

Clinical Trial Protocol

Iranian Registry of Clinical Trials

30 May 2026

The effect of 8 weeks of rhythmic corrective exercises on scapula angle, thoracic curve, happiness and cardiorespiratory indices of adolescent girls with kyphosis

Protocol summary

2023-09-27, 1402/07/05

Study aim

The effect of 8 weeks of rhythmic corrective exercise (aerobic) on scapula position, back arch angle and lung capacity of teenage girls with kyphosis.

Design

The number of samples is 60 people who are randomly divided into two groups and the training protocol is given in the intervention group.

Settings and conduct

The protocol of corrective exercises that are designed in the form of rhythmic movements (aerobics) are performed in the hall (gym).

Participants/Inclusion and exclusion criteria

girl-age between 10 to 12 years-with kyphosis/Existence of abnormalities except kyphosis-failure to attend practice sessions during the study

Intervention groups

The intervention group receives corrective exercise sessions for a duration of 8 weeks, with three sessions per week. On the other hand, during this period, no intervention is provided to the control group.

Main outcome variables

The main result of the present study is the improvement of kyphosis deformity and lung capacity of girls.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230612058457N1**

Registration date: **2023-09-27, 1402/07/05**

Registration timing: **registered_while_recruiting**

Last update: **2023-09-27, 1402/07/05**

Update count: **0**

Registration date

Registrant information

Name

Mohammad Alimoradi

Name of organization / entity

Shahid Bahonar University

Country

Iran (Islamic Republic of)

Phone

+98 34 2250 1685

Email address

malimoradi@sport.uk.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-08-06, 1402/05/15

Expected recruitment end date

2023-10-07, 1402/07/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of 8 weeks of rhythmic corrective exercises on scapula angle, thoracic curve, happiness and cardiorespiratory indices of adolescent girls with kyphosis

Public title

The effect of 8 weeks of rhythmic corrective exercises on scapula angle, thoracic curve, happiness and cardiorespiratory indices of adolescent girls with kyphosis

Purpose

Other

Inclusion/Exclusion criteria**Inclusion criteria:**

Their age should be between 10 and 12 years The back arch angle should be more than 45 degrees

Exclusion criteria:

Individuals who have structural hyper-kyphosis
Individuals who have respiratory problem
Individuals who have undergone surgery on their spine or upper extremities. People who have cardiac and pulmonary issues and may have difficulty with aerobic exercises.

Age

From **10 years** old to **12 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **60**

Randomization (investigator's opinion)

Randomized

Randomization description

First, a general research sample was selected based on the inclusion and exclusion criteria. Then, individuals were randomly assigned to two groups, experimental and control, using simple randomization and the random allocation rule. The website Randomizer.org was used for this purpose.

Blinding (investigator's opinion)

Not blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features

In the study, which includes two groups, one group receives an intervention while the other group does not receive any intervention.

Secondary Ids

empty

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

Ethics committee of Bahonar university

Street address

Unit 6, Yekta Complex, 12th Alley, Fathali Shahi Street.

City

Kerman

Province

Kerman

Postal code

7614816961

Approval date

2021-05-07, 1400/02/17

Ethics committee reference number

IR.UK.REC.1400.002

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

Kyphosis

ICD-10 code

M40.0

ICD-10 code description

Postural kyphosis

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

back arch angle-lung capacity

Timepoint

8 weeks

Method of measurement

axford happines questionnaire, flexible ruler, tape measure, gas analyzer system

Secondary outcomes

empty

Intervention groups**1****Description**

Intervention group: Receives structured corrective exercises for a duration of eight weeks, with three sessions per week. Each session lasts for 20 to 25 minutes, and participants are required to perform the exercises outlined in the intervention program.

Category

Rehabilitation

2**Description**

Control group: Did not receive any intervention.

Category

Rehabilitation

Recruitment centers**1****Recruitment center****Name of recruitment center**

The University of Shahid Bahonar

Full name of responsible person

Mohammad Alimoradi

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Unit 6, Yekta Complex, 12th Alley, Fathali Shahi Street.

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Sponsors / Funding sources

1

Sponsor**Name of organization / entity**

The university of Shahid Bahonar

Full name of responsible person

Alireza Saidi

Street address

Office of Research and Technology, Shahid Bahonar University of Kerman, Pajoohesh Square, Imam Khomeini Highway

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saidi@uk.ac.ir

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

The university of Shahid Bahonar

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**

The university of Shahid Bahonar

Full name of responsible person

Mohammad Alimoradi

Position

Master's degree

Latest degree

Master

Other areas of specialty/work

Pathology

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Person responsible for scientific inquiries

Contact**Name of organization / entity**

The university of Shahid Bahonar

Full name of responsible person

Mohammad Alimoradi

Position

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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**

The university of Shahid Bahonar

Full name of responsible person

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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

According to the laws of ethics and protecting the privacy of individuals, access to this data is not possible.

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

Not applicable

Analytic Code

Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary

Not applicable

Title and more details about the data/document

only part of the information, including the main results, will be shared after de-identifying the participants.

When the data will become available and for how long

the data access period will start immediately after the results are printed.

To whom data/document is available

the data will be available for researchers, organizations and departments related to adolescent girls and for magazines.

Under which criteria data/document could be used

To help scientific research and advance executive goals with the approach of reducing the angle of the back arch and increasing the lung development of girls.

From where data/document is obtainable

malimoradi@sport.uk.ac.ir

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

Requests for access to data will be answered within a week

Comments