Faculty of Medicine

University of Dhaka

Level of Physical disability and life participation of post COVID-19 survivors

Rawnak Jahan

Bachelor of Science in Physiotherapy (B.Sc. PT)

DU Roll no: 904

Reg. no: 3607

Session: 2015-2016

BHPI, CRP, Savar, Dhaka-1343

Bangladesh Health Professions Institute (BHPI)

Department of Physiotherapy

CRP, Savar, Dhaka-1343

Bangladesh

August, 2020

We the undersigned certify that we have carefully read and recommended to the Faculty of Medicine, University of Dhaka, for the acceptance of this dissertation entitled

Level of Physical disability and life participation of post COVID-19 survivors

Submitted by **Rawnak Jahan**, for the partial fulfilment of the requirement for the degree of Bachelor of Science in Physiotherapy (B.Sc. PT).

E. Rahman

.....

Ehsanur Rahman
Associate Professor & MPT Coordinator
Department of Physiotherapy
BHPI, CRP, Savar, Dhaka
Supervisor

.....

Professor Md. Obaidul Haque
Vice principal
BHPI, CRP, Savar, Dhaka

.....

Mohammad Anwar Hossain
Associate Professor, Department of Physiotherapy, BHPI
Senior Consultant & Head, Department of Physiotherapy
CRP, Savar, Dhaka

Asma Islam

.....

Asma Islam
Assistant Professor
Department of Physiotherapy
BHPI, CRP, Savar, Dhaka

Shofiq

.....

Md. Shofiqul Islam
Associate Professor & Head
Department of Physiotherapy
BHPI, CRP, Savar, Dhaka

DECLARATION

I declare that the work presented here is my own. All sources used have been cited appropriately. Any mistakes or inaccuracies are my own. I also decline that same any publication, presentation or dissemination of information of the study. I would bind to take consent from the department of Physiotherapy of Bangladesh Health Profession Institute (BHPI).

Signature: Rawnak Jahan **Date:** 16-11-21

Rawnak Jahan
Bachelor of Science in Physiotherapy (B.Sc. PT)
DU Roll no: 904
Reg.no: 3607
Session: 2015-2016
BHPI, CRP, Savar, Dhaka-1343

Contents

Acknowledgement	I
Acronyms	II
List of Table	III
List of Figures	IV
Abstract	V
CHAPTER-I: INTRODUCTION	**1-9**
1.1 Background	1-4
1.2 Rational	5
1.3 Research question	6
1.4 Study objectives	7
1.5 Conceptual framework	8
1.6 Operational definition	9
CHAPTER-II: LITERATURE REVIEW	**10-14**
CHAPTER-III: METHODOLOGY	**15-21**
3.1 Study Design	15
3.2 Target and sampling population	15
3.3 Study setting	15
3.4 Sample size	16
3.5 Sampling procedure	16
3.6 Inclusion criteria	17
3.7 Exclusion criteria	17
3.8 Data collection	17-18

3.9 Data analysis 18-20

3.10 Ethical consideration and rigor of the study 21

CHAPTER-IV: RESULTS 22-42

CHAPTER-V: DISSCUSSION 43-48

CHAPTER-VI: CONCLUSION AND RECOMMENDATION 49-50

REFERENCES 51-58

APPENDIX 59-75

Acknowledgement

First of all, I would like to pay my gratitude to Almighty who has given me the ability to complete this research project in time with great success. I would like to pay my gratitude towards my parents who constantly encouraged me to carry out this project. My deepest gratefulness goes to my honorable supervisor & respected teacher **Ehsanur Rahman**, Associate Professor & MPT Coordinator, Department of Physiotherapy, Bangladesh Health Professions Institute (BHPI), CRP, Savar, Dhaka, for his keen supervision and tireless effort with excellent guidance and support without which I could not be able to complete this project.

In addition, I am thankful to all of my honorable teachers specially Professor **Md. Obaidul Haque,** Vice principal, BHPI, CRP, Savar, Dhaka; **Mohammad Anwar Hossain**, Associate Professor, Department of Physiotherapy, BHPI, Senior consultant and Head, Department of Physiotherapy, CRP, Savar, Dhaka.

I gratefully acknowledge my respect to **Md. Shofiqul Islam**, Associate Professor, Head of the Department of Physiotherapy, BHPI, CRP, Savar, Dhaka and **Asma Islam**, Assistant professor, Department of physiotherapy, BHPI, CRP, Savar, Dhaka for their support during the project.

I would like to express my admiration to **Muhammad Millat Hossain**, Assistant Professor, Department of Rehabilitation Science, Member Secretary, Institutional Review Board, (IRB), BHPI, CRP, Savar, Dhaka, for allowing me to conduct this research.

I would like to express my gratitude to **Fabiha Alam**, Lecturer, Department of Physiotherapy, BHPI, CRP, Savar, Dhaka for her support during the project.

I would also like to give special thanks to BHPI librarian and other supporting staffs for their positive help during the project study. I am thankful to Rifat al mamun for helping me collecting data and thanks all of my friends for their direct and indirect inspiration, suggestion as well as support. Finally, I would like to thanks those people who eagerly participated as study samples in the conduction of my study and the entire individual who are directly or indirectly involve with this study.

Acronyms

ACE:	Angiotensin Converting Enzyme
BHPI:	Bangladesh Health Professions Institute.
BMRC:	Bangladesh Medical and Research Council
HSC:	Higher Secondary Certificate
IEDCR:	Institute of Epidemiology Disease Control and Research
IRB:	Institutional Review Board
LiSAT-9	Life Satisfaction Questionnaire-9
MERS:	Middle East Respiratory Syndrome
RNA:	Ribonucleic Acid
SARS:	Severe Acute Respiratory Syndrome
SARS-CoV-2:	Severe Acute Respiratory Syndrome Coronavirus 2
SPSS:	Statistical Package of the Social Sciences
SSC:	Secondary School Certificate
WHO:	World Health Organization
WHODAS 2.0:	World Health Organization Disability Assessment Schedule 2. 0

List of Tables

		Page no
Table-1:	Association between age of the participants and getting around domain of WHODAS 2.0 by spearman correlation test.	20
Table-2:	Age of the participants	23
Table-3:	Socio demographic characteristics of the participants	25
Table-4:	Distribution of questionnaires among understanding and communication domain of WHODAS 2.0.	27
Table-5:	Distribution of questionnaires among getting around domain of WHODAS 2.0.	28
Table-6:	Distribution of questionnaires among getting along with people of WHODAS 2.0.	29
Table-7:	Distribution of questionnaires among life activities with people of WHODAS 2.0.	31
Table-8:	Distribution of questionnaires among participation in society with people of WHODAS 2.0	33
Table-9:	Life participation at a glance	36
Table-10:	Comparison of mean scores of different WHODAS 2.0 domain of with different demographic factors along with significance level by spearman correlation test	38
Table-11:	Socio-demographic characteristics along with factors of life satisfaction by spearman correlation test.	42

List of Figures

		Page no
Figure-1:	Gender of the participants	22
Figure-2:	Distribution among participants using IQR range	34
Figure-3:	Shows the frequency of rather satisfying participants with life as a whole.	40

Abstract

Purpose: The purpose of the study is to find out the level of physical disability and life participation of post COVID-19 Survivors. **Objectives:** To find out the physical disability level and life satisfaction of post COVID-19 Survivors, to find out the ability of understanding and communicating, getting around, getting along with people, life activities, participation in society and to find out their participation in life. **Methodology:** It was a cross sectional study. Two hundred participants (136 men and 64 women) from Dhaka and Bogura district, who survived from COVID-19 (through mobile phone and face to face interview) were conveniently recruited as sample for this study. Interviewer administered Bengali version of The World Health Organization Disability Assessment Scale II (WHODAS II) 36 items and LISAT-9 was applied to people who survived from COVID-19. **Result:** In the study the total participants were 200. The minimum age was 18 years old and the maximum age was 73. Each item of WHODAS 2.0 questionnaire was rated on a 5-point scale, from 1 (no difficulty) to 5 (extreme difficulty/cannot do).The disability score was calculated using the Statistical Package for the Social Sciences (SPSS).In this study, the greatest limitation was found in the domains of 'life activities' (median 11, IQR range 5) and social participation (median 11, IQR range 6). Each item of LISAT-9 questionnaire was rated on a 6-point scale, from 1 (very dissatisfying) to 6 (very satisfying). In this study participants were rather satisfy with their life as a whole 62.5% (n=125) and observation indicated that participants with age range 28-37 (n=42) were large in number who were rather satisfied with their life as a whole. Strong association was found between age and partner relationship, educational status and vocational situation, occupation and both sexual life and partner relationship. **Conclusion:** This study provides information about limitation of post COVID-19 survivors, after surviving COVID-19 they have some limitations in life activities and social participation and they were rather satisfy in social participation.

Keywords: COVID-19, physical disability, life participation, Survivors.

CHAPTER – I INTRODUCTION

1.1 Background

A pandemic and public health emergency occurred because of a new human-affecting Beta coronavirus COVID-19 which was first reported in Wuhan (China) in December 2019 and it spreads to all over the world very fast. The virus may show symptoms like malaise, fever, cough or a serious health issue with severe acute respiratory syndrome (SARS),acute cardiac injury and acute kidney disease (Grippaudo et al., 2020).

A large non-segmented positive sense RNA viruses are known as COVs. They can cause enteric and respiratory diseases in animals and humans (Li et al., 2020). SARS-CoV-2 is a part of CoV β-species which predominantly transmits through respiratory droplets and close individual contacts. In past 20 years two global epidemics occur, in 2003 SARS which was caused by SARS-CoV-1 and in 2012 Middle Eastern respiratory syndrome (MERS) which was caused by MERS-CoV. COVID-19 is caused by SARS-CoV-2 which has a proclivity for the lungs, and may cause a severe pneumonia persuading serious fluid, fibrin exudates and hyaline membrane formation in the alveoli, related with intensive care unit (ICU) admission and huge fatality (Wu et al., 2020). As like SARS-CoV-1 SARS-Cov-2 also enters human cells through the similar receptor angiotensin converting enzyme 2(ACE2) (Li et al., 2020).

Grippaudo et al. (2020) stated in their study that there were a lot of asymptomatic COVID-19 carriers has been found and it has been found that from asymptomatic carriers transmission can occur. Since February 2020 Italy has been suffering a lot by this pandemic. According to the data of 'Istituto Superiore di Sanità' on 22 April 2020 Italy had 22, 586 deaths and 173, 730 confirmed cases. The number of infected patients were 4257 in Rome. And Italy faces a devastating situation during management of COVID-19 situation.

In most countries COVID-19 outbreak occurs abruptly and was unexpected. On March 11, 2020 WHO declared COVID-19 a pandemic (Cucinotta & Vanelli, 2020). Worldwide healthcare system is heterogeneous so, getting accurate affected and immunity numbers were very difficult and evaluation of COVID-19 remains unpredictable. Seeing the enormity of the pandemic most of the countries taken lockdown as a withholding strategy (Moreno et al., 2020).

COVID-19 infection shows different types of clinical symptoms which includes fever, fatigue, myalgia, headache, diarrhea, dry cough, dyspnea that can cause acute respiratory distress syndrome and death (Huang et al., 2020). COVID-19 Symptoms associated with skin have been weakly described but may include erythematous rash, urticaria and chicken pox like lesions (Recalcati, 2020). The cellular receptor for COVID-19 is Angiotensin converting enzyme 2 (ACE2). In human cells the weird mode of entry of COVID-19 persuade angiotensin II accumulation. Excess angiotensin II may cause acute lung injury and vessel dysfunction as like as vasoconstriction, vascular permeability and abnormal myocardial remodeling (Vaduganathan et al., 2020).

In US, A study was conducted among 90 participants who were diagnosed COVID-19 by Dawson et al. (2021) and they found that participants showed some classic COVID-19 symptoms which were cough, fever, shortness of breath. Participants also showed some other symptoms like headache, loss of taste and smell, nasal congestion, rhinorrhea, myalgia, nausea, vomiting, diarrhoea, abdominal pain, chest pain, discomfort, lightheadedness, wheezing and other.

After monitoring the reduction with global measures, it is proved that COVID-19 will continue Spreading if strict measures reduced (Guo et al., 2020). It has been founded that the disease can be asymptomatic or may show some mild to severe symptoms (Lechien et al., 2019). Analyzing some recent studies it is established that the severity of the disease varies epidemiologically following race, gender and age (Jin et al., 2020).

At the very first of COVID situation a bunch of patients with pneumonia without any cause was first identified in the Wuhan city of Hubei Province in China in December 2019 (Zhu et al., 2020). At the beginning the symptoms were fever, cough, dyspnea, myalgia or fatigue, headache, hemoptysis, diarrhea and acute respiratory distress syndrome (ARDS) (Huang et al., 2019). Observing a few days' Chinese health authorities ensures that those patients had relation with infection by a novel coronavirus (Lu et al., 2020).

Sohrabi et al. (2020) stated in their study that after doing some research the Chinese Centre for Disease Control and Prevention (CCDC) has marked the causative agent from throat swab samples on January 7, 2020 and entitled the pathogen as Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2).

The non-segmented and enveloped positive sense RNA virus SARS CoV-2 is categorized under the genus Betacoronavirus of the family Coronaviridae under the order Nidovirales (Lai et al., 2020). Conversely the World Health Organization (WHO) named the disease by Coronavirous disease-19 in short COVID-19.On 30 January 2020 the WHO has disclosed the ongoing incidence of COVID-19 as a Public Health Emergency of International Concern (Sohrabi et al., 2020).

On 8 March 2020 Bangladesh detected the first three coronavirus cases which was confirmed at a press conference by the Institute of Epidemiology Disease Control and Research (IEDCR) (Khan et al., 2020). The cases contains two men and one women who were aged from 20 to 35 years. The country confirms three more cases on 16th march and the total number of COVID 19 infected people becomes 8 (Khan & Hossain, 2020).

Forster et al. (2020) indicated in their study that COVID-19 was classified into few subtypes, a recent study shows that type A was seen in the USA and Australia, in china type B has been seen and in East Asia and Europe type C has been seen. These subtypes may show different clinical manifestations as well.

One of the worst invaded countries with over 2,86,000 confirmed cases and more than 44,000 confirmed deaths over the period of writing has been found in the United Kingdom (Halpin et al., 2021).

As reported by WHO the countries with susceptible health system are at higher risk. In last august 1,12,020 the virus has affected at least 2,04,17,377 people and causes death at least 7,42,311 people all over the world (Islam et al., 2020). According to WHO emergency committee the expansion of COVID-19 could be prevented by marking, early detection, Isolation and quick treatment (Sohrabi et al., 2020). Along with Bangladesh till the date more than 213 countries or states have verified the incidence of COVID-19. Because of high population density (ca. 170 million people in 147,570 km^2), poor health care systems, poverty and the weak economy Bangladesh is one of the most endangered countries (Islam et al., 2020).

In Spain more than 2,22,857 confirmed cases and 26,251 deaths were reported on the 9th May. Spain is became one of the most invaded countries by the COVID-19 pandemic (parra et al., 2020). Among the peoples who goes through the COVID-19 Psychological symptoms, such as depression, anxiety, panic attacks and post traumatic symptoms have been found (Spoorthy et al., 2020).

COVID-19 or the coronavirus disease 2019 pandemic has changed very fast the health care needs and international deliveries, from the very beginning of the incident nearly about 1 in 5 people with COVID-19 needs hospitalization, along with the intensive care unit (ICU). Peoples who survives through the ICU are at risk for impairments in mental, cognitive, and physical health, which are generally known as Post intensive care syndrome (Hosey & Needham, 2020). Similar problems are faced by some peoples after getting discharged from hospital which is known as post-hospital syndrome (Krumholz, 2013). But the risk of having all these symptoms in COVID-19 survivors are higher than other patient (Hosey & Needham, 2020).

In most of the cases a full multidisciplinary team (MDT) rehabilitation is required to achieve full recovery as COVID-19 is a multisystem disease. As soon as possible rehabilitation should initiate in the critical care setting. The national Institute for Health and Care Excellence (NICE) advised progressive rehabilitation programmes are best commenced within the first 30 days to have best impact on recovery (Barker et al., 2020).

