

Clinical Trial Protocol

Iranian Registry of Clinical Trials

09 Jun 2026

Effects of Instrument-Assisted Soft Tissue Mobilization (IASTM) on trigger points of the cervical and lumbar region among sedentary individuals

Protocol summary

Study aim

To evaluate the effects of instrument-assisted soft tissue mobilization on trigger points of the cervical and lumbar region among sedentary individuals

Design

The research will use a prospective randomized control trial as a study design. a study design in which participants are randomly assigned to either an experimental or control group. A hypothesis may be tested to see which variables are most likely to be significant explanatory factors.

Settings and conduct

Data will be collected from department of Physical and Rehabilitative Medicine of Memon Medical Institute Hospital Karachi

Participants/Inclusion and exclusion criteria

Inclusion Criteria: • 18 - 40 years of age male and female both • Cervical and lumbar pain more than 6 months • Pain intensity of at least 3 in the numeric pain scale
Exclusion Criteria: • Any type of trauma related to pain area • Acute Fractures • Tuberculosis of spine • Who has history of whiplash injury • History of head, neck, cervical spinal surgery • History of cervical radiculopathy • Diagnosed fibromyalgia and myopathy • History of cancer in relevant area • Myofascial therapy within the past month • Who has taking any medicine for psychiatric disorder

Intervention groups

Intervention group: 25 participants will be received instrument-assisted soft tissue mobilization treatment technique using ergon tool. Along with ergon technique conventional treatment including hot pack 15 minutes, strengthening exercises of all weak cervical and lumbar muscles with 10-12 repetitions of each muscle would be performed. Stretching exercises of all tight cervical and lumbar muscles 3-6 repetition with 10 seconds hold
Control Group: 25 participants will be received only conventional treatment same as included in intervention group

Main outcome variables

Neck Disability Index, Pain Sensitivity Questionnaire, Modified Somatic Perception Questionnaire

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20220804055615N4**

Registration date: **2023-03-29, 1402/01/09**

Registration timing: **registered_while_recruiting**

Last update: **2023-03-29, 1402/01/09**

Update count: **0**

Registration date

2023-03-29, 1402/01/09

Registrant information

Name

Mohabbat Ali

Name of organization / entity

Memon Medical Intitute Hospital

Country

Pakistan

Phone

+92 21 99261810

Email address

ramal_209@yahoo.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-03-15, 1401/12/24

Expected recruitment end date

2023-04-01, 1402/01/12

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effects of Instrument-Assisted Soft Tissue Mobilization (IASTM) on trigger points of the cervical and lumbar region among sedentary individuals

Public title

Effects of Instrument-Assisted Soft Tissue Mobilization (IASTM) on trigger points versus manual Exercises

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Age between 18 to 40 years are included Who having cervical and lumbar pain more than 6 months Patients diagnosed with at least active trigger points in cervical & lumbar region Patients having pain intensity of at least 3 in the numeric pain scale

Exclusion criteria:

If the pain is related to any trauma or fracture Patients with tuberculosis of spine Patients with any types of wounds History of infections or any other cause of back pain not due to muscles spasm or trigger point If the patients have a history of whiplash injury If the patients have history of head, neck and cervical spinal surgery If the patients have a history of cervical radiculopathy If the patients have diagnosed with fibromyalgia and myopathy If the patients have history of cancer at relevant area of body If the patients get the myofascial physical therapy treatment within the past one month If the patients are taking any anti-psychotic medicine

Age

From **18 years** old to **40 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **50**

Randomization (investigator's opinion)

Randomized

Randomization description

Block randomization will be used in this study. This method is used to ensure a balance in sample size across groups over time. Blocks are small and balanced with predetermined group assignments, which keeps the number of participants in each group similar at all times. The block size is determined with 2 treatment groups, a block size of 4. After block size has been determined, all possible balanced combinations of assignment within the block (ie, an equal number for all groups within the block) will be calculated. Blocks are then randomly chosen to determine the participants' assignment into the groups.

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**

Institutional Review Board Memon Medical Institute Hospital

Street address

Safoora Goth Scheme 33

City

Karachi

Postal code

75270

Approval date

2022-07-14, 1401/04/23

Ethics committee reference number

IRB/MMIH/2022/03

Health conditions studied**1****Description of health condition studied**

To treat the myofascial trigger points in cervical and lumbar region

ICD-10 code**ICD-10 code description****Primary outcomes****1****Description**

Instrumental versus manual exercises for trigger point release

Timepoint

The outcomes will be measured at the baseline and re-measured after the 18 sessions. The intervention protocol is based on three sessions per week for six weeks.

Method of measurement

Outcome will measure by numeric pain rating scale, neck disability index, pain sensitivity questionnaire and modified somatic perception questionnaire

Secondary outcomes

1

Description

Muscle power

Timepoint

Before and after 18 session of treatment

Method of measurement

Manual muscle power test

2

Description

To check range of motion before and after intervention

Timepoint

Before and after 18 session of treatment

Method of measurement

Range of motion will be check by inclinometer

3

Description

To check pain scale before an after the interventions

Timepoint

Before and after 18 session of treatment

Method of measurement

Pain will be check by numeric pain scale

Intervention groups

1

Description

Twenty five participants will be received instrument-assisted soft tissue mobilization treatment technique using ergon tool. The position of patients will be in prone lying. With the help of ergon tool, we give strokes (sweeping motion) proximal to distal or distal to proximal in both ways over the myofascial restrictions for 10 minutes. Along with ergon technique conventional treatment including hot pack 15 minutes, strengthening exercises of all weak cervical and lumbar muscles with 10-12 repetitions of each muscle would be performed. Stretching exercises of all tight cervical and lumbar muscles 3-6 repetition with 10 seconds hold. Every patient undergoes 45 minutes' treatment session, 3 sessions/ week for 6 weeks. Assessment will be performed at baseline and at the end of 6th week treatment protocol.

Category

Rehabilitation

2

Description

Twenty five participants will be received only conventional treatment including hot pack therapy for 15 minutes. Strengthening exercises of all weak cervical and lumbar muscles with 10-12 repetitions of each muscle would be performed. Stretching exercises of all tight cervical and lumbar muscles, 3-6 repetitions with 10 seconds hold. Every patient undergoes 45 minutes' treatment session, 3 sessions/ week for 6 weeks. Assessment will be performed at baseline and at the end

of 6th week treatment protocol.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Memon Medical Institute Hospital

Full name of responsible person

Dr. Mohabbat Ali

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Memon College of Physical and Rehasbilitaive Medicine

Full name of responsible person

Dr. Mohabbat Ali Principal of MCPRM

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Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Memon College of Physical and Rehasbilitaive Medicine

Proportion provided by this source

100

Public or private sector

Private
Domestic or foreign origin
Domestic
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
Academic

Person responsible for general inquiries

Contact

Name of organization / entity
Memon Medical Institute Hospital
Full name of responsible person
Dr. Mohabbat Ali
Position
Assistant Professor
Latest degree
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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

analytical data will be avail in published article or can be request by email to get the data

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

No - There is not a plan to make this available

Analytic Code

No - There is not a plan to make this available

Data Dictionary

No - There is not a plan to make this available