**Title of Dataset:**

**Post-COVID-19 syndrome among symptomatic COVID-19 patients: A prospective cohort study in a tertiary care center of Bangladesh**

2. Author Information

A. Principal Investigator Contact Information

Name: **Dr. Reaz Mahmud**

Institution: Dhaka Medical College

Address: Assistant Professor, Department of Neurology, Dhaka Medical

College. Dhaka, Bangladesh. Phone-+8801912270803

Email: reazdmc22@yahoo.com

B. Associate or Co-investigator Contact Information

Name: **Dr. Md. Mujibur Rahman**

Institution: Dhaka Medical College Hospital

Address: Professor and Head, Department of Medicine, Dhaka Medical College

Hospital, Dhaka. Bangladesh Phone-+8801711525406

Email: mmrahman61@gmail.com

C. Alternate Contact Information

Name: **Dr. Farhana Binte Monayem**

Institution: Sarkari karmachari Hospital

Address: Medical officer, Sarkari karmachari Hospital. Dhaka, Bangladesh.

Phone-+8801920155971.

Email: [farhanabintemonayem94947@gmail.com](mailto:farhanabintemonayem94947@gmail.com)

3. Date of data collection: 2020/06/01 to 2020/08/10

4. Geographic location of data collection: COVID-19 unit, Dhaka Medical College, Dhaka, Bangladesh

5. Information about funding sources that supported the collection of the data: **Non-funded study**

SHARING/ACCESS INFORMATION

1. Licenses/restrictions placed on the data:

This work is licensed under a [CC0 1.0 Universal (CC0 1.0) Public Domain Dedication](https://creativecommons.org/publicdomain/zero/1.0/) license

2. Links to publications that cite or use the data: Dryad:

<https://doi.org/10.5061/dryad.m0cfxpp3g>

3. Links to other publicly accessible locations of the data: <https://doi.org/10.1371/journal.pone.0249644>

4. Links/relationships to ancillary data sets: None

5. Was data derived from another source? No

A. If yes, list source(s):

6. Recommended citation for this dataset:

Reaz, Mahmud et al. (2021), **Post-COVID-19 syndrome among symptomatic COVID-19 patients: A prospective cohort study in a tertiary care center of Bangladesh**, Dryad, Dataset, <https://doi.org/10.5061/dryad.m0cfxpp3g>.

DATA & FILE OVERVIEW

1. File List:

Data set in SPSS

2. Relationship between files, if important:

3. Additional related data collected that was not included in the current data package:

4. Are there multiple versions of the dataset? No

A. If yes, name of file(s) that was updated:

i. Why was the file updated?

ii. When was the file updated?

METHODOLOGICAL INFORMATION

1. Description of methods used for collection/generation of data:

The manuscript has been published by PLOS ONE. DOI <https://doi.org/10.1371/journal.pone.0249644>

2. Methods for processing the data:

**Materials and methods**

This single-center prospective cohort study was performed to determine the extent of post-COVID-19 symptoms along with its risk factors in patients with COVID-19. The study was conducted in the COVID-19 unit of Dhaka Medical College Hospital from June 01, 2020 to August 10, 2020. Ethical approval was obtained from the Institutional Ethical Committee (ERC-DMC/ECC/2020/559)

**Participants**

Patients with COVID-19 presented to the triage and inpatient department of Dhaka Medical College were screened for the study. The recruitment was limited to patients aged >18 years with confirmed SARS-CoV-2 positivity on RT-PCR. Asymptomatic or critical COVID-19 cases and patients unwilling to participate were excluded from the study. Informed written consent was obtained from all patients. The recruited patients were followed up for at least a month after clinical recovery and/or viral clearance. Consecutive patients were enrolled in the study. The sample size for this study was determined using the formula

where z=1.96 (at 95% confidence level); p=50%, as the prevalence of post-COVID-19 syndrome is not known in Bangladesh; and q=(100−p)=50. Here, d represents absolute error and was set at 5%. Therefore, the sample size, calculated as n= (1.96)2×50×50/52, was 384 patients. A total of 400 patients were enrolled in the study.

