Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 Jun 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

Name

Hanan Moghadam

Name of organization / entity

The University of Razi

Country

Iran (Islamic Republic of)

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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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Kermanshah

Province
Kermanshah

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
Full name of responsible person
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Sponsors / Funding sources

1

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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
Name of organization / entity
Razi University of Kermanshah
Full name of responsible person
Manouchehr Heydari
Position
Assistant Professor of Sports Pathology
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Other areas of specialty/work
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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