

AB010. Effects of different walking intensities on alleviating depression in older adults with major depressive disorder: a pilot randomized controlled trial

Danny J. Yu¹, Angus P. Yu¹, Chit K. Leung¹, Jacky M. Mo¹, Joshua K. Bernal¹, Edwin C. Chin¹, Welton W. Leung¹, Whitney W. Au¹, Daniel Y. Fong², Calvin P. Cheng³, Parco M. Siu¹

¹Division of Kinesiology, School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, China;

²School of Nursing, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, China; ³Department of Psychiatry, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, China

Correspondence to: Danny J. Yu. Division of Kinesiology, School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, China. Email: dannyu@connect.hku.hk.

Background: The Global Burden of Disease Study 2017 reported that depression is a common global illness and over 264 million people are affected. WHO global physical activity recommendation suggests to older adults to perform 150–300 minutes moderate-intensity or 75–150 minutes vigorous-intensity physical activity to gain health benefits. Although physical activity has been demonstrated to be beneficial to patients with clinical depression, the optimal exercise intensity remains ascertained. This study aims to compare the effects of 12-week moderate- or vigorous-intensity walking exercise on alleviating depression in older depressed patients.

Methods: Older adults aged ≥ 50 years diagnosed with depression were recruited from January 2019 to June 2021. Participants were randomly allocated to the control group (n=9), vigorous-intensity (6.5 metabolic equivalents) walking group (n=9), or moderate-intensity (3.25 metabolic equivalents) walking exercise group (n=9). The walking intervention lasted for 12 weeks, and the exercise frequency was thrice a week. Participants in the control group were instructed to maintain daily life routines during

the intervention period. Beck depression inventory and generalized anxiety disorder 7 were used to measure the depression and anxiety levels, respectively, at baseline and post-intervention measurement. The treatment effects were assessed using generalized estimating equations.

Results: Compared to the control group, depression level was significantly reduced in both walking intervention groups ($P < 0.001$). There was 43.9% reduction in the depression score in the moderate-intensity walking group compared to the baseline, and 43.2% reduction in the vigorous-intensity walking group. There was no significant difference between the two walking groups. Similarly, compared to the control group, anxiety level significantly decreased in two walking intervention groups ($P < 0.001$) and there was no significant difference between the two walking groups.

Conclusions: Our results demonstrated that 12-week walking training at both vigorous- and moderate-intensity significantly alleviated depression and anxiety levels in older adults with clinical depression.

Trial Registration: Clinical Trial Registration No. NCT04403373.

Keywords: Depression; walking exercise; exercise intensity

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Footnote

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