and arousal after viewing negative images under the slow breathing condition. (2) Slow breathing increased global neural oscillatory activity. Compared to the fast breathing condition, slow breathing resulted in higher power values in the delta, theta, and alpha bands. (3) Slow breathing had a significant impact on the neural oscillatory activity of anxiety. Frequency domain analysis found that slow breathing reduced the power values of anxiety in the theta band. Time-frequency domain analysis found a decreasing trend in power values of anxiety in the 500ms-1200ms, 20-25Hz range under the slow breathing condition, indicating desynchronization. These findings confirm the influence of respiratory activities on brain functioning and offer new insights into the role of slow breathing in regulating anxiety based on brain mechanisms.

keywords：Slow breathing, Anxiety, EEG

3.12 “心理学脑成像专业委员会”专题研讨会

心理学实证研究中被试的代表性：基于 1000 篇中文论文的元研究

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摘 要　心理学旨在理解人类的心理和行为。在科研实践中，科学心理学的研究结论在多大程度上能够推广到所有人类，很大程度上依赖于其样本是否能够代表全人类。然而，全球科学心理学研究中，大多数研究中的被试都是选修心理学课程的本科生，且他们大多来自西方的、受教育的、工业化的、富裕的和民主的国家或地区，这些特征被称为“WEIRD”(Henrich et al., 2010)。被试缺乏多样性和代表性，一方面限制了心理学对于人类心理和行为的完整描绘，另一方面影响了心理学研究的可推广性。为解决这一问题，许多研究者呼吁和参与了大规模的国际合作项目，并希望借此收集到更多来自非 WEIRD 区域的样本和数据。大规模的国际合作项目确实增加了样本的地域多样性和样本数量。然而，来自非 WEIRD 区域的被试是否能代表被调查区域的当地人口却是未知。为了理解这一问题，本研究从心理学报、心理科学、中国临床心理学杂志、心理发展与教育、心理与行为研究这五本中国主流学术期刊于三个不同时期（2008 年，2017~2018 年，2020~2021 年）所发表的论文中抽取 1000 篇实证研究，提取其被试信息。同时对大规模国际合作项目（比如：Many Labs projects , the Human Penguin Project, PSA）中报告的中国被试特征进行提取，以理解当前心理学实证研究中被试样本的现状，并将其与全国第七次人口普查数据进行比较。本研究结果提供了中国心理学参与者的真实情况，本研究也将讨论解决中国和全球代表性问题的潜在方案。

关键词　元科学，样本代表性，WEIRD，推广性

Representativeness of subjects in empirical research in psychology: A

meta-research based on 1000 Chinese papers

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Abstract： Psychological science aims at understanding human mind and behaviour. In the practice of scientific research, the extent to which the findings of scientific psychology can be generalized to all human beings relies heavily on the representativeness of its samples. However, most of subjects of global psychological studies are undergraduate students who take psychology courses from “Western, Educated, Industrialized, Rich, and Democratic” countries or regions. These characteristics are referred to as "WEIRD" (Henrich et al., 2010). The lack of representativeness in psychological science limits our understanding of the whole picture of human mind and behavior and may influence generalizability of studies conclusion. To address this issue, Many researchers have called for and participated in large-scale international collaborative projects with the hope of collecting more samples and data from non-WEIRD regions. Large-scale international collaborative projects indeed increase the geographical diversity and sample sizes. However, it is unknown whether subjects from non-WEIRD regions are representative of the local population in the surveyed regions. To understand this problem, in this study, 1,000 empirical studies were extracted from papers published in five mainstream Chinese academic journals, namely, *Acta Psychological Sinica*, *Journal of Psychological Science*, *Chinese Journal of Clinical Psychology*, *Psychological Development and Education*, *Psychological and Behavioral Studies Psychological Journal*, in three different periods (2008, 2017~2018, and 2020~2021) to extract their subjects’ information. The characteristics of Chinese subjects reported in large-scale international collaborative projects (e.g., Many Labs projects , the Human Penguin Project, PSA) were also extracted to understand the current status of the subject samples in current empirical research in psychology, and compared with data from the Chinese 7th census data. The results will provide a realistic picture of Chinese subjects in psychology, and we will discuss potential solutions to the issue of representativeness in both China and worldwide.

Keywords： Meta-science, Sample representativeness, WEIRD, Generalizability

理论-数据驱动视角下的影像计算精神病学与社会互动研究

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摘 要　精神障碍严重影响了患者的社会功能和生活质量。精确诊断和有效治疗精神障碍一直是重大的科学问题及社会问题。目前，多模态数据及人工智能方法被应用于精神障碍研究，利用脑影像数据和机器学习技术构建精神障碍的诊断分类器得到了广泛关注。基于对精神分裂症患者脑-症状学/亚型关联模式的研究，以及先前相关文献的回顾，我们提出利用机器学习模型的分类准确率来(1)识别稳健的生物学标志物(2)提示DSM 精神障碍之间的分类学关系，并运用无监督和半监督机器学习方法(3)定义（跨诊断)疾病亚型与维度。