Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

The effect of combined and online protocol ergonomic advice-exercise in comparison with ergonomic advice protocol based on distance learning conditions on forward head deformity and its effect on shoulder and back posture of students during Covid-19 pandemic

Protocol summary

Study aim
The aim is to improve students upper body posture in online learning conditions at home, reduce pain / discomfort caused by these conditions and raise students' level of awareness and attitude towards prevention.

Design
A clinical trial with a control group, with parallel, randomized groups, will be performed on 180 students.

Settings and conduct
In order to identify students with forward head deformity , due to the lack of physical access to students online, asks students if they feel this anomaly to more accurately evaluate and Maintaining a healthy protocol at the specified days and hours refer to the Corrective exercise center.

Participants/Inclusion and exclusion criteria
Criteria for entering the exercise: 1. High school students 2. Having musculoskeletal disorders 3. Having forward head deformity with an angle higher than 45 degrees Exclusion criteria: 1. History of vertebral surgery 2. Back tumor 3. History of fractures in the cervical spine 4. Osteoporosis 5. Dissatisfaction with participating in exercises

Intervention groups
Individuals with musculoskeletal disorders and head-forward abnormalities were identified and after selecting the samples, subjects were divided into 3 groups of individuals with musculoskeletal disorders (exercise-ergonomic advice group, ergonomic advice group and control group) and 3 groups of individuals with head-to-head abnormalities. The front (exercise group - ergonomic advice, ergonomic advice group and control group) will start training for 8 weeks. All exercises are performed online by a corrective exercise specialist.

Main outcome variables
1- Improving students' upper body posture in online learning conditions at home 2- Reducing pain / discomfort caused by these conditions

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20180721040538N1**
Registration date: **2021-03-25, 1400/01/05**
Registration timing: **prospective**

Last update: **2021-03-25, 1400/01/05**
Update count: **0**

Registration date
2021-03-25, 1400/01/05

Registrant information

Name
Razieh Karimian

Name of organization / entity
The university of Isfahan

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Iran (Islamic Republic of)

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2021-04-03, 1400/01/14

Expected recruitment end date

2021-06-04, 1400/03/14

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of combined and online protocol ergonomic advice-exercise in comparison with ergonomic advice protocol based on distance learning conditions on forward head deformity and its effect on shoulder and back posture of students during Covid-19 pandemic

Public title

The effect of combined and online protocol ergonomic advice-exercise in comparison with ergonomic advice protocol on forward head deformity of students during Covid-19 pandemic

Purpose

Health service research

Inclusion/Exclusion criteria

Inclusion criteria:

Having musculoskeletal disorders Having forward head deformity with an angle higher than 45 degrees

Exclusion criteria:

History of vertebral surgery Back tumor History of fractures in the cervical spine Osteoporosis Dissatisfaction with participating in exercises

Age

From **13 years** old to **18 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **180**

Randomization (investigator's opinion)

Not randomized

Randomization description

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 Fasa University of Medical Sciences

Street address

Fasa University of Medical Sciences, Ibn Sina Square, Fasa

City

Fasa

Province

Fars

Postal code

7461686688

Approval date

2021-03-10, 1399/12/20

Ethics committee reference number

IR.FUMS.REC.1399.178

Health conditions studied

1

Description of health condition studied

Musculoskeletal disorders and forward head deformity

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Forward head angle and pain rate

Timepoint

8 weeks

Method of measurement

1- Nordic Questionnaire 2- Visual Pain Intensity Scale (VAS) 3- Self-Reporting Questionnaire 4- Evaluation of forward head angle by photogrammetric method

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Eexercise-ergonomic advice group. All corrective exercises and ergonomic advice are performed online by a corrective exercise specialist. The prescribed regulatory programs will be for 8 weeks (3 sessions per week and each session for 30 minutes). This program will be designed based on the conditions of students in home quarantine and based on the muscles involved in the upper limbs while sitting at the table. The exercises are such that in the initial sessions they have less intensity, number, repetition and time, and in the subsequent sessions they gradually increase according to the abilities of the subjects and it becomes more difficult to observe the principles of the exercise. Intensity of exercises is done in stretching exercises up to the pain threshold and in strength training up to the

level of fatigue. The structure of the exercise program includes the steps of warming up, performing corrective exercises and returning to the original state.

Category

Treatment - Other

2

Description

Intervention group: Ergonomic advice group. In order to reduce the risk, ergonomic advice will be applied for 8 weeks. This knowledge will be provided to the subjects in the form of verbal reminders and educational posters on correcting body movements while learning online.

Category

Treatment - Other

3

Description

Control group: No intervention. This group will only do their daily activities.

Category

Diagnosis

Recruitment centers

1

Recruitment center

Name of recruitment center
Fasa University of Medical Sciences

Full name of responsible person
Razieh Karimian

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Fasa University of Medical Sciences

Full name of responsible person
Mojtaba Farjam

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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
Fasa University of Medical Sciences

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
Fasa University of Medical Sciences

Full name of responsible person
Razieh Karimian

Position
Phd

Latest degree
Ph.D.

Other areas of specialty/work
Others

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

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

Clinical Study Report
Yes - There is a plan to make this available

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

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

Title and more details about the data/document
Information about the main outcome can be shared.

When the data will become available and for how long
Access period starts from 2021

To whom data/document is available
Researchers working in academic, scientific and industrial institutes

Under which criteria data/document could be used
In order to research the health of students

From where data/document is obtainable
Razieh Karimian, Email

What processes are involved for a request to access data/document
Review by expert and send email

Comments