

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

Effects of Combined Myofascial Release and Fascia Stretching Therapy Versus Myofascial Release Alone on Pain and Function in Chronic Plantar Fasciopathy: A Randomized Controlled Trial

Protocol summary

Study aim

Comparative effects of Myofascial Release and Fascia Stretching Therapy Versus Myofascial Release Alone on pain intensity and functional disability in individuals with chronic plantar fasciitis

Design

A controlled clinical trial practical groups, single blind, randomized, phase 3, conducted on 90 patient. Computer software was used for randomization

Settings and conduct

Participants diagnosed by a physician and referred to Arvand Physiotherapy Clinic were invited to participate, provided that the duration of their condition was at least 3 months.

Participants/Inclusion and exclusion criteria

Individuals with a history of chronic plantar fasciopathy lasting more than 3 months

Intervention groups

The intervention group received myofascial release and fascia stretching therapy. The control group received no therapeutic intervention during the study period and continued their usual daily activities.

Main outcome variables

Scores of the visual analog scale for pain and the Foot Functional Index

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20250519065806N3**

Registration date: **2026-05-01, 1405/02/11**

Registration timing: **prospective**

Last update: **2026-05-01, 1405/02/11**

Update count: **0**

Registration date

2026-05-01, 1405/02/11

Registrant information

Name

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Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2026-05-05, 1405/02/15

Expected recruitment end date

2026-06-05, 1405/03/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effects of Combined Myofascial Release and Fascia Stretching Therapy Versus Myofascial Release Alone on Pain and Function in Chronic Plantar Fasciopathy: A Randomized Controlled Trial

Public title

Combined myofascial release and fascia stretching therapy for chronic heel pain

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:
Adults aged 25–40 years Clinical diagnosis of chronic plantar fasciopathy (symptom duration >3 months) by doctor of medicine Presence of localized tenderness at the medial calcaneal tuberosity Pain during the first steps after a period of rest Willingness to participate and provide written informed consent absence of specific spinal pathology or musculoskeletal disorders lower limbs No prior structured physiotherapy for the condition in the last 3 months Ability to participate in the full intervention period

Exclusion criteria:
History of corticosteroid injection in the affected foot within the previous 6 months Previous foot or ankle surgery Systemic inflammatory or rheumatologic diseases (e.g., rheumatoid arthritis, lupus) Neurological disorders affecting lower limb function (e.g., neuropathy, radiculopathy) Structural foot deformities (e.g., severe pes planus, pes cavus, or congenital deformities) Acute musculoskeletal injuries of the lower extremity during the study period Participation in other physical therapy or rehabilitation programs during the study Use of analgesic or anti-inflammatory medication that could affect pain outcomes without a stable dosage Failure to attend more than 20% of treatment sessions or poor adherence to protocol Pregnancy (for females)

Age
From **25 years** old to **40 days** old

Gender
Both

Phase
3

Groups that have been masked

- Outcome assessor
- Data analyser
- Data and Safety Monitoring Board

Sample size
Target sample size: **90**
More than 1 sample in each individual
Number of samples in each individual: **1**
Chronic Plantar Fasciopathy data on plantar fascia function

Randomization (investigator's opinion)
Randomized

Randomization description
After completion of baseline assessments, participants were randomly allocated to one of three groups: Myofascial Release, Myofascial Release and Fascia Stretching Therapy, or control. Randomization was performed using a simple random allocation procedure with a 1:1:1 ratio to ensure equal group sizes. The randomization sequence was generated using a computer-based random number generator by a researcher who was not involved in participant recruitment, intervention delivery, or outcome assessment. Allocation assignments were placed in sequentially numbered opaque sealed envelopes, which were opened only after completion of baseline

measurements. To reduce assessment bias, the outcome assessor remained blinded to group allocation throughout the study. Participants were instructed not to disclose their assigned intervention during post-intervention testing.

Blinding (investigator's opinion)
Single blinded

Blinding description
Outcome assessor and data and statistical analyzer will be blinded from knowing intervention groups. This individual, a physiotherapist, is blinded to group allocation and is unaware of which participants belong to the intervention group and which belong to the control group.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids
empty

Ethics committees

1

Ethics committee

Name of ethics committee
Sports Sciences Research Institute

Street address
No 32 , Miremad Avenue, Motahary street, Tehran

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Province
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Postal code
1423654185

Approval date
2025-02-11, 1403/11/23

Ethics committee reference number
IR.SSRC.REC.1403.081

Health conditions studied

1

Description of health condition studied
Chronic Plantar Fasciopathy

ICD-10 code
M72.2

ICD-10 code description
Plantar fascial fibromatosis

Primary outcomes

1

Description
Pain intensity and functional capacity

Timepoint

First week and 8 weeks
Method of measurement
Visual Analog Scale (VAS) and Foot Functional Index

