

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 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

##### Name

Rabia Khan

##### Name of organization / entity

The University Of Faisalabad

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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 fasciitis 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 lottery 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 lottery 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

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2343

**Approval date**

## 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 be 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**

Miss Fazeelat Naz

**Street address**

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### 2

#### Recruitment center

**Name of recruitment center**

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#### Recruitment center

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#### Recruitment center

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#### Recruitment center

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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**

Medical doctor

**Other areas of specialty/work**

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## Person responsible for scientific inquiries

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## Person responsible for updating data

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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**