Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of Multimodal intervention on Pain, Range of motion and Trunk Endurance in patients with Hamstring Strain Injury

Protocol summary

Study aim

To determine the effects of multimodal intervention on pain, range of motion and trunk endurance in patients with hamstring strain injury.

Design

Single blinded randomized controlled trial. Randomization will use and done by one of the research team members who will be blinded and not involve in patient recruitment or assessment or data analysis. Randomization will be done through computer generated and random number table. Total Sample Size is 72

Settings and conduct

Data will be collected from Pakistan Sports Board, Lahore. The study population will be consisted of patients with non specific pain. The study is single blinded. One of the research team members who will be blinded and not involve in patient recruitment or assessment or data analysis.

Participants/Inclusion and exclusion criteria

Inclusion Criteria: Age between 18 to 30 years. Both Genders. Previous hamstring strain in last year Athletes diagnosed with hamstring strain injury. Grade I and II patients with hamstring strain injury will be included. Exclusion Criteria: Muscular pain or illness in other than hamstring muscles. Lumbopelvic or lower limb surgery. History of fracture due to hamstring strain injury. History of Lower limb fracture

Intervention groups

Intervention Group: Multimodal intervention will be applied on the patients with hamstring strain injury. This study will assess the impact of multimodal intervention on hamstring strain injury in overall physical performance. Control Group: This group will receive conventional physical therapy (CPT).

Main outcome variables

Pain, Range of motion and Trunk endurance

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20231119060113N1**
Registration date: **2023-12-09, 1402/09/18**
Registration timing: **prospective**

Last update: **2023-12-09, 1402/09/18**
Update count: **0**

Registration date

2023-12-09, 1402/09/18

Registrant information

Name
Hiba Saeed
Name of organization / entity
The University Of Lahore
Country
Pakistan
Phone
+92 309 7158785
Email address
hibasaeed992@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-12-10, 1402/09/19

Expected recruitment end date

2024-02-01, 1402/11/12

Actual recruitment start date

2023-12-10, 1402/09/19

Actual recruitment end date

2024-02-01, 1402/11/12

Trial completion date

2024-02-04, 1402/11/15

Scientific title
Effects of Multimodal intervention on Pain, Range of motion and Trunk Endurance in patients with Hamstring Strain Injury

Public title
Effects of Multimodal intervention on Pain, Range of motion and Trunk Endurance in patients with Hamstring Strain Injury

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Age between 18 to 30 years. Both genders. Previous hamstring strain in last year. Athletes diagnosed with hamstring strain injury. Grade I and II patients with hamstring strain injury will be included.

Exclusion criteria:
Muscular pain or illness in other than hamstring muscles. Lumbopelvic or lower limb surgery. History of fracture due to hamstring strain injury. History of Lower limb fracture

Age
From **18 years** old to **30 years** old

Gender
Both

Phase
2

Groups that have been masked

- Outcome assessor

Sample size
Target sample size: **72**
More than 1 sample in each individual
Number of samples in each individual: **36**
Empty
Actual sample size reached: **36**

Randomization (investigator's opinion)
Randomized

Randomization description
Lottery method of randomization will use and done by one of the research team members who will be blinded and not involve in patient recruitment or assessment or data analysis. Allocation assignments will be kept in opaque and sealed envelope and will be unsealed by researcher after baseline assessment. Participants are randomly allocated into two groups through drawing a number.

Blinding (investigator's opinion)
Single blinded

Blinding description
The study is single blinded and the participants did not know while they are receiving experimental or conventional treatment.

Placebo
Not used

Assignment
Factorial

Other design features
Trunk flexor musculature, Lateral and posterior trunk musculature used for trunk stability.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Research Ethics Committee

Street address
1-Km Defence Road، near Bhuptian Chowk، Lahore, Punjab

City
Lahore

Postal code
54000

Approval date
2023-10-16, 1402/07/24

Ethics committee reference number
REC-UOL-542-10-2023

Health conditions studied

1

Description of health condition studied
Hamstring Strain Injury

ICD-10 code
M79.8

ICD-10 code description
Other specified soft tissue disorders

Primary outcomes

1

Description
Pain will be measured by visual analogue scale

Timepoint
Before intervention, During intervention (3rd week) and after intervention(6th week).

Method of measurement
Visual Analogue Scale

2

Description
Range of motion

Timepoint
Before intervention, During intervention (3rd week) and after intervention(6th week).

Method of measurement
Range of motion will be measured by Goniometer.

Secondary outcomes

1

Description
Trunk Endurance

Timepoint
Before and 6th week after intervention.
Method of measurement
Trunk endurance will be measured by Trunk flexor musculature, Lateral trunk musculature and Posterior trunk musculature

Intervention groups

1

Description
Intervention group: Participants will receive tens and ultrasound therapies after that strengthening exercises will be applied. For 6th weeks, All participants received a total of 18 treatment sessions over a six week period which consisted of 3 treatment sessions per week.
Category
Rehabilitation

2

Description
Control group: This group will receive conventional physical therapy. Participants will receive regular physiotherapy interventions which includes 10 minutes of hot pack followed by TENS which continues till 6th week. After applying modalities patients will receive manual therapy sessions of stretching as well as strengthening exercises of hamstring muscles.
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Pakistan Sports Board
Full name of responsible person
Mr. Abdul Majeed
Street address
G85J+V6V, Lahore – Kasur Rd, Block E 2 Gulberg III, Lahore, Punjab
City
Lahore
Postal code
54000
Phone
+92 42 99230383
Email
psblahore@hotmail.com
Web page address

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
The University of Lahore
Full name of responsible person
Prof. Dr. Ashfaq Ahmad
Street address
1-Km Defence Road، near Bhuptian Chowk، Lahore, Punjab
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Phone
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Email
hibasaeed992@gmail.com
Web page address
https://uol.edu.pk/
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
The University of Lahore
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
Academic

Person responsible for general inquiries

Contact
Name of organization / entity
The University of Lahore
Full name of responsible person
Hiba Saeed
Position
Student
Latest degree
Medical doctor
Other areas of specialty/work
Physiotherapy
Street address
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Person responsible for scientific inquiries

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Name of organization / entity
The University of Lahore

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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
Demographic data and data related to final outcome will be shared by maintaining the confidentially.

When the data will become available and for how long
Data will be available from 15 June 2024 to 15 Dec 2024 after 6 month of publication

To whom data/document is available
Hiba Saeed, University of Lahore

Under which criteria data/document could be used
For research purpose

From where data/document is obtainable
To the corresponding author of the study, Hiba Saeed and can contact on +923097158785, hibasaeed992@gmail.com

What processes are involved for a request to access data/document
Open access and there is the traditional public data release where anyone can get access to the data with no registration

Comments
I want randomized controlled trials registration