

## Effects of digital psychological interventions on physical outcomes in cancer patients: A systematic review and meta-analysis

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**Abstract :** Cancer has become a growing global public health problem. With the development of psychological interventions, digital psychological interventions are increasingly applied to cancer care. However, it remains unclear if digital psychological interventions improve physical symptoms among cancer patients. This study conducts a meta-analysis method to assess the efficacy of digital psychological interventions on physical symptoms (i.e., fatigue, pain, sleep, and physical function) among adults with cancer, as well as to evaluate the variables that possibly moderate intervention effects. The search terms were: “neoplasm”, “Internet”, “psychotherapy”, and “randomized controlled trial”, and nine databases such as MEDLINE, EMBASE, PubMed, and Web of Science were searched. The meta-analysis finally included 42 RCTs comprising 108 effect sizes and 6851 adults with cancer (80.32% women). We found that digital psychological interventions were associated with significant improvements in short-term fatigue ( $g = -0.25$ , 95%  $CI [-0.46, -0.03]$ ) and sleep ( $g = -0.41$ , 95%  $CI [-0.66, -0.16]$ ), but with nonsignificant changes in pain ( $g = -0.11$ , 95%  $CI [-0.26, 0.04]$ ) and physical function ( $g = 0.04$ , 95%  $CI [-0.15, 0.23]$ ). Additionally, no alleviation in long-term physical symptoms (i.e., fatigue, pain, sleep, and physical function) was observed. In subgroup analysis, results suggest that the country significantly moderated the effectiveness of digital psychological interventions in alleviating fatigue. Also, the effect on pain was moderated by the therapist’s contact and support and the use of intention-to-treat analysis. Conclusion: digital psychological interventions are effective for improving short-term fatigue and sleep in patients with cancer. Therefore, we suggested clinicians could consider digital psychological interventions as a possible and efficient approach in cancer treatment. Additionally, more research is needed to assess the effectiveness of digital psychological interventions in various cancer populations (e.g., men and participants from Eastern).

**Keywords:** digital psychological interventions, physical outcomes, cancer patients, meta-analysis

## 工作-家庭冲突对中小学教师心理困扰的影响：反刍思维，心理弹性和组织支持的作用

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**摘要** 随着我国教育体制改革的深入，高速发展和竞争日益激烈的现代社会已向教师的生存与发展提出了越来越严峻的挑战。教师不仅肩负着教育下一代的使命，还需要回应多样化的社会角色期待。既是教书育人的园丁，需要完成传道授业解惑任务，亦是父母、是子女、是爱人，需要为家人提供支持并扮演称职的家庭角色。长时间的工作压力、繁忙的课业以及家庭责任，导致教师工作-家庭冲突问题凸显，也对教师的心理产生了极大的冲击，诱发不同程度的心理困扰，同时，由于工作性质特殊，教师的心理健康问题会极大的影响学生身心发展。为此教师尤其

是中小学教师心理健康水平现状需引起重点关注。

本研究基于资源保存理论,探讨教师工作-家庭冲突对心理困扰影响的中介机制以及边界条件,提出工作-家庭冲突通过反刍思维的中介路径进而对心理困扰产生影响,组织支持在两者间发挥跨层调节作用。同时,心理弹性可以缓解工作-家庭冲突对心理困扰的负面作用。研究采用问卷法,选取367名中小学教师作为研究对象,构建跨层调节中介模型,研究结果发现:中小学教师的工作-家庭冲突会通过反刍思维中介路径诱发心理困扰;在个体水平,心理弹性可以缓解中小学教师的工作-家庭冲突对心理困扰的影响;在团队水平,组织支持感发挥后段调节作用,可以缓解中小学教师的工作-家庭冲突通过反刍思维对心理困扰的负面作用。

本研究探讨了教师工作-家庭冲突与心理困扰传导机制,对理解教师心理困扰发生机制具有一定的理论意义和实践意义,对完善教师心理健康促进政策具有实证参考价值。

关键词 工作-家庭冲突,心理困扰,反刍思维,心理弹性,组织支持

### **The effect of work-family conflict on the psychological distress of elementary and secondary school teachers: the role of rumination, resilience and perceived organizational support**

