

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Effectiveness of Upper Thoracic and Cervical Spine Mobilization for Forward Head Posture in Desk Workers

#### Protocol summary

##### Study aim

To compare the effectiveness of cervical mobilization, thoracic mobilization, and cervicothoracic mobilization and to evaluate neck alignment by improving Forward Head Posture.

##### Design

A concealed, randomized, clinical trial with a parallel-group design of 45 patients.

##### Settings and conduct

All participants will be selected from Faculty members & Administrative staff of The University of Faisalabad Health Sciences Campus. Subjects and assessors are blinded.

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: Age between 20-40 years; Signs and symptoms of FHP like general soreness, intense pain, muscle tightness; lasts for one month; Pain greater than 3 on NPRS; Office workers who engage in their work with the computer for a minimum of 3 hours continuously; Only female participants. Exclusion Criteria: Any history of neck trauma or accident; Degenerative condition; Prior history of surgery to the cervical or thoracic spine at least before 6 months ago; Signs of nerve root compression; Diagnosed/known psychiatric illness; Systemic disease e.g. hyper/hypotension, diabetes, and hypo/hyperthyroidism. Inflammatory arthritis; Any known malignancy/neoplasm; Any known vascular condition; Any medication for the current condition.

##### Intervention groups

Group A: will Receive infrared for 10 mints, cervical mobilization along with exercise therapy (mobility exercises). Group B: will Receive infrared for 10 mins, thoracic mobilization, and exercise therapy (mobility exercises). Group C: will Receive infrared for 10 mins, cervicothoracic mobilization, and exercise therapy (mobility exercise).

##### Main outcome variables

Outcome measures including the Craniovertebral angle, Cervical range of motion, Numeric Pain rating scale, and

Neck disability index will be collected.

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20191030045287N2**

Registration date: **2021-03-11, 1399/12/21**

Registration timing: **retrospective**

Last update: **2021-03-11, 1399/12/21**

Update count: **0**

##### Registration date

2021-03-11, 1399/12/21

##### Registrant information

##### Name

Nimra Arshad

##### Name of organization / entity

The University of Faisalabad

##### Country

Pakistan

##### Phone

+92 41 8811692

##### Email address

nimra.arshad@tuf.edu.pk

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2021-01-10, 1399/10/21

##### Expected recruitment end date

2021-02-10, 1399/11/22

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

## Trial completion date

empty

## Scientific title

Effectiveness of Upper Thoracic and Cervical Spine Mobilization for Forward Head Posture in Desk Workers

## Public title

Effects of two exercises for bad head posture in Desk Workers

## Purpose

Treatment

## Inclusion/Exclusion criteria

### Inclusion criteria:

Age between 20-40 years. Signs and symptoms of FHP last for one month like general soreness, intense pain, muscle tightness. Pain greater than 3 on NPRS. Office workers who engage in their work with computer for minimum 3 hours continuously. Only female participants.

### Exclusion criteria:

Any history of neck trauma or accident Degenerative condition Prior history of surgery to the cervical or thoracic spine at least before 6 months ago Diagnosed/known psychiatric illness Signs of nerve root compression Systemic disease e.g. hyper/hypotension, diabetes and hypo/hyperthyroidism Inflammatory arthritis Any known malignancy / neoplasm Any medication for current condition Any known vascular condition

## Age

From **20 years** old to **40 years** old

## Gender

Female

## Phase

N/A

## Groups that have been masked

*No information*

## Sample size

Target sample size: **45**

## Randomization (investigator's opinion)

Randomized

## Randomization description

A convenient sampling technique will be used for the selection of a sample from the populations and then the sample will be allocated to groups A, B, and C using the lottery method of randomization in which the researcher will randomly pick numbers, with each number corresponding to a subject, in order to create the sample. Allocation concealment will not be carried out.

## 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 The University of Faisalabad, Pakistan

##### Street address

Sargodha Road, University Town, Faisalabad, Pakistan

##### City

Faisalabad

##### Postal code

38000

##### Approval date

2020-10-22, 1399/08/01

##### Ethics committee reference number

TUF/DR/DPT/150

## Health conditions studied

### 1

#### Description of health condition studied

Forward Head Posture

#### ICD-10 code

#### ICD-10 code description

## Primary outcomes

### 1

#### Description

Craniovertebral angle (CVA)

#### Timepoint

Cranio-Vertebral Angle will be measured before treatment at the baseline 1st week and at the end of treatment of last session at 4th week.

#### Method of measurement

Will be Measured by taking photograph of each participant.

