Faculty of Medicine

University of Dhaka

Quality of Life and Psychological Status of the People with COVID-19

By

Md. Kutub Uddin

Master of Science in Physiotherapy

Registration no: 3493

Roll no: 103

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We the undersigned certify that we have carefully read and recommended to the Faculty of Medicine, University of Dhaka, for acceptance of this thesis entitled, "**Quality of Life and Psychological Status of the People with COVID 19",** submitted by Md. Kutub Uddin for the partial fulfillment of the requirements for the degree of Master of Science in Physiotherapy.

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Declaration Form

- This work has not previously been accepted in substance for any degree and isn't concurrently submitted in candidature for any degree.
- This dissertation is being submitted in partial fulfillment of the requirements for the degree of MSc in Physiotherapy.
- This dissertation is the result of my own independent work/investigation, except where otherwise stated. Other sources are acknowledged by giving explicit references. A Bibliography is appended.
- I confirm that if anything identified in my work that I have done plagiarism or any form of cheating that will directly awarded me fail and I am subject to disciplinary actions of authority.
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(Signature)

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Date: 22nd June, 2022

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List of Abbreviations or Symbols

COVID	Coronavirus Disease
SARS-CoV-2	Severe acute respiratory coronavirus 2
WHO	World Health Organization
CoVs	Coronaviruses
EQ-5D-5L	Euro Qol- 5 dimension- 5 Level
IES-R	Impact of Event Scale- Revised
MERS-CoV	Middle East Respiratory Syndrome Coronavirus
VAS	Visual Analogue Scale
IRB	Institutional Review Board
SPSS	Statistical Package for Social Science
ACE2	Angiotensin-converting enzyme II
CVD	Cardiovascular Disease
ICU	Intensive Care Unit
NICE	National Institute for Health and Care Excellence
RT-PCR	Reverse Transcription-Polymerase Chain Reaction
IEDCR	Institute of Epidemiology, Disease Control and Research

Abstract

Background: Aim of the study was to identify the Quality of life and psychological status of the people with COVID 19. **Objective:** This study's objective was to find out socio- demographic information, health related information and quality of life and psychological status of the people with COVID 19. **Methodology:** This study was performed in a cross-sectional study design. This study was conducted to determine quality of life and psychological status of the people with COVID 19. Sample was collected through convenience sampling procedure and total sample was 305. The data was collected from Popular Diagnostic Centre, Savar, Dhaka who are COVID positive. The data collection process was a questionnaire with a mobile phone interview. Data was analyzed with Microsoft Office, Excel 2019 using SPSS 22 version software program and test use of study chi-square test. **Result:** A total 305 participants completed the Observational study. This study's participants age Mean ± Std. deviation was, 34.84 ± 12.984. This study's majority age was 57.5 % (n=175) age range was 26-49 years. This survey was 65.7% (n=200) were male participants and 34.3% (n=105) were female. Participants from semi urban 49.7% (n=151), from rural 26.8% (n=82) and from urban 23.5% (n=72). Researcher found in this study majority participants with hypertension 14.4% (n=44). In this study 50% (n=153), were suffering by symptoms, among them 19.3% (n=59) suffering by fatigue. Researcher found that there was significantly associated with age and quality of life and also significantly associated with isolation duration and psychological status of COVID 19 people. **Conclusion:** From the database, it was found that quality of life and psychological status was declined by COVID 19. This study found a standard prevalence. In addition, since this sample size was small, to generate adequate evidence to support decision-making processes at the national level, there should be more studies on quality of life and psychological status of COVID 19 people. Appropriate, adequate, and timely information is needed to build awareness among them.

Key words: *COVID-19, quality of life, psychological status.*

CHAPTER-I INTRODUCTION

1.1 Background

The coronavirus disease (COVID-19) is an infectious illness caused by the worldwide transmission of the severe acute respiratory coronavirus 2 (SARS-CoV-2) (WHO, 2020). Severe acute respiratory infection symptoms are common in the early stages of this illness (Huang et al., 2020). The COVID-19 pandemic is affecting significant change throughout the world, but little is known about its influence on Covid-19 survivors' quality of life and psychological well-being. COVID-19's immediate and long-term impact on persons impacted must be determined. The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) or 2019 novel coronavirus (2019-nCoV) is rapidly spreading from its origin in Wuhan, Hubei Province, China, to the rest of the world (Wang, 2020).

Coronaviruses (CoVs) are a virus family that causes respiratory and gastrointestinal disorders in humans and livestock. People normally get minor colds from them, but the severe acute respiratory syndrome (SARS) outbreak in China in 2002–2003 and the Middle East respiratory syndrome (MERS) on the African Continent in 2012 demonstrate that they can potentially cause serious illness (Cui, Li & Shi, 2019). Another coronavirus has been attacking the world since December 2019. The virus responsible for the current pandemic of coronavirus illness (COVID-19) is the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). It was originally detected in Wuhan, China, after complaints of severe pneumonia (Wu et al., 2020).

COVID-19 virus transmission can occur through direct contact with infected persons as well as indirect contact with surfaces in the local environment or products used on infected people (Ong et al., 2020). COVID-19 virus is typically spread between persons by respiratory droplets and contact routes, according to existing findings (WHO, 2020). COVID-19 has had a fast impact on daily life, business, and global commerce and transportation. This pandemic has far-reaching consequences for individuals' everyday lives as well as the global economy (Campbell & Bannock, 2020).

The respiratory system is the most usually impacted by SARS-CoV-2. The virus, on the other hand, might infect any organ in the body. Multiple organs are frequently

impacted in severely ill individuals. The virus binds to ACE2 receptors in vascular endothelial cells, the heart, the brain, the kidneys, the colon, the liver, the pharynx, and other tissues.

COVID-19 instances that have been confirmed and published have a wide variety of symptoms, ranging from minor complaints like fever and cough to more serious cases like trouble breathing (CDC, 2020). The aged, a vulnerable group with comorbidities such as diabetes and cardiovascular or lung disease, are at a higher risk of not just getting severe sickness, but also of dying if they become ill (BCCDC, 2020). Hypertension (15.8%), cardiovascular and cerebrovascular disorders (11.7%), and diabetes were the most frequent comorbidities found (Paudel, 2020). COVID-19 has had a negative influence on the population's quality of life and psychological wellbeing in different ways (Algahtani et al. 2021). Furthermore, reduced health status and quality of life is linked to increased morbidity and death (Brown et al., 2015).

The number of cases began to rise dramatically, some of which had no connection to the live animal industry, implying that human-to-human transmission was taking place (Huang & Wang, 2020). In late December 2019, Wuhan, Hubei Province, China, saw an outbreak of an unknown disease identified as pneumonia of unclear etiology. On January 11th, 2020, the first fatal case was reported. The outbreak was fueled by the enormous migration of Chinese around the Chinese New Year. People returning from Wuhan reported cases in other Chinese provinces and other countries (Thailand, Japan, and South Korea in fast succession). On the 20th of January, 2020, transmission to healthcare staff caring for patients was outlined. By the 23rd of January, Wuhan's 11 million residents had been placed under lockdown, with entry and exit restrictions in effect. This curfew was quickly expanded to other cities in Hubei province. COVID-19 cases have been documented in nations outside of China that have no history of travel to China, implying that local human-to-human transmission is occurring in these countries (Rothe, 2020). In January 31, 2020, the outbreak had infected 9720 people in China, resulting in 213 deaths, and 106 persons in 19 other countries (Feng, Deng & Weina, 2020).

Coronaviruses (CoV) are a broad group of viruses that can cause everything from a typical cold to more serious illnesses. The Chinese public health, clinical, and scientific communities acted quickly to enable rapid recognition of the new virus, and the viral

gene sequence was shared with the rest of the world (Zhu, Zhang & Wang, 2020). Concerns developed as the epidemic spread faster in the United States (US), Brazil, and India, raising fears that the numbers might worsen. Because Europe has a large population of seniors, most European countries have taken steps to safeguard adults over the age of 70.

Coronaviruses (CoVs) are a collection of enclosed, positive-sense, single-stranded RNA viruses with a wide range of characteristics (Zumla, Chan, Azhar, Hui & Yuen, 2016). They produce a variety of illnesses in humans and animals that affect the respiratory, gastrointestinal, hepatic, and neurological systems (Chan, Lau & Woo, 2013). Two novel CoVs, severe acute respiratory syndrome CoV (SARS-CoV) and Middle East respiratory syndrome CoV (MERS-CoV), have appeared in the last two decades and are responsible for serious human diseases (Cheng, Lau, Woo & Yuen, 2007).

SARS-CoV-2 is the seventh member of the human-infecting CoV family. Fever, tiredness, and cough were the most common symptoms of COVID-19 infection, which were comparable to those of SARS-CoV and MERS-CoV infections. The pathophysiology and pathogenesis of these CoVs that cause serious disorders in humans have some overlapping and discrete characteristics (Lui, Zheng & Tong, 2020).

The term "long COVID" was coined by the National Institute for Health and Care Excellence to describe people who experience signs and symptoms that persist or worsen after being exposed to COVID-19. It encompasses both symptomatic COVID-19 (from 4 to 12 weeks) and post-COVID-19 syndrome (from 12 weeks). Patients with symptoms six months after an acute illness appeared to have a lower quality of life, functional status, and work productivity (Vaes et al., 2021).

COVID has the potential to cause a wide range of problems. Physical, emotional, and psychic complications are all possible. Many studies suggest that numerous complications such as tiredness, shortness of breath, muscular discomfort, joint pain, headache, cough, chest pain, changed smell, taste, cognitive impairment, memory loss, anxiety, and sleep disturbances are prevalent. Various forms of LONG COVID Complications might affect quality of life and cause work problems (Aiyegbusi et al., 2021).

The global COVID-19 outbreak has wreaked devastation. It took millions of lives, destroyed billions of people economically and mentally, and had a lasting influence on those who survived the epidemic. The most noteworthy conclusion in the research was that COVID-19 recovered patients' physical, social, and environmental quality of life improved with time, with the exception of the psychological domain, which suffered the most from this dreadful condition (Hawlader et al., 2021). COVID-19 has had a significant influence on a variety of levels and has been linked to considerable physical and psychological disability, as well as a worse quality of life (Arab-Zozani et al., 2020). COVID-19 survivors also report poor quality of life 1–3 months after infection, as well as considerable physical and psychological damage (Chen, Gong, Zhang & Li, 2020). Among other symptoms, many COVID-19 survivors have prolonged dyspnea, fatigue (Taquet et al., 2021). Patients with severe COVID-19 may continue to have dyspnea after being discharged from the hospital, both at rest and during exercise or regular activities (Vitacca et al., 2020). Anxiety, depression, and sleep difficulties have been documented in 30-40% of COVID-19 survivors (Vaes et al., 2021).

Physical health is linked to quality of life, and patients who had detectable declines in pulmonary function as a result of COVID-19-related pulmonary complication had lower quality of life (Van der Sar-van der Brugge et al., 2021). It has been linked to considerable physical and psychological harm, as well as a reduction in quality of life. According to studies, due to quarantine and lockdown had an impact on people's quality of life in all sectors (Slimani et al., 2020). Researcher found several studies have lower quality of life in recovered COVID-19 cases, general community, hospitalized patients, and chronic illness patients (Algahtani et al., 2021). COVID-19-related symptoms might last a long time after recovery, and organ-specific sequelae necessitate interdisciplinary comprehensive care. The two most prevalent persisting symptoms of post-COVID-19 syndrome are exhaustion and dyspnoea, both of which can continue regardless of the severity of the initial sickness (Townsend et al., 2020).

The COVID-19 pandemic is a major psychological and physiological stressor for people and organizations in all social and economic groups throughout the world. The absolute difference between COVID-19 patients and a normal Chinese population, including male and female subgroups, was discovered by researchers. Body pain and vitality were higher in patients, while physiological function, social function, and role-physical function were lower. COVID-19 individuals had unusual symptoms such as

headaches, gastrointestinal discomfort, and chest pain. As a result, the COVID-19's physical suffering might persist for a month. Patients were also isolated in hospital wards and subjected to stringent control measures during the acute phase of the sickness. They had to cut their ties with the region. Fear of infection, high risk of infection, increased workload, symptoms of physical sickness, stigmatization, concern about loved ones, loss-related events, and overall unhappiness are all substantial risk factors for mental health disorders in the case of a pandemic. When the pandemic load was taken into account, the protective benefits of coping remained strong (Chen, Li, Gong, Zhang & Li, 2020).

