Excessive and uncontrollable worry is a major symptom of GAD (Generalized anxiety disorder). The family microsystem is the most basic analysis unit in the ecological model of human development. The family parenting style is very important to the growth and development of children. Excessive parental psychological control will affect individual mental health and problem behavior. This present study aimed to explore the relationship among parental psychological control, core self-evaluation, intolerance of uncertainty and worry, so as to provide a reference for schools and society to carry out psychological work and promote the mental health of adolescents. 739 colleges completed Parental Psychological Control Scale, Worry Scale, and Core Self-Evaluation Scale and Intolerance of Uncertainty Scale-12. The results showed that: (1) There are significant differences in parental psychological control and worry on gender, significant differences in core self-evaluation and worry on the only child, and significant differences in core self-evaluation on grade. (2) Parental psychological control was significantly positively correlated with intolerance of uncertainty and worry, parental psychological control was significantly negatively correlated with core self-evaluation, core self-evaluation was significantly negatively correlated with intolerance of uncertainty and worry, and intolerance of uncertainty was significantly positively correlated with worry. (3) Core self-evaluation and intolerance of uncertainty played significant mediating roles between parental psychological control and worry. Specifically, there were three paths that parental psychological control to influence worry: one was the mediating role of core self-evaluation; the

second was the mediating role of intolerance of uncertainty; the third was the chain-mediated role of both core self-evaluation and intolerance of uncertainty.

Keywords: parental psychological control, worry, core self-evaluation, intolerance of uncertainty

互联网时代下的多元心理契约：背景、特点、测量方法与未来方向

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摘要 绝大部分关于工作组织中心理契约的研究都是从员工-雇主二元关系的视角探讨心理契约在工作组织中的作用，而忽视了工作关系中的其他主体在心理契约中扮演的角色。在移动网络和数字技术的推动下，数字零工经济下的应用程序工作快速发展。在应用程序工作中，由于工作需要多方协调共同完成，心理契约不再局限于员工与组织之间，工作关系中的其他主体，如顾客、供应商等也会形成相应的心理契约，由此呈现出多元心理契约的状态。将心理契约的概念从员工-组织关系的狭窄领域中解放出来，从多元视角对工作中的心理契约进行研究，对于心理契约概念在互联网时代背景下的工作情境中的适用性至关重要。鉴于其对理论和实践发展的重要性，近年来，部分研究开始从多元视角或以应用程序工作为背景来研究心理契约，也有少量研究将这两种视角相结合。然而，从整体来看，相关研究仍较少，对于应用程序工作中多元心理契约的认识还不够清晰。本文在系统的回顾和梳理相关研究的基础上，从应用程序工作中多元心理契约产生的背景、特点及测量方法三个角度出发，对多元心理契约进行探讨。最后，从影响多元心理契约的因素、多元心理契约的相互性，多元心理契约的动态变化以及多元心理契约的激励作用四个方面讨论了多元心理契约的未来研究方向。

关键词 多元心理契约，应用程序工作，零工，心理契约测量

Multi-party psychological contract in the Internet Age: background, characteristics, measurement approach and future direction

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Abstract: Most studies on psychological contract in work organization discuss the role of psychological contract from the perspective of employee-employer dual relationship, while ignoring the role of other subjects in work relationship in psychological contract. Driven by the mobile network and digital technology, the application work under the digital part-time economy is developing rapidly. In the application work, because the work needs to be coordinated by many parties, the psychological contract is no longer limited to the relationship between employees and organizations, and other subjects in the working relationship, such as customers and suppliers, will also form corresponding psychological contracts, thus showing the state of multi-party psychological contract. Emancipating the concept of psychological contract from the narrow field of employee-organization relationship and studying the psychological contract from multiple perspectives is very important for the applicability of the concept of psychological contract in the work situation under the background of the Internet age. In view of its importance to the development of theory and practice, in recent years, some studies began to study psychological contract from multiple perspectives or in the context of application work, and a few studies combined these two perspectives. However, on the whole, there are still few relevant studies, and the understanding of multi-party psychological contract in application work is not clear enough. Based on the systematic review and combing of relevant research, this paper discusses the multi-party psychological contract from three perspectives: the background, characteristics and measurement methods of multi-party psychological contract in application work. Finally, the future research direction of multi-party psychological contract is discussed from four aspects: the factors affecting multi-party psychological contract, the interaction of multi-party psychological contract, the dynamic changes of multi-party psychological contract and the incentive effect of multi-party psychological contract.

Keywords: Multi-party psychological contract, Application work, Gig worker, Psychological contract, Measurement

共情回避的现象、机制及影响因素

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摘要 共情回避指人们在可以选择共情与否时，倾向于选择不共情的现象。本研究通过 3 项实验对共情回避现象、心理机制及其影响因素进行了系统研究。实验 1 采用共情选择任务范式（被试在共情任务和描述任务中二选一）考察是否存在共情回避现象，以及共情回避是否受情绪效价影响。结果发现，共情选择比例显著低于 0.5，消极图片和积极图片的共情比例无显著差异，即确实存在共情回避现象，并且此现象与情绪效价无关。实验 2 基于自我损耗的理论框架，采用双任务范式（任务一为共情选择任务，任务二为 Stroop 任务）对共情回避现象进行机制探讨。结果发现，相较于对照组（描述任务组），共情任务组的努力分数更高，即需要被试投入更多努力，消耗更多心理资源。实验 3 考察反馈类型和专业认同对新手咨询师共情选择的影响。结果发现，积极反馈和高专业认同均能促进新手咨询师的共情选择，但对于低专业认同的新手咨询师而言，无论积极反馈还是消极反馈都不能促进其共情选择。本研究结果表明，存在共情回避现象，其原因可能是共情会消耗更多心理资源；对新手咨询师而言，积极反馈和高专业认同可以减少共情回避。

关键词 共情回避，自我损耗，专业认同，新手咨询师

Empathy Avoidance: Phenomenon, Mechanisms and Influencing Factors

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Abstract: Empathy avoidance refers to a phenomenon that individuals are more reluctant to engage in empathy when there are alternatives. The current research investigated this phenomenon, further systematically examined its psychological mechanisms and influencing factors through three studies. Specifically, study 1 examined whether the phenomenon of empathic avoidance existed and whether it was affected by the valence of emotion using the paradigm of empathic choice task, in which participants were required to make choice between the task of empathy and description. The results showed that the ratio of empathic choice was significantly lower than 0.5, however, there was no significant difference of empathic choice between negative and positive pictures. That is, the phenomenon of empathy avoidance existed, but it was not influenced by the valence of emotion. Based on framework of ego-depletion, Study 2 explored the mechanisms of empathy avoidance with a dual-task paradigm, in which task 1 was also the empathic choice task, and task 2 was Stroop task. Then we found that empathic task required more mental resources in experimental group compared to control group, with higher scores in efforts of participants in experimental group. Study 3 examined the effects of feedback and professional identity on empathic choice of novice counselors, of which the results showed that both two variables could make influence on empathic choice, but feedbacks did not influence empathic choice of counselors with low professional identity. In conclusion, empathy avoidance does exist, which may result from the consumption of more mental resources for empathy, but positive feedback and robust higher professional identity could release this avoidance of novice counselors.

Keywords: empathy avoidance, ego-depletion, professional identity, novice counselor

短时正念训练对不确定性决策的影响

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摘要 不确定性决策 (decision-making under uncertainty) 是日常生活中常见的决策类型, 可分为风险决策 (decision-making under risk) 和模糊决策 (decision-making under ambiguity)。以往的研究发现正念对决策存在一定影响, 但以往研究较少聚焦于正念对不确定性决策的影响, 且也未细分正念对风险决策与模糊决策的具体作用。因此, 本研究拟探究正念训练对不确定性决策亚型的具体影响。本研究共招募无正念经验的在校大学生 99 名 (男生 32 名, 女生 67 名, 平均年龄 20.01 ± 1.66 岁), 分别随机进入实验组和两个控制组, 三组在性别组成与平均年龄上无显著性差异。实验组使用短时正念呼吸训练, 两个控制组分别使用腹式呼吸训练和中性音频。采用五因素正念量表 (Five-facet Mindfulness Questionnaire, FFMQ) 测量干预前特质性正念水平、骰子任务 (Game of Dice Task, GDT) 测查风险决策、爱荷华博弈任务 (Iowa Gambling Task, IGT) 测查模糊决策。使用单因素方差分析比较三组被试人口学变量及量表得分差异; 使用 3 (组别: 正念呼吸组、腹式呼吸组、中性音频组) $\times$ 2 (干预: 前测、后测) 重复测量方差分析比较三组被试在决策任务中干预前后的表现差异; 以爱荷华博弈任务前后测净得分之差为因变量, 并将任务试次平均分为 5 段, 使用 3 (组别: 正念呼吸组、腹式呼吸组、中性音频组) $\times$ 5 (分段: block 1、block 2、block 3、block 4、block 5) 重复测量设计方差分析进行分段比较, 考察模糊决策中个体的表现变化差异。结果发现: (1) 三组被试在人口学变量及五因素正念量表得分上无显著差异, 排除被试本身特质影响; (2) 风险决策任务中, 组间差异、干预主效应以及交互作用不显著; (3) 模糊决策中, 组间差异、干预主效应以及交互作用均显著 ($p < 0.05$), 正念呼吸组在训练后的决策表现明显提升, 两个控制组的前后测差异则均不显著; (4) 模糊决策分段比较中, 组间差异显著 ($p < 0.05$), 正念呼吸组随着任务进行表现越来越好, 且各段得分均显著高于另外两组。本研究表明短时正念训练可以显著提升个体模糊决策的表现, 而对风险决策则不存在提升效应; 正念训练可能是通过提高个体从反馈中学习的能力进而改善个体的模糊决策表现。

关键词 正念训练, 风险决策, 模糊决策

Effects of Brief Mindfulness Training on Decision-making Under Uncertainty

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Abstract: As one of decision-making type, decision-making under uncertainty includes decision-making under risk and decision-making under ambiguity. Previous studies have found that mindfulness has certain effects on decision-making, while which seldom focused on the effect of mindfulness on decision-making under uncertainty and didn't separate the specific effects on decision-making under risk and ambiguity. Therefore, this study aimed to examine the specific effect of mindfulness training on different subtypes of decision-making under uncertainty. A total of 99 college students (32 males and 67 females, $M_{age} = 20.01 \pm 1.66$) without experience in mindfulness were recruited and divided into three groups randomly. There were no significant differences in gender and age among the three groups. A brief mindfulness breathing training was used in the experimental group, while abdominal breathing and neutral audio tape were used in the two control groups, respectively. The Five-facet Mindfulness Questionnaire (FFMQ) was used to examine trait mindfulness before intervention, Game of Dice Task (GDT) was performed to assess the decision-making under risk, and Iowa Gambling Task (IGT) was used to test the decision-making under ambiguity. The group differences in the demographic variables and scores of FFMQ were conducted with One-way

ANOVA. The 3 (groups: mindfulness breathing, abdominal breathing, neutral audio tape) $\times$ 2 (interventions: pretest, posttest) repeat measure ANOVA was conducted to examine task differences in performance (pre and after the intervention). The 3 (groups: mindfulness breathing, abdominal breathing, neutral audio tape) $\times$ 5 (blocks: block 1, block 2, block 3, block 4, block 5) repeat measure ANOVA was performed to further explore the task differences in performance changes in decision-making under ambiguity. Results showed that: (1) there were no significant group differences in demographic variables and FFMQ scores; (2) in decision-making under risk, none of the group difference, the main effect of intervention, and the interaction were significant; (3) in decision-making under ambiguity, the group difference, the main effect of intervention, and the interaction were significant ($p < 0.05$), mindfulness training did improve individual performance

多视角因素对寻路行为的影响

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摘要 寻路行为是一种对多个事物进行空间知觉整合的复杂空间认知过程, 且空间认知领域的研究发现, 视角会影响对客体的空间感知, 因此不同视角状态下的寻路行为会因个体对事物空间知觉变化进而产生差异。本研究旨在探讨多视角因素对寻路行为的影响。采用实验法研究在立体空间中的不同视角是否会对客体事物形成不同的认知, 进而影响寻路绩效。在此基础上进行问卷调查, 以探究个体在不同视角的室内寻路实验后, 寻路策略是否具有性别差异。结果表明: 在反应时分析中, 男性在地图程度控制组的反应时显著慢于时间控制组, 女性在时间控制组的反应时边缘显著的慢于程度控制组; 女性反应时边缘显著地慢于男性; 0°视角反应时显著慢于 15°, 30°视角反应时边缘显著的慢于 15°。在正确率分析中, 女性正确率显著高于男性; 时间控制组的正确率显著高于程度控制组; 30°视角正确率显著高于 15°与 0°; 男性在程度控制组的正确率高于时间控制组; 女性在时间控制组的正确率显著高于程度控制组; 女性在 30°视角下的正确率显著高于 15°与 0°; 在时间控制组中, 30°视角的正确率显著高于 0°与 15°; 在程度控制组中, 15°视角的正确率显著高于 0°, 边缘显著高于 30°; 30°视角下的正确率显著高于平视 0°。男性在室内寻路中的定向维度上优于女性。结论: 性别、地图学习程度、视角因素对寻路行为产生了影响。

关键词 多视角因素, 寻路行为, 室内寻路策略

The influence of multi-perspective factors on pathfinding behavior

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Abstract: Pathfinding behavior is a complex spatial cognitive process that integrates spatial perception of multiple objects, and studies in the field of spatial cognition have found that perspective can affect the spatial perception of objects, so the pathfinding behavior in different perspective states will be different due to the change of spatial perception of objects. The purpose of this study was to investigate the effects of multiple perspectives on pathfinding behavior. The experimental method is used to study whether different perspectives in the three-dimensional space will form different cognition of objects, and then affect the pathfinding performance. On this basis, a questionnaire survey was conducted to explore whether there were gender differences in wayfinding strategies after indoor wayfinding experiments from different perspectives. The results showed that: in response time analysis, the response time of men in map degree control group was significantly slower than that of time control group, and the response time of women in time control group was significantly slower than that of degree control group. The edge response of female was significantly slower than that of male. The reaction time of 0° Angle was significantly slower than that of 15°, and the reaction time of 30° Angle was significantly slower than that of 15°. In accuracy analysis, female accuracy was significantly higher than male accuracy. The accuracy of time control group was significantly higher than that of degree control group. The accuracy of 30° Angle was significantly higher than that of 15° and 0°. The correct rate of male in degree control group was higher than that in time control group. The accuracy of females in the time control

group was significantly higher than that in the degree control group. The correct rate of females under 30° was significantly higher than that under 15° and 0°. In the time control group, the accuracy of 30° viewing Angle was significantly higher than that of 0° and 15°. In the degree control group, the accuracy of 15° Angle was significantly higher than that of 0°, and the edge was significantly higher than that of 30°. The accuracy of 30° visual Angle was significantly higher than that of 0° visual Angle. Men are better than women in the directional dimension of indoor pathfinding. Conclusion: Gender, map learning level and perspective have an impact on pathfinding behavior.

