

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

Comparative effect of Functional Patellofemoral Joint Mobilizations and Open-Pack Patellofemoral Joint Mobilization for Patellofemoral Pain Syndrome; A Randomized Clinical Trial.

Protocol summary

Study aim

To compare functional patellofemoral joint mobilizations with the standard open-pack patellofemoral joint mobilization for reducing pain associated with patellofemoral pain syndrome.

Design

A single blinded quantitative study ,following the research design of randomized control trial.
Randomization will be through coin tossing method.
Active control group will be used to compare the results

Settings and conduct

Subjects with patellofemoral pain syndrome will be taken from these 3 hospital settings: Allied hospital Faisalabad, District Headquater hospital Faisalabad and Madinah Teaching Hospital Faisalabad. Blinding: participants will be blinded they will not be aware whether they are in treatment or control group as the participants of both the groups will receive 3 step intervention .Physiotherapist will provide different mobilization to each group which will be hidden from the subjects.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Subjects having pain in the knee associated with, during or after the activity including stair ascending/descending, squatting, jumping, prolonged sitting etc. Non-inclusion criteria: Meniscal injury or any other articular injury; Knee ligament laxity; History of recent knee surgery; History of recent patellar dislocation.

Intervention groups

Intervention group 1: 1. Hot pack (10 min) . 2. Functional patellofemoral joint mobilizations(medial patellofemoral glide in 4 functional positions) 3. Baseline quadricep strengthening exercise program. Intervention group 2: 1.Hot pack (10 min) . 2.Baseline quadricep strengthening exercise program. 3.Grade I-II Medial patellofemoral mobilizations (in one position only).

Main outcome variables

Visual Analogue Scale score; Anterior Knee Pain Scale score

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20220401054385N1**

Registration date: **2022-06-05, 1401/03/15**

Registration timing: **retrospective**

Last update: **2022-06-05, 1401/03/15**

Update count: **0**

Registration date

2022-06-05, 1401/03/15

Registrant information

Name

Laiba Nadeem

Name of organization / entity

The University of Faisalabad

Country

Pakistan

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+92 308 6511400

Email address

dpt-fa14-097@tuf.edu.pk

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-04-29, 1401/02/09

Expected recruitment end date

2022-05-30, 1401/03/09

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparative effect of Functional Patellofemoral Joint Mobilizations and Open-Pack Patellofemoral Joint Mobilization for Patellofemoral Pain Syndrome; A Randomized Clinical Trial.

Public title

Effect of Patellofemoral Joint Mobilizations for knee pain

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Patients at the age of 18-35 years old Both gender Willingness to participate in the research Willingness for random allocation to either of the two groups Pain in the knee associated with, during or after the activity including stair ascending/descending, squatting, jumping, prolonged sitting etc Insidious onset of pain that is unrelated to trauma Patient having at least one positive test from these physical tests: 1)Patellofemoral grind test. 2) Patellar apprehension test.3) Step down test Visual analogue scale rating of anterior knee pain during daily activities at a minimum of 30 mm to 70 mm on 100 mm scale

Exclusion criteria:

Meniscal injury or any other articular injury. Knee ligament laxity. History of recent knee surgery History of recent patellar dislocation NSAID or corticosteroid drug use before testing within 24 hours

Age

From **18 years** old to **35 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant

Sample size

Target sample size: **50**

Randomization (investigator's opinion)

Randomized

Randomization description

Sample will be allocated to Group A (Functional mobilization) and Group B (Open pack mobilization) randomly using coin tossing. Method of randomization: Simple randomization Tool for randomization: Sealed envelopes Unit of randomization: Individual Allocation will be concealed from the participants, they will not know whether they are in the treatment or control group,

Blinding (investigator's opinion)

Single blinded

Blinding description

Participants of both groups will be unaware whether they are in active control group or the treatment group after taking informed consent from them. Participants of both groups will receive the same baseline treatment that is

quadriceps strengthening exercises. After that Physiotherapist will apply different types of knee mobilizations to both groups of which the participants will be unaware of.

Placebo

Not used

Assignment

Other

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics committee of The University of Faisalabad

Street address

4-km,Sargodha Road, University Town, Faisalabad, Pakistan.

City

Faisalabad

Postal code

38000

Approval date

2022-04-07, 1401/01/18

Ethics committee reference number

TUF/DR/MSPP/322

Health conditions studied**1****Description of health condition studied**

Patellofemoral pain syndrome

ICD-10 code

M22.2

ICD-10 code description

Patellofemoral disorders

Primary outcomes**1****Description**

Pain in the anterior knee

Timepoint

Pain level will be measured before applying the intervention and then after 4 weeks after the completion of intervention.

Method of measurement

Visual Analogue scale and anterior knee pain scale will be used to measure the pain.

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group (Group A) ; 1. Hot pack (10 min)
2. Grade 1-11 Functional patellofemoral joint
mobilizations 3. Baseline Quadriceps strengthening
exercise program.

Category

Rehabilitation

2

Description

Control group: Hot pack (10 min) 2. Grade 1-11 open-pack
patellofemoral joint mobilizations 3. Baseline Quadriceps
strengthening exercise program.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Madinah Teaching Hospital

Full name of responsible person

Dr. Sidra Majeed

Street address

Sargodha Rd, University Town, Faisalabad, Punjab,
Pakistan.

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2

Recruitment center

Name of recruitment center

Allied Hospital Faisalabad

Full name of responsible person

Dr. Sidra Majeed

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Jail Road adjacent Faisalabad Medical University, Near
Sargodha Road, Faisalabad, Pakistan

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3

Recruitment center

Name of recruitment center

DHQ hospital Faisalabad

Full name of responsible person

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

The University of Faisalabad

Full name of responsible person

Dr. Sidra Majeed, PT

Street address

4-km Sargodha road, University Town, Faisalabad,
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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

The University of Faisalabad

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

Other

Person responsible for general inquiries

Contact

Name of organization / entity

The University of Faisalabad

Full name of responsible person

Dr. Sidra Majeed, PT

Position

Associate Professor

Latest degree

Master

Other areas of specialty/work

Physiotherapy

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Person responsible for scientific inquiries**Contact****Name of organization / entity**

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Person responsible for updating data**Contact****Name of organization / entity**

The University of Faisalabad

Full name of responsible person

Laiba Nadeem

Position

Student

Sharing plan**Deidentified Individual Participant Data Set (IPD)**

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is 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

Title and more details about the data/document

All collected deidentified participant data set for the
outcome measures.

When the data will become available and for how long

4 months after publication

To whom data/document is available

People working in the academic institutions

Under which criteria data/document could be used

IPD and any any additional supporting documents will be
provided for the research on the similar topic and can be
obtained by asking through the contact person
mentioned below

From where data/document is obtainable

Contact person: Laiba Nadeem contact no: 0308
6511400 email:laiba_nadeem1708@gmail.com

What processes are involved for a request to access data/document

Data files will be provided after talking to the contact
person as mention in the above slot.

Comments