Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

The Evaluation of the effect of six weeks of knee neuromuscular stabilization training program on jump-landing pattern, balance and motor function of adolescent male footballers with valgus dynamic knee defect

Protocol summary

Study aim
Evaluationof knee neuromuscular stabilization training program, on jump-landing pattern, of adolescent male footballers with valgus dynamic; Evaluationof knee neuromuscular stabilization training program, on balance of adolescent male footballers with valgus dynamic; Evaluationof knee neuromuscular stabilization training program, on motor function of adolescent male footballers with valgus dynamic.

Design
Clinical trial with experimental and control groups, without blinding, randomized (adolescent male soccer players). Random number table is used for randomization.

Settings and conduct
From all adolescent soccer boys in the age range of 11 to 13 years in Tom Football School of Isfahan, 30 people based on the formula for determining the sample size, were selected as the sample of the present study and the random number table method is used. The form in which even numbers are assigned to group A (experimental group) and odd numbers to group B (control group) in the upward direction in the table.

Participants/Inclusion and exclusion criteria
Inclusion criteria: Existence of dynamic valgus defect of the knee Activity in football; Male; The age range of 11-13 years. Exclusion criteria: Existence of injury in the lower limb; Existence of other neuromuscular defects such as trunk defects and ankle pronation defects.

Intervention groups
The intervention group includes participants in a knee neuromuscular stabilization exercise program who will perform the exercise program for 6 weeks (3 sessions per week). The control group includes the participants in this project, who will not do a specific training program and will only participate in their team training.

Main outcome variables
jump-landing pattern, static balance, dynamic balance, motor performance in adolescent male footballers with valgus dynamic knee defect

General information

Reason for update
Acronym
IRCT registration information
IRCT registration number: **IRCT20210612051549N1**
Registration date: **2021-11-11, 1400/08/20**
Registration timing: **retrospective**

Last update: **2021-11-11, 1400/08/20**
Update count: **0**

Registration date
2021-11-11, 1400/08/20

Registrant information
Name
Forouzan Zarezadeh
Name of organization / entity
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Iran (Islamic Republic of)
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Recruitment status
Recruitment complete
Funding source

Expected recruitment start date
2021-10-16, 1400/07/24
Expected recruitment end date

2021-11-06, 1400/08/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The Evaluation of the effect of six weeks of knee neuromuscular stabilization training program on jump-landing pattern, balance and motor function of adolescent male footballers with valgus dynamic knee defect

Public title

The effect of a training program on knee function in adolescent male soccer players

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

Existence of dynamic valgus defect of the knee Activity in football Male The age range of 11-13 years

Exclusion criteria:

Existence of injury in the lower limb Existence of other neuromuscular defects such as trunk defects and ankle pronation defects

Age

From **11 years** old to **13 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

The method of crashing is simple and individual. For this study, the method of table of random numbers is used in such a way that even numbers are assigned to group A (experimental group) and odd numbers to group B (control group) up in the table. Based on the sample size of the research, a number of envelopes with aluminum wrappers (in order to obscure the contents of the envelopes) are prepared and each of the random sequences created is recorded on a card and the cards are placed in the envelopes respectively. In order to maintain a random sequence, the envelopes are numbered in the same way on the outer surface. Finally, the letter envelopes are glued and placed in a box. At the beginning of the registration of participants, according to the order of entry of eligible participants to study, one of the envelopes is opened and the group is assigned. That participant will be revealed

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Single

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee in Biomedical Research, Islamic Azad University, Khorasganکمیته اخلاق در پژوهش های

Street address

University Blvd, Arqavanieh, Jey Street Isfahan, Iran

City

Isfahan

Province

Isfehan

Postal code

81595-158

Approval date

2021-06-09, 1400/03/19

Ethics committee reference number

IR.IAU.KHUISF.REC.1400.055

Health conditions studied

1

Description of health condition studied

valgus dynamic knee defect

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Landing jump pattern

Timepoint

Pre-test at the beginning of the study and post-test after 6 weeks

Method of measurement

Subjects will be assessed using the Vine test to identify individuals with valgus dynamic knee defects. To perform the vine, the athlete stood with his legs shoulder-width apart and jumped vertically, raising his knees as high as possible. At the highest point of the jump, the thighs will be parallel to the ground. When landing, the athlete must start the next vine jump. This test will run for 10 seconds.

2

Description

Static balance

Timepoint
Pre-test at the beginning of the study and post-test after 6 weeks
Method of measurement
In the stork test, the subject will stand on his / her superior foot, and in this position, he / she will place the sole of the non-superior foot in the inner part of the knee of the superior foot and place his / her hands on the crown of the sides. In this position, the subject is asked to stand on his toes and the time he can maintain this position is recorded with a stopwatch. The method of performing the Y test for dynamic balance was that the person stood on his superior foot and performed the achievement operation three times in the anterior path, this method is repeated in the internal posterior and posterior external paths.

3

Description
Dynamic balance
Timepoint
Pre-test at the beginning of the study and post-test after 6 weeks
Method of measurement
The modified Y-balance test will be used to assess the dynamic balance. The subjects stand on one leg at the center of the intersection of the lines. Have achievements. The method of performing the test is that the person stands on his superior foot and the achievement operation is repeated three times in the anterior, posterior and external posterior paths.

4

Description
Motor function screening test score
Timepoint
Pre-test at the beginning of the study and post-test after 6 weeks
Method of measurement
How to score in this test is as follows: correct movement without compensatory movements 3 points; Perform movement with side movements 2 points; Inability to move without side movements has 1 point and causing pain while moving or performing a detection test has 0 points. . 7 moves of this test include Deep Scott test, obstacle step test, longs, shoulder mobility test, active straight leg raising test, trunk swimming stability test, rotational stability test

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: Group A as the intervention group in the present study will perform a knee neuromuscular stabilization training program for 6 weeks (3 sessions per week). The training program consists of eleven exercises: Single-Leg Anterior, Single-Leg Lateral, Launch, Vine Jump, Lateral Jump, Lateral Flexion of the Trunk, Prone Trunk Stability, Kneeling Trunk Stability, Posterior Chain, Romanian Dead Lift and Lunge Jump. The set is done and the repetitions in each set will start from 8 repetitions and will reach 10 repetitions. The rest between the set will be 45 seconds and the rest at the end of the set will be 90 seconds.
Category
Rehabilitation

2

Description
Control group: group B as the control group in the present study for 6 weeks (3 sessions per week) do not perform a specific training protocol and only attend their team training.
Category
Diagnosis

Recruitment centers

1

Recruitment center
Name of recruitment center
Tom Sports Club of Isfahan
Full name of responsible person
Forouzan Zarezadeh
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Robat Street
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Islamic Azad University
Full name of responsible person
Majid Toghyani
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University Blvd, Arqavanieh, Jey Street Isfahan, Iran
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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

Islamic Azad University

Proportion provided by this source

100

Public or private sector

Private

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

Islamic Azad University

Full name of responsible person

Forouzan Zarezadeh

Position

Masters student

Latest degree

Bachelor

Other areas of specialty/work

Others

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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

Not applicable

Analytic Code

Not applicable

Data Dictionary

Not applicable