Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparing the effects of 8 week of FIFA 11+ program with injury prevention and enhancement performance (PEP) program on balance, flexibility, agility, speed, strength and power of lower extremities in adolescent male soccer players.

Protocol summary

Study aim
Compare the effect of 8 weeks of FIFA +11 program with PEP program on dynamic balance (Y), agility , hamstring flexibility and speed , isokinetic strength of quadriceps and hamstring muscles and lower limb power in male soccer players under 17 years of age.

Design
A controlled clinical trial with parallel groups, triple blinding, randomization in selecting the intervention for the teams, on 36 players (12 players per team) and randomization of the team name from the container will be used.

Settings and conduct
The tests of this study will be conducted in the laboratory of Shahid Beheshti Faculty of Physical Education, Tehran. The laboratory and field tests will be conducted over 2 days, from 8 am to 12 pm, under standard temperature and conditions, with one of the researchers blinding.

Participants/Inclusion and exclusion criteria
Inclusion criteria: teenage soccer players under the age of 17 in the Tehran Premier League with at least 3 years of regular soccer experience, no injuries in the last 1 year, and participating in regular club training. Exclusion criteria: Subjects who are not permitted to participate in this study are players who are injured during the program, during training or competition, and who do not participate in more than 2 training sessions.

Intervention groups
The PEP and FIFA +11 programs include plyometric, agility, and muscle strengthening components designed to increase the strength of the stabilizing muscles around the knee joint while increasing range of motion and gradually preparing the body for increased activity. Each team will perform the program for 8 weeks (3 sessions per week). Each session of the program is approximately 15-20 minutes. The control group program is the same as the team's traditional routine.

Main outcome variables
Dynamic balance, flexibility, agility, speed, lower limb muscle strength, and lower limb power.

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20251003067490N1**
Registration date: **2025-10-26, 1404/08/04**
Registration timing: **registered_while_recruiting**

Last update: **2025-10-26, 1404/08/04**
Update count: **0**

Registration date
2025-10-26, 1404/08/04

Registrant information

Name
Foad Mahmoudi

Name of organization / entity
Shaid Bahonar university of Kerman

Country
Iran (Islamic Republic of)

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+98 21 4411 4956

Email address
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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2025-10-23, 1404/08/01

Expected recruitment end date
2025-11-05, 1404/08/14
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
Comparing the effects of 8 week of FIFA 11+ program with injury prevention and enhancement performance (PEP) program on balance, flexibility, agility, speed, strength and power of lower extremities in adolescent male soccer players.

Public title
The effects of injury prevention programs on performance factors of adolescent soccer players.
Purpose
Prevention
Inclusion/Exclusion criteria
Inclusion criteria:
At least 3 years of regular football experience No injuries in the last 1 year Participate in regular club workouts
Exclusion criteria:
Less than 3 years of football experience Any injuries in the last 1 year
Age
From **15 years** old to **17 years** old
Gender
Male

Phase
N/A
Groups that have been masked

- Outcome assessor
- Data analyser

Sample size
Target sample size: **36**
Randomization (investigator's opinion)
Randomized
Randomization description
The names of teams interested in participating in the research are placed in a container and then 3 teams are randomly divided into 3 groups.
Blinding (investigator's opinion)
Double blinded
Blinding description
-Information about the effect of pre-test and post-test is not given to participants. -Intervention information (type of intervention and how it was implemented) is not given to the trainers in the 3 groups (one trainer per group). -Each group (with a different intervention) is coded so that the data analyst does not favor one group over the other.
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics committee of Kerman university of Medical sciencese
Street address
Jahad Blvd. Ebn Sina Avenue, Kerman, Iran
City
Kerman
Province
Kerman
Postal code
7616913555
Approval date
2025-10-03, 1404/07/11
Ethics committee reference number
IR.KMU.REC.1404.368

Health conditions studied

1

Description of health condition studied
-
ICD-10 code
--
ICD-10 code description
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Primary outcomes

1

Description
Isokinetic strength of the quadriceps and hamstrings, dynamic balance, flexibility, agility, speed and power
Timepoint
After 8 weeks
Method of measurement
Biodex machine, Y balance, Illinois, vertical jump, 20m sprint, knee extension test

Secondary outcomes

1

Description
Isokinetic quadriceps and hamstring strength, dynamic balance, agility, flexibility, speed, and power
Timepoint
After 8 weeks
Method of measurement
Biodex machine, Y balance, Illinois, vertical jump, 20m sprint, knee extension test

Intervention groups

1

Description
Intervention group: FIFA 11+. The program includes cardiovascular and resistance training that focuses on core and leg strength, balance, and agility, and features a three-level progression of increasing difficulty to provide variety and increase difficulty. It takes approximately 20 minutes to complete and requires minimal equipment (a set of cones and soccer balls). The program includes 15 exercises that are divided into three distinct sections: running drills (8 minutes) that include cutting, changing direction, slowing down, and proper landing techniques. Strength, plyometric, and balance drills (10 minutes) that focus on core strength, extroverted control, and proprioception. Finally, a running drill (2 minutes) to conclude the warm-up and prepare the athlete for athletic participation.

Category
Prevention

2

Description
Intervention group: Prevention injury and Enhance Performance (PEP). Injury Prevention and Performance Enhancement Program. This program includes a 20-minute dynamic warm-up performed at the beginning of training sessions during the warm-up and consists of five different sections that are performed on the training field and do not require additional equipment. The program includes three warm-up activities, five stretching techniques for the core and lower extremities, three strength exercises, five plyometric activities, and three soccer-specific agility drills that emphasize proper biomechanical technique during execution. They will perform the program for 8 weeks (3 sessions per week).

Category
Prevention

3

Description
Control group: Routine program.This program includes routine club and team workouts, which are performed over 8 weeks and designed by the team coach.

Category
Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center
Tehran Football League

Full name of responsible person
foad Mahmoudi

Street address

City
Tehran

Province
Tehran

Postal code

Phone
+98 918 374 1916

Email
foadmahmudi@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Shahid Bahonar University of Kerman

Full name of responsible person

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Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?
No

Title of funding source

Proportion provided by this source
1

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
Other

Person responsible for general inquiries

Contact

Name of organization / entity
Shahid Bahonar University of Kerman

Full name of responsible person
Foad Mahmoudi

Position
Phd student

Latest degree
Ph.D.

Other areas of specialty/work
Physical Education
Street address

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Person responsible for scientific inquiries

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Position
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Latest degree
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Other areas of specialty/work
Physical Education
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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
Due to ethical considerations
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
Undecided - It is not yet known if there will be a plan to make this available
Analytic Code
Undecided - It is not yet known if there will be a plan to make this available
Data Dictionary
Undecided - It is not yet known if there will be a plan to make this available