1.2 Rational

In current situation, COVID-19 is a burning issue in Bangladesh as well as the whole world. It has become the first pandemic of 21st century as it is spreading so quickly all over the world. It has become a threat to everybody. People are getting scared by hearing any news about COVID-19. There are a lot of misconception about COVID-19 among the general people. Of course, coronavirus is a dangerous pathogen and can cause multifunctional disease but it's not untreatable. There are symptomatic treatments for COVID-19 and peoples are getting recovered. Some peoples may even need no treatments, they get better after few days without any complications but some other needs symptomatic management and may suffer from post COVID-19 consequences.

However, Day by day the number of COVID affected patient is increasing in our country. There are a lot of research regarding COVID-19 in china, India, Us and many other countries. In our country there is no research published regarding the issue of post COVID-19 survivors. So this study will help general practitioners and other peoples to know about the level of physical disability and life participation of post COVID survivors. This study will help to set up treatment plan according to patient needs. Health professionals can provide better treatment as well as essential advice to the patients. As a health professional, it will improve our knowledge. With this study patients will also be benefited by gaining knowledge about his/her condition and will gain some information about their post COVID health situation, and this knowledge may help them to get early and better treatments and early recovery. This study will also help to know the importance of including physiotherapist in rehabilitation program for COVID-19 patients.

1.3 Research Question: What are the level of physical disability and life participation of post COVID-19 Survivors?

1.4 Study Objectives

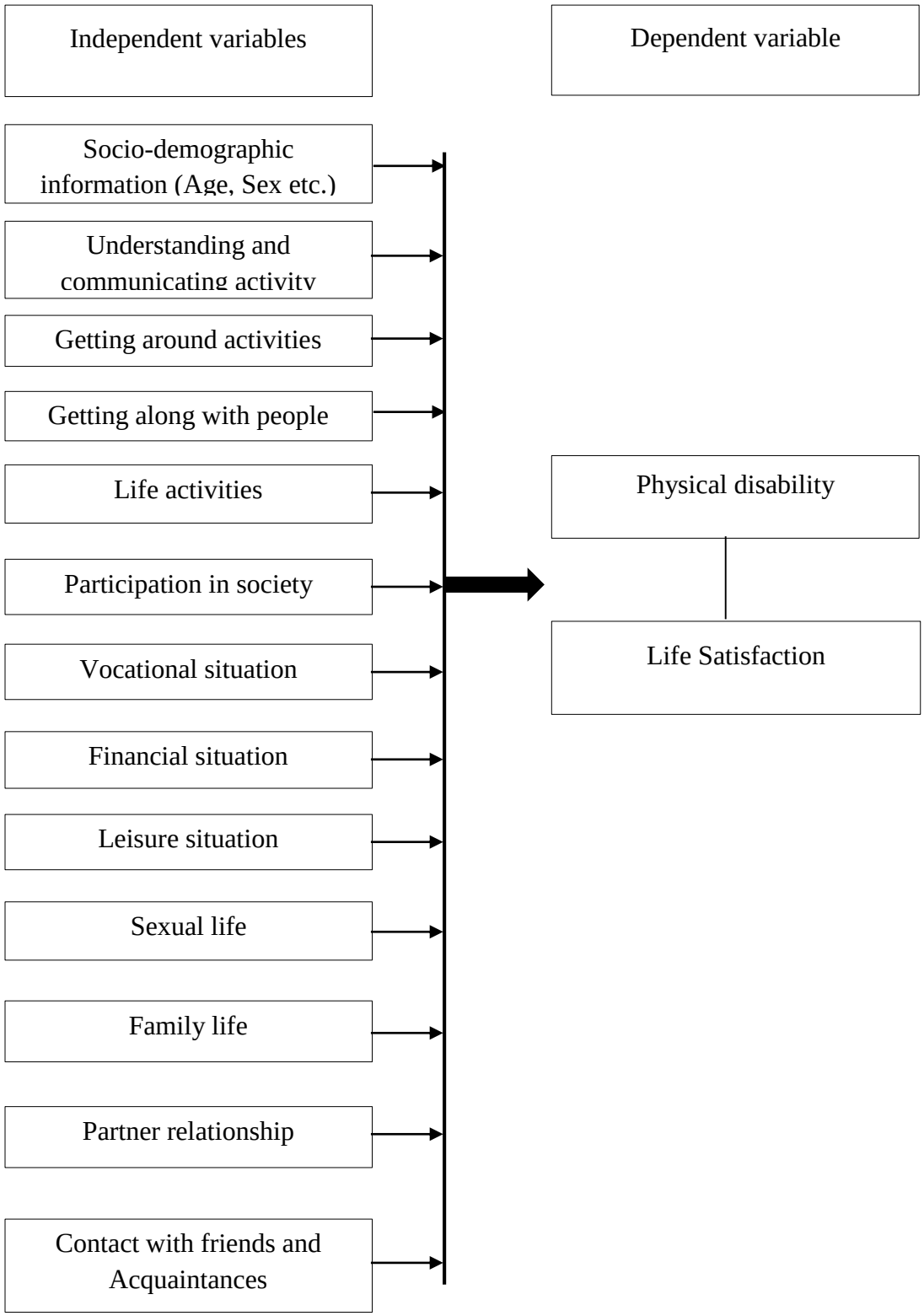
1.4.1 General objective

To find out the physical disability level and life participation of post COVID-19 Survivors.

1.4.2 Specific objectives

1. To know the Socio-demographic characteristics data of COVID-19 survivors.
2. To find out the level of physical limitation of the COVID-19 survivors.
3. To explore their ability of understanding and communicating.
4. To observe their ability of getting around.
5. To observe their ability of getting along with people.
6. To explore their ability of life activities.
7. To explore their ability of participation in society.
8. To find out their participation in life.

1.5 Conceptual framework



1.6 Operational Definition

Physical Disability: Physical disability is defined as a “limitation on a person's physical functioning, mobility, dexterity or stamina “that has a 'substantial' and 'long-term' negative effect on an individual’s ability to do normal daily activities.

Life participation: Life participation can mean different things to different people. It is based on what is important to each person. For some, it’s getting back to work. For others, it’s being involved with family or their community. For many, it’s being involved in a hobby or activity that they enjoy doing

COVID-19: Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. Most people infected with the virus will experience mild to moderate respiratory illness and recover without requiring special treatment. However, some will become seriously ill and require medical attention. Older people and those with underlying medical conditions like cardiovascular disease, diabetes, chronic respiratory disease, or cancer are more likely to develop serious illness. Anyone can get sick with COVID-19 and become seriously ill or die at any age. COVID-19 affects different people in different ways. Most infected people will develop mild to moderate illness and recover without hospitalization.

Survivors: A person who continues to function or prosper in spite of opposition, hardship, or setbacks**.**

CHAPTER – II LITERATURE REVIEW

COVID-19 has become the first pandemic of the twenty first century as it spread all over the globe at a dreadful pace. It is proved that the COVID-19 may sustain to spread because of the reduction in strict measures since we can see some signs of slowing with worldwide measures (Guo et al., 2020).

Coronaviruses are dangerous pathogen which can attack the humans in the lower respiratory tract and can causes few illness expanding from a common cold to severe infection with near about 50% chance of death (Drosten et al., 2003). As it is a highly communicable disease, COVID-19 can spread from one person to an average of three other person (Alimohamadi et al., 2020).

The infection range of COVID-19 is greater than that for SARS (1.7-1.9) and MERS (< 1), from this we can clearly assume that SARS-CoV-2 has a higher capability for transmission and outbreak. There are many proves which suggests that COVID-19 and SARS have many similarities. Nearly 79.5% of the similarities is in the genome sequence of these reported two viruses (Chen et al., 2020). As it has sometimes mild clinical symptoms and it is highly contagious COVID-19 can spread among the community more easily than MERS and SARS (Petrosillo et al., 2020).

It has been proved that COVID-19 can vary person to person, it can be asymptomatic or may extent from mild to very severe symptom (Wu & McGoogan, 2020). Recent studies have been found that the severity of the disease varies epidemiologically following race, gender and age (Huang et al., 2020). COVID-19 has mild impact in most people but in some patients it can cause a respiratory failure, arrhythmias, shock, Kidney failure, cardiovascular damage, or liver failure especially to those who have other underlying diseases (Anderson et al., 2020). The case fatality rate (CFR) of COVID-19 was reported to be 3.8% but it may vary in peoples with Comorbidities. But it’s a good thing that CFR of COVID-19 is lesser than that of SARS and that of MERS (Petrosillo et al., 2020).

In the last 18 years to have cross species transmission severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) is identified as the third novel coronavirus (Ahmed et al., 2020). Until January 19, 2021 nearly 95 million worldwide cases with nearly 68 million recoveries and more than two million deaths have been reported. Only Pakistan contributes to these global cases almost 0.5 million cases was reported (Iqbal et al., 2021).

There is a lot of symptoms associated with COVID-19, the symptoms ranges from fever, cough, and dyspnea mild cases to severe acute respiratory syndrome (SARS) and respiratory failure in severe ill patients who requires hospitalization for further treatments (Shaw et al., 2021). Respiratory symptoms can also be associated with cardiac, gastrointestinal, renal, hepatic, neurological, cutaneous, hematological, olfactory and gustatory symptoms (Lai et al., 2020).

Zhang et al. (2020) stated in their study that precisely COVID-19 is a multisystem disease with usual extra respiratory complicacy affecting the cardiac system including arrhythmias and myocardial injury, renal system such as acute kidney injury, gastrointestinal system, nervous system such as neuropathy, encephalopathy, endocrine system and musculoskeletal system including weakness, pain, and fatigue.

COVID-19 is a highly communicable disease with a human to human transmission and can show a benign course showing flu-like symptoms such as malaise, fever, and cough or with other systemic effects it can cause dangerous health problems such as severe acute respiratory syndrome (SARS), acute cardiac disease and acute kidney disease (Rodriguez-Morales et al., 2020).

Identifying the symptom of COVID-19 is very essential but it is very tough to specify any symptom because the symptoms of COVID-19 are non-specific. Patient who have fever and upper respiratory tract symptoms with lymphopenia or leukopenia can be considerably suspected (Zu et al., 2020). Some of the patients may complain about having a diarrhea a few days before the fever. Very few to little patients may complain about having a headache (Guan et al., 2020).

According to the study of Wang et al (2020) non-critically ill patients had predominantly fever (75%) and cough (52%) along with all these they also had a higher rate of diarrhea (15%). This study was carried out of China on 1012 patients who were non-critically ill and was compared with the predominant symptoms presented in a February 2020 Joint World Health Organization-China report of 5,5,924 laboratory-confirmed cases within China. The symptoms were different in patient who were admitted into intensive care unit (ICU) in Washington, USA, they complained about Shortness of breath and cough (88%) and rhinorrhea in 17% of these patients. There were 24 subjects in ICU of Washington, USA (Bhatraju et al., 2020). There was another study in Italy in which among 202 confirmed infected patients 64% reported about lack of sense in smell or taste (Gane et al., 2020).

In a recent study by the Centers for Disease Control and Prevention (CDC) COVID-19 Response Team studied 9282 health care professionals with surely identified SARS-CoV-2 infection and observed that among those with complete data, 92% reported at least one criteria of symptom. Among them with symptoms the most common symptom were muscle pain (66%) and headache (65%) with lack of sense of smell or taste grouped as "other symptoms" in 750 (16%) of the cases (Pullen et Al., 2020).

The coronavirus disease 2019 (COVID-19) pandemic has driven a fierce changes in the clinical care structure all over the world (Emanuel et al., 2020). On the growing phase of the epidemic spread health system are being submerged by severe ill COVID-19 patients (Remuzzi & Remuzzi, 2020).

Patients who survives through the COVID-19 particularly those who were admitted into ICU and were mechanically ventilated mostly suffer from new or worsening impairments in physical functioning, cognitive function, and/or emotional health which altogether is called Post-intensive care syndrome (PICS) (Elliott et al., 2014).

Patients who survives through COVID-19 and had PICS, it can persist for months or years after a critical illness and have a lot of influence on outcomes which are very important to patients such as quality of life, return to work (Kamdar et al., 2020) and it can also hamper peoples life such as disability in activities of daily living such as bathing or walking (Ferrante et al., 2015).

COVID-19 infected patients sometimes require intensive care unit (ICU) and some of them needs ICU support for 10 or more days (Grasselli et al., 2020) and some of them suffers from acute respiratory distress syndrome (ARDS) which requires mechanical ventilation and during the application of mechanical ventilation generally needs sedation and sometimes neuromuscular blockade (Arentz et al., 2020). All of these factors are maybe responsible to rising the burden of PICS (post intensive care syndrome) between COVID-19 recovered patients, however recently estimated data indicates at least 40% of COVID-19 survivors have long term and serious neurological deficits such as fatigue or weakness after getting discharge from hospital (Mao et al., 2020).

Greenhalgh et al. (2020) stated in their study that people who survived through COVID-19 and have post COVID symptoms they are experiencing a puzzling setting of continuous and agitating symptoms including cough, breathlessness, fever, sore throat, chest pain, palpitations, cognitive deficits, myalgia, neurological symptoms, skin rashes, and diarrhoea.

After surviving severe COVID-19 people experiences complications such as severe respiratory dysfunction, ICU-acquired weakness, and delirium. Hence WHO advised that after recovering from COVID-19 when it is out of danger patients should be provided early mobilization and rehabilitation interventions (Thomas et al., 2020).

According to the study of Matshushima et al. (2021) among the survivors of serious COVID-19 who has taken shortly rehabilitation, their clinical course of oxygenation, physical function, cognitive function, and activities of daily living (ADL) have not been well described. Though they have a good clinical course but their physical and mental recovery status at discharge from the acute care hospital maybe inadequate. Still now it is not well established enough to understand the impairments after COVID-19 recovery.

A study conducted by weerahandi et al. (2021) among 152 participants in New York City about post COVID physical and mental health. Study found that among the participants after discharge from hospital their physical and mental status was worse compared to their pre COVID status.

In compare to Severe Acute Respiratory Syndrome (SARS) which was a pandemic before in 2003 the global concern of COVID-19 is much important (Bonilla-Aldana et al., 2020). Day by day the number of COVID-19 recovered patient discharged from hospital are increasing. But until now about the long-term effects of COVID-19 suffered by the survivors after getting discharged from hospital has a very little evidence. There was an Italian study regarding the situation which shows that 32% of the patients who were previously hospitalized complained about the persistence of one or two COVID-19 associated manifestation, whereas 55% reported more than three manifestation even after two months of discharge from the hospital. Among these post COVID-19 symptoms 53.1% complained about fatigue and 43.4% complained about dyspnea, these complains were widely described by the survivors (Carfi et al., 2020).

Mandal et al. (2021) stated in their study that survivors of the SARS outbreak in 2002 and the Middle East respiratory syndrome (MERS) outbreak in 2012 also experienced the similar post discharge symptoms. Manifestations of these symptoms are also known as "Long COVID" which is in the same category experienced by the survivors before.

Severe Acute respiratory Syndrome (SARS) and Middle East respiratory syndrome (MERS) Survivors suffered from physical manifestations such as reduced exercise capacity and reduced lung function and they also suffered from mental health impairment such as anxiety and depression (Halpin et al., 2021). In a similar way due to the stigma related to COVID-19 the recovered patients suffers from continuous shaming and avoidance, and the situation adds a new mental component to the survivors physical suffering (Dar et al., 2020). Whatsoever still now with most recent literature implying on the acute management of COVID-19 data associated with post COVID-19 symptoms are not enough (Iqbal et al., 2021).

CHAPTER III METHODOLOGY

3.1 Study design

Cross-sectional study design is a type of observational study design. In a cross-sectional study, the investigator measures the outcome and the exposures in the study participants at the same time. Cross-sectional designs are used for population-based surveys and to assess the prevalence of diseases in clinic-based samples. These studies can usually be conducted relatively faster and are inexpensive. The investigator measures the outcome and the exposure(s) in the population, and may study their association (Setia, 2016). The study aimed to observe level of physical disability and life participation of post COVID-19 survivors. For the thesis a cross sectional study was chosen to conduct the study to fulfill the aim and objectives.

