

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 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)

##### Phone

+98 21 8835 1730

##### Email address

maral.am28@gmail.com

#### 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

#### Intervention groups

dynamic neuromuscular stabilization training-Control

#### Actual recruitment start date

empty

#### Actual recruitment end date

empty

#### Main outcome variables

dynamic neuromuscular stabilization training

#### Trial completion date

empty

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20250208064684N2**

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

#### Scientific 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

#### 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

#### Purpose

Other

#### Inclusion/Exclusion criteria

##### Inclusion criteria:

Female gender, age range 40 to 55 years, chronic nonspecific 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 sessions Injury and pain during the training period Unwillingness to continue participating in training

#### Age

From **40 years** old to **55 years** old

#### Gender

Female

#### Phase

N/A

#### Groups that have been masked

- Outcome assessor
- Data analyser

#### Sample size

Target sample size: **32**

#### Randomization (investigator's opinion)

Randomized

#### 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.

#### Blinding (investigator's opinion)

Single blinded

#### 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.

#### Placebo

Not used

#### Assignment

Parallel

#### Other design features

Modality for rehabilitation of patients with chronic nonspecific low back pain

#### Secondary Ids

empty

#### Ethics committees

##### 1

#### 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

#### Approval date

2025-09-28, 1404/07/06

#### Ethics committee reference number

IR.UMZ.REC.1404.042

#### Health conditions studied

##### 1

#### Description of health condition studied

chronic nonspecific low back pain

#### ICD-10 code

#### ICD-10 code description

##### 2

#### Description of health condition studied

chronic nonspecific low back pain

#### ICD-10 code

#### ICD-10 code description

#### Primary outcomes

##### 1

#### 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

#### Timepoint

Before intervention - 2 days after completion of eight weeks then 1 month duration

#### 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

ESFAHAN

##### Province

Isfahan

##### Postal code

0000

##### Phone

+98 913 315 2168

##### Email

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

##### Postal code

47416-13534

##### Phone

+98 11 3530 2000

##### Email

international@umz.ac.ir

#### 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

##### Street address

Pasdaran Street, Babolsar, Mazandaran Province, Iran

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## Person responsible for scientific inquiries

**Contact**

**Name of organization / entity**

university of mazandaran

**Full name of responsible person**

hamed babagoltabar 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 updating data

**Contact**

**Name of organization / entity**

university of tehran

**Full name of responsible person**

maral amini

**Position**

phd

**Latest degree**

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**Other areas of specialty/work**

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**Province**

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**Postal code**

000000

**Phone**

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**Email**

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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**