

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Comparison of the effect of scapulothoracic and upper thoracic mobilization and cervical manual therapy techniques in patients with chronic neck pain and scapula dyskinesia

#### Protocol summary

##### Study aim

The present study is designed to compare of the effect of of scapulothoracic, upper thoracic mobilization, and cervical manual therapy techniques in patients with chronic neck pain and scapula dyskinesia.

##### Design

A clinical trial with a control group, double-blind, randomized, is performed on 80 patients. Simple randomization is used for randomization.

##### Settings and conduct

This study is being conducted in centers affiliated with Kerman University of Medical Sciences. Patients with neck pain associated with scapular dyskinesia are divided into three groups: control, thoracic mobilization, and manual therapy of the neck based on simple randomization. The two-blind study will be conducted in such a way that people are assigned to groups and patients are evaluated by people who are unaware.

##### Participants/Inclusion and exclusion criteria

Patients with neck pain and shoulder pain manifestations in both sexes aged 25-50 years are included in the study. In addition, subjects were included if they had at least one active or latent trigger point in each of the neck muscles. Patients with a history of trauma or surgery to the neck or shoulder, cervical radiculopathy, and those with shoulder-related pathologies such as shoulder impingement syndrome, frozen shoulder, shoulder instability, or rotator cuff tear were also excluded from the study.

##### Intervention groups

Mobilization techniques: Maitland mobilization with grades 3 and 4 is applied to the involved vertebra. They also receive 6 sessions of scapular movement for two weeks. Manual therapy technique of the neck: Soft tissue release is a position that is performed to reduce local muscle tightness 3 sessions per week for 2 weeks. Control group: After determining the involved points, the

therapist applies a soft and superficial massage to the involved muscles.

##### Main outcome variables

1. Pain intensity 2. Disability index 3.Cervical range of motion

#### General information

##### Reason for update

##### Acronym

chronic neck pain and scapula dyskinesia

##### IRCT registration information

IRCT registration number: **IRCT20240211060958N4**

Registration date: **2025-07-07, 1404/04/16**

Registration timing: **prospective**

Last update: **2025-07-07, 1404/04/16**

Update count: **0**

##### Registration date

2025-07-07, 1404/04/16

##### Registrant information

##### Name

tahereh rezaeian

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 34 3132 5367

##### Email address

tahere.rezaiyan@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2025-07-28, 1404/05/06

##### Expected recruitment end date

2025-12-21, 1404/09/30

**Actual recruitment start date**

empty

**Actual recruitment end date**

empty

**Trial completion date**

empty

**Scientific title**

Comparison of the effect of scapulothoracic and upper thoracic mobilization and cervical manual therapy techniques in patients with chronic neck pain and scapula dyskinesia

**Public title**

Comparison of the effect of scapulothoracic and upper thoracic mobilization and cervical manual therapy techniques in patients with Comparison of the effect of scapulothoracic and upper thoracic mobilization and cervical manual therapy techniques in patients with chronic neck pain and scapula dyskinesia

**Purpose**

Treatment

**Inclusion/Exclusion criteria**

**Inclusion criteria:**

All participants are aged from 25 to 50 years Neck pain and scapular dyskinesia are diagnosed with confirmation from a specialist. Complaints of neck pain, and shoulder pain more than 3 months before starting study. The present of trigger points (latent or active) in the neck muscles such as levator scapula, SCM, scalen, suboccipital, and upper trapezius. Having neck disability index is 5 or more than 5.

**Exclusion criteria:**

After any spinal surgery or truma, and neck radiculopathy. Severe systematic diseases. Undergoing a treatment program for neck or shoulder muscles at least 6 months prior to the study Consumption of stimulants (caffeine and nicotine) or painkillers at least 8 hours before the study or people who have contraindications to manual therapy Shoulder-related pathologies such as shoulder impingement syndrome, frozen shoulder, shoulder instability, or rotator cuff tear

**Age**

From **25 years** old to **50 years** old

**Gender**

Both

**Phase**

3

**Groups that have been masked**

- Participant
- Investigator

**Sample size**

Target sample size: **60**

More than 1 sample in each individual

Number of samples in each individual: **20**

20 subjects per group

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

Simple randomization: A table of random numbers is

used. Participants are given a number and using the table of random numbers. Therapist randomly starts from a table point in the row or column direction. The therapist can close his eyes and choose a point.

**Blinding (investigator's opinion)**

Double blinded

**Blinding description**

Double-blind study will be done, in this way, the allocation of people to the groups and the assessment of patients are done by people who are unaware of the status of the grouping of patients. Treatment is provided by a specialist physiotherapist and evaluated by a collaborator.

