

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jul 2026

EFFECTIVENESS OF PNF STRETCHING WITH OR WITHOUT VOODOO FLOSS BAND ON HAMSTRING FLEXIBILITY IN PATIENTS WITH NON-SPECIFIC CHRONIC LOW BACK PAIN

Protocol summary

Study aim

The study aims to find out the effects of Voodoo floss band with Proprioception neuromuscular facilitation(Hold-Relax) stretching in improving Hamstring Flexibility and pain reduction in low back and lumbar flexion ROM in patients with Non-specific Chronic low back pain.

Design

Quasi-Experimental study

Settings and conduct

Clinics and Hospitals will be the settings and the research will be conducted as follows : a screening performas will be distributed to those who are willing to participate those who fulfill the screening and inclusion exclusion criteria will be selected and then will be evaluated using ODI questionnaire, by checking SLR ,By measuring MMST and then pain on NPRS.

Participants/Inclusion and exclusion criteria

Inclusion Criteria: age 18-45 years, Both Genders, Persons who sit for more than 3 hours, During SLR having pain at >70 degrees, Patients with Past three months of NSCLBP Exclusion Criteria: Malignancy, Pregnancy, Disc Herniation, Fracture, Surgery in past 6 months

Intervention groups

After the evaluation and recruitment of participants , the participants will be equally distributed to two groups. Two Groups , Group 1 :PNF (Hold-Relax) stretching with Voodoo Floss band, Group 2:PNF (Hold-Relax) stretching. Both groups will have equal participants with base line treatment using TENS and Ultrasound on low back and the voodoo floss band will then be wrapped around thigh and the PNF technique will be performed in Three sessions per week for four weeks and the recordings will be taken at baseline week(2) and then at week(4) in clinic and hospital settings

Main outcome variables

SLR(Straight leg Raise test), NPRS(Numeric Pain Rating Scale), ODI(Oswestry Disability Index), MMST(Modified-Modified Schober's Test)

General information

Reason for update

There were some spelling mistakes, Postal code, Phone number mistakes, and Gmail mistakes due to typing errors. The corrections are made in the general section, Person responsible for general inquiries section , Person responsible for updating data section

Acronym

IRCT registration information

IRCT registration number: **IRCT20220510054807N1**

Registration date: **2022-05-17, 1401/02/27**

Registration timing: **registered_while_recruiting**

Last update: **2022-07-15, 1401/04/24**

Update count: **1**

Registration date

2022-05-17, 1401/02/27

Registrant information

Name

Farwa Ahmad Khan Rai

Name of organization / entity

Government College University Faisalabad

Country

Pakistan

Phone

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Email address

farwa6095@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-05-15, 1401/02/25

Expected recruitment end date

2022-08-31, 1401/06/09

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

EFFECTIVENESS OF PNF STRETCHING WITH OR WITHOUT
VOODOO FLOSS BAND ON HAMSTRING FLEXIBILITY IN
PATIENTS WITH NON-SPECIFIC CHRONIC LOW BACK PAIN

Public title

EFFECTIVENESS OF PNF STRETCHING WITH OR WITHOUT
VOODOO FLOSS BAND ON HAMSTRING FLEXIBILITY IN
PATIENTS WITH NON-SPECIFIC CHRONIC LOW BACK PAIN.

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Age 18-45 Years Both Genders Persons who sit for more than 3 hours patients with past three months of Non-specific Mechanical Chronic low back pain Pain above 3 on NPRS During SLR having pain at >70 degree persons with minimum of 11 or more ODI score less than 6cm difference on MMST

Exclusion criteria:

Persons with disc herniations Patients with sciatic nerve pain are excluded patients with fracture Persons who had a surgery in past six months Major surgeries like total Hip arthroplasty are also excluded spinal trauma caused by accidents are excluded pregnancy Psychologically un-cooperative Malignancy

Age

From **18 years** old to **45 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **36**

More than 1 sample in each individual

Number of samples in each individual: **18**

Patients will be assigned into two groups. Each group will comprise of 18 patients.

Randomization (investigator's opinion)

Not randomized

Randomization description**Blinding (investigator's opinion)**

Not blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics committee of Faisal Institute of Health Sciences

Street address

673-A Lower canal Road E , Block A Peoples Colony no 1, Faisal Hospital, Faisalabad

City

Faisalabad

Postal code

38000

Approval date

2022-03-20, 1400/12/29

Ethics committee reference number

09/05/2022

Health conditions studied**1****Description of health condition studied**

Non-Specific chronic low back pain can be defined as pain in the lower lumbar region caused by strain or poor posture in the lumbar area associated with or caused by Hamstring tightness.

