Clinical Trial Protocol
Iranian Registry of Clinical Trials

03 Jul 2026

Comparative Effects Of Post Isometric Relaxation And Positional Release Therapy On Pain, Range Of Motion And Cadence In Patient With Plantar Fasciitis.

Protocol summary

Study aim

Primary purpose of this research to evaluate the efficacy of Positional Release Therapy versus Post Isometric Relaxation in treating Plantar fasciitis symptoms such pain, ROM , and cadence.

Design

A randomized double blinded clinical trial and parallel-group design of 36 patients.

Settings and conduct

Study 'll be conduct in Different Government schools.

Participants/Inclusion and exclusion criteria

Inclusion Criteria: School teachers,Male and female both , with unilateral PF & pain that persist more than 3 weeks .Windlass test positive , Age between 30 to 60 Exclusion Criteria: Patient with traumatic , nerve related issue ,NSAIDS user ,with any other musculoskeletal disorder of hip knee foot or fracture , with congenital deformities & using assistive devices

Intervention groups

Both group 'll receive protocol along theragun on baseline. Group A PIR subject in supine position keeping knee extended and therapist on affected side in walking position. The subject's ankle joint will be dorsiflexed until a resistance feel and will ask to hold this position and exert 20% of force towards plantar flexion for a period of 5 to 7 seconds. Resistance will be released and relaxation of 5 seconds will be given during which the ankle will passively dorsiflexed to a new barrier. 5 repetitions. Group B PRT: Therapist places thumb on tender point at plantar fascia insertion while patient in supine position with ipsilateral knee flexed. Plantar flex the toes and ankle while monitoring sore site with thumb, curling around tender point until monitoring thumb feels relief. Supination/pronation of foot will be added if necessary. position of ease is maintained for 90 sec until the tissues soften. After returning the foot to a neutral position the tender spot is re-evaluated. process is repeated three times with 30-sec resting intervals between each repetition.

Main outcome variables

Pain ROM Cadence

General information

Reason for update

Acronym

Comparative effects of PIR and PRT on pain, ROM and cadence in patient with plantar fasciitis

IRCT registration information

IRCT registration number: **IRCT20230607058411N1**
Registration date: **2023-07-11, 1402/04/20**
Registration timing: **registered_while_recruiting**

Last update: **2023-07-11, 1402/04/20**
Update count: **0**

Registration date

2023-07-11, 1402/04/20

Registrant information

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-07-10, 1402/04/19

Expected recruitment end date
2023-09-10, 1402/06/19
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
Comparative Effects Of Post Isometric Relaxation And Positional Release Therapy On Pain, Range Of Motion And Cadence In Patient With Plantar Fasciitis.

Public title
Comparative effects of Post Isometric Relaxation and Positional Release therapy on Pain, Range of motion and Cadence in patient with plantar fasciitis.
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Participants who were willing to sign the consent form. School teachers. Male and female both . Patients having unilateral or bilateral . Windlass test positive . Patient with moderate pain on Visual analogues scale . Age between 30 to 60. Plantar fascists patient present with pain that persist for more than 3 weeks.
Exclusion criteria:
Any traumatic injury of lower limb. Any nerve related issue of lower limb. Patient on NSAIDS and steroids. Patient with any other musculoskeletal disorder of hip knee foot . Prior history of corticosteroids injections. History of ankle or foot fracture . Patient with congenital and acquired deformities . Patient using assistive devices. Subjects unwilling to participate in the study.
Age
From **30 years** old to **60 years** old
Gender
Both

Phase
0
Groups that have been masked

- Participant
- Investigator

Sample size
Target sample size: **36**
Randomization (investigator's opinion)
Randomized
Randomization description
As per the inclusion and exclusion criteria of the study , patients will be divided into two groups randomly by Random lottary method. The randomization process in this study followed a simple randomization method at the individual level. The unit of randomization was the individual participant, meaning that each participant was randomly assigned to either the PRT group or the PIR group. To ensure balance and control for potential confounding factors, randomization strata were used. These strata may have included factors such as age, gender, or severity of Plantar Fasciitis. By stratifying the randomization process, the goal was to create comparable groups with similar characteristics to minimize the influence of potential confounders on the study outcomes. To build the random sequence, patient divided into two groups randomly by Random lottary method. This random sequence helps to ensure that the allocation is unbiased and independent of any potential influence or bias from the researchers. Allocation concealment, a crucial component of randomization, involves preventing the researchers from knowing the group assignment before the randomization process takes place. This ensures that the allocation is concealed and not influenced by subjective factors or biases. Techniques such as sealed envelopes or secure online systems may have been used to achieve allocation concealment, ensuring that the researchers remain unaware of the group assignment until the randomization process is completed. By employing randomization, allocation concealment, and potentially stratified randomization, this study aimed to reduce bias and ensure the groups were comparable at baseline. These methods enhance the internal validity of the study, strengthening the validity of the comparative analysis between the PRT and PIR groups.
Blinding (investigator's opinion)
Double blinded
Blinding description
The patients taking part in the study would be blinded, they would not be able to know the group they have been allocated to, either Post -Isometric Relaxation Techniques or Positional Release Therapy. Principal investigator, who is responsible for the overall conduct and supervision of the study, is also blinded in a double-blind trial. In investigator-initiated trials, the principal investigator may have a vested interest in the study outcomes. By blinding the principal investigator, the risk of conscious or unconscious bias in data interpretation and analysis is minimized.
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
The University of Faisalabad
Street address
Abdullah Colony Samundri road Faisalabad
City
Faisalabad
Postal code
2343
Approval date

