

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Effects of home based aerobic exercises on cardiorespiratory fitness, Heart rate and Rating of perceive exertion in university students.

Protocol summary

Study aim

To investigate the impact of lifestyle components on cardiorespiratory fitness heart rate and Rating of perceive exertion by performing 6 weeks of moderate intensity exercise in estimating change in VO2 max by performing Harvard bench step test after 6 weeks of exercise program.

Design

STUDY DESIGN: Quasi-Experimental study DURATION OF STUDY: 6 months SAMPLE SIZE: =34

Settings and conduct

SETTING: University of Sialkot students.

Participants/Inclusion and exclusion criteria

Inclusion Criteria: • university students • Age between 18-35 years Exclusion criteria • Above the age of 35 • Participant who failed to complete life style questionnaire • Participants failed to complete the fitness test • Participant who have congenital heart disease, hypertension, type I diabetes and known kidney disease will be excluded from the study. • Participants with known past surgical history'

Intervention groups

1. Information pertaining to individual demographics and lifestyle components will be collected through pre exercise questionnaire. 2. After completing the questionnaire Harvard bench step cardiorespiratory fitness test will be performed. In this test Participants step up and down, on and off an aerobics type step for THREE minutes to increase heart rate and Oxygen consumption 3. After performing test HR, RPE and VO2 max will be calculated. 4. Consequently participants will be instructed to participate in moderate intensity exercise for 6 weeks. 6 weeks later participants again perform bench step and calculate the HR, RPE and VO2 max.

Main outcome variables

To see the effects of 6 weeks of aerobic exercise on Heart rate , cardiorespiratory fitness and rating of perceive exertion in students.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20211224053510N1**

Registration date: **2022-01-12, 1400/10/22**

Registration timing: **retrospective**

Last update: **2022-01-12, 1400/10/22**

Update count: **0**

Registration date

2022-01-12, 1400/10/22

Registrant information

Name

kiran iqbal

Name of organization / entity

Riphah international university

Country

Pakistan

Phone

+92 303 2268783

Email address

kiran.iqbal@uskt.edu.pk

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-07-03, 1400/04/12

Expected recruitment end date

2021-11-23, 1400/09/02

Actual recruitment start date

2021-07-10, 1400/04/19

Actual recruitment end date

2021-12-15, 1400/09/24

Trial completion date

2021-12-20, 1400/09/29

Scientific title

Effects of home based aerobic exercises on cardiorespiratory fitness, Heart rate and Rating of perceive exertion in university students.

Public title

Effects of home based aerobic exercises on cardiorespiratory fitness, Heart rate and Rating of perceive exertion in university students.

Purpose

Health service research

Inclusion/Exclusion criteria

Inclusion criteria:

The study included apparently healthy male and female subjects between age group 18 to 35 years. Male and female of university students.

Exclusion criteria:

Above the age 35 years. Participants who failed to complete life style questionnaire. Participants failed to complete fitness test. Participants who have congenital heart disease, hypertension, type I diabetes and known kidney disease will be excluded from the study. Participants with known surgical history. Students on any medications.

Age

From **18 years** old to **35 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **31**

Actual sample size reached: **34**

Randomization (investigator's opinion)

Not randomized

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Convenient sampling technique

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Riphah international university research and Ethics Committee

Street address

Kourpur gohadpur , airport road street# 01 sialkot

City

Sialkot

Postal code

51040

Approval date

2021-04-03, 1400/01/14

Ethics committee reference number

027667

Health conditions studied

1

Description of health condition studied

Effect of home base aerobic exercise on cardiorespiratory fitness and heart rate

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

To see the effect of home base aerobic exercise on rating of perceive exertion, heart rate and oxygen consumption.

Timepoint

6 weeks

Method of measurement

pulse oximeter

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group:

Category

Lifestyle

Recruitment centers

1

Recruitment center

Name of recruitment center

University of Sialkot

Full name of responsible person

Kiran Iqbal

Street address

Kashmir road, china chowk, university of sialkot

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Riphah international university

Full name of responsible person

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Raveena.rajput@uskt.edu.pk

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

No

Title of funding source

self funding

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

University of Sialkot

Full name of responsible person

Kiran iqbal

Position

Lecturer

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

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Person responsible for scientific inquiries

Contact

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available
Study Protocol
Yes - There is a plan to make this available
Statistical Analysis Plan
Yes - There is a plan to make this available
Informed Consent Form
No - There is not a plan to make this available
Clinical Study Report
Yes - There is 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
Title and more details about the data/document

Spss analysis file results
When the data will become available and for how long
February 2022
To whom data/document is available
people working in academic institutes
Under which criteria data/document could be used
Spss analysis
From where data/document is obtainable
Kiraniqbal216@gmail.com
What processes are involved for a request to access data/document
1 month
Comments