Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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 apparantly 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 congnital 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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kiraniqbal216@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Riphah international university

Full name of responsible person

Dr. Raveena rajput

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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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Full name of responsible person

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Person responsible for updating data

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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

Feburary 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