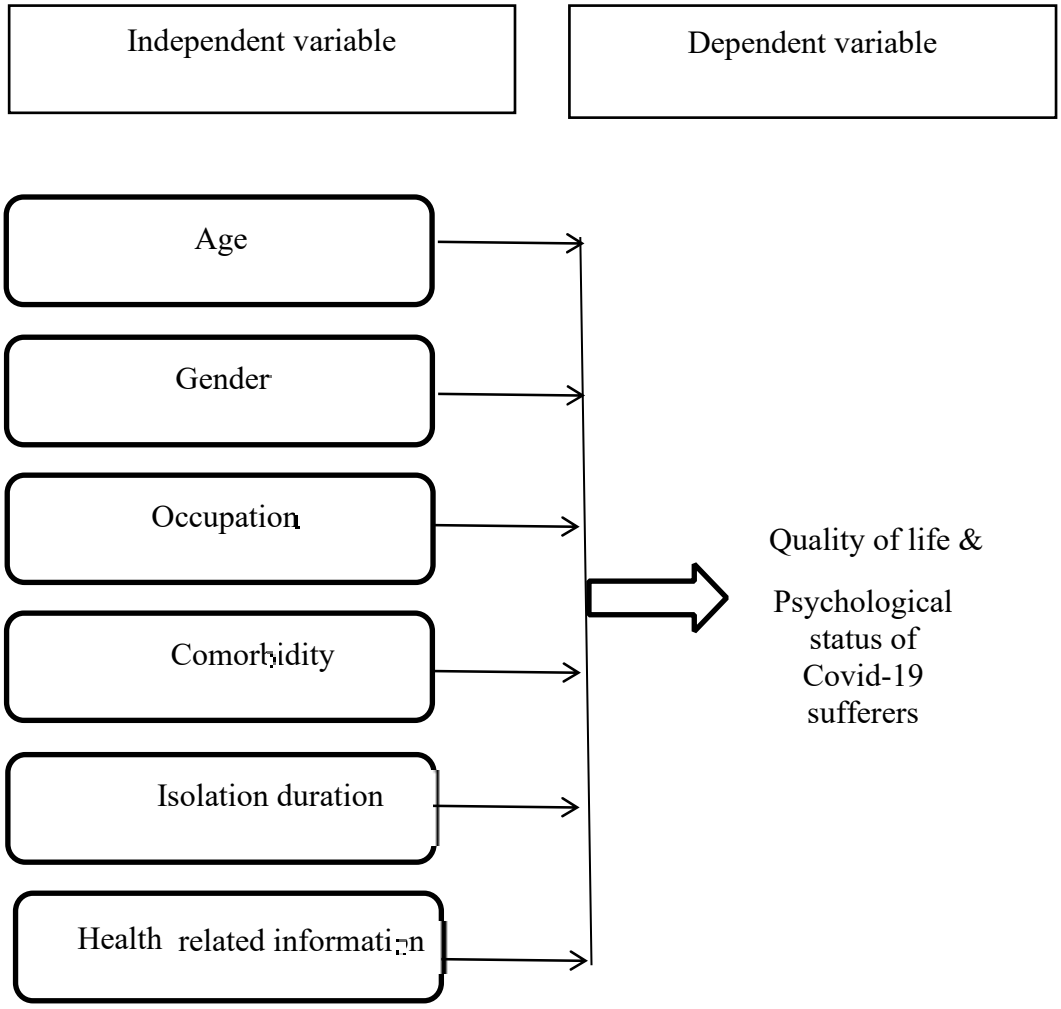
In the case of the SARS outbreak in 2003 and the Ebola outbreak in 2014, not only did the prevalence of psychological disorders such as worry, fear, and stress rise during the epidemic period, but psychological difficulties significantly slowed infected patients' recovery. Long-term follow-up found a considerable rise in the frequency of mental illnesses such post-traumatic stress disorder and depression, particularly among health-care workers (HCW) and infection survivors. Fear of disease and death, social isolation, and a reduction in income all contribute to the high prevalence of mental and psychological issues during epidemic outbreaks. As a result, during the pandemic, focused intervention based on the incidence of mental and psychological issues has significant societal consequences (Li et al., 2021).

During the COVID-19 epidemic in Bangladesh, prior research found that a significant section of the population was at high risk of psychological repercussions, and it was recommended that persons who were home-quarantined after lockdown measures to protect their physical health be monitored (Khan et al., 2020). There were no significant gender differences in the prevalence of moderate to severe depression, anxiety, or stress, which were 47.2 %, 46.0 %, and 32.5 %, respectively. Participants above the age of 30 had considerably greater rates of anxiety and stress than those between the ages of 18 and 30. Following up on COVID-19-related news on a daily basis, experiencing COVID-19 symptoms so far, having contact (direct or indirect) with a COVID-19-infected individual, and fear of infection were all linked to sadness, anxiety, and stress (Zubayer et al., 2020).

1.2 Conceptual Framework

The anticipation choosing this framework of this study is COVID 19 by which the patients are greatly sufferings from various problems and those problems limit their quality of life and also impact on psychological status.

The conceptual framework of this studies is given below



1.3. Justification

COVID-19 has become a global pandemic, affecting millions of individuals worldwide, with more than 24 crore peoples (as of October 28, 2021) verified, and more than 4 million people already dead. Fortunately, the survivor rate outnumbers the mortality rate. More than 15 million individuals have been verified as covid-19 patients in Bangladesh (28 October-2021) and more than 27 thousand people have died (28 October-2021). According to the WHO, 30-40 % of COVID-19 patients experience symptoms for months following infection, and decline quality of life and impact on psychological status. These types of Patients suffer various types of common complications, there are a few numbers of quality of life and psychological related research that have already been published in various international journals that shows impact on quality of life and psychological status of the survival patients but this type of study does not show Bangladeshi People's quality of life and psychological status data. The nutritional state, physical immunity, eating habits, personal hygiene, and surroundings of different ethnicities and races of human beings are all distinct. People from Europe and Africa are not the same as Bangladeshis. As a result, the current study is vital to explore the quality of life and psychological status. This research hopes that this study develops a systematic means of assessing quality of life and psychological status and then to the information gathered would then be used to develop knowledge. Study provides a lot of useful information about COVID patient and to help identify common problem after COVID patients and it is hoped that this work will greatly assist relevant professionals who are involved in the field of health, disability, education in Bangladesh and establish knowledge about both quality of life and psychological status of COVID patients for further inquiry or research. No study was found regarding this issue in Bangladesh.

1.4 Research question

What is the quality of life and psychological status of the people with COVID 19?

1.5. Operational definition

COVID-19: Coronavirus disease, also known as COVID-19, is a viral infection caused by the SARS-CoV-2 virus. Most people who contract COVID-19 will have mild to moderate symptoms and will recover without further treatment. Some, though, will become very ill and require medical attention.

Quality of life: Quality of life is defined by the World Health Organization (WHO), an individual's perspective of their place in life in relation to their objectives, expectations, standards, and concerns in the context of the culture and value systems in which they live.

Psychological status: A psychological status or mental property, often known as a state of mind, is a person's mental state. Perception, pain experience, belief, desire, intention, emotion, and memory are all examples of mental states.

EQ-5D-5L: The EuroQol Group launched the 5-level EQ-5D version (EQ-5D-5L) in 2009 to increase the instrument's sensitivity and eliminate ceiling effects when compared to the EQ-5D-3L. The EQ-5D-5L is made up of two pages: the descriptive system EQ-5D and the visual analogue scale EQ (EQ VAS). Mobility, self-care, typical activities, pain/discomfort, and anxiety/depression are the five aspects of the descriptive system.

IES-R: The IES-R (Impact of event scale- revised) is a self-report questionnaire with 22 items that examines subjective suffering produced by traumatic situations. Items are scored on a 5-point scale, with 0 being "not at all" and 4 being "very much" ("extremely"). The IES-R generates a total score (from 0 to 88), as well as subscale scores for the Intrusion, Avoidance, and Hyperarousal subscales

1.6. Study Objectives

General Objective

To assess the impact on quality of life and psychological status of the people with COVID 19.

Specific objectives

- To find out the sociodemographic factors of the study population.
- To find out the health & Covid related characteristics of the participants.
- To assess the quality of life of the people with COVID 19.
- To determine the psychological status of the participants.
- To find out the association between age and quality of life and isolation duration and psychological status.

CHAPTER III LITERATURE REVIEW

The Huanan Seafood Wholesale Market in Wuhan, Hubei, China, had an epidemic of a strange pneumonia characterized by fever, dry cough, lethargy, and sometimes gastrointestinal symptoms with at least 59 persons were reported in late December 2019. The first laboratory-confirmed case of 2019-nCoV infection began on December 1, 2019. The first epidemic was detected in the market in December 2019, affecting around 66% of the employees (Huang et al., 2020).

Twenty-seven patients had previously been exposed to the Huanan Seafood Market. However, the initial patient on December 1 did not reveal a history of Huanan Seafood Market exposure, and the subsequent cases began nine days later on December 10. In the days that followed, a wave of illnesses swept through Wuhan and Hubei province. As a result, the virus infected several cities and provinces. One of the explanations might be the high volume of traffic during the Chinese Lunar New Year (on January 25). On January 13, 2020, the first shipment was shipped to Thailand. The illness, on the other hand, spread quickly and internationally. There have been epidemics on ocean liners as well as familial clusters (WHO, 2020).

The cell receptor for SARS-CoV and several SARS-like bat coronaviruses was recognized to be angiotensin-converting enzyme II (ACE2). The SARS-CoV-2 virus's receptor-binding domain was discovered to be sufficiently comparable to that of SARS-CoV, indicating that it may effectively employ the human ACE2 receptor for entrance into human cells. Infectivity tests were performed on HeLa cells from humans, bats, civets, pigs, and mice that expressed or did not express ACE2, and the results verified that the SARS-CoV-2 virus could use entrance receptors on all ACE2-expressing cells except mice (Lu et al. 2020). According to molecular modeling, SARS-binding CoV-2's affinity for ACE-2 may be even higher than that of SARS-CoV, making it more effective at infecting human cells. The sequencing studies clearly show that the virus's reservoir host was a bat, most likely a Chinese or Intermediate horseshoe bat, and that an intermediate host, like SARS-CoV, was the genesis of the outbreak (Chen et al., 2020). The viral functions were typical of the beta-coronavirus 2B lineage of the coronavirus, according to whole genome sequencing and bioinformatics analysis. Furthermore, the genome of the radical virus was shown to be 96 % identical to that of

the bat. Rhinolophus affine from Yunnan province was found to have a bat coronavirus. The Chinese government notified the World Health Organization (WHO) about the incidents on December 31 (Chams et al., 2020).

The incubation time, often known as the time between infection and illness manifestation, is a critical metric for determining the transmission of infectious disease and determining quarantine measures. The mean incubation period, for example, is frequently used to compute the reproduction number, whereas the maximum incubation period is frequently used to establish the length of quarantine (Xie et al., 2020). Researcher found evidence on the COVID-19 incubation period to better understand disease transmission and develop prevention strategies The average incubation period is 6.0 days worldwide; however, it is longer (6.5 days) in China's mainland than in other areas (4.6 days). Furthermore, 10% of cases in the Chinese population had an incubation time of more than 14 days, suggesting that the 14-day quarantine may not be sufficient (Cheng et al., 2021).

Fever, cough, dyspnea, and myalgia were the most common clinical symptoms. Headache, diarrhea, nausea, and vomiting were among the less prevalent symptoms (Habibzadeh & Stoneman, 2020). COVID-19 has also been linked to hypercoagulable disease, which increases the risk of venous thrombosis. There is also information on neurological symptoms such as weariness, dizziness, and altered consciousness, as well as ischemic and hemorrhagic strokes and muscular pain. Skin and ocular manifestations are common extra pulmonary symptoms. Twenty percent of patients exhibit cutaneous symptoms, according to Italian experts (Mohamadian et al., 2021).

According to the World Health Organization (WHO), both epidemiological and clinical criteria have been satisfied in suspected cases to far. Acute onset of fever and cough are among the clinical requirements. Fever, cough, asthenia (fatigue), cephalgia (headache), myalgia (muscle pain), odynophagia (throat infection), coryza (nasal congestion or nasal discharge), dyspnea (difficulty breathing), anorexia (lack of appetite)/nausea/vomiting, diarrhea, or mental abnormalities are examples of acute onset signs and symptoms. Any patient with severe acute respiratory infection (SARI: acute respiratory infection with history of fever or measured temperature 38 °C; cough; started in the past 10 days; and needing hospitalization) should be treated as a suspicious case very away (WHO, 2020).

These signs and symptoms are typically mild, and some persons who are diagnosed are asymptomatic (Rothe, 2020). According to the World Health Organization (World Health Organization, 2020), about 80% of infected people easily recover from COVID-19, without the need of any specific treatment. However, about 1 out of 6 cases of infection courses with severe pneumonia (Bermejo-Martinet et al., 2020).

In the United Kingdom, a study was conducted in patients hospitalized for COVID-19, both those who required a stay in the intensive care unit (ICU) and those who were admitted to the ward, finding asthenia (72 % in the ICU group and 60 % in the ward group), dyspnea (65 % in the ICU group and % in the ward group), and psychological changes in both groups (Konstantinidis et al. 2020). Carfi et al. (2020) from Italy worked on their research on the persistence of symptoms in COVID-19 recovered patients. Findings revealed that 87.4 % had at least one symptom continue, while 55% had three or more symptoms. The primary symptoms of asthenia and dyspnea are highlighted.

Available evidence from a body of research on the risk factors for COVID-19 mortality and hospitalization shows that male sex, hypertension, diabetes, cardiovascular disease (CVD), kidney disease, cancer, and dementia are all risk factors for COVID-19 death, hospitalization and persistence the symptom (Noor & Islam, 2020). During COVID-19, the immune system plays a key role, and immunological dysfunction is linked to disease severity. COVID-19 patients with severe lymphopenia and an overactive innate immune response that results in hyperinflammation are linked. Many COVID-19-related comorbidities have an influence on immune system function, which has a direct impact on COVID-19 responsiveness (Chen et al., 2020). Several pre-existing comorbidities were linked to hospitalization, ICU admission, and mortality in COVID-19 and SARS-CoV-2-positive patients (Treskova-Schwarzbach et al., 2021). Around 20% of cases result in clinically significant and complicated diseases. COVID19 manifested as a severe infectious illness that afflicted people of all ages and genders, particularly the elderly with comorbidities (Rodriguez-Morales et al., 2020). Adults over 60 years of age with co-morbid diseases are the most susceptible group, with occasional infrequent incidences of serious illness in younger people (Anwar, Nasrullah & Hosen, 2020).

The early stages of the infection can be asymptomatic or cause upper and lower respiratory tract infection symptoms, including general symptoms, and are commonly coupled with taste and smell problems or gastro-intestinal symptoms. Some individuals may experience a clinical deterioration 7 to 10 days after the beginning of symptoms, with pneumonia symptoms that may be connected with thromboembolic consequences. Finally, a subsequent step in the acute development of SARS-CoV-2 has been recognized as acute respiratory distress syndrome (Gautret et al., 2020). It has been suggested that post-acute COVID (from 4 to 12 weeks following beginning of symptoms) and long COVID be distinguished (more than 12 weeks post onset) (Nalbandian et al., 2021). Post-COVID-19 syndrome is defined by the persistence of symptoms for at least 12 weeks following commencement, according to the British National Institute for Health and Care Excellence (NICE) (NICE, 2020).

The long-term persistence of COVID-19 has been characterized by the persistence of one or more initial symptoms for at least four weeks following start, when none of these symptoms can be explained by another source. According to the WHO, a post COVID-19 patient is defined as someone who has had a history of suspected or proven SARS-CoV-2 infection and has had symptoms for at least two months without any other explanation (WHO, 2021).

