

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Immediate effects of muscle energy techniques and conventional physical therapy versus conventional physical therapy alone on pain and range of motion in patients with chronic mechanical neck pain: A randomized controlled trial

#### Protocol summary

##### Study aim

Muscle energy technique is an emerging type of manual therapy. It is not common in clinical setups. Nowadays, clients and patients want results of a treatment on the spot. So, the scholar want to find out immediate effects of MET on cervical pain and range of motion

##### Design

This study will have 2 groups. A will be experimental group and B control . Sample size: 50 Randomization: will be done using lottery method Center: Single center

##### Settings and conduct

(Hayatabad medical complex, MTI, Peshawar)

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: Male and female, Age 18-50 years, Subjects having neck pain from previous 3 or more than 3 months Exclusion criteria: Cervical radiculopathy or disc prolapse, trauma, bone fractures, joint dislocation or cervical instability, dermatitis, abnormal sensations, active bleeding and open wounds, History of the neck surgery in the past 12 months, Diagnosed cases of serious pathologies like infection, inflammation or malignancy

##### Intervention groups

Experimental Group (Group A): This group will be same as control group (as in having conventional physical therapy) but with addition of the intervention which will be muscle energy techniques (MET). Therapist will give resistance to produce isometric contraction in the muscles just short of the barrier. The patient strength of muscle contraction will be less than the therapist counter force of resistance. Therapist will hold the position for 7-10 seconds. Then a 30 seconds stretch will be given and the process will be repeated three times. Control Group (Group B): This group will comprise of conventional therapy for the participants. Conventional therapy will include heating pad for 15-20 minutes and

soft tissue release for 5 minutes.

##### Main outcome variables

Outcome will be measured on the basis of means of NPRS score and neck ROMs.

#### General information

##### Reason for update

##### Acronym

MET

##### IRCT registration information

IRCT registration number: **IRCT20220209053976N1**

Registration date: **2022-02-14, 1400/11/25**

Registration timing: **prospective**

Last update: **2022-02-14, 1400/11/25**

Update count: **0**

##### Registration date

2022-02-14, 1400/11/25

##### Registrant information

##### Name

Ghulam Hussain

##### Name of organization / entity

Khyber Medical University

##### Country

Pakistan

##### Phone

+92 341 3219734

##### Email address

ghulamhussain.ipmr@kmu.edu.pk

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2022-03-01, 1400/12/10  
**Expected recruitment end date**  
2022-08-01, 1401/05/10  
**Actual recruitment start date**  
empty  
**Actual recruitment end date**  
empty  
**Trial completion date**  
empty

**Scientific title**  
Immediate effects of muscle energy techniques and conventional physical therapy versus conventional physical therapy alone on pain and range of motion in patients with chronic mechanical neck pain: A randomized controlled trial

**Public title**  
A manual therapy technique used in physiotherapy to decrease pain and increase range of motion in chronic mechanical neck pain

**Purpose**  
Treatment

**Inclusion/Exclusion criteria**  
**Inclusion criteria:**  
Male and female Age 18-50 years Subjects having neck pain from previous 3 or more than 3 months  
**Exclusion criteria:**  
Cervical radiculopathy or disc prolapse Absolute contraindications for MET include trauma, bone fractures, joint dislocation or cervical instability Absolute contraindications for hot pack include dermatitis, abnormal sensations, active bleeding and open wounds History of the neck surgery in the past 12 months Diagnosed cases of serious pathologies like infection, inflammation or malignancy

**Age**  
From **18 years** old to **50 years** old

**Gender**  
Both

**Phase**  
N/A

**Groups that have been masked**

- Outcome assessor

**Sample size**  
Target sample size: **50**

**Randomization (investigator's opinion)**  
Randomized

**Randomization description**  
After participants are selected, they will be randomly allocated to control group and experimental group using lottery method in which they will be asked to select a piece of paper from a box. The piece of paper will be marked with initial of the groups (such as A or B) and then the participants will be allocated to the group initial that was on paper.

