Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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
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Pakistan
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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 ● Vertebrobasiliar 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 with3-5 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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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
District Headquarter Hospital Sargodha
Full name of responsible person
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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 updating data

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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