Although research on post-COVID symptoms is still in its early stages, "long-haulers" report a variety of symptoms affecting various systems: neurocognitive post-COVID (brain fog, dizziness, loss of attention, confusion), autonomic post-COVID (chest pain, tachycardia, palpitations), gastrointestinal post-COVID (diarrhea, abdominal pain, vomiting), respiratory post-COVID (general fatigue, dyspnea, cough, throat pain). Post-COVID symptoms include musculoskeletal (myalgias, arthralgias), psychological (post-traumatic stress disorder, anxiety, depression, sleeplessness), and other forms (ageusia, anosmia, parosmia, skin rashes). In fact, the majority of published research on post-COVID symptoms to date have revealed that 50–70% of hospitalized patients had several post-COVID symptoms up to 3 months following release. Non-hospitalized COVID-19 patients had a 50–75 % symptom-free rate one month following symptom start, according to data (Tenforde et al., 2020).

Clinical feature including fever, fatigue, dry cough, dyspnea, myalgia, breathlessness, screening laboratory by white cell count, CRP and ESR, CPK and LDH, ALT/AST, prothrombine time, Creatinine, D-dimer. Radiological test of chest X-ray- Bilateral infiltration, sub segmental consolidation. Molecular examination including real time PCR, next-generation sequencing, quantitative RT-PCR, nRT-PCR, RT-iiPCR Immunoassay immunofluorescence assay, direct fluorescenct antibody Semiconductor Quantum dots, Nuecleocapsid protein detection assay, protein chip.

Bangladesh, like practically every other nation in Southeast Asia, has adopted aggressive non-therapeutic measures to restrict the spread of nCoV-2; nonetheless, there is ongoing dispute about whether the measures have been adopted appropriately and implemented efficiently. On March 7, the country reported the first COVID-19 case on its soil, however several specialists thought that nCoV-2 may have infiltrated the country earlier but went undetected owing to insufficient surveillance. COVID-19 had been detected in 803 instances in the nation as of April 13, with 39 deaths. Bangladesh acknowledged to reducing foreign flights, imposing thermal scanner checks, and closing schools in reaction to the outbreak of the virus; nonetheless, workplaces kept their usual schedules for two weeks (Anwar, Nasrullah & Hosen, 2020).

On March 15, the nation barred all flights from Europe save those from the United Kingdom; nevertheless, planes from Europe were still permitted to land at an airport. As a consequence, more than 631 thousand migrants entered the nation in just 55 days, starting on January 21. Although the Institute of Epidemiology, Disease Control and Research (IEDCR) claimed to have tested every person who entered the nation, the testing facilities at the ports of entry have been heavily criticized. Beginning March 16, all passengers entering the country were subjected to a 14-day mandatory quarantine. (Dhaka Tribune. Coronavirus: Overseas Returnees Roaming Around Violating Govt Directive, Hundreds Fined, 2020).

Quality of life is defined by the World Health Organization (WHO), an individual's perspective of their place in life in relation to their objectives, expectations, standards, and concerns in the context of the culture and value systems in which they live (WHO, 1996).

COVID-19 is a physical condition. As a result, the public's focus has shifted to the number of infected cases and deaths, as well as the disease's physical health problems.

While it is critical to concentrate on COVID-19's physical repercussions, other dimensions of well-being under COVID-19 are also significant. There are four domains of health, according to medical and allied experts, encompassing physical, psychological, social, and spiritual domains. The psychological effects of COVID-19, such as depression and post-traumatic stress disorder, in addition to the physical ones. Most significantly, it's critical to comprehend how various psychological resources, such as the adversity quotient (AQ), emotional quotient (EQ), and coping resources, interact (Shek, 2021).

The fact that Covid-19 produces a wide range of symptoms is widely known. It can cause long-term disease and symptoms in persons of all ages, including the elderly and those with underlying medical disorders, as well as young adults and those with no or few chronic medical illnesses. Interstitial pneumonia and respiratory distress syndrome are caused by the coronavirus, which can lead to multiple organ failure. The virus can harm the heart (heart muscle damage, heart failure), the lungs (lung tissue damage and restrictive lung failure), the brain and nervous system (anosmia, thrombo-embolic events such as stroke, cognitive impairment), mental health (anxiety, depression, sleep disturbance), and musculoskeletal problems and fatigue. Hypoxia, shortness of breath, and decreased capacity to function may persist in patients who recover. According to recent findings, certain people may have medical issues, and 11 % to 24% of Covid-19 patients may experience long-term symptoms even three months after their disease began. Because of the aforementioned factors, Covid-19 may have a negative impact on the patients' health-related quality of life in the short and long term (Poudel et al., 2021).

COVID-19 has been linked to considerable physical and psychological damage, as well as a reduction in health-related quality of life (HRQoL). According to studies, people's quality of life was affected in all categories throughout the COVID period. The majority of these studies, however, were done to examine the pandemic's impact on the general public. There is an obvious gap in the literature where the quality of life (QoL) of COVID-19 patients is investigated, particularly in Bangladesh.

Female sex, old age, the presence of co-morbidities, ICU admission, prolonged ICU stay, and mechanical ventilation are the most prevalent characteristics linked with a low level of QOL. The majority of research examining sex differences in QOL have

concluded that QOL is much lower among females than males, and that the COVID 19 pandemic has disproportionately damaged women's mental health, even if they have not experienced COVID-19 (Moore, Wierenga, Prince, Gillani & Mintz, 2021).

The COVID-19 epidemic has caused widespread fear among the populace, including both infected and susceptible individuals. In most nations, including Bangladesh, health officials focus primarily on reducing the number of new cases and fatalities, but psychological discomfort and its ramifications are frequently disregarded. Psychological discomfort is caused by more than only the fear of contracting COVID-19; a number of other causes are also important. To decrease the number of new cases, most nations use social separation as their primary method. Loneliness, disruption of routine activities, restriction of freedom of travel, loss of work and money, and a lack of medical resources to address disorders other than COVID-19 are all important aspects of social distance. Government interventions such as social separation have been shown to effectively restrict the prevalence and transmission of COVID-19 and cause mild psychological suffering in nations such as China, Singapore, South Korea, and Japan (Khan et al., 2021).

COVID-19 typically affects the lungs, and the majority of hospitalized patients have respiratory symptoms as well as a fever. Acute functional decline, disorientation, and asthenia are also prevalent symptoms in the elderly. COVID-19 produces hypoxemia, and prolonged oxygen therapy is linked to longer hospital stays, as well as the risk of immobilization and acute sarcopenia. Immobilization during an acute illness might result in a loss of physical functions, which can affect everyday activities (ADL). Hospitalization causes functional deterioration in certain elderly adults. Few research has looked at the long-term effects of COVID-19. The impact of aging on functional decline in older adults who have survived acute or severe illness is mainly unclear. In older individuals, cognitive and physical function are two of the most significant criteria for quality of life and independence. Patients' perceptions of the impact of sickness and disability on different aspects of health are measured using quality of life. A few studies imply that the pandemic may affect overall quality of life, and that elderly persons are more likely than younger people to experience diminished quality of life during the pandemic (Walle-Hansen, 2021).

COVID-19 survivors describe a significant impact on their quality of life, with many feelings ill for more than 12 weeks. This implies a need for a comprehensive support system that is tailored to their specific requirements. Furthermore, the quality of life of spouses and family members is significantly harmed, emphasizing the significance of looking into the impact of sickness on family quality of life. The introduction of programs to give assistance to survivors' families and patients in general is thus a critical aspect in COVID-19's future treatment (Shah et al., 2021).

Pain/discomfort was linked to older age, a lack of education, clinical severity, depression, anxiety, and a poor quality of life. It's crucial to be aware of pain and suffering in the general populace during the COVID-19 pandemic. Anxiety/depression was the second most commonly reported condition, with a proportion that is similar to pain/discomfort. With age, chronic disease, lower income, pandemic impacts, and fear of getting COVID during the COVID-19 pandemic, the risk of pain/discomfort and anxiety/depression in the general population in China increased dramatically (Ping et al., 2020).

According to the World Health Organization, some persons who have had COVID-19, whether or not they required hospitalization, continue to have symptoms such as tiredness, respiratory, and neurological issues. Fatigue, breathlessness, cough, chest pain, palpitations, headache, joint pain, myalgia and weakness, insomnia, pins and needles, diarrhoea, rash or hair loss, impaired balance and gait, and neurocognitive issues such as memory and concentration problems are some of the long-term symptoms of coronavirus. In general, immobilization during acute illness can result in a loss of physical functions, affecting activities of daily living (ADL), and post-COVID-19 symptoms have an influence on quality of life. Furthermore, inflammation may continue even after the virus has been eradicated. Because symptoms from covid-19 might last for weeks or months, it may have a more detrimental influence on patients' quality of life. The impact of illnesses, disorders, or impairments on the physical, mental, and social aspects of patient health is assessed using quality of life as a metric (Kundnani & Parikh, 2021).

Limited evidence from prior pandemics suggests that females, adolescents, and those with lower education levels had poorer mental health. Mental health issues were exacerbated by pandemic-related resource loss, which included increased job, family,

and financial stress, as well as a lack of social support. Direct contact to the virus, such as working in healthcare, being sick, or having sick relatives, all resulted in increased symptomatology. Exposure to SARs and Ebola, whether as a social determinant or not, helps to understand how pandemics can cause heightened and long-lasting mental health symptoms. Early research from the COVID-19 pandemic reveals mental health difficulties that are comparable to those seen in previous pandemics. Younger folks have more trouble with mental health concerns than older adults. Another study indicated that those above the age of 85 had worsening mental health. Female participants in the research also reported more symptomatology. Financial hardship, a lack of social connections, and COVID-19 exposure all contribute to mental health issues, as they have in previous pandemics. COVID-19 has been linked to an increase in mental health disorders in studies (Hansel, Saltzman, Melton, Clark & Bordnick, 2022).

COVID-19 is a vital and difficult time in the lives of patients. Patients are experiencing significant stress in addition to physical problems during this crisis, since acute viral outbreaks have poor mental health consequences in addition to potentially harmful medical consequences, as seen in prior infectious epidemics such as SARS and MERS. COVID-19 patients have a limited psychological tolerance capacity, and they are very vulnerable to psychological illnesses due to the disease's current global condition (Park et al. 2020). Psychological difficulties and emotional numbness were experienced by patients who did not know when the crisis would end and were compelled to remain in seclusion. Anxiety can lead to depression in these conditions, which is a regular occurrence due to the person's extreme lack of social contact. Patients who are isolated lose the psychological support of their family and friends, which exacerbates stress and psychological trauma. Furthermore, when work and leisure activities are canceled, the sense of being trapped at home, as well as the extreme boredom that comes with it, can aggravate individuals and family members, increasing the risk of violence (Moradiet et al., 2020).

Hospitalization-related illnesses are known to have a detrimental influence on psychological well-being and quality of life following release. Due of the unique circumstances within and outside the hospital during the pandemic surge, the impact of hospitalization on psychological well-being and health-related quality of life during the Severe Acute Respiratory Syndrome Corona Virus 2 (SARS-CoV-2) pandemic is likely

to be higher. The uncertainties and measures surrounding the pandemic raised concerns of increased psychological distress in non-hospitalized citizens. Since measures taken in hospital were more drastic, concerns of the mental well-being of hospitalized patients were even higher. Data from the previous SARS and MERS epidemics support this concern and early studies suggest that up to 50% of COVID-19 patients suffer from psychological distress up to two months after hospital discharge (Cai, Hu & Ekumi, 2020).

Post-traumatic stress disorder, anxiety, depression, physical weakness, cognitive impairment, and other significant consequences are common among patients who survive hospitalization and isolation. Furthermore, a large proportion of patients acquired a condition known as 'long-covid,' which has a substantial impact on both physical and mental elements of life and well-being. The negative consequences of hospitalization and seclusion may have a significant influence on the quality of life of survivors. However, it is presently unknown which negative outcomes have the greatest influence on self-perceived health-related quality of life (Soliman et al., 2022).

Psychological stress can remain during treatment and recovery, according to research on Ebola patients. Anxiety, despair, and physical discomfort can all lead to long-term mental health issues. These acute psychological issues would eventually progress to persistent mental diseases, including PTSD. Psychiatric morbidity may have been caused by a number of circumstances. Patients were infected with a highly contagious new virus that posed a serious threat to their physical well-being. Because COVID-19 was an unusual virus, the nature of this sickness was completely unforeseeable in comparison to past tragedies. Fears of infecting their family and friends may have a negative impact on their mental health. Finally, increasing quarantining was revealed to be a strong predictor of depression symptoms that persisted. Patients receiving isolation therapy would be unable to communicate with their family members and other social supports for a longer amount of time (Wang, Hu, Zhao, Feng, Wang, Cai & Yang, 2021).

Depression, anxiety, and psychotic symptoms were among the mental problems recorded during the outbreak. During the pandemic, the public's total prevalence of sleep disorders and depressed symptoms was 18.2% and 20.1%, respectively. Depression (50.4 %), anxiety (44.6 %), and sleeplessness (34.0 %) were all reported by

a significant number of health-care employees. COVID-19 has caused a range of psychological difficulties, particularly in confirmed patients, because to its quick onset, high mortality, lack of effective therapies, and large-scale isolation measures. During their time in the hospital, many patients faced both physical and psychological stress (Lai, Ma & Wang, 2020).

Quality of life and general well-being are valuable resources that can safeguard mental health. Those recuperating from flu epidemics reported a worse quality of life in research. The connectivity of quality of life and mental health concerns for recovery has been demonstrated in recent COVID-19 research. Individuals with a history of mental illness had a worse health-related quality of life and reported more COVID-19-related disruptions, according to Liu and colleagues. An early study revealed a rise in positive well-being after COVID-19, however this might be due to the researchers focusing on previous views rather than future ones. Other research has found significant drops in subjective well-being and life quality. According to studies, well-being is determined more by socio-environmental and societal characteristics such as GDP, healthcare access, and pandemic communication and reaction than by individuals. Quality of life and well-being are vital to promote and are a major priority for both people and the general recovery of a community (Ping et al., 2020).

