

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Effectiveness of upper limb exercise along diaphragmatic breathing with or without lower limb exercise in covid-19 survivors

Protocol summary

Study aim

The basic purpose of this study is to assess the effectiveness of upper limb exercise along with diaphragmatic breathing with or without lower limb exercise in COVID-19 survivors

Design

Single blinded, randomized, total sample size is 176 and each groups contain 88 participants by lottery method.

Settings and conduct

conducted at khawaja farid hospital

Participants/Inclusion and exclusion criteria

Inclusion Criteria: Aged 35 and 60 years; male and female; COVID-19 survivors discharged from the hospital six weeks ago (diagnosed with COVID-19, respiratory illness) Exclusion Criteria: having any of the following symptoms in the last 14 days: fever; new or worsening respiratory symptoms; > 38.2 degrees Celsius (e.g., cough, dyspnea); Pregnant Females; Refusal to give consent approval.

Intervention groups

group A received upper limb exercise along diaphragmatic breathing while group B received upper limb exercise along diaphragmatic breathing with or without lower limb exercise in COVID-19 survivors

Main outcome variables

Respiratory function, exertion, quality of life

General information

Reason for update

Acronym

interventional

IRCT registration information

IRCT registration number: **IRCT20220606055084N1**

Registration date: **2022-06-26, 1401/04/05**

Registration timing: **retrospective**

Last update: **2022-06-26, 1401/04/05**

Update count: **0**

Registration date

2022-06-26, 1401/04/05

Registrant information

Name

Anam Zulfiqar

Name of organization / entity

Muhammad Institute of Medical and Allied Sciences

Country

Pakistan

Phone

+92 336 6389053

Email address

anamzulfiqar@mimas.edu.pk

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-11-15, 1400/08/24

Expected recruitment end date

2021-12-15, 1400/09/24

Actual recruitment start date

2021-11-15, 1400/08/24

Actual recruitment end date

2021-12-20, 1400/09/29

Trial completion date

2022-02-02, 1400/11/13

Scientific title

Effectiveness of upper limb exercise along diaphragmatic breathing with or without lower limb exercise in covid-19 survivors

Public title

Effectiveness of exercise along with diaphragmatic breathing in covid-19 survivors

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Between the ages of 35-60 years Both male and female COVID-19 survivors; Discharged from the hospital six weeks ago (diagnosed with COVID-19, with respiratory illness)

Exclusion criteria:

Any of the following: fever; new or worsening respiratory symptoms > 38.2 degrees Celsius (e.g., cough, dyspnea) in the last 14 days, Pregnant females Refusal to give consent approval.

Age

From **36 years** old to **60 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant

Sample size

Target sample size: **176**

More than 1 sample in each individual

Number of samples in each individual: **88**

Each group consists of 88 participants.

Actual sample size reached: **176**

More than 1 sample in each individual

Actual sample size in each individual: **88**

Each group consists of 88 participants

Randomization (investigator's opinion)

Randomized

Randomization description

Allocation concealment occur and patients will be recruited by using simple randomization through lottery method. Lottery method carried out through sealed envelopes. Every participants will randomly choose the sealed envelope and open this sealed envelope.

Blinding (investigator's opinion)

Single blinded

Blinding description

Those participants will be unaware of the method of treatment that will be evaluated after the completion of the interventional trial. Subjects will be given the option of choosing between two samples. Both the samples are in the same packing. In one sample, upper limb exercise was performed alongside diaphragmatic breathing exercise in one sample, and lower limb exercise was performed alongside diaphragmatic breathing in the other two samples. Subjects will be completely unaware of the type and effect of both interventions.

Placebo

Used

Assignment

Parallel

Other design features

Borg Scale, spirometry, 6-minutes walk test and SF8 questionnaire was used to assess the patients before and after treatment.

Secondary Ids

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Institutional ethical committee of Muhammad institute of medical and allied science Multan

Street address

HBL street near sabzazar metro station busan road, Multan

City

Multan

Postal code

60700

Approval date

2021-09-18, 1400/06/27

Ethics committee reference number

2021/IRB/10/PT/17

Health conditions studied**1****Description of health condition studied**

corona virus

ICD-10 code

U07.1

ICD-10 code description

Covid-19, virus identified

Primary outcomes**1****Description**

Respiratory function

Timepoint

before and after treatment(4 week duration)

Method of measurement

borg scale, spirometry, 6-minutes walk test and SF8 questionnaire

Secondary outcomes**1****Description**

Endurance

Timepoint

Before and after treatment(4 week duration)

Method of measurement

borg scale, spirometry, 6-minutes walk test and SF8 questionnaire

Intervention groups**1****Description**

Intervention group: group A received upper limb exercise

along diaphragmatic breathing for 4 week (5 session per week)

Category

Treatment - Other

2

Description

Intervention group: Group B received upper limb along diaphragmatic breathing with lower limb exercise for 4 week(per week 5 session)

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Khawja Fareed hospital

Full name of responsible person

Farah Zahid

Street address

HBL street near Sabsazar metro station, Busan road, Multan

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Multan

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60700

Phone

+92 336 6389053

Email

anamzulfiqar049@gmail.com

Web page address

http://mimas.edu.pk/

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Muhammad Institute of Medical and Allied Sciences

Full name of responsible person

Farah Zahid

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Grant name

Grant code / Reference number

Is the source of funding the same sponsor

organization/entity?

Yes

Title of funding source

Muhammad Institute of Medical and Allied Sciences

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

Muhammad institute of medical and allied sciences, Multan

Full name of responsible person

Dr. Zahid Manzoor

Position

Professor

Latest degree

Medical doctor

Other areas of specialty/work

Physiotherapy

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Person responsible for scientific inquiries

Contact

Name of organization / entity

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Full name of responsible person

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Web page address<http://mimas.edu.pk/>**Person responsible for updating data****Contact****Name of organization / entity**Muhammad institute of medical and allied sciences
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Farah Zahid

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Web page address<http://mimas.edu.pk/>**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/documentEffectiveness of upper limb exercise along diaphragmatic
breathing with or without lower limb exercise in
COVID-19 survivors**When the data will become available and for how long**

this will be available at the end of 2022

To whom data/document is available

Farah zahid

Under which criteria data/document could be used

for reserach purpose

From where data/document is obtainable<https://www.researchgate.net/>**What processes are involved for a request to access data/document**

open assess

CommentsI want randomized clinical trial registration, please
provide me as soon as possible so that i can continue my
study