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 repititions 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 repititions 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
Kaiynat Shafique
Name of organization / entity
The University of Faisalabad
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Pakistan
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kaiynatshafique@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 repititions and a rest interval of 1-2 minute with threshold strength instruments, with additional upper limb resistance exercise in three sets with 10 repititions 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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2

Recruitment center
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Sponsors / Funding sources

1

Sponsor
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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