**Study design**

A case record form was constructed to collect baseline information of patients, such as demographics, clinical signs and symptoms, comorbidities, and oxygen saturation. Routine tests, including those for complete blood count, C-reactive protein, creatinine, random blood sugar, alanine aminotransferase, and D-dimer and chest X-ray, were advised on enrollment. RT-PCR testing for COVID-19 was performed 14 days after the initial positive test result for all the patients. A telephonic interview guide for the follow-up of patients after discharge was also developed. Patients were followed up via telecon for at least a month after recovery or hospital discharge. Clinical improvement was defined according to the WHO and Bangladesh guidelines [8, 13] as follows: normal body temperature for at least 3 days, significant improvement in respiratory symptoms (respiratory rate <25breath/ minute and no dyspnea), oxygen saturation (SpO2) >93% with no assistance for oxygen inhalation, and no hospital care needed for any pathology or clinician assessment. Respiratory distress was defined as shortness of breath, respiratory rate >25breath /min, or SpO2 <93%, and mild disease was defined as symptoms of an upper respiratory tract viral infection, including mild fever, cough (dry), sore throat, nasal congestion, malaise, headache, muscle pain, anosmia, or malaise. Moderate disease was defined as respiratory symptoms such as cough and shortness of breath without signs of severe pneumonia. Severe disease was defined as severe dyspnea, tachypnea (>30 breaths/min), and hypoxia (SpO2 <90% in room air). Critical cases involved patients who developed ARDS or sepsis. These classifications were made according to the WHO and national guidelines of Bangladesh [8, 13]. The WHO has defined viral clearance as laboratory evidence of SARS-CoV-2 clearance in respiratory samples, i.e., two negative RT-PCR results using respiratory tract samples (nasopharynx and throat swabs), with a sampling interval of ≥24 h, after 14 days of initial positivity. However, due to limited testing facilities, we could perform RT-PCR only on day 14 after initial positivity for each patient. The criteria for post-COVID-19 syndrome considered in this research are described in the introduction of this manuscript. In our study, we have considered post-viral fatigue as symptoms reported in the literature and listed in the previous section along with any of the following: cognitive impairment and orthostatic intolerance. However, unlike previous reports, the criteria of its duration for 6 months was not considered in the present study.

**Procedure**

Patients who met the inclusion criteria were enrolled in this study. Patients who required immediate hospital care were admitted. Routine and special investigations were performed according to the attending physician’s advice. All patients received standard care of treatment as advised by the accompanying physicians. Patients were followed up every day and their conditions were recorded. RT-PCR for COVID-19 was performed on day 14 after initial positivity. After discharge, patients were followed up for at least a month via telecon using the telephone interview guide.

Patients who did not require admission were sent home with appropriate treatment as recommended by the attending physician. They were advised to undergo routine investigations for their next visit. They were also followed up via telecon for at least a month after clinical recovery. Patients whose conditions deteriorated during the follow-up period were immediately advised for admission and were followed up similarly as those who received hospital care.

**Statistical analysis**

A sample size of 400 patients would provide a power of at least 90% in the two-tailed test using a p-value of <0.05 to detect a 50% incidence of post-COVID-19 syndrome. Statistical Package for Social Sciences version 20 was used to analyze the data. Categorical variables are presented as n (%), normally distributed continuously are presented as mean (standard deviation [SD]), and skewed continuous variables are presented as median (interquartile range [IQR]). Statistical significance was set at p <0.05. For the comparison of variables, two groups were considered. Group 1 included patients who developed post-COVID-19 syndrome, and Group 2 included patients who did not develop post-COVID-19 syndrome. Categorical variables were compared using the chi-square test, and continuous variables were compared using an independent sample Student’s t-test. Relative risk (RR) with a 95% confidence interval (CI) was calculated using crosstab analysis. The Mann–Whitney U test was used to compare skewed continuous variables. A binary logistic regression model was developed to assess the impact of different variables on the likelihood of developing post-COVID-19 syndrome with the forward conditional method. Independent variables included in the model were age, sex, presenting features of COVID-19, duration of recovery, conversion to next level of severity, persistent positivity for the virus, comorbidities, and severity of illness

3. Instrument- or software-specific information needed to interpret the data:

Statistical Package for Social Sciences version 20 was used to analyze the data.

