Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparative effects of balance training and resisted plyometric training on agility and jump height among cricket fast bowlers

Protocol summary

Study aim
The aim of the study is to compare the effects of balance training and resisted plyometric training on agility and jump height among cricket fast bowlers.

Design
A concealed, randomized clinical trial with a parallel group design of 58 athletes will be recruited using a convenient sampling technique.

Settings and conduct
Data will be collected from athletes, allocated into two groups randomly through 1. Pakistan Sports Board 2. Cricket Academies Lahore

Participants/Inclusion and exclusion criteria
INCLUSION CRITERIA • Only male fast bowlers will be admitted to the Study • Participants between the age of 19 to 26 • Regularly active Fast bowlers EXCLUSION CRITERIA • Athletes having experience of less than 1 year • Athletes involved in any other sports • Athletes with any recent surgery that hinder the training

Intervention groups
Fast bowlers will be selected as per inclusion criteria and before starting the 6-week training in both groups baseline values will be noted with the help of the Countermovement Jump test and Illinois agility test after taking necessary demographic data. Fast bowlers will be randomly divided into groups. Group A will participate in the 6-week balance training program. Group B will participate in 6-week plyometric training

Main outcome variables
Jump Height (Countermovement Jump test) Agility (Illinois agility test) Speed (Speed Gun)

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20210811052138N7**
Registration date: **2023-06-13, 1402/03/23**
Registration timing: **registered_while_recruiting**

Last update: **2023-06-13, 1402/03/23**
Update count: **0**

Registration date
2023-06-13, 1402/03/23

Registrant information

Name
Halima Shoukat

Name of organization / entity
Riphah international university, Lahore

Country
Pakistan

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+92 55 4284121

Email address
halima.shoukat@yahoo.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2023-03-15, 1401/12/24

Expected recruitment end date
2023-09-30, 1402/07/08

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Comparative effects of balance training and resisted plyometric training on agility and jump height among cricket fast bowlers

Public title
Comparative effects of balance training and resisted

plyometric training on agility and jump height among cricket fast bowlers

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Only male fast bowlers will be recruited to the Study Participants between the age of 19 to 26 Active Fast bowlers with more than one year of training

Exclusion criteria:
Athletes with systemic and neuromuscular issue Athletes involved in any other sports Athletes with any recent surgery, Injury or Trauma

Age
From **19 years** old to **26 years** old

Gender
Male

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **58**

Randomization (investigator's opinion)
Randomized

Randomization description
The Random allocation in this study was done using a simple randomization method. To allocate the participants to the two groups, a random table method was used. This involves using a table of random numbers to assign participants to either group, ensuring that each participant had an equal chance of being allocated to either group. By identifying a range of numbers that corresponds to the total number of participants, then select a starting point in the table of random numbers and read the digits in pairs, matching each pair with the participants until all participants have been allocated to a group.

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features
Nil

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics Committee of Riphah College of Rehabilitation and Allied Health Sciencess

Street address
Madar e Millat Road, Quaid e Azam Industrial Estate, Lahore, Punjab

City
Lahore

Postal code
54770

Approval date
2022-11-07, 1401/08/16

Ethics committee reference number
REC/RCR & AHS/22

Health conditions studied

1

Description of health condition studied
Studying the effects of balance and resisted plyometric training on agility and jump height of healthy athletes

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description
Agility and Jump height

Timepoint
Agility and jump height will be measured at baseline and after 6 weeks of intervention.

Method of measurement
Agility will be measured through the Illinois agility test and jump height will be measured using the counter jump test.

Secondary outcomes

1

Description
Bowling Speed

Timepoint
Bowling speed will be measured before intervention and after 6 weeks of intervention

Method of measurement
Bowling speed will be measured through speed gun

Intervention groups

1

Description
Intervention group:

Category
Other

2

Description
Intervention Group 2: Group B will participate in 6-week plyometric training. Participants will perform resisted plyometric training. The training consisted of three

different exercises: vertical jumps, Bulgarian squat jumps, and broad jumps.

Category
Other

Recruitment centers

1

Recruitment center

Name of recruitment center
Pakistan Sports Board and Coaching Centre (PSB)

Full name of responsible person
Asma Ghafoor

Street address
Ferozpur Rd, Block E 2 Gulberg III, Lahore, Punjab

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Lahore

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54810

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info@psb.gov.pk

Web page address
http://www.sports.gov.pk/Detail/ODNmZDljYTMtNmIyOS00YzU3LWFhNmMtZjcxNGM5NjI4NzZm

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Riphah International University

Full name of responsible person
Halima Shoukat

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28-M. Qaid-e-Azam Industrial Estate, Kot Lakhphat, Lahore

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Grant name
Educational

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
20

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 Lahore

Full name of responsible person
Asma Ghafoor

Position
Student

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

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