

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Effects of upper limb resistance exercises on Aerobic capacity, Strength and Quality of life (QOL) in COPD patients

Protocol summary

Study aim

This study will be conducted to evaluate the effectiveness of upper limb Resistance exercises (aerobic capacity, strength and quality of life among COPD patients)

Design

A Randomized Controlled Trial will be conducted. Informed consent will be taken from patients by informing the aims and objectives of the study. Then patients will be selected on the basis of convenient sampling technique that will be randomized through the lottery method.

Settings and conduct

Nusrat Fateh Ali Khan Hospital and General Hospital, Faisalabad.

Participants/Inclusion and exclusion criteria

Inclusion: Age of patients taken is 25-55 years Patients of both genders Individuals with stable COPD(Chronic bronchitis, Emphysema, asthma) being monitored by pulmonologist Exclusion: • MSK (frozen shoulder, osteoarthritis, rheumatoid arthritis, , traumatic fractures, amputation) • Cardiac issues • Surgery (Thoracic surgery, CABG) • Cognitively impaired dementia Peripheral oxygen saturation <90% during 6 min. walk test.

Intervention groups

The control group will warm-up with slow walking, deep breathing and arm circles for 5-15 minutes. Aerobic exercise and inspiratory muscle training will be performed for 5-15 minutes, involving three sets with 10 repetitions and a rest interval of 1-2 minute with threshold strength instruments. At the end of session stretching will be performed for 5-10 minutes. The treatment group will perform the same physical exercises routine as the control group, with additional upper limb resistance exercise in three sets with 10 repetitions with rest interval of 1-2 minutes between each sets which will be followed by message therapy

Main outcome variables

• Modified Borg Scale • Stethoscope • 6 min. walk test • QoL questionnaire • Dynamometer

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20220930056062N4**

Registration date: **2024-06-10, 1403/03/21**

Registration timing: **prospective**

Last update: **2024-06-10, 1403/03/21**

Update count: **0**

Registration date

2024-06-10, 1403/03/21

Registrant information

Name

Kaiyat Shafique

Name of organization / entity

The University of Faisalabad

Country

Pakistan

Phone

+92 334 6925051

Email address

kaiyatshafique@yahoo.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2024-06-18, 1403/03/29

Expected recruitment end date

2024-07-30, 1403/05/09

Actual recruitment start date

empty

Actual recruitment end date

empty
Trial completion date
empty

Scientific title
Effects of upper limb resistance exercises on Aerobic capacity, Strength and Quality of life (QOL) in COPD patients

Public title
Upper limb resistance exercises for COPD patients

Purpose
Other

Inclusion/Exclusion criteria

Inclusion criteria:
Age of patients taken is 25-55 years Patients of both genders Individuals with stable COPD(Chronic bronchitis, Emphysema, asthma) being monitored by pulmonologist

Exclusion criteria:
MSK (frozen shoulder, osteoarthritis, rheumatoid arthritis, , traumatic fractures, amputation)• Cardiac (Angina pectoris, recent MI, severe pulmonary hypertension, CHF, Unstable diabetes, Severe exercise-induced hypoxemia) • . Surgery (Thoracic surgery, CABG) Cognitively impaired dementia Peripheral oxygen saturation <90% during 6 min. walk test

Age
From **25 years** old to **55 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Participant

Sample size
Target sample size: **58**

Randomization (investigator's opinion)
Randomized

Randomization description
Randomization through lottery method. Each participant will be asked to choose between two pieces of paper labeled "Group A" and "Group B." They will be assigned to treatment groups based on the paper they select.

Blinding (investigator's opinion)
Single blinded

Blinding description
Patients will be blind in this clinical trial. In this single-blinded RCT study, participants will be unaware of which treatment they are receiving. To ensure blinding, the treatments will be somewhat similar. The allocation sequence will be concealed.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids
empty

Ethics committees

1

Ethics committee

Name of ethics committee
Government College University Faisalabad

Street address
Faisalabad

City
Faisalabad

Postal code
38000

Approval date
2024-05-25, 1403/03/05

Ethics committee reference number
GCUF/2024/9256

Health conditions studied

1

Description of health condition studied
chronic obstructive pulmonary disease

ICD-10 code
J44

ICD-10 code description
Other chronic obstructive pulmonary disease

Primary outcomes

1

Description
Exertion

Timepoint
Assessment will be made two time before and after 4 weeks

Method of measurement
Modified Borg Scale

2

Description
6 min. walk test

Timepoint
Assessment will be made two time before and after 4 weeks

Method of measurement
6 min. walk test

3

Description
quality of life

Timepoint
Assessment will be made two time before and after 4 weeks

Method of measurement
St. George's Respiratory Questionnaire

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Aerobic exercise and inspiratory muscle training will be performed for 5-15 minutes, involving three sets with 10 repetitions and a rest interval of 1-2 minute with threshold strength instruments, with additional upper limb resistance exercise in three sets with 10 repetitions with rest interval of 1-2 minutes between each sets which will be followed by message therapy

Category

Rehabilitation

2

Description

Control group: The control group will warm-up with slow walking, deep breathing and arm circles for 5-15 minutes. Aerobic exercise and inspiratory muscle training will be performed for 5-15 minutes, involving three sets with 10 repetitions and a rest interval of 1-2 minute with threshold strength instruments. At the end of session stretching will be performed for 5-10 minutes.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Nusrat Fateh Ali Khan Hospital

Full name of responsible person

Rafia Imtiaz

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Recruitment center

Name of recruitment center

General Hospital

Full name of responsible person

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

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Full name of responsible person

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Grant name

It is a self funded study. All financial expenses are bear personally

Grant code / Reference number

It is a self funded study. All financial expenses are bear personally

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

No

Title of funding source

It is a self funded study. All financial expenses are bear personally

Proportion provided by this source

1

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

Persons

Person responsible for general inquiries

Contact

Name of organization / entity

Government College University Faisalabad

Full name of responsible person

Rafia Imtiaz

Position

Lecturer

Latest degree

Master

Other areas of specialty/work

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Sharing plan**Deidentified Individual Participant Data Set (IPD)**

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

No - There is not 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