Clinical Trial Protocol
Iranian Registry of Clinical Trials

19 Sep 2026

The effect of sensorimotor training with visual feedback on proprioception and alignment of joint in woman with dynamic knee valgus

Protocol summary

Study aim
The purpose of this study is the effect of sensorimotor training with visual feedback on proprioception and alignment of joint in woman with dynamic knee valgus

Design
Single-blind randomized clinical trial with control group (n=40)

Settings and conduct
The present quasi-experimental study is performed in the rehabilitation laboratory of arak university. The experimental group performs sensorimotor training for 8 week, 3sessions per week and each session lasts 45-60 minutes. Static and dynamic balance, proprioception, range of motion of hip and knee, knee joint alignment respectively, with the y test and walking the single leg squat test (sls(,goniometer and also the single-leg landing test.

Participants/Inclusion and exclusion criteria
Inclusion criteria : female gender, age range 18-30 years, no history of knee surgery, no injury to the lower limb in the last year, and subjects suffering from dynamic knee valgus. Exclusion criteria: neurological and orthopedic problems, special diseases

Intervention groups
Intervention group: the participants in this group perform sensorimotor training for 8 weeks, 3 sessions per week and each session lasts 45-60 minutes. Control group: they will have the usual routine of their lives.

Main outcome variables
Static and dynamic balance, proprioception, alignment of knee joint, hip and knee range of motion.

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20200204046368N12**
Registration date: **2023-06-07, 1402/03/17**
Registration timing: **registered_while_recruiting**

Last update: **2023-06-07, 1402/03/17**
Update count: **0**

Registration date
2023-06-07, 1402/03/17

Registrant information

Name
Zahra Raeisi

Name of organization / entity
Arak University

Country
Iran (Islamic Republic of)

Phone
+98 86 3417 3492

Email address
z_raisi13@yahoo.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2023-06-05, 1402/03/15

Expected recruitment end date
2023-09-06, 1402/06/15

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
The effect of sensorimotor training with visual feedback on proprioception and alignment of joint in woman with

dynamic knee valgus

Public title
Sensorimotor training with visual feedback on proprioception and alignment of joint in woman with dynamic knee valgus
Purpose
Supportive
Inclusion/Exclusion criteria
Inclusion criteria:
Female gender Age 18 to 30 years No history of knee surgery No injury to the lower limb in the last year Subjects suffering from dynamic knee valgus
Exclusion criteria:
Neurological and orthopedic problems Suffering from any disease affecting the study variables
Age
From **18 years** old to **30 years** old
Gender
Female

Phase
N/A
Groups that have been masked

- Data analyser

Sample size
Target sample size: **40**
Randomization (investigator's opinion)
Randomized
Randomization description
The randomization method is parallel. The randomization unit is individual. The Randlist software is used to assign subjects to study groups randomly. At, the number of participants and groups is given to the software. Then, with this software, each participant is assigned a code. A group is then randomly assigned to each code by the software.
Blinding (investigator's opinion)
Single blinded
Blinding description
The data analyzer will not be aware of the group's classification. The information of the groups will be provided to the data analyzer in the form of numbers 1, 2, and for each participant with a code.
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Research Ethics Committee of Arak University
Street address
Arak University, Karbala Boulevard, Basij Square
City
Arak
Province
Markazi
Postal code
3848177584
Approval date
2023-04-19, 1402/01/30
Ethics committee reference number
IR.ARAKU.REC.1402.008

Health conditions studied

1

Description of health condition studied
dynamic knee valgus
ICD-10 code
M21.06
ICD-10 code description
Valgus deformity, not elsewhere classified, knee

Primary outcomes

1

Description
Alignment of joint
Timepoint
Before and after 8 week intervention
Method of measurement
Single leg landing test

2

Description
Proprioception
Timepoint
Before and after 8 week intervention
Method of measurement
Single leg squat (sls) and photogrammetry

3

Description
Hip and knee range of motion
Timepoint
Before and after 8 week intervention
Method of measurement
Goniometer

Secondary outcomes

1

Description
Static and dynamic balance
Timepoint
Before and after 8 week intervention
Method of measurement
Pedoscan

Intervention groups

1

Description
Intervention group: Intervention group: The intervention group performs sensorimotor training with visual feedback for 8 weeks, 3 sessions per week, and 45-60 minutes per session. A mirror will be used to provide visual feedback.
Category
Rehabilitation

2

Description
Control group: the control group performs their normal activities for 8 weeks.
Category
Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Arak university
Full name of responsible person
Zahra Raeisi
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Arak university
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Hamed Safikhani
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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
Arak university
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
Arak University
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Zahra Raeisi
Position
Assistant professor
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Person responsible for updating data

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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
Not applicable
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
Not applicable
Data Dictionary
Not applicable