Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparative effects of Mulligan and Maitland Mobilization Techniques in chronic Non- Specific Low Back Pain patients.

Protocol summary

Study aim

• To compare the effects of Mulligan and Maitland mobilization to decrease pain and improve Range of Motion among patients having Chronic Nonspecific Low Back Pain. • To find out either Mulligan or Maitland mobilization is effective to eliminate kinesiophobia among patients due to Chronic Non Specific Low Back Pain.

Design

A Single Blinded Randomized Clinical Trial was conducted.

Settings and conduct

Subjects were recruiting from Outdoor Patient Department of; • District Headquarter Nankana Sahib • Alkarim Hospital Nankana Sahib

Participants/Inclusion and exclusion criteria

inculsion criteria: • Both gender (Male /Female) with the age 20-40. • Patient having low back pain with duration of at least 4 months. • At least moderate pain according to NPRS. • Minimum flexion of lumbar was 37±12° (23). • Minimum extension of lumbar was 14±4° (23). • Minimum kinesiophobia was 40±4 exclusion criteria: • Diagnosed with specific disease of LBP (arthritis, SIJ pain, and osteoporosis) • Recent fracture or history of fracture • Osteoporosis • Pregnancy or C-section 6 months ago • Previous hip or back surgery or fracture less than half year prior

Intervention groups

Group A basically a Mulligan group and Group B was a Maitland group. Group A (Mulligan group), apply Hot Pack first for 10 minutes to warm while the patient lies in a comfortable position. After the warm-up, the patient received a Mulligan mobilization during which the exercisers performed half crunches, knee-to-chest, and hamstring stretches for 15 minutes. And same for Group B (Maitland group), but the difference was to apply Maitland Mobilization.

Main outcome variables

Outcome Measure Following outcome measures were used to gather data from selected population. 1-Primary Outcome Measure • Pain intensity = Numeric Pain Rating Scale (NPRS). • Lumbar Range of Motion = Measuring tape. 2-Secondary Outcome Measure Kinesiophobia = Tampa Scale.

General information

Reason for update

Acronym

RCT

IRCT registration information

IRCT registration number: **IRCT20230530058343N1**
Registration date: **2023-07-09, 1402/04/18**
Registration timing: **retrospective**

Last update: **2023-07-09, 1402/04/18**
Update count: **0**

Registration date

2023-07-09, 1402/04/18

Registrant information

Name

Hafiza mubashra Zahid

Name of organization / entity

The University of Faisalabad

Country

Pakistan

Phone

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-12-24, 1399/10/04

Expected recruitment end date

2023-06-10, 1402/03/20

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparative effects of Mulligan and Maitland Mobilization Techniques in chronic Non- Specific Low Back Pain patients.

Public title

Comparing Mulligan and Maitland Mobilization Techniques for Chronic Non-SpecificLow Back Pain Patients

Purpose

Diagnostic

Inclusion/Exclusion criteria

Inclusion criteria:

Both gender (Male /Female) with the age 20-40. Patient having low back pain with duration of at least 4 months. At least moderate pain according to NPRS Minimum flexion of lumbar was 37±12° Minimum extension of lumbar was 14±4° Minimum kinesiophobia was 40±4.

Exclusion criteria:

Vascular disease Diagnosed with systematic disease i.e. TB of spine Diagnosed with specific disease of LBP (arthritis, SIJ pain, and osteoporosis) Recent fracture or history of fracture Osteoporosis Pregnancy or C-section 6 months ago Previous hip or back surgery or fracture less than half year prior Abdominal surgery inside the past 90 days Treatment of existing back pain by another health care professional within one week Red flags i.e. tumor, infection, open wound (clinical signs of conceivable serious spinal or foundational messes) Diagnosed with neurological disease or radiculopathy Patient who do not receive any PT/ exercise plan from previous 3 months Refusal for consent.

