Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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

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Rahman Sheikhhoseini
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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 envelops 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

Comittee of ethics in research of Allameh Tabataba'i University

Street address

Dehkade Olympic

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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
Photogrametery

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 physiscal educationa and sport scienecs
Full name of responsible person
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Sponsors / Funding sources

1

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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
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Assistant professor

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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
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