

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Effects of static stretching with and without neurodynamics on range of motion, pain and functional ability in females with hamstrings tightness

#### Protocol summary

Registration timing: **retrospective**

#### Study aim

The main objective of this study is to compare the effects of static stretching with and without neurodynamics on range of motion, pain and functional ability in females with hamstrings tightness.

Last update: **2022-03-07, 1400/12/16**

Update count: **0**

#### Registration date

2022-03-07, 1400/12/16

#### Design

A concealed, double blinded, randomized controlled trial with a parallel group design of 62 participants, enrolled between July 2021 and January 2022 And followed for one month.

#### Registrant information

##### Name

NAYAB JOHN

##### Name of organization / entity

UNIVERSITY OF LAHORE

##### Country

Pakistan

##### Phone

+92 53 3705255

##### Email address

drnayab73@gmail.com

#### Settings and conduct

females of University of Lahore

#### Participants/Inclusion and exclusion criteria

Inclusion Criteria: 1.Female participants with hamstring tightness 2.Aging between 18 and 30 years 3.Participants with knee extension  $\leq 20^\circ$ . Non-inclusion Criteria: Patient having history of 1.Neurological disorders 2.Orthopedic diseases (Osteoarthritis, Rheumatoid Arthritis, Spondylolisthesis) 3.Hamstrings injury or strain 4.Chronic Low back pain 5.Any recent spinal surgery history

#### Recruitment status

**Recruitment complete**

#### Funding source

#### Intervention groups

Participants will randomly allocated to two different group each contain 31 participants. Group A receive neurodynamics along with static stretching while group B receive only static stretching. Both interventions will be applied for 6 days and followups will be done after 1 month.Then Results of both interventions will be compared.

#### Expected recruitment start date

2021-07-27, 1400/05/05

#### Expected recruitment end date

2022-01-26, 1400/11/06

#### Actual recruitment start date

empty

#### Actual recruitment end date

empty

#### Main outcome variables

Pain; Range of motion; Functional ability

#### Trial completion date

empty

#### General information

#### Scientific title

Effects of static stretching with and without neurodynamics on range of motion, pain and functional ability in females with hamstrings tightness

#### Reason for update

#### Acronym

#### IRCT registration information

IRCT registration number: **IRCT20210705051796N1**

Registration date: **2022-03-07, 1400/12/16**

#### Public title

Effects of static stretching with and without

neurodynamics on range of motion, pain and functional ability

#### **Purpose**

Treatment

#### **Inclusion/Exclusion criteria**

##### **Inclusion criteria:**

Female participants with hamstring tightness Aging between 18 and 30 years Participants with knee extension  $\leq 20^\circ$

##### **Exclusion criteria:**

Neurological disorders Orthopedic diseases (Osteoarthritis, Rheumatoid Arthritis, Spondylolisthesis) Hamstrings injury or strain Chronic Low back pain Any recent spinal surgery history

#### **Age**

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

#### **Gender**

Female

#### **Phase**

2-3

#### **Groups that have been masked**

- Participant
- Care provider
- Investigator
- Outcome assessor
- Data analyser

#### **Sample size**

Target sample size: **62**

#### **Randomization (investigator's opinion)**

Randomized

#### **Randomization description**

Computer generated randomization assignment will be designed by an independent statistician and randomization will be done by one of the research team members who will not be the part of any intervention, assessment or data analysis. Randomization assignments will be kept in opaque. Outcome assessors will be unaware of group assignment. The intervention will be started on the day after randomization, for both group. For both groups the intervention will be continue for 5 consecutive days and reading should be taken before and after applying intervention and followup will be done after one month .

#### **Blinding (investigator's opinion)**

Double blinded

#### **Blinding description**

Participants, care provider , outcome assessor, data analyser and investigator will be unaware of intervention.

#### **Placebo**

Not used

#### **Assignment**

Parallel

#### **Other design features**

### **Secondary Ids**

empty

### **Ethics committees**

#### 1

##### **Ethics committee**

###### **Name of ethics committee**

Ethical Committee of The University of Lahore

###### **Street address**

1 km Raiwand Road, The University of Lahore

###### **City**

Lahore

###### **Postal code**

40050

##### **Approval date**

2021-11-22, 1400/09/01

##### **Ethics committee reference number**

IRB-UOL-FAHS/993/2021

#### 2

##### **Ethics committee**

###### **Name of ethics committee**

Ethical Committee of The University of Lahore  
Institutional Review Board

###### **Street address**

1 km Raiwand Road, The University of Lahore

###### **City**

Lahore

###### **Postal code**

40050

##### **Approval date**

2021-11-22, 1400/09/01

##### **Ethics committee reference number**

IRB-UOL-FAHS/993/2021

### **Health conditions studied**

#### 1

##### **Description of health condition studied**

Hamstrings Tightness

##### **ICD-10 code**

##### **ICD-10 code description**

### **Primary outcomes**

#### 1

##### **Description**

Range of motion

##### **Timepoint**

Outcomes will be checked at baseline before apply intervention and after applying intervention on conservative 5 day and followup should be done after 1 month .

##### **Method of measurement**

Goniometer.