Age

From **20 years** old to **40 years** old

Gender

Both

Phase

1-2

Groups that have been masked

- Participant

Sample size

Target sample size: **40**

Randomization (investigator's opinion)

Randomized

Randomization description

A Single Blinded Randomized Clinical Trial was conducted for treatment and the unit of randomization through individual. Purposive sampling Technique was used to collect sample and two groups will randomly allocated by lottery method. Total 44 patients was assessed for eligibility criteria, 2 excluded for not meeting the inclusion criteria and 1 refused to participate. then Randamization is done and allocated into two groups Mulligan group and Maitland Group. The Mulligan group has total 21 participant from 21 participant 1 is exclude for not following the treatment session . and the Maitland group has 20 participants. Both groups results has been analyzed through spss version.

Blinding (investigator's opinion)

Single blinded

Blinding description

The participants in both Mulligan group and Maitland group are blinded from treatment after giving informed consent.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

1

Registry name

RCT

Secondary trial Id

https://pjmhsonline.com/index.php/pjmhs/article/view/2222

Registration date

2022-09-06, 1401/06/15

2

Registry name

RCT

Secondary trial Id

https://www.thehealerjournal.com/index.php/templates/article/view/83

Registration date

2022-10-31, 1401/08/09

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Comittee of The University of Faisalabad

Street address

Near to manawala road, Faisalabad

City

Faisalabad

Postal code

38860

Approval date

2020-12-24, 1399/10/04

Ethics committee reference number

0418750971

Health conditions studied

1

Description of health condition studied
Chronic Non-Specific Low Back Pain
ICD-10 code
M54.5
ICD-10 code description
Low back pain

Primary outcomes

1

Description
1-Pain 2-Range of Motion
Timepoint
1-Pain intensity = Numeric Pain Rating Scale (NPRS). 2-Lumbar Range of Motion = Measuring tape 3-
Method of measurement
1-Pain intensity = Numeric Pain Rating Scale (NPRS). On a Numeric Pain Rating Scale (NPRS), patients were approached to check the number somewhere in the range of 0 and 10, 0 and 20 or 0 and 100 that best matches their aggravation power. Zero as a rule addresses 'no aggravation' and as far as possible addresses 'most exceedingly terrible conceivable torment' 2-Lumbar Range of Motion = Measuring tape One of the most common tape measurement procedures used to measure lumbar flexion involves a technique pioneered by Schubert, who described the original two-point method for measuring spinal flexion and later modified it to measure spinal flexion. This makes one mark at the lumbosacral. Junction and the second mark are made 10 cm above the first mark, with the subject in a neutral position with the spine. After the stationary subject bends forward as far as possible, the amount of flexion in the spine is estimated by increasing the distance between the first and second points. Because the tape measure method relies on the stretching or distraction of the skin over the spine, this technique (and modifications of the technique) is sometimes called the skin distraction method. Bone landmarks for tape measure indicate ROM of lumbar extension, midline of spine consistent with PSIS, cm above baseline marker

Secondary outcomes

1

Description
Kinesiophobia
Timepoint
kinesiophobia= Tampa Scale
Method of measurement
The Tampa Scale for Kinesiophobia has a complete score scope of 17-68, with 17 showing no kinesiophobia, 68 demonstrating extreme kinesiophobia, and a score of ±37 showing the presence of kinesiophobia. The contracted variant keeps up with things 1, 2, 3, 5, 6, 7, 10, 11, 13, 15 and 17 from the first TSK- 11 scale and has a score scope of 11-44.

Intervention groups

1

Description
Intervention group: Mulligan Group
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
1-Alkarim Hospital Nankana Sahib. 2- District Headquarter Hospital Nankana Sahib
Full name of responsible person
DR- Hafeez-u- Rehman, DR Aijaz
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Sponsors / Funding sources

1

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Grant name
Hafiza Mubashra Zahid
Grant code / Reference number
03254597992
Is the source of funding the same sponsor

organization/entity?
No
Title of funding source
investigator initiated trail
Proportion provided by this source
10
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
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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
No - There is not 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

Comparative effects of Mulligan and Maitland Mobilization Techniques in chronic Non- Specific Low Back Pain patients.

When the data will become available and for how long

not sure

To whom data/document is available

The University of Faisalabad

Under which criteria data/document could be used

For Research Purpose

From where data/document is obtainable

website and Email

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

not sure

Comments

Please comment them when you study the article.