Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The effect of adding hamstring stretching exercises to core stability exercises on pain, range of motion, sense of position, fear of movement and function of pre-elderly women with non-specific chronic back pain

Protocol summary

Study aim
The effect of adding hamstring stretching exercises to core stability exercises on pain, range of motion, sense of position, fear of movement and function of pre-elderly women with non-specific chronic back pain

Design
Clinical trial with control group with parallel groups, single blinded, randomized, on 30 patients.

Settings and conduct
The location of the study will be Dr. Shakri's pain clinic in Zahedan city. The study population will be selected from those who refer to this clinic with chronic non-specific back pain problems. After the tests, they will be divided into intervention and control groups according to the entry and exit criteria. The study will be single blind, so that the samples will not know the details of the tests and exercise groups.

Participants/Inclusion and exclusion criteria
Inclusion criteria: being female, suffering from non-specific chronic back pain; age range 48 to 58 years; suffering from hamstring shortness. Exclusion criteria: Receiving treatment related to non-specific chronic back pain in the last month; Back pain caused by a fracture or protrusion of a lumbar disc; Diseases that affect the research process; Cardiovascular diseases or diabetes; Cancer; Osteoporosis; Surgery in the lower limbs, abdomen or chest and spine; Back pain caused by trauma; Accompanying structural changes in the tissues of the back or hamstring muscles.

Intervention groups
Intervention group: core stability exercises and hamstring stretching exercises; Control group: core stability exercises

Main outcome variables
Pain, range of motion, impaired sense of position, fear of movement; performance weakness

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20250113064372N1**
Registration date: **2025-02-24, 1403/12/06**
Registration timing: **prospective**

Last update: **2025-02-24, 1403/12/06**
Update count: **0**

Registration date
2025-02-24, 1403/12/06

Registrant information

Name
Asma Eshaghi
Name of organization / entity
University of Sistan and Baluchestan
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Iran (Islamic Republic of)
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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2025-02-28, 1403/12/10

Expected recruitment end date
2025-03-15, 1403/12/25

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date

empty

Scientific title
The effect of adding hamstring stretching exercises to core stability exercises on pain, range of motion, sense of position, fear of movement and function of pre-elderly women with non-specific chronic back pain

Public title
Hamstring stretching exercises and core stability exercises in back pain

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Women with non-specific chronic back pain Being at the age of 48 - 58 years Hamstring contracture

Exclusion criteria:
Receiving treatment related to non-specific chronic back pain in the last month Back pain caused by a fracture or protrusion of a lumbar disc Diseases that affect the research process Cardiovascular diseases or diabetes Cancer Osteoporosis Surgery in the lower limbs, abdomen or chest and spine Back pain caused by trauma Accompanying structural changes in the tissues of the back or hamstring muscles

Age
From **48 years** old to **58 years** old

Gender
Female

Phase
N/A

Groups that have been masked

- Participant

Sample size
Target sample size: **30**

Randomization (investigator's opinion)
Randomized

Randomization description
Through a drawing a piece of paper and in the presence of the people themselves, each person will be given a number from 1 to 30. The numbers will be written on paper, folded and placed in a container (container number 1). Then, in another container, the names of the groups (15 sheets per group) will be folded and placed inside the container (container number 2). Then, the "drawing a piece of paper" process will be done in the presence of the participants. One person will draw the number and group and one person will do this to record and write the numbers. All people will be grouped in the same way.

Blinding (investigator's opinion)
Single blinded

Blinding description
Participants participate in the study with the assumption that they will receive a similar exercise.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics Committee in Research of Sistan and Baluchistan University

Street address
Dasneshgah blvd.

City
Zahedan

Province
Sistan-va-Balouchestan

Postal code
9816745785

Approval date
2024-11-09, 1403/08/19

Ethics committee reference number
IR.USB.REC.1403.031

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 level

Timepoint
Before the start of the intervention, one day after the end of the intervention

Method of measurement
Visual Analogue Pain Scale,

2

Description
Range of motion

Timepoint
Before the start of the intervention, one day after the end of the intervention

Method of measurement
sorensen test,

3

Description
Sense of situation

Timepoint
Before the start of the intervention, one day after the end of the intervention
Method of measurement
repositioning error

4

Description
Fear of movement
Timepoint
Before the start of the intervention, one day after the end of the intervention
Method of measurement
Five times sit to stand test

5

Description
Performance
Timepoint
Before the start of the intervention, one day after the end of the intervention
Method of measurement
Roland-Morris Disability Questionnaire, oswestry disability index ،

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: core stability exercises and hamstring stretching exercises to increase the flexibility of this muscle. Exercises will be performed three times a week for 8 weeks
Category
Rehabilitation

2

Description
Control group: core stability exercises ,three times a week for 8 weeks
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Dr.Shakeri pain clinic
Full name of responsible person
Asadollah Shakeri
Street address
Khayam street
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9816847154
Phone
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Email
drashakeri@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Sistan and Baluchestan University of Medical Sciences
Full name of responsible person
Noor Mohammad Yaghoobi
Street address
Daneshgah street
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yaghoubi@mgmt.usb.ac.ir
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Sistan and Baluchestan University of Medical Sciences
Proportion provided by this source
20
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
Sistan and Baluchestan University of Medical Sciences
Full name of responsible person
Asma Eshaghi
Position
student
Latest degree
Bachelor
Other areas of specialty/work

Corrective exercise

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Sport pathology and corrective exercises

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Undecided - It is not yet known if there will be a plan to make this available

Study Protocol
Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan
Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form
Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report
Undecided - It is not yet known if there will be a plan to make this available

Analytic Code
Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary
Undecided - It is not yet known if there will be a plan to make this available