Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparative Efficacy of Cervical Thoracic Spine Stabilization and Dynamic Exercises in Improving Pain and Functional Status among Cervical Spondylosis

Protocol summary

Study aim

To compare the effectiveness of Cervical-Thoracic Spine Stabilization Exercises and Dynamic Cervical Exercises in reducing pain intensity and improving functional disability among patients with cervical spondylosis.

Design

Single-centre, single-blind, parallel-group quasi-experimental pretest-posttest study with 40 participants. Allocation was based on clinical availability. Outcomes were assessed at baseline, two weeks, and four weeks.

Settings and conduct

The study was conducted at the Department of Physiotherapy, DHQ Hospital, Okara, after ethical approval (Ref No. LIMIT/DPT/2025/15). Written informed consent was obtained. Participants were allocated by an independent researcher, and the outcome assessor was blinded to group allocation.

Participants/Inclusion and exclusion criteria

Forty adults (30–55 years) with radiologically confirmed cervical spondylosis, chronic neck pain (>3 months), and mild-to-moderate disability were included. Patients with cervical surgery, trauma, radiculopathy, myelopathy, other major musculoskeletal disorders, pregnancy, or lactation were excluded.

Intervention groups

All participants received conventional physiotherapy consisting of a 15-minute hot pack and cervical stretching exercises before the exercise intervention. Group A received Cervical-Thoracic Spine Stabilization Exercises, while Group B received Dynamic Cervical Exercises. Both interventions were supervised, performed five days per week for four weeks, with three sets of ten repetitions per session and progression according to patient tolerance.

Main outcome variables

Visual Analogue Scale (VAS) and Neck Disability Index (NDI)

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20210331050793N1**
Registration date: **2026-07-15, 1405/04/24**
Registration timing: **retrospective**

Last update: **2026-07-15, 1405/04/24**
Update count: **0**

Registration date

2026-07-15, 1405/04/24

Registrant information

Name

Sumbal Salik

Name of organization / entity

King Edward Medical University , Lhaore

Country

Pakistan

Phone

+92 42 99330102

Email address

sumbalsalik1@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2025-09-01, 1404/06/10

Expected recruitment end date

2025-09-30, 1404/07/08

Actual recruitment start date

2025-09-01, 1404/06/10

Actual recruitment end date

2025-09-30, 1404/07/08

Trial completion date

2025-10-24, 1404/08/02

Scientific title
Comparative Efficacy of Cervical Thoracic Spine Stabilization and Dynamic Exercises in Improving Pain and Functional Status among Cervical Spondylosis

Public title
Comparison of Two Exercise Programs for Reducing Pain and Improving Neck Function in Patients with Cervical Spondylosis

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Age between 30 and 55 years. Male or female patients. Radiologically confirmed cervical spondylosis Neck pain persisting for more than three months. Willingness to participate and provide written informed consent.

Exclusion criteria:
Previous cervical spine surgery. History of cervical trauma or fracture. Cervical radiculopathy or cervical myelopathy. Other musculoskeletal disorders requiring physiotherapy treatment. Pregnancy and Lactation.

Age
From **30 years** old to **55 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Outcome assessor

Sample size
Target sample size: **40**
Actual sample size reached: **40**

Randomization (investigator's opinion)
Not randomized

Randomization description

Blinding (investigator's opinion)
Single blinded

Blinding description
The outcome assessor was blinded to each participant's intervention throughout the study to minimize assessment bias. Due to the nature of the physiotherapy interventions, the treating physiotherapist and participants were aware of the allocated intervention. The researcher responsible for group allocation was independent of the outcome assessment process.

Placebo
Not used

Assignment
Parallel

Other design features
A single-centre, single-blind, parallel-group quasi-experimental pretest-posttest study involving 40 participants. Participants were recruited using non-probability purposive sampling and allocated to two intervention groups based on clinical availability and scheduling by an independent researcher. The outcome assessor was blinded to group allocation. Both groups received four weeks of supervised treatment, and outcome measures were assessed at baseline, two weeks, and four weeks.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Research & Ethics Committee, Department of Physical Therapy, The Limit Institute of Health Sciences

Street address
The Limit Institute of Health Sciences, Pakpattan Road, Sahiwal, Punjab, Pakistan

City
Sahiwal

Postal code
57000

Approval date
2025-04-02, 1404/01/13

Ethics committee reference number
LIMIT/DPT/2025/15

Health conditions studied

1

Description of health condition studied
Cervical spondylosis is a degenerative disorder of the cervical spine characterized by chronic neck pain, reduced cervical mobility, and functional disability. This study evaluates the effectiveness of cervical-thoracic spine stabilization exercises compared with dynamic exercises in patients with cervical spondylosis.

