Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

Effectiveness of supervised versus work-placed exercises on neck-shoulder pain, workability, alignment and muscle activities among office workers with upper crossed syndrome

Protocol summary

Study aim

The purpose of this study is to evaluate the effectiveness of supervised-based versus workplace-based exercises on neck-shoulder pain, workability, alignment, and muscle activity among office workers with upper crossed syndrome.

Design

A quasi-experimental; randomized controlled clinical trial including 45 samples assigned randomly to two groups: supervised exercises; workplace exercises, and a control group.

Settings and conduct

The participants with upper crossed syndrome in two groups supervised exercises and workplace exercises performing 50 minutes of intervention 3 sessions per week for eight weeks; the control group receives no intervention. Baseline assessments will be organized at the physical education laboratory at the University of Shahid Beheshti in Tehran- Iran which, will be repeated after eight weeks of intervention.

Participants/Inclusion and exclusion criteria

Inclusion criteria: office workers in Tehran between the age of 25 to 50 years being at work for more than five years and 30 hours per week with postural alteration including the forward head equal to or more than 45°; round shoulder equal to or more than 52°; and round back equal to or more than 42° as well as neck and shoulder pain intensity equal to or more than three as per visual analog scale. Exclusion criteria: body mass index (BMI) equal to or more than 25 or equal to or less than 18; being pregnant; having a previous upper-body injury or not being able to take exercises due to any medical conditions.

Intervention groups

Intervention 1: workplace exercises: 50-minute exercise, 3 days per week with 3 repetitions, holding for10 seconds for 8 weeks. Intervention 2: supervised exercises: 50-minute exercise, three days per week with three repetitions, holding for10 seconds for 8 weeks. 3: control group: receive no intervention.

Main outcome variables

Neck-shoulder pain; workability; alignment; muscle activity

General information

Reason for update

changing the expected date of recruitment.

Acronym

IRCT registration information

IRCT registration number: **IRCT20200729048249N1**
Registration date: **2020-09-06, 1399/06/16**
Registration timing: **prospective**

Last update: **2020-10-05, 1399/07/14**
Update count: **1**

Registration date

2020-09-06, 1399/06/16

Registrant information

Name

ZOHREH YAGHOUBI TAJANI

Name of organization / entity

The University of Beheshti

Country

Iran (Islamic Republic of)

Phone

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Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-12-20, 1399/09/30

Expected recruitment end date

2021-06-20, 1400/03/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effectiveness of supervised versus work-placed exercises on neck-shoulder pain, workability, alignment and muscle activities among office workers with upper crossed syndrome

Public title

Effectiveness of exercise on upper crossed syndrome

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

Office workers being at work for more than five years and 30 hours per week Forward head posture equal to or more than 45°, round shoulder equal to or more than 52°, and round back equal to or more than 42° Pain intensity equal to or more than three in the neck and shoulder as per visual analog scale

Exclusion criteria:

Pregnancy Previous upper-body injuiry Not being able to do exercise due to any medical conditions Bodyweight out of the normal range; having body mass index (BMI) equal to or more than 25 or equal to or less than 18

Age

From **25 years** old to **50 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **45**

Randomization (investigator's opinion)

Randomized

Randomization description

The website https://www.sealedenvelope.com will be applied to randomize and generate a random block sequence, and sealed opaque envelopes will be used to conceal random allocation. Based on the sample size, a number of envelopes with aluminum wrappers are used in order to obscure the contents of the envelopes. Each of the random sequences is written on a card, and the cards are placed in the envelopes respectively. In order to maintain a random sequence, the envelopes are numbered on the outer surface as well. The envelopes are glued and placed inside a box, respectively. The participants open one of the envelopes, then the assigned group of that participant is revealed.

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

Research Ethics Committee in Shahid Beheshti University Tehran, IRAN

Street address

Daneshjoo Blvd., Shahid Shahriari Square, Yemen St., Shahid Chamran Highway

City

Tehran

Province

Tehran

Postal code

1983969411

Approval date

2020-06-20, 1399/03/31

Ethics committee reference number

IR.SBU.REC.1399.036

Health conditions studied

1

Description of health condition studied

Upper Crossed Syndrome

ICD-10 code

M40.04

ICD-10 code description

Postural Kyphosis, Thoracic Region

Primary outcomes

1

Description

Neck–shoulder pain

Timepoint

Before and after eight weeks of intervension

Method of measurement

Visual analogue scale (VAS)

Secondary outcomes

1

Description

Work ability

Timepoint

Before and after eight weeks of intervention

Method of measurement

Work ability index (WAI) questionnaire

2

Description

Alignment

Timepoint

Before and after eight weeks of intervention

Method of measurement

Photogrammetry

3

Description

Muscles activity

Timepoint

Before and after eight weeks of intervention

Method of measurement

Surface electromyography

Intervention groups

1

Description

Intervention group 1(work-placed exercises): An eight-week exercise program including corrective exercises based on alignment and effective muscle activation on upper crossed syndrome will be taken three days per week about 50 minutes each session which will be started by five to seven minutes of warm-up and cool-down. The exercises will be initiated by three repetitions holding for 10 seconds, and progress to six repetitions, holding for 25 seconds based on the overload principles and the individual capabilities. The present study aims to evaluate the effectiveness of exercises in the workplace that will be performed without the direct supervision of the researcher as the first intervention group.

Category

Prevention

2

Description

Intervention group2(supervised exercises): An eight-week exercise program including corrective exercises based on alignment and effective muscle activation on upper crossed syndrome will be taken three days per week about 50 minutes each session which will be started by five to seven minutes of warm-up and cool-down. The exercises will be initiated by three repetitions holding for 10 seconds, and progress to six repetitions, holding for 25 seconds based on the overload principles and the individual capabilities. The present study aims to evaluate the effectiveness of supervised exercises as the second intervention group that will be performed under direct supervision.

Category

Prevention

3

Description

Control group: receive no intervention.

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

The University of Shahid Beheshti Tehran, IRAN

Full name of responsible person

Sajjad Ahmadizad

Street address

Daneshjoo Blvd., Shahid Shahriari Square, Yemen St., Shahid Chamran Highway

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

The University of Shahid Beheshti

Full name of responsible person

Babak Shokri

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Grant name

Grant code / Reference number

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

No

Title of funding source

The University of Shahid Beheshti

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

The University of Shahid Beheshti

Full name of responsible person

Zohreh Yaghoubi Tajani

Position

University Student

Latest degree

Bachelor

Other areas of specialty/work

Corrective Exercises

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Person responsible for scientific inquiries

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Bachelor

Other areas of specialty/work

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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

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

Undecided - It is not yet known if there will be 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