

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Assessment of effect of active cycle of breathing techniques (ACBT) on airway clearance in covid-19 patients

#### Protocol summary

##### Study aim

The aim of this study is to evaluate the effect of ACBT exercises on airway clearance in COVID-19 patients and to fill the research gap for both studies that will help patients in future to deal with post COVID complications more conveniently with cost effective procedures.

##### Design

100 covid-19 patients from both ICU and indoor were taken. ACBT treatment was applied. No placebo effect was used. Non randomized, no biasness and not blinded.

##### Settings and conduct

study was conducted in ICU and indoor wards of different hospitals with proper use of PPE-protective personal equipment's.

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: Patients having the age range from 30-60 were selected. Patients who were admitted to ICU or COVID indoor patients were included. Patients who were conscious were selected for this study. Exclusion criteria: Individuals below age 30, without COVID or with other comorbidities were prohibited from our review. Patients with decreased awareness and conscious level were not included in the assortment criteria. Patients admitted to CCU were excluded

##### Intervention groups

A total of 100 patients were recruited including both males and females. They were taken for the application of active cycles of breathing techniques in different Indoors and ICU units from multiple hospitals in Lahore city. Prior to exercise subjects were evaluated with the help of a standardized questionnaire i.e. Interventions Evaluation on COVID-19 patients-Questionnaire. After getting the active cycles of breathing techniques patients were again evaluated with the Interventions Evaluation on COVID-19 patients-Questionnaire. All registered subjects were informed of the study protocol.

##### Main outcome variables

Oxygen saturation, Breathing rate, Forced expiratory volume, Body temperature, heart rate and blood

pressure were important variables because they fluctuate differently in both gender

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20220825055791N1**

Registration date: **2022-09-15, 1401/06/24**

Registration timing: **retrospective**

Last update: **2022-09-15, 1401/06/24**

Update count: **0**

##### Registration date

2022-09-15, 1401/06/24

##### Registrant information

##### Name

Anam Yousaf

##### Name of organization / entity

Government College University Faisalabad

##### Country

Pakistan

##### Phone

+92 310 4722300

##### Email address

anamyousaf13@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2022-04-24, 1401/02/04

##### Expected recruitment end date

2022-05-17, 1401/02/27

##### Actual recruitment start date

2022-04-24, 1401/02/04

##### Actual recruitment end date

2022-05-17, 1401/02/27

**Trial completion date**

2022-05-17, 1401/02/27

**Scientific title**

Assessment of effect of active cycle of breathing techniques (ACBT) on airway clearance in covid-19 patients

**Public title**

effect of active cycle of breathing techniques (ACBT) in covid-19 patients

**Purpose**

Treatment

**Inclusion/Exclusion criteria**

**Inclusion criteria:**

Patients having the age range from 30-60 were selected. Patients who were admitted to ICU or COVID indoor patients were included. Patients who were conscious were selected for this study.

**Exclusion criteria:**

Individuals below age 30, without COVID or with other comorbidities were prohibited from our review. Patients with decreased awareness and conscious level were not included in the assortment criteria. Patients admitted to CCU were excluded.

**Age**

From **30 years** old to **60 years** old

**Gender**

Both

**Phase**

3

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **100**

Actual sample size reached: **100**

**Randomization (investigator's opinion)**

Not randomized

**Randomization description**

**Blinding (investigator's opinion)**

Not blinded

**Blinding description**

**Placebo**

Not used

**Assignment**

Single

**Other design features**

One hundred COVID-19 patients, age group 30-60 years from both indoor and ICU were involved in this research.

**Secondary Ids**

empty

**Ethics committees**

**1**

**Ethics committee**

**Name of ethics committee**

Afro-Asian Institute

**Street address**

43-52 Khayaban-e-Kareem Rd, Near Nishter Metro Station

**City**

Lahore

**Postal code**

54000

**Approval date**

2022-07-27, 1401/05/05

**Ethics committee reference number**

AAI/IRB/DPT/2022/00149

**Health conditions studied**

**1**

**Description of health condition studied**

In this research Coronavirus (COVID-19) pandemic was studied. Patients with Obstructive pulmonary disease that is corona was studied to observe the ACBT treatment plan. Previous studies have shown that incidence of COVID-19 has increased more effectively among both gender ranges from 43% male and 57% female. Approximately, major population suffered with COVID-19 report fever, shortness of breath, cough, tachypnea, chest tightness, dyspnea, chills, high-grade temperature and even death.

