# Clinical Trial Protocol
# Iranian Registry of Clinical Trials

22 Nov 2026

## The effect of active release and release of trigger points on pain, disability and neck strength in girls with non-specific chronic neck pain

### Protocol summary

**Study aim**
The aim of the present study is to investigate the effect of active release technique and trigger point release on pain, disability, and neck muscle strength in female students with non-specific chronic neck pain.

**Design**
This study is designed as a randomized clinical trial with three groups (active release therapy, myofascial release, and control group) over a period of 2 weeks, with 3 sessions per week

**Settings and conduct**
Faculty of Physical Education and Sport Sciences, Razi University, Kermanshah

**Participants/Inclusion and exclusion criteria**
Inclusion criteria included: Gender and educational status: Participants must be female students within a certain age range (e.g., 25 to 35 years old). Pain diagnosis: Having chronic nonspecific neck pain for at least 3 months as confirmed by a physician. Pain level: Having a minimum specified level of pain (e.g., a score of 3 or more on the Visual Analogue Scale (VAS)). And exclusion criteria included: Underlying diseases: Having diseases such as rheumatoid arthritis, cervical disc herniation, or severe structural injuries in the neck. Surgical history: Having a history of surgery in the neck or spine. Neurological problems: Having neurological symptoms such as tingling, numbness, or progressive muscle weakness in the upper limbs.

**Intervention groups**
The first group will perform Active Release Technique (ART) exercises over two weeks, totaling six sessions, involving deep trapezius muscle stretching and neck movements. The second group will undergo Myofascial Release (MFR) exercises during the same period, involving pressure application and specific neck motions, while the third group, as the control, will receive no intervention

**Main outcome variables**
Pain, Disability, and Strength of Neck Muscles

### General information

**Reason for update**

**Acronym**

**IRCT registration information**
IRCT registration number: **IRCT20250221064791N1**
Registration date: **2025-05-07, 1404/02/17**
Registration timing: **registered_while_recruiting**

Last update: **2025-05-07, 1404/02/17**
Update count: **0**

**Registration date**
2025-05-07, 1404/02/17

**Registrant information**

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The University of Razi

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**Recruitment status**
**Recruitment complete**

**Funding source**

**Expected recruitment start date**
2025-04-09, 1404/01/20

**Expected recruitment end date**
2025-05-10, 1404/02/20

**Actual recruitment start date**
empty

**Actual recruitment end date**
empty

**Trial completion date**
empty

**Scientific title**
The effect of active release and release of trigger points on pain, disability and neck strength in girls with non-specific chronic neck pain

**Public title**
The Effect of Active Release Technique and Trigger Point Release on Pain, Disability, and Neck Strength in Girls with Non-Specific Chronic Neck Pain

**Purpose**
Prevention

**Inclusion/Exclusion criteria**

**Inclusion criteria:**
Gender and Age: Participants must be females within a specified age range (e.g., 18 to 30 years old). Pain Diagnosis: Having non-specific chronic neck pain for at least 3 months, confirmed by a physician or specialist. Pain Level: Having a minimum pain score (e.g., a score of 3 or higher on the Visual Analog Scale (VAS)). No Concurrent Treatments: Participants should not be undergoing other treatments (e.g., physiotherapy, anti-inflammatory medications, or injections) during the study.

**Exclusion criteria:**
Underlying Medical Conditions: Presence of serious conditions such as rheumatoid arthritis, cervical disc herniation, or severe structural damage in the neck area. Surgical History: A history of surgery in the neck or spine region. Neurological Issues: Presence of neurological symptoms such as tingling, numbness, or progressive muscle weakness in the upper limbs. Pregnancy or Specific Conditions: Pregnancy or having specific medical conditions that may affect the study outcomes.

**Age**
From **18 years** old to **30 years** old

**Gender**
Female

**Phase**
N/A

**Groups that have been masked**

- Participant

**Sample size**
Target sample size: **51**

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

**Randomization description**
In the present study, to ensure the random allocation of participants into groups, a simple randomization method was employed. To this end, each participant was first assigned a unique identification number. Subsequently, using a computer-generated random number table, participants were randomly assigned to one of two groups (intervention or control group) without any subjective interference from the researcher. This process ensures that each participant has an equal chance of being placed in either group and that no bias influences the allocation procedure.