ICD-10 code

M54.5

ICD-10 code description

Low back pain

Primary outcomes**1****Description**

Straight leg raise test was used to measure the hamstring flexibility in patients with Non-Specific Mechanical Chronic Low Back Pain

Timepoint

3time points including Baseline, 2nd Week Post Treatment, 4th Week Post Treatment

Method of measurement

SLR will be measured by Universal Goniometer

2**Description**

NPRS(Numeric Pain Rating Scale) was utilized to measure the intensity of pain. Pain intensity was rated 0-10 at a horizontal bar. NPRS consists of 11 points, which range from 0=no pain, 1-4=mild pain, 4-7=moderate pain, 7-10=severe pain

Timepoint

3 time points including Baseline, 2nd Week Post Treatment, 4th Week Post Treatment

Method of measurement

NPRS will be utilized to assess pain

Secondary outcomes

1

Description

Lumbar Flexion Range of motion is assessed by the use of Modified-Modified Schober's Test. This test uses Tape measure to measure the lumbar flexion range. To measure the range of motion, the therapist puts his thumbs on the inferior margin of the subject's PSIS. An ink mark is drawn along the midline of the lumbar spine horizontal to the PSIS (lower landmark). While the therapist holds the tape firmly against the subject's skin, he marks a second line 15 cm above the original one (higher landmark). Then the subject is asked to do an active anterior flexion of the trunk without increasing the pain. The new distance between the lower and higher landmarks is then measured. The subject returns to the neutral position. The difference in the initial distance between the skin markings in the neutral position and the new measurements made in the flexion position is used to indicate the amount of lumbar flexion

Timepoint

3 time points, Baseline, 2nd Week post treatment, 4th week post treatment

Method of measurement

MMST (Modified-Modified Schober's Test) will be utilized to measure Lumbar Flexion range

2

Description

ODI (Oswestry Disability Index) is a questionnaire which measure low back pain function disability. It is a gold standard of low back functional outcome. There are 10 sections in this questionnaire. Each section has six questions that score 0 to 5. Total score of all the sections is 50. Patients will fill the Questionnaire and the scored will be (total possible score) will be divided by 50 and then will be multiplied to 100 to get the percentage. 0-20%=indicates minimal disability, 21-40%=Moderate Disability, 41-60%=Severe Disability, 61-80%=Crippled, 81-100%=These patients are either bed bound or exaggerating there symptoms.

Timepoint

3 Time Points Baseline, 2nd Week post treatment, 4th week post treatment

Method of measurement

ODI (Oswestry Disability Index) questionnaire will be utilized to measure Low back function

Intervention groups

1

Description

Intervention group 1:", Base line Treatment includes TENS (Transcutaneous Electrical Nerve Stimulation) will be used on lower back before actual treatment protocol, 10

minutes in continuous mode (100 Hz with pulse duration of 50-100 micro second) and Therapeutic Ultrasound with 3 MHz for 10 minutes at 50% intensity (1.0 w/cm square, pulsed 50%). PNF (Hold-Relax) Stretching with Voodoo floss band, Voodoo floss band is a latex band black color has 2 inch width and 7 feet length is used to wrap around thighs with 50% stretch to compress blood flow around hamstring muscles and then PNF hold relax stretching technique is performed. Voodoo floss band will be wrapped around hamstrings, PNF includes Passive hamstring stretch by therapist held for 7 seconds, then 3 seconds isometric contract, 5 second relaxation, The physiotherapist then passively stretch the muscle until a mild stretch sensation is reported, 5 repetitions, Each repetition is separated by 20 seconds, 3 sessions per week on alternative days for 4 weeks

Category

Rehabilitation

2

Description

Intervention group 2:", Base line Treatment includes TENS (Transcutaneous Electrical Nerve Stimulation) will be used on lower back before actual treatment protocol, 10 minutes in continuous mode (100 Hz with pulse duration of 50-100 micro second) and Therapeutic Ultrasound with 3 MHz for 10 minutes at 50% intensity (1.0 w/cm square, pulsed 50%). PNF (Hold-Relax) Stretching includes Passive hamstring stretch by therapist held for 7 seconds, then 3 seconds isometric contract, 5 second relaxation, The physiotherapist then passively stretch the muscle until a mild stretch sensation is reported, 5 repetitions, Each repetition is separated by 20 seconds, 3 sessions per week on alternative days for 4 weeks

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Faisal hospital canal road, Peoples colony no:1, Faisalabad, Punjab, Pakistan

Full name of responsible person

Dr. Muhammad Masood Ahmad

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Web page address

2

Recruitment center

Name of recruitment center

Shahidheera's Health Clinic

Full name of responsible person

Dr. Shahid Ahmad Heera

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C442+69P,Satiana Road, Batala Colony, Faisalabad,
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3

Recruitment center

Name of recruitment center

District Headquarters Hospital Faisalabd

Full name of responsible person

Dr.Shaista

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Jail Road, Faisalabd

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Web page address

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Faisal Institute of Health Sciences

Full name of responsible person

Dr. Ramesha Tahir; PT

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673-A, Canal Road E, A Block Peoples Colony, Faisal
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Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

No

Title of funding source

Self Financed

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**

Other

Person responsible for general inquiries

Contact**Name of organization / entity**

Faisal Institute of Health Sciences

Full name of responsible person

Dr. Farwa Ahmad Khan Rai

Position

Principal Investigator /Student

Latest degree

Medical doctor

Other areas of specialty/work

Physiotherapy

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Person responsible for scientific inquiries

Contact**Name of organization / entity**

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Full name of responsible person

Dr. Ramesha Tahir ;PT

Position

Principal Investigator/Student

Latest degree

Medical doctor

Other areas of specialty/work

Physiotherapy

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Person responsible for updating data

Contact

Name of organization / entity
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Full name of responsible person
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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

Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Not applicable

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Not applicable

Analytic Code

Not applicable

Data Dictionary

Not applicable