

APRU Global Health Conference 2021

GLOBAL URBAN HEALTH

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The University of Hong Kong, Pokfulam, Hong Kong

Abstract No.	Abstract Title
91	Effects of Exercise Training Intensity on Objective and Subjective Cognitive Performance in Older Adults with Mild Cognitive Impairment: A Pilot Study
Theme	C. Environment, health & active lifestyle
Author(s):	Angus P. Yu ¹ , MPhil, Danny J. Yu ¹ , Jacky M. Mo ¹ , MPH, BSc, Chit Kay Leung ¹ , BScE&H, Edwin C. Chin ¹ , BScEd, Joshua D.K. Bernal ¹ , BScE&H, Francesco Recchia ¹ , MSc, and Parco M. Siu ¹ , PhD.
Affiliation(s):	¹ Division of Kinesiology, School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, China

Purpose / Background:

Dementia presents dire public health consequences owing to the absence of approved treatments. Mild cognitive impairment is an intermediate state between normal cognitive function and dementia. A timely intervention during the state of mild cognitive impairment is thought to attenuate further cognitive decline and prevent subsequent progression to dementia.

According to the American Academy of Neurology, regular exercise can improve the cognitive performance of individuals with mild cognitive impairment. Despite that there are recommended length and frequency of exercise intervention, the intensity of exertion is not specified in the guideline. With limited existing knowledge in how exercise intensity affects cognitive performance, this study is designed to examine the effects of moderate and vigorous-intensity exercise on objective and subjective cognitive performance in older adults with mild cognitive impairment.

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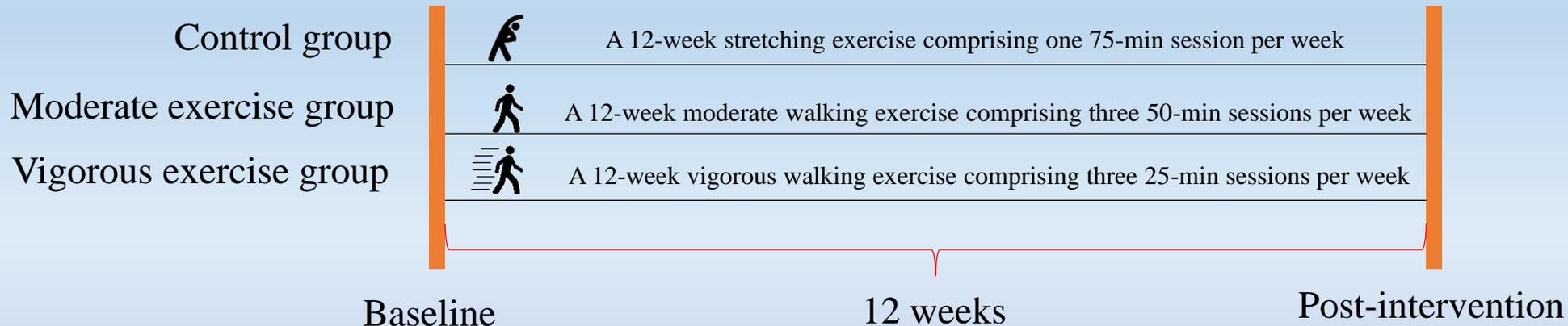
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Effects of Exercise Training Intensity on Objective and Subjective Cognitive Performance in Older Adults with Mild Cognitive Impairment: A Pilot Study

Methods:

Twenty older adults aged 50 years or above with mild cognitive impairment were randomly assigned into three groups, namely vigorous exercise group (VIG, n=7, three 25-min sessions of vigorous walking exercise per week with intensity set at 7 metabolic equivalents for 12 weeks), moderate exercise group (MOD, n=7, three 50-min sessions of moderate walking exercise per week with intensity set at 3.5 metabolic equivalents for 12 weeks) and control group (CON, n=6, 12 weeks of stretching exercise comprising one 75-min session per week). The weekly exercise volumes of vigorous exercise and moderate exercise groups were identical whereas the weekly exercise duration of the control group was equivalent to that of the vigorous exercise group. Objective and subjective cognitive performances were assessed by the Hong Kong version of Montreal Cognitive Assessment (MoCA-HK) and Cognitive Self-report Questionnaire (CSQR) respectively. Data were analyzed by generalized estimating equations with baseline as covariate. Differences among groups in any given outcomes were indicated by a significant group-by-time interaction. Pair-wise comparison was performed using closed test procedure.



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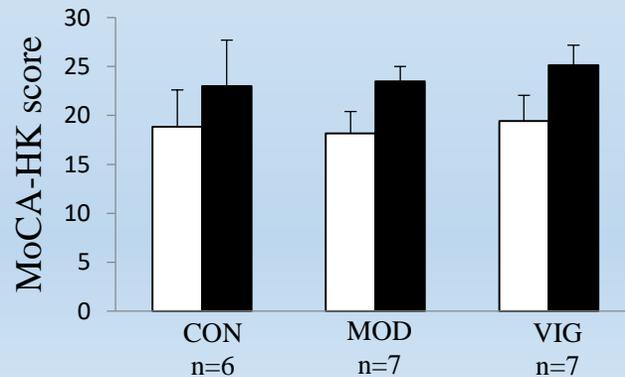
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Results & Conclusions:

Objective Cognitive Performance

Group-by-time interaction: $P=0.226$

Group effect: $P=0.212$ Time effect: $P<0.001$

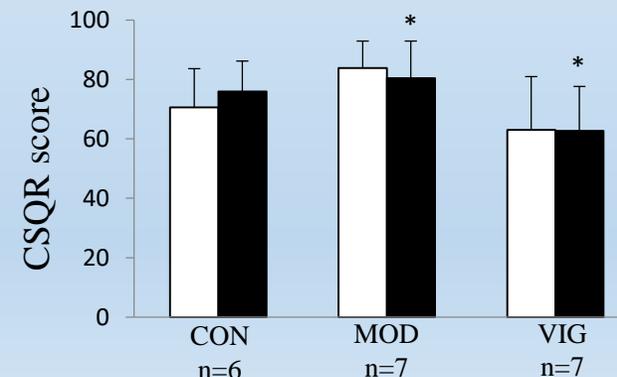


Higher MoCA-HK score indicates better performance

Subjective Cognitive Performance

Group-by-time interaction: $P=0.005$

Group effect: $P=0.002$ Time effect: $P=0.017$



Lower CSQR score indicates better performance

* Indicates that the change is significantly different from CON

Conclusions:

Both moderate and vigorous walking exercises are equally efficacious in preventing the decline in subjective cognitive performance. Moreover, the exercise-induced changes in objective cognitive performance and subjective cognitive performance may not be consistent.