Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Assessing the effect of aerobic exercises on cardiorespiratory and cardiometabolic fitness in hyperlipidemic young population of Multan

Protocol summary

Study aim
Aim of this study is to intervent the change in (blood pressure, pulse rate, oxygen saturation, glucose level, lipid profile ,uric acid level, HDL, LDL temperature respiration rate and C-reactive protein) to see level of improvement of the quality of life and to prevent from cardiovascular abnormalities in young adults of Multan with hyperlipidemia that are associated with body mass index and cardiorespiratory and cardiometabolic fitness.

Design
Randomized , single group design with triple blinded study

Settings and conduct
MIMAS, Faiz hospital and Shahbaz Sharif

Participants/Inclusion and exclusion criteria
• Young Adults. • Age group of 18-30 years. • Hyperlipidemic people. • Mentally and physically wellbeing. The excluding criteria: • Older Adults. • Childs. • Pregnant Women. • Uncontrolled hypertension. • Chronic heart problems. • Physically disable. • Mentally ill. • Any type of major surgery. • Lactating females.

Intervention groups
Group 1 with jogging exercise , group 2 with brisk walking and group 3 with jumping rope exercise

Main outcome variables
improvement in crf and CMP

General information

Reason for update

Acronym
cross sectional experimental study

IRCT registration information
IRCT registration number: **IRCT20230718058826N4**
Registration date: **2024-01-03, 1402/10/13**
Registration timing: **retrospective**

Last update: **2024-01-03, 1402/10/13**
Update count: **0**

Registration date
2024-01-03, 1402/10/13

Registrant information

Name
Perwasha Perwasha

Name of organization / entity
Muhammad Institute of Medical and Allied Sciences, Multan, Pakistan.

Country
Pakistan

Phone
+92 310 6562039

Email address
perwashanaseer123@gmail.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2023-07-29, 1402/05/07

Expected recruitment end date
2023-09-29, 1402/07/07

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Assessing the effect of aerobic exercises on cardiorespiratory and cardiometabolic fitness in hyperlipidemic young population of Multan

Public title
Assessing the effect of aerobic exercises on cardiorespiratory and cardiometabolic fitness in hyperlipidemic young population of Multan

Purpose

Health service research

Inclusion/Exclusion criteria

Inclusion criteria:

• Young Adults.• Age group of 18-30 years Hyperlipidemic people.• .• Mentally and physically wellbeing.

Exclusion criteria:

• Older Adults.• Childs.• Pregnant Women.• Uncontrolled hypertension.• Chronic heart problems.• Physically disable.• Mentally ill.• Any type of major surgery.• Lactating females.

Age

From **18 years** old to **30 years** old

Gender

Both

Phase

0

Groups that have been masked

- Participant
- Investigator
- Data analyser

Sample size

Target sample size: **393**
More than 1 sample in each individual
Number of samples in each individual: **131**
in 3 groups, 131, 131 participants will be added for inducing the stress by using stress inducers

Randomization (investigator's opinion)

Randomized

Randomization description

we are studying randomized control trial allocation done by lottery method in which 393 patients or participants divided into 3 groups randomly with 131 participants each in each group.

Blinding (investigator's opinion)

Triple blinded

Blinding description

in this study, triple blinding method involved in which the participants, investigator and data analyzer will be blinded. Participant do not know about exercise, investigator randomly allocate the patient or participants and data analyzer will be independent for results.

Placebo

Not used

Assignment

Single

Other design features

Randomized control trial will be used in this study. We will randomly allocate the patients into 3 different interventional groups. Each group contain 131 participants.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethical Committee of Muhammad Institute of Medical and Allied Sciences

Street address

HBL street near sabzazar metro station bosan road Multan

City

multan

Postal code

66000

Approval date

2023-07-10, 1402/04/19

Ethics committee reference number

2023/ MIMAS/Sawera/08/19

Health conditions studied

1

Description of health condition studied

cardiometabolic and cardiorespiratory fitness health in young adults of Multan with hyperlipidemia

ICD-10 code

E00-E89

ICD-10 code description

Endocrine, nutritional and metabolic diseases

Primary outcomes

1

Description

Decrease cholestrol level and improve the cardiorespiratory health

Timepoint

Time duration of study will be 8 weeks .5 days a week for 8 weeks.

