

Feasibility of a Community-Based Structured Exercise Program for Persons With Spinal Cord Injury

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DOI: [10.5014/ajot.2024.78S2-PO300](https://doi.org/10.5014/ajot.2024.78S2-PO300)

Date presented: March 23, 24

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Persons with spinal cord injury (PwSCI) are at higher risk of cardiorespiratory and metabolic diseases (Froehlich-Grobe et al., 2016) and often are sedentary or engage in low levels of physical activity (Martin-Ginis et al., 2010). More community-based research is needed to identify effective exercise interventions that improve health for PwSCI (Nightingale et al., 2017; Rimmer et al., 2013). We used a pilot randomized controlled trial to examine the feasibility of a community-based exercise program (CBEP) for PwSCI and identify trends in cardiorespiratory fitness, musculoskeletal strength, and psychosocial well-being. Participants with SCI were required to be 18 years or older, did not regularly engage in physical activity, and were able to independently move one or more extremities. Thirty-two community-dwelling PwSCI were randomized into a 36-session CBEP led by exercise specialists (n=15) or an education group (n=17). Outcome measures included feasibility, cardiorespiratory fitness, strength, self-efficacy, motivation, pain, adherence, acceptability, and goal satisfaction. Independent sample t-tests for continuous data and Chi-square analyses for categorical data were used to detect differences between groups and evaluate feasibility. The CBEP group, who attended, on average, two sessions per week, experienced changes of moderate effect size in cardiorespiratory fitness, strength, motivation, and satisfaction with their goals. The CBEP rated their satisfaction with the program high. These findings demonstrate a CBEP is highly accepted, feasible, safe, and effective at progressing meaningful health outcomes for PwSCI. Our study has important clinical implications for community-based fitness programs that serve PwSCI, who in-turn, benefit from access to these programs to optimize their health and quality of life. Continued exercise implementation research is warranted with additional focus on increasing the intensity and duration of exercise for PwSCI.

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