**Placebo**

Used

**Assignment**

Parallel

**Other design features**

**Secondary Ids**

empty

**Ethics committees**

**1**

**Ethics committee**

**Name of ethics committee**

Ethics Committee of the kerman University of Medical Sciences

**Street address**

Kerman University of Medical Sciences, Haft Bagh Square, Kerman Town

**City**

Kerman

**Province**

Kerman

**Postal code**

7616913555

**Approval date**

2024-12-23, 1403/10/03

**Ethics committee reference number**

IR.KMU.REC.1403.464

**Health conditions studied**

**1**

**Description of health condition studied**

Cervical pain

**ICD-10 code**

G54.2

**ICD-10 code description**

Cervical disorders

**Primary outcomes**

**1**

**Description**

Pain intensity

### **Timepoint**

Before, After and 1month follow up

### **Method of measurement**

Visual analog scale

## **Secondary outcomes**

### **1**

#### **Description**

Functional index

#### **Timepoint**

Before, After and 1month follow up

#### **Method of measurement**

Neck Disability Index and Disabilities of Arm, Shoulder and Hand questionnaires

### **2**

#### **Description**

Cervical range of motion

#### **Timepoint**

Before, after and 1month follow up

#### **Method of measurement**

Goniometer

## **Intervention groups**

### **1**

#### **Description**

Intervention group: Scapulothoracic and thoracic joint mobilization. Maitland mobilization technique with grades 3 and 4 is applied to the involved vertebra and scapula. The techniques are applied in 10 sets of 10 repetitions with 30 seconds of rest between each set. Each movement was held for 5 seconds and there was a 3 second rest between each movement in each set. They also received 6 sessions of scapular mobilization over a two-week period.

#### **Category**

Rehabilitation

### **2**

#### **Description**

Intervention group: Manual therapy of the neck. In this group, soft tissue release and muscle stretching of the neck muscles (levator scapulae, sternocleidomastoid, scalene, suboccipital, and upper trapezius) is performed. Soft tissue release is a posture used to reduce local muscle tightness. Patients in this group received each technique with 5 repetitions, 20 seconds hold, once a day for 6 sessions.

#### **Category**

Rehabilitation

### **3**

#### **Description**

Control group: While the patient is side lying position, the therapist applies soft and superficial massage on the

involved muscles. The fingertips of each therapist's hand are placed in contact with the related muscles and a surface massage is performed. The number of sessions is the same as the intervention group.

#### **Category**

Placebo

## **Recruitment centers**

### **1**

#### **Recruitment center**

##### **Name of recruitment center**

Medical centers affiliated to Kerman University of Medical Sciences

##### **Full name of responsible person**

Tahereh Rezaian

##### **Street address**

Kerman University of Medical Sciences, Haft Bagh Square, Kerman Town

##### **City**

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##### **Province**

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##### **Postal code**

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##### **Phone**

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##### **Email**

tahere.rezaian@gmail.com

## **Sponsors / Funding sources**

### **1**

#### **Sponsor**

##### **Name of organization / entity**

Kerman University of Medical Sciences

##### **Full name of responsible person**

Hamid Sharifi

##### **Street address**

Kerman University of Medical Sciences, Haft Bagh Square, Kerman Town

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##### **Province**

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##### **Postal code**

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##### **Phone**

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##### **Email**

sharifhami@gmail.com

#### **Grant name**

#### **Grant code / Reference number**

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

Yes

#### **Title of funding source**

Kerman 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**

Kerman University of Medical Sciences

**Full name of responsible person**

tahereh rezaeian

**Position**

Assistant Professor of Kerman University of Medical Sciences

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Physiotherapy

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tahere.rezaiyan@gmail.com

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

Kerman University of Medical Sciences

**Full name of responsible person**

tahereh rezaeian

**Position**

Assistant Professor of Kerman University of Medical Sciences

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Physiotherapy

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**Person responsible for updating data****Contact****Name of organization / entity**

Kerman University of Medical Sciences

**Full name of responsible person**

tahereh rezaeian

**Position**

Assistant Professor of Kerman University of Medical Sciences

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Physiotherapy

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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**

Yes - There is 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**

Some of the data, such as information about the consequences, can be shared.

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

Starting the access period: 6 months after publication the results.

**To whom data/document is available**

Researchers working in academic institutions.

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

Only statistical analyses can be used to find treatment for improvement of patients.

**From where data/document is obtainable**

Applicants can be guided by email to the authors(tahere.rezaiyan@gmail.com).

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

First, they will email the authors of the study and we Will be answered within a week.

**Comments**