Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 Jun 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

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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 flexibilty 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 be 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 questionnair which measure low back pain function disability. It is a gold standard of low back functional outcome. There are 10 sections in this questionnair.Each section has six questions that score 0 to 5. Total score of all the sections is 50.Patients will fill the Questionnair 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 Masoosd Ahmad
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673-A Canal Road E, Block A, Peoples Colony no 1 Faisalabad
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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, Punjab, Pakistan
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Phone
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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
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Full name of responsible person
Dr. Ramesha Tahir; PT
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673-A, Canal Road E, A Block Peoples Colony, Faisal Hospital, Faisalabad
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drramishatahir@gmail.com
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 updating data

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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