

Effects of 24-week exergame intervention on physical function under single- and dual-task conditions in fibromyalgia: A randomized controlled trial

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Objective: To evaluate the effects of 24-week exergame intervention in the physical fitness of women with fibromyalgia in both single- and dual-task conditions. **Design:** Single-blinded, randomized controlled trial. **Setting:** University facilities. **Participants:** Fifty-five women with fibromyalgia, recruited from the local fibromyalgia association, were randomly assigned to one of the two groups: exercise group and control group. **Intervention:** The exercise group completed 24 weeks of supervised and group-based exergame protocol, divided into two sessions of 60 minutes. The intervention was focused on mobility, postural control, upper and lower limbs coordination, aerobic fitness, and strength. **Main outcome measures:** The strength of the upper limbs was measured using the arm curl test. The mobility skill was assessed through the timed-up and go test, and the flexibility of both upper and lower limbs was measured using the back scratch and the sit and reach tests, respectively. **Results:** Fifty participants completed the study. In the single-task condition, exergame intervention led to significantly higher effects in the arm curl test ($P = 0.008$), sit and reach test ($P = 0.033$), and timed-up and go test ($P = 0.021$). Moreover, under dual-task condition, exergames led to significant effects in all the physical fitness tests (arm curl test, timed-up and go test, back scratch test, and sit and reach test) compared to the control group. **Conclusions:** Exergame is an effective tool to improve the physical fitness in women with fibromyalgia under single or dual-task conditions. © 2019 John Wiley & Sons A/S. Published by John Wiley & Sons Ltd

dual-task

exercise

exergame

physical fitness

virtual reality

adult

body equilibrium

controlled study

female

fibromyalgia

fitness

human

joint characteristics and functions

kinesiotherapy

middle aged

pathophysiology

randomized controlled trial

recreational game

single blind procedure

Adult

Exercise Therapy

Female

Fibromyalgia

Games, Recreational

Humans

Middle Aged

Physical Fitness

Postural Balance

Range of Motion, Articular

Single-Blind Method