3.2 Target population and sample population

Target population was people who survived COVID-19 in Bangladesh and Sample population was people who survived COVID-19 in Dhaka and Bogura district.

3.3 Study setting

People who survived COVID-19 living in Dhaka and Bogura district in Bangladesh was chosen for the study.

3.4 Sample size:

Using the following formula we can calculate sample size from population,

$$n = \frac{z^2 pq}{d^2}$$

Here,

n=sample size

p=expected prevalence which is 11.6 % (WHO, 2020)

q= (1-p) which is 10.6

z= the standard normal deviation which is 1.96

d=degree of accuracy which is 1

After calculation the sample size n comes out,

n=472

The actual sample size for this study was calculated as 472.

As it was an academic thesis, self-funding and data was collected from a specific area by considering the feasibility and time limitation 200 sample were selected conveniently.

3.5 Sampling procedure

The convenience sampling method was used in this study. Convenient sampling is a process in which a sample was draw from the subjects conveniently available. The procedure was including all of people who survived from COVID-19 actually who met the inclusion and exclusion criteria.

3.6 Inclusion criteria

a) Patients who survived COVID-19 (Weerahandi., 2021).
b) Both male and female patients (Iqbal et al., 2021).
c) Patient who agree to willingly participate in the study (Halpin et al., 2020).
d) Patients age range 18-77 years old (Elibol, 2021).

3.7 Exclusion criteria

a) Medically unstable patient (Weerahandi., 2021).
b) Patient with cognitive problem or typically injured and psychologically unstable (Iqbal et al., 2021).
c) Patients who are aged below 18 year or above 77 year (Halpin et al., 2020).

3.8 Data collection

3.8.1 Data collection tools

Socio demographic profile sheet: This questionnaire was developed by researcher included items related to personnel characteristic for collect socio-demographic details of the persons such as name, age, gender, marital status, education, occupation, duration of illness etc.

Covid-19 related information: There was few COVID-19 related information such as when did they get COVID-19, how did they get their treatments and other information's.

WHODAS 2.0 Questionnaire: WHODAS 2.0 36 items Bengali version questionnaire was used in this study. It consists of domains like Understanding and communicating, Getting around, self-care, getting along with people, Life activities and participation in society.

The Life Satisfaction Questionnaire-9 (Lisat-9):

In this study, the Life Satisfaction instrument LiSat-9 has used. LiSat-9 is a self-rating life satisfaction instrument consisting of the global item 'life as a whole' and the eight domain-specific items vocational situation, financial situation, leisure situation, contacts with friends, sexual life, activities of daily living (ADL), family life and partnership relationship. These nine different variables were rated on an ordinal scale from 1 to 6 where, 1 represents 'very dissatisfying' and 6 'very satisfying'. The instrument is not recommended for use as a sum-score instrument.

3.8.2 Procedure of data collection

Data was collected by using the Bengali version questionnaire through face to face and phone call interview with the participants.

3.8.3 Duration of data collection

Data was collected carefully and confidentially and maintained all ethical considerations. The researcher gave each participant a particular time to collect the data. Each questionnaire took approximately 20-25 minutes to complete.

3.9 Data analysis

By using descriptive statistics method, data was analyzed through data entry and analysis performed using the Statistical Package for Social Science (SPSS), Inc. version 20, and Microsoft excel spreadsheet, at a descriptive level. WHODAS 2.0, Lisat-9 questionnaire and Demographic questionnaire was analyzed. Demographic factors were discussed such as gender, age, occupation, marital status etc. The Statistical Package for Social Sciences (SPSS) was used to calculate all statistical data. Researcher analyzed the data by descriptive statistics using frequency (n), percentage(%), Pie diagram, Bar diagram and table and also shown the associations by spearman correlation test.

Spearman Correlation test:

Spearman's rank correlation coefficient is a nonparametric measure of rank correlation (statistical dependence between the rankings of two variables). It assesses how well the relationship between two variables can be described using a monotonic function (Cavallo, 2020). In this study Spearman correlation test was done to measure the correlation between two variables.

Assumption

a. Data must be at least ordinal
b. The scores on one variable must be monotonically related to the other variable.

Formula: the test statistics follow-

$$\rho = 1 - \frac{6\Sigma d_i^2}{n(n^2 - 1)}$$

Here,

ρ = Spearman's rank correlation coefficient

d_i = difference between the two ranks of each observation

n = number of observations

Level of significance

The researcher has used 5% level of significant to test the hypothesis. If the p value for the calculation is $p<0.05$ it conclude that there is significant association between the two variables.

Example:

Table-1: Association between age of the participants and getting around domain of WHODAS 2.0 by spearman correlation test.

Age of the participants (n)	Getting around domain	Correlation Coefficient value	P value	Significance
18-27 years (29)	Standing for long periods, such as 30 minutes?	0.308	0.000*	significant
28-37 years (66)	Standing up from sitting down?	0.379	0.000*	significant
38-47 years (46)	Moving around inside your home?	0.140	0.040*	significant
48-57 years (43)	Getting out of your home?	0.297	0.000*	significant
58-67 years (13)	Walking a long distance, such as a kilometer (or equivalent)?	0.324	0.000*	significant
68-77 years (3)				

3.10.1 Ethical Consideration

The proposal was submitted and prepared to the Institutional Review Board (IRB) and Bangladesh Health Profession Institute (BHPI) and approval was obtained from the board. The World Health Organization (WHO) and Bangladesh Medical Research Council (BMRC) guideline was all followed to conduct the study. A written/verbal consent was taken from participant before collecting of data. During the course of the study, the samples who were interested in the study had given consent forms and the purpose of the research and the consent form were explained to them verbally through mobile phone. Permission for recording their conversation was taken from them and permission of reusing their information from record was also taken. The study did not interfere with their jobs. They were informed that their participation was fully voluntary and they had the right to withdraw or discontinue from the research at any time. They were also informed that confidentiality was maintained regarding their information. It should be assured the participant that his or her name or address would not be used. The participants were also informed that the research result would not be harmful for them.

3.10.2 Rigor of the study

The rigorous manner was maintained to conduct the study. The study was conducted in a clean and systemic way. During the data collection it was ensured participants were not influenced was experiences. The answer was accepted whether they were negative or positive impression. No leading questions were asked or no important questions were avoided. The participant information was coded accurately and checked by the supervisor to eliminate any possible errors. The entire information was handled with confidentiality. In the result section, outcome was not influenced by showing any personal interpretation. During conduct the study every section of the study was checked and rechecked by the research supervisor.

CHAPTER–IV RESULTS

The cross sectional study was conducted to achieve the research objectives. The main objective of the study was to find out the physical disability level and life participation of post COVID-19 Survivors. According to WHODAS 2.0 (Socio-demographic information, Understanding and communicating, Getting around, getting along with people, household activity, Life activity and participation in the society and total score) and LISAT-9 all variables are calculated through using an SPSS 20.0 version software program.

4.1Gender:

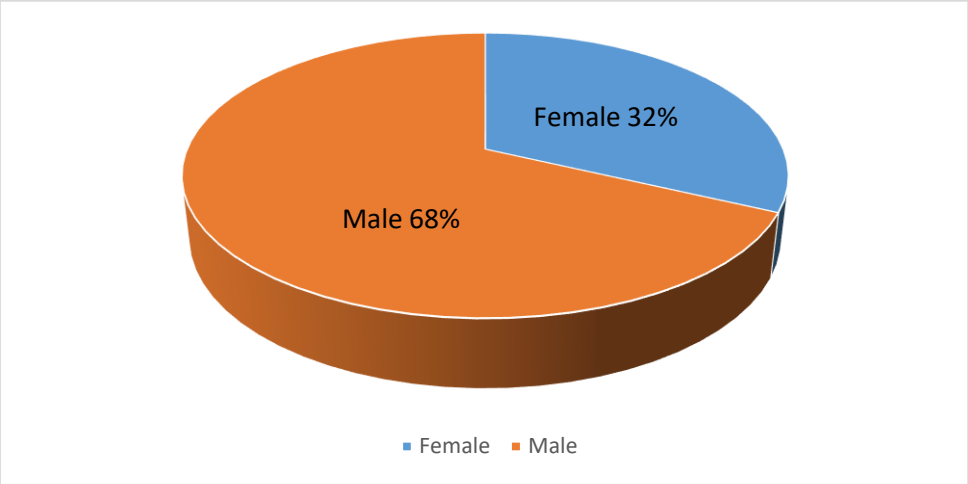


Figure-01: Gender of the participants

In total 200 participants were selected, most of them were male (n=136, 68%), and female (n=64, 32%).

4.2: Age

In this study, among 200 participants age range was 18-73 year. (Mean±SD) was (39.76±12.07). The highest age was 73 year and the lowest age was 18 year. Researcher divided the age range into 6 groups for analysis purpose. In this table the number of maximum age range was 66 in 28-37 years of age and minimum number age range was 3 in 68-77 years of age.

Table 2: Age of the participants

Age group	n (%)
18-27 years	29 (14.5)
28-37 years	66 (33)
38-47 years	46 (23)
48-57 years	43 (21.5)
58-67 years	13 (6.5)
68-77 years	3 (1.5)

4.3 Participants socio-demographic Characteristics at a glance:

Among 200 participants, marital status of the participants were married 86.5% (n=173), unmarried 12.0% (n=24), widow 1% (n=1) and separated 0.5% (n=1). Educational status of the participants were no formal education 1.5% (n=3), primary education 12% (n=24), SSC 15% (n=30), HSC 28.5% (n=57) and bachelor/above 42% (n=86). Occupation of the participants were car driver 1% (n=2), student 11.5% (n=23), labour 2% (n=4), businessman 15.5% (n=31), farmer 2% (n=4), mason 0.5% (n=1), service holder 45.5% (n=91), housewife 15.5% (n=31) and others 6.5% (n=13). Living area of the participants were rural 7.5% (n=15), urban 38.5% (n=38.5) and semi urban 54% (n=108). Smoking history of the participants were 27% (n=54) smokers and 73% (n=146) non-smokers. Co-Morbidity status of the participants were 71% (n=142) had no co-morbidity, 13.5% (n=27) participants had diabetes mellitus, 2% (n=4) participants had hypertension, 2.5% (n=5) participants had asthma, 2.5% (n=5) participants had both diabetes mellitus and asthma, 7% (n=14) participants had both diabetes mellitus and hypertension, 1.5% (n=3) had diabetes mellitus, asthma and hypertension all together.

Table 3: Socio demographic characteristics of the participants

Characteristics	n (%)	Characteristics	n (%)
Marital Status:		**Occupation:**	
Married	173 (86.5)	Car driver	2 (1)
Unmarried	24 (12.0)	Student	23 (11.5)
Widow	2 (1)	Labour	4 (2)
Separated	1 (0.5)	Businessman	31 (15.5)
Educational Status:		Farmer	4 (2)
No formal education	3 (1.5)	Mason	1 (0.5)
Primary education	24 (12)	Service holder	91 (45.5)
SSC	30 (15)	Housewife	31 (15.5)
HSC	57 (28.5)	Others	13 (6.5)
Bachelor/Above	86 (42)	**Co-Morbidity:**	
Living Area:		No	142 (71)
Rural	15 (7.5)	DM	27 (13.5)
Urban	38.5 (38.5)	HTN	4 (2)
Semi Urban	108 (54)	Asthma	5 (2.5)
Smoking History:		DM+Asthma	5 (2.5)
Yes	54 (27)	DM+HTN	14 (7)
No	146 (73)	DM+Asthma+HTN	3 (1.5)

4.4 Understanding and communicating

In this domain, it was notified that among 200 participants they faced difficulties in understanding and communicating. Frequency showed that in concentrating on doing something for 10 minutes 27% (n=54) people faced no difficulties, 54% (n=108) people faced mild difficulty, 18% (n=34) people had moderate difficulty and 1% (n=2) people had severe difficulty. In remembering to do important things 24.5% (n=49) people faced no problems, 44.5% (n=89) people faced mild difficulty, 30.5% (n=61) people faced moderate difficulty and 0.5% (n=1) faced severe difficulty. In analyzing and finding solutions to problems in day-to-day life 62.5% (n=125) people faced no problems, 35.5% (n=71) people faced mild difficulty and 2% (n=4) people faced moderate difficulty. In learning a new task 68% (n=136) people had no difficulty, 29.5% (n=59) people had mild difficulty and 2.5% (n=5) people had moderate difficulty. In generally understanding what people say 78% (n=156) people faced no problems, 21% (n=42) people had mild difficulty and 1% (n=2) people faced moderate difficulty. In starting and maintaining a conversation 79% (n=158) people faced no difficulty, 19.5% (n=39) people faced mild difficulty and 1.5% (n=3) people faced moderate difficulty.

Table 4: Distribution of questionnaires among understanding and communication domain of WHODAS 2.0.

Questions	None n (%)	Mild n (%)	Moderate n (%)	Severe n (%)	Extreme or cannot do n (%)
Concentrating on doing something for ten minutes?	54 (27)	108 (54)	36 (18)	2 (1)	0
Remembering to do important things?	49 (24.5)	89 (44.5)	61 (30.5)	1 (0.5)	0
Analyzing and finding solutions to problems in day-to-day life?	125 (62.5)	71 (35.5)	4 (2)	0	0
Learning a new task, for example, learning how to get to a new place?	136 (68)	59 (29.5)	5 (2.5)	0	0
Generally understanding what people say?	156 (78)	42 (21)	2 (1)	0	0
Starting and maintaining a conversation?	158 (79)	39 (19.5)	3 (1.5)	0	0

4.5 Getting around

In getting around it was noticed that standing for long period 24.5% (n=49) people faced no difficulties, 43.5% (n=87) people faced mild difficulty, 30% (n=60) people faced moderate difficulties and 2% (n=4) people faced severe difficulties. In standing up from sitting down 54% (n=108) people had no problems, 35.5% (n=71) people had mild problems 9.5% (n=19) people had moderate problems and 1% (n=2) people had severe problems. In moving around inside home 80% (n=160) people faced no problems, 19.5% (n=39) people faced mild problems, 0.5% (n=1) people faced moderate problems. In getting out from home 59% (n=118) people faced no problems, 33% (n=66) people faced mild problems, 8% (n=16) people faced moderate problems. While walking a long distance 28.5% (n=57) people faced no difficulty 33% (n=66) people faced mild difficulty, 37% (n=74) people faced moderate difficulty and 1.5% (n=3) people faced severe difficulty.

Table-5: Distribution of questionnaires among getting around domain of WHODAS 2.0.

Questions	None n (%)	Mild n (%)	Moderate n (%)	Severe n (%)	Extreme or cannot do n (%)
Standing for long periods, such as 30 minutes?	49 (24.5)	87 (43.5)	60 (30)	4 (2)	0
Standing up from sitting down?	108 (54)	71 (35.5)	19 (9.5)	2 (1)	0
Moving around inside your home?	160 (80)	39 (19.5)	1 (0.5)	0	0
Getting out of your home?	118 (59)	66 (33)	16 (8)	0	0
Walking a long distance, such as a kilometer?	57 (28.5)	66 (33)	74 (37)	3 (1.5)	0

4.6 Getting along with people

In getting along with people it is found that during dealing with unknown people 45.5% (n=91) people faced no difficulties, 36.5% (n=73) people faced mild difficulty, 17.5% (n=35) people faced moderate difficulties and 0.5% (n=01) people faced severe difficulties. In maintaining a friendship 63.5% (n=127) people had no problems, 32% (n=64) people had mild problems and 4.5% (n=9) people had moderate problems. While getting along with close people 75% (n=150) people faced no problems, 22% (n=44) people faced mild problems and 3% (n=6) people faced Moderate problems. In making new friends 62% (n=124) people faced no problems, 34.5% (n=69) people faces mild problems, 3.5% (n=7) people faced moderate problems. During sexual activities 62.5% (n=125) people faced no difficulty, 26% (n=52) people faced mild difficulty, 10% (n=20) people faced moderate difficulty and 1.5% (n=3) people faced severe difficulty.

Table-6: Distribution of questionnaires among getting along with people of WHODAS 2.0.

