

Clinical Trial Protocol

Iranian Registry of Clinical Trials

09 Jun 2026

Effects of eccentric exercises with and without Proprioceptive neuromuscular facilitation on pain, Range of motion and function in cricketers with Glenohumeral Internal Rotation Deficit

Protocol summary

Study aim

to compare the effects of eccentric exercises with and without proprioceptive neuromuscular facilitation on pain, Range of motion and function in cricketers with glenohumeral Internal Rotation Deficit

Design

Randomized Controlled Trial, Parallel Group, Single Blind

Settings and conduct

The study will be conducted in Pakistan sports Board (PSB), Lahore Pakistan. Football players visiting PSB will be consented to participate in the study. The study will be single blind and the outcome assessor will be blinded by not knowing the details of the study groups. The Investigator will determine the information by the medical record number, assigned to each participant.

Participants/Inclusion and exclusion criteria

inclusion criteria: Male Cricketers (age ≥ 15 years), Current participation on cricketer team as a bowler or fielders, Presence of GIRD, IR ROM greater than 18° with a corresponding loss of total rotational motion greater than 5° and will be marked as GIRD exclusion criteria: History of GH dislocation in the past year, Fracture of upper limb, Cervical injuries, Thoracic outlet syndrome, Any surgery in the upper limb region in the past two years, Participating in shoulder rehabilitation in the past year, Neurological and musculoskeletal disorders that limit movement, and pain in the upper limb prior to and after the tests.

Intervention groups

Group 1: This group will follow eccentric exercise, stretches along with PNF training. Group 2: This group will follow only eccentric exercise and stretches only.

Main outcome variables

Improvement in pain, Range of motion and function in cricketers with Glenohumeral Internal Rotation Deficit

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20220216054033N3**

Registration date: **2022-05-17, 1401/02/27**

Registration timing: **prospective**

Last update: **2022-05-17, 1401/02/27**

Update count: **0**

Registration date

2022-05-17, 1401/02/27

Registrant information

Name

Sufian Ahmed

Name of organization / entity

Riphah International University Islamabad Pakistan

Country

Pakistan

Phone

+92 334 4272734

Email address

sufianahmedghuman@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-06-15, 1401/03/25

Expected recruitment end date

2022-12-01, 1401/09/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effects of eccentric exercises with and without Proprioceptive neuromuscular facilitation on pain, Range of motion and function in cricketers with Glenohumeral Internal Rotation Deficit

Public title

Effects of eccentric exercises with and without Proprioceptive neuromuscular facilitation on pain, Range of motion and function in cricketers with Glenohumeral Internal Rotation Deficit

Purpose

Health service research

Inclusion/Exclusion criteria

Inclusion criteria:

male cricketers (age ≥ 15 years) current participation on cricketer team as a bowler or fielders . presence of glenohumeral internal rotation deficit internal rotation range of motion greater than 18° with a corresponding loss of total rotational motion greater than 5° and will be marked as glenohumeral internal rotation deficit

Exclusion criteria:

history of glenohumeral dislocation in the past year fracture of upper limb cervical injuries thoracic outlet syndrome. any surgery in the upper limb region in the past two years participating in shoulder rehabilitation in the past year neurological and musculoskeletal disorders that limit movement, and pain in the upper limb prior to and after the tests

Age

From **15 years** old

Gender

Male

Phase

N/A

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: **40**

Randomization (investigator's opinion)

Randomized

Randomization description

After selecting the subjects using Purposive sampling the included cases will randomly allocated into two groups by simple random sampling using Gold Fish bowl method. Participants will be informed about their registration Number. The participants group will be masked as A & B by the Trainer/Assessor. Pre and post Data will be collected and analyzed by the data analyst. After analysis the Groups will be unmasked.

Blinding (investigator's opinion)

Single blinded

Blinding description

40 Participants will be involved in my study using Purposive Sampling Technique. 2 groups of 20 participants each will be made and will be randomized using systematic sampling. Outcome assessor will be blinded by not knowing the information about the groups of the study. The Investigator will determine the

information by the medical record number, assigned to each participant.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Riphah International University

Street address

Quaid e Azam Industrial State

City

Lahore

Postal code

40050

Approval date

2021-12-27, 1400/10/06

Ethics committee reference number

029269

Health conditions studied

1

Description of health condition studied

Glenohumeral Internal Rotation Deficit

ICD-10 code

M24. 811

ICD-10 code description

Glenohumeral Internal Rotation Deficit

Primary outcomes

1

Description

Reduction in pain in cricketers with Glenohumeral Internal Rotation Deficit

Timepoint

Before intervention and 6 weeks after intervention

Method of measurement

for pain assessment: numeric pain rating scale for functional assessment

Secondary outcomes

1

Description

Improvement in Range of motion in cricketers with Glenohumeral Internal Rotation Deficit

Timepoint

Before intervention and 6 weeks after intervention

Method of measurement

Goniometer

2**Description**

Improvement in function in cricketers with Glenohumeral Internal Rotation Deficit

Timepoint

Before intervention and 6 weeks after intervention

Method of measurement

Kerlan-Jobe Orthopaedic Clinic Shoulder & Elbow Score

Intervention groups**1****Description**

Intervention group: ● The experimental group will perform throwing exercise with a Thera Band for approximately 20 min per session, three sessions a week lasted six weeks ● Eccentric exercises ● Sleeper Stretch in the prone position ● PNF (hold relax).

Category

Rehabilitation

2**Description**

Control group: This group will follow only eccentric exercise and stretches only

Category

Rehabilitation

Recruitment centers**1****Recruitment center****Name of recruitment center**

Pakistan Sports Board

Full name of responsible person

Dr. Muhammad Hashim

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Kalma Chowk

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Sponsors / Funding sources**1****Sponsor**

Name of organization / entity

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Full name of responsible person

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Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Riphah International University

Proportion provided by this source

1

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**

Riphah International University

Full name of responsible person

Muhammad Hashim

Position

Assistant Professor

Latest degree

Master

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)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

There is no further information

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

No - There is not a plan to make this available

Analytic Code

No - There is not a plan to make this available

Data Dictionary

No - There is not a plan to make this available