

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

The effect of 12-week corrective exercises on the upper quarter posture in females with upper crossed syndrome

Protocol summary

Study aim

This study aimed to investigate the effect of 12-week corrective exercises on the forward head, forward shoulder and kyphosis angles in females with Upper crossed syndrome

Design

Randomized control trial with control group, with parallel groups, without blindness

Settings and conduct

Forty women with Upper crossed syndrome will recruit and randomly assign in two control and experimental groups. All measurements will perform in biomechanics laboratory of faculty of physical education at Allameh Tabataba'i University.

Participants/Inclusion and exclusion criteria

The inclusionary criteria are female gender, forward shoulder angle more than 52°, forward head angle more than 46°, and kyphosis angle more than 42°. The exclusionary criteria are history of cervical or thoracic spine surgery, observing significant scoliosis, torticollis, and cervical spine instability based on the New York Postural Assessment Tool. Besides, the participants were excluded if they were involved in other training programs and did not participate in training sessions regularly for last 1 years.

Intervention groups

A corrective exercise program will be implemented for 12 weeks. Each training session will beginning with ten minutes warm-up and ended with ten minutes cool-down. The self-myofascial release technique will execute in the first phase of the corrective exercise continuum to inhibit and release latissimus dorsi, upper trapezius, sternocleidomastoid, levator scapula muscles, and thoracic spine. Stretching exercises will prescribe for these muscles, too. Isolated strengthening exercises including quadruped ball chin tucks, resisted cervical posterior translation, floor prone scaption, and ball combo I. In the last phase, integrated dynamic movements will perform.

Main outcome variables

forward shoulder angle, forward head angle, and kyphosis angle

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20180626040244N2**

Registration date: **2021-04-18, 1400/01/29**

Registration timing: **prospective**

Last update: **2021-04-18, 1400/01/29**

Update count: **0**

Registration date

2021-04-18, 1400/01/29

Registrant information

Name

Rahman Sheikhhoseini

Name of organization / entity

Allameh Tabataba'i University

Country

Iran (Islamic Republic of)

Phone

+98 21 4839 4134

Email address

rahmanhoseini@atu.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-04-30, 1400/02/10

Expected recruitment end date

2021-06-21, 1400/03/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of 12-week corrective exercises on the upper quarter posture in females with upper crossed syndrome

Public title

The effect of corrective exercises on upper crossed syndrome

Purpose

Prevention

Inclusion/Exclusion criteria**Inclusion criteria:**

forward shoulder angle more than 52 degrees forward head angle more than 46 degrees kyphosis angle more than 42 degrees Age between 25-40 years old

Exclusion criteria:

significant scoliosis in the spine presence of torticollis history of thoracic spine surgery history of cervical spine surgery

Age

From **25 years** old to **40 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **40**

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 be 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 envelopes 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

Not available

Secondary Ids

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Islamic Azad University, Tehran Science and Research Branch

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Hesarak Shohada Bulevered

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Province

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Postal code

1477893855

Approval date

2021-02-14, 1399/11/26

Ethics committee reference number

IR.IAU.SRB.REC.1399.167

Health conditions studied**1****Description of health condition studied**

Upper crossed syndrome

ICD-10 code

R29.3

ICD-10 code description

Abnormal posture

Primary outcomes**1****Description**

Forward head angle more than 46°

Timepoint

Before starting the study and after 12 weeks of prescribing corrective exercises

Method of measurement

The photogrammetric method by calculating angles from a captured pictures

Secondary outcomes**1****Description**

Forward shoulder angle more than 52 degrees

Timepoint

At study start and end of 12 weeks of corrective exercises

Method of measurement

The photogrammetric method by calculating angles from a captured pictures

2**Description**

Kyphosis angle more than 42°

Timepoint

At study start and end of 12 weeks of corrective exercises

Method of measurement

With flexible ruler with 70 centimeters of length

Intervention groups

1

Description

Intervention group: 12 weeks of corrective exercises, 3 sessions per week, 45 minutes for each session. Number (adding one set) and time (adding 5 seconds) of doing sets increase progressively each week. to prevent from fatigue, allocated 30 seconds rest between each set

Category

Prevention

2

Description

Control group: No intervention

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Allameh Tabataba'i University

Full name of responsible person

Rahman Sheikhhoseini

Street address

Chogan street

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1485743411

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rahmanhoseini@atu.ac.ir

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Allameh Tabataba'i University

Full name of responsible person

Hashem Piri

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hpiry63@gmail.com

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

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

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Position

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Other areas of specialty/work

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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

Undecided - It is not yet known if there will be 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