Among in a study, in the spectrum of post COVID-19 persistent symptoms, cognitive impairments, notably memory and focus deficits, have been observed. The constraints imposed by attempts to contain the COVID-19 epidemic may have created an additional obstacle to social functioning. It's worth noting that two-thirds of the patients were under 65 years old, implying that their delayed return to work may have resulted in large financial losses for the patients, their families, and their employers. It was more challenging for persons with a larger load of co-morbidities and who had more obvious physical weakness during their hospital stay to resume their normal activities (Saverino et al., 2021).

372 people took part in the study, with 57.5 % of them being men and an average age of 44.5 ± 15.3 years. Diabetes (19.4 %), hypertension (12.4%), heart disease (2.4 percent), renal disease (0.8 percent), and other comorbidities were reported by almost 40% of patients. The average EQ-5D utility score was 0.925, and the average EQ-VAS was 90.68± 11.81. Overall, men's utility values were greater (0.938± 0.130) than

women's (0.907 ±0.170). Individuals with comorbidities who needed more time in the hospital had lower utility scores than their peers (Barani et al., 2022).

In a systematic review of meta-analysis between January 28 and April 15, 2020, 53 studies looked at the prevalence of anxiety symptoms, and the prevalence was determined to be 29.6% (95%ci: 19.7–39.5 %). During three eras of pandemic, there were 7, 24, and 22 studies that looked at the incidence of anxiety symptoms. The prevalence was 26.2 % (95 percent confidence interval: 19.3–33.1 %) in the first period, 32.5 % (95%CI: 25.7–39.3 %) in the second period, and 27.4 percent (95 % confidence interval: 14.6–40.3 %) in the third period of pandemic.

The population of this study consisted of 5792 people. The males with institutional quarantine (n = 1392, 75.7 percent) experienced the greatest post-traumatic stress disorder (PTSD) symptoms. Females with an income of more than 75000 takas in Bangladeshi currency had the highest depressive symptoms (n = 920, 72.8 percent). 81.8 percent of those surveyed experienced PTSD, with an IES-R score of 24. After correcting all personal characteristics, respondents with an income of 40000–74999 takas in Bangladesh currency had greater PTSD symptoms and the odds ratio 19.3 (95 percent CI: 12.5–27.3), adjusted odds ratio 22.9 (95 percent CI: 15.6–32.4). On the CES-D scale, 85.9% of respondents scored 16 or above, indicating that they felt depressed. After correcting for all personal characteristics, the respondents whose education level was grade 10 had an odds ratio of 3.8 (95 % CI: 3.1–4.65) and an adjusted odds ratio of 13.19 (95 % CI: 9.88–17.62) (Ripon et al., 2020).

In a study in Cina, approximately 18.3 % of the 922 individuals experienced mental health issues. Medical workers had a significantly higher SCL-90 score (mean = 1.49) than the general population (mean = 1.36). Furthermore, people who entered in March were less likely than those who enrolled in February to have psychological health issues (odds ratio = 0.42, 95 percent confidence range [CI] = 0.30 to 0.59). Females had a 1.44-fold higher incidence of mental health issues than males (95%CI = 1.01 to 2.03) (Zhu et al., 2020)

The EuroQol Group launched the 5-level EQ-5D version (EQ-5D-5L) in 2009 to increase the instrument's sensitivity and eliminate ceiling effects when compared to the EQ-5D-3L. The EQ-5D-5L is made up of two pages: the descriptive system EQ-5D and the visual analogue scale EQ (EQ VAS). Mobility, self-care, typical activities,

pain/discomfort, and anxiety/depression are the five aspects of the descriptive system. Each dimension has five levels: no issues, minor issues, moderate issues, severe issues, and extreme issues. The patient is asked to tick the box next to the most relevant statement in each of the five dimensions to reflect his or her health status. This option yields a one-digit number that represents the dimension level chosen. The five dimensions' numbers can be merged to form a five-digit number that indicates the patient's health status (Euroqol, 2021).

The IES-R is a self-report questionnaire with 22 items that examines subjective suffering produced by traumatic situations. It is an updated version of the previous 15-item IES (Horowitz, Wilner & Alvarez, 1979). The IES-R includes seven new items relating to PTSD's hyperarousal symptoms that were not present in the original IES. Respondents are asked to name a stressful life event and then rate how affected or irritated they were by each "difficulty" listed in the previous seven days. Items are scored on a 5-point scale, with 0 being "not at all" and 4 being "very much" ("extremely"). The IES-R generates a total score (from 0 to 88), as well as subscale scores for the Intrusion, Avoidance, and Hyperarousal subscales. The highest point total was 88. In the IES-R scale, score ≥20 was posttraumatic stress disorder (PTSD) and diagnostic psychiatric interviews (National centre for PTSD, 2018). Three subscale scores were also calculated measuring intrusion (8 items), avoidance (8 items), and hyperarousal (6 items). Intrusion subscale: 1, 2, 3, 6, 9, 14, 16, 20, avoidance subscale: 5, 7, 8, 11, 12, 13, 17, 22 and hyper arousal subscale: 4, 10, 15, 18, 19, 21 (Park et al., 2020).

CHAPTER-IV METHODOLOGY

3.1. Study design

It was a quantitative type of research study and the study design was cross sectional. According to Hicks (1999) quantitative research is used because the data is collected from a number of participants. A cross-sectional study can be thought of as providing a snapshot of the frequency & characteristics of a (symptoms, functional limitation) disease in a population at a particular point in time. A cross-sectional study design was used for a large number of participants to collect data.

3.2 Target Population

The people with COVID 19 who are COVID positive.

3.3 Study Site & Area

The study area was Popular Diagnostic Centre, Savar, Dhaka. At first researcher was obtained information and list of patients from the Popular Diagnostic Centre at Savar, Dhaka, about how many people were tested by RT-PCR and antigen test and positive Covid 19 in the Centre. According to their ideas and suggestions, researcher collect data from those areas.

3.4 Study Period

The study will conduct from March 2021 to February 2022. However, the study will start after the acceptance of protocol from the institution.

3.5 Study Duration

Study period was from 1st August 2021 to March 2022.

3.6 Sample Size

The sample size has been calculated as the estimation of sampling scientifically and will be selected as the standard number of the sample as a calculation guide. It is also checked with EPI info software by CDC.

Mathematical Tools:

N = number of sample

p = sample proportion /percentage of incidence & prevalence =1.5

P is calculated according to total literature (Hossain et al., 2021) and population of Bangladesh 166231089

q =1-p

z =1.96 (constant)

e=margin of error 5%=0.05

The equation of sample size calculation is given below-

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

$$= \frac{(1.96)^2 \times 0.5 \times (1-0.5)}{(0.05)^2}$$

$$= \frac{3.8416 \times 0.5 \times 0.5}{0.0025}$$

$$= \frac{0.9406}{0.0025}$$

$$= 384$$

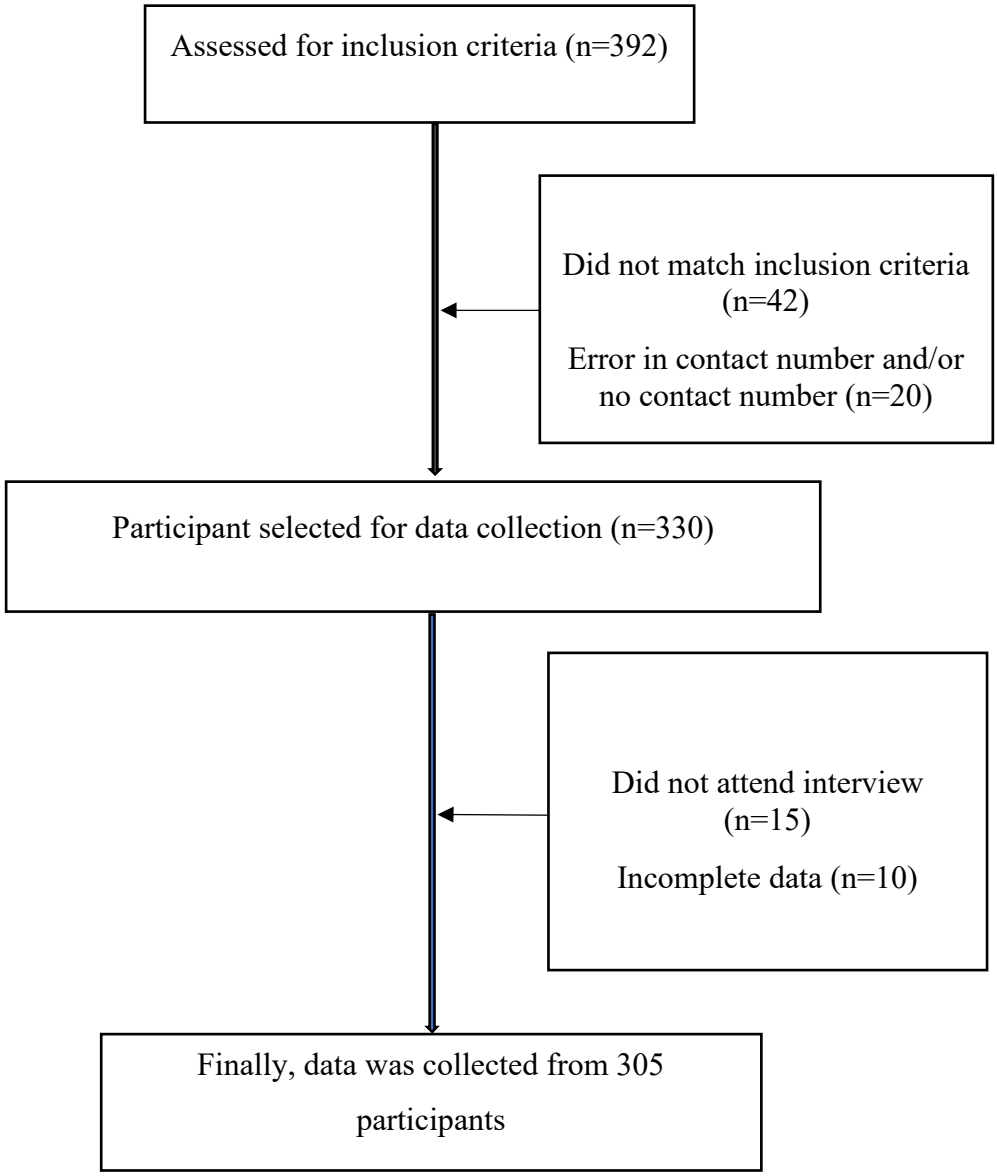
3.7. Inclusion Criteria

- People with COVID-19 (i.e., diagnosed with COVID-19 and/or discharged from the hospital) (Habibzadeh & Stoneman, 2020).
- 18 years and above.
- Both male and female are included (Khan et al., 2020).
- No medical diagnosis of mental illness.

3.8. Exclusion Criteria

- Patients who are not willing to communicate or participate.
- Significant physical and mental illness.
- Refusal to give consent

3.9. Flow chart of sample selection



3.10. Outcome Measurement tools

1. A semi-structured questioner

   Including

   a. Socio-demographic information
   b. Health and Covid related information
   c. Data will be collected through interview using a structured questionnaire by EQ-5D-5L and IES-R.

3.11.Procedure of data collection

At very beginning researcher clarified that the participant had the right to refuse the answer of any question during completing questionnaire. They can withdraw from the study at any time. Researcher also clarified to all participants about the aim of the study. Participants were ensured that any personal information would not be published anywhere. Researcher took permission from each volunteer participant by using a written consent form. After getting consent from the participants for participation in research, data collection for the study and audio records the calls, standard questionnaire was used to identify the complaint and collect demographic information. Questions were asked according to the Bengali format.

For conducting the interview, the researcher conducted an interview over mobile phone and asked questions. Physical environment was considered strictly. Stimuli that can distract interviewee were removed to ensure adequate attention of interview. Interviewee was asked questions alone as much as possible with consent as sometimes close relatives can guide answer for them. The researcher-built rapport and clarified questions during the interview. Face to face interviews were the most effective way to get full cooperation of the participant in a survey (Fraenkel & Wallen, 2000). Due to pandemic situation because of highly contaminated disease, it was collected data by mobile phone.

3.12.Data analysis

After completing the initial data collection every questionnaire had been checked again to find out any mistake or unclear information. The data analysis was performed in SPSS version 22. The variables were labeled in a list in order. The researcher put the name of the variables on the variable view of SPSS and defined the types, values, decimal, label alignment, and measurement level of data. Then the inputted data was checked to ensure that all data has been transferred from the questionnaire. The raw data is then ready to be analyzed in SPSS. Data were analyzed by descriptive statistics and calculated as percentages and presented by using tables. Microsoft Office Excel 2013 was used to decorate data. By this study, a lot of information had been collected.

3.13. Statistical test

The variables were determined as nominal, ordinal, interval and ratio data and considered their parametric or non-parametric properties based on data type. Normality test and standard procedure (Hicks, 2009).

Table- 1: Data category and normality test of data

Variable	Description	Data type	Normality test	Data distribution
Age overall	18-76 year	Ratio	P= (.000)	Parametric
Age category	25≥ years 26-49 years 50≤years	Ordinal	-	Non-parametric
Sex	Male, female	Nominal	-	Non-parametric
Residential area	Rural, semi urban, urban	Nominal	-	Non-parametric
Marital status	Unmarried, married, divorce widow	Nominal	-	Non-parametric
Education	Illiterate, Primary education, Secondary education, SSC, HSC, Bachelor degree, Master's degree.	Ordinal	-	Non-parametric
Monthly expenditure (Thousand)	0-100,000	ratio	P= (.001)	Parametric
Monthly expenditure	25,000 ≥ Tk 26,000-49,000 Tk 50,000 ≤ Tk	Ordinal	-	Non-parametric
Occupation	Job Business Student Housewife Farmer Others	Nominal	-	Non-parametric
Isolation duration	1-90	Ratio	P= (.000)	Non-parametric

Isolation duration	14> days 14-21 days 21< days	Ordinal	-	Non-parametric
Management after COVID 19	Medication, hospitalization and others	Nominal	-	Non-parametric
Preexisting comorbidity	Hypertension, diabetes, cardiovascular disease, kidney disease, lung disease, liver disease, obesity, hypothyroidism, cancer disease, others disease	Nominal	-	Non-parametric
Symptom after COVID recover	Fatigue, dyspnea, cough, headache, dizziness, anxiety, weakness, muscle pain, joint pain, disturbance of balance, any vital organ, diseases, others symptoms	Nominal	-	Non-parametric
Duration of symptom		Ratio	P= (.000)	Parametric
Duration of symptom	30>day, 30-60 days, 60<day	Ordinal	-	Non-parametric
Newly disease after recovery from Covid	Respiratory disease Cardiovascular disease Diabetes Kidney disease Liver disease Neurological disease Others disease	Nominal	-	Non-parametric
Management takes for problem	Medication according to doctor advice, hospitalization, others	Nominal	-	Non-parametric

Receive any physiotherapy			-	
Mobility	No problem, slight, moderate, severe and unable to walk	Ordinal	-	Non-parametric
Self-care	No problem, slight, moderate, severe and unable to washing and dressing,	Ordinal	-	Non-parametric
Usual activities	No problem, slight, moderate, severe and unable to do usual activity	Ordinal	-	Non-parametric
Pain/discomfort	No pain or discomfort, slight, moderate, severe, extreme pain or discomfort	Ordinal	-	Non-parametric
Anxiety/depression	No, slight, moderate, moderate, severe and extreme anxious or depressed	Ordinal	-	Non-parametric
IES-R	0-88	Ratio	P= (.000)	
	Normal 0-23 Mild 24-32 Moderate 33-36 Severe ≥37	Ordinal	-	Non-parametric

3.14 Determination of statistical test

The statistical has been performed as descriptive and inferential statistics based on parametric or non-parametric properties.

