

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jul 2026

The Effect of 8 weeks of selected corrective exercises on first grade high-school boy students with Forward Head Posture and determination of Minimally Clinically Important Difference (MCID) in related variables

Protocol summary

Study aim

To investigate the effects of selective corrective exercises (SCEs) on the craniovertebral angle (CVA) and shoulder angle (SA) in boy students with forward head posture (FHP), and to establish MCID for these angles

Design

This randomized study includes two parallel experimental and control groups, single-blind, 100 male students with FHP, block randomized (numbers in each group)

Settings and conduct

This study is about examining the effect of corrective exercises on the FHP and obtaining MCID values for the two mentioned angles. The study is done after receiving written consent from parents and explaining the research process channel for 8 weeks and 3 sessions per week on selected students and the clinical recipient test in this study is blind

Participants/Inclusion and exclusion criteria

Inclusion criteria: Craniovertebral angle is less than 50 degrees; Male students; The second elementary school. Exclusion criteria: History of heart disease or other diseases that can interfere with research; Scoliosis according to the New York standard; First to structural hyper kyphosis; History of severe visual impairment or balance problems; History of any prohibition of physical activity; Not participating in professional and regular sports programs; Report of chronic pain in the neck or pelvic lumbar region.

Intervention groups

The control group includes male students who have a FHP but do not perform the corrective exercises selected during 8 weeks of research and do not use any other treatment method. The intervention group includes selected male students with FHP who performed selected corrective exercises for 8 weeks. After 8 weeks, both groups are re-examined and the data are recorded.

Main outcome variables

The values of the MCID for the craniovertebral angle (CVA) and shoulder angle (SA) and Investigate the extent of changes in these two angles

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200927048851N1**

Registration date: **2020-11-08, 1399/08/18**

Registration timing: **registered_while_recruiting**

Last update: **2020-11-08, 1399/08/18**

Update count: **0**

Registration date

2020-11-08, 1399/08/18

Registrant information

Name

Zahra Heydari

Name of organization / entity

Allame tabatabaee university of tehran

Country

Iran (Islamic Republic of)

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Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-10-21, 1399/07/30

Expected recruitment end date

2020-12-21, 1399/10/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The Effect of 8 weeks of selected corrective exercises on first grade high-school boy students with Forward Head Posture and determination of Minimally Clinically Important Difference (MCID) in related variables

Public title

Effect of selected corrective exercises on students with Head Forward Posture and determination of Minimally Clinically Important Difference (MCID)

Purpose

Supportive

Inclusion/Exclusion criteria**Inclusion criteria:**

Cranio Vertebral Angle (CVA) less than 50° boy student elementary school student

Exclusion criteria:

History of heart disease or other illnesses that may interfere with research Scoliosis according to the New York standard Structural hyper kyphosis (lack of correction by performing stretching movements) History of severe visual impairment or balance problems History of any prohibition of physical activity Not participating in professional and regular sports programs Report of chronic pain in the neck or pelvic lumbar region

Age

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

Gender

Male

Phase

N/A

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: **100**

Randomization (investigator's opinion)

Randomized

Randomization description

Randomization will be done using a random number table, which is in the form of numbers 0 to 50 for the control group, numbers 51 to 100 for the group of corrective exercises. The researcher touches one of the numbers and moves in the predetermined direction and records the number and based on them assigns individuals into the relevant groups.

Blinding (investigator's opinion)

Single blinded

Blinding description

In this research, the examiner who performs photographic method is blind. When doing pre-test and post-test and analyzing photos, the person is unaware of this research and while taking photos, only follow the principles of taking photos of students and predetermined distances. They will also apply only the

study inclusion criteria for selecting the desired students.

