

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Correlation of forced expiratory technique, chest physiotherapy, pursed lips breathing exercises on cardiorespiratory and renal parameters fitness in acute pneumonia patients in Multan

#### Protocol summary

##### Study aim

Aim of this study is to explore the correlates (B.P, pulse rate, oxygen saturation, glucose level, lipid profile, temperature, respiration rate) of young adults with acute pneumonia of Multan that are associated with body mass index and cardiorespiratory and renal parameters health.

##### Design

randomization single group design triple blinding study

##### Settings and conduct

Ch. Pervaiz Elahi Institute of Cardiology Multan.

##### Participants/Inclusion and exclusion criteria

Including criteria • Young adults • Age group of 18-30 • Acute pneumonia patient • Acute pneumonia patients from Multan • Good mental health Excluding criteria • Any type of physical disability • Acute pneumonia patients with active infection • Any type of mental disorder • Any type of major surgery • Older adults • Childs • Smear positive respiratory sample

##### Intervention groups

We take three groups. Group A Group B Group C In Group A we take 18 participants .They perform forced expiratory technique exercises. In Group B we take 17 participants .They perform chest physiotherapy exercises. In Group C we take 18 participants.They perform pursed lips breathing exercises.

##### Main outcome variables

This study will investigate the correlation of cardiorespiratory fitness and renal parameters with body mass index and in young adults with acute pneumonia of Multan and also investigate the respiratory improvements. We will expect the positive and negative correlation.

#### General information

##### Reason for update

##### Acronym

Cross sectional study

##### IRCT registration information

IRCT registration number: **IRCT20230718058826N2**

Registration date: **2023-08-28, 1402/06/06**

Registration timing: **prospective**

Last update: **2023-08-28, 1402/06/06**

Update count: **0**

##### Registration date

2023-08-28, 1402/06/06

##### Registrant information

###### Name

Perwasha Perwasha

###### Name of organization / entity

Muhammad Institute of Medical and Allied Sciences, Multan, Pakistan.

###### Country

Pakistan

###### Phone

+92 310 6562039

###### Email address

perwashaaseer123@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2023-09-01, 1402/06/10

##### Expected recruitment end date

2023-10-01, 1402/07/09

##### Actual recruitment start date

2023-09-01, 1402/06/10

##### Actual recruitment end date

2023-10-01, 1402/07/09

##### Trial completion date

2023-10-01, 1402/07/09

## Scientific title

Correlation of forced expiratory technique, chest physiotherapy, pursed lips breathing exercises on cardiorespiratory and renal parameters fitness in acute pneumonia patients in Multan

## Public title

Correlation of forced expiratory technique, chest physiotherapy, pursed lips breathing exercises on cardiorespiratory and renal parameters fitness in acute pneumonia patients in Multan

## Purpose

Health service research

## Inclusion/Exclusion criteria

### Inclusion criteria:

• Young adults • Age group of 18-30 • Acute pneumonia patient • Acute pneumonia patients from Multan • Good mental health

### Exclusion criteria:

• Any type of physical disability • Acute pneumonia patients with active infection • Any type of mental disorder • Any type of major surgery • Older adults • Childs • Smear positive respiratory sample

## Age

From **18 years** old to **35 years** old

## Gender

Both

## Phase

1

## Groups that have been masked

- Participant
- Investigator
- Data analyser

## Sample size

Target sample size: **53**

Actual sample size reached: **53**

## Randomization (investigator's opinion)

Randomized

## Randomization description

We take three group • Group I with forced expiratory technique(1.Take 3—5 slow deep breaths, inhaling through the nose, exhaling through pursed lips, using diaphragmatic breathing. 2. Take a deep breath and hold it for 1—3 seconds. 3. Exhale from mid-to-low lung volume (to clear secretions from peripheral airways). 4. Take a normal breath in and then squeeze it out by contracting the abdominal and chest wall muscles, with the mouth and glottis open, while whispering the word “huff” (sounds like a forced sigh) during exhalation. Repeat several times. 5. As secretions enter the larger airways, exhale from high-to-mid lung volume to clear secretions from more proximal airways. Repeat maneuver 2—3 times. 6. Take several relaxed diaphragmatic breaths before the next cough effort.) • Group II with chest physiotherapy(CPT should be done 1-4 times a day, preferably half an hour before meals or one and half hour after meals. The total duration should not exceed 30 minutes with 3-6 minutes in each position.) • Group III with Pursed lips breathing exercise( Pursed lip breathing was to be done as a home exercise daily for 5 min thrice a day over a period of 6 weeks.)

