

Effects of step training in older adults with mild to moderate dementia

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Subheading/s (if required):

Introduction

Falls are common in older adults with dementia. Step training has been shown to be effective at reducing falls and improving related risk factors in healthy older adults. However, the effects of step training have not been investigated in older adults with mild to moderate dementia. This study aimed to evaluate the effects of a 12-week step training program on simple and choice stepping performances, lower limb muscle strength, and balance in older adults with mild to moderate dementia.

Method

This study is a wait-list controlled trial. Older adults who (1) had mild to moderate dementia; and (2) were able to walk 10 meters independently without a walking aid were recruited. Participants in the step training group received 40 minutes of step training, twice a week for 12 weeks. Participants in the wait-list control group received usual care for 12 weeks before receiving the same program. The maximum step length, choice stepping reaction time, lower limb muscle strength, and balance of the participants were evaluated at baseline and 12 weeks.

Results

Up to April 2023, 21 participants (step training group, n = 9; wait-list control group, n = 12) completed the 12-week program. No adverse events were reported in the step training group. Independent t-tests showed that the step training group had significant improvements in 5 of the 6 maximum step length tests (all $p < 0.015$), and choice stepping reaction time ($p = 0.012$). The attendance rate of the step training group was 81%.

Conclusion

The preliminary results showed that the 12-week step training program was feasible, safe and effective at improving simple and choice stepping in older adults with mild to moderate dementia. The study is currently in process. The full results are expected to be available by the end of 2023.

References: