Research Progress on the Application of Self-Management Interventions in Children with Cancer

Dan Li, Hailing Liu, Guo Liu, Jinglan Ji, Ruixing Zhang*

School of Nursing and Health, Zhengzhou University, Zhengzhou, China

Email address:

773526089@qq.com (Dan Li), 2891485311@qq.com (Hailing Liu), 664685765@qq.com (Guo Liu), ji18339016129@163.com (Jinglan Ji), zhangruixing@zzu.edu.cn (Ruixing Zhang)

*Corresponding author

Abstract

This article reviews the research progress on the application of self-management interventions in children with cancer. Globally, cancer remains a significant cause of mortality among children and adolescents. In China, the incidence of pediatric malignancies is rising, highlighting the importance of effective self-management interventions to improve treatment outcomes and quality of life for these young patients. Self-management encompasses self-care and disease management, emphasizing the active participation of individuals in their own health management. In the context of pediatric cancer, self-management interventions aim to empower children and their families with the necessary knowledge, skills, and confidence to better cope with the disease and its treatment. The theoretical foundation of self-management is rooted in social cognitive theory, which has been adapted for various chronic conditions, including pediatric cancer. Interventions for children with cancer typically include education on disease-related knowledge, symptom management, emotional regulation, and physical activity promotion. Innovative intervention methods, such as gamified education, mobile health (mHealth) applications, and structured self-management programs, have been developed to engage children and enhance their self-management capabilities. These interventions have demonstrated positive effects on treatment adherence, self-efficacy, and overall quality of life. Gamified education leverages children's natural inclination towards play, incorporating interactive elements to teach disease management skills. mHealth applications offer personalized health guidance and symptom monitoring, providing convenient access to health information. Structured self-management programs provide systematic education and support, helping children set goals and solve problems related to their health. Despite the promising results, challenges remain in the application of self-management interventions for pediatric cancer patients. Future research should focus on developing more immersive and personalized interventions using emerging technologies like virtual reality (VR) and augmented reality (AR). Long-term studies with larger sample sizes are needed to assess the sustained impact of these interventions on children's health outcomes. Additionally, exploring the role of family and school support, as well as conducting cost-effectiveness analyses, will provide valuable insights for clinical practice and policy-making. By addressing these challenges, self-management interventions can be further optimized to offer comprehensive and effective support for children with cancer, improving their treatment experience and long-term well-being.

Keywords

Self-management Intervention, Children with Cancer, Application Effect, Research Progress