Clinical Trial Protocol
Iranian Registry of Clinical Trials

19 Nov 2026

Comparing the effects of 30 minutes of Exergaming with brisk walking in physiological and psychological measures of older adults

Protocol summary

Study aim
Investigating the differences between 30 minutes of exergaming versus brisk walking on some physiological and psychological measures in older adults

Design
This is a single-blind, crossover study comprising of two groups, totaling 40 subjects in a single center setting

Settings and conduct
This study will be conducted in a day center for the elderly and a park. Also, the outcome assessor and data analyzer, which are two different people are blind to which person has been assigned to which group and they just work with the study population, or look at data as a whole.

Participants/Inclusion and exclusion criteria
40 Men and women aged ≥60 years are enrolled in the study. The inclusion criteria are as follows: being able to walk with or without assistive devices for 10 meters; obtaining a score <6 (out of 15) in the Geriatric Depression Scale; obtaining a score >23(out of 30) in the Mini-Mental State Examination; responding No to all of the 7 questions in the Physical Activity Readiness Questionnaire; and the exclusion criteria are: having uncorrected vision, hearing or cardiovascular disorders; taking medications that could affect balance or orientation.

Intervention groups
There are 2 interventions in this study. One is Exergaming, which is playing video games that encourage the physical movement of the body by simulating exercise-like activities and the other intervention is walking briskly in an outdoor park. Both of the interventions are done once for 30 minutes.

Main outcome variables
Average and peak heart rate; blood pressure, and double product measurements; time spent in each heart rate zone; the rate of perceived exertion and enjoyment using Physical Activity Enjoyment Scale Questionnaire (PACSES)

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20151118025105N3**
Registration date: **2019-03-18, 1397/12/27**
Registration timing: **prospective**

Last update: **2019-03-18, 1397/12/27**
Update count: **0**

Registration date
2019-03-18, 1397/12/27

Registrant information

Name
Sobhan Sobhani

Name of organization / entity
Shiraz University of Medical Sciences

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Iran (Islamic Republic of)

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2019-05-26, 1398/03/05

Expected recruitment end date
2019-06-15, 1398/03/25

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Comparing the effects of 30 minutes of Exergaming with brisk walking in physiological and psychological measures of older adults

Public title
Comparing the effects of Exergaming with brisk walking in older adults

Purpose
Supportive

Inclusion/Exclusion criteria

Inclusion criteria:
Having ≥60 years of age Being able to walk with or without assistive devices for 10 meters Obtaining a score <6 (out of 15) in the Geriatric Depression Scale Obtaining a score >23(out of 30) in the Mini-Mental State Examination Responding No to all of the 7 questions in the Physical Activity Readiness Questionnaire

Exclusion criteria:
Having uncorrected vision, hearing or cardiovascular disorders Taking medications that could affect balance or orientation

Age
From **60 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Outcome assessor
- Data analyser

Sample size
Target sample size: **40**

Randomization (investigator's opinion)
Randomized

Randomization description
Each participant is randomized to an AB or BA group, therefore the participant is used as his or her own control. Participants in the AB group receive intervention A (Brisk Walking) followed by intervention B (Exergaming) and the ones in the BA group receive intervention B (Exergaming) followed by intervention A (Brisk Walking).

Blinding (investigator's opinion)
Single blinded

Blinding description
The outcome assessor and data analyzer, which are two different people are blind to which person has been assigned to which group and they just work with the study population, or look at data as a whole.

Placebo
Not used

Assignment
Crossover

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics Committee of Shiraz University of Medical Sciences

Street address
Vice-Chancellor for Research, Shiraz University of Medical Sciences, Zand Blvd., Shiraz, Iran

City
Shiraz

Province
Fars

Postal code
71348-14336

Approval date
2018-12-12, 1397/09/21

Ethics committee reference number
IR.SUMS.REHAB.REC.1397.007

Health conditions studied

1

Description of health condition studied
Ageing

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description
Average heart rate

Timepoint
During the intervention

Method of measurement
Heart rate monitor

2

Description
Peak Heart Rate

Timepoint
During the Intervention

Method of measurement
Heart Rate Monitor

3

Description
Rate of Perceived Exertion

Timepoint
Immediately after the Intervention

Method of measurement
10-Point Rate of Perceived Exertion Scale

Secondary outcomes

1

Description
Blood pressure
Timepoint
Before and immediately after the intervention
Method of measurement
Sphygmomanometer

2

Description
Double product
Timepoint
Immediately after the intervention
Method of measurement
Multiplying systolic blood pressure number by heart rate over 1 minute

3

Description
Time spent in each heart rate zone
Timepoint
Immediately after the intervention
Method of measurement
Polar Flow Training Analysis Tool (Software)

4

Description
Enjoyment score
Timepoint
Immediately after the intervention
Method of measurement
Physical Activity Enjoyment Scale Questionnaire (PACSES)

Intervention groups

1

Description
Intervention group AB- Brisk walking first and then Exergaming: In this group, the participant will first walk briskly for 30 minutes in a park area. Before the start of intervention, their resting blood pressure will be measured and then their heart rate will be consistently recorded throughout the walking session. Also the rest of research valuables like the Rate of Perceived Exertion Scale and the Physical Activity Enjoyment Scale Questionnaire will be measured/filled after the intervention. After 1 week, these participants will perform the second intervention, which is playing Exergames for 30 minutes. In this session, all of the measurements will be taken just like the previous session.
Category
Other

2

Description
Intervention group BA- Exergaming first and then brisk walking: In this group, the participant will be first playing Exergames for 30 minutes. Before the start of intervention, their resting blood pressure will be measured and then their heart rate will be consistently recorded throughout the Exergaming session. Also the rest of research valuables like the Rate of Perceived Exertion Scale and the Physical Activity Enjoyment Scale Questionnaire will be measured/filled after the intervention. After 1 week, these participants will perform the second intervention, which is walking briskly for 30 minutes in a park area. In this session, all of the measurements will be taken just like the previous session.
Category
Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Shiraz Jahandidegan Center
Full name of responsible person
Sobhan Sobhani
Street address
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Shiraz University
Full name of responsible person
Dr. Farhad Daryanoosh
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Fars
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Email

Daryanoosh@Shirazu.ac.ir

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Shiraz University

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Shiraz University of Medical Sciences

Full name of responsible person

Dr. Sobhan Sobhani

Position

Assistant Professor, PT, PhD

Latest degree

Ph.D.

Other areas of specialty/work

Physiotherapy

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Person responsible for scientific inquiries

Contact

Name of organization / entity

Shiraz University of Medical Sciences

Full name of responsible person

Dr. Sobhan Sobhani

Position

Assistant Professor, PT, PhD

Latest degree

Ph.D.

Other areas of specialty/work

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Person responsible for updating data

Contact

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Dr. Sobhan Sobhani

Position

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Web page address

Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

The data of the participant alone is useless.

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Not applicable

Data Dictionary

Not applicable

Title and more details about the data/document

The results of primary outcomes will be shared.

When the data will become available and for how long

two months after the publication of the results.

To whom data/document is available

academic researchers

Under which criteria data/document could be used

Once accessed, individuals have the right to use the study protocol for rehabilitation purposes.

From where data/document is obtainable

Reza Sayar will be responsive through email. Rez.Sayar@gmail.com

What processes are involved for a request to access data/document

After receiving the request and mentioning the reasons for the request, the data will be answered within a maximum of one month.

Comments