

Clinical Trial Protocol

Iranian Registry of Clinical Trials

18 Sep 2026

The effects of a knee injury prevention program on jump-landing pattern, balance and lumbar-pelvic function among female basketball players with dynamic knee valgus

Protocol summary

Study aim

Investigating the effect of knee injury prevention training program on jump-landing pattern, balance and lumbar-pelvic function of female basketball players with dynamic knee valgus.

Design

Clinical trial with intervention and control groups, with the number of 30 female basketball players, community-based and practice-oriented, with parallel groups, single-blind, randomization using a random number table.

Settings and conduct

Subjects will work in a safe environment at the basketball club of Qazvin province. After selecting the participants in the research, consent forms will be provided to them, in which all the stages, goals and conditions of participation in the research are written, and after signing the form, people will enter the research process and randomly Two training groups (Stop X exercises) and the control group will be divided. And also the blinding of the participants is done in a single blind type.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Female gender, having a valgus angle greater than 12 degrees during the single-leg landing functional test (SLL), having a sports history of at least 3 years, having regular exercises (at least three training sessions per week), not having a history of injury in the last six months in the lower limb that causes a functional exclusion criteria: Subjects' failure to cooperate in the pre-test or post-test, failure to complete the training program for any reason, absence of more than three training sessions or two consecutive sessions, occurrence of pain or injury during training, or unwillingness to continue cooperation.

Intervention groups

Intervention group: they perform knee injury prevention exercises. Control group: They only do their routine

exercise program.

Main outcome variables

Balance, landing-jump pattern, lumbopelvic function, knee valgus angle

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20231230060574N1**

Registration date: **2024-01-04, 1402/10/14**

Registration timing: **prospective**

Last update: **2024-01-04, 1402/10/14**

Update count: **0**

Registration date

2024-01-04, 1402/10/14

Registrant information

Name

Mohadeseh Rostami

Name of organization / entity

University of guilan

Country

Iran (Islamic Republic of)

Phone

+98 28 3256 7044

Email address

rostamimohadeseh78@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2024-01-21, 1402/11/01

Expected recruitment end date

2024-04-08, 1403/01/20

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effects of a knee injury prevention program on jump-landing pattern, balance and lumbar-pelvic function among female basketball players with dynamic knee valgus

Public title

The effect of injury prevention exercises on the balance and performance of female basketball players

Purpose

Prevention

Inclusion/Exclusion criteria**Inclusion criteria:**

Female gender Age range 15 to 20 years Having a valgus angle greater than 12 degrees during the single leg landing functional test (SLL) Having a sports history of at least 3 years Having regular exercises (at least three training sessions a week) Not having a history of injury in the last six months in the lower limb that causes a functional or structural limitation in the person or surgery in the lower limb that causes a change in the natural alignment of the person Absence of skeletal-muscular abnormalities in the spine and upper limbs

Exclusion criteria:

Non-cooperation of subjects in pre-test or post-test Not completing the training program for any reason Absence of more than three training sessions or two consecutive sessions Pain or injury during exercises or unwillingness to continue to cooperate

Age

From **14 years** old to **19 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

The subjects of the present study were randomly selected using the random number table method in such a way that unknown codes were given to each subject and then placed in a table format, and subsequently the researcher randomly assigned them to the group without knowing the identity of the subjects. divides the experimental and control equally. Finally, each group receives its own intervention.

Blinding (investigator's opinion)

Single blinded

Blinding description

The selected exercises of the intervention and control

group are kept blind without the exercise subjects knowing about the control or intervention group.

Placebo

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics committee in biomedical research of Gilan University

Street address

5th Kilometer of Persian Gulf Highway, Rasht, Guilan Province, Iran

City

Rasht

Province

Guilan

Postal code

۴۱۹۹۶۱۳۷۷۶

Approval date

2023-04-19, 1402/01/30

Ethics committee reference number

IR.GUILAN.REC.1402.015

Health conditions studied**1****Description of health condition studied**

Basketball players with dynamic knee valgus

ICD-10 code

S89.8

ICD-10 code description

Other specified injuries of lower leg

Primary outcomes**1****Description**

Balance

Timepoint

Measurement of balance tests before and after eight weeks of intervention

Method of measurement

Functional tests for balance

2**Description**

Landing-jump pattern

Timepoint

Measurement of landing-jump pattern test before and after 8 weeks of intervention
Method of measurement
landing-jump pattern test

3

Description

Lumbar-pelvic function

Timepoint

Measurement of lumbopelvic function test before and after 8 weeks of intervention

Method of measurement

Forward- step down (FSD)

4

Description

Knee valgus angle

Timepoint

Measuring knee valgus angle before and after 8 weeks of intervention

Method of measurement

Using the camera and kinovea software

Secondary outcomes

1

Description

Dynamic knee valgus

Timepoint

Measurement of dynamic knee valgus before and after the intervention week

Method of measurement

Using the camera and Kinovea software

Intervention groups

1

Description

Intervention group: special knee injury prevention program for eight weeks, three days a week, 20 to 45 minutes and gradually increasing the training load in different weeks.

Category

Rehabilitation

2

Description

Control group: The control group will be engaged in their routine exercise program for eight weeks

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Qazvin Basketball club

Full name of responsible person

Mohammad Rostami

Street address

Qazvin, Ponak, Amirkabir Blvd., South Ghaem St., behind Allameh Dehkoda University, Qazvin Province
Basketball House

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Province

Qazvin

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3414778332

Phone

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Email

rostami.mohammad199@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

The university of Guilan

Full name of responsible person

Reza Ebrahimi atani

Street address

5th Kilometer of Persian Gulf Highway, Rasht, Guilan Province, Iran

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4199613776

Phone

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Email

Rebrahimi@guilan.ac.ir

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

The university of Guilan

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

The university of Guilan

Full name of responsible person

Mohadeseh rostami

Position

MSc student

Latest degree

Bachelor

Other areas of specialty/work

Sport injury and corrective exercise

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Person responsible for updating data

Contact

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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

Yes - There is a plan to make this available

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

Yes - There is a plan to make this available

Title and more details about the data/document

All data of measured variables can be shared after de-identifying people.

When the data will become available and for how long

Beginning of the access period from 2024

To whom data/document is available

Only for researchers working for scientific and academic institutions

Under which criteria data/document could be used

Scientific use is permitted in improvements compared to other research.

From where data/document is obtainable

Email address for correspondence
rostamimohadeseh78@gmail.com

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

The applicant must send the reason for using the documents by e-mail.

Comments