

Clinical Trial Protocol

Iranian Registry of Clinical Trials

02 Jul 2026

Comparison of the Effectiveness of Cupping and Proprioceptive Neuromuscular Facilitation (PNF) on neck and shoulder muscle pain and Range of Motion in neck and shoulder pain patients

Protocol summary

Study aim

-Determination of the effect of ventilation and neuromuscular facilitation of deep sense on pain intensity and range of motion of neck and shoulder area

Design

A clinical trial with two groups of intervention and control group, 4-of permutation blocks, No blinding

Settings and conduct

Participants are asked to attend the research site at Tehran University of Medical Sciences for a period of four weeks, three days a week. Prior to starting the first session, participants are asked to fill out a consent form, demographic information and, a pain questionnaire. Hold Relax method is used to perform PNF. Visual Analogue Scale (VAS) questionnaire is used to measure pain severity. In addition to the questionnaire, the goniometer is measured using the neck and shoulder range of motion in Extension, Flexion and, Rotation.

Participants/Inclusion and exclusion criteria

Inclusion criteria: People between 30 and 70 years with a history of neck pain over the past year or more, at least twice a week, unless the treating physician has specified a specific cause for neck pain and pain intensity based on visual acuity of pain greater than 30 mm: Exclusion criteria: People with severe osteoporosis, pregnancy, eczema, epilepsy, spine fractures, spine surgery history, and Whiplash during the past year

Intervention groups

1.cupping 2.Proprioceptive Neuromuscular Facilitation
3.Control

Main outcome variables

The severity of neck and shoulder pain: Range of motion of the neck and shoulder

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20190918044812N1**
Registration date: **2019-10-21, 1398/07/29**
Registration timing: **registered_while_recruiting**

Last update: **2019-10-21, 1398/07/29**

Update count: **0**

Registration date

2019-10-21, 1398/07/29

Registrant information

Name

Fatemeh Noughani

Name of organization / entity

Country

Iran (Islamic Republic of)

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+98 21 6693 6968

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-10-07, 1398/07/15

Expected recruitment end date

2019-10-22, 1398/07/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of the Effectiveness of Cupping and

Proprioceptive Neuromuscular Facilitation (PNF) on neck and shoulder muscle pain and Range of Motion in neck and shoulder pain patients

Public title

The Effect of Cupping and Proprioceptive Neuromuscular Facilitation (PNF) on neck and shoulder muscle pain and Range of Motion

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

People between the ages of 30 and 70 The history of neck pain over the past year or more, at least twice a week, with mechanical neck and shoulder pain The pain intensity was more than 30 mm according to the visual analogue scale.

Exclusion criteria:

severe osteoporosis Pregnancy Eczema Epilepsy Spine fractures Spine surgery history Whiplash over the past year

Age

From **30 years** old to **70 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **36**

Randomization (investigator's opinion)

Randomized

Randomization description

According to the method of permutation blocks of size 4, individuals are randomly divided into two equal 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

Ethics committee of Tehran University of Medical Sciences

Street address

School of Nursing and Midwifery, Tehran University of Medical Sciences, Nosrat St., Tohid Sq., Tehran I.IRAN

City

Tehran

Province

Tehran

Postal code

1419733171

Approval date

2019-06-25, 1398/04/04

Ethics committee reference number

IR.TUMS.FNM.REC.1398.068

Health conditions studied

1

Description of health condition studied

Neck and shoulder pain

ICD-10 code

G89

ICD-10 code description

Pain, not elsewhere classified

2

Description of health condition studied

Neck and Shoulder Range of Motion

ICD-10 code

G89.29

ICD-10 code description

Other chronic pain

Primary outcomes

1

Description

Severity of neck and Shoulder pain Visual Analogue scale questionnaire

Timepoint

Before intervention, at the beginning of each intervention session. End of intervention session

Method of measurement

Visual Analogue scale questionnaire

2

Description

Neck and Shoulder Range of Motion

Timepoint

Before intervention, at the beginning of each intervention session. End of intervention session

Method of measurement

Goniometer

Secondary outcomes

1

Description

-

Timepoint

-

Method of measurement

-

Intervention groups

1

Description

Intervention group1: Cupping(12 sessions 3 days a week hot and dry cupping for 10-20 minutes in the neck and shoulder area with glass mug and industrial alcohol).

Category

Treatment - Devices

2

Description

Intervention group2: Proprioceptive Neuromuscular Facilitation (PNF)(In Hold Relax method, where the volunteer is asked to sit on a chair, the researcher stands behind the volunteer and asks him to raise his hands so that the elbow rests on his shoulder, then the researcher with his hands Put the candidate's arms in front of him and ask him to move his hands for ten seconds against the resistance the researcher exerts on his arms (the researcher must adjust his strength with the strength of the volunteer). The volunteer finishes in relaxation mode within ten seconds and repeats the move for 3-5 times).

Category

Treatment - Devices

3

Description

Control group3: sample

Category

Treatment - Devices

Recruitment centers

1

Recruitment center

Name of recruitment center

tehran university of medical science

Full name of responsible person

Elham Janani

Street address

No.588,Food & Drug Administration Of Tehran,
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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Tehran University of Medical Sciences

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?

Yes

Title of funding source

Tehran University of Medical Sciences

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

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Tehran University of Medical Sciences

Full name of responsible person

Fatemeh Noghani

Position

Associate professor

Latest degree

Ph.D.

Other areas of specialty/work

Psychology

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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