Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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°. 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 Inclinometer)

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 Inclinometer

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
Postal code
40100
Phone
+92 48 3250425
Email
hafsanoreen7575@gmail.com
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
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Person responsible for scientific inquiries

Contact
Name of organization / entity
Riphah College of Rehabilitation Sciences (RCRS)
Full name of responsible person
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Position
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Latest degree
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Other areas of specialty/work
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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)
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