

Clinical Trial Protocol

Iranian Registry of Clinical Trials

23 Feb 2026

Comparison of the effect of core stability training and dynamic neuromuscular stabilization exercise (DNS) on core area endurance, balance, fear of falling and quality of life in elderly women

Protocol summary

Study aim

Comparison of the effect of core stability training and dynamic neuromuscular stabilization exercise (DNS) on core area endurance, balance, fear of falling and quality of life in elderly women

Design

The clinical trial has two experimental groups and a control group, with parallel and random groups. The Roll of dice method was used for randomization.

Settings and conduct

The present study is a quasi-experimental research with a pre-test - post-test design. 36 elderly women randomly divided into two experimental and one control groups. Core area endurance, balance, fear of falling and quality of life are measured before and after exercises. This study is performed in Shiraz sanatoriums.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Elderly; women; aged 55 to 65 years;
Exclusion criteria: Inability to perform exercises, Lack of balance disorders, No history of falls

Intervention groups

The first intervention group includes elderly women who receive central stability exercise intervention. The second intervention group includes elderly women who receive dynamic neuromuscular stabilization (DNS) intervention. The control group included elderly women who did not receive any intervention.

Main outcome variables

Core area endurance, Balance, Fear of falling, Quality of life

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200107046035N8**

Registration date: **2022-03-29, 1401/01/09**

Registration timing: **prospective**

Last update: **2022-03-29, 1401/01/09**

Update count: **0**

Registration date

2022-03-29, 1401/01/09

Registrant information

Name

Hossein Shahrokhi

Name of organization / entity

Hakim Sabzevari University

Country

Iran (Islamic Republic of)

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+98 51 4401 2756

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h.shahrokhi@hsu.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-04-04, 1401/01/15

Expected recruitment end date

2022-04-19, 1401/01/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of the effect of core stability training and dynamic neuromuscular stabilization exercise (DNS) on core area endurance, balance, fear of falling and quality

of life in elderly women

Public title

The effect of core stability training and dynamic neuromuscular stabilization exercise (DNS) on core area endurance, balance, fear of falling and quality of life in elderly women

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Female gender Aged 55 to 65 years

Exclusion criteria:

Inability to perform exercises Lack of balance disorders
No history of falls

Age

From **55 years** old to **65 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **36**

Randomization (investigator's opinion)

Randomized

Randomization description

A simple randomization method was used to assign individuals to three groups. In this method, the Roll of a dice method was used to create a random sequence. In this method, the numbers 1 and 2 were considered for the first group, the numbers 3 and 4 for the second group, and the numbers 5 and 6 for the third group. Then, in order not to determine which group the individuals will be assigned to before dividing them into three groups, or in other words, allocation concealment, the central randomization method was used.

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

Sport sciences research institute

Street address

No. 3, 5th Alley, Miremad Street, Motahhari Street,
Tehran, Iran.

City

Tehran

Province

Tehran

Postal code

1587958711

Approval date

2022-01-19, 1400/10/29

Ethics committee reference number

IR.SSRC.REC.1400.123

Health conditions studied

1

Description of health condition studied

Elderly

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Core area endurance

Timepoint

At the beginning of the study (before the start of the intervention) and after 6 weeks of intervention

Method of measurement

Trunk flexion and forward and sideways plank tests

2

Description

Balance

Timepoint

At the beginning of the study (before the start of the intervention) and after 6 weeks of intervention

Method of measurement

Sharpened Romberg test and Get Up and Go test

3

Description

Fear of falling

Timepoint

At the beginning of the study (before the start of the intervention) and after 6 weeks of intervention

Method of measurement

Fall Efficacy Scale

4

Description

Quality of life

Timepoint

At the beginning of the study (before the start of the intervention) and after 6 weeks of intervention

Method of measurement

WHO Quality of Life Questionnaire

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Core stability training, for 8 weeks, 3 sessions per week, 2 hour per session

Category

Treatment - Other

2

Description

Intervention group: Dynamic neuromuscular stabilization training, for 8 weeks, 3 sessions per week, 2 hour per session

Category

Treatment - Other

3

Description

Control group: Without any training and just doing normal daily activities

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Shafagh University

Full name of responsible person

Elham Moeini

Street address

20th Mordab Ave, Nashtaroud

City

Tonekabon

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Qazvin

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4683165363

Phone

+98 11 5426 6957

Email

eli1400140014001400@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Shafagh University

Full name of responsible person

Mohammad Fallahmohamadi

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4683165363

Phone

+98 11 5426 6957

Email

info@shafagh.ac.ir

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Shafagh University

Proportion provided by this source

10

Public or private sector

Private

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

Hakim Sabzevari University

Full name of responsible person

Hossein Shahrokhi

Position

Assistant Professor

Latest degree

Ph.D.

Other areas of specialty/work

Corrective Exercise

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Hakim Sabzevari University - Tohidshahr - Sabzevar

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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

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

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

All potential data can be shared after people have not been identified

When the data will become available and for how long

Start the access period one year after printing the results

To whom data/document is available

Data will be available to academic and scientific researchers

Under which criteria data/document could be used

Any kind of functional analysis on the submitted data is allowed

From where data/document is obtainable

by Email: h.shahrokhi@hsu.ac.ir

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

by Email: h.shahrokhi@hsu.ac.ir and the reason for using the documents

Comments