Placebo

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

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

Ethics committee of the university of social welfare and rehabilitation sciences

Street address

University of social welfare and rehabilitation sciences, Daneshjo boulevard, Avin avenue, Tehran

City

tehran

Province

Tehran

Postal code

1985713834

Approval date

2018-03-05, 1396/12/14

Ethics committee reference number

IR.USWR.REC.1398.181

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

Forward Head Posture (FHP)

ICD-10 code**ICD-10 code description****Primary outcomes****1****Description**

Cranio vertebral angle (CVA) :Inclusion criteria in the study when the craniovertebral angle in male students is less than 50 degrees

Timepoint

At the beginning of the study (before the intervention) and after the end of the intervention

Method of measurement

The intersection of two lines drawn from a line in the direction of the seventh cervical vertebra to the tragus of the ear and the other line in the horizontal direction of the seventh cervical vertebra forms an angle called the cranio vertebral angle. After determining these values in students, they are photographed by photographic method.

2

Description

Cranio Angle (CA)

Timepoint

Angle measurement is at the beginning of the study and after the intervention.

Method of measurement

This angle is used to determine the position of the head on the trunk next to the cranio vertebral angle. This angle is drawn from a horizontal line in the direction of the ear cranial (ear tragus) and a line is drawn from the line connecting the ear cranial and the corner of the eye.

3

Description

Shoulder Angle (ShA)

Timepoint

It is measured at the beginning of the study (before the intervention) and after the intervention

Method of measurement

The shoulder angle is defined for the round shoulder and refers to the increase in the distance between the spine appendage of the vertebrae and the lower angle of the scapula, and increasing this angle causes the shoulder to protrude from the sagittal plate from the lateral view of the body. The angle obtained from the seventh cervical vertebra (C7) and the direction of the head is called the shoulder angle. To obtain this angle, draw a line perpendicular to the seventh cervical vertebra and draw another line from the acromion in the direction of the shoulder and connect it. The angle obtained with the line perpendicular to the seventh cervical vertebra will be considered the shoulder angle.

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Students are given 8 weeks of selected corrective exercises and then the effect of the exercise on the dependent variables is examined. (The selected corrective exercises are confidential) Exercises are given to the students of the intervention group 3 times a week for 40 minutes, and after this period, the data related to the research are recorded before and after the intervention using the photogrammetric method.

Category

Rehabilitation

2

Description

Control group: This group of students does not receive selected corrective exercises or other related treatment and After 8 weeks, the dependent variables are

measured again for comparison with the training group

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Schools needed to find the sample in areas 1

Full name of responsible person

Zahra Heydari

Street address

No. 51, corner of Unit 12, Bijan Boulevard, Shams Abad, Tehran

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1675848120

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Allameh Tabatabai University of Tehran

Full name of responsible person

Rahman Sheikh Hosseini

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Allameh Tabatabai University of Tehran, Faculty of Physical Education and Sport Sciences

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Web page address

<https://atu.ac.ir/>

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

No

Title of funding source

Allameh Tabatabai University of Tehran

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 Tabatabai University of Tehran

Full name of responsible person

Rahman Sheykh Hosseini

Position

Assistant Professor

Latest degree

Ph.D.

Other areas of specialty/work

Physiotherapy

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Other areas of specialty/work

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master student

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Master

Other areas of specialty/work

Injuries and Corrective Exercises

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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

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

Analytic Code

Yes - There is 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 mentioned information will be provided to the
applicant upon written request as well as e-mail after the
article is published in the desired journal.

When the data will become available and for how long

3 months after the publication of the results in the
desired journal

To whom data/document is available

The person in charge of the article and the assistant
professor and the two colleagues mentioned in the
article

Under which criteria data/document could be used

By mentioning sufficient reasons and by referring to the article reference in the applicant's research

From where data/document is obtainable

The mentioned people are published in the article

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

After receiving an official written letter or e-mail from the applicant and after reviewing the reasons, the

information will be provided to the person for at least 1 month. It should be noted that in this study, due to the protection of privacy and security of participating students, we are sorry to send photos taken in the photographometric method by mentioning the personal information of students because this data is confidential. The rest of the information will be emailed to the applicant after review.

Comments