Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

EFFECTS OF HIP AND KNEE MUSCLES STRENGTHENING IN IMPROVING PAIN AND FUNCTIONAL STATUS IN SEDENTARY FEMALES WITH PATELLOFEMORAL PAIN SYNDROME: A Randomized Clinical Trial

Protocol summary

Study aim
To check the effects of knee and hip muscles strengthening and stretching exercises in patellofemoral pain syndrome
Design
Experimental
Settings and conduct
District Head Quarter Hospital Study will be conduct in Orthopedic department
Participants/Inclusion and exclusion criteria
inclusion criteria : sedentary females with age of 21-50 Exclusion Criteria: Female who are pregnant or suffering with neurological disorders or any surgery of effected limb
Intervention groups
Group A will receive knee and hip muscle strengthening exercises Group B will receive knee and hip muscle stretching exercises
Main outcome variables
pain Functional status

General information

Reason for update
want to update acutal starting date
Acronym
IRCT registration information
IRCT registration number: **IRCT20230615058490N2**
Registration date: **2023-07-05, 1402/04/14**
Registration timing: **prospective**

Last update: **2023-11-24, 1402/09/03**
Update count: **1**
Registration date
2023-07-05, 1402/04/14

Registrant information

Name
Iqra Tahir
Name of organization / entity
The University of Faisalabad
Country
Pakistan
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+92 302 7150546
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Recruitment status
Recruitment complete
Funding source

Expected recruitment start date
2023-07-07, 1402/04/16
Expected recruitment end date
2023-08-29, 1402/06/07
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
EFFECTS OF HIP AND KNEE MUSCLES STRENGTHENING IN IMPROVING PAIN AND FUNCTIONAL STATUS IN SEDENTARY FEMALES WITH PATELLOFEMORAL PAIN SYNDROME: A Randomized Clinical Trial

Public title
EFFECTS OF HIP AND KNEE MUSCLES STRENGTHENING IN IMPROVING PAIN AND FUNCTIONAL STATUS IN SEDENTARY FEMALES WITH PATELLOFEMORAL PAIN SYNDROME
Purpose
Health service research
Inclusion/Exclusion criteria

Inclusion criteria:
Sedentary females of 21-50 year of age Diagnosed by orthopedic surgeon through X-rays and physical examination. Unilateral anterior knee pain from atleast past 3-months• Pain in 2 or more daily activities (ascending and descending stairs,kneeling, long sitting, and pain on palpation of the medial and/or lateral facet of the patella).
Exclusion criteria:
Male gender Pregnancy Bilateral anterior pain syndrome• Chondromalacia patellae• Any neurological disorders Hip or ankle injuries or previous lower extremity surgery in past 6-month Low back pain or sacroiliac joint pain Rheumatoid arthritis, previously used corticosteroids Osteoarthritis, patellar instability, tendinopathies, meniscal or ligament tear and epiphysitis Red flag sign (uncontrolled hypertension, uncontrolled diabetes and unresolved pyrexia).

Age
From **21 years** old to **50 years** old
Gender
Female

Phase
N/A
Groups that have been masked

- Participant

Sample size
Target sample size: **40**
Randomization (investigator's opinion)
Randomized
Randomization description
Participant will be screened according to inclusion criteria after that she will asked to choose one piece of paper on which group A or B will be mentioned.The Participant will not known which treatment protocol she will receive.
Blinding (investigator's opinion)
Single blinded
Blinding description
Each participants will be asked to select one piece of paper on which group A or B will be mentioned. The Participant will not known which treatment protocol she will receive.
Placebo
Not used
Assignment
Other
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics committee of Government college University Faisalabad
Street address
Dhobi ghat
City
Faisalabad
Postal code
38000
Approval date
2023-04-04, 1402/01/15
Ethics committee reference number
20752

Health conditions studied

1

Description of health condition studied
Patellofemoral pain syndrome
ICD-10 code
M22.2
ICD-10 code description
arthropathies

Primary outcomes

1

Description
Patellofemoral pain
Timepoint
Pain is measured 2 times. One before apply any technique and one after 4 sessions.
Method of measurement
Numeric Pain Rating Scale (NPRS)

Secondary outcomes

1

Description
Functional Status
Timepoint
Functional status assessed 2 times one time before apply any technique and second time after 4 sessions.
Method of measurement
Lower extremity functional scale.

Intervention groups

1

Description
Intervention group A: This group will receive Stretching exercise for hip and knee muscles. Each individual will receive two session per week for 2 weeks. Each session will consist of ten repetitions.
Category
Treatment - Other

2

Description
Intervention group B: This group will receive Strengthening exercise for hip and knee muscles. Each individual will receive two session per week for 2 weeks. Each session will consist of ten repetitions.

Category
Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center
District head quarter Hospital

Full name of responsible person
Iqra Tahir

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Sponsors / Funding sources

1

Sponsor

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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
All financial expenses will bore by myself

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
Other

Person responsible for general inquiries

Contact

Name of organization / entity
Government College University Faisalabad

Full name of responsible person
Iqra Tahir

Position
Student

Latest degree
Master

Other areas of specialty/work
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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
Undecided - It is not yet known if there will be a plan to make this available
Informed Consent Form
No - There is not 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