Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 Jun 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-11 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
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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 corticosteriod 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 1-11open-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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3

Recruitment center
Name of recruitment center
DHQ hospital Faisalabad
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Sponsors / Funding sources

1

Sponsor
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The University of Faisalabad
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Dr. Sidra Majeed, PT
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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
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Master
Other areas of specialty/work
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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 deindentified 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