

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

17 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  $\geq 15$  years), Current participation on cricketer team as a bowler or fielders, Presence of GIRD, IR ROM greater than  $18^\circ$  with a corresponding loss of total rotational motion greater than  $5^\circ$  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  $\geq 15$  years) current participation on cricketer team as a bowler or fielders . presence of glenohumeral internal rotation deficit internal rotation range of motion greater than  $18^\circ$  with a corresponding loss of total rotational motion greater than  $5^\circ$  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

#### Street address

Kalma Chowk

#### City

Lahore

#### Postal code

40050

#### Phone

+92 323 4071564

#### Email

muhammad.hashim@riphah.edu.pk

## Sponsors / Funding sources

## 1

### Sponsor

Name of organization / entity

Riphah International University

### Full name of responsible person

Muhammad Hashim

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Quaid e Azam Industrial State

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### Phone

+92 323 4071564

### Email

muhammad.hashim@riphah.edu.pk

### 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

#### Street address

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Punjab

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## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**  
Riphah International University  
**Full name of responsible person**  
Samra Nadeem  
**Position**  
Lecturer  
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Bachelor  
**Other areas of specialty/work**  
Physiotherapy  
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## Person responsible for updating data

### Contact

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Punjab  
**Postal code**  
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**Phone**  
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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