2023-03-25, 1402/01/05

Ethics committee reference number

TUF/Addl Ree/SB/359

Health conditions studied

1

Description of health condition studied

Plantar fasciitis is a common cause of heel pain, characterized by discomfort in the plantar area of the foot, particularly the inferior part of the heel. The pain is often more severe in the morning or after periods of inactivity, and it worsens with prolonged standing or weight-bearing activities. Physiotherapy treatments, including rest, taping, stretching, orthosis, silicon heel cups, and myofascial release, are commonly used for pain relief. This study aimed to compare the effects of two physiotherapy techniques, Post Isometric Relaxation (PIR) and Positional Release Therapy (PRT), on pain, range of motion, and cadence in patients with plantar fasciitis. The results of this research will provide valuable insights into the effectiveness of these therapies in managing the symptoms of plantar fasciitis and potentially guide clinicians in selecting appropriate treatment options for their patients

ICD-10 code

M72.2

ICD-10 code description

Plantar fascial fibromatosis

Primary outcomes

1

Description

1. Dorsiflexion range of motion of ankle joint

Timepoint

Goniometer for assessing the dorsiflexion ROM at baseline, 2nd, 4th, 6th & 8th week

Method of measurement

Goniometry is a technique used to measure the range of motion (ROM) of joints, including the ankle joint. In the case of the ankle, a specific instrument called a goniometer is employed. To measure ankle dorsiflexion and plantar flexion, the goniometer is positioned with its stationary arm aligned with the fibula (lateral malleolus) and its movable arm aligned with the dorsum of the foot on the lateral side of the ankle joint. Plantar flexion is evaluated by pointing the toes downward, while dorsiflexion is measured by actively moving the foot toward the shin. The angles of dorsiflexion and plantar flexion are recorded in degrees. Goniometry enables the quantification of ankle joint ROM, which is valuable for diagnosing conditions, monitoring rehabilitation progress, and assessing the effectiveness of treatment interventions.

Secondary outcomes

1

Description

2 measuring pain severity in patients having PF

Timepoint

Visual Analogues Scale for the assessment and measuring pain. at baseline , outcome will be measured 2nd ,4th,6th & 8th week

Method of measurement

The Visual Analogue Scale (VAS) is a subjective technique for assessing pain in plantar fasciitis (PF). It involves using a line with anchor points to represent the extremes of pain. Patients mark a point on the line to indicate their perceived pain intensity. The VAS provides a continuous measurement of pain, facilitating comparisons of treatment outcomes and tracking changes over time. It is a valuable tool for evaluating treatment effectiveness and assessing pain levels in PF patients.

2

Description

Cadence (number of steps per minute) in patients having Plantar Fasciitis

Timepoint

Stopwatch for the assessment of cadence. Outcome will be measured 2nd ,4th,6th & 8th week

Method of measurement

A stopwatch is a timing tool used to measure the passing of time. It is also employed to assess cadence, which refers to the frequency of steps or strides taken during activities like walking or jogging. By counting the number of steps within a designated timeframe, typically a minute, a stopwatch provides a convenient method for monitoring cadence. While there are more advanced wearable devices for precise cadence measurements, a stopwatch can still provide approximate measurements when such technology is not available.

Intervention groups

1

Description

Intervention group: Group A (PIR) subject will be in supine position keeping knee fully extended and therapist on affected side in walking position. The subject's ankle joint will be dorsiflexed until a resistance feel and will ask to hold this position and exert 20% of force towards plantar flexion for a period of 5 to 7 seconds. Resistance will be released and relaxation of 5 seconds will be given during which the ankle will was passively dorsiflexed to a new barrier. 5 repetitions will be given.

Category

Treatment - Other

2

Description

Intervention group: Group B (PRT) During the positional release therapy for plantar fasciitis, the therapist places

their thumb on the tender point at the insertion of the plantar fascia while the patient is in a supine position with the knee flexed on the same side. The patient then performs plantar flexion of the toes and ankle, while the therapist monitors the sore spot with their thumb, curling around the tender point until symptomatic relief is felt. If necessary, foot supination/pronation may be added. The position of ease is maintained for 90 seconds, allowing the tissues beneath the monitoring thumb to soften. Once the foot is returned to a neutral position without moving the thumb, the tender spot is re-evaluated. This process is repeated three times with 30-second resting intervals in-between each repetition.

Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Govt. Girls Elementary school 270/RB Faisalabad
Full name of responsible person
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
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Grant name

No Grant

Grant code / Reference number

no

Is the source of funding the same sponsor organization/entity?

No

Title of funding source

My parents Supporting me,

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

Rabia Khan

Position

Student

Latest degree

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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

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

Comparative effects of Post Isometric Relaxation and Positional Release therapy on Pain, Range of motion and Cadence in patient with plantar fasciitis. All collected identified IPD

When the data will become available and for how long

Data will be available after the completion of study and will remain available till 6 months

To whom data/document is available

Data will be available for other people almost 6 months after the completion of study

Under which criteria data/document could be used

The data/document could be used by communicating with the principle investigator Rabia Khan gmail : rabisandhu4549@gmail.com

From where data/document is obtainable

Rabia Khan rabisandhu4549@gmail.com

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

The data/document could be used by communicating with the principle investigator Rabia Khan rabisandhu4549@gmail.com

Comments