

Preliminary Findings from a Pediatric Physical Activity Program for Children with Cancer

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ABSTRACT

It is critical for pediatric patients diagnosed with cancer to engage in physical activity (PA) as it is associated with positive psychosocial outcomes and may improve physical function. However, physical activity opportunities for pediatric cancer patients are limited. **PURPOSE:** To test the feasibility and adherence of pediatric cancer patients to a virtual PA program. **METHODS:** Pediatric patients undergoing cancer treatment were referred to the Pediatric Physical Activity program (PePA) by the Children's Hospital's oncology team using rolling recruitment. The target sample size was 20-25 patients. Patients enrolled in an online 12-week PA intervention with similar-aged peers (2x/week, 60 min/session). Patients completed surveys which shared their hobbies and interests. They were given PA equipment (i.e., yoga ball, mat). Trained undergraduate Kinesiology students designed and delivered the PA lessons which included yoga, dancing, calisthenics and Pilates. PA duration (visual inspection of recorded sessions, system for observing fitness instruction time, SOFIT), intensity (wrist-based heart rate monitors) and focus group data were used to assess program feasibility. **RESULTS:** Nine patients enrolled in the study (5, 5-7 years-olds; 4, 13-16 year-olds). One patient from each group completed 95% and 79% of the 24 sessions, respectively. These 2 patients reported improved balance and enjoyment of the program. PA leaders led the 5-7-year-old and 13-16-year-old groups through 27.6±4.9 and 33.0±9.4 minutes of PA, respectively. Average PA intensity was 26±6% heart rate reserve (HRR) and varied based upon activity. Patients rated their perceived exertion (RPE) of the PA as 2-7 on a scale of 1-10. During the session, children aged 5-7 years and 13-16 years engaged in 14.6±9.1 and 27.2±14.4 minutes of fitness, respectively (SOFIT coding). Three-fourths through the program, the duration for the 5-7 year olds was reduced to 45 minutes to match energy levels. Patients and parent-proxies of the younger children reported that they liked the session duration and type of PA performed. **CONCLUSION:** PA intensity fell at the lower end of the recommended 30-45% HRR range for adult patients undergoing cancer treatment. Program adherence was difficult to achieve, but those who completed the program reported physical benefit.