

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Comparison of the effects of eight weeks of dynamic stretching and Nordic hamstring exercises on balance, flexibility, agility, and performance of male soccer players with hamstring shortness

Protocol summary

Study aim

An investigation of the effects of 8 weeks of dynamic stretching and Nordic hamstring exercise on balance, flexibility, agility, and performance of male football players with hamstring shortness

Design

The present study includes 60 participants and will be conducted as a single-blind, randomized controlled trial. Participants will be assigned to three groups, including dynamic hamstring stretching, Nordic hamstring exercise, and control, using simple randomization and the random allocation rule by drawing names from a hat.

Settings and conduct

In the present study, both the dynamic hamstring stretching and Nordic hamstring exercise groups will perform their interventions for a duration of 8 weeks, with five sessions per week, at the training facility location.

Participants/Inclusion and exclusion criteria

Participants must have a minimum of 3 years of regular sports experience in football. Additionally, they should not have experienced any lower limb injuries in the past six months. Furthermore, individuals who have had lower limb injuries or surgeries in the past 6 months, or have participated in an injury prevention program, are also excluded from the study.

Intervention groups

The present study includes three groups: dynamic hamstring stretching, Nordic hamstring exercise, and control. The first two groups will perform their intervention program for 8 weeks and five sessions per week, while the control group will not receive any intervention during this period.

Main outcome variables

The outcome variables of the present study are improvements in balance, flexibility, agility, and performance.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230612058457N3**

Registration date: **2024-04-07, 1403/01/19**

Registration timing: **registered_while_recruiting**

Last update: **2024-04-07, 1403/01/19**

Update count: **0**

Registration date

2024-04-07, 1403/01/19

Registrant information

Name

Mohammad Alimoradi

Name of organization / entity

Shahid Bahonar University

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2024-03-26, 1403/01/07

Expected recruitment end date

2024-05-27, 1403/03/07

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of the effects of eight weeks of dynamic stretching and Nordic hamstring exercises on balance, flexibility, agility, and performance of male soccer players with hamstring shortness

Public title

Comparing the Effects of Two Exercise Protocols on Football Players with Hamstring Shortening

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

Participants were required to have a minimum of three years of regular sports experience in football (three sessions per week). Participants should not have experienced any lower limb injuries in the past six months.

Exclusion criteria:

Participants must have a minimum of three years of sports experience in the field of football. Participants in the past six months may have suffered injuries in the lower extremity. Participants who have experienced lower limb injuries or surgeries in the past 6 months, or have participated in an injury prevention program.

Age

From **18 years** old to **25 years** old

Gender

Male

Phase

N/A

Groups that have been masked

- Participant

Sample size

Target sample size: **60**

Randomization (investigator's opinion)

Randomized

Randomization description

In the current study, participants are randomly assigned to three groups: dynamic stretching, Nordic hamstring, and control, through a chance draw where names are drawn from a hat.

Blinding (investigator's opinion)

Single blinded

Blinding description

After providing a general overview of the research and the participant groups to the participants, in the current study, participants are randomly assigned to three research groups: Dynamic Traction, Nordic Hamstring, and Control. None of the participants are aware of the intervention ratio and protocol performed by the other groups.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Bu-Ali Sina University, Hamedan

Street address

Bu-Ali Sina University, Chaharbagh-e Shahid Mostafa Ahmadi Roshan, Hamedan

City

Hamedan

Province

Hamadan

Postal code

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Approval date

2024-02-26, 1402/12/07

Ethics committee reference number

IR.BASU.REC.1402.102

Health conditions studied

1

Description of health condition studied

Comparing two intervention programs on balance, flexibility, agility, and performance of football players with hamstring shortness.

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

In the present study, balance is being investigated.

Timepoint

8 weeks

Method of measurement

Balance is measured using the Y Balance Test.

2

Description

In the present study, flexibility is being investigated.

Timepoint

8 weeks

Method of measurement

Flexibility is assessed using the SLR (Straight Leg Raise) and sit and reach tests

3

Description

In the present study, agility is being investigated.

Timepoint

8 weeks

Method of measurement

Agility is evaluated using the Illinois Agility Test

4

Description

In the present study, performance is being investigated.

Timepoint

8 weeks

Method of measurement

Performance is measured using the Counter Movement Jump test.

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: The dynamic hamstring stretch is performed with the individual standing on both feet. The target leg is fully extended from the hip joint and flexed towards the torso. This stretch is conducted at a speed of 60 beats per minute for a duration of 30 seconds, with three repetitions performed on each leg. It is worth mentioning that there is a 10-second rest period between each stretch.

Category

Prevention

2

Description

Intervention group: The Nordic hamstring protocol will be implemented as follows: In weeks 4-1, players will perform the Nordic exercise in the form of 2 sets of 5 repetitions. Since this exercise may vary in difficulty for different individuals, they can use an external aid such as a plate to ensure individualized training. Additionally, during weeks 8-5, the Nordic exercise will be performed in 3 sets of 5 repetitions. It is worth noting that there will be a 10-second rest period between each set for the participants.

Category

Prevention

3

Description

Control group: Does not receive any intervention

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Shahin Football Club

Full name of responsible person

Mohammad Alimoradi

Street address

Unit 6, Yekta Complex, 12th Alley, Fathali Shahi Street.

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

The University of Bu-Ali Sina

Full name of responsible person

Arash Ghorbani

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The University of Bu-Ali, Shahid Fahmideh St, Hamedan

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6517838695

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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

The University of Bu-Ali Sina

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

Shahid Bahonar University
Full name of responsible person
Mohammad Alimoradi
Position
Graduated Student
Latest degree
Master
Other areas of specialty/work
Sport Medicine
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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

According to the laws of ethics and protecting the privacy of individuals, access to this data is not possible.

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

Not applicable

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

All data will be shared after anonymizing individuals, ensuring their non-identifiability.

When the data will become available and for how long

The data access period will start immediately after the results are printed.

To whom data/document is available

The data will be made available to researchers, organizations, and institutions related to the field of football and also for publication in accessible journals.

Under which criteria data/document could be used

In order to assist scientific research and promote the implementation of executive goals with a focus on reducing musculoskeletal injuries and enhancing the performance of football players in the field,

From where data/document is obtainable

Mohammad Alimoradi/malimoradi@sport.uk.ac.ir

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

Requests for access to data will be answered within a week

Comments