Questions	None n (%)	Mild n (%)	Moderate n (%)	Severe n (%)	Extreme or cannot do n (%)
Dealing with people you do not know?	91 (45.5)	73 (36.5)	35 (17.5)	1 (0.5)	0
Maintaining a friendship?	127 (63.5)	64 (32)	9 (4.5)	0	0
Getting along with people who are close to you?	150 (75)	44 (22)	6 (3)	0	0
Making new friends?	124 (62)	69 (34.5)	7 (3.5)	0	0
Sexual activities?	125 (62.5)	52 (26)	20 (10)	3 (1.5)	0

4.7 Life activities

In this domain it is seen that among 200 participants many of them faced difficulties in their life activities. Frequency shows that during taking care of household responsibilities 79.5% (n=159) people faced no difficulties, 19% (n=38) people faced mild difficulty and 1.5% (n=3) people had moderate difficulty. While doing most important household tasks well 76.5% (n=153) people faced no problems, 21% (n=42) people faced mild difficulty, 2% (n=4) people faced moderate difficulty and 0.5% (n=1) people faced severe difficulty. When they try to get all of the household work done needed to do 77.5% (n=155) people had no difficulty, 19% (n=38) people had mild difficulty, 3% (n=6) people had moderate difficulty and 0.5% (n=1) people had severe difficulty. While doing household work quickly 69% (n=138) people faced no problems, 19% (n=38) people had mild difficulty, 10% (n=20) people faced moderate difficulty and 2% (n=4) people faced severe difficulty. In their day to day school/work 60.5% (n=121) people faced no difficulty, 35% (n=70) people faced mild difficulty and 4.5% (n=9) people faced moderate difficulty. While doing most important school/work tasks well 59% (n=118) people faced no problems, 36.5% (n=73) people faced mild difficulty, and 4.5% (n=9) people faced moderate difficulty. When they try to get all of the work done needed to do in school or working place 59% (n=118) people had no difficulty, 37.5% (n=75) people had mild difficulty, 3% (n=6) people had moderate difficulty and 0.5% (n=1) people had severe difficulty. While doing work quickly in school or in job 55.5% (n=111) people faced no problems, 37.5% (n=75) people had mild difficulty, 6% (n=12) people faced moderate difficulty and 1% (n=2) people faced severe difficulty.

Table-07: Distribution of questionnaires among life activities with people of WHODAS 2.0.

Questions	None n (%)	Mild n (%)	Moderate n (%)	Severe n (%)	Extreme or cannot do n (%)
Taking care of your household responsibilities?	159 (79.5)	38 (19.0)	3 (1.5)	0	0
Doing most important household tasks well?	153 (76.5)	42 (21)	4 (2.0)	1 (0.5)	0
Getting all of the household work done that you needed to do?	155 (77.5)	38 (19)	6 (3)	1 (0.5)	0
Getting your household work done as quickly as needed?	138 (69)	38 (19)	20 (10)	4 (2)	0
Your day-to-day work/school?	121 (60.5)	70 (35)	9 (4.5)	0	0
Doing your most important work/school tasks well?	118 (59)	73 (36.5)	9 (4.5)	0	0
Getting all of the work (school/work) done that you need to do?	118 (59)	75 (37.5)	6 (3)	1 (0.5)	0
Getting your work (school/work) done as quickly as needed?	111 (55.5)	75 (37.5)	12 (6)	2 (1)	0

4.8 Participation in society

During participation in society it was found that when people tries to join in community activities 55% (n=110) people faced no difficulties, 39.5% (n=79) people faced mild difficulty and 5.5% (n=11) people had moderate difficulty. 54% (n=108) people faced no problems, 39.5% (n=79) people faced mild difficulty, 5% (n=10) people faced moderate difficulty and 1.5% (n=3) people faced severe difficulty because of barriers and hindrances around them. When people tries to live with dignity 64% (n=128) people had no difficulty, 29% (n=58) people had mild difficulty, 6% (n=12) people had moderate difficulty and 1% (n=2) people had severe difficulty because of the attitudes and actions of others. 75.5% (n=151) people spent no time, 19.5% (n=39) people spent a little extra time, 4.5% (n=9) spent more extra time and 0.5% (n=1) spent a lot of extra time on their health condition or its consequences. Peoples are emotionally affected because of their condition among them 66.5% (n=133) peoples were not emotionally affected, 24% (n=48) peoples had mild emotional affect and 8% (n=16) people were moderate emotionally affected and 1.5% (n=3) had severe emotional affect because of their health condition. On financial condition 48.5% (n=97) people had no effect, 36.5% (n=73) people had mild effect, 13% (n=26) people had moderate effect and 2% (n=4) people had severe effect by their health condition. Because of their health condition their family facing problems among them 51% (n=102) people had no difficulty, 33.5% (n=67) people had mild difficulty, 13.5% (27) people had moderate difficulty and 2% (n=4) people had severe difficulty. Problems in doing things by themselves for relaxation or pleasure 79.5% (n=159) people faced no problems, 18.5% (n=37) people had mild problems, and 2% (n=4) people faced moderate problems.

Table-8: Distribution of questionnaires among participation in society with people of WHODAS 2.0

Questions	None n (%)	Mild n (%)	Moderate n (%)	Severe n (%)	Extreme or cannot do n (%)
How much of a problem did you have in joining in community activities (for example, festivities, religious, or other activities) in the same way as anyone else can?	110 (55)	79 (39.5)	11 (5.5)	0	0
How much of a problem did you have because of barriers or hindrances around you?	108 (54)	79 (39.5)	10 (5)	3 (1.5)	0
How much of a problem did you have living with dignity because of the attitudes and actions of others?	128 (64)	58 (29)	12 (6)	2 (1.0)	0
How much time did you spend on your health condition or its consequences?	151 (75.5)	39 (19.5)	9 (4.5)	1 (0.5)	0
How much have you been emotionally affected by your health condition?	133 (66.5)	48 (24)	16 (8)	3 (1.5)	0
How much has your health been a drain on the financial resources of you or your family?	97 (48.5)	73 (36.5)	26 (13)	4 (2)	0
How much of a problem did your family have because of your health problems?	102 (51)	67 (33.5)	27 (13.5)	4 (2)	0
How much of a problem did you have in doing things by yourself for relaxation or pleasure?	159 (79.5)	37 (18.5)	4 (2)	0	0

4.9 Distribution among participants using IQR range

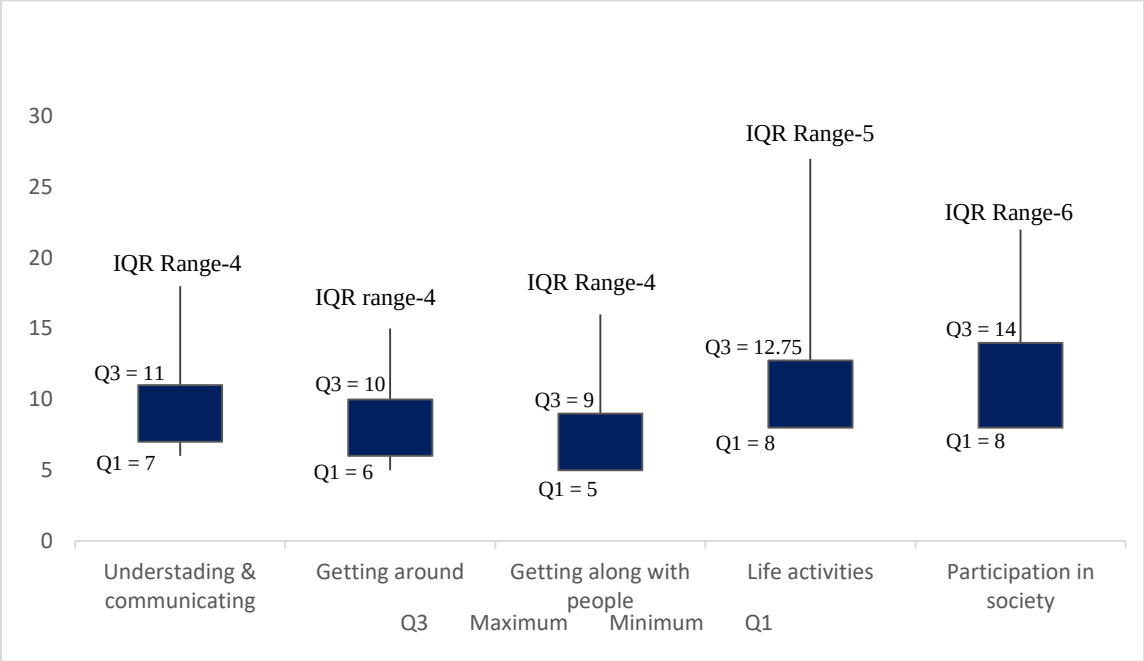


Figure 2: Shows the median (IQR) score of 5 components of WHODAS 2.0

After analyzing summation of understanding and communicating median was 9 and range was 12.In summation of getting around median was 8 and range was 10.In getting along with people median was 7 and range was 11. In summation of Life activities median was 11 and range was 19.In summation of participation in society median was 11 and range was 14.Among all of them life activities and participation in society has higher median and range which indicates higher limitations. So this study revealed that among 200 participants their life activities and social participation has more limitation after surviving COVID-19 than the other activities.

4.10 Life participation at a glance (LISAT-9 questionnaire)

As a whole, the satisfactory percentage to the life of people after surviving COVID-19 among the 200 participants, about 2% (n=4) participants had dissatisfying, whereas 4% (n=8) had rather dissatisfying, 62.5% (n=125) participants had Rather Satisfying, 30.5% (n=61) had Satisfying and 1% (n=2) Very Satisfying has been found. In this study it has been found that 13.5% (n=27) people had no occupation and 1% (n=01) participants were very dissatisfying, 1% (n=1) had dissatisfying, 13% (n=26) had rather dissatisfying, 58% (n=116) participants had Rather Satisfying, 14% (n=28) had Satisfying and 0.5% (n=1) were Very Satisfying in their vocational situation. Financial condition of the participants found that 2% (n=4) had dissatisfying, 20% (n=40) had rather dissatisfying, 59% (n=118) participants had Rather Satisfying, 18.5% (n=37) had Satisfying and 0.5% (n=1) were Very Satisfying. Leisure situation of the participants 2% (n=4) had dissatisfying, 17.5% (n=35) had rather dissatisfying, 51% (n=102) participants had Rather Satisfying, 29% (n=58) had Satisfying and 0.5% (n=1) were Very Satisfying. 1% (n=2) had dissatisfying, 6% (n=12) had rather dissatisfying, 45% (n=90) participants had Rather Satisfying, 47.5% (n=95) had Satisfying and 0.5% (n=1) were Very Satisfying with their contact with friends and acquaintances. In this study it has been found that 13.5% (n=27) people had no sexual life and 5% (n=10) had dissatisfying, 20.5% (41) had rather dissatisfying, 43% (n=86) participants had Rather Satisfying, 17.5% (n=35) had Satisfying and 0.5% (n=1) were Very Satisfying in their sexual Life. In ability to manage self-care 0.5% (n=1) had dissatisfying, 4.5% (n=9) had rather dissatisfying, 43.5% (n=87) participants had Rather Satisfying, 51% (n=102) had Satisfying and 0.5% (n=1) had Very Satisfying result. Family life of the participants were 0.5% (n=1) dissatisfying, 2% (n=4) rather dissatisfying, 34% (n=68) Rather Satisfying, 62.5% (n=125) Satisfying and 1% (n=2) very satisfying. In this study it has been found that 13.5% (n=27) people had no partner and 2% (n=4) had rather dissatisfying, 18.5% (n=37) participants had Rather Satisfying, 64.5% (n=129) had Satisfying and 1.5% (n=3) had Very Satisfying relationship with their partners.

Table-09: Life participation at a glance

	Not Applicable n (%)	Very Dissatisfying n (%)	Dissatisfying n (%)	Rather Dissatisfying n (%)	Rather Satisfying n (%)	Satisfying n (%)	Very Satisfying n (%)
Life as a whole is	0	0	4 (2)	8 (4)	125 (62.5)	61 (30.5)	2 (1)
My vocational situation is	27 (13.5)	1 (1)	1 (1)	26 (13)	116 (58)	28 (14)	1 (0.5)
My financial situation is	0	0	4 (2)	40 (20)	118 (59)	37 (18.5)	1 (0.5)
My leisure situation is	0	0	4 (2)	35 (17.5)	102 (51)	58 (29)	1 (0.5)
My contact with friends and acquaintances are	0	0	2 (1)	12 (6)	90 (45)	95 (47.5)	1 (0.5)
My sexual life is	27 (13.5)	0	10 (5)	41 (20.5)	86 (43)	35 (17.5)	1 (0.5)
My ability to manage my self-care (dressing, hygiene, transfers etcetera) is	0	0	1 (0.5)	9 (4.5)	87 (43.5)	102 (51)	1 (0.5)
My family life is	0	0	1 (0.5)	4 (2)	68 (34)	125 (62.5)	2 (1)
My partner relationship is	27 (13.5)	0	0	4 (2)	37 (18.5)	129 (64.5)	3 (1.5)

4.11 Comparison of mean scores of different WHODAS 2.0 domain of with different demographic factors along with significance level by spearman correlation test.

The comparison of scores on WHODAS 2.0 according to different demographic factors are presented in Table 13. Age of the participants has significant association with understanding and communication domain ($p<0.000$), getting around domain ($p<0.000$), getting along with people domain ($p<0.003$), life activities domain ($p<0.000$) and social participation domain ($p<0.031$). Gender male (n= 136) and female (n=64) of the participants has significant association with life activities ($p<0.019$). Marital status of the participants, married (n=173), unmarried (n=24), widow (n=2), Separated (n=1) showed significance with understanding and communication domain ($p<0.000$), getting around domain ($p<0.000$) and life activities domain ($p<0.003$). Occupation of the participant's car driver (n=2), Student (n=23), Labor (n=4), businessman (n=31), farmer (n=4), mason (n=1), service holder (n=91), Housewife (n=31) and others (n=13) showed significance with understanding and communication domain ($p<0.000$), getting around domain ($p<0.000$), getting along with people domain ($p<0.003$) and life activities domain ($p<0.025$). Educational qualification of the participants, no formal education (n=3), primary education (n=24), secondary education (n=30), higher secondary education (n=57), bachelor or above (n=86) showed no significance. Living area of the participants, rural (n=15), urban (n=77) and semi urban (n=108) showed no significance with any of the domain. Co-Morbidity status of the participants, no co-morbidity (n=142), Diabetes mellitus (n=27), hypertension (n=4), asthma (n=5), diabetes mellitus and asthma (n=5), diabetes mellitus and hypertension (n=14), diabetes mellitus with asthma and hypertension (n=3) showed significance with understanding and communication domain ($p<0.000$), getting around domain ($p<0.000$), getting along with people domain ($p<0.001$), life activities domain ($p<0.000$) and social participation domain ($p<0.005$).

Table-10: Comparison of mean scores of different WHODAS 2.0 domain with different demographic factors along with significance level by spearman correlation test.

