Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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 tabatabae university of tehran
Country
Iran (Islamic Republic of)
Phone
+98 21 2251 1979
Email address
missheidari@gmail.com

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 Verteblal 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 verteblal 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 photographometric 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
City
Tehran
Province
Tehran
Postal code
1675848120
Phone
+98 21 2251 1979
Email
missheidari@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Allameh Tabatabai University of Tehran
Full name of responsible person
Rahman Sheikh Hosseini
Street address
Allameh Tabatabai University of Tehran, Faculty of Physical Education and Sport Sciences
City
Tehran
Province
Tehran
Postal code
1485743411
Phone
+98 21 4839 4134
Fax
+98 21 4839 0000
Email
rahman.pt82@gmail.com
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
Street address
Allameh Tabatabai University of Tehran, Faculty of Physical Education and Sport Sciences
City
Tehran
Province
Tehran
Postal code
1485743411
Phone
+98 21 4839 4134
Fax
+98 21 4839 0000
Email
rahman.pt82@gmail.com

Person responsible for scientific inquiries

Contact
Name of organization / entity
Allameh Tabatabai University of Tehran
Full name of responsible person
Rahman Sheikh Hosseini
Position
Assistant professer
Latest degree
Ph.D.
Other areas of specialty/work
Physiotherapy
Street address
Allameh Tabatabai University of Tehran, Faculty of Physical Education and Sport Sciences
City
tehran
Province
Tehran
Postal code
1485743411
Phone
+98 21 4839 4134
Email
rahman.pt82@gmail.com

Person responsible for updating data

Contact
Name of organization / entity
Allameh Tabatabai University of Tehran
Full name of responsible person
Zahra Heydari
Position
master studant
Latest degree
Master
Other areas of specialty/work
Injuries and Corrective Exercises
Street address
Tehran, Shemans Abad, beginning of Bijan Boulevard, Shahid Malekandeh Alley, No. 51, corner of Unit 12 Alley
City
tehran
Province
Tehran
Postal code
1675848120
Phone
+98 21 2251 1979
Email
missheidari@gmail.com

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