

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Comparison of breathing exercises and low intensity circuit training in asthma patients

Protocol summary

Study aim

The aim of the study is to comprehensively compare the efficacy of breathing exercises and low-intensity circuit training as therapeutic interventions for asthma patients. This will help patients of asthma to become more independent.

Design

Pragmatic, community based, parallel group, double blinded, randomised control trial. There will be 357 patients that we will enroll. Study will be done from April-July 2024.

Settings and conduct

1. Azeem Hospital Multan 2. Sughran Wazeer Child Clinic Hospital Multan 3. South Punjab Hospital Multan 4. Muhammad Rehabilitation Clinic (Muhammad Institute of Medical and Allied Sciences Multan) after approval from institutional ethical committee

Participants/Inclusion and exclusion criteria

Inclusion criteria: Patients of 18-40 years, diagnosed asthmatic patients, both genders. Exclusion criteria: Patients with vascular neoplasia, fibromyalgia, radiculopathy, neuropathy, tumor, joint fractures, and vestibular problems, heart problems, not willing to participate, psychological unfit patients, pregnant/lactating ladies were excluded.

Intervention groups

Group-A will be given breathing exercises and group-B will be given low-intensity circuit exercises for 12 weeks. Breathing exercises for group-A includes pursed lip breathing, diaphragmatic breathing and breath holding exercises. For group-B low intensity circuit exercises includes walking, running and abdominal crunches.

Main outcome variables

Lung capacity, forced expiratory volume, exercise capacity and quality of life.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230202057310N6**
Registration date: **2024-06-09, 1403/03/20**
Registration timing: **registered_while_recruiting**

Last update: **2024-06-09, 1403/03/20**

Update count: **0**

Registration date

2024-06-09, 1403/03/20

Registrant information

Name

Imran Ahmad Khan

Name of organization / entity

Muhammad Nawaz Shareef University of Agriculture, Multan

Country

Pakistan

Phone

+92 333 6120602

Email address

imran.ahmad@mnsuam.edu.pk

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2024-04-12, 1403/01/24

Expected recruitment end date

2024-07-12, 1403/04/22

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of breathing exercises and low intensity

circuit training in asthma patients

Public title

Breathing exercises and low intensity circuit training in asthma patients

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Both male and female Age 18-40 years Patients diagnosed with asthma

Exclusion criteria:

Not willing to participate Psychological unfit patient Patients with heart problems/diseases Patient with musculoskeletal disorders Pregnant/ lactating ladies Patients with any trauma/neoplasms

Age

From **18 years** old to **40 years** old

Gender

Both

Phase

1-2

Groups that have been masked

- Participant
- Investigator
- Data analyser

Sample size

Target sample size: **357**

More than 1 sample in each individual

Number of samples in each individual: **3**

At day 1, 6th week and at the end (12th week) parameters will be checked

Randomization (investigator's opinion)

Randomized

Randomization description

Double blinded study will be conducted randomization of participants in two groups will be done by lottery method

Blinding (investigator's opinion)

Double blinded

Blinding description

In a double-blinded study, participants will be blinded. Participants will be unaware of the type of treatments that will be evaluated after the completion of the intervention trial. subjects will choose between two samples and also the investigator will be kept blind as he will not know who is receiving the treatment and who is receiving a placebo or alternative treatment.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

The Institutional Ethical Committee of Muhammad Institute of Medical and Allied Sciences,

Street address

Bosan Road

City

Multan

Postal code

66000

Approval date

2024-02-02, 1402/11/13

Ethics committee reference number

MIMAS/03/IRB/Farah

Health conditions studied

1

Description of health condition studied

Asthma

ICD-10 code

J45

ICD-10 code description

Asthma

Primary outcomes

1

Description

Lung capacity

Timepoint

12 weeks

Method of measurement

Spirometry

2

Description

Forced expiratory volume

Timepoint

12 weeks

Method of measurement

Spirometry

3

Description

Exercise capacity

Timepoint

12 weeks

Method of measurement

6-minute walk test and shuttle walk test

Secondary outcomes

1

Description

Quality of life
Timepoint
12 weeks
Method of measurement
Asthma Quality of Life Questionnaire (AQLQ)

2

Description
Asthma Related Anxiety and Depression
Timepoint
12 weeks
Method of measurement
Asthma Related Anxiety and Depression Scale

Intervention groups

1

Description
Intervention group: Group-A will be treated with breathing exercises for 3 times/ week each session lasted for 45 minutes and total duration is 12 weeks
Category
Treatment - Other

2

Description
Intervention group: Group-B will be treated with low-intensity circuit exercises including cycling ergometer, low intensity walking, running squats for 3 times/ week each session lasted for 45 minutes and total duration is 12 weeks
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Muhammad Rehabilitation Clinic
Full name of responsible person
Dr. Gul-e-Mizgan
Street address
Bosan road
City
Multan
Postal code
66000
Phone
+92 333 6102847
Email
gulemizgan@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Ali -Ul- Murtaza Department of Rehabilitation Science, MIMAS
Full name of responsible person
Gul-e-Mizgan
Street address
Bosan road
City
Multan
Postal code
66000
Phone
+92 337 6231111
Email
mimasmultan99@gmail.com
Grant name
Student fund
Grant code / Reference number
03/MIMAS/ANAS
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Ali -Ul- Murtaza Department of Rehabilitation Science, MIMAS
Proportion provided by this source
50
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
Muhammad Nawaz Shareef University of Agriculture, Multan
Full name of responsible person
Imran Ahmad Khan
Position
Lecturer
Latest degree
Ph.D.
Other areas of specialty/work
Medical Pharmacy
Street address
Agriculture Complex, Old Shuja Abad Rd, Multan, Punjab
City
Multan
Province
Punjab
Postal code
66000
Phone
+92 333 6120602

Email

imran.ahmad@mnsuam.edu.pk

Person responsible for scientific inquiries**Contact****Name of organization / entity**

Muhammad Institute Of Medical And Allied Sciences
Multan

Full name of responsible person

Farah Zahid

Position

Lecturer

Latest degree

Specialist

Other areas of specialty/work

Physiotherapy

Street address

Bosan road

City

Multan

Province

Punjab

Postal code

66000

Phone

0337-623111

Email

farahzahid977@gmail.com

Person responsible for updating data**Contact****Name of organization / entity**

Muhammad Institute Of Medical And Allied Sciences
Multan

Full name of responsible person

Anas Sajjad

Position

Final year student of DPT

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

Street address

Bosan road

City

Multan

Province

Punjab

Postal code

66000

Phone

+92 306 6887085

Email

anaskhanqalandrani01@gmail.com

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