### 2

#### Description

Neck Range of Motion

#### Timepoint

ROM measurements will only be filled at baseline 1st week, mid-session 2nd week and after the last session 4th week.

#### Method of measurement

Goniometer

### 3

#### Description

Neck Disability

#### Timepoint

NDI score will be measured before at 1st week and at the end of session at 4th week.

#### Method of measurement

Neck Disability Index

## **4**

### **Description**

Neck Pain

### **Timepoint**

Pain measurements will be taken after each week till 4 weeks.

### **Method of measurement**

Numeric Pain Rating Scale (NPRS)

## **Secondary outcomes**

empty

## **Intervention groups**

### **1**

#### **Description**

Intervention group 1: Thoracic mobilization group: Subjects will be in the prone position. Mobilization will be performed for 30-second bout of grade I, II and III, according to clinical indication, mobilization at the T1 spinous process. After 30-sec the technique will proceed to T2 with the same protocol. This process will be sequentially continued in a caudal direction towards T6, for an overall interventional time of approximately <5 min with a 10-sec break between the mobilizations of each joint.

#### **Category**

Rehabilitation

### **2**

#### **Description**

Intervention group 2: Cervical mobilization group: Cervical mobilization will be conducted for 30 sec, three times for each segment. The mobilization will last for a total of <5 mins, with a 10-sec break between the mobilizations of each joint. The total time of inter-segmental movement and break intervals will be 30 sec. This process will be continued from C3-C7.

#### **Category**

Rehabilitation

### **3**

#### **Description**

Intervention group 3: Cervico-thoracic mobilization group: Cervical mobilization will be performed for 30 sec, three repetitions for each segment for a total of <5 min. there was a 10-sec break between each mobilization for each joint according to tissue resistance. The total time of inter-segmental movement, as well as break intervals, will be the 30s. This mobilization for the cervical region will be continued from C3 to C7 and then continued towards mobilization at the T1 spinous process. After the 30-sec treatment in the cervical region, the same technique will be applied to T2. The same process will be sequentially continued in a caudal direction from C7 to T6. The interventional time at the thoracic region will be <5 min with a break of 10 sec between the mobilizations of each joint. An overall interventional time of

mobilization treatment at the cervicothoracic region will be approximately <10 min with a 10-sec break between the mobilizations of each joint.

#### **Category**

Rehabilitation

## **Recruitment centers**

### **1**

#### **Recruitment center**

##### **Name of recruitment center**

Madina University Faisalabad

##### **Full name of responsible person**

Dr. Sidra majeed ;PT

##### **Street address**

Sargodha Road, University Town, Faisalabad, Punjab,Pakistan

##### **City**

Faisalabad

##### **Postal code**

38000

##### **Phone**

+92 41 8868326

##### **Email**

sidra.majeed@tuf.edu.pk

##### **Web page address**

<https://tuf.edu.pk/>

## **Sponsors / Funding sources**

### **1**

#### **Sponsor**

##### **Name of organization / entity**

The University of Faisalabad

##### **Full name of responsible person**

Dr. Sidra Majeed

##### **Street address**

Sargodha Road, University Town, Faisalabad, Punjab, Pakistan

##### **City**

Faisalabad

##### **Postal code**

38000

##### **Phone**

+92 41 8868326

##### **Email**

sidra.majeed@tuf.edu.pk

#### **Grant name**

#### **Grant code / Reference number**

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

Yes

#### **Title of funding source**

The University of Faisalabad

#### **Proportion provided by this source**

100

#### **Public or private sector**

Private

#### **Domestic or foreign origin**

Foreign

**Category of foreign source of funding**

Sponsor: country of origin

**Country of origin**

PK

**Type of organization providing the funding**

Academic

38000

**Phone**

+92 41 8811692

**Fax****Email**

nimraarshad70@yahoo.com

**Person responsible for general inquiries****Contact****Name of organization / entity**

The University of Faisalabad

**Full name of responsible person**

Nimra Arshad

**Position**

Lecturer

**Latest degree**

Master

**Other areas of specialty/work**

Physiotherapy

**Street address**

House no 91,street no 4,Muslim town no 3,Sargodha road Faisalabad,Pakistan

**City**

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**Province**

Punjab

**Postal code**

38000

**Phone**

+92 41 8811692

**Fax****Email**

nimraarshad70@yahoo.com

**Person responsible for updating data****Contact****Name of organization / entity**

The University of Faisalabad

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The University of Faisalabad

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**Latest degree**

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**Other areas of specialty/work**

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**Province**

Punjab

**Postal code****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