

Systematic Review and Meta-analysis Investigating the Efficacy of Walking-based Aerobic Exercise Interventions to Treat Postpartum Depression

Authors : V. Pentland, S. Spilsbury, A. Biswas, M. F. Mottola, S. Paplinskie, M. S. Mitchell

Abstract : Postpartum depression (PPD) is a form of major depressive disorder that afflicts 10-22% of mothers worldwide. Rising demands for traditional PPD treatment options (e.g., psychiatry), especially in the context of the COVID-19 pandemic, are increasingly difficult to meet. More accessible treatment options (e.g., walking) are needed. The objective of this review is to determine the impact of walking on PPD severity. A structured search of seven electronic databases for randomised controlled trials published between 2000 and July 29, 2021, was completed. Studies were included if walking was the sole or primary aerobic exercise modality. A random-effects meta-analysis was conducted for studies reporting PPD symptoms measured using a clinically validated tool. A simple count of positive/null effect studies was undertaken as part of a narrative summary. Five studies involving 242 participants were included (mean age= \sim 28.9 years; 100% with mild-to-moderate depression). Interventions were 12 (n=4) and 24 (n=1) weeks long. Each assessed PPD severity using the Edinburgh Postnatal Depression Scale (EPDS) and was included in the meta-analysis. The pooled effect estimate suggests that relative to controls, walking yielded clinically significant decreases in mean EPDS scores from baseline to intervention end (pooled MD=-4.01; 95% CI:-7.18 to -0.84, I²=86%). The narrative summary provides preliminary evidence that walking-only, supervised, and group-based interventions, including 90-120+ minutes/week of moderate-intensity walking, may produce greater EPDS reductions. While limited by a relatively small number of included studies, pooled effect estimates suggest walking may help mothers manage PPD. This is the first time walking as a treatment for PPD, an exercise modality that uniquely addresses many barriers faced by mothers has been summarized in a systematic way. Trial registration: PROSPERO (CRD42020197521) on August 16th, 2020

Keywords : postpartum, exercise, depression, walking

Conference Title : ICRHST 2022 : International Conference on Reproductive Health Science and Technology

Conference Location : Toronto, Canada

Conference Dates : September 20-21, 2022