
Abstract

A Combination of Web-based and In-Person Training Reduced Fall Accidents in Older Adults During the COVID-19 Pandemic

Mikkel Jacobi Thomsen¹, BA, MSc; Matthew Liston², PhD; Merete Grothe Christensen³, BA; Peter Vestergaard³, PhD, MD; Rogerio Hirata¹, PhD

¹Department of Health Science and Technology, Faculty of Medicine, Aalborg University, Aalborg, Denmark

²The Chartered Society of Physiotherapy, London, United Kingdom

³Department of Endocrinology, Aalborg University Hospital, Aalborg, Denmark

Corresponding Author:

Rogerio Hirata, PhD

Department of Health Science and Technology

Faculty of Medicine

Aalborg University

Fredrik Bajers Vej 7D

Aalborg, 9220

Denmark

Phone: 45 4531423258

Email: rirata@hst.aau.dk

Abstract

Background: Fall accidents in older adults are associated with reduced quality of life, personal health issues, and earlier deaths. Previous studies have found that both physical and cognitive parameters influence the risk of falling in older adults. During the COVID-19 pandemic lockdown (2020-2021) in Denmark, web-based training was the safest option for training, although its effectiveness was uncertain.

Objective: The purpose of this stratified, block randomized trial was to examine the effect of two types of web-based and in-person training—salsa dance and regular fitness circuit—in two training groups in comparison with a control group.

Methods: A total of 78 older adults (9 male and 69 female; mean age 70.4, SD 4.4 years; mean height 165.2, SD 6.8 cm; and mean weight 65.7, SD 11.9 kg) completed the 6-months training period: dance (n=25), fitness (n=23), and control group (n=30). Accidental falls were registered during the follow-up test. Participants in the two training groups were assigned to 1-hour training sessions twice a week for 6 months. Prior to the pandemic, training was administered by a skilled instructor at an activity center in the municipality or a dance studio. Following the pandemic, dance training was administered through a web-based meeting platform, whereas fitness training was guided by a video. Adherence to the training was collected weekly. Participants in the control group were encouraged to continue their everyday life.

Results: Both intervention groups had fewer accidental falls during the 6 months intervention compared with the control group (control group: 9 falls; dance: 4 falls, fitness: 0 falls; chi-square: $P < .05$). In total, adherence to fitness training was 72.6%, and it was 86.9% for dance. However, adherence to the web-based dance training was 95% (342 dance training hours of possible 360 dance training hours).

Conclusions: A combination of a 6-months web-based and in-person training (for dance and fitness) reduced the number of accidental falls in older adults.

Trial Registration: ClinicalTrials.gov NCT03683849; <https://clinicaltrials.gov/ct2/show/NCT03683849>

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KEYWORDS

falls; older adults; training; dance; web-based training

Conflicts of Interest

None declared.

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