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: After obtaining ethics approval, individuals with chronic plantar fasciopathy who met the inclusion criteria were invited to participate in the study. Participants were identified through structured interviews and questionnaires that included demographic and medical history information, conducted by the researcher. The inclusion criteria were: age between 25 and 40 years, clinical diagnosis of chronic plantar fasciopathy (symptoms lasting more than 3 months), localized tenderness at the medial calcaneal tuberosity, pain during the first steps after rest (especially morning pain), no structured physiotherapy within the past 3 months, ability to complete the intervention period, and written informed consent. Exclusion criteria included: history of corticosteroid injection in the affected foot within the previous 6 months, previous foot or ankle surgery, systemic inflammatory or rheumatologic diseases (e.g., rheumatoid arthritis or lupus), neurological disorders affecting lower limb function (e.g., neuropathy or radiculopathy), structural foot deformities (e.g., severe pes planus, pes cavus, or congenital deformities), acute musculoskeletal injury of the lower limb during the study period, concurrent participation in other rehabilitation or physiotherapy programs, use of analgesic or anti-inflammatory medications that could affect outcomes (unless on a stable dose), and pregnancy (if applicable). All participants provided written informed consent after receiving a full explanation of the study objectives, procedures, and their responsibilities. Demographic and clinical data, including age, height, weight, physical activity history, and pain intensity, were collected through questionnaires and face-to-face interviews. A total of 90 eligible participants were randomly allocated with equal probability into three groups: myofascial release (MFR) (n = 30), combined myofascial release and fascia stretching therapy (MFR+FST) (n = 30), and control (n = 30). The two intervention groups participated in an 8-week supervised training program, consisting of three 45-minute sessions per week. Each session included 10 minutes of warm-up, 30 minutes of the main intervention, and 5 minutes of cool-down. Exercise intensity and difficulty were progressively increased based on participant tolerance and adaptation. In both intervention groups, standardized myofascial release (MFR) was applied. Participants were positioned supine with the lower limb supported in an extended position and the ankle maintained in a neutral position by the therapist. The therapist applied sustained ischemic pressure using the

thumb at three anatomical sites: the medial calcaneal tuberosity, the distal first metatarsal, and the distal fifth metatarsal. Each point received 90 seconds of pressure, repeated three times, with a total treatment duration of approximately 15 minutes per session. In the combined intervention group, fascia stretching therapy (FST) was additionally performed. Participants stood in a forward lunge position facing a wall, with the contralateral limb placed anteriorly and in contact with the wall. The therapist stood behind the participant, holding the affected ankle and tibia while applying controlled posterior traction toward the therapist's trunk. Stretching was performed in two variations: with the knee extended to target the gastrocnemius muscle and with the knee flexed to target the soleus muscle. All participants were evaluated before and after the intervention period. Outcome measures included pain intensity assessed using the Visual Analogue Scale (VAS) and functional ability assessed using the Foot Function Index (FFI).

Category

Rehabilitation

2

Description

Control group: No intervention was performed before ethics approval and trial registration. After obtaining ethical approval, eligible individuals were invited to participate in the study. For participant recruitment, the researcher visited the physician's clinic and reviewed medical records of patients diagnosed with chronic plantar fasciopathy. Potential participants were screened according to the predefined inclusion and exclusion criteria. Eligibility was assessed for each individual through direct contact and clinical screening based on the study criteria. Based on the required sample size, eligible individuals who initially agreed to participate were selected. The objectives of the study, as well as potential benefits and possible risks of participation, were fully explained to all participants. Participants were informed that their participation was voluntary and that they could withdraw from the study at any stage without any consequences. Written informed consent was obtained from all participants who agreed to participate. Demographic information, including age, weight, and height, was collected through face-to-face interviews. All participants underwent baseline (pre-intervention) assessment before the start of the intervention. Outcome measures included pain intensity assessed using the Visual Analogue Scale (VAS) and functional ability assessed using the Foot Function Index (FFI). The order of assessment was identical for all participants. A pre-test was also conducted for the control group before the intervention period. The control group did not receive any intervention for 8 weeks and continued their usual daily activities throughout the study period. All participants were reassessed after the 8 weeks using the same outcome measures

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Arvand Physiotherapy

Full name of responsible person

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

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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?

Yes

Title of funding source

Sports Sciences Research Institute

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

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Sports Sciences Research Institute

Full name of responsible person

Mohammadreza Seyedi

Position

Assistant professor

Latest degree

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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

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

There is no further information

When the data will become available and for how long

3 Month after pulication

To whom data/document is available

Everyone

Under which criteria data/document could be used

For research and rehabilitation

From where data/document is obtainable

Email

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

One week time to gather the needed data

Comments