Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The effect of online respiratory and corrective exercises on posture, physical ability, respiratory function, and quality of life in the elderly with thoracic hyper-kyphosis

Protocol summary

Study aim

Ĭn this study we sought to evaluate the effectiveness of 6 weeks of online corrective exercises on posture, disability, respiratory function, and quality of life in the elderly with thoracic hyperkyphosis

Design

A clinical trial with the control group, With parallel groups, single-blinded, randomized

Settings and conduct

34 elderly adults with thoracic hyperkyphosis will recruit and randomly assign to two control and experimental groups. All measurements will perform in the biomechanics laboratory of the faculty of physical education at Allame Tabataba'i University.

Participants/Inclusion and exclusion criteria

Adults aged ≥60 with TK angle more than 40◦, without participation in any regular exercise routines were included in this study. The exclusion criteria were the history of any neuromuscular diseases, presence of back pain, osteoarthritis, falls while walking, cancers and chemotherapy, long-term use of corticosteroids medication,

Intervention groups

The experimental group will undergo the corrective exercises protocols with online supervision for 6 weeks (3 sessions per week ×60 minutes), which will be augmented with breathing practices. Exercises will be used as part of the intervention to address issues with spinal extensor muscle weakness, inadequate recruitment and activation of the muscles, limited spinal mobility, and improper postural alignment. The control group will be asked to perform 10 minutes of general warm-up exercises and general stretching exercises followed by 40 minutes of self-selected walking speed.

Main outcome variables

Quality of life (SF 36) Postural measurements (Kyphosis angle, forward head posture angle, shoulder angle) Disability Index (Barthel Index) Breathing pattern

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20180626040244N3**
Registration date: **2022-10-08, 1401/07/16**
Registration timing: **prospective**

Last update: **2022-10-08, 1401/07/16**
Update count: **0**

Registration date

2022-10-08, 1401/07/16

Registrant information

Name

Rahman Sheikhhoseini

Name of organization / entity

Allameh Tabataba'i University

Country

Iran (Islamic Republic of)

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rahmanhoseini@atu.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-10-23, 1401/08/01

Expected recruitment end date

2023-01-10, 1401/10/20

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of online respiratory and corrective exercises on posture, physical ability, respiratory function, and quality of life in the elderly with thoracic hyper-kyphosis

Public title

The effect of online rcorrective exercises in the elderly with thoracic hyper-kyphosis: A clinical trial study

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

Adults aged ≥60 Thoracic kyphosis angle more than 40◦ Without participation in any regular exercise routines

Exclusion criteria:

History of any neuromuscular diseases Presence of back pain History of osteoarthritis History of falls while walking History of cancers and chemotherapy History of long-term use of corticosteroids medication Age more than 75 years

Age

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

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **34**

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

Allameh Tabataba'i University

Street address

Chogan street

City

Tehran

Province

Tehran

Postal code

1485743411

Approval date

2021-05-22, 1400/03/01

Ethics committee reference number

IR.ATU.REC.1400.012

Health conditions studied

1

Description of health condition studied

Thoracic hyper kyphosis

ICD-10 code

M40.03

ICD-10 code description

Postural kyphosis, cervicothoracic region

Primary outcomes

1

Description

Quality of life

Timepoint

Before the study starts and after 6 weeks of intervention

Method of measurement

SF-36 questionnaire

2

Description

Posture

Timepoint

Before the study starts and after 6 weeks of intervention

Method of measurement

photogrametric method

3

Description

Physical ability

Timepoint

Before the study starts and after 6 weeks of intervention

Method of measurement

Barthel index

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: online respiratory and corrective exercises including stretching and strengthening, for 6 weeks, 3 sessions per week, every session last for 60 minuets,
Category
Prevention

2

Description
Control group: general walking for 60 minuets, 3 sessions per week with self-selected speed
Category
Prevention

Recruitment centers

1

Recruitment center
Name of recruitment center
Allameh Tabataba'i University
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 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
Allameh Tabataba'i University
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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
There is no further information
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