Keywords: multiple perspectives, way-finding behavior Indoor, routing strategy

孤独症（自闭症）谱系障碍儿童父母教养行为量表修订及信效度检验

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摘要 背景: 父母教养是影响孤独症（自闭症）谱系障碍（ASD）儿童社会功能发展和社会适应的重要因素。目前对 ASD 儿童的教养研究主要集中于教养压力, 对教养行为的关注相对较少。Van Leeuwen 等人编制的孤独症（自闭症）谱系障碍儿童父母教养行为量表（PBS-A, Parental Behavior Scale-ASD）是针对 ASD 儿童养育者群体开发的教养行为的有效评估工具。该量表对我国 ASD 儿童父母群体的适用性尚有待检验。**目的:** 本研究旨在对 PBS-A 进行本土化修订,使其适用于测量我国 ASD 儿童父母的教养行为, 并对修订后的量表进行信效度检验。**方法:** 采用方便抽样, 选取 416 名 2 岁-7 岁 ASD 儿童父母(样本 1)为被试, 使用中文版 PBS-A 施测, 采用探索性因素分析对量表结构进行探索。在间隔 1 月后选取其中 105 人(样本 2)进行重测, 检验重测信度。采用样本 3 (N=91), 施测父母养育方式量表(PBI, Parental Bonding Instrument)、Alabama 教养问卷父母版(APQ, Parental Global Report Form of the Alabama Parenting Questionnaire)和中文版 PBS-A, 分别以 PBI 和 APQ 中的积极养育维度和消极养育维度作为校标变量, 检验中文版 PBS-A 相关分量表的校标效度。**结果:** 根据探索性因素分析结果, 删除 11 个低载荷或多重载荷的条目。修订后的量表包括 41 个条目, 分为积极教养、纪律与惩罚、规则、物质奖励、工具辅助、促进问题解决思维和促进社会情绪识别七个因子。其中, 积极教养、规则和物质奖励三个维度与原量表基本一致, 原量表的纪律与严酷惩罚两个维度合并为一个维度, 命名为纪律与惩罚, 原量表的刺激发展维度被拆分为促进问题解决思维和促进社会情绪识别两个维度, 原量表的适应环境维度被保留了 3 个条目, 命名为工具辅助。其中, 后三个维度为针对 ASD 儿童的特有教养维度。七因子的累计方差解释率为 55.69%, 总量表的内部一致性系数为 0.88, 各分量表的内部一致性系数在 0.63-0.87 之间。总量表的重测信度系数为 0.76, 各分量表的重测信度系数在 0.52-0.82 之间。各分量表与 PBI 及 APQ 的相关维度的相关性在 0.41-0.77 之间。结论: 修订后的中文版孤独症（自闭症）谱系障碍儿童父母教养行为量表具有良好的信效度, 能够作为我国 ASD 儿童父母教养行为的有效测量工具。

关键词 孤独症（自闭症）谱系障碍, 教养行为, 信效度

Adaptation and Validation of the Parental Behavior Scale - ASD in Chinese Parents

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Abstract: Background: Parenting is a key factor contributing to the social functioning of children with ASD. Previous research on parenting in families with children diagnosed as ASD focuses more on parenting stress and leaves parenting behaviors less examined. Parental Behavior Scale - ASD (PBS-A), developed by Van Leeuwen et al, is a valid measurement to assess parental behavior of ASD children's parents. The applicability of this scale to measure the parenting behaviors of ASD children's parents in China remains to be tested. Objective: The present study aims to revise the Parental Behaviour Scale - ASD in Chinese parents and test the reliability and validity on the

revised scale, Method: four hundred and sixteen parents (sample 1) of children with autism spectrum disorders aged between 2-7 years old completed the initial version of PBS-A. Exploratory factor analysis was applied to explore the structure of the scale in Chinese parents. A subsample of 105 parents (sample 2) filled out the questionnaire once again one month later to examine the test-retest reliability. The third sample comprised of 91 parents (sample 3) completed another two parenting measures, i.e, Parental Bonding Instrument (PBI) and Parental Global Report Form of the Alabama Parenting Questionnaire (APQ) in addition to PBS-A to examine the criterion-related validity. Results: Eleven items were removed because of low loading or multiple loading according to results of EFA. There were 41 items in Chinese version of Parental Behaviour Scale-ASD including seven factors, that is, positive parenting, harsh punishment and discipline, rules, material rewarding, tools-assisted parenting and promoting problem-solving thinking and promoting social emotions recognition. Positive parenting, rules and material rewarding sub-scale are basically consistent with the original scale. The two dimensions of discipline and harsh punishment merge into one dimension named discipline and punishment. Stimulating the development sub-scale is split into two sub-scales which are promoting problem-solving thinking and promoting social emotions recognition. One of the original PBS-A dimension, adapting the environment transforms into tools-assisted parenting sub-scale retaining 3 items of the adapting the environment sub-scale. The latter three dimensions were specific for children with ASD. The seven-factor structure explained 55.69% of the variance. The Cronbach's α of the total scale was 0.88 and the Cronbach's α s of the seven sub-scales ranged from 0.63 to 0.87. The test-retest reliability of the total scale was 0.76 and the coefficients were between 0.52 to 0.82 for the seven sub-scales. The correlations of dimensions in PBS-A and similar dimensions in PBI and APQ were between 0.41-0.76. Conclusion: The Chinese version of Parental Behaviour Scale - ASD for parents of children with ASD has good validity and reliability. It can be used to measure the parenting behaviors for ASD children's parents in future research.

Keywords: Autism spectrum disorders, parenting behaviors, reliability and validity

疫情背景下前瞻性应对和工作控制感对工作不安全感的影响

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摘要 新冠疫情下, 员工承担许多压力, 其中定量的工作不安全感是最常经历的工作压力, 也是影响员工工作投入、心理健康的重要变量。但同在疫情下, 为什么有的员工压力应对的更好, 经历更少的工作不安全感, 有的员工则体验到更多的工作压力, 进而影响其身心健康? 根据压力的认知评价理论与前瞻性应对概念, 我们认为员工的前瞻性应对水平和工作控制感会影响员工在疫情下感知到的工作不安全感进而影响其心理健康(焦虑与抑郁)和工作投入。本研究通过对 455 名工作者进行问卷调查, 探讨在疫情下, 员工的前瞻性应对水平和工作控制感在评估工作不安全感中起到的调节作用。

目的: 调查工作者在疫情下感知到的定量的职业不安全感、心理健康水平(由抑郁和焦虑表示), 探讨前瞻性应对水平和工作控制感对疫情下员工感知到的工作不安全感的调节作用。**方法:** 本研究采用疫情因子量表、工作不安全感量表的定量工作不安全感维度、未来取向应对量表、认知评价量表的感知控制维度、工作投入量表、抑郁焦虑压力量表于 2021 年 5 月对 455 名工作者进行问卷调查, 并使用 SPSS 的 PROCESS 3.5 进行模型检验。**结果:** 前瞻性应对水平高且工作控制感高的员工在疫情下应对更好, 感知到更少的工作不安全感, 有更好的心理健康; 前瞻性应对水平高而工作控制感低的员工会感知到更多的工作不安全感。个体前瞻性应对水平和工作控制感的调节作用提醒我们可以通过提升工作者的前瞻性应对水平和工作控制感, 减少二者间的差距来减少工作者的工作不安全感。

关键词 新冠疫情, 前瞻性应对, 工作控制感, 工作不安全感

The Influence of proactive Coping and Job Control on Job Insecurity in the COVID-19

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Abstract: Under the COVID-19, employees in organizations often experience a lot of work pressure and job insecurity is one of them which affects mental health and work engagement. In the same situation, why do some employees cope with stress better and experience less job insecurity, while others experience more job stress? According to the cognitive appraisal theory of stress and the concept of proactive coping, we hypothesize that perceived control of job and proactive coping moderate employees' job insecurity under the COVID-19, and then affect their mental health (anxiety and depression) and work engagement. We tested this moderated mediation model with 482 employees. Using PROCESS macro 3.5 in SPSS to test the model.

Objective: To investigate the quantitative job insecurity, mental health (depression and anxiety) and work engagement perceived by workers under the COVID-19, and to explore the moderating effects of proactive coping level and job control on the quantitative job insecurity of workers under the COVID-19. **Methods:** This study is a part of "Mental Health Support Project against the COVID-19" (Project No.: 40061). In May 2021, 455 workers were investigated with COVID-19 factor scale, quantitative job insecurity dimension of job insecurity scale, perceived control dimension of future orientation coping scale, cognitive appraisal scale, work engagement scale, depression anxiety and stress scale, and tested with SPSS PROCESS 3.5. **Results:** Employees with higher proactive coping and higher job control cope better, feel less job insecurity and have better mental health. Employees with higher proactive coping and lower job control feel more job insecurity. This reminds us that we can reduce workers' job insecurity by improving workers' proactive coping and job control and reducing the gap between them.

Keywords: COVID-19, proactive coping, perceived control, job insecurity

基于微博大数据爬取的新冠疫情民众心理分析

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摘要 自2019年12月31日国家卫健委专家抵达武汉正式介入调查起,“新型冠状病毒”一词逐渐进入民众视野,并长期占据民众心理资源。2020年1月20日,国家卫健委记者会上,钟南山首次证实新冠病毒存在“人传人”,民众心理开始恐慌。2020年1月23日上午10点,武汉“封城”,恐慌心理陡然上升。2月16日,国家卫健委称全国各地疫情防控效果已显现。至3月18日,武汉首次0新增确诊病例,给以武汉为焦点的疫情防控暂时画上句号。疫情期间,层出不穷的舆情事件一次又一次将民众情绪推向高潮。另外,疫情严峻化信息的心理传播使得大量民众出现焦虑,紧张,恐惧等情绪。了解疫情期间民众的心理走向对于社会舆情策略有着借鉴作用。而用户行为心理的全时程跟踪可以通过微博等社交应用来进行追踪,微博作为一个公开平台,有着丰富的用户数据可供研究。微博作为一个国民软件,活跃的使用者在微博留下当天的心情、行为等痕迹,可供研究者回溯。故爬取2019年12月31日到2020年3月18日微博关键字为“肺炎”和“新冠”等微博活跃独立用户相关微博全文。另对微博用户分为两类:武汉用户和全国用户。以比较武汉和全国用户的心理情绪和行为变化相似与不同。

收集来的微博全文文本数据均使用中国科学院心理研究所计算网络心理实验室开发的“文心”中文心理分析系统(TextMind)进行心理行为相关语言表达特征的提取。分析用户的心理特征。探究用户焦虑、紧张、恐惧、孤独等负性情绪何时因何增长或消弭。

探讨在新型冠状病毒造成的民众恐慌情绪肆虐的当时,民众的情绪情感有何规律。未来类似事件发生后,社交媒体应当以合适的方式引导民众了解疫情的严峻并听从官方指导并在合适的时间给民众吃定心丸,缓解紧张情绪,减少社会情绪骚动。

关键词 大数据, 新冠病毒, 文本分析, 微博, 舆情干预

A Psychological analysis of the population of the neo-crown epidemic based on microblogging big data crawl

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Abstract: Since December 31, 2019, the National Health Commission experts arrived in Wuhan to formally intervene in the investigation, the term "new coronavirus" gradually entered the public's field of vision, and long-term occupation of the public psychological resources. 2020 January 20, the National Health Commission press conference, Zhong Nanshan first confirmed the existence of the new coronavirus "On January 23, 2020, at 10:00 a.m., Wuhan was "sealed off" and panic rose steeply. on February 16, the National Health Construction Commission said that the effect of prevention and control of the epidemic across the country had appeared. On March 18, for the first time, there were zero new confirmed cases in Wuhan, putting a temporary end to the epidemic control focusing on Wuhan. During the epidemic, the public sentiment was pushed to a climax again and again by the numerous public opinion events. In addition, the psychological dissemination of information about the severity of the epidemic caused a large number of people to become anxious, nervous, and fearful. Understanding the psychological trends of the public during the epidemic is useful for social opinion strategies. As a public platform, Weibo has a wealth of user data for research. As a national software, active users leave traces of their moods and behaviors on Weibo on that day, which can be retraced by the researcher. Therefore, we crawled the full text of microblogs from December 31, 2019 to March 18, 2020 with the keywords of "pneumonia" and "new crown" and other active independent users. The microblog users were divided into two categories: Wuhan users and national users. The data were used to compare the similarities and differences in the psychological and behavioral changes of Wuhan and national users.

The collected full text data were extracted using the "TextMind" Chinese psychological analysis system (TextMind) developed by the Laboratory of Computational Network Psychology, Institute of Psychology, Chinese Academy of Sciences. Analysis of users' psychological characteristics. To investigate when and why negative emotions such as anxiety, tension, fear, and loneliness grow or subside.

To explore what are the patterns of people's emotional feelings at the time of the rampant panic caused by the new coronavirus. After similar events in the future, social media should guide people in an appropriate way to understand the severity of the epidemic and follow official guidance and give them reassurance at the right time to ease tension and reduce social unrest.

