Physical activity promotion interventions are important to address low levels of physical activity among childhood cancer survivors. Regular participation in physical activity and improved physical fitness are associated with many health benefits for survivors, including improved cardiovascular health, decreased risk of cardiovascular disease, improved quality of life, reduced fatigue, and decreased risk of mortality. Although the number of intervention studies has increased in recent years, there is a critical gap in effective and scalable physical activity interventions for childhood cancer survivors.

Cheung and colleagues report on the results of a randomized clinical trial evaluating a brief parent motivational interviewing session with 6 months of ongoing motivational interviewing via instant messaging compared with a brief health educational session to promote physical activity among childhood cancer survivors aged 9 to 16 years. They found significant improvement in physical activity compared with the control group at 6 months and 12 months. Results also indicated significant improvements in secondary outcomes of cancer-related fatigue, muscular strength, and quality of life. Strengths of this work include the randomized design, use of a health education control, blinding of assessors, and high recruitment and retention rates. The intervention itself is novel in implementing motivational interviewing to parents via instant messaging to address ambivalence toward their child's physical activity engagement and encourage them to facilitate their child's participation in physical activity.

An important highlight of this intervention is the direct parent involvement in the intervention. Prior work demonstrates that family support is a key factor in promoting physical activity among children and adolescents in the general population and among childhood cancer survivors. Parents may influence their children's physical activity by modeling the behavior, encouraging physical activity, and providing resources and access to different types of activities. A brief motivational interviewing intervention may also address concerns specific to parents of pediatric cancer survivors, such as worries about overtaxing their children following cancer treatment or misconceptions about exercise promoting fatigue rather than ameliorating it. Cheung and colleagues highlight that family involvement may be particularly important to Chinese survivors compared with those from Western countries owing to cultural factors; however, a recent systematic review by Brown and colleagues suggests that parent involvement may be critical to address across cultures.

While there are barriers to implementing physical activity and exercise interventions with families following a cancer diagnosis, targeting the family unit may increase the chance of successful outcomes. Cheung and colleagues overcame some common feasibility challenges by incorporating a brief parent session during a routine clinical visit and using a familiar instant messaging application to continue to connect with parents in their usual environment over time. Instant messaging allows brief conversations to occur in parents' everyday life settings, offering support at times when needed, while minimizing participant burden.

Despite the rigorous design, several limitations of this work warrant consideration for future research. The potential bias of self-reported physical activity is a limitation recognized by the authors; objective measures of physical activity are important outcomes for this work but also come with challenges in data collection and analysis. The motivational interviewing intervention provided flexibility in timing and dose because it was tailored to parents' individual needs and responses. Future work is needed to identify factors relevant for tailoring and optimal effective doses that result in successful outcomes.
in sustained improvements. Finally, the use of theory in designing the intervention was a strength, but future work should examine the pathways through which the intervention affects outcomes.

Cheung et al⁴ reported the efficacy of a brief motivational interviewing intervention to improve the physical activity among childhood cancer survivors. This study suggested the utility of targeting parents to improve children's physical activity and the acceptability of using an instant messaging application to deliver personalized messages over time. Future work should consider strategies for promoting family support for physical activity in different intervention contexts and measuring the pathways through which interventions improve outcomes.

ARTICLE INFORMATION
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