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**Abstract :** With the deepening of education system reform in our country, the modern society with rapid development and increasingly fierce competition has put forward more and more severe challenges to the survival and development of teachers. Teachers not only shoulder the mission of educating the next generation, but also need to respond to the expectations of diverse social roles. As a gardener who teaches and educates people, he needs to complete the task of preaching and teaching, and he is also a parent, child, and lover who needs to provide support for his family and play a competent family role. The long-term work pressure, busy schoolwork and family responsibilities have led to the prominent problem of teachers' work-family conflict, which has also had a great impact on teachers' psychology, causing different degrees of psychological distress. At the same time, due to the special nature of work, teachers' Mental health problems can greatly affect the physical and mental development of students. Therefore, the current situation of mental health of teachers, especially teachers in primary and secondary schools, needs to be paid attention to.

Based on the theory of resource conservation, this study explores the mediating mechanism and boundary conditions of the impact of teacher work-family conflict on psychological distress, and proposes that work-family conflict has an impact on psychological distress through the mediating path of rumination, and organizational support plays an important role in the interplay between the two. layer regulation. At the same time, psychological resilience can alleviate the negative effect of work-family conflict on psychological distress. The research adopts the questionnaire method, selects 367 primary and secondary school teachers as the research objects, and constructs a cross-level adjustment mediation model. The research results show that: the work-family conflict of primary and secondary school teachers can induce psychological distress through the mediating path of rumination; at the individual level, psychological resilience It can alleviate the impact of primary and secondary school teachers' work-family conflict on

psychological distress; at the team level, organizational support plays a post-regulatory role, which can alleviate the negative effect of primary and secondary school teachers' work-family conflict on psychological distress through rumination.

This study discusses the transmission mechanism of teachers' work-family conflict and psychological distress, which has certain theoretical and practical significance for understanding the mechanism of teachers' psychological distress, and has empirical reference value for improving teachers' mental health promotion policies.

**Keywords:** Work-family conflict; Psychological Distress; Rumination; Resilience; Perceived organizational support

## 正念与大学生睡眠质量的关系： 消极注意偏向与就寝拖延行为的链式中介作用

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**【摘要】目的:**为明确正念对睡眠质量影响的作用机制,本研究构建了一个链式中介模型,考察了消极注意偏向及就寝拖延在二者之间的中介作用。**方法:**以 924 名大学生为被试,采用问卷法对其正念、消极注意偏向、就寝拖延行为及睡眠质量进行调查。**结果:**(1) 相关分析显示,正念、消极注意偏向、就寝拖延、睡眠质量两两之间呈显著正相关;(2) 在控制性别、年龄后,正念对睡眠质量具有显著的负向预测作用,就寝拖延在其中的中介作用显著,且消极注意偏向及就寝拖延的链式中介作用显著。**结论:**正念既可以直接影响睡眠质量,又可以通过就寝拖延的单一中介作用及消极注意偏向→就寝拖延的链式中介效应间接影响睡眠质量。

**【关键词】** 正念;睡眠质量;注意偏向;睡眠拖延行为

## The Relationship Between Mindfulness and Sleep Quality in College Students: The Chain Mediating Effect of Negative Attentional Bias and Bedtime Procrastination\*

**【Abstract】 Objective:** To clarify the mechanism of the effect of mindfulness on sleep quality, this study constructed a chain mediation model to investigate the mediating effects of negative attentional bias and bedtime procrastination. **Methods:** Taking 924 college students as subjects, the questionnaires were used to investigate their mindfulness, negative attentional bias, bedtime procrastination and sleep quality. **Results:** (1) Correlation analysis showed that there was a significant positive correlation between mindfulness, negative attentional bias, bedtime procrastination, and sleep quality; (2) After controlling for gender and age, mindfulness had a significant negative predictive effect on sleep quality, the mediating effect of bedtime procrastination is significant, and the chain mediating effect of negative attentional bias and bedtime procrastination is significant. **Conclusion:** Mindfulness can not only directly affect sleep quality, but also indirectly affect sleep quality through the single mediating effect of bedtime procrastination and the chain mediating effect of negative attentional bias → bedtime procrastination.