Keywords: big data, COVID-19, text analytics, microblogging

童年期心理虐待和青少年非自杀性自伤： 非适应性认知情绪调节和心理困扰的中介作用

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摘 要 非自杀性自伤 (Non-suicidal Self-injury, NSSI, 以下简称自伤) 是指在没有明确自杀意图的情况下, 个体故意、直接、重复地伤害自己身体, 这种行为不被社会认同, 且不具致死性或致死性较低。自伤行为既

是一种心理病理行为，也是一个复杂的社会问题，常见于青少年群体。以往研究发现，个体早期不良经历（如童年期心理虐待）是引发自伤行为的早期不利处境诱因。相关理论和研究表明，消极的情绪调节及心理困扰直接或间接影响自伤行为的发生，在童年期心理虐待经历和自伤行为间扮演重要作用。因此，本研究希望通过考察青少年童年期心理虐待经历与自伤行为之间的关系，探讨非适应性认知情绪调节和心理困扰在两者间的作用机制。采用分层整群抽样方法，在福建省四所中学选取 2300 名中学生进行调查，回收有效问卷 1992 份，有效率为 86.61%。其中男生 955 名（47.94%），女生 1037 名（52.06%）；初中生 522 名（26.20%），高中生 1470（73.80%）。本次评估采用问卷调查的方法，通过 IBM SPSS Statistics 23.0 及 AMOS 24.0 进行数据分析，进行结构方程建模和中介效应检验。研究结果表明：①童年期心理虐待、非适应性认知情绪调节、心理困扰和自伤行为两两之间均呈显著正相关；②童年期心理虐待对青少年自伤行为具有直接预测作用；③心理困扰在童年期心理虐待和青少年自伤行为之间起部分中介作用；④非适应性认知情绪调节和心理困扰在童年期心理虐待和青少年自伤行为之间起链式中介作用。研究进一步揭示了非适应性认知情绪调节和心理困扰在童年期心理虐待和青少年自伤行为之间的作用机制，为今后相关话题探讨提供研究支持，也为青少年自伤行为干预和预防提供了理论依据。

关键词 青少年，非自杀性自伤，童年期心理虐待，非适应认知情绪调节，心理困扰

Childhood Psychological Abuse and Non-suicidal Self-injury among Adolescents: the Mediating Effect of Negative Cognitive Emotion Regulation and Mental Problems

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Abstract: Non-suicidal self-injury (NSSI) refers to a socially unacceptable behavior, that deliberately, directly, repeatedly destructs or alters body tissue in no or low lethality, without conscious suicidal intent. NSSI, being a psychopathological behavior, as well as a complex social problem, is common among adolescents. Previous studies have found that negative experiences in childhood, such as psychological abuse, are the early adverse circumstances that could induce to the occurrences of NSSI behaviors. Relevant theories and studies demonstrate that, negative cognitive emotion regulation and mental health problems had direct or indirect effects on NSSI behaviors in adolescents, and play an important role in the relationship between childhood psychological abuse and NSSI. Thus, this study aimed to investigate the relationship between childhood psychological abuse and NSSI in Chinese adolescents, and tried to explore the mechanism of negative cognitive emotion regulation and mental problem in the association between them. Using the stratified cluster sampling approach, a total of 2300 adolescents selected from four middle high schools in Fujian Province, China, and of 1992(86.61%) valid subjects collected. All of the 1992 participants were composed of 955 males(47.94%) and 1037 females(52.06%), 522 middle school students(26.20%), 1470 high school students(73.80%). Structural equation modeling and mediating effect testing were conducted using IBM SPSS Statistics 23.0 and AMOS 24.0 in this questionnaire survey. The results indicate that (1) positive correlations were conducted among all the variables; (2) childhood psychological abuse had a direct effect on NSSI behavior; (3) mental problem played a partial mediating role in childhood psychological abuse and NSSI behavior; (4) negative cognitive emotion regulation and mental problem act as a chain mediating effect between childhood psychological abuse and NSSI behavior. The study further revealed the mechanism of negative cognitive emotion regulation and mental problem in the association between childhood psychological abuse and NSSI behavior among adolescents, which provides research supports for future topic discussions, and also theoretical references for intervention and prevention of NSSI behaviors.

Keywords: Adolescents, Non-suicidal Self-injury, Childhood Psychological Abuse, Negative Cognitive Emotion

道德情绪唤起对大学生国家认同感的影响 ——以红色纪念馆为例

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摘 要 红色纪念馆是培养当代大学生国家认同感的重要载体与有效方式, 但各纪念馆在培养效果上却存在显著差异。为此, 本研究从红色纪念馆出发, 将道德情绪作为影响大学生国家认同感形成的核心变量, 以此探讨道德情绪对大学生国家认同感的提升作用。研究假设: 道德情绪唤起与大学生的国家认同感密切相关, 并在红色纪念馆对大学生的国家认同感培养中发挥出重要的作用。研究内容: 本研究由两个实验部分组成。实验一采用调查法, 对南京大屠杀等 15 个红色纪念馆的场馆信息陈设与来访者参观感受(道德情绪感受、国家认同感等)进行实地调研; 实验二采用实验室实验的方法, 以 120 名大学生为被试, 采用 3(道德情绪水平: 低、中、高)×2(时序: 前测、后测)的被试内实验设计, 对个体的国家认同感进行了测量。研究结果: (1) 不同红色纪念馆在对参观者的道德情绪和国家认同感唤起中存在显著差异; (2) 道德情绪强度与大学生的国家认同感存在显著正性相关; (3) 道德情绪在红色纪念馆对大学生国家认同感的培养过程中发挥着显著的中介作用。研究结论: 道德情绪是红色纪念馆对大学生国家认同感培养的重要影响因素, 加强红色纪念馆对大学生国家认同的培养作用, 应在内容设计与布展时, 更多的提升信息中所蕴含的道德情绪信息。

关键词 道德情绪, 红色纪念馆, 大学生国家认同感, 德育

The Influence of Moral Emotional Arousal on College Students' Sense of National Identity

-- Take the Red Memorial Hall as an Example

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Abstract: Red Memorial Hall is an important carrier and means to cultivate the sense of national identity of contemporary college students. However, they have significant differences in training effect. Therefore, the study starts from the Red Memorial Hall, taking moral emotions as the core variable to affect the formation of college students' national identity, so as to explore the effect of moral emotions on the enhancement of college students' sense of national identity. Research hypothesis: Moral emotional arousal is closely related to college students' sense of national identity, and plays an important role in the cultivation of college students' sense of national identity by Red Memorial Hall. Research Content: This study consists of two experimental parts. Experiment 1 adopts to survey method, conducting a field survey on the information and display of 15 Red Memorials Halls including the Nanjing Massacre and other Red Memorial Halls, and collecting visitors' experience (moral and emotional feelings, national identity, etc.). In Experiment 2, 120 college students are recruited to measure their sense of national identity with a 3 (moral emotional level: low, medium and high) × 2 (time sequence: front and back) internal experiment design. The results are as follows: (1) There are significant differences in moral emotions and national identity arousal among different Red Memorial Halls; (2) There is a significantly positive correlation between moral emotional intensity and college students' sense of national identity; (3) Moral emotions play a significant mediating role in the cultivation of college students' national identity by Red Memorial Hall. Research conclusion: Moral emotion is an important factor influencing the cultivation of college students' national identity by Red Memorial Hall. To strengthen the role of Red Memorial Hall in cultivating college students' national identity, designers should consider how to evoke moral emotions in the presentation of information when Red Memorial Halls are designed.

Keywords: moral emotion, red memorial hall, national identity of college students, moral education

家庭回避癌症沟通量表在乳腺癌患者中应用的信效度评价

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摘要 目的: 癌症背景下的家庭癌症相关沟通对于乳腺癌患者及家庭具有意义。然而目前国内鲜有研究来探讨乳腺癌患者家庭癌症相关沟通现状, 且缺乏特异性的测量工具。家庭回避癌症沟通量表(Family Avoidance of Communication about Cancer Scale, FACC) 条目简短, 易于理解, 在国外应用广泛, 具有较好的跨文化适用性。因此, 为了丰富家庭癌症相关沟通领域的研究, 给后续研究者提供可选择的评估工具, 本研究首次将 FACC 量表引入, 检验其在乳腺癌患者中的适用性, 以期家庭癌症相关沟通提供可靠、有效的测量工具。**方法:** 在征得原量表作者同意后, 对英文版 FACC 进行汉化。采用便利抽样的方法, 于 2020 年 4 月至 11 月选取山东省某三级甲等专科医院的乳腺癌患者进行问卷调查。本研究共回收有效问卷 824 份, 其中 784 份为初次测量数据, 40 份为研究对象二次填写的数据(且距离初次填写的时间间隔为 3 周), 用于重测信度检验。随机选取一半初次测量数据($n = 392$) 用来进行项目分析和探索性因子分析, 另一半($n = 392$) 用于验证性因子分析和信度检验。采用临界比值法和同质性检验来评价 FACC 中条目的鉴别度和同质性; 采用因子分析法检验 FACC 的结构效度; 采用 Cronbach α 系数和 Spearman-Brown 系数来评价 FACC 的内在信度; 采用 Pearson 相关系数计算出重测信度来评估 FACC 的外在信度。**结果:** 量表共 5 个条目, 其因子载荷均在 0.668~0.877 之间, 共提取了 1 个公因子, 累计方差贡献率为 64.164%; 单因子模型拟合良好(χ^2/df 、RMSEA、GFI、AGFI、CFI、IFI、TLI 分别为 2.301, 0.058, 0.988, 0.963, 0.992, 0.992, 0.983)。量表的 Cronbach α 系数为 0.843; Spearman-Brown 系数为 0.839; 重测信度为 0.682。**结论:** 中文版 FACC 的条目数量与原英文版相同, 且保留了原量表的单因素结构, 具有良好的信效度, 可用于测量乳腺癌患者家庭关于癌症沟通的状况。

关键词 乳腺癌, 癌症相关沟通, 家庭回避癌症沟通量表, 信度, 效度

Validity and Reliability of Chinese Version of Family Avoidance of Communication about Cancer Scale in Breast Cancer Patients

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Abstract: Objective: Cancer-related communication in the family has implications for breast cancer patients and their families. However, currently there are few domestic studies to explore the status of cancer-related communication in breast cancer patients, and a specific measurement tool is scarcely unavailable. Family Avoidance of Communication about Cancer Scale (FACC) with its brief and accessible entries is extensively applied abroad and shows good cross-cultural applicability. Therefore, in an effort to diversify the field of cancer-related communication and to provide an optional instrument for subsequent researches, our study introduces the FACC scale into China and to test its applicability in breast cancer patients, with a view to offering a reliable and valid tool for cancer-related communication. **Methods:** After translating the English version of FACC with the permission of the author of original English scale, a convenience sample were recruited in a tertiary A hospital in Shandong Province, from April 2020 to November 2020. A total of 824 valid completed questionnaires were collected in this survey, of which 784 were initial measurement data and 40 were retest data at 3-week intervals for the retest reliability test. Half of the initial measurement data ($n = 392$) were selected for item analysis and exploratory factor analysis, and the rest ($n = 392$) were used for confirmatory factor analysis and reliability test. The critical ratio and homogeneity test were used to verify the differentiation and homogeneity of the scale; construct validity was evaluated by factor analysis; and

Cronbach α coefficient, Spearman-Brown coefficient, and retest reliability were used to assess the reliability of the scale. **Results:** The scale consisted of 5 items with the factor loadings ranged from 0.668 to 0.877. A single-factor model was obtained with cumulative variance contribution of 64.164% and the model fitted well (χ^2/df , RMSEA, GFI, AGFI, CFI, IFI, TLI were 2.301, 0.058, 0.988, 0.963, 0.992, 0.992, 0.983, respectively). The Cronbach α coefficient of the scale was 0.843; the Spearman-Brown coefficient was 0.839; and the retest reliability was 0.682. **Conclusion:** The Chinese version of the FACC contains the same number of items as the original scale and retains the single-factor structure, which has good reliability and validity and could be used for measuring cancer-related communication in breast cancer patients.

Keywords: Breast cancer, Cancer-related communication, Family Avoidance of Communication about Cancer Scale, Reliability, Validity

大学生自尊与负性信息注意偏向的关系：负性自动思维的中介作用

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摘要 自尊是自我概念的核心，是个体对自我价值的评判、对自我能力的感知以及对整体自我的接纳。低自尊者对社会环境中的负性信息非常敏感，表现出负性注意偏向。此外，低自尊者通常具有较高的负性自动思维，对自身具有消极的认知评价。以往研究很少探讨自尊对自我概念有关负性信息（如：被拒绝、无能的等）注意偏向的影响及机制。因此，本研究探讨自尊对负性信息注意偏向的影响以及负性自动思维的中介作用。选取 167 名大学生（男=79）作为调查对象，采用二维自尊量表、自动思维问卷分别测量自尊、负性自动思维，空间线索任务测量注意偏向，实验程序为 2(线索条件：有效/无效) $\times$ 3(词语类型：低能力/低价值/中性) 的被试内设计。在控制性别条件下，以自尊总分为自变量、空间线索任务中的反应时为因变量，对负性自动思维的中介作用进行分析。结果发现：负性自动思维在自尊对有效线索条件下的低能力词注意偏向的影响中起完全中介作用，在自尊对无效线索条件下的低价值词注意偏向的影响中起完全中介作用。结果表明，自尊通过负性自动思维影响个体对低价值、低能力词汇的注意偏向。低自尊的个体负性自动思维越高，对低能力词越表现为注意回避，对低价值词越表现为注意脱离困难。结果揭示了自尊影响个体负性注意偏向的机制，有助于加深对低自尊个体心理健康的理解。

关键词 大学生，自尊，注意偏向，负性自动思维

The relationship between self-esteem and negative information attention bias in college students: the mediating role of negative automatic thoughts

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Abstract: Self-esteem is the core of self-concept, which is the individual's judgment of self-worth, perception of self-ability, and acceptance of the entire self. People with low self-esteem are empathetic to negative information in the social environment and show negative attention bias. In addition, people with low self-esteem generally have higher negative automatic thoughts (NATs) and negative cognitive evaluations of themselves. Previous studies have seldom discussed the influence and mechanism of self-esteem on the attentional bias of self-concept-related negative information (such as rejection, incompetence, etc.). Therefore, this research explores the influence of self-esteem on the attention bias of negative information and the role of NATs. This study included 167 college students (male=79) as participants. Their self-esteem was measured using the Self-Liking/Self-Competence Scale (SLCS). The Automatic Thoughts Questionnaire (ATQ) was utilized to measure NATs. Attention bias was measured using the spatial clue task. The experimental procedure was 2 (cue conditions: valid/invalid) $\times$ 3 (word type: low ability/low value/neutral) in-subject design. Results showed that NATs mediated the relationship between self-esteem and the attention bias of

low-ability words under valid cues, and played a completely mediating role in the influence of self-esteem on the attention bias of low-value words under the invalid cues. These results provide evidence that self-esteem affects negative attentional bias through NATs. The higher the NATs of individuals with low self-esteem, the more they show attention avoidance to low-ability words, and the harder they show attention to escape from low-value words. The results reveal the mechanism between self-esteem and negative attentional bias, which helps to deepen the understanding of the mental health of individuals with low self-esteem.