The descriptive statistics was performed as frequency and percentage in nominal or ordinal data. Mean and standard deviation has been calculated for interval or ratio data.

The inferential Statistics has been performed as follows:

Table.2 The Inferential Statistics has been performed as follows:

Purpose	Variables	Statistical test
Relationship	Two categorical data (non-parametric)	Chi square test
	Two parametric data	Spearman correlation test

3.15.Ethical consideration

The proposal was submitted to the Institutional Review Board (IRB) of the Bangladesh Health Profession Institute (BHPI) and after the defense, the research proposal approval was taken from the IRB (CRP/BHPI/ IRB/12/ 2021/ 539). Written consent was taken from each participant before collecting the data. The World Health Organization (WHO) guidelines were always followed to conduct the study.

3.16. Pilot Study:

Researcher done piloting for check the questionnaire tool for next data collection smoothness. It was more helpful for researcher for early identification problem and researcher done collection smoothly.

CHAPTER-IV RESULTS

The study aimed to determine the quality of life and psychological status of the people with COVID-19. The data was collected by data collector. Structured questions were used with both open-ended and close-ended questions in the questionnaire. The data were analyzed with the Microsoft Office Excel 2019 with SPSS 22 version software program. In this study researcher use bar, column, figure, pie chart to show the result of the study. Because it is easier to make sense of a set of data.

4.1. Socio-demographic Condition

4.1.1 Age of participants:

A total 305 participants completed the Observational study. This study's participants age Mean ± Std. deviation was, 34.84 ± 12.984. This study's majority age were 57.5 % (n=175) age range was twenty-six (26) to fifty-nine (49) years old, twenty-five to under twenty-five (25≥) years age was (n=90) and 13.1 % (n=40) participant age range were fifty to more than fifty years old (50≤years) in this total three hundred five participant age.

4.1.2 Gender

This survey was 65.7% (n=200) were male participants and 34.3% (n=105) were female.

4.1.3 Monthly expenditure

Among the participants monthly expenditure 25,000 ≥ Tk of 29.7% (n=91) participants, 26,000-49,000 Tk of 62.1% (n=190) participants and 50,000 ≤ Tk of 8.2% (n=25) participants and mean ± Std. deviation = 1.78 ± .578.

4.1.4 Living area

Participants from semi urban 49.7% (n=151), from rural 26.8% (n=82) and from urban 23.5% (n=72).

4.1.5 Marital status

Among 305 participants researcher found unmarried 35% (n=107), married 63.1% (n=193), divorce 0.3% (n=1) and widow were 1.5% (n=5).

4.1.6 Educational level of the participants

Among 305 participants illiterate 1.6% (n=5), primary education 3.6% (n=11), secondary education 5.6% (n=17), SSC 13.7% (n=42), HSC 40.5% (n=123), bachelor degree15.7% (n=48) persons, master's degree 15.4% (n=47) and others 3.9% persons (n=12).

4.1.7 Occupation of participants

The chart shows that the number of jobs 40.2% (n=123), business 13.1% (n=40), students 24.8% (n=76), house wife 15.7% (n=48), farmer 2.6% (n=8), and others 3.6% (n=11).

Table.3 Distribution of participants according to Socio- Demographic characteristics

Socio-demographic profile of participant		
Age of participant	**Frequency**	**Percent (%)**
25≥ years	90	29.4
26-49 years	175	57.5
50≤years	40	13.1
Mean ± Std. deviation, median	34.84±12.984, 30.00	
Monthly expenditure of the family		
25,000 ≥ Tk	91	29.7
26,000-49,000 Tk	189	62.1
50,000 ≤ Tk	25	8.2
Mean ± Std. deviation = 1.78 ± .578		
Sex of participant		
Male	200	65.7
Female	105	44.3
Living area of participant		
Urban	72	23.5
Semi Urban	151	49.7
Rural	82	26.8
Educational level of participant		
Illiterate	5	1.6

Primary education	11	3.6
Secondary education	17	5.6
SSC	42	13.7
HSC	123	40.5
Bachelor degree	48	15.7
Master's degree	47	15.4
Occupation of participant		
Job	122	40.2
Business	40	13.1
Student	76	24.8
Housewife	48	15.7
Farmer	8	2.6
Others	11	3.6

4.1.8 Isolation duration of participants

Among participants 65.7% (n=201) participants were in isolation 14> days, 24.2% (n=73) participants were in isolation 14-21 days, 9.2% (n=28) participants were in isolation 21< days and no duration of isolation1% (n=3) participants.

4.1.9 Management takes after COVID 19 positive

Among participants management had taken by medication 66% (n=201), hospitalization 20.9% (n=64) and others 12.1% (n=37).

4.1.10 Comorbidity:

Researcher found in this study participants with hypertension 14.4% (n=44), diabetes 13.1% (n=40), cardiovascular disease 4.2% (n=13), kidney disease 1.6% (n=5), lung disease 2.3% (n=7), obesity .7% (n=2) and hypothyroidism .3% (n=1).

Table.4 Isolation duration of participant

14> days	65.7% (n=201)
14-21 days	24.2% (n=74)
21< days	9.2% (n=28)
Not duration of isolation	1% (n=3)
Management takes after COVID 19 positive	
Medication	66% (n=201)
Hospitalization	20.9% (n=64)
Others	12.1% (n=37)

4.1.11 Participants suffering of symptoms after recovery from COVID-19

In this study 50% (n=153), were suffering by symptoms. Among them 19.3% (n=59) suffering by fatigue, dyspnea persons 9.8% (n=30), cough persons 12.7% (n=39), headache 6.2% (n=19), dizziness 2.6% (n=8), anxiety 5.6% (n=17), weakness 11.4% (n=35), muscle pain 11.4% (n=35), joint pain 6.9% (n=21), disturbance of balance 2.9% (n=9), any vital organ disease 1.3% (n=4), other symptom 1.3% (n=4).

Table.5 Participant Suffering of symptoms after recovery from COVID 19

Suffering of symptoms	**Frequency**
Any symptoms	**Yes:** 49.83% (n=152) **No:** 50.17% (n=153)
Fatigue	**Yes:** 19.3% (n=59) **No:** 80.7% (n=246)
Dyspnea	**Yes:** 9.8% (n=30) **No:** 90.2% (n=275)
Cough	**Yes:** 12.7% (n=39) **No:** 87.3% (n=266)
Headache	**Yes:** 6.2% (n=19) **No:** 93.8% (n=286)
Dizziness	**Yes:** 2.6% (n=8) **No:** 97.4% (n=297)
Anxiety	**Yes:** 5.6% (n=17) **No:** 94.4% (n=288)
Weakness	**Yes:** 11.4% (n=35) **No:** 88.6% (n=270)
Muscle pain	**Yes:** 11.4% (n=**35**) **No:** (88.6% (n=270)
Joint pain	**Yes:** 6.9% (n=21) **No:** 93.1% (n=284)
Disturbance of balance	**Yes:** 2.9% (n=9) **No:** 97.1% (n=296)
Any vital organ Diseases	**Yes:** 1.3% (n=4) **No:** 98.7% (n=301)
Others Symptoms	**Yes:** 1.3% (n=4) **No:** 98.7% (n=301)

4.1.12 Duration of suffer symptom

Among this study duration of symptom 44.26% (n=135) yes, no 55.74% (n=170). 101 participants had 30>D (33%), 16 participants had symptom 30-60 D (5.2%) and 17 participants had 60<D (5.6%).

Duration of suffer of symptoms

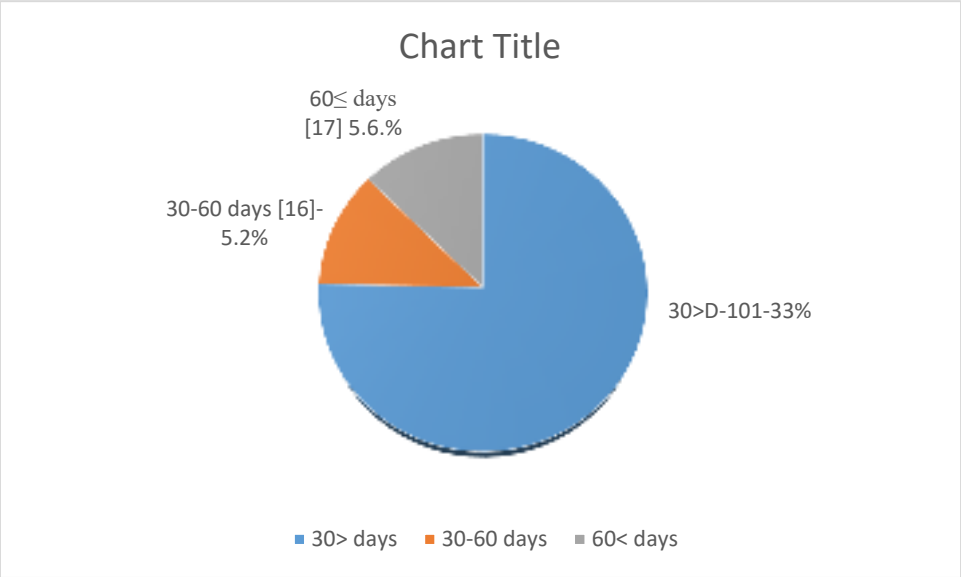


Figure.1 Duration of suffer of symptoms

4.1.13 Pre-existing comorbidity of participant

Among 305 participants pre-existing comorbidity had hound, hypertension 14.4 % (n=44), diabetes 13.1 % (n=40), cardiovascular disease 4.2 % (n=13), kidney disease 1.6 % (n=5), lung disease 2.3 % (n=7), obesity 0.7 % (n=2), hypothyroidism 0.3 % (n=1) and other disease 8.8 % (n=27).

Table.6. Pre-existing comorbidity of participant

Pre-existing comorbidity of participant	
Hypertension	**Yes:** 14.4 % (n=44) **No:** 85.6 % (n=261)
Diabetes	**Yes:** 13.1 % (n=40) **No:** 86.9 % (n=265)
Cardiovascular Disease	**Yes:** 4.2 % (n=13) **No:** 95.8 % (n=292)
Kidney Disease	**Yes:** 1.6 % (n=5) **No:** 98.4 % (n=300)
Lung Disease	**Yes: 7** 2.3 % (n=7) **No:** 97.7 % (n=298)
Liver Disease	**Yes:** 0.0 % (n=0) **No:** 100 % (n=305)
Obesity	**Yes:** 0.7 % (n=2) **No:** 99.3 % (n=303)
Hypothyroidism	**Yes:** 0.3 % (n=1) **No:** 99.7 % (n=304)
Cancer Disease	**Yes:** 0.0 % (n=0) **No:** 100 % (n=305)
Others Disease	**Yes:** 8.8 % (n=27) **No:** 91.2 % (n=278)

4.1.14 Newly diagnosed disease after recovery from COVID 19

Among the participant's respiratory disease in 10.8 % (n=33), cardiovascular disease in 1.6 % (n=5) diabetes in 2.0 % (n=6), kidney disease in 1.0 % (n=3), liver disease in 0.7 % (n=2), neurological disease in 4.2 % (n=13) and other disease 7.5 % (n=23).

Table.7. Newly diagnosed disease after recovery from COVID 19

Newly diagnosed disease after recovery from COVID 19	
Respiratory disease	**Yes:** 10.8 % (n=33) **No:** 89.2 % (n=272)
Cardiovascular disease	**Yes:** 1.6 % (n=5) **No:** 98.4 % (n=300)
Diabetes	**Yes:** 2 % (n=6) **No:** 98 % (n=299)
Kidney disease	**Yes:** 1 % (n=3) **No:** 99 % (n=302)
Liver disease	**Yes:** 0.7 % (n=2) **No:** 99.3 % (n=303)
Neurological disease	**Yes:** 4.2 % (n=13) **No:** 95.8 % (n=292)
Others disease	**Yes:** 7.5 % (n=23) **No:** 92.5 % (n=282)

4.1.15 Kind of management were taken for health problem:

Researcher found 71.9 % (n=220) had taken management for health problem, 28.9 % (n=85) didn't take any management. medication taken according to doctor advice 24.2 % (n=74), hospitalization 2 % (n=6) and others 2 % (n=6). 2.9 % (n=9) had taken any physiotherapy, participants received chest physiotherapy 0.3 % (n=1) and received other physiotherapy 2.6 % (n=8).

