

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jul 2026

The effect of corrective micro-exercise on kyphosis arch of mail students with hyper kyphosis, a randomized controlled trial

Protocol summary

Study aim

The purpose of the present study is to investigate musculoskeletal and motor disorders in children and use corrective micro-exercises to improve them and measure the effectiveness of these exercises.

Design

A randomized, open-label, parallel-group clinical trial with an exercise and control group on 38 patients.

Settings and conduct

This research is conducted on children's musculoskeletal health and its improvement. The research location is inside the school and the implementation protocol is as follows: for 8 weeks and three exercises per week, exercises will be performed inside the classroom for 10 minutes at the end of the class.

Participants/Inclusion and exclusion criteria

Inclusion criteria: The subjects must be between 9 and 12 years old. The subjects must be elementary school students. The subjects must be students in Tehran. The subjects must have hyperkyphosis. Exclusion criteria: The subjects must have disability in the upper or lower extremities. The subjects must have a history of spinal surgery.

Intervention groups

The present study will have a two-group design including a control group and a micro-correctional training group with a pre-test and post-test process. The training group will perform the training protocol for 8 weeks, 3 days a week, each session lasting 10 minutes. The control group will not receive any intervention.

Main outcome variables

The final result of this project will help specialists, considering the decrease in children's activity levels, to reduce children's levels of inactivity using micro exercises and work towards improving children's physical condition.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20251110067945N1**

Registration date: **2026-05-09, 1405/02/19**

Registration timing: **prospective**

Last update: **2026-05-09, 1405/02/19**

Update count: **0**

Registration date

2026-05-09, 1405/02/19

Registrant information

Name

Fatemeh Pirataei

Name of organization / entity

Shahid beheshti university Faculty sports and health sciences

Country

Iran (Islamic Republic of)

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+98 21 2990 5847

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2026-05-10, 1405/02/20

Expected recruitment end date

2026-07-15, 1405/04/24

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of corrective micro-exercise on kyphosis arch of mail students with hyper kyphosis, a randomized controlled trial

Public title

the effect of corrective micro-exercise on kyphosis arch of mail students with hyper kyphosis

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

Subjects should be between the ages of 9 and 12 years old. Subjects should not have disabilities in the upper or lower limbs The subjects are elementary school students. The subjects were students from Tehran. Subjects have hyperkyphosis.

Exclusion criteria:

Age

From **9 years** old to **12 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **38**

Randomization (investigator's opinion)

Randomized

Randomization description

Individuals who met the inclusion criteria were randomly assigned to one of two micro-corrective exercises groups and a control group. Randomization was performed using a cluster randomization method.

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

Ethics Committee of Shahid Beheshti University

Street address

Evin, Shahid Shahriari Square, Shahid Beheshti University, Presidency Building, Research Vice-Chancellor, Third Floor, Office of the Ethics in Biological Research Working Group

City

Tehran

Province

Tehran

Postal code

1658953571

Approval date

2025-09-19, 1404/06/28

Ethics committee reference number

IR.SBU.REC.1404.174

Health conditions studied

1

Description of health condition studied

Kyphosis condition

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

The rate of improvement in kyphosis

Timepoint

Kyphosis arch measurement at the beginning of the study and after 8 weeks of training.

Method of measurement

Spinal Mouse Device

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: This group will perform micro-corrective exercises in the classroom three days a week, each session lasting ten minutes.

Category

Rehabilitation

2

Description

Control group: This group will not receive any intervention.

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

دبستان پسرانه فرمان

Full name of responsible person

Nastaran darabi

Street address

Yazdankhah Street, Farnam Elementary School

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Latest degree

Master

Other areas of specialty/work

Sports pathology and corrective exercises

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Sponsors / Funding sources

1

Sponsor**Name of organization / entity**

Shahid Beheshti University

Full name of responsible person

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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

Shahid Beheshti University

Proportion provided by this source

100

Public or private sector

Private

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

Persons

Person responsible for general inquiries

Contact**Name of organization / entity**

Shahid Beheshti University

Full name of responsible person

fatemeh pirataei

Position

student

Person responsible for scientific inquiries

Contact**Name of organization / entity**

Shahid Beheshti University

Full name of responsible person

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Position

student

Latest degree

Master

Other areas of specialty/work

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Person responsible for updating data

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Position

student

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

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

Study Protocol

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

Statistical Analysis Plan

Not applicable

Informed Consent Form

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

Clinical Study Report

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

Analytic Code

Not applicable

Data Dictionary

Not applicable