

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 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

Country

Iran (Islamic Republic of)

Phone

+98 54 3344 6251

Email address

asal.es7501@gmail.com

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

City

Zahedan

Province

Sistan-va-Balouchestan

Postal code

9816847154

Phone

+98 992 190 2556

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

City

Zahedan

Province

Sistan-va-Balouchestan

Postal code

98167-45845

Phone

+98 54 3113 6245

Email

yaghoobi@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

Street address

Daneshgah street

City

Zahedan

Province

Sistan-va-Balouchestan

Postal code

9816745785

Phone

+98 54 3113 2000

Email

asal.es7501@gmail.com

Person responsible for scientific 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

Sport pathology and corrective exercises

Street address

Daneshgah street

City

Zahedan

Province

Sistan-va-Balouchestan

Postal code

۹۸۱۶۷۴۵۷۸۵

Phone

+98 54 3344 6251

Fax

Email

asal.es7501@gmail.com

Person responsible for updating data

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

Sport pathology and corrective exercises

Street address

Daneshgah street

City

Zahedan

Province

Sistan-va-Balouchestan

Postal code

۹۸۱۶۷۴۵۷۸۵

Phone

+98 54 3344 6251

Fax

Email

asal.es7501@gmail.com

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