Method of measurement

digital sphygmomonometer, thermometer, pulse oximeter, lab kit to measure blood glucose, cholesterol and uric acid

Secondary outcomes

empty

Intervention groups

1

Description

'Intervention group' 1 with jogging .Drink 1 glass of water every hour until you run so you are hydrated. Start with 5 mins of exercise in start and then build up at least 10 mins per session. The goal will be to achieve at least 65-70 mins of jogging per week. Make sure you warm and stretch thoroughly before the exercise. Heart rate , blood pressure, respiration rate, oxygen saturation and temperature will be recorded before and after the

exercise. (21)

Category

Lifestyle

2

Description

Intervention group: ‘Internationale group 2’ with brisk walking .This analysis will be done in young overweight/obese people who completed either the brisk walking program or the brisk walking plus diet program. The brisk walking consisted of walking for 5 to 10 minutes per session and for 3 to 6 days/week. The diet consisted of 60 minutes of group education and 15 to 20 minutes of individual counselings every week. Heart rate, respiration rate ,blood pressure, oxygen saturation and temperature will be recorded before and after the exercise. (22)

Category

Lifestyle

3

Description

Intervention group: ‘Intervention group 3’ with jumping rope. Exercise intervention will be designed as individualised rope skipping 20 per session and three times a week. The participants will be instructed to gradually increase the amount of rope skipping to 150 per week and then they maintain this exercise intensity until the end of the intervention. Heart rate ,respiration rate, blood pressure ,oxygen saturation and temperature will be recorded before and after the exercise. (23)

Category

Lifestyle

Recruitment centers

1

Recruitment center

Name of recruitment center

Faiz hospital

Full name of responsible person

Nimra Arif

Street address

BCG chock

City

multan

Postal code

66000

Phone

+92 321 6563479

Email

nimraarif@gmail.com

2

Recruitment center

Name of recruitment center

Shahbaz Sharif hospital

Full name of responsible person

ali abbas

Street address

Fawara chock

City

multan

Postal code

66000

Phone

+92 321 5654897

Email

shahbaz@gmail.com

Web page address

3

Recruitment center

Name of recruitment center

MIMAS, Multan

Full name of responsible person

Imran Ahmad Khan

Street address

HBL street near sabzazar metro station bosan road Multan

City

multan

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66000

Phone

+92 333 6120602

Email

imranahmadkhandurrani@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

CUVAS

Full name of responsible person

Zahid Manzoor

Street address

bahawalpur , punjab, Pakistan

City

Bahawalpur

Postal code

63100

Phone

+92 312 6678543

Email

zahidmanzoor@cuvas.edu.pk

Grant name

scholarship for research

Grant code / Reference number

43681

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

No

Title of funding source

scholarship for research

Proportion provided by this source

100

Public or private sector

Public

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

CUVAS

Full name of responsible person

Zahid Manzoor

Position

Associate Professor

Latest degree

Ph.D.

Other areas of specialty/work

Toxicology

Street address

bahawalpur , punjab, Pakistan

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Province

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zahidmanzoor@cuvas.edu.pk

Person responsible for scientific inquiries

Contact

Name of organization / entity

MIMAS

Full name of responsible person

Perwasha

Position

Assistant Professor

Latest degree

Ph.D.

Other areas of specialty/work

Health Service Management

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Email

perwashanaseer123@gmail.com

Person responsible for updating data

Contact

Name of organization / entity

MIMAS

Full name of responsible person

Perwasha

Position

Assistant Professor

Latest degree

Ph.D.

Other areas of specialty/work

Health Service Management

Street address

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Postal code

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Phone

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Email

perwashanaseer123@gmail.com

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

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

Aim of this study is to explore the correlation of (blood pressure, pulse rate, oxygen saturation, glucose level, lipid profile, temperature and respiration rate) and to improve the quality of life in young adults of Multan with hyperlipidemia that are associated with body mass index and cardiorespiratory and cardiometabolic health. 1.6. Expected outcomes This study will investigate the correlation of cardiorespiratory and cardiometabolic fitness with body mass index in young adults of Multan with hyperlipidemia. We will expect a positive result with blood pressure, heart rate, respiration rate, temperature and oxygen saturation and negative result with VO2max and cholesterol level.

When the data will become available and for how long

after practical completion

To whom data/document is available

investigator

Under which criteria data/document could be used
under ethical consideration
From where data/document is obtainable
secretary BASR
What processes are involved for a request to access data/document
supervisor
Comments
kindly consider it