Clinical Trial Protocol
Iranian Registry of Clinical Trials

11 Sep 2026

The Effect of Selected Corrective Exercises on Postural Indices in Myopic Individuals with Upper Crossed Syndrome

Protocol summary

Study aim

To determine the effect of selected corrective exercises on forward head angle and rounded shoulder degree in myopic individuals.

Design

This study is a quasi-experimental trial with two parallel groups (experimental and control) using simple randomization. The sample size was set at 32 participants (16 in each group). The experimental group undergoes an 8-week selected corrective exercise program, while the control group receives no intervention. Measurements are conducted in the pre-test and post-test phases.

Settings and conduct

This study is conducted at Kashan University in a facility suitable for corrective exercises. After selecting participants based on inclusion and exclusion criteria, postural indices—including forward head angle and rounded shoulder degree—are measured in both pre-test and post-test phases, and the changes between the two groups are compared.

Participants/Inclusion and exclusion criteria

Female university students aged 18 to 25 years with myopia and upper crossed syndrome, including forward head and rounded shoulders, confirmed by postural assessments, and having a body mass index (BMI) below 25.

Intervention groups

Participants in the intervention group took part in a selected corrective exercise program aimed at improving postural alignment associated with upper crossed syndrome. The exercises were based on the Corrective Exercise Model of the National Academy of Sports Medicine (NASM) and included inhibitory, stretching, strengthening, and integrative phases.

Main outcome variables

Forward head angle; Rounded shoulder degree

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20250930067436N1**
Registration date: **2026-01-25, 1404/11/05**
Registration timing: **prospective**

Last update: **2026-01-25, 1404/11/05**
Update count: **0**

Registration date

2026-01-25, 1404/11/05

Registrant information

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Name of organization / entity
The University of Toloemehr Qom
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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2026-04-04, 1405/01/15

Expected recruitment end date

2026-05-05, 1405/02/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title
The Effect of Selected Corrective Exercises on Postural Indices in Myopic Individuals with Upper Crossed Syndrome

Public title
Selected Corrective Exercises and Their Impact on Posture

Purpose
Supportive

Inclusion/Exclusion criteria

Inclusion criteria:
Having myopia (nearsightedness) confirmed by an optometrist The presence of upper crossed syndrome symptoms, including forward head and rounded shoulders, confirmed by postural assessments Having the ability to perform corrective exercises Having a body mass index (BMI) below 25 Having a written consent form to participate in the study and full cooperation during the assessment and exercise phases Female students Age between 18 and 25 years

Exclusion criteria:
Having prior experience participating in related corrective exercise programs during the past six months Presence of musculoskeletal injuries, especially in the neck, shoulder, and spinal regions Having balance problems or severe uncorrected visual impairments Having progressive neuromuscular or musculoskeletal disorders Having undergone surgery in the head, neck, shoulder, or spinal region within the past year Starting a similar exercise program or undergoing physiotherapy outside the scope of the study

Age
From **18 years** old to **25 years** old

Gender
Female

Phase
N/A

Groups that have been masked

- Participant
- Outcome assessor

Sample size
Target sample size: **32**

Randomization (investigator's opinion)
Randomized

Randomization description
To allocate participants to the experimental and control groups, simple randomization with an individual unit was used. Each participant was assigned a unique identification number, and the random sequence was generated using SPSS software. The first 16 numbers were assigned to the experimental group, and the next 16 numbers to the control group. To prevent bias, the allocation sequence was placed in sealed envelopes, so that neither the researcher nor the participants were aware of the group assignment until the time of allocation. Stratified randomization was not used in this study because the baseline characteristics of the participants were homogeneous.

Blinding (investigator's opinion)
Double blinded

Blinding description
This study is a randomized controlled clinical trial with a pretest–posttest design. Eligible participants were enrolled after obtaining written informed consent and were randomly allocated to the intervention and control groups. Due to the nature of the exercise-based intervention, full blinding was not feasible. However, the outcome assessor was blinded to group allocation, and participants were not informed about the study hypothesis or their group assignment. All participants received a full explanation of the study objectives and procedures and provided written informed consent prior to participation.

Placebo
Not used

Assignment
Parallel

Other design features
The distinctive aspect of this study lies in its focus on myopic individuals diagnosed with upper crossed syndrome and the implementation of a selected corrective exercise program designed according to specific postural indicators, namely forward head angle and rounded shoulder degree. Furthermore, to minimize potential participant attrition during the intervention period, the final sample size was increased from 28 to 32 participants.This quasi-experimental design enables a direct comparison of the effects of corrective exercises with a control group and facilitates the evaluation of pre- and post-intervention changes, thereby providing insight into the efficacy of corrective exercises in improving postural alignment among myopic individuals with upper crossed syndrome.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics committee of the Faculaty of Sport and Health Sciences

Street address
Faculty of Physical Education and Sport Sciences, between 15th and 16th St., North Kargar st

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Approval date
2026-01-18, 1404/10/28

Ethics committee reference number
IR.UT.SPORT.REC.1404.221

Health conditions studied

1

Description of health condition studied
Upper Crossed Syndrome
ICD-10 code
ICD-10 code description

Primary outcomes

1

Description
upper Crossed syndrome
Timepoint
Before and after the intervention
Method of measurement
3D motion analysis software

Secondary outcomes

empty

Intervention groups

1

Description
The program includes a combination of stretching, strengthening, and postural correction exercises.
Category
Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Kashan University
Full name of responsible person
Neda kazemi
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
The University of Kashan
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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
The University of Kashan
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
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Full name of responsible person
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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
Undecided - It is not yet known if there will be 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
The shared dataset will include de-identified individual participant data after removal of all direct and indirect identifiers. Data eligible for sharing will comprise key demographic variables, primary and secondary outcome measures, and variables used in the main statistical analyses. Raw data containing identifiable information, complete medical records, or participant contact details will not be shared.

When the data will become available and for how long
Data will be available starting 6 months after publication of the primary study results and will remain accessible for a period of 5 years.

To whom data/document is available
Access may be granted to qualified researchers affiliated with academic institutions, research centers, or recognized scientific organizations. Requests from industry researchers may also be considered upon submission of a scientifically sound research proposal and approval by the relevant review committee.

Under which criteria data/document could be used
The data may be used solely for scientific research purposes, including secondary analyses. Applicants must submit a clear research proposal and sign a data use agreement committing to ethical use and non-attempt of participant re-identification. Commercial use, data redistribution, or any use beyond the approved scope is not permitted.

From where data/document is obtainable
Requests for data access should be submitted by contacting the corresponding investigator of the study via email. If required, requests will be forwarded to the relevant scientific or ethics committee for review.

What processes are involved for a request to access data/document
Upon receipt of a request, the research proposal will be reviewed by the study team. If necessary, the request will be evaluated by the relevant scientific or ethics committee. Following final approval and signing of a data use agreement, the data will be shared through a secure method. This process typically takes 4 to 8 weeks.

Comments