

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

The effect and durability of dynamic neuromuscular stabilization training on pain, disability, mental health, quality of life, range of motion, lumbopelvic proprioception, endurance, and balance in women with chronic nonspecific low back pain

Protocol summary

Registration timing: **prospective**

Study aim

The effect and durability of dynamic neuromuscular stabilization training on pain, disability, mental health, quality of life, range of motion, lumbopelvic proprioception, endurance, and balance in women with chronic nonspecific low back pain

Last update: **2026-01-09, 1404/10/19**

Update count: **0**

Registration date

2026-01-09, 1404/10/19

Design

Intervention group: The intervention group performed dynamic neuromuscular stabilization exercises for 15 weeks, 3 sessions per week, each session lasting 45 to 60 minutes.

Registrant information

Name

Maral Amini

Name of organization / entity

The University of tehran

Country

Iran (Islamic Republic of)

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Email address

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Settings and conduct

Intervention group: The intervention group performed dynamic neuromuscular stabilization exercises for 15 weeks, 3 sessions per week, each session lasting 45 to 60 minutes.

Recruitment status

Recruitment complete

Funding source

Participants/Inclusion and exclusion criteria

Female gender Age range 40 to 55 years Chronic non-specific low back pain No underlying diseases that affect the results (such as rheumatological diseases, spinal stenosis, etc.) Presence of pain for at least the past 3 months Absence of 3 training sessions Injury and pain during the training period Unwillingness to continue participating in training

Expected recruitment start date

2026-01-30, 1404/11/10

Expected recruitment end date

2026-04-30, 1405/02/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Intervention groups

dynamic neuromuscular stabilization training-Control

Main outcome variables

dynamic neuromuscular stabilization training

Scientific title

The effect and durability of dynamic neuromuscular stabilization training on pain, disability, mental health, quality of life, range of motion, lumbopelvic

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20250208064684N2**

Registration date: **2026-01-09, 1404/10/19**

proprioception, endurance, and balance in women with chronic nonspecific low back pain		Assignment Parallel
Public title The effect and durability of dynamic neuromuscular stabilization training on pain, disability, mental health, quality of life, range of motion, lumbopelvic proprioception, endurance, and balance in women with chronic nonspecific low back pain		Other design features Modality for rehabilitation of patients with chronic non-specific low back pain
Purpose Other		Secondary Ids empty
Inclusion/Exclusion criteria Inclusion criteria: Female gender, age range 40 to55 years, chronic non-specific low back pain, absence of underlying diseases that affect the results (such as rheumatological diseases, spinal stenosis, etc.), presence of pain for at least the past 3 months. Exclusion criteria: Absence from 3 training sessionsInjury and pain during the training periodUnwillingness to continue participating in training		Ethics committees
Age From 40 years old to 55 years old		<u>1</u> Ethics committee Name of ethics committee Research Ethics Committee of University of Mazandaran Street address Pasdaran Street, Babolsar, Mazandaran Province, Iran City babolsar Province Mazandaran Postal code 47416-13534
Gender Female		Approval date 2025-09-28, 1404/07/06
Phase N/A		Ethics committee reference number IR.UMZ.REC.1404.042
Groups that have been masked • Outcome assessor • Data analyser		Health conditions studied
Sample size Target sample size: 32		<u>1</u> Description of health condition studied chronic nonspecific low back pain ICD-10 code ICD-10 code description
Randomization (investigator's opinion) Randomized		<u>2</u> Description of health condition studied chronic nonspecific low back pain ICD-10 code ICD-10 code description
Randomization description Thirty women were selected purposively and conveniently with the approval of an orthopedic specialist based on the inclusion criteria and were placed in three groups and randomly and equally divided into two intervention groups and a control group. In order to randomly assign subjects to the intervention and control groups, a number was assigned to each subject, and the numbers were randomly divided between the three groups using a random number table. In order to conceal the numbers in each group, they were written on paper, and each was kept in a separate opaque sealed envelope. Each subject was asked to choose one of the envelopes and was placed in one of the groups based on the number.		Primary outcomes
Blinding (investigator's opinion) Single blinded		<u>1</u> Description The effect and durability of dynamic neuromuscular stabilization training on pain, disability, mental health, quality of life, range of motion, lumbopelvic proprioception, endurance, and balance in women with chronic nonspecific low back pain
Blinding description In order not to influence the test method and results, the experimenter was kept blind to which group (intervention or control) the subjects were in, and the subjects also expressed their consent to participate in a study by being fully informed about the research and filling out a consent form.		Timepoint Before intervention - 2 days after completion of eight weeks then 1 month duration
Placebo Not used		Method of measurement Lumbar extension test - proprioception measurement

with goniometer - abdominal test - chair test - regular plank - Sharpend-Romberg test - visual pain scale - mental health questionnaire - quality of life questionnaire and Asustro Functional Disability Questionnaire

Secondary outcomes

1

Description

dynamic neuromuscular stabilization training

Timepoint

3 months

Method of measurement

dynamic neuromuscular stabilization training

Intervention groups

1

Description

Intervention group: Intervention group: The intervention group performed dynamic neuromuscular stabilization exercises for 8 weeks, 3 sessions per week, each session lasting 45 to 60 minutes. Control group

Category

Rehabilitation

2

Description

Control group: Control group: Control group: The control group did not participate in any therapeutic activities during this period (eight weeks) and were engaged in normal daily activities.

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Orthopedist

Full name of responsible person

Orthopedist

Street address

ESFAHAN

City

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Province

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0000

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maral.am28@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

UniverCity of Mazandaran

Full name of responsible person

UniverCity of Mazandaran

Street address

Pasdaran Street, Babolsar, Mazandaran Province, Iran

City

babolsar

Province

Mazandaran

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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

UniverCity of Mazandaran

Proportion provided by this source

50

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

University of Mazandaran

Full name of responsible person

hamed babgoltabar samakoush

Position

Assistant Professor

Latest degree

Ph.D.

Other areas of specialty/work

corrective exercises and sport injuries

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Person responsible for scientific inquiries

Contact

Name of organization / entity

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Full name of responsible person

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Position

Assistant Professor

Latest degree

Ph.D.

Other areas of specialty/work

corrective exercises and sport injuries

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Person responsible for updating data

Contact

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Full name of responsible person

maral amini

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Latest degree

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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

Yes - There is a plan to make this available

Data Dictionary

Not applicable

Title and more details about the data/document

Before and after tests and durability

When the data will become available and for how long

From 1405-1406

To whom data/document is available

Researchers, practitioners, and other individuals

Under which criteria data/document could be used

Use for rehabilitation

From where data/document is obtainable

Research Team Email maral.am28@gmail.com

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

email

Comments