Keywords: college students, self-esteem, attentional bias, negative automatic thoughts

环境中的社交属性对消费意愿的影响

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摘要 本研究基于 M-R 模型和 S-O-R 理论, 通过对现实休闲餐饮环境的深入分析, 探究餐饮环境中的社交属性对顾客消费意愿的影响及影响机制。通过在休闲餐饮环境中设置不同的桌椅布置形式来操纵环境的社交属性。使用自编问卷《社交属性评定问卷》来验证对社交属性操纵的有效性; 使用自编问卷《消费意愿问卷》来探究社交属性对群体消费意愿的影响及影响机制。结果发现, 所设置的 12 种环境的社交属性权重分数与预期基本一致; 建立了社交属性对消费意愿的影响的回归模型, 模型良好, 结果表明, 社交属性对消费意愿有显著正向影响, 即环境的社交属性值越高, 顾客的消费意愿越高。同时, 喜好度在社交属性对消费意愿的影响中起中介作用, 顾客对社交属性高的环境的喜好度越高, 其消费意愿越高。顾客对餐饮消费环境的情绪反应越积极, 越促进社交属性对消费意愿的影响; 相反, 若顾客对餐饮消费环境的情绪反应是消极的, 则减弱社交属性对消费意愿的影响; 顾客的情绪反应同时还调节喜好度对消费意愿的影响, 积极情绪起促进作用, 消极情绪则减弱影响。说明改变环境设置中的桌椅布置形式, 可有效操纵环境的社交属性; 环境的社交属性影响群体消费意愿, 群体对环境的喜好程度起中介作用, 同时, 群体对环境的情绪反应在其中起调节作用, 调节社交属性和喜好程度对消费意愿的影响。

在以往的研究中, 社交因素对消费意愿的影响中, 顾客对消费环境的喜好程度起中介作用。另外有研究表明, 顾客的情绪反应在环境因素对消费意愿的影响中起调节作用。基于以上分析, 本研究同时考虑社交因素、喜好程度、情绪反应对消费意愿的影响, 探究休闲餐饮环境中的社交属性对顾客消费意愿的影响, 能够进一步明确餐厅环境要素的作用, 在一定程度上帮助餐厅经营者更好地采取针对性措施进行环境设置。此外, 此前对餐厅环境要素的研究者大多来自设计行业, 本研究从心理学角度开展理论研究和实践分析, 研究角度新颖。

关键词 社交属性, 消费意愿, 休闲餐饮环境, 桌椅布置

The Influence of Social Attributes in Environment on Consumption Intention

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Abstract: Based on the M-R model and S-O-R theory, through the in-depth analysis of the real leisure catering environment, this study explores the impact and influence mechanism of social attributes in the catering environment on customers' consumption intention. The social attributes of the environment are manipulated by setting different table and chair arrangements in the leisure catering environment. Using the self-made questionnaire "social attribute evaluation questionnaire" to verify the effectiveness of social attribute manipulation; The self-made questionnaire consumption intention questionnaire is used to explore the impact of social attributes on group consumption intention

and its mechanism. The results show that the social attribute weight scores of the 12 environments are basically consistent with the expectation; The regression model of the impact of social attributes on consumption intention is established. The model is good. The results show that social attributes have a significant positive impact on consumption intention, that is, the higher the social attribute value of the environment, the higher the customer's consumption intention. At the same time, preference plays an intermediary role in the impact of social attributes on consumption intention. The higher the customer's preference for the environment with high social attributes, the higher their consumption intention. The more positive customers' emotional response to the catering consumption environment, the more the impact of social attributes on consumption intention; On the contrary, if customers' emotional response to catering consumption environment is negative, the impact of social attributes on consumption intention will be weakened; At the same time, customers' emotional response also regulates the impact of preference on consumption intention. Positive emotions promote the impact, while negative emotions weaken the impact. Explain that changing the layout of tables and chairs in the environment setting can effectively manipulate the social attributes of the environment; The social attributes of the environment affect the group's consumption intention, and the group's preference for the environment plays an intermediary role. At the same time, the group's emotional response to the environment plays a regulatory role in regulating the impact of social attributes and preference on consumption intention.

In previous studies, in the influence of social factors on consumption intention, customers' preference for consumption environment plays an intermediary role. In addition, studies have shown that customers' emotional response plays a regulatory role in the impact of environmental factors on consumption intention. Based on the above analysis, this study also considers the impact of social factors, preference and emotional response on consumption intention, and explores the impact of social attributes in leisure catering environment on customers' consumption intention, which can further clarify the role of restaurant environmental elements and help restaurant operators better take targeted measures for environmental setting to a certain extent. In addition, most of the previous researchers on the environmental elements of restaurants came from the design industry. This study carried out theoretical research and practical analysis from the perspective of psychology.

Keywords: Social Attributes, Consumption Intention, Casual Dining Environment, Table and Chair Layout

正念对抑郁的影响：注意偏向和情绪调节的作用

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摘要 正念无论是在理论上还是经验上都与个体心理健康有关，被证实能够减轻压力、抑郁、焦虑等症状；负性信息注意偏向抑郁产生发展维持的重要因素之一，广泛存在于抑郁人群中。在情绪调节中，情绪调节策略使用越频繁的个体，其抑郁情绪出现的概率就越低。目前大量研究考察了正念与抑郁的关系，但少有研究探讨其背后的作用机制。本研究将注意偏向与情绪调节作为重要的中介变量和调节变量来探究正念对抑郁的影响。研究选取 600 名被试填写正念五因素量表（FFMQ）、贝克抑郁量表（BDI）、正性信息负性信息注意量表（APNI）、情绪调节量表（ERQ），结果表明：（1）正念水平、情绪调节、正性注意偏向与抑郁存在显著负相关，对抑郁具有负向预测作用。（2）负性注意偏向与抑郁呈显著正相关，对抑郁具有正向预测作用。（3）注意偏向在正念对抑郁的影响中具有中介作用。具体而言，正念可能会通过影响个体对于负性信息注意偏向来缓解抑郁。（4）情绪调节在正念、抑郁、注意偏向之间的中介模型中起到调节作用，即与情绪策略使用越频繁的个体相比，较少使用情绪调节策略的个体的注意偏向对抑郁的预测作用更加显著。本研究验证了正念、注意偏向、情绪调节与抑郁之间的关系及作用机制，对减少抑郁的发生具有一定的启示意义。

关键词 正念，抑郁，注意偏向，情绪调节

The Effect of Mindfulness on Depression: The Role of Attentional Bias and Emotional Regulation

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Abstract: Mindfulness is related to individual mental health both theoretically and empirically. It has been proven to reduce symptoms such as stress, depression, and anxiety. Negative information attention bias is one of the important factors for the development and maintenance of depression, and it is widely present in depressed people. In emotion regulation, the more frequently uses emotion regulation strategies, the lower the probability of depression. At present, a large number of studies have investigated the relationship between mindfulness and depression, but few studies have explored the mechanism behind it. This study takes attentional bias and emotion regulation as important mediating and moderating variables to explore the impact of mindfulness on depression. The study selected 600 subjects to fill in the Five-factor Mindfulness Scale (FFMQ), Beck Depression Inventory (BDI), Attention Scale for Positive Information and Negative Information (APNI), and Emotion Regulation Scale (ERQ). The results showed that: (1) Mindfulness, emotion regulation, and positive attention bias are significantly negatively correlated with depression, and have a negative predictive effect on depression. (2) Negative attentional bias is significantly positively correlated with depression, and has a positive predictive effect on depression. (3) Attentional bias plays a mediating role in the influence of mindfulness on depression. Specifically, mindfulness may alleviate depression by influencing the individual's attention bias towards negative information. (4) Emotion regulation have a moderating effect in the mediating model between mindfulness, depression, and attention bias, that is, the attention bias of individuals who use emotion regulation strategies less predicts depression moderating effect is more significant. This study verifies the relationship and mechanism of mindfulness, attentional bias, emotion regulation and depression, and has certain enlightening significance for reducing the occurrence of depression.

Keywords: Mindfulness, depression, attentional bias, emotional regulation

海洛因戒断者的成瘾严重程度与其时间洞察力的关系

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摘要 毒品成瘾者的持续吸毒行为给他们的生活和财产造成了巨大的损失，但是他们依然坚持这种吸毒行为。他们不顾吸毒行为给其未来造成的危害，而坚持立即满足自身的欲望，表现出目光短浅的行为，即他们的时间视角可能表现异常。海洛因戒断者的成瘾严重程度是否与其时间视角存在密切联系尚不清楚。本研究选自甘肃省某戒毒所机构的海洛因成瘾者 500 名，剔除无效问卷后，最终有效被试 352 名被纳入最后的统计分析，使用津巴多时间洞察力问卷和成瘾严重度量表探讨了海洛因成瘾者的时间洞察力与成瘾严重程度的关系，采用 spss22.0 对数据进行描述统计、相关分析和回归分析。结果发现：(1)海洛因戒断者的过去消极时间观得分最高，未来时间观得分最低；(2)海洛因戒断者的现在宿命观、现在享乐观、过去消极观均与海洛因戒断者的成瘾严重程度正相关，而未来时间观与海洛因戒断者成瘾严重程度呈负相关；进一步逐步多元线性回归显示，过去消极时间观显著正向预测海洛因戒断者的成瘾严重程度，未来时间观显著负向预测海洛因戒断者的成瘾严重程度。本研究提示海洛因戒断者对未来的时间视角较为短浅且其过去的时间视角较为消极，这可能预测了他们的成瘾严重程度，该结果可能为我国现阶段的戒毒工作提供一定的现实指导。

关键词 海洛因戒断者，时间洞察力，成瘾严重程度

Relationship between Addiction Severity and Time Insight of Heroin Abstiners

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Abstract: Drug addicts' continuous drug-taking behavior has caused great losses to their lives and property, but they still insist on this kind of drug-taking behavior. Despite the harm caused by drug abuse, they insist on satisfying their own desires immediately and show short-sighted behavior, that is, their time perspective may be abnormal. It is unclear whether the addiction severity of heroin abstiners is closely related to their time perspective. In this study, 500 heroin addicts from a drug rehabilitation center in Gansu province were selected, and 352 valid subjects were included in the final statistical analysis after the invalid questionnaires were eliminated. The relationship between heroin addicts' time insight and addiction severity was discussed by using zimbaro Time Insight Questionnaire and Addiction Severity Scale, and spss22.0 was used for descriptive statistics, correlation analysis and regression analysis. The results showed that: (1) heroin abstiners scored the highest in past negative time view and the lowest in future time view; (2) Heroin abstiners' present fatalism, present optimism and past negativity are positively correlated with heroin abstiners' addiction severity, while future time is negatively correlated with heroin abstiners' addiction severity. Further stepwise multiple linear regression showed that the past negative time view positively predicted the addiction severity of heroin abstiners, while the future time view negatively predicted the addiction severity of heroin abstiners. This study suggests that heroin abstiners have a short time perspective on the future and a negative time perspective on the past, which may predict the severity of their addiction, and the results may provide some practical guidance for the current drug rehabilitation work in China.

Keywords: Heroin abstinence, Time insight, Addiction severity

父亲协同教养与青少年攻击性行为的关系：父子依恋的中介作用

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摘要 家庭系统理论认为, 家庭是由若干存在互动和相互依赖关系的子系统组成的, 其中夫妻系统、父母系统和亲子系统三大子系统之间相互影响。对于青少年群体来说, 家庭是教养的主要场所, 因此为了对青少年提供更好的教养环境, 需要将家庭各个系统整体纳入研究。作为父亲和丈夫, 需要处理好夫妻、父母和亲子关系, 一方面父亲对孩子的教养会影响孩子的成就感, 预测孩子的未来犯罪可能性, 另一方面父亲对于母亲抚育工作的协助可以减轻母亲教养的困难。因此协同教养观点认为父亲对于其他抚育者 (主要是母亲) 养育行为的支持或者破坏具有对于孩子和整个家庭具有重要作用。

本研究在家庭系统理论框架下, 为探讨父母系统中父亲协同教养行为和亲子系统中父子依恋水平对于青少年攻击性行为发展的影响, 构建了以父子依恋为中介的模型, 以期说明父子依恋在父亲协同教养行为对于青少年攻击性行为产生影响的过程中发挥的作用。使用问卷法抽取郑开地区五所中学共 2271 名中学生, 使用伍新春等人编制的父母协同教养问卷青少年评价版中的父亲卷、IPPA 和攻击性问卷, 根据父亲协同教养的四种不同行为 (一致、团结、冲突和贬低) 构建四个中介模型。

结果显示: (1) 不同年级的学生在攻击性、父子依恋和父亲协同教养上存在差异; (2) 父亲协同教养的一致行为和团结行为对于父子依恋有显著的正向预测作用, 对青少年攻击性有显著的负向预测作用; 冲突和贬低行为对于父子依恋有显著的负向预测作用, 对于青少年的攻击性有显著的正向预测作用; (3) 父子依恋在父亲的一致行为对于青少年攻击性产生影响的过程中起完全中介作用; (4) 父子依恋在父亲的冲突和贬低行为对青少年攻击性产生影响的过程中发挥部分中介的作用。

因此，随着年龄的增长，青少年对于父亲的疏离程度会逐渐增长，相比较初中生，高中生的父子依恋质量较低。在家庭中，父亲与母亲教养行为的一致性会通过影响父子依恋的水平最终反向预测青少年的攻击性水平。

关键词 家庭系统理论，父亲协同教养，攻击性，父子依恋

The relationship between Father Coparenting Behavior and Adolescent Aggressive Behaviors: the mediating effect of Father-Child Attachment

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Abstract: According to family system theory, a family is composed of several subsystems that interact and depend on each other, among which the three subsystems, the husband and wife system, the parent system and the parent subsystem, influence each other. For teenagers, family is the main place of upbringing. Therefore, in order to provide a better upbringing environment for teenagers, it is necessary to integrate all family systems into the research. As fathers and husbands, they need to deal with the relationship between husband and wife, parents and parent-child. On the one hand, the father's upbringing will affect the child's sense of achievement and predict the possibility of the child's future crime; on the other hand, the father's assistance to the mother's upbringing can alleviate the difficulties of the mother's upbringing. Therefore, the collaborative parenting view holds that the father's support or destruction of the nurturing behaviors of other caregivers (mainly mothers) plays an important role for children and the whole family.

In the family system theory under the framework, this study to explore the father cooperative breeding behavior in the system and the subsystem of parent-child attachment level to the development of adolescent aggression, the influence of parent-child attachment to the mediation model is constructed, in order to illustrate parent-child attachment on father's cooperative breeding behavior influences for aggressive behavior of adolescents in the process of role. A total of 2,271 middle school students from five middle schools in Zhengkai area were selected by questionnaire method. The questionnaires of father, IPPA and aggression in the adolescent evaluation version of the questionnaire of parental cooperative parenting compiled by Wu Xinchun et al. were used to construct four mediation models according to four different behaviors of paternal cooperative parenting (conformity, solidarity, conflict and belligerence).

The results showed that : (1) there were differences in aggression, paternal attachment and paternal co-parenting among students of different grades; (2) The congruent behavior and solidarity behavior of paternal cooperative parenting had a significant positive predictive effect on paternal attachment, and a significant negative predictive effect on adolescent aggression; Conflict and belittling behavior had a significant negative predictive effect on parent-child attachment and a significant positive predictive effect on adolescent aggression. (3) Paternal attachment was a complete mediator in the relationship between paternal concordant behavior and adolescent aggression; (4) paternal attachment plays a partial mediating role in the influence of paternal conflict and belittling behavior on adolescent aggression.

