

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

The Comparison of the effect of 8 weeks of multi component training and Comprehensive corrective exercise program on balance and posture and predicting the risk of falls in elderly with upper cross syndrome

Protocol summary

Study aim

To compare the effect of eight weeks of combined multi-component exercises and exercises of a comprehensive corrective program on balance and postural prediction of the risk of falls in the elderly with the upper crossed syndrome.

Design

A clinical trial with a control group, parallel groups, single-blind, randomized, conducted on 30 persons. Random numbers table is used for randomization

Settings and conduct

30 elderly people with upper cross syndrome and qualified to enter the research are randomly divided into three groups of multi-component exercises and comprehensive program exercises and a control group. All measurements will be done at the day care center for the elderly in Ashkazar.

Participants/Inclusion and exclusion criteria

The elderly who are 60 calendar years or older, having upper crossed syndrome with the criteria (head forward angle more than 46 degrees, rounded shoulder angle more than 52 degrees and kyphosis more than 42 degrees), not having muscle problems, whether hereditary or acquired, will be included.

Intervention groups

One of the two intervention groups will participate in partial body exercises and the other group will participate in comprehensive exercises for 8 weeks and three sessions per week and each session will be 60 minutes. These exercises will be done with the aim of improving balance and dual-task balance (along with cognitive exercises) and posture and predicting the risk of falls in the elderly. Also, the control group is asked to walk for 40 minutes at a desired speed after warming up for 10 minutes and cool down again with 10 minutes of stretching exercises.

Main outcome variables

"Dynamic equilibrium, natural angles including craniovertebral, kyphosis, and shoulder angles, and risk of falling

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20180626040244N4**

Registration date: **2023-06-20, 1402/03/30**

Registration timing: **prospective**

Last update: **2023-06-20, 1402/03/30**

Update count: **0**

Registration date

2023-06-20, 1402/03/30

Registrant information

Name

Rahman Sheikhhoseini

Name of organization / entity

Allameh Tabataba'i University

Country

Iran (Islamic Republic of)

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+98 21 4839 4134

Email address

rahmanhoseini@atu.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-06-21, 1402/03/31

Expected recruitment end date

2023-09-22, 1402/06/31

Actual recruitment start date

empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
The Comparison of the effect of 8 weeks of multi component training and Comprehensive corrective exercise program on balance and posture and predicting the risk of falls in elderly with upper cross syndrome

Public title
The effect of corrective exercise on balance and posture and predicting the risk of falls in elderly

Purpose
Health service research

Inclusion/Exclusion criteria
Inclusion criteria:
The elderly who are 60 calendar years or older Having upper crossed syndrome with the criteria (head forward angle more than 46 degrees, rounded shoulder angle more than 52 degrees and kyphosis more than 42 degrees) Not having cognitive problems measured by the Persian MMSE test
Exclusion criteria:
History of balance disorders such as disorders related to vision, inner ear, and vestibular and sensory systems History of surgery in the lower limbs, pelvis, back Presence of postural abnormalities such as the lower limbs, spine and soles of the feet Having a history of participating in the program Rehabilitation in the last six months Not participating in two consecutive training session

Age
From **60 years** old to **80 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **30**

Randomization (investigator's opinion)
Randomized

Randomization description
Randomization will be done as simple method with card. The type of intervention will be put in sealed envelopes. Individuals are listed in order of attendance. After including in the study, the envelopes will shuffled and each person is asked to select an envelope. The subjects will be asked to select one envelope. According to the predicted sample size, the number of envelope will be provided. Therefore, any selected envelope will not return to randomization sequence. This type of randomization can result to have the same number of individuals in both groups

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
Committee of ethics in research of Allameh Tabataba'i University
Street address
Dehkade Olympic
City
Tehran
Province
Tehran
Postal code
1485743411

Approval date
2023-01-25, 1401/11/05

Ethics committee reference number
IR.ATU.REC.1401.083

Health conditions studied

1

Description of health condition studied
Upper crossed syndrome

ICD-10 code
R29.3

ICD-10 code description
Abnormal posture

2

Description of health condition studied
Falling

ICD-10 code
R29.6

ICD-10 code description
Repeated falls

Primary outcomes

1

Description
Dynamic Balance

Timepoint
Before and after prescribing exercise protocols

Method of measurement
Foltron Advanced Scale and Timed Up & Go Scale

2

Description

Postural measurements (head forward angle, shoulder round angle, thoracic kyphosis angle)

Timepoint

Before and after prescribing exercise protocols

Method of measurement

Photogrametry

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Intervention group 1, multi-component exercises including: walking, shoulder abduction exercises, abdominal exercises and straight leg raising, hip abduction exercises, knee straightening exercises, dorsiflexion and plantar flexion exercises, sit-up exercises, as well as triceps-sternum muscle stretching - pectoral, scalene, pectoral, quadriceps, and triceps surae. Standing with feet together, standing with open feet, standing with one foot slightly in front of the other. Standing with one foot fully in front of the other. Turning around, walking on the stairs and passing the obstacle, as well as performing dual tasks during balance exercises, where a new type of cognitive exercise is performed in each session, which will be 3 sessions a week and each session will be 60 minutes.

Category

Rehabilitation

2

Description

Intervention group: Intervention group 2 exercises of the comprehensive program including: arm abduction, external rotation to the side, bending forward, standing oblique bending and military press, external rotation to the side with dumbbells, bending forward with dumbbells, standing diagonal bending with Dumbbell is a standing external rotation with a dumbbell. , standing diagonal bending with Terra Band, abduction while sitting on the exercise ball, lying exercises and abduction while standing on the balance board, which will be 60 minutes three days a week.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Faculty of physical education and sport sciences

Full name of responsible person

Rahman Sheikhhoseini

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Allameh Tabataba'i

Full name of responsible person

Ehsan Zareian

Street address

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Grant name

Grant code / Reference number

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

Yes

Title of funding source

Allameh Tabataba'i

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

Allameh Tabataba'i University

Full name of responsible person

Rahman Sheikhhoseini

Position

Assistant professor

Latest degree

Ph.D.

Other areas of specialty/work

Physiotherapy

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Person responsible for scientific inquiries**Contact****Name of organization / entity**

Allameh Tabataba'i University

Full name of responsible person

Rahman Sheikhhoseini

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Assistant professor

Latest degree

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Other areas of specialty/work

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Person responsible for updating data**Contact****Name of organization / entity**

Allameh Tabataba'i University

Full name of responsible person

Rahman Sheikhhoseini

Position

Assistant professor

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

Not applicable

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

All primary and secondary data will be share in the future after making them unidentifiable

When the data will become available and for how long

Data will be available immediately after publishing the study results

To whom data/document is available

All academic people and researchers

Under which criteria data/document could be used

Data will be share for systematic review and meta-analyses studies, or for any researchers who need for our data for research proposes

From where data/document is obtainable

Data request can be sent to following Emails: 1. rahman.pt82@gmail.com, 2. hpiry63@gmail.com, and 3. rahmanhoseini@atu.ac.ir

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

All requests will be answered immediately after receiving Emails, for maximum of 1 week

Comments