

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Effects of Muscle Energy Technique versus Bruegger's Relief Exercise on the Forward Head Posture among the electronic gadget users.

Protocol summary

Study aim

Effects of Muscle Energy Technique versus Bruegger's Relief Exercise on the Forward Head Posture, pain, function and ROM among the electronic gadget users.

Design

A randomized controlled trail

Settings and conduct

DHQ Hospital Sargodha

Participants/Inclusion and exclusion criteria

INCLUSION: Age range 18-35 years, male and female, CVA<52. NPRS>3, NDI>10, usage of smart phones for 4 hours or more per day. neck pain due to sustained posture, after activity. **EXCLUSION:** Inflammation, neurological disorder, Neck pain radiating into arms, headache, surgery, VBI, trauma fracture, therapeutic intervention or medical treatment.

Intervention groups

Patients randomly divided into two groups, 23 subjects in each group. After taking baseline assessment both groups A and B will be treated with Hot pack for 7-10 minutes and then Muscle energy technique will be performed, 4 weeks 5 sessions in a week MET applied to Upper trapezius, Levator scapulae, Scalene and the Pectoralis major muscles. In addition to this, Bruegger's Relief Exercise, An elastic resistance band wrapped on each hand of the participant leaving the palm open then abduct and extend of thumb along with fingers, wrist extension and forearm supination, perform scapular retraction with shoulder external rotation, elbow extension, shoulder abduction, extension and chin tuck. Intervention will be starts from 10 seconds hold to 30 seconds with 2 seconds increment in every session. Rest time would be 30 seconds, 4 sets 12 times repetition. Treatment time of each session approximately 20-30 minutes

Main outcome variables

Pain, Function, ROM, CVA

General information

Reason for update

Acronym

EMETBREFHP

IRCT registration information

IRCT registration number: **IRCT20201019049069N2**

Registration date: **2021-08-02, 1400/05/11**

Registration timing: **registered_while_recruiting**

Last update: **2021-08-02, 1400/05/11**

Update count: **0**

Registration date

2021-08-02, 1400/05/11

Registrant information

Name

Hamna Afzal

Name of organization / entity

Riphah International University

Country

Pakistan

Phone

+92 48 3768660

Email address

hamnaafzal101@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-07-27, 1400/05/05

Expected recruitment end date

2021-09-30, 1400/07/08

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effects of Muscle Energy Technique versus Bruegger's Relief Exercise on the Forward Head Posture among the electronic gadget users.

Public title

Effects of Muscle Energy Technique versus Bruegger's Relief Exercise on the Forward Head Posture among the electronic gadget users.

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

□ Age: participants having range 18-35 years both male and female are included. □ Craniovertebral angle < 52 □ NPRS > 3 and NDI > 10 □ Patients having neck pain due to usage of smart phones or computers for 4 hours or more per day. □ Patients are willing to participate. □ Patients having neck pain due to sustained posture and after activity.

Exclusion criteria:

● Inflammation malignancy, neurological disorder ● Metabolic disorders ● Neck pain radiating into arms and upper extremity ● Neck pain associated with headache and facial pain ● Recent surgery ● Vertebrobasilar insufficiency (VBI) positive ● History of recent trauma and fractures of cervical spine ● Patients having any other therapeutic intervention or medical treatment.

Age

From **18 years** old to **35 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: **46**

Randomization (investigator's opinion)

Randomized

Randomization description

Non-probability convenient sampling will be used to recruit the individual for study and then randomization will be done by sealed enveloped method to divide the individuals into groups. written informed consent will be taken.

Blinding (investigator's opinion)

Single blinded

Blinding description

outcome assessor will be blinded by labeling the participants with different codes

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethical review committee of sargodha institute of health sciences, Government college university Fai

Street address

117-C, Zafar Ullah Road, Sattelite Town, Sargodha

City

sargodha

Postal code

40100

Approval date

2021-07-17, 1400/04/26

Ethics committee reference number

SIHS/21/158

Health conditions studied

1

Description of health condition studied

forward head posture is due to extension of upper cervical spine and flexion of lower cervical spine and cause neck pain

ICD-10 code

M54.2

ICD-10 code description

Cervicalgia

Primary outcomes

1

Description

pain

Timepoint

before treatment and after treatment (4th week)

Method of measurement

Numeric Pain Rating Scale (NPRS)

2

Description

Functional performance

Timepoint

before treatment and after treatment (4th week)

Method of measurement

Neck Disability Index (NDI)

3

Description

Cervical AROM

Timepoint

before treatment and after treatment (4th week)

Method of measurement

Universal Goniometer

4

Description

Craniovertebral angle

Timepoint

before treatment and after treatment 4th week

Method of measurement

Image j software

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Before applying METs we will apply□ heat pack for 10-15 minutes. Protocol of Muscle Energy Technique: We will apply protocol for 4 weeks 20 Sessions (5 sessions in a week) and 10 sec rest between each segment with 3-5 times repetition than their will 7-10 sec Isometric contraction followed by 5sec relaxation than 30 sec hold for MET stretch. Effort and counter pressure will be modest(20%). Cervical spine non-thrust mobilization (Grade 3) will be given to each segment from C2-C7, will be followed by rest between segments. MET will be applied to Upper trapezius, Levator scapulae, Scalene and the Pectoralis major muscles. Following the 7-10 seconds isometric contraction and complete relaxation of all elements, the stretch is maintained for 30 seconds

Category

Treatment - Other

2

Description

Intervention group: Before applying Bruegger's relief exercise we will apply□ heat pack for 10-15 minutes. Protocol of Bruegger's Relief Exercise: Participant will be in a high sitting position. An elastic resistance band will be wrapped on each hand of the participant leaving the palm open and will be told to abduct and extend of thumb along with fingers, followed by wrist extension and forearm supination, the participant will be instructed to perform scapular retraction with shoulder external Than rotation, elbow extension, shoulder abduction, and extension and chin tuck. Intervention will be starts from 10 seconds hold to 30 seconds with 2 seconds increment in every session. Rest time would be 30 seconds, 4 sets 12 times repetition.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

District Headquarter Hospital Sargodha

Full name of responsible person

Hamna Afzal

Street address

Khushab Road, Sargodha, Punjab

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hamnaafzal101@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

District Headquarter Hospital Sargodha

Full name of responsible person

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Street address

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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

District Headquarter Hospital Sargodha

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

Other

Person responsible for general inquiries

Contact

Name of organization / entity

Sargodha Institute of health sciences, Government college university, Faisalabad

Full name of responsible person

Hamna Afzal

Position

Senior lecturar

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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Full name of responsible person

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Position

Senior Lecturar

Latest degree

Master

Other areas of specialty/work

Physiotherapy

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Position

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Sharing plan**Deidentified Individual Participant Data Set (IPD)**

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

nil

Study Protocol

No - There is not 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