Therefore, with the increase of age, the degree of alienation from their father will gradually increase. Compared with junior high school students, the quality of paternity attachment is lower in senior high school students. In the family, the congruence of parental and paternal rearing behaviors negatively predicted the level of adolescent aggression by affecting the level of paternal attachment.

Keywords: family system theory, father coparenting behavior, adolescent aggressive behaviors, father-child attachment

目标出现率对自我面孔加工优势的影响

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摘 要 自我面孔加工优势指的是，相比他人面孔，个体在识别自我面孔时表现更好。过往研究发现对自我面孔的加工会受到文化差异、社会威胁等诸多因素的影响。以往研究中目标面孔出现的概率通常是 50%，但实际生活中，目标出现的概率往往较低，比如安检时搜索危险物品、医学影像中搜索病灶等。本研究通过两个实验考察目标出现率和对目标出现的预期对自我面孔加工的影响。实验过程中，先呈现一张目标面孔（自我或陌生人面孔），随后呈现由 6 张不同面孔组成的圆形搜索集（可能包含目标面孔，也可能不包含目标面孔）。被试的任务是搜索目标面孔是否存在，并作相应的按键反应。搜索集中目标面孔出现的概率（低概率：10%，中概率：50%）在不同实验组中变化。实验 1 和实验 2 的区别在于：实验 1 中被试事先不知道目标面孔出现的概率；实验 2 中被试提前知道当前实验组的目标出现率。与已有的研究结果一致，本研究发现了经典的自我面孔加工优势效应，即在实验 1 和实验 2 中，相比陌生人面孔，目标为自我面孔时，漏报率更低、辨别力更强、报告标准更宽松、反应时更快；同时，发现了低目标出现率效应，即目标出现率低时，对目标的漏报率提高，虚惊率降低，报告标准更严格。更重要的是，对辨别力的分析发现，目标出现率和面孔的交互作用显著，主要表现为，低目标出现率相比中目标出现率条件下，自我面孔辨别力增强而陌生人面孔无差异，且该效应在实验 1 和实验 2 之间没有显著差异。综上，本研究结果表明，自我面孔的优势会受到目标出现率的影响，在低目标出现率下，自我面孔的辨别力增强，增强了自我面孔加工优势。

关键词 自我面孔优势，目标出现率，视觉搜索范式，信号检测论

The Effect of Target Prevalence on Self-Face Advantage

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Abstract: People usually search self-face faster and better than others' faces, which is called "self-face advantage". Previous studies have shown that the self-face processing will be affected by many factors, such as cultural difference and social threat. The prevalence of the target face was always 50% in previous studies. However, people usually search for rare targets in daily life - for example, to detect dangerous goods in luggage or tumorous in radiographs. The current study was designed to investigate the effect of the target prevalence and prevalence expectation on the self-face processing through two experiments. In both experiments, a target face (self vs. other) was presented in advance. Then a search display consisted of six different faces along a circle was presented, which either included the target face or not. Participants were asked to search the target face (presence vs. absence), and pressed the corresponding key. The prevalence of target face (low: 10% vs. moderate: 50%) varied across different experimental blocks. The differences between two experiments were that participants were not told the prevalence in the current block in Experiment 1, while participants were told in advance in Experiment 2. In consistent with previous studies, the present study found a self-face advantage, i.e., there was a lower miss rate, a stronger sensitivity (d'), a lower report criterion and a shorter reaction time under the self-face condition than the other-face condition in both experiments. The results also showed a low-prevalence effect in both experiments, that is, when the prevalence was low, the miss rate increased, the false alarm rate decreased, and the report criterion became stricter. More importantly, a significant interaction effect on d' was observed between the face type and the target prevalence. Simple effect analysis showed that d' under the low prevalence condition was higher than under the moderate prevalence condition for the self-face, while no significant difference for the other-face. This effect was stable in the analysis combining Experiments 1 and 2, which was not influenced by the experiment groups. Overall, these results indicated that the self-face advantage was affected by the target prevalence. When the prevalence was low, the perceptual sensitivity of self-face was strengthened, and the self-face advantage was enhanced.

Keywords: self-face advantage, target prevalence, visual search paradigm, signal detection theory

边缘型人格障碍患者的身份紊乱与创伤后同一性重构

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摘要 在临床诊断和理论研究中，身份紊乱都是边缘型人格障碍（BPD）的关键因素，并作为其他症状的基础。BPD 患者的身份紊乱总的来说包括三个部分：僵硬、消极的自我评价、不稳定、碎片化的自我感受以及不一致、不协调的自我体验，其特点表现在缺乏一致性和协调性而体验到空虚和痛苦的不连贯。BPD 患者的早期的不良经历包括：受虐、忽视、心理控制与父母的早期分离。这些早期经历是潜在创伤性的，与儿童的无组织依恋关系有关，变成儿童的内部工作模式，即僵化的早期不适应图式。当 BPD 患者遇到新的创伤事件时，僵化且不稳定的身份再次破碎。个体的同一性承诺的评价反馈出现问题，强迫个体重新进入到同一性探索的过程，面对和参与自我意义的重新构建，使同一性的形成过程变得更加复杂。有复杂型创伤的个体，其自我的功能就像一个有症状的自我，而症状来源于他的抵抗。这种控制和抵抗会让其陷入对创伤事件的反刍思维当中，在同一性探索的双循环模型中个体停留在探索承诺的阶段而无法认同承诺。在这种状态下，BPD 患者无法将创伤经历转化为连贯而有意义的叙述，由于自身的敏感性、对关系的不信任、面对创伤事件的战斗反应、对事件体验缺乏完整性等，BPD 患者的同一性整合和再次构建失败。在僵化的早期不适应图式背景下，BPD 患者只能采用自残自伤、破坏关系等方式来应对创伤事件。

关键词 边缘型人格障碍，身份紊乱，复杂创伤，同一性，早期不适应图式

Identity disturbance and post-traumatic identity destruction in patients with borderline personality disorder

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Abstract: In clinical diagnosis and theoretical research, identity disturbance is the key factor of borderline personality disorder (BPD) and the basis of other symptoms. The identity disturbance of BPD patients generally includes three parts: rigid and negative self-evaluation; unstable and fragmented self-feeling; inconsistent and uncoordinated self-experience, which is characterized by the lack of consistency and coherence and the experience of emptiness and painful incoherence. BPD patients have early adversities, including: abuse, neglect, psychological control and early separation of parents. These early adversities are potential traumatic, related to children's disorganized attachment, and become children's rigid early maladaptive schemas. When BPD patients encounter new traumatic events, their rigid and unstable identity is broken again. There are problems in the evaluation feedback of individual identity commitment, which forces individuals to re-enter the process of identity exploration, face the reconstruction of meaning-making, and disrupt the normative identity process. The identity construction of individuals with complex trauma is like a "symptomatic" self, and the symptoms come from his resistance. This kind of control and resistance will lead them to ruminate on traumatic events. In the dual-cycle model, individuals stay in the stage of exploring commitment and cannot identify with commitment. In this state, patients with BPD couldn't transform their traumatic experiences into coherent and meaningful narratives. Due to their own sensitivity, distrust of relationship, combat response to traumatic events, and lack of integrity of event experience, the identity integration and reconstruction of patients are defeated. In the context of rigid early maladaptive schemas, patients with BPD can only deal with trauma events by self-damaging self-abusing and relationship destruction.

Keywords: Borderline personality disorder, Identity disturbance, Complex trauma, Early maladaptive schemas

自我效能视域下儿童游泳初学者恐水心理的研究

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摘 要 游泳运动是一项全身性运动, 对提高心肺功能, 缓解压力以及健身减肥有着显著效果, 因此受到了社会各界人士的热爱, 但是在初学者学习游泳的过程中常常出现对水恐惧、甚至是讨厌下水等的心理现象, 这严重影响了初学者学习游泳的效果与长期游泳锻炼爱好的养成, 基于此, 本文将在自我效能视域下探讨游泳初学者恐水心理的成因, 以期游泳初学者克服恐水心理及如何快速掌握游泳技术做出理论贡献。本文通过采用文献资料法、问卷调查法、教育实验法对嫩江县游泳馆培训班 100 名游泳初学者进行为期 2 周的调查研究并进行前测与后测, 分为自我效能教学组(实验组)与常规教学组(对照组), 每组各 50 人。研究结果表明:

(1) 通过对嫩江县游泳培训班 100 名游泳初学者的游泳初始水平、性格、兴趣爱好等的研究调查可知, 游泳初学者恐水心理的成因可分为内部因素与外部因素。内部因素如年龄、性格等问题, 由于年幼对外界环境的适应能力有限, 特别是惧怕水的浮力、害怕换气呛水以及心理易紧张等而造成的胆怯、惧怕心理; 对学习新鲜事物的能力有限, 由于儿童对游泳项目的学习多数是以家长为主导因素, 缺乏自主学习动机; 在学习过程中害怕失败, 缺乏自信心; 另外, 性格较为内向的儿童, 往往缺乏自信心, 表现出了较高的恐水心理。外部因素如教学方法、陌生的人际环境以及呼吸方式的改变等因素, 由于游泳培训班的教练没有经过良好的教师职业技能的培训, 虽然在游泳技术上较出色且取得了游泳社会指导员职业资格证书, 但是并不了解儿童的心理以及不能采用恰当的教学方式; 儿童在陌生的环境下, 要接触很多新的同学与教练, 难免会产生社交压力; 水中换气方式不同于我们在陆地上的换气方式, 难免会发生喝水、假呼吸甚至是呛水的现象。这些都是造成儿童恐水心理的重要成因。

(2) 前测结果表明, 实验组与对照组在游泳技术水平与恐水程度上差异不显著。后测结果表明, 与对照组相比, 实验组在游泳技术的提高与克服恐水心理的程度上明显优于对照组。

(3) 表扬教学法与熟悉水性教学法可快速建立儿童游泳初学者的自信心以克服恐水心理, 榜样教学法可有效提高儿童游泳初学者的游泳技术。

关键词 自我效能, 儿童游泳初学者, 恐水心理

A study on water phobia of children swimming beginners from the perspective of self efficacy

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Abstract: Swimming is a whole-body exercise, which has a significant effect on improving cardiopulmonary function, relieving stress and weight loss. Therefore, it is loved by people from all walks of life. However, in the process of learning swimming for beginners, there are often psychological phenomena such as fear of water, even hate to go into the water, This has seriously affected the effect of beginners learning swimming and the cultivation of long-term swimming exercise hobby. Based on this, this paper will explore the causes of water phobia of beginners in the perspective of self-efficacy, in order to make a theoretical contribution for beginners to overcome water phobia and how to quickly master swimming skills. By using the methods of literature review, questionnaire survey and educational experiment, this paper investigates 100 swimming beginners in the training class of Nenjiang natatorium for two weeks, and carries out pre-test and post test. They are divided into self-efficacy teaching group (experimental group) and conventional teaching group (control group), with 50 students in each group. The results show that:

(1) The results are as follows: (1) through the investigation on the initial swimming level, personality and hobbies of 100 swimming beginners in the swimming training class of Nenjiang County, we can see that the causes of the water phobia of swimming beginners can be divided into internal factors and external factors. Internal factors such as age,

personality and so on, due to the limited adaptability of young people to the external environment, especially the fear of buoyancy of water, fear of choking the water by breathing, and psychological tension; The ability to learn new things is limited, because the majority of children's swimming learning is dominated by parents, lack of autonomous learning motivation; In the process of learning, they are afraid of failure and lack of self-confidence; In addition, introverted children often lack self-confidence and show high fear of water. External factors such as teaching methods, unfamiliar interpersonal environment and the change of breathing style, because the coaches of the swimming training class have not received good training of teachers' professional skills, although they are excellent in swimming technology and have obtained the professional certificate of swimming social instructor, they do not understand children's psychology and can not adopt appropriate teaching methods; In a strange environment, children have to contact many new classmates and coaches, which inevitably leads to social pressure; The way of breathing in water is different from our way of breathing on land. It is inevitable to drink water, fake breath or even choke water. These are the important causes of children's fear of water.

(2) The pre-test results showed that there was no significant difference between the experimental group and the control group in swimming skill level and water phobia degree. The results showed that, compared with the control group, the experimental group was significantly better than the control group in the improvement of swimming skills and the degree of overcoming the fear of water.

(3) Praise teaching method and familiar water-based teaching method can quickly establish the self-confidence of children swimming beginners to overcome the fear of water. The example teaching method can effectively improve the swimming technology of children swimming beginners.

Keywords: Self efficacy, children swimming beginners, water phobia

(2) “博士研究生论坛—应用心理学”展贴报告

心理健康素养调节新冠疫情应激对心理健康的负面影响： 一项纵向研究

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摘要 背景 心理健康素养是指有关心理障碍的知识、概念和观念，能够帮助人们识别、处理和预防心理疾病。作为提升国民心理健康的重要方面，心理健康素养在我国的研究却较为少见。然而，此次新型冠状病毒的爆发是研究心理健康素养在疫情相关应激源下如何影响民众心理健康的独特机会。

方法 本研究采用滚雪球式方便取样法，纵向调查了新型冠状病毒肺炎（COVID-19）下国内普通民众的心理健康状况，探究疫情相关应激源和心理健康素养对心理健康的预测作用。本研究采用自编新冠肺炎应激源调查表，自编新冠肺炎心理影响调查表，心理健康素养量表，PDS-5 创伤后诊断量表，以及中国短版健康焦虑量表，对 434 位国内普通民众进行了网络匿名问卷调查。新冠肺炎应激源测量时间为疫情爆发初期（2020 年 2 月），其他维度测量时间为国内疫情控制期（2020 年 5 月）。

结果 多元回归分析表明，疫情爆发初期的总应激源数量正向预测了疫情控制期被试的创伤后应激症状（PTSS）（ $\beta=.520, p<.001$ ），健康焦虑症状（ $\beta=.672, p<.05$ ）与被试感知的疫情带来的心理影响（ $\beta=.737, p<.005$ ）。而心理健康素养则负向预测 PTSD 症状（ $\beta=-.104, p<.001$ ），健康焦虑症状（ $\beta=-.148, p<.001$ ）与被试感知的疫情带来的心理影响（ $\beta=-.114, p<.001$ ）。此外，结果还表明心理健康素养在应激事件与 PTSD 症状（心理健康素养 $\times$ 应激事件 $=-.102, p<.001$ ）的关系中，以及应激事件对被试感知的疫情带来的心理影响（心理健康素养 $\times$ 应激事件 $=-.119, p<.001$ ）的关系中起到调节作用，即对于心理健康素养较高的个体，应激源的增加对于个体的创伤后应激症状与心理状况影响较小。

讨论 本研究表明，COVID-19 疫情下，中国普通民众的心理健康负担受到疫情相关应激事件与本身心理健康素养的影响，较高的心理健康素养可缓冲应激事件对民众心理健康的负面影响，提示提高心理健康素养

对于促进国民心理健康非常必要。

关键词 COVID-19, 应激, 心理健康素养, 心理健康

The Moderating Effect of Mental Health Literacy on the Relationship between COVID-19 Related Stressors and Psychological Health: A Longitudinal Study

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Abstract: Background: Mental health literacy refers to the knowledge, concepts, and beliefs about mental disorders which aid people to identify, manage and prevent mental illness. Although it is an important aspect of improving national mental health, mental health literacy has rarely been studied in China. Nevertheless, the COVID-19 outbreak is a unique opportunity to study how mental health literacy affects the mental health of people under epidemic related stressors. **Methods:** We assessed COVID-19 related stressors, mental health literacy, post-traumatic stress symptoms (PTSS), health anxiety, and perceived psychological impact during the COVID-19 pandemic, in 434 Chinese general public through an anonymous online survey. COVID-19 related stressors were measured during the initial period of the outbreak (February 2020), and other variables were assessed during the non-outbreak period in China (May 2020). **Results:** Multiple regression analysis showed that the number of total stressors in the early outbreak period positively predicted later PTSS ($\beta=.520, p<.001$), health anxiety ($\beta=.672, p<.05$) and perceived psychological impact ($B=.737, p<.005$), whereas mental health literacy was negatively associated PTSS ($\beta=-.104, p<.001$), health anxiety ($\beta=-.148, p<.001$) and perceived psychological impact ($\beta=-.114, p<.001$). Moreover, mental health literacy negatively moderated the association between the number of stressors and PTSS (mental health literacy $\times$ number of stressors $=-.102, p<.001$), as well as the association between the number of stressors and the perceived psychological impact (mental health literacy $\times$ number of stressors $=-.119, p<.001$), indicating that for participants with higher levels of mental health literacy, the increase of stressors has a relatively smaller effect on PTSS and psychological impact. **Discussion:** This study indicated that the experience of COVID-19 related stressors predicted the extent of mental health burden in the Chinese general public during this pandemic, and high levels of mental health literacy could alleviate this negative effect. These findings underline the necessity of improving mental health.