#### 2

##### **Description**

Pain

##### **Timepoint**

Pain will be assess by using Visual analog scale . Before and after applying intervention for 5 consecutive

days, and followup will be done after one month .

#### **Method of measurement**

Numeric pain rating scale

### **3**

#### **Description**

Functional ability

#### **Timepoint**

Functional abilities will be measured on daily bases .Base line reading will be measured and then after applying intervention again the reading will be taken, this will be continue for 5 consecutive days (DAY 1, DAY 2 , DAY 3, DAY 4, DAY 5 )and after 1 month again the functional ability will be measured.

#### **Method of measurement**

The Lower Extremity functional scale (LEFS)

### **Secondary outcomes**

empty

### **Intervention groups**

#### **1**

#### **Description**

Intervention group 1: Participants will receive neurodynamics along static stretching (NS-SS) of hamstring musculature. Subjects in lying supine and their neck and thoracic spine supported in a forward flexed position. Concurrent hip and knee flexion were alternated dynamically with concurrent hip and knee extension. The therapist alternated the combination of movement depending on the tissue resistance level. This combination of movements was performed for 180 seconds on their dominant lower extremity. This position will then maintained for 30 seconds consisted of six sets of 30 s with a 60 s rest between sets and repeated 5 times further on conservative days and then follow up after 1 month.

#### **Category**

Treatment - Other

#### **2**

#### **Description**

Intervention group 2 : Participants will receive only static stretching (SS) of the hamstring muscles in their dominant leg. While subjects in lying supine, the dominant lower extremity would passively position into SLR position (hip in flexion, knee in extension and ankle in neutral) without pain/discomfort to the point where resistance to the movement will first noted. This position will then maintained for 30 seconds consisted of six sets of 30 s with a 60 s rest between sets and repeated 5 times further on conservative days and then follow up after 1 month. During the 30 second stretches, the therapist monitored the subject to ensure they did not make any compensation that could modify the stretching position. Each subject had a total of 180 seconds of stretching on their lower extremity.

#### **Category**

Treatment - Other

### **Recruitment centers**

#### **1**

#### **Recruitment center**

##### **Name of recruitment center**

University of Lahore

##### **Full name of responsible person**

Nayab John

##### **Street address**

1 km Raiwand Road, The University of Lahore

##### **City**

Lahore

##### **Postal code**

40050

##### **Phone**

+92 42 111 865 865

##### **Email**

info@uol.edu.pk

### **Sponsors / Funding sources**

#### **1**

#### **Sponsor**

##### **Name of organization / entity**

University of Lahore

##### **Full name of responsible person**

Nayab John

##### **Street address**

Univeristy of Lahore adjacent Chenab river GT road , GujraT ,Punjab ,Pakistan

##### **City**

Lahore

##### **Postal code**

50700

##### **Phone**

+92 42 111 865 865

##### **Fax**

##### **Email**

drnayab73@gmail.com

##### **Web page address**

<https://uol.edu.pk/contact-us/>

#### **Grant name**

Not Applicable

#### **Grant code / Reference number**

Not Applicable

#### **Is the source of funding the same sponsor organization/entity?**

No

#### **Title of funding source**

Not Applicable

#### **Proportion provided by this source**

1

#### **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**  
University of Lahore  
**Full name of responsible person**  
Nayab John  
**Position**  
Lecturer  
**Latest degree**  
Bachelor  
**Other areas of specialty/work**  
Physiotherapy  
**Street address**  
1 km Raiwand Road, The University of Lahore  
**City**  
Lahore  
**Province**  
Punjab  
**Postal code**  
50700  
**Phone**  
+92 42 111 865 865  
**Email**  
info@uol.edu.pk  
**Web page address**  
https://uol.edu.pk/

## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**  
University of Lahore  
**Full name of responsible person**  
Nayab John  
**Position**  
Lecturer  
**Latest degree**  
Bachelor  
**Other areas of specialty/work**  
Physiotherapy  
**Street address**  
1 km Raiwand Road, The University of Lahore  
**City**  
Lahore  
**Province**  
Punjab  
**Postal code**  
50700  
**Phone**  
+92 42 111 865 865  
**Email**  
info@uol.edu.pk  
**Web page address**  
https://uol.edu.pk/

## Person responsible for updating data

### Contact

**Name of organization / entity**  
Univeristy of Lahore  
**Full name of responsible person**  
Nayab John  
**Position**  
Lecturer  
**Latest degree**  
Bachelor  
**Other areas of specialty/work**  
Physiotherapy  
**Street address**  
1 km Raiwand Road, The University of Lahore  
**City**  
Lahore  
**Province**  
Punjab  
**Postal code**  
50700  
**Phone**  
+92 307 6130426  
**Email**  
drnayab73@gmail.com  
**Web page address**  
https://uol.edu.pk/

## Sharing plan

### Deidentified Individual Participant Data Set (IPD)

Undecided - It is not yet known if there will be 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

Not yet decided.

### When the data will become available and for how long

not yet applicable

### To whom data/document is available

All

### Under which criteria data/document could be used

NOT DECIDED YET

### From where data/document is obtainable

NOT DECIDED YET

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

WILL let you later

### Comments