Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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 form 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 comittee

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, pschycological 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

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+92 333 6120602

Email address
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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
Spirometery

2

Description
Forced expiratory volume
Timepoint
12 weeks
Method of measurement
Spirometery

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 argometer, low intensity walking, running squats for 3 times/ week each session lasted for 45 minutes and total duration is 12 weeks12 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

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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

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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

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Person responsible for scientific inquiries

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Specialist
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Physiotherapy
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Person responsible for updating data

Contact
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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