Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The effect of comprehensive core stability and lumbopelvic stabilization exercises on Plantar pressure variables, pain, and quality of life patients with chronic non-specific low back pain

Protocol summary

Study aim
The effect of comprehensive core stability and lumbopelvic stabilization exercises on Plantar pressure variables, pain, and quality of life patients with chronic non-specific low back pain

Design
Clinical trial with two control and exercise groups, with parallel groups, single-blind, randomized on 40 patients and randomization method by lottery

Settings and conduct
This study will be conducted in the Sports Rehabilitation Laboratory of Bu-Ali Sina University. Subjects will be assessed in two groups at two time points: pre-test and post-test, completing pain and disability questionnaires, quality of life, and performing a standing test on a plantar pressure distribution measuring device. The data analyst will be blinded to the grouping.

Participants/Inclusion and exclusion criteria
A history of more than three months of back pain, physician confirmation of chronic non-specific back pain, no spinal deformities, and no acute deformities in the lower limbs and soles of the feet

Intervention groups
comprehensive core stability and lumbopelvic stabilization

Main outcome variables
Pain, functional disability, quality of life, plantar pressure

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20251017067658N1**
Registration date: **2026-01-07, 1404/10/17**
Registration timing: **prospective**
Last update: **2026-01-07, 1404/10/17**
Update count: **0**

Registration date
2026-01-07, 1404/10/17

Registrant information

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Name of organization / entity
The University of Bu Ali Sina

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2026-01-10, 1404/10/20

Expected recruitment end date
2026-01-15, 1404/10/25

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
The effect of comprehensive core stability and lumbopelvic stabilization exercises on Plantar pressure variables, pain, and quality of life patients with chronic non-specific low back pain

Public title
The effect of comprehensive core stability and

lumbopelvic stabilization exercises on Plantar pressure variables, pain, and quality of life patients with chronic non-specific low back pain

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
A history of more than three months of back pain, physician confirmation of chronic non-specific back pain spinal deformities no acute deformities in the lower extremities or soles of the feet People with chronic back pain in the age range between 30 and 50 years

Exclusion criteria:
Having scoliosis advanced osteoporosis advanced cardiovascular disease uncontrolled blood pressure severe deformity in the lower limbs and soles of the feet, fractures in the spine unwillingness to participate in exercises

Age
From **30 years** old to **50 years** old

Gender
Female

Phase
N/A

Groups that have been masked

- Data analyser

Sample size
Target sample size: **40**

Randomization (investigator's opinion)
Randomized

Randomization description
Randomization was done by drawing lots. We wrote the titles of control and experimental on pieces of paper and asked the subjects to each pick one of them.

Blinding (investigator's opinion)
Single blinded

Blinding description
The data analyst will not be aware of the group division (group information will be provided to the data analyst in the form of groups 1 and 2 for each participant with a code).

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Research Ethics Committees of Bu Ali Sina University-Hamedan

Street address
Hamedan, Shahid Mustafa Ahmadi Roshan Street

City
Hamrdan

Province
Hamadan

Postal code
۳۸۶۹۵-۶۵۱۷۸

Approval date
2025-10-05, 1404/07/13

Ethics committee reference number
IR.BASU.REC.1404.033

Health conditions studied

1

Description of health condition studied
Chronic non-specific low back pain

ICD-10 code
M54.5

ICD-10 code description
Low back pain

Primary outcomes

1

Description
Pain

Timepoint
Pre-test and post-test, meaning before the start of the first practice session and one day after the end of the last practice session.

Method of measurement
VAS questionnaire

Secondary outcomes

1

Description
Quality of life

Timepoint
pre test & post test

Method of measurement
The Short Form Health Survey (SF-36) questionnaire

Intervention groups

1

Description
Intervention group: Intervention group: Comprehensive core stability exercise protocol with lumbopelvic stabilization in the present study was performed for eight weeks, three sessions per week, and each session lasted 60 minutes. These exercises included abdominal pull-in maneuver, leg bent-over abdominal, reverse crunch, clamshell, bridge, single-leg bridge, side bridge, modified sit-up, bird dog, leg extension, kick bag, and hip abduction to the side.

Category
Treatment - Other

2

Description
Control Group: Control Group: Initially, all tests were taken from them and the people in this group did not participate in any rehabilitation intervention and simply lived their normal lives with daily activities during these 8 weeks, and then after 8 weeks, the post-test was taken from them.
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Bu Ali Sina University
Full name of responsible person
Ali Yalfani
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Hamedan, Shahid Mustafa Ahmadi Roshan Street
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Vice President for Research, Bu-Ali Sina University, Hamadan
Full name of responsible person
Gholamhossein Majzoobi
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Shahid Mustafa Ahmadi Roshan Chaharbagh, Bu Ali Sina University, Vice President for Research Affairs
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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
Vice President for Research, Bu-Ali Sina University, Hamadan
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
Bu Ali Sina University
Full name of responsible person
Ali Yalfani
Position
Professor
Latest degree
Ph.D.
Other areas of specialty/work
Rehabilitation management
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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
Not applicable

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
The measured data files will be shared by the testers after the study is completed, if needed.

When the data will become available and for how long
The period begins one year after the publication of results and articles.

To whom data/document is available
Researchers and researchers whose field of work is similar to the present research and who are employed in universities.

Under which criteria data/document could be used
The data from this study will only be made available to other researchers for comparison with future studies, and the use and analysis of the data is prohibited.

From where data/document is obtainable
Email address m.azizpour@phe.basu.ac.ir

What processes are involved for a request to access data/document
A complete explanation of the research should be provided and the details of the use of the data should also be fully explained.

Comments