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

**Blinding description**
In the present study, a single-blind method of blinding was employed. In this approach, participants were not informed about whether they were assigned to the intervention group or the control group. This measure was taken to reduce the influence of personal expectations and biases of the participants on the study outcomes. However, the researchers responsible for implementing the interventions (such as aerobic exercises or other protocols) were aware of the group assignments. To ensure the effectiveness of this blinding method, participants were asked to refrain from discussing their group assignments with others throughout the study. Additionally, similar and standardized instructions were provided to both groups to minimize any perceived differences between them for the participants. This approach helps reduce errors caused by participant bias and enhances the scientific validity of the study.

**Placebo**
Used

**Assignment**
Parallel

**Other design features**

## Secondary Ids

empty

## Ethics committees

### 1

**Ethics committee**

**Name of ethics committee**
Ethics Committee of Razi University of Kermanshah

**Street address**
No. 9, University Blvd, Kermanshah Province, Razi University of Kermanshah

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**Province**
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**Postal code**
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**Approval date**
2023-11-11, 1402/08/20

**Ethics committee reference number**
IR.RAZI.REC.1402.078

## Health conditions studied

### 1

**Description of health condition studied**
Non-specific chronic neck pain

**ICD-10 code**
C76.0

**ICD-10 code description**
Malignant neoplasm of head, face and neck

## Primary outcomes

**1**

**Description**
Pain
**Timepoint**
Before the intervention and after the end of the study
**Method of measurement**
Pain rating scales such as the Visual Analogue Scale (VAS) or the Numerical Rating Scale (NRS) are used. In these methods, the individual evaluates their pain level based on a scale (e.g., from 0 to 10).

**2**

**Description**
Disability
**Timepoint**
Before the intervention and after the end of the study
**Method of measurement**
Neck disability questionnaires such as the Neck Disability Index (NDI) are used. These questionnaires assess daily activities that are affected by neck pain or limitation.

**3**

**Description**
Neck Muscle Strength
**Timepoint**
Before the intervention and after the end of the study
**Method of measurement**
Hand-held dynamometers or strength measuring devices are used to assess neck muscle strength.

## Secondary outcomes

empty

## Intervention groups

**1**

**Description**
Intervention group: Active Release Training - ART): This group will perform active release training 3 sessions per week for 2 weeks (6 sessions in total). In this method, the subject sits on a stool and the therapist applies deep tension to the trapezius muscle using the thumb. The subject is then asked to flex and rotate the neck. This process is repeated 3 to 5 times
**Category**
Prevention

**2**

**Description**
Intervention group: Myofascial Release Training - MFR: This group will also perform myofascial release training 3 sessions per week for 2 weeks (6 sessions in total). In this method, the therapist applies pressure and sliding to the base of the neck or upper shoulder area using the forearm or ulnar margin of the palm. The subject is asked to bend the head to the side and rotate it in the opposite direction during this movement. This is repeated 3 to 4 times.
**Category**
Prevention

**3**

**Description**
Control group: This group will not receive any intervention and will be considered as the control group.
**Category**
Prevention

## Recruitment centers

**1**

**Recruitment center**
**Name of recruitment center**
Razi University of Kermanshah
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## Sponsors / Funding sources

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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**
Razi University of Kermanshah
**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**
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## Person responsible for updating data

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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**
Not applicable
**Data Dictionary**
Not applicable
**Title and more details about the data/document**
All data will be recorded in SPSS and can be presented.
**When the data will become available and for how long**
Access begins 9 months after publication of all articles
**To whom data/document is available**
Only available to researchers working in academic and scientific institutions.
**Under which criteria data/document could be used**
All data can be used for citation.
**From where data/document is obtainable**
Moghadamhanan@gmail.com

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

If the explanation of the need for the data is convincing, it will be delivered within three days.

**Comments**