Reviewer: Gaela Kilgour, PT
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Journal Article Digest Sub-Committee

Article

Angeli, JM, Peck, MN, & Schwab, SM. (2019). Self-perceived scholastic competence, athletic competence, and physical appearance are enhanced in children and young adults with physical disabilities following a community-based running program, *J Dev Phys Disabil, 31*:707–723. https://doi.org/10.1007/s10882-019-09690-4

Adaptive Sports/Recreation Topic Categories

- Participation in Sports/Recreation.

Research Question

1. Does a community-based running program intended to foster improved daily physical activity patterns in children and young adults with physical disabilities concurrently impact self-concept?
2. Which self-concept domains are sensitive to change following participation?

Methodology

- A pre-post study design
- Children and young adults with a physical disability who were medically stable and expressed an interest in seeking opportunities to engage in sport and recreation were recruited from an outpatient pediatric medical center. The intervention was a running program taking place 2x/week for 10 weeks in an outdoor community setting with a large group of volunteers to assist practises and the race
- The program was incremental in time/volume (walk: run ratio) and individualised as needed (e.g. adaptive equipment was permitted) with the final aim to complete a 5km run
- The outcome used to evaluate changes in self-concept was the Self-Perception Profile for Children (SPPC; Harter 2012). The SPPC consists of 36-items evaluating self-concept in five domains: scholastic competence, social competence, athletic competence, physical appearance, and behavioral conduct. An overall global self-worth score is also obtained.
- The SPPC testing was facilitated by one physical therapist with over 10 years of pediatric physical therapy experience
- Data were analyzed both for all participants as well as divided by two age groups: elementary school children (7–14 years; 11 participants) and high school children and young adults (15–24 years; 8 participants) using analysis of variance.

Results

- Twenty children and young adults with a variety of physical disabilities (70% had cerebral palsy) and with a mean age 14.2 years (range 7-24 years) were recruited
- All participants completed the training (mean attendance 77.3%) and a 5km race with no adverse events
- 19 participants completed both baseline and post-training testing
- The greatest average SPPC subscale score was documented for physical appearance (3.44 ± 0.61); with improvements in physical appearance highest for 68.42% of individuals
- However, significant changes were observed in the other domains, with mean change scores in the athletic competence (0.33, 95% CI 0.02 to 0.63) and scholastic competence (0.31, 95%CI 0.07 to 0.55) domains
- Different subscale trends emerged when analyzing by age group such as the greatest mean change score for elementary school children was found for scholastic

competence (0.56, 95% CI 0.24 to 0.87), but no increase for the high school children and young adults
- The greatest mean change score for high school children and young adults was found for athletic competence (0.42, 95% CI -0.01 to 0.84).

Discussion/Conclusion
- A community-based model of physical activity such as a running program outdoors can positively influence self-concept in multiple domains, with significant improvements noted in the domains of scholastic competence, athletic competence, and physical appearance.

Article Strengths
- All participants data were also analyzed for two age groups, i.e. elementary school children (7–14 years) and high school children and young adults (15–24 years) to provide information for different age groups
- The potential benefits of the community-based running program on self-concept in adolescent females may motivate an increased recruitment of female participants in future community-based physical activity programs.

Article Weaknesses
- Small sample
- No control group, therefore results have lower level of evidence
- Many volunteers are required to run the programme
- Running program did not include all community members, it could have been designed with an athletics/harrier club event for greater exposure to adaptive participation in running
- Unable to determine how many participants completed program using adaptive equipment and what this entailed i.e. how to replicate
- No long-term (> 1 month) follow-up testing was performed.

Take Home Messages
- Gains in self-concept can occur when promoting physical activity participation in children and young adults with a community-based running programme
- Focus on self-concept and participation may be as important and meaningful as the physical gains achieved from physical activity programs