Variables	Understanding and communication		Getting around		Getting along with people		Life activities		Social Participation	
	n	P-value	n	P-value	n	P-value	n	P-value	n	P-value
Age		0.000*		0.000*		0.003*		0.000*		0.031*
18-27 year	29		29		29		29		29	
28-37 year	66		66		66		66		66	
38-47 year	46		46		46		46		46	
48-57 year	43		43		43		43		43	
58-67 year	13		13		13		13		13	
68-77 year	3		3		3		3		3	
Gender		0.093		0.195		0.117		0.019*		0.325
Male	136		136		136		136		136	
Female	64		64		64		64		64	
Marital Status		0.000*		0.000*		0.205		0.003*		0.129
Married	173		173		173		173		173	
Unmarried	24		24		24		24		24	
Widow	2		2		2		2		2	
Separated	1		1		1		1		1	
Educational status		0.868		0.745		0.704		0.367		0.189
No formal education	3		3		3		3		3	
Primary education	24		24		24		24		24	
SSC	30		30		30		30		30	
HSC	57		57		57		57		57	
Bachelor/Above	86		86		86		86		86	
Living area		0.817		0.786		0.561		0.111		0.201
Rural	15		15		15		15		15	
Urban	77		77		77		77		77	
Semi Urban	108		108		108		108		108	

Occupation		0.000*		0.000*		0.003*		0.025*		0.148
Car driver	2		2		2		2		2	
Student	23		23		23		23		23	
Labor	4		4		4		4		4	
Businessman	31		31		31		31		31	
Farmer	4		4		4		4		4	
Mason	1		1		1		1		1	
Service holder	91		91		91		91		91	
Housewife	31		31		31		31		31	
Others	13		13		13		13		13	
Co-Morbidity		0.000*		0.000*		0.001*		0.000*		0.005*
No	142		142		142		142		142	
DM	27		27		27		27		27	
HTN	4		4		4		4		4	
Asthma	5		5		5		5		5	
DM+Asthma	5		5		5		5		5	
DM+HTN	14		14		14		14		14	
DM+Asthma+HTN	3		3		3		3		3	

**=significant [p<0.05]*

4.12 Frequency of rather satisfying participants of life as a whole from LISAT-9 questionnaire

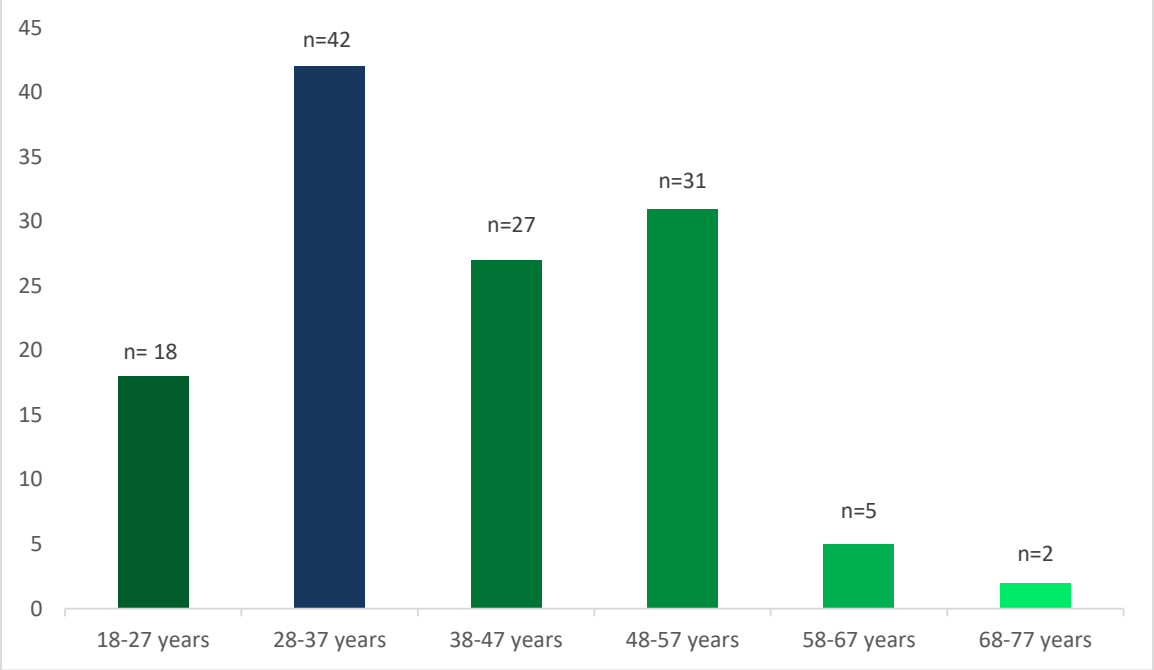


Figure-3: Shows the frequency of rather satisfying participants with life as a whole.

Among 200 participants, 125 (62.5%) participants said that they are rather satisfying with their lives as a whole. Among 125 rather satisfying participants with their life as a whole, 18 (9%) participants age range was 18-27, 42 (21%) participants age range was 28-37, 27 (13.5%) participants age range was 38-47, 31 (15.5%) participants age range was 48-57, 5 (2.5%) participants age range was 58-67 and 2 (1%) participants age range was 68-77. So, observation indicated that participants with age range 28-37 (n=42) were large in number who were rather satisfied with their life as a whole.

4.13 Correlation between socio-demographic characteristics along with factors of life satisfaction by spearman correlation test.

The correlation between socio-demographic characteristics along with factors of life satisfaction by spearman correlation test are presented in table-13. Age of the participants had positive association with the participant's sexual life (correlation coefficient value was 0.129 and p value was 0.069). Age of the participants was strongly associated with partner relationship (correlation coefficient value was 0.207 and p value was 0.003). Gender of the participants had positive association with financial situation (correlation coefficient value was 0.016 and p value was 0.826), sexual life (correlation coefficient value was 0.012 and p value was 0.869) and partner relationship (correlation coefficient value was 0.006 and p value was 0.934). Educational status of the participants had positive association with life as a whole (correlation coefficient value was 0.010 and p value was 0.89), financial situation (correlation coefficient value was 0.113 and p value was 0.110), leisure situation (correlation coefficient value was 0.034 and p value was 0.634), contact with friends and acquaintances (correlation coefficient value was 0.079 and p value was 0.26), sexual life (correlation coefficient value was 0.041 and p value was 0.56), managing self-care (correlation coefficient value was 0.055 and p value was 0.43), family life (correlation coefficient value was 0.063 and p value was 0.37) and partner relationship (correlation coefficient value was 0.110 and p value was 0.221). Educational status of the participants was strongly associated with vocational situation (correlation coefficient value was 0.184 and p value was 0.009) of the participants. Occupation of the participants had positive association with life as a whole (correlation coefficient value was 0.001 and p value was 0.985). Occupation of the participants was strongly associated with sexual life (correlation coefficient value was 0.212 and p value was 0.003) and partner relationship (correlation coefficient value was 0.301 and p value was 0.000). Living area of the participants had positive association with life as a whole (correlation coefficient value was 0.015 and p value was 0.83), vocational situation (correlation coefficient value was 0.032 and p value was 0.650), leisure situation (correlation coefficient value was 0.119 and p value was 0.094), family life (correlation coefficient value was 0.031 and p value was 0.659) and partner relationship (correlation coefficient value was 0.002 and p value was 0.976).

Table-11: Socio-demographic characteristics along with factors of life satisfaction by spearman correlation test.

Age range	My sexual life is						My partner relationship is		
	0.129 (0.069)						0.207 (0.003)**		
Gender	My financial situation is			My sexual life is			My partner relationship is		
	0.016 (0.826)			0.012 (0.869)			0.006 (0.934)		
Educational status	Life as a whole is	My vocational situation is	My financial situation is	My leisure situation is	My contacts with friends and acquaintances are	My sexual life is	My ability to manage my self-care (dressing, hygiene, transfers etcetera)	My family life is	My partner relationship is
	0.010 (0.89)	0.184 (0.009)*	0.113 (0.110)	0.034 (0.634)	0.079 (0.26)	0.041 (0.56)	0.055 (0.43)	0.063 (0.37)	0.110 (0.221)
Occupation	Life as a whole is			My sexual life is			My partner relationship is		
	0.001 (0.985)			0.212 (0.003)**			0.301 (0.000)**		
Living area	Life as a whole is		My vocational situation is		My leisure situation is		My family life is		My partner relationship is
	0.015 (0.83)		0.032 (0.650)		0.119 (0.094)		0.031 (0.659)		0.002 (0.976)

CHAPTER–V DISCUSSION

A cross sectional survey was used to find out the physical disability level and life participation of post COVID-19 Survivors. The purpose of the study was to find out the level of physical disability and life participation of the peoples who survived the COVID-19. The data was gathered from Dhaka and Bogura district. In the study of Halpin et al. (2021) total participants were 100, among the 100 participants 46 participants were female and 54 participants were male. In another research total 90 participants were taken, among them 48 were male and 52 participants were female (Dawson et al., 2021). In this study 200 participants were taken in total among them most of the participants were male the number of male participants are 136 (68%) and the number of female participants were 64 (32%).

A cross sectional study conducted by Iqbal et al. (2021) among 158 COVID-19 recovered patient. In their study age of the participants (mean ± SD) was (40.10 ± 12.4), the study was done in Karachi Pakistan. In this study age of the participants (mean ± SD) was (39.76 ± 12.07) which is quiet similar to the study of Iqbal et al. (2021).

Halpin et al. (2021) studied among 100 participants about post discharge symptoms and rehabilitation need of COVID-19 patients, the occupation of the participants were 30 keyworker and 15 works in a healthcare setting. In this study occupation of the participants were car driver 2 (1%), student 23 (11.5%), labour 4 (2%), businessman 31 (15.5%), farmer 4 (2%), Mason 1 (5%), Service holder 91 (0.5%), Housewife 31 (15.5%), Other 13 (6.5%). In another research the occupation was 38 (24.1%) were student, 29 (18.4%) were housewife, 65 (41.1%) were job holder, 16 (10.1%) were businessman and 10 (6.3%) were unemployed or retired which is approximately similar comparing with this study (Iqbal et al., 2021).

In this study the educational qualification of the participants are with no formal education 3 (1.5%) person, primary education 24 (12%) person, secondary education 30 (15%) person, higher secondary education 57 (28.5%) person, bachelor/Above 86 (42%) person. In the study of Iqbal et al. (2021) educational qualification of the subjects are primary

education 10 (6.3%) person, Secondary education 9 (5.7%) person, intermediate education 32 (20.3%) person, graduate 58 (36.7%), Post-graduate 49 (31.0%) in compare to this study it is nearly similar.

In this study living area of the participants are, 15 (7.5%) people lives in rural area, 38.5 (38.5%) people lives in urban area, 108 (54%) people lives in semi urban area. In another study living area of the participants were, 132 (83.5%) participants were from urban area, 26 (16.5%) participants were from rural area (Iqbal et al., 2021). Smoking history of the participants are, among 200 participants 54 (27%) participants were smoker and 146 (73%) were non-smoker. In the study of Iqbal et al (2021), 19 (12.0%) participants were smokers and 139 (88.0%) participants were non-smoker which is relevant with the study. In another study of Weerahandi et al. (2021) the smoking history of the participants were 94 (58.4%) participants never smoked, 45 (28.0%) participants were former smoker, 4 (2.5%) participants were current smoker and 18 (11.2%) participants smoking history was unknown.

A prospective single health system observational cohort study in New York City was conducted among 161 participants, the participant's co-morbidity status was observed. Among them 15 (9.3%) participants had coronary artery disease, 59 (36.7%) participants had diabetes, 8 (5.0%) participants had heart failure, 75 (46.6%) participants had hyperlipidemia, 97 (60.3%) participants had hypertension, 39 (24.2%) participants had asthma or chronic obstructive pulmonary disorder (Weerahandi et al., 2021). In this study co-morbidity of the participants are, 142 (71%) participants had no co-morbidity, 27 (13.5%) participants had diabetes mellitus, 4 (2%) participants had hypertension, 5 (2.5%) participants had asthma, 5 (2.5%) had both diabetes mellitus and asthma, 14 (7%) participants had both diabetes mellitus and hypertension and 3 (1.5%) participants had diabetes mellitus with asthma and hypertension. In the study of Iqbal et al (2021) co-morbidity found among them 15 (9.5%) participants had diabetes mellitus, 21 (13.3%) participants had hypertension, 16 (10.1%) participants had asthma, 5 (3.2%) participants had hypothyroidism, 2 (1.3%) participants had chronic kidney disease, 11 (7.0%) participants had cardiovascular disease and 27 (17.1%) participants had other conditions which is relevant with the study.

A retrospective case study was conducted in china about the co-morbidity and its impact on COVID-19 patients. Total participants of the study was 1590, among the participants 686 (42.7%) patients were female. The mean age of the participants was 48.9 year. Among the participants 399 (25.1%) participants reported of having at least one co-morbidity. Co morbidity observed by the researcher was hypertension 269 (16.9%), other cardiovascular diseases (53.7%) cerebrovascular diseases 30 (1.9%), diabetes 130 (8.2%), hepatitis B infections 28 (1.8%), chronic obstructive pulmonary disease 24 (1.5%), chronic kidney diseases 21 (1.3%), malignancy 18 (1.1%) and immunodeficiency 3 (0.2%). The researcher found that co-morbidity was associated with poor clinical outcome. The patients who survived through COVID-19 among them who had more co morbidity they had poorer clinical outcome (Guan et al., 2020).

In this study association found between co-morbidity of the participants and understanding and communication which was statistically significant ($p<0.000$); getting around which was statistically significant ($P<0.000$); association found between co-morbidity of the participants and getting along with people which was statistically significant ($P<0.001$); association found between co-morbidity of the participants and life activities which was statistically significant ($P<0.000$); association found between co-morbidity of the participants and participation in society which was statistically significant ($P<0.005$).

A cross sectional study was conducted among the post COVID-19 survivors in Karachi, Pakistan. The study was about post recovery symptoms of COVID-19 patients. Total participants were 158 recovered patients of COVID-19. Mean age of the participants was 40.10. Among total participants female was 87 and male was 71. The questionnaire used in the study to measure the quality of life after surviving COVID-19 of the participants was EuroQol five-dimension five-level questionnaire (EQ-5D-5L) telephone interview version. The EQ-5D-5L measures the QoL based on a five-component scale (mobility, self-care, usual activities, pain/discomfort, and anxiety/depression). Researcher found association between severity of COVID-19 and five dimension of EQ-5D-5L problems in carrying out usual activities, difficulty in washing or dressing oneself, difficulty in walking, pain, and discomfort, and anxiety and depression. Of severely affected subjects, 77% experienced either severe problems or were unable to carry out their usual activities. On the other hand,

75% of mildly affected patients reported either no or slight problems in their day-to-day activities (Iqbal et al., 2021).

In this study researcher found association between age and understanding and communication (P<0.000), getting around (P<0.000), getting along with people (P<0.003), life activities (P<0.000) and social participation (p<0.031) which are statistically significant. Researcher found association between gender and life activities (P<0.019) which was statistically significant. Researcher found association between marital status and understanding and communication (P<0.000), getting around (P<0.000) and life activities (P<0.003) which are statistically significant. An association was also found between occupation and understanding and communication (p<0.000), getting around (p<0.000), getting along with people (p<0.003) and life activities (p<0.025) which are statistically significant. An association was also observed by the researcher between co morbidity and understanding and communication (p<0.000), getting around (P<0.000), getting along with people (P<0.001), life activities (P<0.000) and social participation (P<0.005) which are statistically significant.

As a whole, the satisfactory percentage to the life of people after surviving COVID-19 about 2% participants had dissatisfying, whereas 4% had rather dissatisfying, 62.5% participants had Rather Satisfying, 30.5% had Satisfying and 1% Very Satisfying has been found. In this study it has been found that 13.5% people had no occupation and 1% participants were very dissatisfying, 1% had dissatisfying, 13% had rather dissatisfying, 58% participants had Rather Satisfying, 14% had Satisfying and 0.5% were Very Satisfying in their vocational situation. Financial condition of the participants found that 2% had dissatisfying, 20% had rather dissatisfying, 59% participants had Rather Satisfying, 18.5% had Satisfying and 0.5% were Very Satisfying. Leisure situation of the participants 2% had dissatisfying, 17.5% had rather dissatisfying, 51% participants had Rather Satisfying, 29% had Satisfying and 0.5% were Very Satisfying. 1% had dissatisfying, 6% had rather dissatisfying, 45% participants had Rather Satisfying, 47.5% had Satisfying and 0.5% were Very Satisfying with their contact with friends and acquaintances. In this study it has been found that 13.5% people had no sexual life and 5% had dissatisfying, 20.5% had rather dissatisfying, 43% participants had Rather Satisfying, 17.5% had Satisfying and

0.5% were Very Satisfying in their sexual Life. In ability to manage self-care 0.5% had dissatisfying, 4.5% had rather dissatisfying, 43.5% participants had Rather Satisfying, 51% had Satisfying and 0.5% had Very Satisfying result. Family life of the participants were 0.5% dissatisfying, 2% rather dissatisfying, 34% Rather Satisfying, 62.5% Satisfying and 1% very satisfying. In this study it has been found that 13.5% people had no partner and 2% had rather dissatisfying, 18.5% participants had Rather Satisfying, 64.5% had Satisfying and 1.5% had Very Satisfying relationship with their partners. And we studied further with the 125 (62.5%) participants who were rather satisfying with their lives as a whole and observation says that the participants with age range 28-37 (n=42) were large in number who were rather satisfied with their life as a whole.

