

Free Paper Presentation II: Dementia / Mental Health – Paper 02

Feasibility, Safety and Effects of a Step Training Program in Community-Dwelling Older Adults with Dementia: A Feasibility Wait-List Controlled Trial

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Purpose

This study evaluates the feasibility, safety, and effects of a step training program on stepping performance, physical function, and cognitive function in community-dwelling older adults with dementia.

Method

This study is a pilot quasi-experimental, wait-list controlled trial. Fifty-six older adults who had a diagnosis of dementia and were able to walk 10 m independently without any walking aid or with a walking stick were recruited. Participants who were allocated to the step training program completed two 40-minute exercise sessions per week for 12 weeks. Participants who were assigned to the wait-list control group received usual care for the first 12 weeks, followed by the same step training program. The feasibility (retention and adherence to the step training program), safety (percentage of the participants having any adverse events), and clinical outcomes of the participants, including the stepping performance, general mobility, walking speed, lower limb muscle strength, dynamic balance, global cognition, and functional ability, were assessed at the baseline and 12 weeks.

Results

Forty-seven participants (84%) completed the 12-week assessment. The mean number of completed exercise sessions was 17.95 (74%). No adverse events were recorded. Significant interactions in choice stepping reaction time ($p = .038$), maximum step length [left leg backward stepping ($p = .046$) and side stepping ($p = .020$)], and alternate stepping ($p = .002$) between the step training and wait-list control groups were found.

Conclusion

The step training program was feasible, safe, and potentially effective in improving the stepping performance of older adults with dementia. Future research to evaluate the effects of the step training program using a larger sample and a more stringent study design is therefore warranted.

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