Keywords: COVID-19, stressors, mental health literacy, mental health

创造性问题解决中情绪性反馈对虚拟团队成员合作感知和行为投入的影响

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摘要 虚拟团队顺应科技潮流产生, 因具有打破时空局限、克服产生式阻碍、增加成员适应性反应等优势, 在组织中创新情境中得到广泛应用。然而虚拟团队成员分散各地, 知识背景、价值观念以及行事风格各自独特, 团队信任难以建立, 成员在互动过程中的行为投入也难以控制, 因此如何提高虚拟团队创造性问题解决效果, 逐渐得到了研究者的关注。现有研究显示, 情绪性反馈作为促进任务表现的一种重要策略, 会对个体创造性任务体验和表现产生重要影响。然而, 在创造性问题解决过程中, 情绪性反馈与虚拟团队成员的合作感知(包括合作满意度、持续合作意愿和团队快速信任)和行为投入的关系及其作用机制仍不清晰。本研究采用电子头脑风暴技术, 通过在线聊天软件中的表情图像, 对情绪性反馈进行操纵, 创设积极、消极和中性三种情绪性反馈实验条件。招募不同专业背景大学生为研究对象, 随机组成以 5 人为单位的虚拟团队。每个团队需要在上述三种情绪性实验条件下通过在线交流工具, 协同完成一个创造性问题解决任务。研究结果表明:

(1) 相较于其他两组,接受积极情绪反馈的被试,体验到更强的积极情绪,以及报告出更高水平的合作满意度、继续合作意愿和团队快速信任。(2) 接受消极情绪反馈的被试,在合作任务中的行为投入水平显著高于其他两组。(3) 积极情绪仅在情绪性反馈和团队快速信任间发挥着部分中介作用。这些结果表明,情绪性反馈会对虚拟团队的成员合作感知和成员行为投入产生影响,其中,积极情绪反馈有助于促进虚拟团队成员间的合作感知,但消极情绪反馈更能促进虚拟团队成员在创造性问题解决任务中的行为投入。

关键词 虚拟团队, 情绪性反馈, 创造性问题解决, 合作感知, 行为投入

Emotional Feedback Enhances Cooperative Perception and Behavior Engagement of Virtual Team in Creative Problem-solving

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Abstract: Virtual teams are widely used in innovation for its unique advantages, like free from time and distance constraints, overcome production blocking and increase adaptive response. However, it's difficult to build team trust and control the interaction process, because the members of the virtual team are from different regions, background, and values. Therefore, how to improve the creative problem-solving effect of virtual team has gradually attracted researchers' attention. Current studies suggest that emotional feedback may be used to support individuals' task performance and process experience. It is worth noting, however, how emotional feedback affects the cooperation perceptions and behavior engagement of virtual team in creative problem-solving is unclear. Using electronic brainstorming, three emotional feedback conditions were created by manipulating different special emoticons. All the groups were asked to discuss an open-ended realistic problem using online software, during which the display of emotion in feedback varied (positive vs. negative vs. no emotion). As expected, the results showed that participants received positive emotion feedback reported that they have experienced higher levels of pleasantness, cooperation satisfaction and stronger willingness to continue cooperative during the task; however, in contrast to our expectations, those under negative emotion condition showed significantly higher level of behavioral engagement on the group task. Positive emotion mediated the relation between perceived level of feedback emotion and team swift trust. These results suggest that emotional feedback enhances cooperative perception and behavior engagement of virtual team in creative problem-solving from different perspectives.

Keywords: Virtual Team, Emotional Feedback, Creative Problem-solving, Cooperative Perception, Behavior Engagement

融合中医药文化的“五位一体”心理健康教育工作站路径研究

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摘要 心理健康教育是提高大学生心理素质、促进其身心健康和谐发展的教育,是高校人才培养体系的重要组成部分。有条件的高校,要建立相对独立的有特色的院(系)二级心理健康教育工作站。本研究首先分析了融合中医药文化的心理健康教育工作站建设的意义:学校层面,在弘扬优秀传统文化的同时,可以完善“学校-院系-班级-寝室”四级大学生心理健康网络体系;学院层面,可以推动心理健康教育工作重心由面向少数学生的危机干预转向面向全体学生的发展性辅导和健康教育;个人层面,可以提升师生文化素养,滋养师生心灵。本研究从文化心理学的视角梳理了中医药文化与心理健康教育工作的契合性,有“天人合一”整体观、“治未病”辨证思维、“五行藏象”学说等。本研究最后根据中医药五行文化提出了“五位一体”心理健康教育工作站的建设路径:融合“金”文化,注重专业队伍建设,使心理育人有力度;融合“木”文化,注重标准课堂教育,

使心理育人有高度；融合“水”文化，注重寝室文化建设，使心理育人有深度；融合“火”文化，注重开展品牌活动，使心理育人有温度；融合“土”文化，注重培养学生志趣，使心理育人有厚度。后续研究拟从实证的角度来考察这种心理健康教育工作站建设的意义。

关键词 中医药文化，心理健康教育，工作站

Research on Construction Path of "Five-in-One" Mental Health Education Workstation Integrating Traditional Chinese Medicine Culture

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Abstract: The purpose of mental health education is to improve the psychological quality of college students and promote their physical and mental health and harmonious development. Mental health education is an important part of the university personnel training system. Universities with conditions should establish relatively independent and characteristic secondary mental health education workstations of colleges and departments. This study first analyzed the significance of the construction of mental health education workstation integrating Traditional Chinese Medicine (TCM) culture. At the school level, while carrying forward the excellent traditional culture, it can improve the "School-Academy-Class-Dormitory" four-level college students' mental health network system; At the academy level, the focus of mental health education can be shifted from crisis intervention for a few students to developmental guidance and health education for all students; At the personal level, it can improve the cultural quality of teachers and students and nourish their minds. From the perspective of cultural psychology, this study sorted out the compatibility between TCM culture and mental health education, including the holistic view of "The overall view that the unity of nature and human", the thinking of syndrome differentiation of "preventing diseases", and the theory of "elements and viscera doctrine". Finally, this study proposed the construction path of "five-in-one" mental health education workstation according to the five elements culture of Traditional Chinese Medicine: integrating "metal" culture, paying attention to the construction of professional team, so as to make psychological education strong; Integrate "wood" culture, pay attention to standard classroom education, make psychological education high; Integrate the "water" culture, pay attention to the construction of dormitory culture, so that psychological education depth; Integrating "fire" culture, focusing on brand activities, so that psychological education temperature; Integration of "earth" culture, pay attention to the cultivation of students' interests, so that psychological education thickness. The follow-up study intends to investigate the significance of the construction of mental health education workstation from an empirical perspective.

Keywords: Traditional Chinese Medicine culture, Mental health education, The workstation

敌意偏向和反社会行为、攻击性的关系：来自不同测量范式的比较

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摘 要 敌意解释偏向是攻击行为的重要认知特点。尽管存在诸多范式测量敌意解释偏向，但少有研究比较不同范式所测的敌意解释偏向与攻击性、反社会行为的关系。本研究旨在探讨未成年罪犯和普通大学生对情境和面孔任务下的敌意解释偏向与自我报告的攻击性和反社会行为的关系。研究招募了 53 名男性未成年犯（平均年龄 17.56 岁）和 69 名男性大学生（平均年龄 18.58 岁）完成敌意词句联想范式（Word and Sentence Association Paradigm-hostile, WSAP）、模糊意图敌意问卷（The Ambiguous Intentions Hostility

Questionnaire, AIHQ)、敌意解释偏向面孔任务 (Hostility Interpretation Bias Task, HIBT)、自评的攻击性和反社会行为问卷。采用独立样本 t 检验未成年犯和普通大学生的敌意偏向差异。结果显示, 男性未成年犯具有较低的善意解释偏向 (WSAP 任务)、较高的敌意偏向和攻击偏向 (来自 AIHQ) 以及更高的对快乐、惊讶和恐惧面孔 (来自 HIBT) 的敌意偏向。进一步的网络分析结果揭示了对情境 (来自 WSAP 和 AIHQ) 和面孔 (HIBT) 的敌意偏向之间的弱相关关系。此外, 逐步回归和 Lasso 回归的结果表明, WSAP-敌意偏向、AIHQ-敌意偏向和 AIHQ-责备偏见构成了解释自我报告攻击性的最优预测变量子集, 而 AIHQ 攻击偏向则是预测自我报告的反社会行为的最重要特征。本研究揭示了不同测量范式下, 敌意偏向之间的差异, 以及不同类型的敌意偏向与攻击性, 反社会行为的独特关系。

关键词 敌意偏向, 攻击性, 反社会行为, 未成年

The relationship between hostility bias and antisocial behavior and aggression: differences in measurements

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Abstract: Hostility bias was considered an important cognitive characteristic for aggression. The present study aimed to explore the hostility bias towards vignettes and faces among juvenile offenders and non-offenders, and its association with self-reported aggression and antisocial behavior. 53 male juvenile offenders and 69 non-offenders were recruited to finish Word and Sentence Association Paradigm-hostile (WSAP), The Ambiguous Intentions Hostility Questionnaire (AIHQ), Hostility Interpretation Bias Task (HIBT), self-reported aggression, and antisocial behavior. Male juvenile offenders had lower benign bias (from WSAP), higher hostility bias and aggression bias (from AIHQ) as well as higher hostility bias towards happy, surprise, and fear faces (from HIBT) than non-offenders. However, correlational network results revealed a weak relationship between hostility bias towards vignettes (from WSAP and AIHQ) and faces (HIBT). Furthermore, the results from step-wise regression and Lasso regression suggested that WSAP-hostility bias, AIHQ-hostility bias, and AIHQ-blame bias constructed the best subset of hostility bias indices for predicting self-reported aggression; AIHQ-aggression bias was the most important feature to predict self-reported antisocial behavior.

Keywords: hostility bias, aggression, antisocial behavior, juveniles

发展性工作经历对员工竞争力的影响：心理授权与防御焦点的作用

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摘要 发展性工作经历是指个体需要在动态环境中解决多个问题, 并在风险与不确定性条件下做出决策的经历。以往研究结果显示, 发展性工作经历对员工的管理技能、管理能力等员工自身内部能力有积极影响, 但少有研究探讨发展性工作经历对员工竞争力的影响及其作用机制。在当前的无边界职业生涯时代中, 竞争力这一与组织内外部、他人横向比较的能力对员工的职业发展十分重要。本研究旨在探讨发展性工作经历与员工竞争力之间的关系。基于自我决定理论, 本研究建构了一个有调节的中介模型, 假设发展性工作经历可通过提升员工的心理授权感, 进而影响员工竞争力, 员工自身的防御焦点会调节这一关系。本研究采用发展性工作经历量表、感知到的市场竞争力量表、心理授权量表和防御焦点量表对 316 名企业在职员工进行了间隔 1 个月的两波段时间滞后调查, 运用 SPSS25.0 和 MPLUS7.0 软件进行数据分析。各研究工具的信度良好, 经检验共同方法偏差不会对结果造成明显的影响。结果显示: (1) 发展性工作经历对员工竞争力有积极影响; (2) 心理授权在发展性工作经历与员工竞争力关系中的中介作用显著; (3) 发展性工作经历通过心理授权

对员工竞争力的影响受到防御焦点的调节,防御焦点越高,发展性工作经历通过心理授权对员工竞争力的影响越强。本研究的研究结论有助于深化研究者对发展性工作经历影响范围及内在过程的认识,也为研究者探索个体层面的认知和行为倾向在发展性工作经历影响中的作用奠定了基础。

关键词 发展性工作经历,心理授权,竞争力,防御焦点

The Impact of Developmental Job Experiences on Employees' Marketability: The Role of Psychological Empowerment and Prevention Focus

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Abstract: Developmental job experiences are the experiences that need to solve multiple problems in dynamic situations and make decisions under conditions of risk and uncertainty. Previous studies have shown that developmental job experiences have a positive impact on employees' internal abilities such as management skills and management competencies, but few studies have explored its impact on employees' marketability and its mechanism. Marketability, the ability to remain value-added to their present employer and be viewed as marketable by other organizations, is very important for employees in the current era of boundaryless career. This study attempts to explore the relationship between developmental job experiences and marketability. Based on self-determination theory, the present study constructed a moderated mediation model, hypothesizing that developmental job experiences influence employees' marketability through improving psychological empowerment, and employees' prevention focus moderates this relationship. Data was collected from 316 employees through 2 network questionnaires with the interval of 1 month. Participants were invited to respond to the Developmental Job Experiences Scale, Perceived Marketability Scale, Psychological Empowerment Scale, and Prevention Focus Scale. SPSS25.0 and MPLUS7.0 were used to analyze data. The result showed that scales have adequate reliability, and there are not significant common method biases. The results showed that: (1) Developmental job experiences could positively affect marketability; (2) Psychological empowerment mediated the relation between developmental job experiences and marketability; (3) The mediating effect of psychological empowerment was moderated by prevention focus. The indirect effect was stronger for employees with high prevention focus than for those with low prevention focus. The results are helpful to deepen the understanding of developmental job experiences and its underlying mechanism, and lay a foundation for future research to explore the role of individual cognitive and behavioral orientations in the influence of developmental job experiences.

