

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Comparative effects of Egoscue and McGill stabilization exercises on pain, disability and lumbar lordotic angle in patients with lower cross syndrome

Protocol summary

Study aim

The objective of the study is to compare the effects of Egoscue and McGill stabilization exercises on pain, disability and lumbar lordotic angle in patients with lower cross syndrome.

Design

A randomized clinical not blinded trial. Sample size 44 divided in 2 groups. Total 24 treatment sessions will be given to subjects in 8 weeks with 3 sessions/week.

Settings and conduct

Setting: Sadiq Hospital, Satellite Town Sargodha, Pakistan.

Participants/Inclusion and exclusion criteria

INCLUSION CRITERIA: Both Male and Female. Age between 20-40 years. Lordotic curve angle $>45^\circ$. Adults having back pain from the previous 2-3 months. NPRS value between 3-6. **EXCLUSION CRITERIA:** Scoliosis. Patients with diagnosed cases of discogenic disease. Recent surgery or trauma. Patients with diagnosed cases of sciatica. Patients with severe incapacitating pain not relieved by position change.

Intervention groups

Informed consent will be taken from the subjects by consents forms. After meeting the inclusion criteria, the patients will be randomly allocated into two groups A and B. Group A will receive Egoscue Exercise (with hot pack for 15 minutes) 3 days a week and 10 repetitions of exercise for a period of 8 weeks and a rest interval of 2 minutes between exercises. Group B will receive McGill Stabilization Exercise (with hot pack for 15 minutes) 3 days a week and 10 repetitions of exercise for a period of 8 weeks and a rest interval of 2 minutes between exercises. Measurements of all the outcome measures will be taken at baseline, at 4th week and at 8th week.

Main outcome variables

Pain (NPRS), Functional Performance (MODI), Lumbar AROM's (Bubble Inclinator)

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230715058788N1**

Registration date: **2023-09-04, 1402/06/13**

Registration timing: **prospective**

Last update: **2023-09-04, 1402/06/13**

Update count: **0**

Registration date

2023-09-04, 1402/06/13

Registrant information

Name

Hafsa Noreen

Name of organization / entity

Riphah International University, Lahore Campus

Country

Pakistan

Phone

+92 48 3250425

Email address

hafsanoreen7575@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-09-20, 1402/06/29

Expected recruitment end date

2023-11-20, 1402/08/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparative effects of Egoscue and McGill stabilization exercises on pain, disability and lumbar lordotic angle in patients with lower cross syndrome

Public title

Comparative effects of Egoscue and McGill stabilization exercises on pain, disability and lumbar lordotic angle in patients with lower cross syndrome

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Both Male and Female. Age between 20-40 years. Lordotic curve angle >45°. Adults having back pain from the previous 2-3 months. NPRS value between 3-6.

Exclusion criteria:

Scoliosis. Patients with diagnosed cases of discogenic disease. Recent surgery or trauma. Patients with diagnosed cases of sciatica. Patients with severe incapacitating pain not relieved by position change.

Age

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

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **44**

Randomization (investigator's opinion)

Randomized

Randomization description

Randomization by lottery method. Allocation concealment through sealed envelopes.

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Non-probability convenient sampling technique will be used to recruit the individuals for the study and then randomization will be done by lottery method to divide the individuals in two interventional groups.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Riphah College of Rehabilitation Sciences(RCRS)

Research Ethical Committee (REC)

Street address

Near Hajj Complex, 1-14, Islamabad, Islamabad Capital Territory

City

Islamabad

Postal code

46000

Approval date

2023-08-03, 1402/05/12

Ethics committee reference number

REC/RCR & AHS/23/0138

Health conditions studied

1

Description of health condition studied

Lower cross syndrome also known as pelvic cross syndrome is a postural distortion syndrome characterized by anterior pelvic turn, increased lumbar lordosis, weak abdominal muscles and tight spinal extensors along with hip flexors. This postural imbalance in young adults can lead to low back pain in future.

ICD-10 code

ICD-10 code description

Lower Cross Syndrome

Primary outcomes

1

Description

Pain

Timepoint

Before treatment, at 4th week and at 8th week.

Method of measurement

Numeric Pain Rating Scale (NPRS)

2

Description

Functional Performance

Timepoint

Before treatment, at 4th week and at 8th week.

Method of measurement

Modified Oswestry Disability Index (MODI)

3

Description

Lumbar Active Range of Motion (AROM)

Timepoint

Before treatment, at 4th week and at 8th week.

Method of measurement

Bubble Inclinator

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: After taking baseline measures Group A will receive Egoscue Exercise (with hot pack for 15 minutes) 3 days a week and 10 repetitions of exercise for a period of 8 weeks and a rest interval of 2 minutes between exercises.

Category

Treatment - Other

2

Description

Intervention group: After taking baseline measures Group B will receive McGill Stabilization Exercise (with hot pack for 15 minutes) 3 days a week and 10 repetitions of exercise for a period of 8 weeks and a rest interval of 2 minutes between exercises.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Sadiq hospital Sargodha

Full name of responsible person

Hafsa Noreen

Street address

Satellite Town, Sargodha

City

Sargodha

Postal code

40100

Phone

+92 48 3250425

Email

hafsanoreen7575@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Sadiq Hospital Sargodha

Full name of responsible person

Hafsa Noreen

Street address

Satellite Town, Sargodha

City

Sargodha

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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

Sadiq Hospital, Sargodha

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

Riphah International University Lahore, Pakistan

Full name of responsible person

Hafsa Noreen

Position

Student

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

Street address

House No 115, Near Saleemi House Anjum Town
Shaheenabad Road Sargodha

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Province

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Postal code

40100

Phone

+92 48 3250425

Email

hafsanoreen7575@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity

Riphah College of Rehabilitation Sciences (RCRS)

Full name of responsible person

Hafsa Noreen

Position

Student

Latest degree

Bachelor

Other areas of specialty/work

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Person responsible for updating data

Contact

Name of organization / entity

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

There is no further decision and information is decided yet.

Study Protocol

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

Statistical Analysis Plan

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

Informed Consent Form

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

Clinical Study Report

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

Analytic Code

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

Data Dictionary

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