

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 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

inculson 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  $37\pm 12^\circ$  (23). • Minimum extension of lumbar was  $14\pm 4^\circ$  (23). • Minimum kinesiophobia was  $40\pm 4$  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

+92 41 8750971

##### Email address

2021-ms-pt-074@tuf.edu.pk

##### 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-Specific Low 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  $37\pm 12^\circ$  Minimum extension of lumbar was  $14\pm 4^\circ$  Minimum kinesiophobia was  $40\pm 4$ .  
**Exclusion criteria:**  
Vascular disease Diagnosed with systematic disease i.e. TB of spine Diagnosed with specific disease of LBP (arthritis, SJJ 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 Randomization 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 Committee 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  $\pm 37$  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

##### Street address

Near govt. gurunanak girls college Nankana Sahib

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##### Web page address

<https://g.co/kgs/gLB5vY>

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

The University of Faisalabad

##### Full name of responsible person

Hafiza Mubashra Zahid

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##### Web page address

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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

**City**

Faisalabad

**Province**

punjab

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The University of Faisalabad

**Full name of responsible person**

hafiza Mubashra Zahid, Maryam Safdar

**Position**

consultant

**Latest degree**

Specialist

**Other areas of specialty/work**

Health Service Management

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**Full name of responsible person**

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**Position**

consultant

**Latest degree**

Specialist

**Other areas of specialty/work**

Health Service Management

**Street address**

near manawala road

**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.