**Blinding (investigator's opinion)**  
Single blinded

**Blinding description**  
Due to nature of study, it will not be feasible to blind researcher/therapist and subjects. However, assessor,

who will assess pre and post scores, will be blind.

**Placebo**  
Not used

**Assignment**  
Parallel

**Other design features**

**Secondary Ids**  
empty

**Ethics committees**

**1**

**Ethics committee**

**Name of ethics committee**  
KMU ethics committee

**Street address**  
F1 Phase-6 Rd, Phase 5 Hayatabad

**City**  
Peshawar

**Postal code**  
25000 (25100)

**Approval date**  
2022-02-25, 1400/12/06

**Ethics committee reference number**  
not yet provided

**Health conditions studied**

**1**

**Description of health condition studied**  
Chronic mechanical neck pain

**ICD-10 code**  
M54.2

**ICD-10 code description**  
Cervicalgia

**Primary outcomes**

**1**

**Description**  
Cervical pain and range of motion

**Timepoint**  
before intervention and immediately post intervention

**Method of measurement**  
Pain will be measured using numerical pain rating scale and range of motion by goniometer

**Secondary outcomes**  
empty

**Intervention groups**

**1**

**Description**  
Experimental/Interventional Group (Group A): This group

will be same as control group (as in having conventional physical therapy) but with addition of the intervention which will be muscle energy techniques (MET). Therapist will give resistance to produce isometric contraction in the muscles just short of the barrier. The patient strength of muscle contraction will be less than the therapist counter force of resistance. Therapist will hold the position for 7-10 seconds. Then a 30 seconds stretch will be given and the process will be repeated three times.

**Category**

Rehabilitation

**2****Description**

Control group B: This group will comprise of conventional therapy for the participants. Conventional therapy will include heating pad for 15-20 minutes and soft tissue release for 5 minutes.

**Category**

Rehabilitation

**Recruitment centers****1****Recruitment center****Name of recruitment center**

Physiotherapy department, Hayatabad medical complex, Peshawar khyber pakhtoonkhwa, Pakistan

**Full name of responsible person**

Dr. Zara PT

**Street address**

Phase 4 Hayatabad, Peshawar

**City**

Pashto

**Postal code**

25000

**Phone**

+92 313 9913036

**Email**

zara.kmu20@gmail.com

**Sponsors / Funding sources****1****Sponsor****Name of organization / entity**

Khyber medical university

**Full name of responsible person**

Dr. Aatik Arsh PT

**Street address**

F1 Phase-6 Rd, Phase 5 Hayatabad

**City**

Peshawar

**Postal code**

25000 (25100)

**Phone**

+92 344 6997046

**Email**

aatikarshkmu@yahoo.com

**Grant name****Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Khyber medical university

**Proportion provided by this source**

50

**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**

Persons

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

Khyber medical university

**Full name of responsible person**

Dr. Aatik Arsh PT

**Position**

Assistant professor

**Latest degree**

Master

**Other areas of specialty/work**

Physiotherapy

**Street address**

F1 Phase-6 Rd, Phase 5 Hayatabad

**City**

Peshawar

**Province**

Khyber Pakhtoonkhwa

**Postal code**

25000

**Phone**

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**Email**

aatikarshkmu@yahoo.com

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

Khyber medical university

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**Person responsible for updating data**

**Contact**

**Name of organization / entity**

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**Sharing plan**

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

Yes - There is a plan to make this available

**Study Protocol**

Yes - There is a plan to make this available

**Statistical Analysis Plan**

Yes - There is a plan to make this available

**Informed Consent Form**

No - There is not a plan to make this available

**Clinical Study Report**

Yes - There is a plan to make this available

**Analytic Code**

Yes - There is a plan to make this available

**Data Dictionary**

Yes - There is a plan to make this available

**Title and more details about the data/document**

I will provide study protocols, data analysis, codes

**When the data will become available and for how long**

After completion of my thesis and will provide for long time

**To whom data/document is available**

To IRCT and other members

**Under which criteria data/document could be used**

For research and educational purposes

**From where data/document is obtainable**

from websites and journals

**What processes are involved for a request to access data/document**

online

**Comments**