

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

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sidra.majeed@tuf.edu.pk

Web page address

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

The University of Faisalabad

Full name of responsible person

Dr. Sidra Majeed

Street address

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Phone

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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

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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

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

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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