ICD-10 code
M47.812

ICD-10 code description
Spondylosis without myelopathy or radiculopathy, cervical region

Primary outcomes

1

Description
Pain intensity

Timepoint
Measured at baseline (before intervention), after 2 weeks of intervention, and after 4 weeks (end of intervention).

Method of measurement
Pain intensity was measured using a 10-cm Visual Analogue Scale (VAS), where 0 indicates no pain and 10 indicates the worst imaginable pain.

2

Description

Functional disability

Timepoint

Measured at baseline (before intervention), after 2 weeks of intervention, and after 4 weeks (end of intervention)

Method of measurement

Functional disability was assessed using the Neck Disability Index (NDI) questionnaire.

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group 1: Participants received conventional physiotherapy (15-minute hot pack and cervical stretching exercises) followed by Cervical-Thoracic Spine Stabilization Exercises, including chin tucks with cervical retraction, scapular retraction with thoracic extension, quadruped cervical-thoracic stabilization, and upper thoracic stabilization on a Swiss ball. Treatment was provided 5 days per week for 4 weeks.

Category

Rehabilitation

2

Description

Intervention group 2: Participants received conventional physiotherapy (15-minute hot pack and cervical stretching exercises) followed by Dynamic Cervical Exercises, including resisted cervical flexion, extension, rotation, lateral flexion, shoulder shrugs, and scapular mobility exercises. Treatment was provided 5 days per week for 4 weeks.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

District Headquarters (DHQ) Hospital, Okara

Full name of responsible person

Sumbal Salik

Street address

Eid Gah Road, Okara, Punjab, Pakistan

City

Okara

Postal code

56300.

Phone

+92 44 9200091

Email

dhqokara@yahoo.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

DHQ Hospital, Okara

Full name of responsible person

Head, Department of Physiotherapy

Street address

Eid Gah Road, Okara

City

okara

Postal code

56300

Phone

+92 44 9200090

Email

dhqokara@yahoo.com

Grant name

Grant code / Reference number

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

Yes

Title of funding source

DHQ Hospital, Okara

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

Department of Physiotherapy, DHQ Hospital, Okara

Full name of responsible person

Sumbal Salik

Position

Consultant Physiotherapist

Latest degree

Master

Other areas of specialty/work

Physiotherapy

Street address

Eid Gah Road, Okara

City

Okara

Province

Punjab

Postal code

56300

Phone

+92 318 4552151

Email

sumbalsalik1@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity
Department of Physiotherapy, DHQ Hospital, Okara

Full name of responsible person
Sumbal Salik

Position
Consultant Physiotherapist

Latest degree
Master

Other areas of specialty/work
Physiotherapy

Street address
Okara

City
okara

Province
Punjab

Postal code
56300

Phone
+92 318 4552151

Email
sumbalsalik1@gmail.com

Person responsible for updating data

Contact

Name of organization / entity
Department of Physiotherapy, DHQ Hospital, Okara

Full name of responsible person
Sumbal Salik

Position
Consultant Physiotherapist

Latest degree
Master

Other areas of specialty/work
Physiotherapy

Street address
Eid Gah Road, Okara

City
okara

Province
Punjab

Postal code
56300

Phone
+92 318 4552151

Email
sumbalsalik1@gmail.com

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
Deidentified individual participant data will not be made publicly available due to ethical and confidentiality considerations and because no data-sharing agreement was included in the informed consent process.

Study Protocol
Yes - There is 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
Not applicable

Analytic Code
Not applicable

Data Dictionary
Not applicable

Title and more details about the data/document
Comparative Efficacy of Cervical-Thoracic Spine Stabilization and Dynamic Exercises in Improving Pain and Functional Status among Patients with Cervical Spondylosis. The complete study protocol, including the study objectives, methodology, interventions, eligibility criteria, outcome measures, and statistical methods, will be made available upon reasonable request.

When the data will become available and for how long
The study protocol will be available from the date of publication of the study results and will remain available for at least five years thereafter.

To whom data/document is available
The study protocol will be available to qualified researchers, clinicians, and academic investigators upon reasonable request for research or educational purposes.

Under which criteria data/document could be used
The protocol may be used for academic research, scientific collaboration, systematic reviews, replication studies, and educational purposes. Requests will be reviewed by the corresponding author to ensure that the intended use is consistent with ethical and scientific standards.

From where data/document is obtainable
The study protocol may be obtained by contacting the corresponding author via the email address provided in the trial registration record.

What processes are involved for a request to access data/document
Interested researchers should submit a request by email describing the purpose of the request and the intended use of the protocol. Requests will be reviewed by the corresponding author, and the protocol will be shared within approximately two weeks, provided the request is for legitimate academic or scientific purposes.

Comments
No deidentified individual participant data, informed consent forms, statistical analysis plans, analytic code, clinical study reports, or data dictionary will be shared as part of this study.