Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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)

Phone

+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 فرنام

Full name of responsible person
Nastaran darabi

Street address
Yazdankhah Street, Farnam Elementary School
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Shahid Beheshti University
Full name of responsible person
fatemeh pirataei
Street address
No. 5, Beigi Alley, Hadi Saei Square
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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
Latest degree
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Other areas of specialty/work
Sports pathology and corrective exercises
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Person responsible for updating data

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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