Age of the participants had positive association with the participant's sexual life (correlation coefficient value was 0.129 and p value was 0.069). Age of the participants was strongly associated with partner relationship (correlation coefficient value was 0.207 and p value was 0.003). Gender of the participants had positive association with financial situation (correlation coefficient value was 0.016 and p value was 0.826), sexual life (correlation coefficient value was 0.012 and p value was 0.869) and partner relationship (correlation coefficient value was 0.006 and p value was 0.934). Educational status of the participants had positive association with life as a whole (correlation coefficient value was 0.010 and p value was 0.89), financial situation (correlation coefficient value was 0.113 and p value was 0.110), leisure situation (correlation coefficient value was 0.034 and p value was 0.634), contact with friends and acquaintances (correlation coefficient value was 0.079 and p value was 0.26), sexual life (correlation coefficient value was 0.041 and p value was 0.56), managing self-care (correlation coefficient value was 0.055 and p value was 0.43), family life (correlation coefficient value was 0.063 and p value was 0.37) and partner relationship (correlation coefficient value was 0.110 and p value was 0.221). Educational status of the participants was strongly associated with vocational situation (correlation coefficient value was 0.184 and p value was 0.009) of the participants. Occupation of the participants had positive association with life as a whole (correlation coefficient value was 0.001 and p value was 0.985). Occupation of the participants was

strongly associated with sexual life (correlation coefficient value was 0.212 and p value was 0.003) and partner relationship (correlation coefficient value was 0.301 and p value was 0.000). Living area of the participants had positive association with life as a whole (correlation coefficient value was 0.015 and p value was 0.83), vocational situation (correlation coefficient value was 0.032 and p value was 0.650), leisure situation (correlation coefficient value was 0.119 and p value was 0.094), family life (correlation coefficient value was 0.031 and p value was 0.659) and partner relationship (correlation coefficient value was 0.002 and p value was 0.976).

Limitation of the Study: There were a number of limitations and barriers in this research project which had affect the accuracy of the study, these are as follow:

The samples were collected only from Dhaka and Bogura district and the sample size was small, so the result of the study could not be generalized to the whole population of COVID-19 survivors in Bangladesh. There was little evidence to support the result of this project in the context to Bangladesh. A convenience sampling was used that was not reflecting the wider population under study. The research project was done by an undergraduate student and it was first research project for her. So the researcher had limited experience with techniques and strategies in terms of the practical aspects of research.

CHAPTER – VI CONCLUSION AND RECOMMENDATION

6.1 Conclusion:

COVID-19 is a burning issue in the current situation of Bangladesh. Millions of people are suffering from COVID-19 and its post recovery symptoms. In Bangladesh there is lack of information and proper database about post COVID symptoms. Bangladesh is a developing country. Most of them live with low economic level and poor educational status. In these countries there is also lack of awareness about physical disability of post COVID survivors. This study shows some limitation of post COVID survivors which may help the post COVID survivors to get an early rehabilitation program for their early and better recovery. Despite the small sample and the drawbacks identified in this study, this research Provides valuable insight into physical disability and life participation of post COVID-19 survivors. Study shows that post COVID-19 survivors had limitations in understanding and communication, getting around, getting along with people, life activities and social participation. Among them life activities and social participation has more limitation after surviving COVID-19.

This study found that there is an association between co-morbidity and post COVID survivors further study needs to specify the association. Study also found some association between gender, marital status and occupation further study should be done to specify the association. Future longitudinal studies with larger sample size and assessment of additional variables are required to assess the physical disability and life participation of post COVID survivors.

6.2 Recommendation:

The aim of the study was to assess the physical disability and life participation of post COVID-19 survivors. Though the study had some limitations but investigator identified some further step that might be taken for the better accomplishment of further research. The main recommendations would be as follow:

The random sampling technique rather than the convenience sampling technique would be chosen in further in order to enabling the power of generalization the results.

The duration of the study was relatively short, so in future wider time would be taken for conducting the study.

Investigator used 200 participants as the sample of this study, in future the sample size would be more.

In this study, the investigator took the participants only from two selected area of Bangladesh as a sample for the study. So for further study investigator strongly recommended to include the post COVID-19 survivors from all over the Bangladesh to ensure the generalize ability of this study.

REFERENCE

Alimohamadi, Y., Taghdir, M., and Sepandi, M., (2020). Estimate of the basic reproduction number for COVID-19: a systematic review and meta-analysis. Journal of Preventive Medicine and Public Health, 53(3):151.

Anderson, R.M., Heesterbeek, H., Klinkenberg, D., and Hollingsworth, T.D., (2020). How will country-based mitigation measures influence the course of the COVID-19 epidemic? The lancet, 395(10228):931-34.

Ahmed, M.U., Hanif, M., Ali, M.J., Haider, M.A., Kherani, D., Memon, G.M., Karim, A.H., and Sattar, A., (2020). Neurological manifestations of COVID-19 (SARS-CoV-2): a review. Frontiers in neurology, 11:518.

Arentz, M., Yim, E., Klaff, L., Lokhandwala, S., Riedo, F.X., Chong, M., and Lee, M., (2020). Characteristics and outcomes of 21 critically ill patients with COVID-19 in Washington State. Jama, 323(16):1612-14.

Barker-Davies, R.M., O'Sullivan, O., Senaratne, K.P.P., Baker, P., Cranley, M., Dharm-Datta, S., Ellis, H., Goodall, D., Gough, M., Lewis, S., and Norman, J., (2020). The Stanford Hall consensus statement for post-COVID-19 rehabilitation. British journal of sports medicine, 54(16):949-59.

Bonilla-Aldana, D.K., Dhama, K., and Rodriguez-Morales, A.J., (2020). Revisiting the one health approach in the context of COVID-19: a look into the ecology of this emerging disease. Adv Anim Vet Sci, 8(3):234-37.

Bhatraju, P.K., Ghassemieh, B.J., Nichols, M., Kim, R., Jerome, K.R., Nalla, A.K., Greninger, A.L., Pipavath, S., Wurfel, M.M., Evans, L., and Kritek, P.A., (2020). Covid-19 in critically ill patients in the Seattle region case series. New England Journal of Medicine, 382(21):2012-22.

Cucinotta, D., and Vanelli, M., (2020). WHO declares COVID-19 a pandemic. Acta Bio Medica: Atenei Parmensis, 91(1):157.

Chen, T., Wu, D.I., Chen, H., Yan, W., Yang, D., Chen, G., Ma, K., Xu, D., Yu, H., Wang, H., and Wang, T., (2020). Clinical characteristics of 113 deceased patients with coronavirus disease 2019: retrospective study. British medical journal, 368:1091-1102.

Carfì, A., Bernabei, R., and Landi, F., (2020). Gemelli against COVID-19 post-acute care study group. Persistent symptoms in patients after acute COVID-19. JAMA, 324(6):603-05.

Cavallo, B., (2020). Functional relations and Spearman correlation between consistency indices. Journal of the Operational Research Society, 71(2):301-11.

Drosten, C., Günther, S., Preiser, W., Van Der Werf, S., Brodt, H.R., Becker, S., Rabenau, H., Panning, M., Kolesnikova, L., Fouchier, R.A., and Berger, A., (2003). Identification of a novel coronavirus in patients with severe acute respiratory syndrome. New England journal of medicine, 348(20):1967-76.

Dar, S.A., Khurshid, S.Q., Wani, Z.A., Khanam, A., Haq, I., Shah, N.N., Shahnawaz, M., and Mustafa, H., (2020). Stigma in coronavirus disease-19 survivors in Kashmir, India: A cross-sectional exploratory study. Plos one, 15(11):0240152.

Dawson, P., Rabold, E.M., Laws, R.L., Conners, E.E., Gharpure, R., Yin, S., Buono, S.A., Dasu, T., Bhattacharyya, S., Westergaard, R.P., and Pray, I.W., (2021). Loss of taste and smell as distinguishing symptoms of coronavirus disease 2019. Clinical Infectious Diseases, 72(4):682-85.

Emanuel, E., Persad, G., Upshur, R., Thome, B., Parker, M., Glickman, A., Zhang, C., Boyle, C., Smith, M., and Phillips, J., (2020). Fair Allocation of Scarce Medical Resources in the Time of Covid-19. New England Journal of Medicine, 382(21):2049-2055.

Elliott, D., Davidson, J.E., Harvey, M.A., Bemis-Dougherty, A., Hopkins, R.O., Iwashyna, T.J., Wagner, J., Weinert, C., Wunsch, H., Bienvenu, O.J. and Black, G., 2014. Exploring the scope of post–intensive care syndrome therapy and care: engagement of non–critical care providers and survivors in a second stakeholders meeting. Critical care medicine, 42(12):2518-26.

Elibol, E., (2021). Otolaryngological symptoms in COVID-19. European Archives of Oto-Rhino-Laryngology, 278(4):1233-36.

Forster, P., Forster, L., Renfrew, C., and Forster, M., (2020). Phylogenetic network analysis of SARS-CoV-2 genomes. Proceedings of the National Academy of Sciences, 117(17):9241-43.

Ferrante, L.E., Pisani, M.A., Murphy, T.E., Gahbauer, E.A., Leo-Summers, L.S., and Gill, T.M., (2015). Functional trajectories among older persons before and after critical illness. Journal of the American Medical Association internal medicine, 175(4):523-29.

Grippaudo, F.R., Migliano, E., Redi, U., Turriziani, G., Marino, D., D'Ermo, G., and Ribuffo, D., (2020). The impact of COVID-19 in plastic surgery departments: a comparative retrospective study in a COVID-19 and in a non-COVID-19 hospital. European journal of plastic surgery, 43(5):645-650.

Guo, Y.R., Cao, Q.D., Hong, Z.S., Tan, Y.Y., Chen, S.D., Jin, H.J., Tan, K.S., Wang, D.Y., and Yan, Y., (2020). The origin, transmission and clinical therapies on coronavirus disease 2019 (COVID-19) outbreak an update on the status. Military Medical Research, 7(1):1-10.

Guan, W.J., Ni, Z.Y., Hu, Y., Liang, W.H., Ou, C.Q., He, J.X., Liu, L., Shan, H., Lei, C.L., Hui, D.S., and Du, B., (2020). Clinical characteristics of coronavirus disease 2019 in China. New England journal of medicine, 382(18):1708-20.

Gane, S.B., Kelly, C., and Hopkins, C., (2020). Isolated sudden onset anosmia in COVID-19 infection. A novel syndrome. Rhinology, 58(3):299-301.

Grasselli, G., Zangrillo, A., Zanella, A., Antonelli, M., Cabrini, L., Castelli, A., Cereda, D., Coluccello, A., Foti, G., Fumagalli, R., and Iotti, G., (2020). Baseline characteristics and outcomes of 1591 patients infected with SARS-CoV-2 admitted to ICUs of the Lombardy Region, Italy. Journal of the American Medical Association, 323(16):1574-81.

Greenhalgh, T., Knight, M., A'Court, C., Buxton, M., and Husain, L., (2020). Management of post-acute covid-19 in primary care. British medical journal, 370:3026.

Guan, W.J., Liang, W.H., Zhao, Y., Liang, H.R., Chen, Z.S., Li, Y.M., Liu, X.Q., Chen, R.C., Tang, C.L., Wang, T., and Ou, C.Q., (2020). Comorbidity and its impact on 1590 patients with COVID-19 in China: a nationwide analysis. European Respiratory Journal, 55(5):2000547.

Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., Zhang, L., Fan, G., Xu, J., Gu, X., and Cheng, Z., (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. The lancet, 395(10223):497-506.

Halpin, S.J., McIvor, C., Whyatt, G., Adams, A., Harvey, O., McLean, L., Walshaw, C., Kemp, S., Corrado, J., Singh, R., and Collins, T., (2021). Post discharge symptoms and rehabilitation needs in survivors of COVID-19 infection: A cross-sectional evaluation. Journal of medical virology, 93(2):1013-22.

Hosey, M.M., and Needham, D.M., (2020). Survivorship after COVID-19 ICU stay. Nature reviews Disease primers, 6(1):1-2.

Islam, M.T., Talukder, A.K., Siddiqui, M.N., and Islam, T., (2020). Tackling the COVID-19 pandemic: The Bangladesh perspective. Journal of Public Health Research, 9(1794):389-97.

Iqbal, A., Iqbal, K., Ali, S.A., Azim, D., Farid, E., Baig, M.D., Arif, T.B., and Raza, M., (2021). The COVID-19 sequelae: a cross-sectional evaluation of post-recovery symptoms and the need for rehabilitation of COVID-19 survivors. Cureus, 13(2):1-13.

Jin, J.M., Bai, P., He, W., Wu, F., Liu, X.F., Han, D.M., Liu, S., and Yang, J.K., (2020). Gender differences in patients with COVID-19: focus on severity and mortality. Frontiers in public health, 8:152.

Khan, M., and Hossain, A., (2020). Machine Learning Approaches Reveal That the Number of Tests Do Not Matter to the Prediction of Global Confirmed COVID-19 Cases. Frontiers in Artificial Intelligence, 3:561801.

Krumholz, H.M., (2013). Post-hospital syndrome a condition of generalized risk. The New England journal of medicine, 368(2):100-103.

Kamdar, B.B., Suri, R., Suchyta, M.R., Digrande, K.F., Sherwood, K.D., Colantuoni, E., Dinglas, V.D., Needham, D.M., and Hopkins, R.O., (2020). Return to work after critical illness: a systematic review and meta-analysis. Thorax, 75(1):17-27.

Khan, H.R., Howlader, T., and Islam, M.M., (2020). Battling the COVID-19 pandemic: is Bangladesh prepared? Med Archive, 1-20.

Lechien, J.R., Chiesa-Estomba, C.M., Place, S., Van Laethem, Y., Cabaraux, P., Mat, Q., Huet, K., Plzak, J., Horoi, M., Hans, S., and Rosaria Barillari, M., (2020). Clinical and epidemiological characteristics of 1420 European patients with mild-to-moderate coronavirus disease 2019. Journal of internal medicine, 288(3):335-344.

Li, Y.C., Bai, W.Z., and Hashikawa, T., (2020). The neuroinvasive potential of SARS-CoV2 may play a role in the respiratory failure of COVID-19 patients. Journal of medical virology, 92(6):552-55.

Lu, H., Stratton, C.W., and Tang, Y.W., (2020). Outbreak of pneumonia of unknown etiology in Wuhan, China: The mystery and the miracle. Journal of medical virology, 92(4):401-2.

Lai, C.C., Shih, T.P., Ko, W.C., Tang, H.J., and Hsueh, P.R., (2020). Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease-2019 (COVID-19): The epidemic and the challenges. International journal of antimicrobial agents, 55(3):105924.

Lai, C.C., Ko, W.C., Lee, P.I., Jean, S.S., and Hsueh, P.R., (2020). Extra-respiratory manifestations of COVID-19. International journal of antimicrobial agents, 56(2):106024.

Moreno, C., Wykes, T., Galderisi, S., Nordentoft, M., Crossley, N., Jones, N., Cannon, M., Correll, C., Byrne, L., Carr, S., Chen, E., Gorwood, P., Johnson, S., Karkkainen, H., Krystal, J., Lee, J., Lieberman, J., Lopez-Jaramillo, C., Männikkö, M., Phillips, M., Uchida, H., Vieta, E., Vita, A., and Arango, C., (2020). How mental health care should change as a consequence of the COVID-19 pandemic. The Lancet Psychiatry, 7(9):813-24.

Mao, L., Jin, H., Wang, M., Hu, Y., Chen, S., He, Q., Chang, J., Hong, C., Zhou, Y., Wang, D., and Miao, X., (2020). Neurologic manifestations of hospitalized patients with coronavirus disease 2019 in Wuhan, China. The Journal of the American Medical Association neurology, 77(6):683-90.