4. Standards and calibration information, if appropriate:

5. Environmental/experimental conditions:

6. Describe any quality-assurance procedures performed on the data:

7. People involved with sample collection, processing, analysis and/or submission:

**Principal investigator and Co-investigators of the study**

DATA-SPECIFIC INFORMATION FOR: [FILENAME]

1. Number of variables: 44

2. Number of cases/rows: 355

3. Variable List:

Age group of the patients: 1=<40 years, 2=40-60 years, 3=>60 years

Gender: male -1or female-0

Fever: presence-1 or absence-0

Cough: presence-1 or absence-0

Running nose: presence-1 or absence-0

Respiratory distress: presence-1 or absence-0

Sore throat: presence-1 or absence-0

Hoarseness of voice: presence-1 or absence-0

Chest pain: presence-1 or absence-0

Diarrhea: presence-1 or absence-0

Vomiting: presence-1 or absence-0

Anorexia: presence-1 or absence-0

Anosmia: presence-1 or absence-0

Headache: presence-1 or absence-0

Lethargy: presence-1 or absence-0

Conjunctivitis: presence-1 or absence-0

Body ache: presence-1 or absence-0

Total duration of illness: duration required to have clinical recovery

Conversion to next level of severity: presence-1 or absence-0

Persistent positivity: presence-1 or absence-0

Frequency of follow up: Number of the visit during the follow-up period

Interval to develop post COVID symptoms: 0-persisted from the beginning, 1-less than 7 days, 2-Morethan 7 days

Latency to develop post COVID symptoms: Scale variable, Number of days required to develop post COVID symptoms.

Post Covid syndrome: presence-1 or absence-0

Neurasthenia: presence-1 or absence-0

Persistent cough: presence-1 or absence-0

Insomnia: presence-1 or absence-0

Sleep pattern alteration: presence-1 or absence-0

Headache new onset/exaggeration: presence-1 or absence-0

Vertigo/Dizziness: presence-1 or absence-0

Exertional Dyspnea: presence-1 or absence-0

Arthralgia: presence-1 or absence-0

New onset hypertension: presence-1 or absence-0

New onset diabetes: presence-1 or absence-0

Adjustment disorder/Depression: presence-1 or absence-0

**Others post covid symptoms:** None-0, NUD-1, Excessive sweaing-2, Burning feet-3,myalgia-4,tinnitus-5, Nasal blockadge-6, chest tightness-7, palpitation-8, depression-9,anosmia-10, bradycardia-11, allergic rhinitis-12, rash-13, pneumonia-14, restless leg syndrome-15, memory disturbance-16

Co-morbidity: presence-1 or absence-0

Diabetes: presence-1 or absence-0

Hypertension presence-1 or absence-0

Others:

Severity grade of illness: Mild 1, moderate-2, severe-3

Severity conversion; none-0, moderate-1, severe-2, death-3

Ultimate severity: At the end Mild-1 moderate-2 and severe-3

Ultimate post COVID: none-0, present-1

4. Missing data codes: 99, 98 etc

5. Specialized formats or other abbreviations used:

**Clinical Recovery:**

**Clinical improvement or recovery** in patients was assessed according to the improvement criteria of the WHO and Bangladesh guidelines which required that the body temperature remained normal for at least 3 days, respiratory symptoms were significantly improved (respiratory rate < 25 and no dyspnea), and SpO2 >93% was achieved without assisted oxygen inhalation.

Respiratory distress; Shortness of breath, respiratory rate >25/min, or oxygen saturation <93%

Severity of the disease:

**Mild disease** was defined as the symptoms of an upper respiratory tract viral infection, including mild fever, cough (dry), sore throat, nasal congestion, malaise, headache, muscle pain, anosmia, or malaise.

**Moderate disease**, including respiratory symptoms, such as cough and shortness of breath are present without signs of severe pneumonia.

**Severe disease** included severe dyspnea, tachypnea (> 30 breaths/min), and hypoxia (SpO2 < 90% in room air). These classifications were made according to the World Health Organization and national guidelines of Bangladesh.

In this study, we assessed the proportion of patients with **early recovery** (clinical improvement within 7 days of symptom onset), **late recovery** (clinical improvement required ≥12 days),

**Severity conversion** (patients progress to more serious disease),

**Persistently positive** for RT-PCR of COVID-19 (positive RT-PCR on a 14 day test), and

**Post-COVID syndrome** (in the absence of any definition, we defined it as 1. Persistence of illness with signs and symptoms beyond virologic clearance 2. Development of new symptoms within 1 month after the initial clinical and virologic cure, the etiology of which is postulated to be viral infection.