Table: 8. Kind of management had taken for health problem

		Frequency	Percent
Valid		220	71.9
	Medication according to doctor instruction	74	24.2
	Hospitalization	6	2.0
	Others	6	2.0
	Total	306	100.0

Intervention	Frequency	Percent
Received any physiotherapy	9	2.9
Received chest physiotherapy	1	.3
Received others physiotherapy	8	2.6

4.1.16 Today's mobility

This study focuses, 77.5 % (n=236) had no problem in walking and 22.5 % (n=69) had problem on walking. Slight problem in walking 19.9% (n=61), moderate problem in walking 2.3 % (n=7), severe problems in walking 0.3 % (n=1),

Table.9 Today's mobility

		Frequency	Percent
Valid	No problem in walking	236	77.5
	Slight problems in walking	61	19.9
	Moderate problems in walking	7	2.3
	Severe problems in walking	1	0.3
	Total	305	100

4.1.17 Today's self-care

In this study had found no problem in washing or dressing myself 78.4 % (n=240) and had problem in 21.6 % (n=66). Slight problems found in washing or dressing myself in 19.6 % (n=60), moderate problems washing or dressing myself 2 % (n=6).

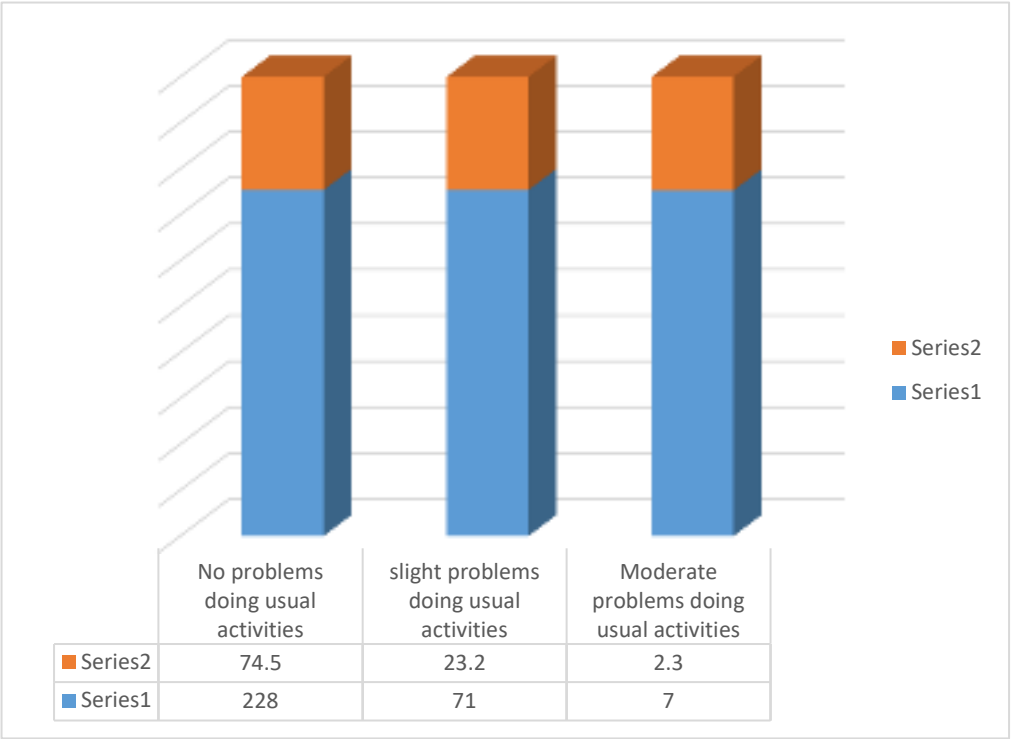
Table.10 Today's Self Care

		Frequency	Percent
Valid	No problems washing or dressing myself	239	78.4
	Slight problems washing or dressing myself	60	19.6
	Moderate problems washing or dressing myself	6	2.0
	Total	305	100

4.1.18 Today's usual activity

This study focuses, no problem had found in usual activities in 74.5 % (n=227), 25.5 % (n=78) have problem in usual activities. Slight problems in doing usual activities in 23.2 % (n=71). Moderate problems in doing usual activities 2.3 % (n= 7).

Today's usual activities



	No problems doing usual activities	slight problems doing usual activities	Moderate problems doing usual activities
Series2	74.5	23.2	2.3
Series1	228	71	7

Figure.2 Today's usual activities

4.1.19 Pain or discomfort

In this study no pain or discomfort had found in 47.1 % (n=144) and 52.9 % (n=161) had problem of pain and discomfort. Mild pain or discomfort in 33 % (n=101) and moderate pain or discomfort in 19.3 % (n=59) and severe pain or discomfort in 0.7 % (n=2).

Pain or discomfort Feeling

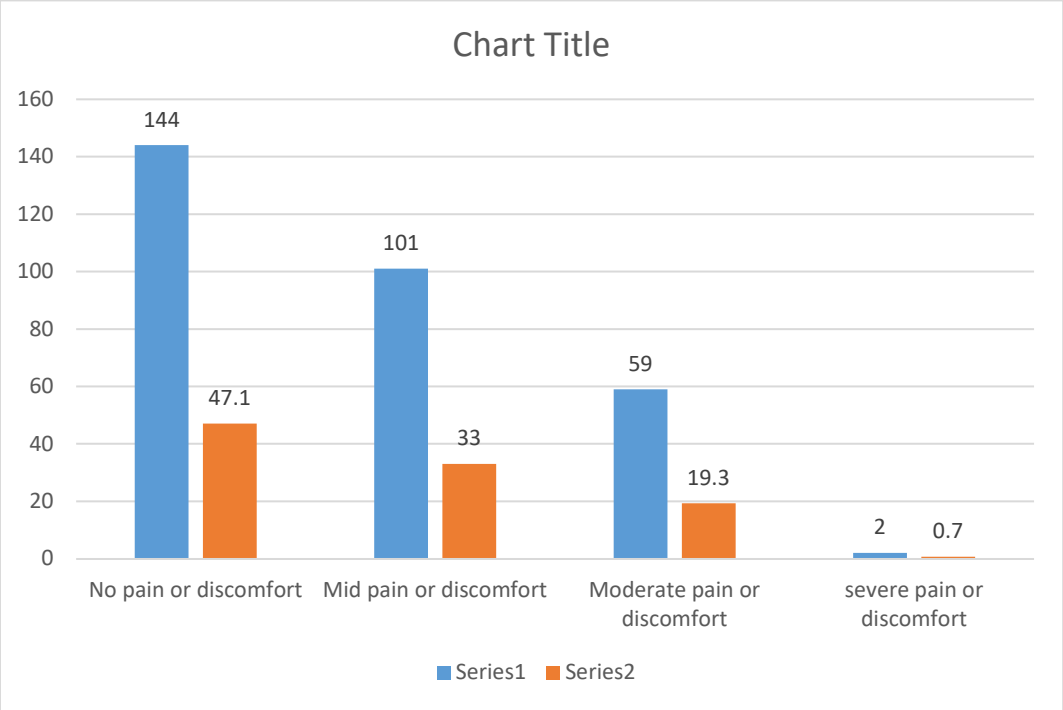


Figure.3 Pain or discomfort

4.1.20 Anxiety or depression

Study focuses 48.4 % (n=148) had no anxiety or depression and 51.6 % (n=157) had problem of anxiety or depression. Mild anxiety or depression in in 35.3 % (n=108), moderate anxiety or depression in 15 % (n=46), severe anxiety or depression in 1.3 % (n=4).

Anxiety or Depression Feeling

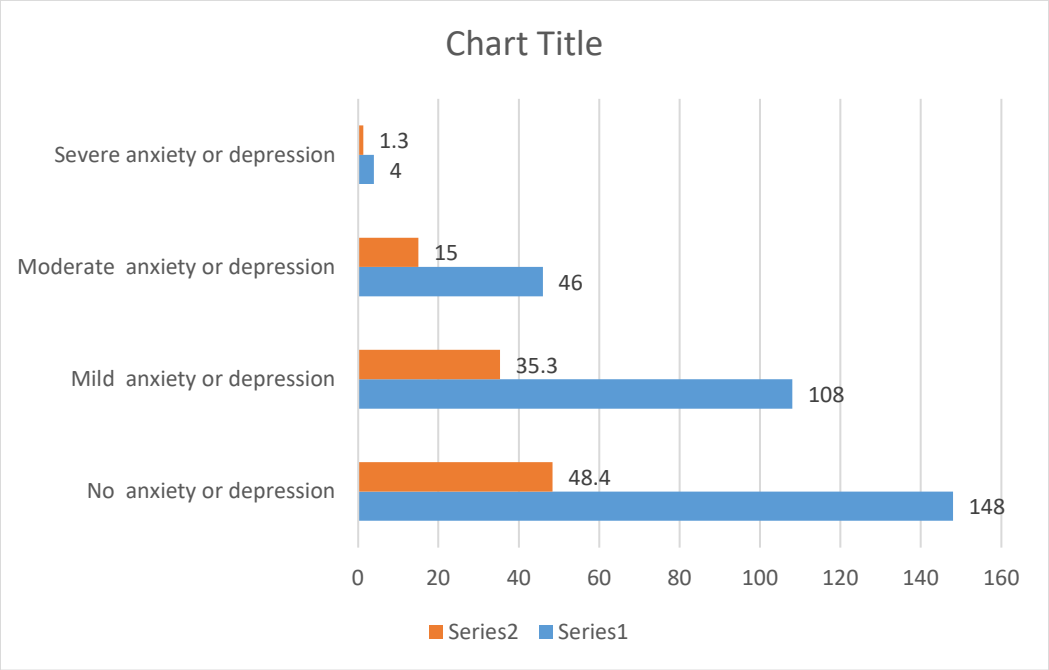


Figure.4 Anxiety or depression

4.1.21 EQ VAS Score

EQ-VAS Score Mean ±SD= 90.05±10.223 and median 92.00

Table.11 Psychological status by IES-R

Psychological status by IES-R	
Any reminder brought back feelings about it	**yes:** 34.09 % (n=104), **no:** 65.90 % (n=201)
I had trouble staying asleep.	**yes:** 43.93 % (n=134) **no:** 56.07 % (n=171)
Other things kept making me think about it.	**yes:** 46.55 % (n=142), **no=** 53.45 % (n=163)
I felt irritable and angry.	**yes:** 48.85 % (n=149), **no:** 51.14 % (n=156)
I avoided letting myself get upset when I thought about it or was reminded of it.	**yes:** 41.9 % (n=128**)** **no:** 58.00 % (n=177)
I thought about it when I didn't mean to	**yes:** 34.75 % (n=106), **no:** 65.25 % (n=199)
I felt as if it hadn't happened or wasn't real	**yes:** 31.8 % (n=97) **no:** 68.2 % (n=208)
I stayed away from reminders about it.	**yes:** 33.77 % (n=103) **no=** 66.23 % (n=202)
Pictures about it popped into my mind.	**yes:** 36.72 % (n=112), **no:** 63.28 % (n=193)
I was jumpy and easily startled.	**yes:** 38.36 % (n=117) **no:** 61.64 % (n=188)
I tried not to think about it.	**yes:** 36.72 % (n=112) **no:** 63.28 % (n=193)
I was aware that I still had a lot of feelings about it, but I didn't deal with them.	**yes:** 37.70 % (n=115) **no:** 62.30 % (n=190)
My feelings about it were kind of numb.	**yes:** 34.09 % (n=104) **no:** 65.91 % (n=201)
I found myself acting or feeling like I was back at that time.	**yes:** 31.47 % (n=96) **no:** 68.53 % (n=209)
I had trouble falling asleep.	**yes:** 35.73 % (n=109**)** **no:** 64.27 % (n=196)
I had waves of strong feelings about it.	**yes:** 34.42 % (n=105) **no:** 65.58 % (n=200)
I tried to remove it from my memory.	**yes:** 32.45 % (n=99**)** **no:** 67.55 % (n=206)
I had trouble concentrating.	**yes:** 33.44 % (n=102) **no:** 66.56 % (n=203)
Reminders of it caused me to have physical reactions, such as sweating, trouble breathing.	**yes:** 31.14 % (n=95) **no:** 68.86 % (n=210)
I had dreams about it.	**yes:** 33.44 % (n=102) **no:** 66.56 % (n=203)
I felt watchful and on-guard.	**yes:** 30.49% (n=93) **no:** 69.51 % (n=212)
I tried not to talk about it.	**yes:** 27.86 % (n=85), **no:** 72.14 % (n=220).

Normal (from 0 to 23) in 294 (96.1%), mild (from 24 to 32) in 10 (3.3%), Moderate (from 33 to 36) in 1 (.3%) and severe in 1 (.3). IES-R score mean ±SD 10.32 ± 7.379.

Tab.12 Impact of Event Scale-Revised scoring (IES-R):

(Ranging from 0 to 88)	Frequency	Percentage
Normal (from 0 to 23)	293	96.1
Mild (from 24 to 32)	10	3.3
Moderate (from 33 to 36)	1	0.3
Severe (≥37) psychological impact	1	0.3
Mean ±SD	10.32 ± 7.379	

4.2. Association

4.2.1 Association between age and pain or discomfort:

The table shows that the chi value was 17.399 and the P-value 0.008. so, there is significant association between age and pain or discomfort of the patient.

Table.13 Association between age of participant and become fatigue

Association between age and pain or discomfort					
		Do you have felt pain and discomfort?			
		Yes	No	Chi value	P-value
Age of participant	Less than 25 years	36	54	17.399	0.008
	26 years to 49 years	102	74		
	More than 50	23	16		
Total		161	144		

4.2.2 Association between age and mobility:

The table shows that the chi value 12.310 and the P-value was 0.055. so, there is significant association between age and mobility problem of the participant

Table.14 Association between age of participant and mobility

Association between age of participant and mobility					
		Have your problem in activities?			
		Yes	No	Chi value	P value
Age of participant	Less than 25 years	15	75	12.310	0.055
	26 years to 49 years	38	138		
	More than 50	15	24		
Total		68	237		

4.2.3 Association between age and usual activities:

The table shows that the chi value was 13.333 and P-value was 0.01. So, there is significant association between age and activities.

Table.15 Association between age of participant and usual activities

Association between age of participant and usual activities					
		Have your problem in activities?			
		Yes	No	Chi value	P value
Age of participant	Less than 25 years	13	77	13.333	0.01
	26 years to 49 years	50	126		
	More than 50	14	25		
Total		77	228		

4.2.4 Association between age and self-care

The table shows that the chi value 10.575 and the P-value 0.032. So, there is significant association between age and usual activities of the participant.

