

Clinical Trial Protocol

Iranian Registry of Clinical Trials

19 Jun 2026

The effect of corrective exercises on balance in hyperkyphotic elderly women

Protocol summary

Summary

Objectives: Women with hyperkyphosis have impaired balance and increased body sway, which can increase their risk of falls. Impaired balance, mobility, and postural stability are the main risk factors for falling. This study examined the effectiveness of corrective exercises on mobility, postural stability, and balance in hyperkyphotic elderly women. Design: In this randomized controlled trial, participants were randomly assigned to an experimental group and a control group. Setting and conduct: The subjects in exercise group participated in an 8 week (3 sessions a week) corrective exercise program. But the control group didn't participate in any intervention. Participants: 30 adults (60- 75 years old) who lived in Arak and didn't have any of these conditions: geriatric patients with orthopedic disease in the last 5 years, diabetes, Alzheimer's, Parkinson's, cancer or visually impaired, heart problems limiting activity, The use of assistive devices (such as canes and walkers), weakness, fainting and dizziness, subjects with vestibular disorders, subjects with head injuries, people who were not able to perform the exercise protocol and procedures. Intervention: corrective exercise program was prescribed to The subjects in exercise group in 8 week (3 sessions a week). Main outcome measures: Time up and go (TUG), turn 180 test, flexicurve ruler, Berg balance scale were used in pre and post-test for evaluation of mobility, postural stability, kyphosis degree and balance. The number of falls and fear of falling were also recorded.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2014090319024N1**

Registration date: **2016-01-10, 1394/10/20**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2016-01-10, 1394/10/20

Registrant information

Name

Fahime Mahmoudi

Name of organization / entity

Arak University

Country

Iran (Islamic Republic of)

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+98 71 5383 0850

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f-mahmoudi@arshad.araku.ac.ir

Recruitment status

Recruitment complete

Funding source

Investigator

Expected recruitment start date

2014-01-21, 1392/11/01

Expected recruitment end date

2014-06-20, 1393/03/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of corrective exercises on balance in hyperkyphotic elderly women

Public title

The effect of corrective exercises on balance in hyperkyphotic elderly women

Purpose

Treatment

Inclusion/Exclusion criteria

Major exclusion criteria: geriatric patients with orthopedic disease in the last 5 years; diabetes; Alzheimer's; Parkinson's; cancer; visually impaired; heart problems limiting activity; The use of assistive devices (such as canes and walkers); weakness; fainting; dizziness; subjects with vestibular disorders; subjects with head injuries; people who were not able to perform the exercise protocol and procedures. Major inclusion criteria: elderly women (60- 75 years old) who lived in Iran, Arak.

Age

From **60 years** old to **75 years** old

Gender

Female

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Arak University of Medical Sciences

Street address

Arak University of Medical Sciences, Sardasht, Arak, Iran

City

Arak

Postal code

Approval date

2014-02-24, 1392/12/05

Ethics committee reference number

92-159-19

Health conditions studied

1

Description of health condition studied

Balance in hyperkyphotic elderly women

ICD-10 code

M40.0

ICD-10 code description

Postural kyphosis

Primary outcomes

1

Description

Mobility

Timepoint

Pre and post test

Method of measurement

Time Up and Go Test

2

Description

Postural Stability

Timepoint

Pre and post test

Method of measurement

Turn 180 Test

3

Description

Balance

Timepoint

Pre and post test

Method of measurement

Berg Balance Scale

Secondary outcomes

1

Description

Kyphosis Degree

Timepoint

Pre and post test

Method of measurement

Flexicurve ruler

Intervention groups

1

Description

The subjects in exercise group participated in an 8 week (3 sessions a week) corrective exercise program.

Category

Treatment - Other

2

Description

The control group didn't participate in any intervention.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Jahandideh Daily Geriatric Rehabilitation Center

Full name of responsible person

Jahan ban

Street address

Jahandideh Daily Geriatric Rehabilitation Center,
Meisam street, Shahid Beheshti street, Arak, Iran

City

Arak

Arak University, Shareaati street, Arak, Iran

City

Arak

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Web page address

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research, Arak University

Full name of responsible person

Doctor Alireza Fazlaali

Street address

Vice chancellor for research, Arak University, Oloum
Alley, Shariati Square, Arak, Iran

City

Arak

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Vice chancellor for research, Arak University

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

empty

Person responsible for general inquiries

Contact**Name of organization / entity**

Arak University

Full name of responsible person

Fahime Mahmoudi

Position

M.Sc of Physical Training and Sport Sciences

Other areas of specialty/work**Street address**

Person responsible for scientific inquiries

Contact**Name of organization / entity**

Arak University

Full name of responsible person

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Position

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Web page address

Person responsible for updating data

Contact

Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty