

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 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

Phone

+92 302 7150546

Email address

iqra.tahir@mth.org.pk

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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Email

iqratahir741@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Government College University Faisalabad

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

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

Physiotherapy

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Person responsible for scientific inquiries

Contact

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Government College University Faisalabad

Full name of responsible person

Iqra Tahir

Position

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Latest degree

Master

Other areas of specialty/work

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Person responsible for updating data

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Full name of responsible person

Iqra Tahir

Position

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Latest degree

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Other areas of specialty/work

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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