Table.16 Association between age of participant and self-care

Association between age of participant and self-care					
		Have your problem in self-care?			
		Yes	No	Chi value	P value
Age of participant	Less than 25 years	14	76	10.575	0.032
	26 years to 49 years	38	138		
	More than 50	13	26		
Total		65	240		

4.2.5 Association between age and anxiety or depression:

The table shows that the chi value was 0.032 and the P-value was 0.000. So, there is highly significant association between age and anxiety and depression.

Table.17 Association between age of participant and anxiety or depression

Association between age of participant and anxiety or depression					
		Do you have felt anxiety or depression?			
		Yes	No	Chi value	P value
Age of participant	Less than 25 years	32	58	0.032	0.000
	26 years to 49 years	97	79		
	More than 50	28	11		
Total		157	148		

4.2.6 Association between isolation duration and impact of trouble staying asleep:

The table shows that the chi value was 21.23 and the P-value was 0.02. So, there is significant association between isolation duration and impact of trouble staying asleep.

Table.18 Association between isolation duration and impact of trouble staying asleep

Association between isolation duration and Impact of trouble staying asleep					
		Do you have impact of trouble staying sleep?			
		Yes	No	Chi value	P value
Isolation duration	14> days	88	112	21.23	0.02
	14-21 days	33	41		
	21< days	11	16		
Total		132	169		

4.2.7 Association between isolation duration and impact of picture it popped into mind

The table shows that the chi value was 16.329 and the P-value 0.012. so, there is significant association between isolation duration and Impact of picture it popped into mind.

Table.19 Association between isolation duration and psychological status

Association between isolation duration and Impact of picture it popped into mind					
		Do you have impact of picture about it popped into mind?			
		Yes	No	Chi value	P value
Isolation duration	14> days	66	135	16.329	0.012
	14-21 days	33	41		
	21< days	11	16		
Total		110	192		

4.2.8 Association between isolation duration and impact of waves of strong feelings about it:

The table shows that the chi value was 17.584 and the P-value was 0.025. so, there is significant association between isolation duration and impact of waves of strong feelings.

Table.20 Association between isolation duration and impact of waves of strong feelings about it

Association between isolation duration and impact of waves of strong feelings about it					
		Do you have impact of waves of strong feelings about it?			
		Yes	No	Chi value	P value
Isolation duration	14> days	61	140	17.584	0.025
	14-21 days	30	44		
	21< days	13	14		
Total		104	198		

4.2.9 Association between intrusion, avoidance and hyperarousal subscale and monthly expenditure and occupation.

Psychological impact and monthly expenditure intrusion chi value 17.098, p- value <0.029, on avoidance scale psychological impact and monthly (expenditure), chi value 15.731, p- value <0.015 and hyperarousal (psychological impact and occupation).

Table.21 Association between intrusion, avoidance and hyperarousal subscale and monthly expenditure and occupation.

Variable	**N=305**		**Chi-value**	**P-Value**
IES-R				
Intrusion		Psychological status and monthly expenditure	17.098	<0.029
Avoidance		Psychological status and monthly expenditure	15.731	<0.015
Hyperarousal		Psychological status and occupation	41.522	<0.003

4.3 Correlation between EQ VAS score and IES-R score

The spearman test suggested that there is a correlation between EQ VAS score and IES-R score but they are negatively correlated.

Table.22 Spearman correlation between EQ-VAS score and IES-R score

	VAS score of participants	IES-R score of participants
EQ-VAS score of participants	1	-0.685
IES-R score of participants	-0.685	1

Correlation is significant at the 0.01 level (2-tailed).

CHAPTER-V DISCUSSION

This study aims to provide a comprehensive survey of the quality of life and psychological status of the people with COVID-19.

Dinah (2021) founded his study mean age of population was 11±4.4. This study's participant means and standard deviation of participant age where Mean ±SD= 33.91±12.422; about (5.20 %) Participant age Less than 20 years; (60.80 %) age 20-35 years; (20.60 %) age 36-50 years; and 13.40 % more than 50 years. Zhang & Ma (2020) found their study the mean age of participation 37.7±14.0 and 41.4 % were aged between 18 and 30 years.

In this study, participants age Mean ± Std. deviation was, 34.84 ± 12.984 and median 30.00. This study's majority age was 57.5 % (n=175) age range was twenty-six (26) to fifty-nine (49) years old, twenty-five to under twenty-five (25≥) years age was (n=90) and 13.1 % (n=40) participant age range were fifty to more than fifty years old (50 ≤ years) in this total three hundred five participant age. Around 305 participants are involved, which there was 200 were male participants (65.7%) and 105 were female (34.3%). Another study shows male 172 (23.4%) and female 563 (76.6%) (Shah et al., 2021).

In 2021, (Aly & Saber) discovered that their research marital status was 75.7 % (n=87) married, 5.2 % (n=6) single/divorced, and 19.1% (n=22) widowed. They also discovered that approximately education (5.2%) had finished primary school, 39.1% had junior high school, and 55.7 % had high school or above. In this study unmarried 35 % (n=107), married 63.1 % (n=193), divorce 0.3 % (n=01) and widow were 5 person (1.5 %). Illiterate 1.6 % (n=5), primary education 3.6 % (n=11), secondary education 5.6 % (n=17), SSC 13.7 % (n=42), HSC 40.5 % (n=123), bachelor degree15.7 % (n=48) persons, master's degree 15.4 % (n=47) and others 3.9 % persons (n=12).

In this study majority participants occupation were job 40.2 % (n=123), business 13.1 % (n=40), students 24.8 % (n=76), house wife 15.7 % (n=48), farmer 2.6 % (n=8), and others 3.6 % (n=11). According to another study, the majority of participants (50.3 %) work in the private sector, while the rest work for the government (11.2 %) wife of a housewife (7.9 %) Students are encouraged to participate (10.4 %) Health-care providers (10.1 %) agencies of law enforcement (10.1%) (Hossain et al., 2021).

In 2021 (Algamdi) found his study, medication had taken 8.7 % (39) and hospitalization 91.3 % (410). In this study, management had taken by medication 66 % (n=201), hospitalization 20.9 % (n=64), others 12.1 % (n=37).

In this study 201 participants were in isolation 14> days (65.7 %), 73 participants were in isolation 14-21 days (24.2 %), 28 participants were in isolation 21< days (9.2 %) and no duration of isolation 3 participants (1 %). In another study found, a total of 201 (53 %) participants completed the two-week isolation term, with 138 (36.4 %) experiencing longer periods of isolation (Almayahi & Lamki 2022).

Another study shows that, fever was reported by 76.6 % (1683), tiredness by 50.1 % (1101), cough and upper respiratory tract symptoms by 65.4 % (1438), dyspnea by 23.8 % (523), pain by 33.1 % (727), ageusia by 29.3 % (644), headache by 38 % (836), and anosmia by 43.9 % (966). In this study 50 % (n=153), were suffering by symptoms. Among them 19.3 % (n=59) suffering by fatigue, dyspnea persons 9.8 % (n=30), cough persons 12.7 % (n=39), headache 6.2 % (n=19), dizziness 2.6 % (n=8), anxiety 5.6 % (n=17), weakness 11.4 % (n=35), muscle pain 11.4 % (n=35), joint pain 6.9 % (n=21), disturbance of balance 2.9 % (n=9), any vital organ disease 1.3 % (n=4), other symptom 1.3 % (n=4). Hossain et al. (2021) found their study fatigue (84.8 %) and discomfort (15.4 %) were the two most common PACS.

In 2021 (Mannan et al.) found their study, diabetes 19.3 % (197), cardiovascular disease 7.7 % (78), respiratory disease 8.4 % (86), liver disease 2 % (20), kidney disease 2.7 % (27), cancer 1 % (10) and other chronic disease 7.8 % (80). In this study found that, hypertension 14.4 % (n=44), diabetes 13.1 % (n=40), cardiovascular disease 4.2 % (n=13), kidney disease 1.6 % (n=5), lung disease 2.3 % (n=7), obesity 0.7 % (n=2), hypothyroidism 0.3 % (n=1) and other disease 8.8 % (n=27).

In this study newly diagnosed diseases had found that, respiratory disease in 10.8 % (n=33), cardiovascular disease in 1.6 % (n=5) diabetes in 2 % (n=6), kidney disease in 1 % (n=3), liver disease in 0.7 % (n=2), neurological disease in 4.2 % (n=13) and other disease 7.5 % (n=23).

In this study found that today mobility problem found in 22.5 % (n=69) activity problem in 25.5 % (n=78), self-care problem found in 21.6 % (n=66), usual activity problem in 25.5 % (n=78), pain or discomfort in 52.9 % (n=161) and 51.6 % (n=157) had anxiety and depression.

Anxiety/depression was indicated by the majority of research participants (16 %), followed by pain/discomfort (12.4 %). Individuals aged 60 and above reported issues in all domains, including self-care (6.1%), regular activities (10.6 %), pain/discomfort (21.2 %), and anxiety/depression (12.1 %) (Barania et al., 2022). And the mean EQ-VAS was 90.68 ± 11.81.

In this study IES-R score normal (from 0 to 23) in 96.1 % (n=294), mild (from 24 to 32) in 3.3 %) (n=10), Moderate (from 33 to 36) in 1 0.3 % (n=1) and severe in 0.3 % (n=1) and EQ-VAS Score Mean ±SD= 90.05±10.223 and median 92.00. IES-R Mean ±SD 10.32 ± 7.379.

Males were more likely to have IES-R, whereas females were more likely to have depression. The man (among males) who underwent institutional quarantine had the greatest PTSD symptoms (n = 1392, 75.7 percent). The females (n = 920, 72.8 percent) with an income of more than 75000 takas in Bangladeshi currency had the highest depressive symptoms (Ripon et al., 2020).

CHAPTER-VI LIMITATION AND RECOMENDATION

Limitation:

COVID-19 has been spreading swiftly over the world since November 2019, and the first instance of the virus was detected in Bangladesh on March 8, 2020. COVID-19 has been designated a global pandemic by the World Health Organization. Data gathering was difficult in this scenario since the government had proclaimed statewide lockdown multiple times. The calculated sample size was larger, however owing to the time constraints, this investigation was completed with just 305 samples. It was extremely difficult to persuade individuals to participate in full anger due to limited movement and maintaining social distance. Few participants were not agree to phone call record.

Recommendation:

In this study researcher only took the COVID positive participant from Savar area to show the identify quality of life and psychological status. But due to time limitations, the investigator was not able to gather a huge number of participants and this result cannot be generalized all over Bangladesh. So, for further study, it is strongly recommended to increase the sample size to generalize the result in all over in Bangladesh. This study can be considered as a ground work for the health service provision for the quality of life and psychological status. Proper health management can reduce or prevents problem of quality of life and psychological status of COVID survivors. There are few studies on quality of life and psychological problem of COVID positive people. The scan not cover all aspects of the vast area. So, it is recommended that the next generation of physiotherapy members continue study regarding this area. The Government and NGOs should be aware about quality of life and psychological status and should take a necessary step.

CHAPTER-VII CONCLUSION

This study aims to identify quality of life and psychological status of the people with COVID-19. This study focused on quality of life and psychological status of the people with COVID-19. Patients with COVID can present with a wide range of common physical complication including mobility, self-care, activity, pain and anxiety and also psychological status. This review, while presenting what is currently known about common physical and psychological complication with COVID patients, represents only the base of what will eventually become a separate active field of research. Much work remains to determine a fuller understanding of the complication of COVID. COVID most common problem found that such as anxiety, depression, memory loss, mild cognitive impairment, severe fatigue, dyspnea etc. In addition, since this sample size was small, to generate adequate evidence to support decision-making processes at the national level, there should be more studies among the COVID-19 quality of life and psychological status. Appropriate, adequate, and timely information is needed to build awareness among them.

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APPENDIXES

Code no:

Consent Form (Interview)

Assalamu Alaikum/ Namaskar,

I am Md. Kutub Uddin, Part-II, M. Sc. in physiotherapy student, BHPI, CRP, Savar, Dhaka-1343. I am asking you to participate in a research study. This form is designed to give you information about this study. I want to describe this study to you and answer any of your questions. My project title is "Quality of life and psychological status of the people with COVID 19". The purpose of the study is to assess the quality of life and psychological status of the people with COVID 19. This will take approximately 20 minutes.

During the interview period if you fell any emotional disturbance, social and economic risk and any other discomfort physical risk please tell me, I will stop the interview immediately. I am committed that the study will not harmful or risk for you. There is no payment for taking part in the study. All information provided by you will be treated as confidential and in the event of any report or publication it will be ensured that the source of information remains anonymous.

Your participation in this study is voluntary and you may withdraw yourself at any time during this study without any negative consequences. You also have the right not to answer a particular question that you don't like or do not want to answer during interview. If you have any query about the study or your right as a participant, you may contact with me or my supervisor Ehsanur Rahman, Associate Professor BHPI, CRP, Savar, Dhaka-1341. Do you have any questions before I start?

So, may I have your consent to proceed with the interview?

YES ☐ NO ☐

Signature of the Investigator & date: ……...

Signature of data collector & date :……...

Signature of witness & date:……

Consent Form (Thesis participation)

Assalamu Alaikum/ Namaskar,

I am Md. Kutub Uddin, Part-II, M. Sc. in physiotherapy student, BHPI, CRP, Savar, Dhaka-1343. I am asking you to participate in a research study. This form is designed to give you information about this study. I want to describe this study to you and answer any of your questions. My project title is "Quality of life and psychological status of the people with COVID 19". The purpose of the study is to assess the quality of life and psychological status of the people with COVID 19. This will take approximately 20 minutes.

During the interview period if you fell any emotional disturbance, social and economic risk and any other discomfort physical risk please tell me, I will stop the interview immediately. I am committed that the study will not harmful or risk for you. There is no payment for taking part in the study. All information provided by you will be treated as confidential and in the event of any report or publication it will be ensured that the source of information remains anonymous.

Your participation in this study is voluntary and you may withdraw yourself at any time during this study without any negative consequences. You also have the right not to answer a particular question that you don't like or do not want to answer during interview. If you have any query about the study or your right as a participant, you may contact with me or my supervisor Ehsanur Rahman, Associate Professor BHPI, CRP, Savar, Dhaka-1341. Do you have any questions before I start?