## Blinding (investigator's opinion)

Triple blinded

## Blinding description

Triple Blinding.. In triple blinding participant do not know in which group they are evaluated. In triple blinding investigator are randomly evaluated. In triple blinding data analyser analyse the data.

## Placebo

Not used

## Assignment

Single

## Other design features

Randomized single group desgin triple blinding study

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Muhammad Institute of Medical and Allied Sciences  
Multan.

##### Street address

HBL street near sabazazar station bosan road Multan.

##### City

Multan

##### Postal code

66000

#### Approval date

2023-10-01, 1402/07/09

#### Ethics committee reference number

MIMAS /Ref/IRB/24/17

## Health conditions studied

### 1

#### Description of health condition studied

Pneumonia

#### ICD-10 code

(J00-J99)

#### ICD-10 code description

Diseases of the respiratory system

## Primary outcomes

### 1

#### Description

Improve cardiorespiratory and renal parameters.

#### Timepoint

4 days/week for 4 weeks

#### Method of measurement

• Pulse oximeter (choiceMMed), Digital Thermometer (certeza), Sphygmomanometer BP apparatus (Medisign Aneroid Sphygmomanometer MODEL: MC 2002), Glucose strips (on call plus), spirometer (besmed incentive), Cholesterol devise (beneCheck Multi-Monitoring Meter).

Urine output measurements. • Urine tests • Blood tests • Imaging tests • Removing a sample of kidney tissue for testing.

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Intervention group: 1 Forced expiratory technique,  
Intervention group 2 Chest physiotherapy exercises and  
intervention group 3 Pursed lips breathing.

#### Category

Rehabilitation

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Ch. Pervaiz Elahi Institute of Cardiology Multan.

##### Full name of responsible person

Dr.Perwasha

##### Street address

HBL street near sabazazar station bosan road Multan.

##### City

Multan

##### Postal code

66000

##### Phone

+92 310 6562039

##### Email

perwahanaseer123@gmail.com

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

mimas

##### Full name of responsible person

imran durrani

##### Street address

HBL street near sabazazar station bosan road Multan.

##### City

Multan

##### Postal code

66000

##### Phone

+92 333 6120602

##### Email

imranahmadkhandurrani@gmail.com

##### Grant name

research grant

##### Grant code / Reference number

765478

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

Yes

## Title of funding source

mimas

## Proportion provided by this source

80

## 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

mimas

#### Full name of responsible person

Imran Ahmad Khan

#### Position

Assistant professor

#### Latest degree

Ph.D.

#### Other areas of specialty/work

Cardiology

#### Street address

HBL street near sabazazar station bosan road Multan.

#### City

Multan

#### Province

punjab

#### Postal code

66000

#### Phone

+92 61 6221111

#### Email

imranahmadkhandurrani@gmail.com

## Person responsible for scientific inquiries

### Contact

#### Name of organization / entity

mimas

#### Full name of responsible person

Perwasha

#### Position

med. doctor

#### Latest degree

Medical doctor

#### Other areas of specialty/work

Physiotherapy

#### Street address

HBL street near sabazazar station bosan road Multan.

#### City

Multan

#### Province

punjab

**Postal code**

66000

**Phone**

+92 61 6231111

**Email**

perwahanaseer123@gmail.com

**Person responsible for updating data**

**Contact**

**Name of organization / entity**

mimas

**Full name of responsible person**

perwasha

**Position**

med.doc

**Latest degree**

Medical doctor

**Other areas of specialty/work**

Physiotherapy

**Street address**

HBL street near sabazazar station bosan road Multan.

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**Phone**

+92 61 6221111

**Email**

perwahanaseer123@gmail.com

**Sharing plan**

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

Yes - There is a plan to make this available

**Study Protocol**

Yes - There is a plan to make this available

**Statistical Analysis Plan**

Yes - There is a plan to make this available

**Informed Consent Form**

Yes - There is a plan to make this available

**Clinical Study Report**

Yes - There is a plan to make this available

**Analytic Code**

Yes - There is a plan to make this available

**Data Dictionary**

Yes - There is a plan to make this available

**Title and more details about the data/document**

Correlation of forced expiratory technique, chest physiotherapy, pursed lips breathing exercises on cardiorespiratory and renal parameters fitness in acute pneumonia patients in Multan

**When the data will become available and for how long**

after 4 weeks

**To whom data/document is available**

supervisor

**Under which criteria data/document could be used**

ethical consideration

**From where data/document is obtainable**

supervisor

**What processes are involved for a request to access data/document**

documentation

**Comments**

kindly consider for further evaluation