**ICD-10 code**

U07

**ICD-10 code description**

COVID-19, virus identified

**Primary outcomes**

**1**

**Description**

Pre outcomes were breathing rate 48 breath pre minute. After interventions application results were improved breathing rate was 16-20 breath pre minute which was like normal people.

**Timepoint**

In this study patients were checked before and after the ACBT interventions applied. symptoms of berating compilation were assessed. cough, dyspnea, shortness of breath. The treatment application time was 2 weeks. Patient history was taken prior to treatment and after 2 weeks treatment plan.

**Method of measurement**

The patient examination was performed before and after the treatment by using the tool Interventions Evaluation on COVID-19 patients-Questionnaire to assess the impact of Coronavirus on people and exercises effects on airways clearance.

**2**

**Description**

Temperature was raised up to (103F) which represents body immune system activation against virus or other foreign agent. after treatment application temperature reduced to optimal level that is 37F.

### Timepoint

In this study patients were checked before and after the ACBT interventions applied. Fever/pyrexia was the initial sign along with oxygen level during corona patient diagnosis. The treatment application time was 2 weeks. Patient history was taken prior to treatment and after 2 weeks treatment plan.

### Method of measurement

The patient examination was performed before and after the treatment by using the tool Interventions Evaluation on COVID-19 patients-Questionnaire to assess the impact of Coronavirus on people and exercises effects on airways clearance.

## 3

### Description

O2 saturation was less than 75% -80% before treatment applied an after treatment application O2 improve to >90%. ACBT proved more beneficial for COVID-19 patients.

### Timepoint

In this study patients were checked before and after the ACBT interventions applied. O2 saturation vital sign was checked in corona patients every 24-hours because most deadly agent was oxygen vital. The treatment application time was 2 weeks. Patient history was taken prior to treatment and after 2 weeks treatment plan.

### Method of measurement

The patient examination was performed before and after the treatment by using the tool Interventions Evaluation on COVID-19 patients-Questionnaire to assess the impact of Coronavirus on people and exercises effects on airways clearance.

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Control group: COVID-19 population was targeted. Total 100 patients were taken. In this study pre and post vitals and required information history was taken. 2 groups was involved. One group is labelled as pre- group with no intervention applied and severe COVID-19 symptoms. The prior vitals then compared with post vitals after 2 weeks of treatment application to check outcome results. Procedure repeated 2- times a week. Treatment method was Active cycle of breathing techniques, use to reduced the pulmonary symptoms.

#### Category

Treatment - Other

### 2

#### Description

Intervention group: COVID-19 population was targeted. Total 100 patients were taken. 2nd group was labelled as Post- group and vitals and required information history

was taken after 2 weeks of treatment application to check outcome results. Procedure repeated 2- times a week. Treatment method was Active cycle of breathing techniques, use to reduced the pulmonary symptoms. results compared to the prior vitals were 96% more satisfactory and ACBT proved beneficial for airway clearance in COVID-19 patients.

#### Category

Treatment - Other

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Jinnah hospital

##### Full name of responsible person

Anam Yousaf

##### Street address

Shahdara lahore khadim colony street no.5

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Lahore

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##### Phone

+92 310 4722300

##### Email

anamyousaf13@gmail.com

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Govt. college university of Faisalabad

##### Full name of responsible person

Anam Yousaf

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street no. 05, khadim colony, shahdara, lahore.

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#### Grant name

Anam Yousaf

#### Grant code / Reference number

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

Yes

#### Title of funding source

Govt. college university of Faisalabad

#### 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**  
Persons

## Person responsible for general inquiries

### Contact

**Name of organization / entity**  
Govt. college university of Faisalabad  
**Full name of responsible person**  
Anam Yousaf  
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## Person responsible for scientific inquiries

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## Person responsible for updating data

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## 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

Assessment of effect of active cycle of breathing techniques (ACBT) on airway clearance in covid-19 patients

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

starting 6 months after publication.

### To whom data/document is available

This only available for people working in academic institutions or people working in businesses can also apply to receive it.

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

it is an cosile study and researchers can approach this article by simply entering the MESH keys.

### From where data/document is obtainable

For communication means contact  
anamyousaf13@gmail.com.

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

contact via mail or number mentioned.

## Comments