Matsushima, S., Kasahara, Y., Aikawa, S., Fuzimura, T., Yokoyama, H., and Katata, H., (2021). Impairment in Physical Function and Mental Status in a Survivor of Severe COVID-19 at Discharge from an Acute Care a Hospital: A Case Report. Physical Therapy Research, 10083.

Mandal, S., Barnett, J., Brill, S.E., Brown, J.S., Denneny, E.K., Hare, S.S., Heightman, M., Hillman, T.E., Jacob, J., Jarvis, H.C., and Lipman, M.C., (2021). 'Long-COVID': a cross-sectional study of persisting symptoms, biomarker and imaging abnormalities following hospitalisation for COVID-19. Thorax, 76(4):396-98.

Petrosillo, N., Viceconte, G., Ergonul, O., Ippolito, G., and Petersen, E., (2020). COVID-19, SARS and MERS: are they closely related? Clinical Microbiology and Infection, 26(6):729-34.

Pullen, M., Skipper, C., Hullsiek, K., Bangdiwala, A., Pastick, K., Okafor, E., Lofgren, S., Rajasingham, R., Engen, N., Galdys, A., Williams, D., Abassi, M., and Boulware, D., (2020). Symptoms of COVID-19 Outpatients in the United States. Open Forum Infectious Diseases, 7(7):271.

Parra, A., Juanes, A., Losada, C.P., Alvarez-Sesmero, S., Santana, V.D., Marti, I., Urricelqui, J., and Rentero, D., (2020). Psychotic symptoms in COVID-19 patients. A retrospective descriptive study. Psychiatry research, 291:113254.

Recalcati, S., (2020). Cutaneous manifestations in COVID-19: a first perspective. Journal of the European Academy of Dermatology and Venereology, 34(5).

Rodriguez-Morales, A.J., Cardona-Ospina, J.A., Gutiérrez-Ocampo, E., Villamizar-Peña, R., Holguin-Rivera, Y., Escalera-Antezana, J.P., Alvarado-Arnez, L.E., Bonilla-Aldana, D.K., Franco-Paredes, C., Henao-Martinez, A.F. and Paniz-Mondolfi, A., (2020). Clinical, laboratory and imaging features of COVID-19: A systematic review and meta-analysis. Travel medicine and infectious disease, 34:101623.

Remuzzi, A., and Remuzzi, G., (2020). COVID-19 and Italy: what next? The lancet, 395(10231):1225-28.

Sohrabi, C., Alsafi, Z., O'neill, N., Khan, M., Kerwan, A., Al-Jabir, A., Iosifidis, C., and Agha, R., (2020). World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19). International journal of surgery, 76:71-76.

Spoorthy, M.S., Pratapa., S.K. and Mahant, S., (2020). Mental health problems faced by healthcare workers due to the COVID-19 pandemic A review. Asian journal of psychiatry, 51:102119.

Shaw, B., Daskareh, M., and Gholamrezanezhad, A., 2021. The lingering manifestations of COVID-19 during and after convalescence: update on long-term pulmonary consequences of coronavirus disease 2019 (COVID-19). La radiologia medica, 126(1):40-46.

Setia, M.S., (2016). Methodology series module 3: Cross-sectional studies. Indian journal of dermatology, 61(3):261.

Thomas, P., Baldwin, C., Bissett, B., Boden, I., Gosselink, R., Granger, C.L., Hodgson, C., Jones, A.Y., Kho, M.E., Moses, R., and Ntoumenopoulos, G., (2020). Physiotherapy management for COVID-19 in the acute hospital setting: clinical practice recommendations. Journal of Physiotherapy, 66(2):73-82.

Vaduganathan, M., Vardeny, O., Michel, T., McMurray, J.J., Pfeffer, M.A., and Solomon, S.D., (2020). Renin–angiotensin–aldosterone system inhibitors in patients with Covid-19. New England Journal of Medicine, 382(17):1653-59.

Wu, W., Wang, A., and Liu, M., (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. Lancet, 395(10223):497-506.

Wu, Z., and McGoogan, J.M., (2020). Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: summary of a report of 72 314 cases from the Chinese Center for Disease Control and Prevention. The Journal of the American Medical Association, 323(13):1239-42.

Wang, X., Fang, J., Zhu, Y., Chen, L., Ding, F., Zhou, R., Ge, L., Wang, F., Chen, Q., Zhang, Y., and Zhao, Q., (2020). Clinical characteristics of non-critically ill patients with novel coronavirus infection (COVID-19) in a Fangcang Hospital. Clinical Microbiology and Infection, 26(8):1063-68.

WHO, (2020). WHO Bangladesh COVID-19 Situation Report #10 [Online]. Bangladesh: WHO. Available: https://cdn.who.int/media/docs/default-source/searo/bangladesh/covid19-who-bangladesh-situation-reports/who-ban-covid-19-sitrep 10.pdf?sfvrsn=c0aac0b8_4 [accessed on 10 November 2021].

Weerahandi, H., Hochman, K.A., Simon, E., Blaum, C., Chodosh, J., Duan, E., Garry, K., Kahan, T., Karmen-Tuohy, S.L., Karpel, H.C., and Mendoza, F., (2021). Post-discharge health status and symptoms in patients with severe COVID-19. Journal of general internal medicine, 36(3):738-745.

Zhang, G., Hu, C., Luo, L., Fang, F., Chen, Y., Li, J., Peng, Z., and Pan, H., (2020). Clinical features and short-term outcomes of 221 patients with COVID-19 in Wuhan, China. Journal of Clinical Virology, 127:104364.

Zhu, N., Zhang, D., Wang, W., Li, X., Yang, B., Song, J., Zhao, X., Huang, B., Shi, W., Lu, R., Niu, P., Zhan, F., Ma, X., Wang, D., Xu, W., Wu, G., Gao, G., and Tan, W., (2020). A Novel Coronavirus from Patients with Pneumonia in China, 2019. New England Journal of Medicine, 382(8):727-33.

Zu, Z.Y., Jiang, M.D., Xu, P.P., Chen, W., Ni, Q.Q., Lu, G.M., and Zhang, L.J., (2020). Coronavirus disease 2019 (COVID-19): a perspective from China. Radiology, 296(2):15-25.

Appendix

সম্মতিপত্র বাংলা

আসসালামু আলাইকুম!

আমি রওনক জাহান। আমি একটি গবেষনা পরিচালনা করছি যা আমার কোর্স কর্মসূচির অন্তর্ভুক্ত এবং এর শিরোনাম হল কোভিড-১৯ উত্তরজীবীদের শারীরিক অক্ষমতা এবং জীবনে অংশগ্রহন এর স্তরচ। গবেষনা সম্পন্ন করার উদ্দেশ্যে আমার কিছু সামাজিক, জনতাত্ত্বিক এবং রোগ বিষয়ক তথ্য জানা আবশ্যক। তাই, আমি আপনাকে এই সম্পর্কিত কিছু প্রশ্ন জিজ্ঞেস করব এবং পরীক্ষা করে দেখব যা প্রায় ২০-৩০ মিনিট সময় নিবে।

আমি আশ্বাস দিচ্ছি যে এটি একটি সম্পুর্ন পেশাগত গবেষনা এবং এর দ্বারা আপনার কোনো ক্ষতি হবে না। যেসব তথ্য আপনি প্রদান করবেন তার গোপনীয়তা বজায় রাখা হবে এবং প্রতিবেদন প্রকাশ করার ক্ষেত্রে সকল তথ্য অজ্ঞাতনামা হিসেবে রাখা হবে। আমি আরো জানাচ্ছি যে আপনার এই গবেষনায় অংশগ্রহন সম্পুর্ণ ঐচ্ছিক হিসেবে গণ্য হবে এবং এটি সকল প্রকার অর্থনৈতিক লেনদেন মুক্ত।

গবেষনার অংশ হিসেবে বা অংশগ্রহণকারীর অধিকার বাবদ আপনি গবেষনার যেকোনো মুহুর্তে আপনার অংশগ্রহণ প্রত্যাহার করতে পারেন বা যেকোনো প্রশ্নের উত্তর দিতে অনিচ্ছুক থাকলে তা বাদ দিয়েই এগিয়ে যেতে পারেন। এই গবেষনার ব্যাপারে আরো কিছু জানার থাকলে নিঃসংকোচে জিজ্ঞেস করতে পারেন গবেষক রওনক জাহান, ৪র্থ বর্ষের ছাত্রী, ফিজিওথেরাপী বিভাগ, বাংলাদেশ হেলথ প্রফেশনস ইন্সটিউট (বিএইচপিআই), সিআরপি, সাভার, ঢাকা-১৩৪৩ অথবা আমার সুপারভাইজর এহসানুর রহমান, সহযোগী অধ্যাপক, ফিজিওথেরাপী বিভাগ, বিএইচপিআই, সিআরপি, সাভার, ঢাকা-১৩৪৩।

আমি কি সাক্ষাৎকার শুরু করতে পারি? (টিকচিহ্ন দিন)

হ্যাঁ	না

অংশগ্রহণকারীর স্বাক্ষরঃ তারিখঃ

সাক্ষাতকারকের স্বাক্ষরঃ তারিখঃ

প্রত্যক্ষদর্শীর স্বাক্ষরঃ তারিখঃ

English verbal consent form

Code No:

Informed Consent

Assalamualaikum!

My name is Rawnak Jahan. I am conducting this study which is the part of my course curriculum and my thesis title is **"Level of Physical disability and life participation of post COVID-19 survivors"**. For the fulfillment of my study, I would like to know some information about social, demographics, clinical information set people. So, I need to ask you some questions and examine you on this regard and this will take approximately 20-30 minutes.

I am assuring you that this is a pure professional study and this will not creating any harm to you. The information you will provide, will be treated as confidential and in event of any report or publication the source of these information will be kept as anonymous. I would like to inform you that your participation of this study will be considered as voluntary and there will not be any kinds of financial dealings.

As a part of this study or by the rights of the participants you can withdraw yourself at any time from this study or if you will want to skip any questions that you don't want to give answer, you can proceed. If you further have any questions on this study, please feel free to ask researcher Rawnak Jahan, 4th year student, Physiotherapy Department, Bangladesh Health Professions Institute(BHPI), CRP, Savar, Dhaka-1343 and/or my research supervisor Ehsanur Rahman, Associate professor of Physiotherapy, BHPI, CRP, Savar, Dhaka-1343.

May I start the interview? (Put tick mark)

Yes	No

Signature of the Participant's: Date:

Signature of Interviewer: Date:

Signature of Witness: Date:

পর্ব ১- রোগীর আর্থ জনতাত্ত্বিক তথ্য

ক্রমিক নং	প্রশ্ন	অংশগ্রহনকারীর উত্তর
১.১	বয়স	বছর
১.২	লিঙ্গ	• পুরুষ • মহিলা
১.৩	বৈবাহিক অবস্থা	• বিবাহিত • অবিবাহিত • বিধবা/ বিপত্নিক • বিবাহ বিচ্ছিন্ন
১.৪	শিক্ষাগত যোগ্যতা	• অশিক্ষিত • প্রাথমিক শিক্ষা • এস এস সি • এইচ এস সি • স্নাতক/ স্নাতকোত্তর • অন্যান্য
১.৫	পেশা	১)গাড়ি চালক ২)ছাত্র/ছাত্রী ৩)শ্রমিক ৪)ব্যবসা ৫) কৃষক ৬)দিনমজুর ৭)চাকুরিজীবি ৮)গৃহিনী ৯)অন্যান্য(লিখে দিন)।
১.৬	বসবাসের স্থান	• গ্রাম • শহর • উপশহর
১.৭	পরিবারের সদস্য সংখ্যা	

পর্ব ২- কোভিড ১৯ সম্পর্কিত তথ্য

২.১	আপনার কবে কোভিড ১৯ ধরা পরে? (তারিখ টি লিখুন)	
২.২	আপনি কতদিন আইসোলেশনে ছিলেন?	..... দিন

২.৩	আপনি কি হাসপাতালে ভর্তি ছিলেন?	১= হ্যাঁ ২= না (যদি হ্যাঁ হয় তবে, উল্লেখ করুন .....দিন)
২.৪	রোগের লক্ষণ দেখা দেয়ার কতদিন পরে হাসপাতালে ভর্তি হন?	..... দিন
২.৫	পরিবারের অন্য কারো কি কোভিড ১৯ ধরা পরেছিলো?	১=হ্যাঁ ২=না (যদি হ্যাঁ হয় তবে, কতজন সদস্য তা উল্লেখ করুন.....)
২.৬	এলাকায় অন্য কারো কোভিড ১৯ ধরা পরেছিলো?	১= হ্যাঁ ২=না
২.৭	আপনার কর্মক্ষেত্রে কী কারো কোভিড ১৯ ধরা পরেছিলো?	১= হ্যাঁ ২=না
২.৮	কোভিড ১৯ ধরা পরার পূর্বে কি আপনি ধূমপান করতেন?	১= হ্যাঁ ২=না
২.৯	কোভিড ১৯ ধরা পরার পূর্বে কী আপনি বিদেশ ভ্রমণ করেছেন?	১= হ্যাঁ ২=না (যদি হ্যাঁ হয় তবে,দেশের নাম উল্লেখ করুন.....)
২.১০	কোভিড ধরা পরার পূর্বে কি আপনি দেশের লকডাউন এলাকা/আক্রান্ত কোন স্থান এ গিয়েছিলেন?	১= হ্যাঁ ২=না (যদি হ্যাঁ হয় তবে এলাকার নাম উল্লেখ করুন ...)

২.১১	আপনার কি কোন কো মরবিডি ছিল?	১ না ২ ডায়াবেটিস মেলাইটাস ৩ উচ্চ রক্তচাপ ৪ শ্বাসকষ্ট ৫ ডায়াবেটিস মেলাইটাস + শ্বাসকষ্ট ৬ ডায়াবেটিস মেলাইটাস + উচ্চ রক্তচাপ ৭ ডায়াবেটিস মেলাইটাস+ শ্বাসকষ্ট + উচ্চ রক্তচাপ
২.১২	আপনি কবে কোভিড ১৯ থেকে সুস্থ হন? (তারিখটি লিখুন)	
২.১৩	কোভিড ১৯ এ আক্রান্ত হবার পর কি ধরণের চিকিৎসা নিয়েছিলেন?	১=ঔষধ ২=ভেন্টিলেশন ৩=অক্সিজেন
২.১৪	কোভিড ১৯ এর জন্য কি আপনাকে আই সি ইউ তে ভর্তি করতে হয়েছিলো?	১= হ্যাঁ ২=না
২.১৫	কোভিড ১৯ থেকে ভালো হবার পর কি আপনি ফিজিওথেরাপি চিকিৎসা নিয়েছেন?	১= হ্যাঁ ২=না যদি হ্যাঁ হয় তবে, উল্লেখ করুন ৩=বক্ষ ফিজিওথেরাপি ৪=অন্যান্য ফিজিওথেরাপি

পর্ব ৩- বিশ্ব স্বাস্থ্যসংস্থা অক্ষমতা মূল্যায়ন পদ্ধতি ২.০

প্রতিটি তথ্যের জন্য নির্ধারিত নাম্বার		১	২	৩	৪	৫
বিগত ৩০ দিনে আপনি কতটুকু সমস্যায় পড়েছেন?						
বোধশক্তি						
১.১	কোন কিছু করতে ১০ মিনিট মনোযোগ দিতে পারেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
১.২	গুরুত্বপূর্ণ কিছু করার কথা মনে থাকে?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
১.৩	দৈনন্দিন কাজে সমস্যা হলে বিশ্লেষণ ও সমাধান করতে পারেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
১.৪	নতুন কিছু শেখা (যেমন নতুন কোন স্থানে কি করে যেতে হয়)?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
১.৫	সচরাচর মানুষ যা বলে তা বুঝতে পারেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
১.৬	কোন বিষয়ে আলোচনা শুরু করতে ও চালিয়ে যেতে পারেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
চলাফেরা						
২.১	একটানা ৩০ মিনিট দাঁড়িয়ে থাকতে পারেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
২.২	বসা থেকে দাঁড়াতে পারেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই

						করতে না পারা
২.৩	বাড়ীর ভিতর চলা-ফেরা করতে পারেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
২.৪	বাড়ী থেকে বাইরে যেতে পারেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
২.৫	একটানা এক কিলোমিটার হাঁটতে পারেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
নিজের যত্ন						
৩.১	নিজে নিজে গোসল করতে পারেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৩.২	নিজে নিজে কাপড় পরতে পারেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৩.৩	নিজে নিজে খেতে পারেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৩.৪	দিন কয়েক একা থাকতে পারেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
মানুষের সাথে মানিয়ে চলা						
৪.১	অপরিচিত লোকের সংগে আচরণে?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা

৪.২	বন্ধুত্ব রক্ষা করতে?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৪.৩	পরিচিত লোকের সাথে থাকতে?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৪.৪	নতুন বন্ধু তৈরিতে?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৪.৫	যৌন কার্যকলাপে?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
জীবন-যাপন প্রণালী গৃহস্থালি কার্যাবলী						
৫.১	গৃহস্থালি দায়িত্বগুলো পালন করতে পারেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৫.২	সবচেয়ে গুরুত্বপূর্ণ গৃহস্থালি কাজগুলো ভালোভাবে করতে পারেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৫.৩	প্রয়োজনীয় সকল গৃহস্থালি কাজগুলো সমাপ্ত করতে পারেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৫.৪	গৃহস্থালি কাজগুলো যথাসম্ভব দ্রুত করতে পারেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
জীবন-যাপন প্রণালী পেশাগত বা স্কুলের কাজকর্ম						
যদি সাক্ষাৎদানকারী চাকুরী করেন(বেতন ভুক্ত,অবৈতনিক,স্বকর্মসংস্থান) অথবা স্কুলে যায়, তাহলে পরবর্তী প্রশ্ন ৫.৫-৫.১০ এর প্রশ্নগুলো শেষ করুন।অন্যথায় ৬.১ এ চলে যেতে পারেন।						

৫.৫	আপনার দৈনন্দিন বা স্কুলের কাজ করতে?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৫.৬	আপনার পেশাগত বা স্কুলের জরুরী কোন কাজ সমাধান করতে ?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৫.৭	আপনার প্রয়োজনীয় সকল কাজগুলো করতে?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৫.৮	আপনার কাজগুলো নির্দিষ্ট সময়ে প্রয়োজনীয় দ্রুততার সাথে শেষ করতে?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
অংশগ্রহণ						
৬.১	সামাজিক অনুষ্ঠান গুলোতে(যেমন উৎসব, ধর্মীয় অনুষ্ঠান বা অন্যান্য কর্মকাণ্ড) অন্যদের মত অংশগ্রহণ করতে গিয়ে কোন অসুবিধার মুখোমুখি হয়েছেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৬.২	আপনার পারিপার্শ্বিক বাধা-বিঘ্নের দরুণ কতটুকু সমস্যায় পড়েছেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৬.৩	অন্যের দৃষ্টিভঙ্গি ও কাজের কারণে আপনি মর্যাদাপূর্ণ জীবনযাপনে কতটুকু সমস্যায় পরেছেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৬.৪	আপনার শারীরিক সমস্যা ও এর ফলে উদ্‌ভূত সমস্যা গুলোর জন্য কতটুকু সময় ব্যয় করেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৬.৫	নিজের শারীরিক সমস্যার কারণে কতটূকু আবেগতাড়িত হন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা

৬.৬	আপনার শারীরিক সমস্যার কারণে আপনার ও আপনার পরিবারের কি রকম আর্থিক ক্ষতি হচ্ছে?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৬.৭	আপনার শারীরিক সমস্যার কারণে আপনার পরিবার কতটুকু ভুক্তভোগী?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
৬.৮	বিশ্রাম বা বিনোদনের জন্য কিছু করতে গিয়ে আপনি কতটুকু সমস্যায় পড়েছেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারী সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কোন কিছুই করতে না পারা
	মোট অক্ষমতার মান				১৮০	৫

পর্ব ৪-The life Satisfaction questionnaire 9 (LiSAT-9)

	খুবই অসন্তুষ	**অসন্তুষ্ট**	**মোটামুটি অসন্তুষ্ট**	**মোটামুটি সন্তুষ্ট**	**সন্তুষ্ট**	**খুবই সন্তুষ্ট**
সামগ্রিকভাবে জীবন কেমন	১	২	৩	৪	৫	৬
আমার কর্মক্ষেত্রের অবস্থা	১	২	৩	৪	৫	৬
আমার আর্থিক অবস্থা	১	২	৩	৪	৫	৬
আমার অবসর সময়ের অবস্থা	১	২	৩	৪	৫	৬
আত্নীয়-স্বজন এবং বন্ধুবান্ধব দের সাথে সম্পর্ক	১	২	৩	৪	৫	৬
আমার যৌন জীবন	১	২	৩	৪	৫	৬
আমার নিজের যত্ন নেয়ার ক্ষমতা (পরিষ্কারপরিচ্ছন্নতা, কাপড় পরা চলাফেরা ইত্যাদি)	১	২	৩	৪	৫	৬
আমার পারিবারিক জীবন	১	২	৩	৪	৫	৬
আমার জীবনসংগীর সাথে আমার সম্পর্ক	১	২	৩	৪	৫	৬

Questionnaire- English

Part – 1: Socio-demographic Information

Question and filters	Response	
1.1	Age	…….. years
1.2	Gender (Put √ on your answer)	1. Male 2. Female
1.3	Marital status (Put √ on your answer)	1. Married 2. Single 3. Divorced 4. Widow 5. Separated
1.4	Educational status (Put √ on your answer)	1. Illiterate 2. Primary education 3. S.S.C 4. H.S.C 5. Bachelor or above
1.5	Occupation (Please write)	1. Car driver 2. Student 3. Labour 4. Businessman 5. Farmer 6. Mason 7. Service holder 8. Housewife 9. Others (Please mention)
1.6	Living area (Put √ on your answer)	1. Rural 2. Semi Urban 3. Urban
1.7	Number of family members (Please write)	

Part-2: Covid-19 related information

2.1	When did you diagnose COVID-19 positive? (Please write the date)	
2.2	How long you were in isolation? (Please write)	…….. days

2.3	Had you been admitted to the hospital?	1= Yes 2= No (if yes, mention the duration…… days)
2.4	Days from symptom onset to hospital admission (Please write)	……. days
2.5	Diagnosed COVID 19 in the family? (Put √ and write your answer)	1= Yes 2= No (If yes, mention the number of your affected family members…….)
2.6	Diagnosed COVID 19 in the community?	1= Yes 2= No
2.7	Diagnosed COVID 19 in the working area?	1= Yes 2= No
2.8	Did you have a smoking history before diagnosed COVID positive?	1= Yes 2= No
2.9	Did you have travel history from abroad before diagnosed COVID positive?	1= Yes 2= No (If yes, mention the name of the country……..
2.10	Did you visit the lockdown area/ affected area in Bangladesh before diagnosed COVID positive?	1= Yes 2= No (if yes, mention the name of the area……
2.11	Do you have any co morbidities?	1. No 2. DM 3. HTN 4. Asthma 5. DM+Asthma 6. DM+HTN 7. DM+Asthma+HTN
2.12	When did you diagnose COVID-19 negative? (Please write the date)	

2.13	What kinds of treatment you have received during COVID-19 status?	1= Medicine 2= Ventilation 3= Oxygen supplementation
2.14	Did you have to admit in ICU for COVID-19?	1= Yes 2= No
2.15	Did you received any Physiotherapy intervention after recovering from COVID-19	1= Yes 2= No If yes, mention the name 3= Chest Physiotherapy 4= Other Physiotherapy interventions

Part-3: WHODAS 2.0 Questionnaire

	Numeric scores assigned to each of the items	1	2	3	4	5
In the last 30 days, how much difficulty did you have in:						
Understanding and communicating						
1.1	Concentrating on doing something for ten minutes?	None	Mild	Moderate	Severe	Extreme or cannot do
1.2	Remembering to do important things?	None	Mild	Moderate	Severe	Extreme or cannot do
1.3	Analyzing and finding solutions to problems in day-to-day life?	None	Mild	Moderate	Severe	Extreme or cannot do
1.4	Learning a new task, for example, learning how to get to a new place?	None	Mild	Moderate	Severe	Extreme or cannot do
1.5	Generally understanding what people say?	None	Mild	Moderate	Severe	Extreme or cannot do
1.6	Starting and maintaining a conversation?	None	Mild	Moderate	Severe	Extreme or cannot do
Getting around						
2.1	Standing for long periods, such as 30 minutes?	None	Mild	Moderate	Severe	Extreme or cannot do
2.2	Standing up from sitting down?	None	Mild	Moderate	Severe	Extreme or cannot do
2.3	Moving around inside your home?	None	Mild	Moderate	Severe	Extreme or cannot do
2.4	Getting out of your home?	None	Mild	Moderate	Severe	Extreme or cannot do
2.5	Walking a long distance, such as a kilometer (or equivalent)?	None	Mild	Moderate	Severe	Extreme or cannot do
Self-care						
3.1	Washing your whole body?	None	Mild	Moderate	Severe	Extreme or cannot do

3.2	Getting dressed?	None	Mild	Moderate	Severe	Extreme or cannot do
3.3	Eating?	None	Mild	Moderate	Severe	Extreme or cannot do
3.4	Staying by yourself for a few days?	None	Mild	Moderate	Severe	Extreme or cannot do
Getting along with people						
4.1	Dealing with people you do not know?	None	Mild	Moderate	Severe	Extreme or cannot do
4.2	Maintaining a friendship?	None	Mild	Moderate	Severe	Extreme or cannot do
4.3	Getting along with people who are close to you?	None	Mild	Moderate	Severe	Extreme or cannot do
4.4	Making new friends?	None	Mild	Moderate	Severe	Extreme or cannot do
4.5	Sexual activities?	None	Mild	Moderate	Severe	Extreme or cannot do
Life activities—Household						
5.1	Taking care of your household responsibilities?	None	Mild	Moderate	Severe	Extreme or cannot do
5.2	Doing most important household tasks well?	None	Mild	Moderate	Severe	Extreme or cannot do
5.3	Getting all of the household work done that you needed to do?	None	Mild	Moderate	Severe	Extreme or cannot do
5.4	Getting your household work done as quickly as needed?	None	Mild	Moderate	Severe	Extreme or cannot do
Life activities—School/Work						
If you work (paid, non-paid, self-employed) or go to school, complete questions D5.5–D5.8, below. Otherwise, skip to 6.1.						
5.5	Your day-to-day work/school?	None	Mild	Moderate	Severe	Extreme or cannot do
5.6	Doing your most important work/school tasks well?	None	Mild	Moderate	Severe	Extreme or cannot do
5.7	Getting all of the work done that you need to do?	None	Mild	Moderate	Severe	Extreme or cannot do
5.8	Getting your work done as quickly as needed?	None	Mild	Moderate	Severe	Extreme or cannot do
Participation in society						
6.1	How much of a problem did you have in joining in community activities (for example, festivities, religious, or other activities) in the same way as anyone else can?	None	Mild	Moderate	Severe	Extreme or cannot do
6.2	How much of a problem did you have because of barriers or hindrances around you?	None	Mild	Moderate	Severe	Extreme or cannot do
6.3	How much of a problem did you have living with dignity because of the attitudes and actions of others?	None	Mild	Moderate	Severe	Extreme or cannot do
6.4	How much time did you spend on your health condition or its consequences?	None	Mild	Moderate	Severe	Extreme or cannot do

6.5	How much have you been emotionally affected by your health condition?	None	Mild	Moderate	Severe	Extreme or cannot do
6.6	How much has your health been a drain on the financial resources of you or your family?	None	Mild	Moderate	Severe	Extreme or cannot do
6.7	How much of a problem did your family have because of your health problems?	None	Mild	Moderate	Severe	Extreme or cannot do
6.8	How much of a problem did you have in doing things by yourself for relaxation or pleasure?	None	Mild	Moderate	Severe	Extreme or cannot do
General Disability Score (Total):					____ 180	____ 5

Part-4: The life Satisfaction questionnaire 9(LiSAT-9)

	Very Dissatisfying	**Dissatisfying**	**Rather Dissatisfying**	**Rather Satisfying**	**Satisfying**	**Very Satisfying**
Life as a whole is	1	2	3	4	5	6
My vocational situation is	1	2	3	4	5	6
My financial situation is	1	2	3	4	5	6
My leisure situation is	1	2	3	4	5	6
My contact with friends and acquaintances are	1	2	3	4	5	6
My sexual life is	1	2	3	4	5	6
My ability to manage my self-care (dressing, hygiene, transfers etcetera) is	1	2	3	4	5	6
My family life is	1	2	3	4	5	6
My partner relationship is	1	2	3	4	5	6

Permission Letter

Date: September 09, 2020

Head
Department of physiotherapy
Bangladesh Health Professions Institute (BHPI)
CRP, Chapain, Savar, Dhaka-1343.

Subject: An application for seeking permission to collect data from one health complex at Bogra and also some COVID-19 related hospital at Savar, Dhaka for conducting research project.

Sir,

With due respect and humble submission to state that I am Rawnak Jahan, a student of 4th year B.Sc. in Physiotherapy at Bangladesh Health Professions Institute (BHPI). The Ethical committee has approved my research project entitled: "Level of Physical activity and life satisfaction of post COVID-19 survivors" under the supervision of Ehsanur Rahman, Associate Professor, Department of Physiotherapy, BHPI. I want to collect data for my research project from the Shajahanpur Upazilla Health complex, Bogra and Savar Upazilla Health Complex, Savar, Dhaka. So, I need permission for data collection from the Shajahanpur Upazilla Health complex, Bogra and Savar Upazilla Health Complex, Savar, Dhaka. I would like to assure that nothing of the study would be harmful for the participants.

I therefore, pray and hope that your honor would be kind enough to grant my application and give me permission for data collection and oblige thereby.

Yours faithfully,

Rawnak Jahan

Rawnak Jahan
4th Year
B.Sc. in Physiotherapy
Class Roll: 03; Session: 2015-16
Bangladesh Health Professions Institute (BHPI)
(An academic Institution of CRP)
CRP-Chapain, Savar, Dhaka-1343,

Forwarded & Recommended
E. Rahman
09.09.2020

Recommended
Shofiq
09.09.2020
Md. Shofiqul Islam
Associate Professor & Head
Department of Physiotherapy
Bangladesh Health Professions Institute (BHPI)
CRP, Chapain, Savar, Dhaka-1343

বাংলাদেশ হেল্‌থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)
Bangladesh Health Professions Institute (BHPI)
(The Academic Institute of CRP)

Ref: CRP/BHPI/IRB/06/2021/458

Date: 6th June 2021

To
Rawnak Jahan
B.Sc. in Physiotherapy
Session: 2015-16, Student ID: 112150274

Subject: Approval of the thesis proposal**"Level of Physical disability and life participation of post COVID-19 survivors"**by ethics committee.

Dear Rawnak Jahan,

Congratulations.

The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application to conduct the above mentioned dissertation, with yourself, as the Principal investigator. The Following documents have been reviewed and approved:

Sr. No.	Name of the Documents
1	Dissertation Proposal
2	Questionnaire (Bengali version)
3	Information sheet & consent form.

The purpose of this study is to investigate the level of physical disability and life participation of people who survives COVID-19. The study involves use of a questionnaire (WHODAS 2.0 and life satisfaction 9) to identify the level of physical disability and life participation of post COVID-19 survivors in Bangladesh, that may take 30 to 35 minutes to answer the questionnaire and there is no likelihood of any harm to the participants.The members of the Ethics committee have approved the study to be conducted in the presented form at the meeting held at 08.30 AM on 1st March at BHPI (23rd IRB Meeting). This letter is reissued as per request with updated title.

The institutional Ethics committee expects to be informed about the progress of the study, any changes occurring in the course of the study, any revision in the protocol and patient information or informed consent and ask to be provided a copy of the final report. This Ethics committee is working accordance to Nuremberg Code 1947, World Medical Association Declaration of Helsinki, 1964 - 2013 and other applicable regulation.

Best regards,

Muhammad Millat Hossain
Assistant Professor, Dept. of Rehabilitation Science
Member Secretary, Institutional Review Board (IRB)
BHPI, CRP, Savar, Dhaka-1343, Bangladesh