Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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; Sings 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

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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. Sings 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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Sponsors / Funding sources

1

Sponsor
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The University of Faisalabad
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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

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
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Person responsible for updating data

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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