Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 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
rostamimohadese78@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 kinonvea 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 Dehkhoda University, Qazvin Province Basketball House

City

Qazvin

Province

Qazvin

Postal code

3414778332

Phone

+98 28 3366 9333

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

City

Rasht

Province

Guilan

Postal code

4199613776

Phone

+98 13 3369 0274

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

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

City
Rasht

Province
Guilan

Postal code
4199613776

Phone
+98 13 3369 0274

Email
rostamimohadese78@gmail.com

Person responsible for scientific 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

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

City
Rasht

Province
Guilan

Postal code
4199613776

Phone
+98 13 3369 0274

Email
rostamimohadese78@gmail.com

Person responsible for updating data

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

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

City
Rasht

Province
Guilan

Postal code
4199613776

Phone
+98 13 3369 0274

Email
rostamimohadese78@gmail.com

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 rostamimohadese78@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