Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of Pilates breathing versus Rhythmic Initiation Proprioceptive neuromuscular facilitation technique in Chronic Obstructive Pulmonary Disease (COPD) patients

Protocol summary

Study aim
To find the effects of Pilates breathing versus Rhythmic initiation Proprioceptive Neuromuscular Facilitation (PNF) on pulmonary function tests, dyspnea and chest expansion in Chronic Obstructive Pulmonary Disease (COPD) patients.

Design
Two parallel groups, double blinded randomized clinical trial with pre and post assessment

Settings and conduct
Pulmonology ward , Ittefaq hospital Lahore

Participants/Inclusion and exclusion criteria
Inclusion Criteria • Age group of 35-65years • Both male and females • COPD diagnosed according to the Global Initiative for Chronic Obstructive Lung Diseases (GOLD) guidelines at mild stage EXCLUSION CRITERIA • Patients with any recent surgery • Patients with other medical conditions that may interfere with exercise program • Patients doing yoga training • Diagnosis of other chronic lung disease such as (bronchiectasis, cystic fibrosis, asthma, interstitial lung disease, lung cancer etc. • Mental Illness

Intervention groups
Standardized pulmonary rehabilitation program along with Pilates breathing and Proprioceptive neuromuscular facilitation technique

Main outcome variables
Dyspnea measured using Modified Medical Research Council (MMRC) scale, Chest Expansion measured using Measuring tape, Pulmonary Function Tests using Portable Spirometer

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20191117045462N13**
Registration date: **2024-03-24, 1403/01/05**
Registration timing: **retrospective**

Last update: **2024-03-24, 1403/01/05**
Update count: **0**

Registration date
2024-03-24, 1403/01/05

Registrant information

Name
Wajeeha Zia

Name of organization / entity
Riphah International University

Country
Pakistan

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wajeeha_z@yahoo.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2023-11-30, 1402/09/09

Expected recruitment end date
2024-03-01, 1402/12/11

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Effects of Pilates breathing versus Rhythmic Initiation Proprioceptive neuromuscular facilitation technique in

Chronic Obstructive Pulmonary Disease (COPD) patients

Public title
Effects of Pilates breathing versus Rhythmic Initiation Proprioceptive neuromuscular facilitation technique in Chronic Obstructive Pulmonary Disease (COPD) patients

Purpose
Education/Guidance

Inclusion/Exclusion criteria

Inclusion criteria:
Age group of 35-65years Both male and females Chronic Obstructive Pulmonary Disease (COPD) diagnosed according to the Global Initiative for Chronic Obstructive Lung Disease (GOLD) guidelines at mild stage.

Exclusion criteria:
Patients with any recent surgery Patients with other medical conditions that may interfere with exercise program Patients doing yoga training• Diagnosis of other chronic lung disease such as (bronchiectasis, cystic fibrosis, asthma ,interstitial lung disease, lung cancer) Mental Illness

Age
From **35 years** old to **65 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Participant
- Outcome assessor

Sample size
Target sample size: **52**

Randomization (investigator's opinion)
Randomized

Randomization description
Convenient sampling technique will be used to recruit the COPD patients in the study and then they will be divided into two groups by simple random sampling through sealed opaque envelope system as mentioned below 1- Fifty- two sealed envelopes were randomly given to participating clinicians (in shuffled form) with half having treatment A and half having treatment B in them. 2- After taking consent from the patient, the clinician randomly picks up an envelope and allocates the patient to the treatment regimen mentioned in the envelope.

Blinding (investigator's opinion)
Double blinded

Blinding description
Both participants and outcome assessor will be blind. assessment will be done by second therapist who will not be involved in treatment and data analysis

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Riphah college of Rehabilitation & Allied Health Sciences

Street address
25 Raza Saeed road, Bhabra block M Gulberg 3, Lahore, Punjab 25-Block Lahore

City
Lahore

Postal code
54000

Approval date
2023-06-14, 1402/03/24

Ethics committee reference number
REC/RCR&AHS/23/0329

Health conditions studied

1

Description of health condition studied
Chronic Bronchitis

ICD-10 code
J41

ICD-10 code description
Simple and mucopurulent chronic bronchitis

2

Description of health condition studied
Emphysema

ICD-10 code
J43

ICD-10 code description
Emphysema

Primary outcomes

1

Description
Dyspnea

Timepoint
Pre-post treatment

Method of measurement
Modified Medical Research Council scale (MMRC)

2

Description
Chest Expansion

Timepoint
Pre-post treatment

Method of measurement
Measuring Tape

3

Description
Pulmonary Function Tests
Timepoint
Pre-post treatment
Method of measurement
Portable Spirometer

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: Conventional Pulmonary Rehabilitation with Pilates breathing. The Conventional treatment includes Pursed lip breathing, Diaphragmatic Breathing and Postural drainage.
Category
Rehabilitation

2

Description
Intervention group: Conventional Pulmonary Treatment with Rhythmic Initiation PNF technique. The Conventional treatment includes Pursed lip breathing, Diaphragmatic Breathing and Postural drainage.
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Riphah college of Rehabilitation & Allied Health Sciences
Full name of responsible person
Riphah college of Rehabilitation & Allied Health Sciences
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25 Raza Saeed road, Bhabra block M Gulberg 3, Lahore, Punjab 25-Block Lahore
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2

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Sponsors / Funding sources

1

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Grant name
educational
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
Riphah International University
Proportion provided by this source
100
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
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Full name of responsible person
Mishal Fatim
Position
Student
Latest degree
Master
Other areas of specialty/work
Physiotherapy
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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
There is no further information.
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