

# Drums Alive Golden Beats Improves Functional Reach in Older Adults

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## INTRODUCTION

- An impairment in dynamic postural control is one of the major predictors related to falls.
- Decreased functional reach reduces the capacity to appropriately stabilize and react to forces outside a base of support and can be negatively affected by progressing age and fear of falling.
- Maintaining a physically active lifestyle can help attenuate age-related declines in balance. Drums Alive® is a therapeutic movement program that uses choreographed rhythmic movements to improve cardiorespiratory health, mobility and flexibility.
- This study aimed to determine if a 10-week Drums Alive® intervention, Golden Beats, could improve functional reach in community dwelling older adults.

## METHODS

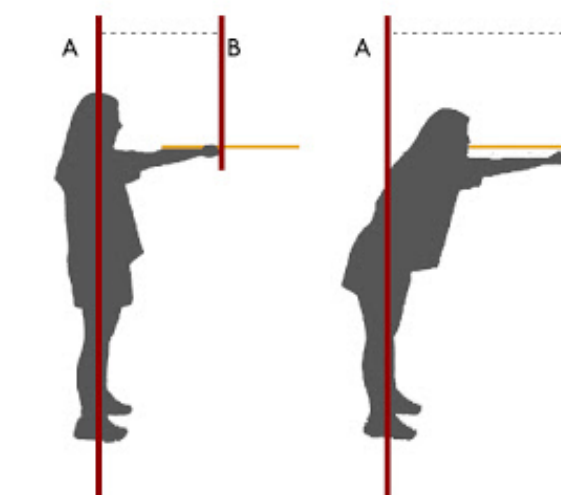
- 12 community dwelling volunteers (2 males) completed the Drums Alive® intervention (mean age = 68.82 years, SD = 5.33).
- Participants participated in the Drums Alive® intervention consisting of 20 one-hour sessions over the course of 10 weeks (2 sessions per week).
- Each Drums Alive® session started with a 10-minute warm-up followed by 40 minutes of choreographed rhythmic movements and a 10-minute cool-down.

## METHODS (cont.)

- The Functional Reach item of the Berg Balance Scale (BBS) was used to assess each participant's balance before and after the Drums Alive® intervention.
- Each of the 14-item BBS is scored from 0 – 4, with a total maximum possible score of 56 that indicates there are no balance deficits.

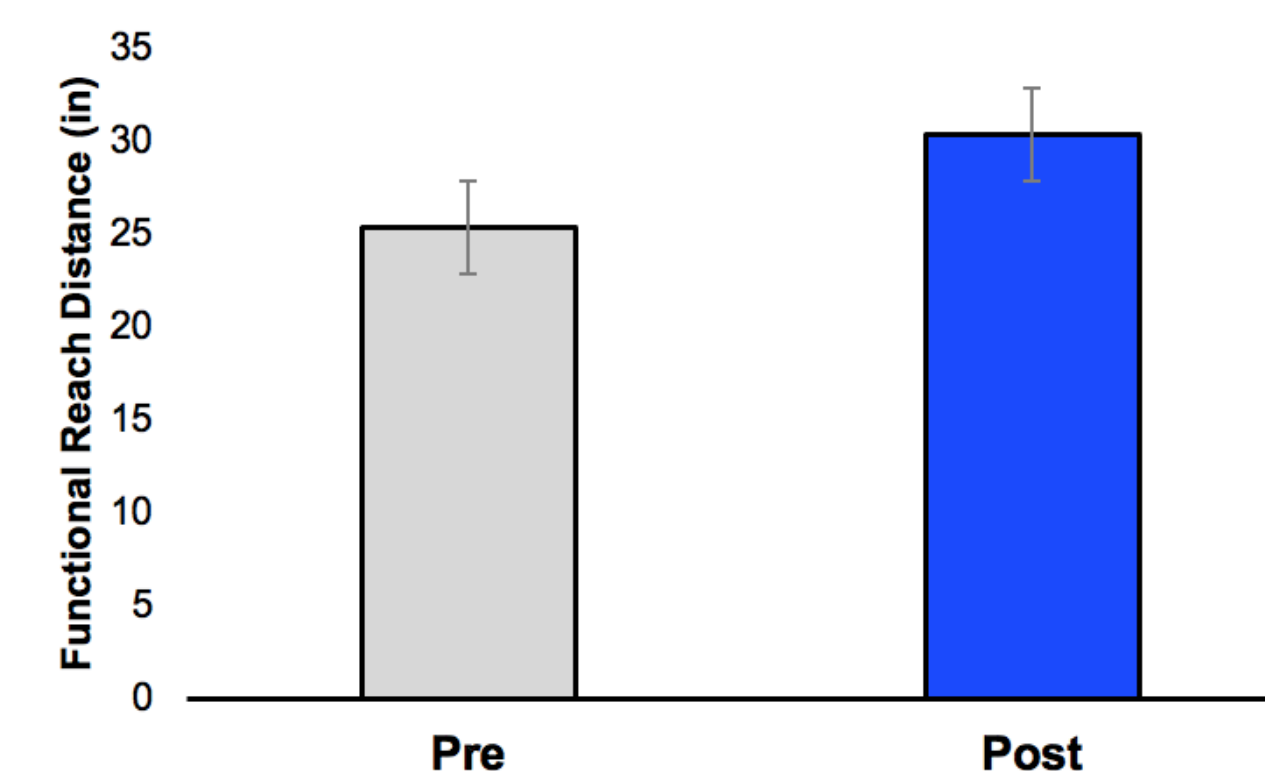


**Fig. 1.** Representative Drums Alive® Golden Beats class. Drums Alive® Golden Beats exposes participants to a drumming and movement experience designed to enhance function and mood.



**Fig. 2.** Functional reach test. Standing in a static position (A), participants were instructed to lift their arm to 90 degrees (B) and reach forward as far as possible while maintaining a stable base of support (C).

## RESULTS



**Fig. 3.** Functional reach test. There was a statistically significant different in pre- and post-intervention for functional reach following the Drums Alive® intervention ( $M = -5.008$ ;  $SD = 3.077$ ;  $t(12) = -5.638$ ,  $p < 0.0001$ , two-tailed). All participants scored well on the BBS as a whole; thus, no significant differences were observed for the total score.

## DISCUSSION

- Findings suggest that a choreographed rhythmic exercise intervention benefits functional reach in community-dwelling older adults. The Drums Alive® intervention was a significant contributor to in pre- and post-intervention FR.
- Age-related declines in postural control limits the ability to maintain balance when the center of mass straddles the boundaries of the base of support.
- Dynamic postural control is essential to decrease the risk of future falls.
- Findings suggest that physical therapists should consider novel intervention strategies aimed at improving motor performance in older adults.

## ACKNOWLEDGMENTS

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