Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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
Mostafa Jalili Bafrouei
Name of organization / entity
University of Tehran
Country
Iran (Islamic Republic of)
Phone
+98 21 8837 2580
Email address
m.jalili.b@ut.ac.ir

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 disoredrs 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

City

Tehran

Province

Tehran

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
Mostafa Jalili Bafrouei
Street address
No.64, Darya Bolvd, Saadat Abad, Tehran
City
Tehran
Province
Tehran
Postal code
1423654123
Phone
+98 21 8837 2580
Email
jalilimostafa3@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Sports Sciences Research Institute
Full name of responsible person
Hamed Abbasi
Street address
No 32, Miremed Avenue, Motaheri Street, Tehran
City
Tehran
Province
Tehran
Postal code
1423654187
Phone
+98 21 8865 4578
Email
ssrc@ut.ac.ir

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
Ph.D.
Other areas of specialty/work
Sport Medicine
Street address
No 32, Miremad Avenue, Motahari Street. Tehran
City
Tehran
Province
Tehran
Postal code
1416935840
Phone
+98 21 6652 3147
Email
seyedi@ssrc.ac.ir

Person responsible for scientific inquiries

Contact

Name of organization / entity
University of Tehran
Full name of responsible person
Mostafa Jalili Bafrouei
Position
PhD Student
Latest degree
Master
Other areas of specialty/work
Sport Medicine
Street address
17th North Kargar street, Tehran
City
Tehran
Province
Tehran
Postal code
1423654123
Phone
+98 21 9109 9511
Email
m.jalili.b@ut.ac.ir

Person responsible for updating data

Contact

Name of organization / entity
University of Tehran
Full name of responsible person
Mostafa Jalili Bafrouei
Position
PhD student

Latest degree
Master
Other areas of specialty/work
Sport Medicine
Street address
17th North Kargar street, Tehran
City
Tehran
Province
Tehran
Postal code
1423654123
Phone
+98 21 9109 9511
Email
m.jalili.b@ut.ac.ir

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