Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

Comparison the addition of respiratory exercises to corrective exercises on pain, electromyography, posture, and respiratory pattern in Smartphone users with forward head posture and non-specific chronic neck pain

Protocol summary

Study aim
Comparison the addition of respiratory exercises to corrective exercises on pain, electromyography, posture, and respiratory pattern in Smartphone users with forward head posture and non-specific chronic neck pain

Design
Randomized control trial, With parallel groups, Double blind, randomized

Settings and conduct
60 subjects with forward head posture and Non-specific chronic neck pain that met the inclusion criteria was randomly divided into three intervention groups (Corrective _ Respiratory Exercise Group, Corrective Exercise Group and Control Group). Groups Training interventions will be performed 3 sessions per week for 8 weeks.

Participants/Inclusion and exclusion criteria
Inclusion criteria: 20-30 year old students, 2 to 4 hours of smartphone use per day, With non-specific chronic neck pain averaging between 3 and 7 out of 10 on the Visual Analog Scale (VAS) scale in the past 3 months, Having a forward head and shoulder posture less than 50 degrees, body Math Index (BMI) between 19 and 25. Exclusion criteria: History of bone fracture, Neuromyopathy, Inflammation or inflammation of the spinal cord, History of spinal cord injury and surgery, Cardiovascular disease, Trauma, Hypertension, Respiratory disorders, smoking habit, Nerve deficiency,Poor public health, Chronic lung disease, MS.

Intervention groups
Combining Corrective Exercises with Respiratory Exercises 2. Corrective Exercises 3. Daily Activities

Main outcome variables
Pain,Posture of head and neck, Electromyography of superficial neck muscles (upper trapezius, sternocleidomastoid, scalene, diaphragm and spine neck erector) and Respiratory pattern

General information

Reason for update
To enter the start and end dates of the disease

Acronym

IRCT registration information
IRCT registration number: **IRCT20200212046469N1**
Registration date: **2020-03-04, 1398/12/14**
Registration timing: **prospective**

Last update: **2020-10-18, 1399/07/27**
Update count: **4**

Registration date
2020-03-04, 1398/12/14

Registrant information

Name
Hamid Rezaee dareh deh

Name of organization / entity
Center for Human Movement Sciences Kharazmi University

Country
Iran (Islamic Republic of)

Phone
+98 21 2222 8001

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std_h.rezaee@khu.ac.ir

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2020-03-10, 1398/12/20

Expected recruitment end date

2020-05-09, 1399/02/20

Actual recruitment start date

2020-03-10, 1398/12/20

Actual recruitment end date

2020-05-09, 1399/02/20

Trial completion date

2020-08-10, 1399/05/20

Scientific title

Comparison the addition of respiratory exercises to corrective exercises on pain, electromyography, posture, and respiratory pattern in Smartphone users with forward head posture and non-specific chronic neck pain

Public title

Comparison the addition of respiratory exercises to corrective exercises on pain, electromyography, posture, and respiratory pattern in Smartphone users with forward head posture and non-specific chronic neck pain

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

20-30 year old students 2 to 4 hours of smartphone use per day Non-specific chronic neck pain ranging from 3 to 7 out of 10 on the VAS scale in the past 3 months Having a forward head and shoulder posture with an angle of less than 50 degrees BMI between 19 and 25

Exclusion criteria:

History of bone fractures Neuromyopathy Infection or inflammatory arthritis in the cervical spine History of spinal cord injury and surgery trauma Hypertension Respiratory disorders Smoking habit Nerve defect Poor public health Chronic pulmonary disease MS Cardiovascular diseases

Age

From **20 years** old to **30 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Investigator
- Outcome assessor
- Data analyser

Sample size

Target sample size: **60**

Actual sample size reached: **60**

Randomization (investigator's opinion)

Randomized

Randomization description

Balanced block randomization

Blinding (investigator's opinion)

Double blinded

Blinding description

The outcome evaluator, participant, researcher, and data analyst are kept blind.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Kharazmi University

Street address

Center for Human Movement Sciences Kharazmi University Mirdamad, South Razan Street, Hesari Street, Keshvari Sport Complex, Tehran, Iran

City

Tehran

Province

Tehran

Postal code

15447-33111

Approval date

2019-09-30, 1398/07/08

Ethics committee reference number

IR.KHU.REC.1398.023

Health conditions studied

1

Description of health condition studied

Forward head posture

ICD-10 code

R29.3

ICD-10 code description

Abnormal posture

2

Description of health condition studied

Chronic neck pain

ICD-10 code

G89.29

ICD-10 code description

Other chronic pain

Primary outcomes

1

Description

Pain

Timepoint

Before and after the intervention

Method of measurement

VAS

2

Description

Forward head angle

Timepoint

Before and after the intervention

Method of measurement

Photogrammetry

Secondary outcomes

1

Description

Muscle Activity Level 1- Upper Trapezius 2- Sternocleidomastoid 3- Scalene 4- Neck Erector Spine 5- Diaphragm

Timepoint

Before and after the intervention

Method of measurement

Electromyography device

2

Description

Onset of muscle activity 1. Upper trapezius, 2. Sternocleidomastoid 3. Scalene 4. neck erector Spine 5. Diaphragm

Timepoint

Before and after the intervention

Method of measurement

Electromyography device

3

Description

Respiratory pattern

Timepoint

Before and after the intervention

Method of measurement

Manual Assessment of Respiratory Motion (MARM)

Intervention groups

1

Description

Intervention group: combination of corrective exercises and respiratory exercises, One session a day, three sessions a week, for eight weeks

Category

Rehabilitation

2

Description

Intervention group: Corrective Exercises, One session a day, three sessions a week, for eight weeks

Category

Rehabilitation

3

Description

Control group: Doing daily activities

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Kharazmi University Health and Wellness Center

Full name of responsible person

Hamid Rezaee darehdeh

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Web page address

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Kharazmi University

Full name of responsible person

Amir letafatkar

Street address

-

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Province

Tehran

Postal code

-

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letafatkaramir@yahoo.com

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Kharazmi University

Proportion provided by this source

20

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

Center for Human Movement Sciences Kharazmi University

Full name of responsible person

Hamid Rezaee darehdeh

Position

Master student of Corrective Exercises and Sport injury prevention

Latest degree

Master

Other areas of specialty/work

Corrective Exercises and Sport injury prevention

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Person responsible for scientific inquiries

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Contact

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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

Yes - There is 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

Only part of the data, such as the dependent variables, The average of all samples, can be shared in scientific articles.

When the data will become available and for how long

The date of access is August 2020.

To whom data/document is available

Personal information is confidential and general results are available to anyone in the article.

Under which criteria data/document could be used

Information is not available to anyone. general results are available to anyone in the article.

From where data/document is obtainable

Hamid Rezaee darehdeh 0098 9353872375 - Email: std-h.rezaee@khu.ac.ir

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

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Comments

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