Keywords: developmental job experiences, psychological empowerment, marketability, prevention focus

中国心理咨询本土化问题初探——来访者与咨询师双视角分析

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摘要 前言: 心理咨询本土化是我国心理咨询行业面临的重要挑战。本研究探讨两个问题: 1) 我国心理咨询中来访者是否体验到文化冲突, 以及体验到什么文化冲突; 2) 我国心理咨询师采用本土化方法的影响因素。

方法: 本研究采用演绎性主题分析了对 17 名心理咨询来访者进行的 15-30 分钟的半结构化访谈, 并通过网络发放, 98 名咨询师完成心理健康从业人员服务方法调查表和心理健康从业者本土化方法问卷。通过多元线性回归, 分析了咨询师的教育背景、咨询经验、专业资质、本土化意识对心理咨询本土化方法使用的影响。结

果: 本研究的受访者在心理咨询中体验到文化冲突, 包括中庸文化、心理分析的客观性、家庭模式、个人主义与集体主义、指导性、寻求权威、非商业化且柔性的咨询关系、表达方式含蓄、注重现实这 9 个方面。本研究中, 86.7% 的心理咨询师意识到心理咨询中存在文化冲突, 96% 的咨询师认为有必要对心理咨询进行本土化。进一步分析发现, 咨询师的受教育水平越高, 本土化方法的使用越少; 从业年限越长, 本土化方法的使用越少; 专业资质越高, 本土化方法使用越多; 认为本土化的重要性越高, 本土化方法的使用越多。**讨论:** 心理咨询在我国存在本土化的必要性, 咨询师应根据我国来访者的文化特点对心理咨询方法进行适应与改进。**关键词** 心理咨询, 本土化, 主题分析, 心理健康服务

The cultural adaptation of psychotherapy in China -- a dual perspective analysis of clients and psychological counselors

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Abstract: Introduction: Cultural adaptation is a challenge for Chinese psychological counseling industry. This study examined two questions: 1) Did Chinese clients experience cultural conflicts during treatment? If the answer is yes, what kinds of cultural conflicts did they experience? 2) What factors influenced the adoption of cultural adaptation methods by psychological counselors in China? **Methods:** In this study, a deductive thematic analysis approach was used for analyzing 15-30 min semi-structured interviews of 17 clients, and 98 counselors completed the Service Methods Questionnaire for Mental Health Practitioners and the Cultural Adaptation Methods Questionnaire online. Multiple linear regression was used to analyze the impact of the counselors' educational background, counseling experience, professional qualifications, and cultural adaptation awareness on the use of cultural adaptation methods. **Results:** Chinese clients experienced cultural conflicts during psychological treatment, which included 9 aspects: the doctrine of the mean culture, the objectivity of psychoanalysis, family pattern, individualism and collectivism, guidance, seeking authority, non-commercial and flexible counseling relationship, implicit expression, and focus on reality. In this study, 86.7% of psychological counselors were aware of cultural conflicts in psychotherapy, and 96% agreed that cultural adaptation was necessary. Education level and working years were negatively associated with cultural adaptation methods used, measured by the total score of the Cultural Adaptation Methods Questionnaire. Professional qualifications and cultural adaptation awareness were positively associated with cultural adaptation methods used. **Discussion:** Cultural adaptation of psychological treatment is necessary in China. Chinese counselors could adapt and improve counseling approaches according to the cultural characteristics of Chinese clients.

Keywords: Psychotherapy, cultural adaptation, thematic analysis, mental health service

金钱会使人一视同仁么? 任务无关的他人能力与金钱启动对单次博弈中个体合作的影响

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摘要 在社会认知领域, 能力是知觉他人或自己拥有的一种智力性特质(即智力、技能、创造性和高效率等), 目前尚未有研究探讨在囚徒困境博弈中, 当博弈对象具有不同能力水平时个体将选择如何与其合作。同时, 以往研究发现金钱作为一种重要的资源, 能够改变他人对自己的影响, 让人们自由做出决策, 个体处于金钱启动情境下与不同能力他人的合作水平是否会发生改变, 以及这种改变是如何发生的尚不得而知。鉴于此, 本研究探讨了与任务无关的他人能力高低和金钱启动对个体合作水平的影响, 以及内部机制。通过 3

个实验，依次论证了当他人的能力与合作任务无关时，个体更偏爱与高能力他人（vs 低能力他人）合作（实验 1）；金钱概念启动（vs 控制条件下）弱化了这一效应，使个体和高能力与低能力他人合作水平差异不显著（实验 2）；金钱启动（大量金钱 vs 少量金钱 vs 控制组）对他人能力与个体合作水平之间的关系具有调节效应，这种调节效应是以信任水平为中介变量的（实验 3）。本研究创新性的探索了与合作任务无关的他人能力特质对个体的合作水平之间的关系及内部机制，并系统性的考察了金钱启动的调节作用，具有一定的理论价值与实践价值。为规范人们对高低能力他人的合作偏见提供了理论支持，能够使人们更加客观的看待自己由于晕轮效应而产生的合作偏差，从而更加能够理性的与不同能力的他人合作。同时，为人们提供了一种可以降低合作偏差的方法，也就是接触金钱。这些研究结果可以进一步帮助人们了解自己做出不同合作决策的深层原因。

关键词 他人能力，金钱启动，合作，信任，囚徒困境

Does money make different people be treated equally? The influence of task-irrelevant competence of others and money priming on cooperation in the One-shot Game

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Abstract: In the field of social cognition, competence is an intellectual trait (i.e., intelligence, skill, creativity and efficiency, etc.) possessed by others or oneself. So far, no research has explored how individuals cooperate with others with different competence in prisoner's dilemma game. At the same time, previous studies have found that money, as an important resource, can change the influence of others on them and allow people to make decisions freely. Whether the level of cooperation between individuals and others with different competence will change in the money priming situation and how this change happens is still unknown. Therefore, this study explores the influence of task-irrelevant competence of others and money priming on the level of individual cooperation, and further discusses the internal mechanism. Through 3 experiments, it was demonstrated that individuals prefer to cooperate with others with high ability (vs others with low ability) (Experiment 1); The money concept priming (vs control group) weakened this effect, making the difference in the level of cooperation between individuals and others with high and low competence not significant (Experiment 2); Money priming (a lot of money vs. a small amount of money vs. control group) has a moderating effect on the relationship between the competence of others and individual's cooperative behavior. This moderating effect is based on the level of trust as a mediating variable (Experiment 3). In theoretical, this study innovatively explored the relationship and internal mechanism between the task-irrelevant competence of others and the individual cooperation level, and systematically investigated the moderating effect of money priming. In practice, this study provides theoretical support for standardizing people's cooperation bias against others with competence and incompetence, and enables people to view their own cooperation bias caused by the halo effect more objectively, so as to be more able to rationally cooperate with others. At the same time, it provides a way for people to reduce cooperation bias, namely access to money. These findings may help people understand the underlying reasons behind their different cooperative decisions.

Keywords: competence of others; money priming; cooperation; trust; prisoner's dilemma

Neuro-mediating basis of trait anxiety and cognitive flexibility: Evidence from Resting State EEG

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Abstract: A large body of evidence indicates that high trait anxiety individuals exhibit cognitive flexibility impairment characterized by rigid and maladaptive behaviors, however, the brain basis that mediate their relationships remain unclear. Against this background, we collected trait anxiety scores, cognitive flexibility scores and resting EEG data of a large sample of young Chinese individuals, and used relatively new EEG microstate analysis technology to analyze resting EEG functional networks. Firstly, the results revealed that the EEG microstate of class A, class B, and class D are closely related to the trait anxiety levels of the individuals, and the brain EEG microstate of class A, class C, and class D may be the neural underpinning of the individual's cognitive flexibility. Further mediating effect analysis indicated that EEG microstate of class D, which is closely related to the dorsal attention network, mediates the relationship between trait anxiety and cognitive flexibility. This study supports the key role of the prefrontal cortex in generating behavioral biases in highly anxious individuals from the perspective of resting-state EEG modality, and further suggests that interventions aimed at improving executive function networks may promote the recovery of maladaptive behaviors in highly anxious individuals.

Keywords: Trait anxiety, Cognitive flexibility, Resting-state EEG, Microstate Class D, Mediate effect

压力阻碍蔬果摄入？计划干预对蔬果摄入的促进作用及慢性压力的调节作用：一项线上随机对照实验

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摘要 本研究旨在探究中国群体中，蔬果计划对蔬果摄入的促进作用，及压力在其中是否会有阻碍作用。研究通过选取 98 名学生和工作人群，采用线上随机对照实验，验证了计划干预对蔬果摄入的促进作用，并通过有调节的中介模型，验证了压力在计划和蔬果摄入中的阻碍作用，即慢性压力低的情况下，蔬果计划中介干预组别和蔬果摄入的关系；而在慢性压力高的情况下，则没有此中介作用。未来研究可进一步在更多健康行为中，验证压力的阻碍作用，同时开展通过缓解压力促进个体健康行为的实验和干预研究，进一步促进个体的健康行为。

关键词 蔬果摄入，计划干预，慢性压力

Does Stress Hinder Fruit and Vegetable Intake? Promotional Effects of Planning Intervention on Fruit and Vegetable Intake with the Regulation of Chronic Stress: An Online Randomized Controlled Trial

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Abstract: The purpose of this study was to investigate the effect of a fruit and vegetable program on fruit and vegetable intake in a Chinese population, and whether stress has an inhibiting effect on this effect. Research by

choosing 98 students and working people, using online randomized controlled trials, to verify the planned intervention for the promotion of fruit and vegetable intake, and through a mediation model of regulation, to verify the pressure in the plan and the obstacles of the fruit and vegetable intake, or chronic under low pressure, intervention group and the relationship between the fruit and vegetable intake of fruits and vegetables planning intermediary; However, there was no mediating effect in the condition of high chronic stress. Future research can further verify the blocking effect of stress in more health behaviors, and meanwhile carry out experiments and intervention studies to promote individual health behaviors by alleviating stress to further promote individual health behaviors.

Keywords: fruit and vegetable intake, planning intervention, chronic stress

通讯压力对网络闲逛的影响——自我损耗与微休息的作用

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摘要 随着科技的发展, 电子通讯技术得到越来越广泛地使用, 工作中, 人们愈发习惯于使用微信、QQ、电子邮件等处理工作相关任务和与同事、客户沟通。在电子通讯技术为人们带来诸多便利的同时, 研究者们也越发关注其可能存在的一些负面影响。通讯压力是指员工急于查看和回复工作相关消息以防耽误工作进程而体验到的紧迫性, 以往研究多关注通讯压力对员工健康、恢复等的负性影响, 而忽视了对员工工作相关不良行为的影响。基于自我调节理论, 本研究采用随机抽样法, 收集和分析了 459 名正式组织员工的问卷数据, 探讨了通讯压力对工作相关不良行为之一——网络闲逛的作用机制及边界条件。研究结果发现: (1) 通讯压力正向预测网络闲逛行为; (2) 自我损耗在通讯压力与网络闲逛之间起中介作用; (3) 微休息在通讯压力与自我损耗间起调节作用。本研究结论对于丰富通讯压力的结果变量以及指导团队管理实践具有一定现实意义, 具体而言, 本研究的结论启示组织和管理者合理向员工传达回复信息速度的期望, 比如在消息后明确说明回复时间等, 避免让员工感受到“越快回复越好”的紧迫感, 反而适得其反, 造成压力引起网络闲逛等不良行为, 另外管理者需要为员工提供良好的微休息环境和支持; 对于员工本身而言, 可通过放松、摄入营养等微休息活动, 缓解通讯压力带来了不良影响, 另外注意合理定时监控通讯设备, 通过制定计划、自我监控等方式提升自我控制能力, 避免因急于回复电子消息而过多查看电子设备, 过度自我损耗, 引起网络闲逛最终反而降低了工作效率。

关键词 通讯压力, 自我损耗, 微休息, 网络闲逛

The Relationship Between Telepressure and Cyberloafing ——the Role of Ego Depletion and Microbreaks

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Abstract: With the development of science and technology, information and communication technologies (ICTs) have become more and more widely used. During work, it becomes common to use WeChat, QQ, e-mail and other ICTs to deal with work-related tasks and communicate with colleagues and customers. While ICTs bring many conveniences to people, researchers are also paying more and more attention to its negative effects. Telepressure refers to the urgency experienced by employees who are eager to view and respond to work-related messages to prevent delays during work. Previous studies have focused on the negative effects of telepressure on employees' health and recovery, but its negative effects on employees' work-related outcomes are ignored. Based on self-regulation theories, this study collected data from 459 formal organization employees, and explored the mechanism and boundary conditions of telepressure on one of the negative work-related behaviors-cyberloafing. The results showed that: (1) telepressure positively predicts cyberloafing; (2) ego depletion plays a mediating role between telepressure and cyberloafing; (3) microbreaks plays a moderating role between telepressure and ego depletion. The results of this research contributed

to literatures theoretically and practically. Specifically, the results enlighten organizations and managers to reasonably convey the expectations of the response speed to employees. By stating the response time clearly, it can be avoided to make employees feel the urgency of responding ‘as soon as possible’, causing negative behaviors such as cyberloafing. And good environment of microbreaks should be supplied for employees. For employees themselves, they can take microbreaks to avoid too much pressure from respond expectation. And it is necessary to monitor ICTs reasonably. Through making plans and self-monitoring to improve self-control ability, employees can avoid excessive contact with ICTs due to the eagerness to reply messages, which may cause cyberloafing.

