


# Enhancing Supportive Care in Pediatric Oncology: The Positive Impact of Physical Activity on Psychological Well-Being [Letter]

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## Dear editor

Alya et al recently published a review focusing on factors associated with psychological well-being (PWB) in pediatric cancer patients.<sup>1</sup> This is an important review in the field of pediatric oncology that reminds us that cancer and its resulting treatments are disruptive to the psychosocial health and development of these patients. Exposure to cancer therapies during developmental phases when rapid and dramatic physiological and psychological changes are occurring is challenging for pediatric cancer patients.

Therefore, we could not agree more that it is important to recognize that PWB is a key aspect in oncology care that impacts patients' physical and mental health, ultimately impacting their abilities to engage in normal peer activities.<sup>1</sup> This scoping review emphasized the complex interplay of factors that contribute to PWB.<sup>1</sup> Alya et al<sup>1</sup> identified four categories of factors that can affect PWB: sociodemographic, individual, health and history, and environmental factors. Physical function, measured with health-related questionnaires, was mentioned as a key aspect of individual factors associated with PWB. And while the data generated by the authors provide new perspectives, it should be noted that physical activity related to physical function was not mentioned, nor discussed, despite its positive impact on PWB.

Physical activity in pediatric oncology is a key component of supportive care.<sup>2</sup> In fact, declining levels of physical activity in pediatric cancer patients can directly impact patients' PWB. The first weeks following their cancer diagnosis, both boys and girls are equally negatively impacted with a significant decrease in their physical activity behavior and psychosocial health (attitude, identity, self-confidence and self-esteem), ultimately impacting their PWB.<sup>3</sup> Physical activity demonstrates its value in short-term symptoms management and long-term survivorship outcomes. Studies have shown that physical activity can help alleviate treatment-related decreases in strength and mobility, while also reducing fatigue, anxiety, and depression symptoms, ultimately improving health-related quality of life and PWB.<sup>2</sup> Leisure-time physical activity has been associated with better PWB in pediatric cancer patients.<sup>4</sup>

As emphasized by Alya et al, children lose their enthusiasm for life when exposed to physical and psychological challenges.<sup>1</sup> In a context where PWB is influenced by a complex combination of sociodemographic, individual, health and history, and environmental factors,<sup>1</sup> it is vital to offer the right support to these patients. Physical activity is an enjoyable activity that can alleviate symptoms affecting PWB. One way to help these patients is with community-based exercise programs in a variety of activities. This allows for a social connection that is often lost during treatment. Supervised group activities, adaptive sports, and recreational therapy ensure that pediatric patients can participate safely, regardless of treatment-related limitations. Notably, a study showed that PWB can be promoted through integrated adventure-based training and health education programs in childhood cancer survivors.<sup>5</sup>

More opportunities for these patients to engage in safe and appropriate physical activity programs will favor long-term PWB. Doing so will contribute to enhancing supportive care in pediatric oncology. Future research in pediatric oncology should consider physical activity as an essential component of care to manage cancer-related symptoms and ultimately improve PWB.

## Data Sharing Statement

Data sharing not applicable to this communication as no datasets were generated or analysed during the current study.

## Author Contributions

MC and CS made substantial contributions to the manuscript; MC and CS wrote the manuscript for important intellectual content; MC and CS provided final approval of the version to be published. All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution and data interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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## Disclosure

Maxime Caru and Chloe Sholler are co-first authors for this study. The authors declare that they have no conflicts of interest for this communication.

## References

1. Alya FP, Hendrawati S, Mediani HS. Factors associated with psychological well-being among children under 18 years old with cancer: a scoping review. *Psychol Res Behav Manag*. 2025;18:39–53. doi:10.2147/PRBM.S488905
2. Wurz A, McLaughlin E, Lategan C, Ellis K, Culos-Reed SN. Synthesizing the literature on physical activity among children and adolescents affected by cancer: evidence for the international Pediatric Oncology Exercise Guidelines (iPOEG). *Transl Behav Med*. 2021;11(3):699–708. doi:10.1093/tbm/ibaa136
3. Caru M, Curnier D, Levesque A, et al. The impact of cancer on theory of planned behavior measures and physical activity levels during the first weeks following cancer diagnosis in children. *Support Care Cancer*. 2021;29(2):823–831. doi:10.1007/s00520-020-05541-7
4. Keats MR, Courneya KS, Danielsen S, Whitsett SF. Leisure-time physical activity and psychosocial well-being in adolescents after cancer diagnosis. *J Pediatr Oncol Nurs*. 1999;16(4):180–188. doi:10.1177/104345429901600402
5. Li HC, Chung OK, Ho KY, Chiu SY, Lopez V. Effectiveness of an integrated adventure-based training and health education program in promoting regular physical activity among childhood cancer survivors. *Psycho-Oncology*. 2013;22(11):2601–2610. doi:10.1002/pon.3326

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