

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

09 Jun 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 for 10 seconds for 8 weeks. Intervention 2: supervised

exercises: 50-minute exercise, three days per week with three repetitions, holding for 10 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

+98 21 4443 5988

##### Email address

zohreh.yaghoubi@gmail.com

##### 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 injury 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 intervention

**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

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

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b-shokri@sbu.ac.ir

**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

**Street address**

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## Person responsible for scientific inquiries

### Contact

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## Person responsible for updating data

### Contact

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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