Keywords: telepressure, ego depletion, microbreaks, cyberloafing

妊娠并发症住院患者及其配偶 二元应对的潜在剖面分析及与焦虑症状的关系

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摘要 背景: 因妊娠并发症住院作为妊娠期重大应激性事件, 会加剧妊娠期女性及其配偶的焦虑症状。系统交互模型认为, 二元应对在夫妻应对共同应激源的过程中发挥重要作用。且研究发现, 夫妻双方的二元应对水平与其自身及配偶的焦虑症状密切相关。因此, 从家庭视角探究妊娠并发症住院患者及其配偶的夫妻二元应对模式及与焦虑症状的关系对于早期筛选高风险家庭、针对性开展以夫妻为单位的二元干预具有重要意义。**目的:** 探究妊娠并发症住院患者及其配偶的二元应对模式及与夫妻双方焦虑症状的关系。**方法:** 于2019年3月至10月期间, 在济南市两所三级甲等医院产科门诊招募符合条件的妊娠并发症患者及其配偶共197对。使用一般资料问卷、二元应对量表 (Dyadic Coping Inventory, DCI) 和状态焦虑问卷 (State-Trait Anxiety Inventory-State, STAI-S) 分别评估患者及其配偶的社会人口学特征及临床信息、二元应对和焦虑症状。使用Mplus7.0和SPSS 26.0进行统计分析。**结果:** 妊娠并发症住院患者及其配偶的二元应对可被划分为4个潜在类别, 分别为: “夫妻低二元应对组” (47人, 占23.9%)、“夫妻一般二元应对组” (89人, 45.2%)、“患者高二元应对-配偶低二元应对组” (16人, 8.1%)及“夫妻高二元应对组” (45人, 占22.8%)。在控制了协变量后, 夫妻低二元应对组患者及其配偶焦虑症状得分均显著高于“夫妻一般二元应对组”、“夫妻高二元应对组” (p 均 <0.05); “夫妻低二元应对组”患者焦虑症状得分显著高于“患者高二元应对-配偶低二元应对组” ($p=0.002$), 而两组在配偶焦虑症状得分上无显著差异 ($p=0.203$)。**结论:** 采取低二元应对模式的妊娠并发症住院患者及其配偶是焦虑症状的高风险人群。临床实践开展针对夫妻双方的二元应对干预对于预防和改善夫妻焦虑症状具有重要意义。

关键词 妊娠并发症, 二元应对, 焦虑症状, 患者, 配偶

Latent profile analysis of dyadic coping among hospitalized patients with pregnancy complications and their spouses and its relationship with anxiety symptoms

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Abstract: Background: Hospitalization due to pregnancy complications, as a major stressful event during pregnancy, may exacerbate anxiety symptoms among pregnant women and their spouses. The system interaction model suggests that dyadic coping plays an important role in coping with couples' common stressors. Extant research found that dyadic coping was closely related to anxiety symptoms among patients and their spouses. Therefore, it is of great

significance to explore the dyadic coping profiles among hospitalized patients with pregnancy complications and their spouses from the perspective of family, as well as its relationship with anxiety symptoms for early screening high-risk families and developing targeted dyadic interventions for couples. **Objective:** To explore dyadic coping profiles among hospitalized patients with pregnancy complications and their spouses, as well as its relationship with anxiety symptoms. **Methods:** From March to October 2019, 197 pairs of eligible obstetric patients with pregnancy complications and their spouses were recruited in obstetrics clinics of two tertiary hospitals in Jinan. The general data questionnaire, Dyadic Coping Inventory (DCI) and State-Trait Anxiety Inventory-State (STAI-S) were used to assess the sociodemographic characteristics and clinical information, dyadic coping and anxiety symptoms of the patients and their spouses. Mplus7.0 and SPSS 26.0 were used for statistical analysis. **Results:** The dyadic coping of obstetric patients with pregnancy complications and their spouses can be classified into four profiles: "Couples with low dyadic coping group" (47, 23.9%), "couples with general dyadic coping group" (89, 45.2%), "patients with high dyadic coping - spouses with low dyadic coping group" (16, 8.1%) and "couples with high dyadic coping group" (45, 22.8%). After controlling for covariates, the scores of anxiety symptoms of obstetric patients and their spouses in the "Couples with low dyadic coping group" were significantly higher than those in the "couples with general dyadic coping group" and "couples with high dyadic coping group" (all $P < 0.05$). The scores of anxiety symptoms of obstetric patients in the "Couples with low dyadic coping group" were significantly higher than those in the "patients with high dyadic coping - spouses with low dyadic coping group" ($P = 0.002$), but there was no significant difference in the scores of anxiety symptoms of spouses between these two groups ($P = 0.203$). **Conclusion:** Obstetric patients with pregnancy complications and their spouses that identified as "low dyadic coping profile" are at high risk for experiencing anxiety symptoms. In clinical practice, it is of great significance to carry out dyadic coping intervention for couples to prevent and improve their anxiety symptoms.

Keywords: pregnancy complications, dyadic coping, anxiety symptoms, patients, spouses

抑郁症状大学生静息脑电、体力活动及睡眠质量特征研究

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摘要 目的：了解抑郁症状大学生静息脑电、体力活动及睡眠质量特征，为开展大学生抑郁干预工作提供理论与实证依据。方法：2020年10月至2021年6月，在某大学城高校下发问卷1000份，随机招募60名在校大学生为研究对象，抑郁症状组（30人）、正常对照组（30人）。采用上海诺诚16导NCERP-190012脑电检测仪、国际体力活动问卷-短卷（IPAQ）、匹兹堡睡眠指数量表（PSQI）、抑郁自评量表（SDS）分别对两组大学生的静息脑电、体力活动、睡眠质量以及抑郁症状得分进行数据采集；运用相关分析探讨各变量与抑郁症状得分的关系。结果：1）抑郁症状大学生C3、P3、P4、O1、O2的导联总功率，Fp1、Fp2、C3、C4、P3、P4的 α 频段绝对功率显著高于正常对照组。2）抑郁症状组与正常对照组间总体力活动水平与总睡眠质量得分间存在显著性差异（ $t=-4.98, p<0.01$ ； $t=7.47, p<0.01$ ）。抑郁症状组总平均体力活动水平为 1385.43 ± 749.03 （MET-min/W），正常对照组为 2193.43 ± 1111.69 （MET-min/W）。抑郁症状组总睡眠质量得分为 7.65 ± 3.53 分，正常对照组为 3.70 ± 2.47 分；睡眠质量量表下设七个维度中，除服用催眠药物项目外，其余6项两组间均存在显著性差异。3）相关分析表明，抑郁症状量表得分与总体力活动水平呈显著性负相关（ $r=-0.43, p<0.01$ ），与睡眠质量量表总得分呈显著性正相关（ $r=0.65, p<0.01$ ）。结论：抑郁症状组静息脑电与正常对照组间存在一定差异性，脑电功率值差异有望成为评估大学生抑郁风险的客观预测因子。保持规律体力活动与良好睡眠质量有助于大学生抑郁症状减轻。

关键词 抑郁症状，静息脑电，体力活动，睡眠质量，特征

Characteristics of resting eeg, physical activity and sleep quality in college students with depressive symptoms

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Abstract: Objective: To understand the characteristics of resting EEG, physical activity and sleep quality of college students with depression symptoms, and to provide theoretical and empirical evidence for the development of depression intervention work for college students. Methods: From October 2020 to June 2021, 1,000 questionnaires were issued in a university town of colleges and universities, and 60 college students were randomly recruited as research subjects, depressive symptom group (30 people) and normal control group (30 people). Using Shanghai Nuocheng 16-lead NCERP-190012 EEG tester, International Physical Activity Questionnaire-short paper (IPAQ), Pittsburgh Sleep Index (PSQI), and Depression Self-Rating Scale (SDS) to evaluate the resting of two groups of college students. EEG, physical activity, sleep quality, and scores of depressive symptoms were collected for data; correlation analysis was used to explore the relationship between various variables and scores of depressive symptoms. Results: 1) The total power of C3, P3, P4, O1, O2, and the absolute power of α band of Fp1, Fp2, C3, C4, P3, P4 of college students with depressive symptoms were significantly higher than the normal control group. 2) There is a significant difference between the depressive symptom group and the normal control group in the total physical activity level and the total sleep quality score ($t=-4.98, p<0.01$; $t=7.47, p<0.01$). The total average physical activity level of the depressive symptom group was 1385.43 ± 749.03 (MET-min/W), and the normal control group was 2193.43 ± 1111.69 (MET-min/W). The total sleep quality score of the depressive symptom group was 7.65 ± 3.53 points, and the normal control group was 3.70 ± 2.47 points. There are seven dimensions under the sleep quality scale. Except for taking hypnotic drugs, the other 6 items are significant between the two groups. difference. 3) Correlation analysis showed that the score of Depressive Symptoms Scale was significantly negatively correlated with overall physical activity level ($r=-0.43, p<0.01$), and was significantly positively correlated with the total score of Sleep Quality Scale ($r=0.65, p<0.01$). Conclusion: There is a certain difference between the resting EEG of the depression symptom group and the normal control group. The difference of EEG power value is expected to be an objective predictor of the risk of depression in college students. Maintaining regular physical activity and a good quality of sleep can help alleviate the depression symptoms of college students.

Keywords: Depressive symptoms, Resting EEG, Physical activity, Sleep quality, Characteristics

青少年压力与问题性智能手机使用严重性的关系： 焦虑和智能手机使用频率的序列中介效应

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摘要 引言: 近期的研究探讨了压力和问题性智能手机使用严重性间的关系。本研究的目的是分析焦虑和智能手机使用频率作为压力和问题性智能手机使用严重性间可能的中介。方法: 采用整群抽样的方法, 对 7681 名中国青少年进行网络问卷调查, 包括压力、焦虑、智能手机使用频率和问题性智能手机使用。结果: 压力与问题性智能手机使用的严重性显著正相关, 焦虑和智能手机使用频率中介了压力和问题性智能手机使用间的关系, 焦虑和智能手机使用频率在压力和问题性智能手机使用的严重性间存在序列中介作用。结论: 青少年压力与问题性智能手机使用的严重程度呈正相关, 焦虑和智能手机使用频率在青少年压力和问题性智能手

机使用间存在序列中介作用。

关键词 压力, 智能手机成瘾, 焦虑, 智能手机使用频率, 青少年

The relationship between adolescent stress and problematic smartphone use severity: The serial mediating effects of anxiety and frequency of smartphone use

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Abstract: Introduction: Recently studies have examined mediating psychological constructs accounting for relations between stress and excessive smartphone use severity. The aim of the current study was to analyze anxiety and the frequency of smartphone use as possible mediators between stress and excessive smartphone use. Method: We recruited 7681 Chinese adolescents by cluster sampling via a web-based survey that measured stress, anxiety, the frequency of smartphone use and excessive use. Results: Stress was significantly associated with excessive smartphone use severity. Anxiety and the frequency of smartphone use mediated relations between stress and excessive smartphone use levels. Anxiety and the frequency of smartphone use played a serial mediating role between stress and excessive smartphone use severity. Conclusion: Adolescent stress is positively related to excessive smartphone use severity. Anxiety and the frequency of smartphone use play a serial mediating role between adolescent stress and excessive use.

Keywords: Stress, Smartphone addiction, Anxiety, Frequency of smartphone use, Adolescent

高校心理咨询中师生-咨访双重关系的存在形态及伦理特征

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摘 要 咨询关系是心理咨询与心理治疗产生效果的重要影响因素, 而咨询关系中涉及到的双重关系是专业伦理所规范的重要内容。我国高校心理咨询中的师生-咨访双重关系常常不可避免, 而对其利弊影响的分析也多有分歧, 对其伦理特征的研究势在必行。本研究以拟剧论、身份认同理论为理论基础, 采用质性研究方法, 通过目的性抽样深度访谈了 13 位从业五年以上的高校专职心理咨询师, 其中男性 2 人, 女性 11 人, 平均年龄 36.07±6.36 岁。运用扎根理论对访谈资料进行分析和建构。研究发现, 在咨询过程中师生-咨访双重关系有显性与隐性两种存在形态。显性双重关系是指, 心理咨询师在咨询过程中明显按照教师的行为模式、职业态度或社会期待与来访者工作; 隐性双重关系是指在心理咨询过程中, 心理咨询师以咨询师的角色工作, 但教师角色仍然以背景性方式存在着, 师生关系仍隐性存在。由此带来的伦理特征体现为: (1) 当咨询关系处于显性双重关系时, 意味着咨询师离开了“咨询师位置”以教师角色进行工作, 可能会阻碍来访者的获益, 甚至造成伤害; (2) 当处于隐性双重关系时, 意味着咨询师守在“咨询师位置”, 即使存在双重关系, 并不会对来访者带来伤害; (3) 在咨询过程中, 由于咨询师或来访者有教师或者学生角色定位发生的变化, 会带来显性与隐性双重关系的相互转化。这种转化具有耗时短、单次咨询中可多次转化以及可预测性等特点。特别是隐性双重关系很容易转化为显性双重关系。因此双重关系体现的伦理特征具有复杂性, 在双重关系不可避免的

情况下, 需要咨询师对隐性与显性双重关系的伦理特征有深入的理解和实务中的敏锐觉察, 以保证咨询师更恰当、更有效地进行伦理决策, 使来访者的利益得以保护。

关键词 高校心理咨询, 隐性双重关系, 显性双重关系, 存在形态, 伦理特征

The existing forms and ethical characteristics of teacher-student dual relationship in college counseling

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Abstract: The counseling relationship is one of the most important factors related to the effectiveness of psychological counseling and therapy. Besides, the dual relationship occurred in the counseling relationship is heavily emphasized in the ethic codes. Generally speaking, the teacher-student dual relationship was unavoidable in the college counseling practice in China, and the analysis of pros and cons are controversial in the previous researches. It is essential to investigate the ethical characteristics of the teacher-student dual relationship in order to better understand the benefits and potential harms. This study integrated the dramaturgical theory and identity theory as the theoretical grounding, and 13 experienced counselors from colleges and universities were interviewed. There are 11 females and 2 males, and the average age is 36.07 ± 6.36 . The data were analyzed based on the grounded theory. The results showed that there are implicit dual relationship and explicit dual relationship as the existing forms of the teacher-student dual relationship. The explicit dual relationship is defined as that the counselors worked according to the behavioral models, attitudes or social expectations of the teacher role. In contrast to that, the implicit dual relationship refers to the implicit teacher-student relationship, which means that the counselor behaves as the counselor role while the teacher role existed as background. Thus, the ethical characteristics of teacher-student dual relationship include: (1) The explicit dual relationship means the counselor abandoned the "counselor position" and entered the teacher role, which might hinder the benefit of the client, and results potential harms; (2) The implicit dual relationship means that the counselor held onto the "counselor position"; (3) The bilateral transformation of explicit and implicit will occur when the role of the counselor/client changed into the teacher/student. Such transformation shall occur multiple times in a short time in one session, and is predictable. Specifically, the implicit dual relationship can be easily transformed into explicit compared to the reverse direction. Consequently, the ethical characteristics embodied by dual relationship were quite complicated. When the dual relationships were unavoidable, the counselors were encouraged to gain in-depth understanding of the ethical characteristics of both implicit and explicit dual relationships and be more sensitive in the practice. As a result, the counselors can make more appropriate and effective ethical decisions and the welfare of the clients can be better protected.

Keywords: college counseling, implicit dual relationship, explicit dual relationship, existing forms, ethical characteristics