Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Immediate effects of muscle energy technique (post isometric relaxation) versus primal reflex release technique on hamstring tightness

Protocol summary

Study aim
To compare the immediate effects of Muscle energy technique (post isometric relaxation) and primal reflex release technique in hamstring tightness. To check the improvement in ROM, pain and flexibility in hamstrings in the people suffering from hamstring tightness

Design
Randomized, superiority, paralell group trial, single blinded. randomised was done through lottery method.

Settings and conduct
the trial was conducted in The University of Faisalabad. it was single blinded trial and only participants were blinded.

Participants/Inclusion and exclusion criteria
inclusion criteria: 1- Age group between 17 to 25 years healthy subjects (females). 2- Should have long sitting in daily routine 3- NPRS scale 3 or more. 4- Sit and reach score below 19 exclusion criteria: 1- history of lower extremity injury in past 3 month 2- motor neuron lesions 3- pregnancy 4- open wounds 5- systemic illness history

Intervention groups
Subjects were randomly allocated in two groups by using lottery ticket method. Pre values were recorded before the session. Moist hot pack will be used as baseline treatment. Group A received Muscle Energy Technique and group B received Primal Reflex Release Technique. Post values were recorded after the session

Main outcome variables
• Rom • Pain • Flexibility of hamstrings

General information

Reason for update

Acronym
RCT

IRCT registration information
IRCT registration number: **IRCT20240430061606N1**
Registration date: **2024-05-31, 1403/03/11**
Registration timing: **retrospective**
Last update: **2024-05-31, 1403/03/11**
Update count: **0**

Registration date
2024-05-31, 1403/03/11

Registrant information

Name
Nimra Amin

Name of organization / entity
The University of Faisalabad

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Pakistan

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2024-01-03, 1402/10/13

Expected recruitment end date
2024-03-03, 1402/12/13

Actual recruitment start date
2024-01-18, 1402/10/28

Actual recruitment end date
2024-03-27, 1403/01/08

Trial completion date
2024-05-20, 1403/02/31

Scientific title
Immediate effects of muscle energy technique (post isometric relaxation) versus primal reflex release technique on hamstring tightness

Public title
Immediate effects of muscle energy technique (post isometric relaxation) versus primal reflex release technique on hamstring tightness

Purpose

Education/Guidance

Inclusion/Exclusion criteria

Inclusion criteria:

Should have long sitting in daily routine (at least 6 hours NPRS scale 3 or more. Sit and reach score below 19 (according to YMCA) Age group between 17 to 25 years healthy subjects (females). Willing to participate.

Exclusion criteria:

Any history of lower extremity injury in past 3 month Upper Motor Neuron Lesion and Lower Motor Neuron Lesion due to spasticty and flaccidity Subjects involving in any sports and gymnasium activity e.g running, football, yoga etc Systemic issues e.g irritable bowl syndrome, hemophilia Other musculoskeletal issues e.g arthritis, rheumatoid arthritis etc . Pregnancy Open wounds • Unwilling to participate and sign in the informed consent

Age

From **17 years** old to **25 years** old

Gender

Female

Phase

2-3

Groups that have been masked

- Participant

Sample size

Target sample size: **44**

Actual sample size reached: **44**

Randomization (investigator's opinion)

Randomized

Randomization description

lottery ticket method was used for randomization.

Blinding (investigator's opinion)

Single blinded

Blinding description

in my study participants are unaware what treatment they are getting. they only know the names as A or B. Only Physiotherapist knows what treatment they are getting and what treatment is A and B

Placebo

Not used

Assignment

Parallel

Other design features

It was immediate effect.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Research and ethics Committe The University Of Faisalabad

Street address

West Canal Road, Faisal Town, Faisalabad.

City

Faisalabad

Postal code

54700

Approval date

2024-02-17, 1402/11/28

Ethics committee reference number

TUF/DR/SA/MSPP/2024/392

Health conditions studied

1

Description of health condition studied

Hamstring tightness

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

range of motion

Timepoint

before intervention and after the intervention

Method of measurement

active knee extension test using universal Goniometer

2

Description

flexibility of hamstrings

Timepoint

before the intervention and after the intervention.

Method of measurement

straight leg raise test using universal goniometer

Secondary outcomes

1

Description

pain

Timepoint

before intervention and after intervention

Method of measurement

numeric pain rating scale.

Intervention groups

1

Description

Intervention group:1

Category

Treatment - Other

2

Description

Intervention group:

Category
Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center
The University of Faisalabad

Full name of responsible person
Dr. Shahid Ahmad Heera

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west canal road, Faisal town, Faisalabad

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Sponsors / Funding sources

1

Sponsor

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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
The University of Faisalabad

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 Faisalabad

Full name of responsible person
Dr. Rubina Zulfiqar

Position
Lecturer

Latest degree
Master

Other areas of specialty/work
Physiotherapy

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
No - There is not a plan to make this available
Justification/reason for indecision/not sharing IPD
it can reveal my participants personal information including addresses and phone numbers
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
No - There is not a plan to make this available
Data Dictionary
No - There is not a plan to make this available
Title and more details about the data/document
IMMEDIATE EFFECTS OF MUSCLE ENERGY TECHNIQUE (POST ISOMETRIC RELAXATION) VERSUS PRIMAL REFLEX RELEASE TECHNIQUE ON HAMSTRING TIGHTNESS
When the data will become available and for how long
starting 4 months after publication
To whom data/document is available
only working in academic institution, clinical set ups and hospitals
Under which criteria data/document could be used
main author and co-authors will review the requests. the analysis will be based upon the reasoning and background of the requester.
From where data/document is obtainable
email address
What processes are involved for a request to access data/document
applicant must provide the reasons that why the data is needed. moreover, any copyright and copying of data will not be allowed. any use of this data should be prohibited. applicant must be a person of relevant field.
Comments