Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparison of combined pilates-Kinesio tape and mulligan-Kinesio tape exercises tape on pain, hamstring stiffness, lumbar range of motion, and pelvic tilt in women of nonspecific chronic low back pain

Protocol summary

Study aim

Comparison of combined pilates-Kinesio tape and mulligan-Kinesio tape exercises tape on pain, hamstring stiffness, lumbar range of motion, and pelvic tilt in women of non-specific chronic low back pain

Design

A clinical trial study with parallel groups, open-labeled and phase 3, which will be conducted on 30 participants. Randomization will be done by simple randomization using random numbers table.

Settings and conduct

Women who will be referred for the treatment of low back pain in the orthopedic clinic of Urmia Imam Khomeini Hospital will be included. The study will be an open-label study.

Participants/Inclusion and exclusion criteria

In this study, women with non-specific chronic low back pain will be included. The inclusion criteria will be including persistent back pain for at least 12 weeks; age between 35 to 65 years old; pain intensity between 3-6 based on the visual analogue scale (VAS) and difficulty in bending forward. Participants with pregnancy, narrowing of the canal, lumbar disc, tumor, history of spine surgery, rheumatoid arthritis, and osteoporosis will be excluded.

Intervention groups

Participants in group one will do Pilates exercises three days a week for 6 weeks (one hour each time). The exercises will be 6 to 8 repetitions in the first sessions and 10 to 12 repetitions in the last sessions. In the second group, the participants will receive Mulligan techniques three days a week for 6 weeks (one hour each time), the exercises will be performed with 3 repetitions in the first sessions and 10 repetitions in the last sessions.

Main outcome variables

Pain; hamstring stiffness; lumbar range of motion and pelvic tilt

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20211228053554N3**
Registration date: **2022-09-11, 1401/06/20**
Registration timing: **prospective**

Last update: **2022-09-11, 1401/06/20**
Update count: **0**

Registration date

2022-09-11, 1401/06/20

Registrant information

Name

siyamak kazemisofi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 44 3345 9538

Email address

kazemisofi.s@umsu.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-10-23, 1401/08/01

Expected recruitment end date

2023-01-20, 1401/10/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title
Comparison of combined pilates-Kinesio tape and mulligan-Kinesio tape exercises tape on pain, hamstring stiffness, lumbar range of motion, and pelvic tilt in women of nonspecific chronic low back pain

Public title
The effect of combined pilates-Kinesio tape and mulligan-Kinesio tape exercises on nonspecific chronic low back pain

Purpose
Other

Inclusion/Exclusion criteria

Inclusion criteria:
Persistent back pain for at least 12 weeks Age between 35 to 65 years Pain intensity is between 3-6 based on the visual analogue scale (VAS) Difficulty in bending forward

Exclusion criteria:
Pregnancy Narrowing of the canal Lumbar disc Tumor History of spine surgery Rheumatoid Arthritis Osteoporosis

Age
From **35 years** old to **65 years** old

Gender
Female

Phase
3

Groups that have been masked
No information

Sample size
Target sample size: **30**

Randomization (investigator's opinion)
Randomized

Randomization description
Participants will be randomly divided into groups using a table of random numbers.

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics Committee of Allameh Tabatabai University

Street address
Allameh Tabatabai University., Village Square., Olympic Village., Tehran., Iran.

City
Tehran

Province
Tehran

Postal code
1489684511

Approval date
2022-06-28, 1401/04/07

Ethics committee reference number
IR.ATU.REC.1401.024

Health conditions studied

1

Description of health condition studied
Chronic low back pain

ICD-10 code
M54.5

ICD-10 code description
Low back pain

Primary outcomes

1

Description
Pain

Timepoint
Before and 6 weeks after the intervention

Method of measurement
visual analogue scale (VAS)

2

Description
hamstring stiffness

Timepoint
Before and 6 weeks after the intervention

Method of measurement
Straight Leg Raise (SLR) test

3

Description
Lumbar range of motion

Timepoint
Before and 6 weeks after the intervention

Method of measurement
Inclinometer

4

Description
Pelvic tilt

Timepoint
Before and 6 weeks after the intervention

Method of measurement
Tilt meter

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: Participants in group one will do Pilates exercises three days a week for 6 weeks (one hour each time). The exercises will be 6 to 8 repetitions in the first sessions and 10 to 12 repetitions in the last sessions.
Category
N/A

2

Description
Intervention group: In the second group, the participants will receive Mulligan techniques three days a week for 6 weeks (one hour each time), the movements will be performed with 3 repetitions in the first sessions and 10 repetitions in the last sessions.
Category
N/A

Recruitment centers

1

Recruitment center
Name of recruitment center
Orthopedic Clinic of Urmia Imam Khomeini Hospital
Full name of responsible person
Dr. Siamak Kazemi Sofi
Street address
Imam Khomeini hospital., Ershad Ave., Modarres Blvd., Urmia., Iran.
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57157-89397
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kazemisofi.s@umsu.ac.ir

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Oroumia University of Medical Sciences
Full name of responsible person
Dr. Saber Gholizadeh
Street address
Urmia University of Medical Sciences., Resalat Ave., Jahad Blvd., Urmia., Iran.
City
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Province
West Azarbaijan
Postal code
5714783734
Phone
+98 44 3223 4897
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gholizadeh.s@umsu.ac.ir
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Oroumia University of Medical Sciences
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
Oroumia University of Medical Sciences
Full name of responsible person
Dr. Siamak Kazemi Sofi
Position
Assistant Professor
Latest degree
Specialist
Other areas of specialty/work
Orthopedics
Street address
Imam Khomeini hospital., Ershad Ave., Modarres Blvd., Urmia., Iran.
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Person responsible for scientific inquiries

Contact
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Full name of responsible person
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Position

Assistant Professor

Latest degree

Specialist

Other areas of specialty/work

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Person responsible for updating data

Contact

Name of organization / entity

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Position

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Latest degree

Specialist

Other areas of specialty/work

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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

No - There is not 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

Not applicable

Data Dictionary

Not applicable

Title and more details about the data/document

The results will be available as the published article.

When the data will become available and for how long

After publishing the article

To whom data/document is available

Researchers

Under which criteria data/document could be used

Not applicable

From where data/document is obtainable

Email address of the corresponding author

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

Email address: kazemisofi.s@umsu.ac.ir

Comments