The participant agrees to participation in thesis program

YES ☐ NO ☐

Signature of the Investigator & date: ……...

Signature of data collector & date :……...

Signature of witness & date:……

Consent Form (Record audio-visual interview)

Assalamu Alaikum/ Namaskar,

I am Md. Kutub Uddin, Part-II, M. Sc. in physiotherapy student, BHPI, CRP, Savar, Dhaka-1343. I am asking you to participate in a research study. This form is designed to give you information about this study. I want to describe this study to you and answer any of your questions. My project title is "Quality of life and psychological status of the people with COVID 19". The purpose of the study is to assess the quality of life and psychological status of the people with COVID 19. This will take approximately 20 minutes.

During the interview period if you fell any emotional disturbance, social and economic risk and any other discomfort physical risk please tell me, I will stop the interview immediately. I am committed that the study will not harmful or risk for you. There is no payment for taking part in the study. All information provided by you will be treated as confidential and in the event of any report or publication it will be ensured that the source of information remains anonymous.

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The participant agrees to call record the interview

YES ☐ NO ☐

Signature of the Investigator & date: ……...

Signature of data collector & date :……...

Signature of witness & date:……

সম্মতি পত্র (সাক্ষাৎকার)

আসসালামু আলাইকুম/নমস্কার,

আমি মোঃ কুতুব উদ্দিন, পার্ট-২, মাস্টার অব সাইন্স ইন ফিজিওথেরাপি ছাত্র, বিএইচপিআই, সিআরপি, সাভার, ঢাকা-১৩৪৩। আমার গবেষণার শিরোনাম হলো "কোভিড-১৯ আক্রান্ত ব্যক্তিদের জীবনযাত্রার মান ও মানসিক অবস্থা"। গবেষণার উদ্দেশ্য হলো কোভিড-১৯ আক্রান্ত ব্যক্তিদের জীবনযাত্রার মান ও মানসিক অবস্থা মূল্যায়ন করা। আমি আপনাকে এ সম্পর্কে কিছু প্রশ্ন করতে চাই, এতে আনুমানিক ২০ মিনিট সময় লাগবে।

সাক্ষাৎকারের সময় যদি আপনি কোন মানসিক বিপর্যয়, সামাজিক ও অর্থনৈতিক ঝুঁকি এবং অন্য কোন অস্বস্তিকর শারীরিক ঝুঁকিতে পড়ে থাকেন তবে আমাকে বলবেন, আমি অবিলম্বে সাক্ষাৎকারটি বন্ধ করব। আমি প্রতিশ্রুতিবদ্ধ যে গবেষণাটি আপনার জন্য ক্ষতিকর বা ঝুঁকিপূর্ণ হবে না। গবেষণায় অংশগ্রহণের জন্য কোনও পেমেন্ট নেই। আপনার দ্বারা প্রদত্ত সমস্ত তথ্য গোপনীয় হিসাবে গন্য হবে।

এই গবেষণায় আপনার অংশগ্রহণ হবে স্বেচ্ছাকৃত এবং আপনি কোন নেতিবাচক ফলাফল ছাড়া এই গবেষণার সময় যে কোন সময়ে নিজেকে প্রত্যাহার করতে পারবেন এ ছাড়া আপনি পছন্দ করেননা এমন নির্দিষ্ট প্রশ্নের উত্তর না দেওয়ার অধিকার আপনার আছে। যদি আপনার আরো কিছু জানার আগ্রহ থাকে তবে আমি আমাকে অথবা আমার সুপারভাইজার এহসানুর রহমান, সহযোগী অধ্যাপক, কোর্স কো-অর্ডিনেটর, এমএসসি ইন পিটি, বিএইচপিআই, সিআরপি, সাভার, ঢাকায় যোগাযোগ করতে পারেন। শুরু করার পূর্বে আপনার কোনো প্রশ্ন থাকলে আপনি করতে পারেন।

আপনি সম্মতি থাকলে আমি কি আপনার সাক্ষাৎকার আরম্ভ করতে পারি?

হ্যা ☐ না ☐

তদন্তকারীর স্বাক্ষর এবং

তারিখঃ.....

ডাটা সংগ্রহকারীর স্বাক্ষর এবং

তারিখঃ.....

স্বাক্ষীর স্বাক্ষর এবং

তারিখঃ.....

সম্মতি পত্র (গবেষনায় অংশগ্রহণ)

আসসালামু আলাইকুম/নমস্কার,

আমি মোঃ কুতুব উদ্দিন, পার্ট-২, মাস্টার অব সাইন্স ইন ফিজিওথেরাপি ছাত্র, বিএইচপিআই, সিআরপি, সাভার, ঢাকা-১৩৪৩। আমার গবেষণার শিরোনাম হলো "কোভিড-১৯ আক্রান্ত ব্যক্তিদের জীবনযাত্রার মান ও মানসিক অবস্থা"। গবেষণার উদ্দেশ্য হলো কোভিড-১৯ আক্রান্ত ব্যক্তিদের জীবনযাত্রার মান ও মানসিক অবস্থা মূল্যায়ন করা। আমি আপনাকে এ সম্পর্কে কিছু প্রশ্ন করতে চাই, এতে আনুমানিক ২০ মিনিট সময় লাগবে।

সাক্ষাৎকারের সময় যদি আপনি কোন মানসিক বিপর্যয়, সামাজিক ও অর্থনৈতিক ঝুঁকি এবং অন্য কোন অস্বস্তিকর শারীরিক ঝুঁকিতে পড়ে থাকেন তবে আমাকে বলবেন, আমি অবিলম্বে সাক্ষাৎকারটি বন্ধ করব। আমি প্রতিশ্রুতিবদ্ধ যে গবেষণাটি আপনার জন্য ক্ষতিকর বা ঝুঁকিপূর্ণ হবে না। গবেষণায় অংশগ্রহণের জন্য কোনও পেমেন্ট নেই। আপনার দ্বারা প্রদত্ত সমস্ত তথ্য গোপনীয় হিসাবে গন্য হবে।

এই গবেষণায় আপনার অংশগ্রহণ হবে স্বেচ্ছাকৃত এবং আপনি কোন নেতিবাচক ফলাফল ছাড়া এই গবেষণার সময় যে কোন সময়ে নিজেকে প্রত্যাহার করতে পারবেন এ ছাড়া আপনি পছন্দ করেননা এমন নির্দিষ্ট প্রশ্নের উত্তর না দেওয়ার অধিকার আপনার আছে। যদি আপনার আরো কিছু জানার আগ্রহ থাকে তবে আমি আমাকে অথবা আমার সুপারভাইজার এহসানুর রহমান, সহযোগী অধ্যাপক, কোর্স কো-অর্ডিনেটর, এমএসসি ইন পিটি, বিএইচপিআই, সিআরপি, সাভার, ঢাকায় যোগাযোগ করতে পারেন। শুরু করার পূর্বে আপনার কোনো প্রশ্ন থাকলে আপনি করতে পারেন।

অংশগ্রহণকারী এই গবেষনায় অংশগ্রহণ করতে সম্মত

হ্যা ☐ না ☐

তদন্তকারীর স্বাক্ষর এবং

তারিখঃ.....

ডাটা সংগ্রহকারীর স্বাক্ষর এবং

তারিখঃ.....

স্বাক্ষীর স্বাক্ষর এবং

তারিখঃ.....

সম্মতি পত্র (অডিও-ভিজুয়াল সাক্ষাৎকার ধারণ)

আসসালামু আলাইকুম/নমস্কার,

আমি মোঃ কুতুব উদ্দিন, পার্ট-২, মাস্টার অব সাইন্স ইন ফিজিওথেরাপি ছাত্র, বিএইচপিআই, সিআরপি, সাভার, ঢাকা-১৩৪৩। আমার গবেষণার শিরোনাম হলো "কোভিড-১৯ আক্রান্ত ব্যক্তিদের জীবনযাত্রার মান ও মানসিক অবস্থা"। গবেষণার উদ্দেশ্য হলো কোভিড-১৯ আক্রান্ত ব্যক্তিদের জীবনযাত্রার মান ও মানসিক অবস্থা মূল্যায়ন করা। আমি আপনাকে এ সম্পর্কে কিছু প্রশ্ন করতে চাই, এতে আনুমানিক ২০ মিনিট সময় লাগবে।

সাক্ষাৎকারের সময় যদি আপনি কোন মানসিক বিপর্যয়, সামাজিক ও অর্থনৈতিক ঝুঁকি এবং অন্য কোন অস্বস্তিকর শারীরিক ঝুঁকিতে পড়ে থাকেন তবে আমাকে বলবেন, আমি অবিলম্বে সাক্ষাৎকারটি বন্ধ করব। আমি প্রতিশ্রুতিবদ্ধ যে গবেষণাটি আপনার জন্য ক্ষতিকর বা ঝুঁকিপূর্ণ হবে না। গবেষণায় অংশগ্রহণের জন্য কোনও পেমেন্ট নেই। আপনার দ্বারা প্রদত্ত সমস্ত তথ্য গোপনীয় হিসাবে গন্য হবে।

এই গবেষণায় আপনার অংশগ্রহণ হবে স্বেচ্ছাকৃত এবং আপনি কোন নেতিবাচক ফলাফল ছাড়া এই গবেষণার সময় যে কোন সময়ে নিজেকে প্রত্যাহার করতে পারবেন এ ছাড়া আপনি পছন্দ করেননা এমন নির্দিষ্ট প্রশ্নের উত্তর না দেওয়ার অধিকার আপনার আছে। যদি আপনার আরো কিছু জানার আগ্রহ থাকে তবে আমি আমাকে অথবা আমার সুপারভাইজার এহসানুর রহমান, সহযোগী অধ্যাপক, কোর্স কো-অর্ডিনেটর, এমএসসি ইন পিটি, বিএইচপিআই, সিআরপি, সাভার, ঢাকায় যোগাযোগ করতে পারেন। শুরু করার পূর্বে আপনার কোনো প্রশ্ন থাকলে আপনি করতে পারেন।

অংশগ্রহণকারী সাক্ষাৎকারের কল রেকর্ড করতে সম্মত

হ্যা ☐ না ☐

তদন্তকারীর স্বাক্ষর এবং

তারিখঃ.....

ডাটা সংগ্রহকারীর স্বাক্ষর এবং

তারিখঃ.....

স্বাক্ষীর স্বাক্ষর এবং তারিখঃ.....

(Questionnaire English)

Title:

Quality of life and psychological status of the people with COVID 19.

				Code				no:			am	Pm
				Date:		Time:						

Participant name: ……

Address: …..……..

Mobile no: ……...…….

Section: 1. Socio-demographic information.

Q. no	Question	Answer	Code
1.1	How old are you?	……Yrs	
1.2	Sex of participant?	1= Male, 2= Female	
1.3	Where do you live?	1= Rural 2= Semi Urban 3= Urban	
1.4	Marital Status?	1= Unmarried 2= Married 3= Divorcee 4= Widow 5= Separate 6= Others ……	
1.5	What is your educational level?	1= Illiterate 2= Primary education 3= Secondary education 4= SSC 5= HSC 6= Bachelor degree	

		7= Master's degree 8= Others…….	
1.6	Present Occupation?	1= Job 2= Business 3= Student 4= Housewife 5= Farmer 6=Others……	
1.7	Monthly expenditure of the family	……BDT	

Section: 2. Health and Covid related information.

Q. no	Question	Answer	Code
2.1	How long you stay in isolation?	……days	
2.2	What kind of management do you have taken after COVID 19 positive?	1= Medication, 2= Hospitalization, 3= Others……	
2.3	Pre-existing comorbidity	1= Hypertension 2= Diabetes 3= Cardiovascular disease 4= Kidney disease 5= Pre-existing lung disease 6= Liver disease 7= Obesity 8= Hypothyroidism 9= Cancer 10= Others …….	
2.4	Are you suffering any symptom after recovery from COVID 19?	1=Yes 2= No	
2.5	What kind of symptoms are you suffer after recovery from COVID 19?	1= Fatigue 2= Dyspnea 3= Cough 4= Headache 5= Dizziness 6= Anxiety 7= Weakness 8= Muscle pain 9= Joint pain 10= Disturbance of balance	

		11= Any Vital organ diseases 12= Others…….	
2.6	How long you suffer from the symptom?	……days	
2.7	Newly diagnosed disease after recovery from COVID 19	1= Respiratory disease 2= Cardiovascular disease 3= Diabetes 4= Kidney disease 5= Liver disease 6= Neurological disease 7= Others……..	
2.8	What kind of management have you taken for health problem?	1= Medication according to doctor instruction, 2= Hospitalization 3= Others……	
2.9	Do you have received any Physiotherapy intervention after recovering from COVID-19?	1= Yes 2= No If yes, mention the name 3= Chest Physiotherapy 4= Other Physiotherapy intervention	

Section: 3. EQ-5D-5L

Under each heading, please tick the **ONE** box that best describes your health **TODAY**

3.1. Mobility

I have no problem in walking about 1 □

I have slight problems in walking about 2 □

I have moderate problems in walking about 3 □

I have severe problems in walking about 4 □

I am unable to walk about 5 □

3.2. Self-care

I have no problems washing or dressing myself 1 □

I have slight problems washing or dressing myself 2 □

I have moderate problems washing or dressing myself 3 □

I have severe problems washing or dressing myself 4 □

I am unable to wash or dress myself 5 □

3.3. Usual Activities (e g. Work, study, housework, family or leisure activities)

I have no problems doing my usual activities 1 □

I have slight problems doing my usual activities 2 □

I have moderate problems doing my usual activities 3 □

I have severe problems doing my usual activities 4 □

I am unable to do my usual activities 5 □

3.4. Pain / Discomfort

I have no pain or discomfort 1 □

I have slight pain or discomfort 2 □

I have moderate pain or discomfort 3 □

I have severe pain or discomfort 4 □

I have extreme pain or discomfort 5 □

3.5. Anxiety / depression

I am not anxious or depressed 1 □

I am slightly anxious or depressed 2 □

I am moderately anxious or depressed 3 □

I am severely anxious or depressed 4 □

I am extremely anxious or depressed 5 □

We would like to know how good or bad your health is TODAY.

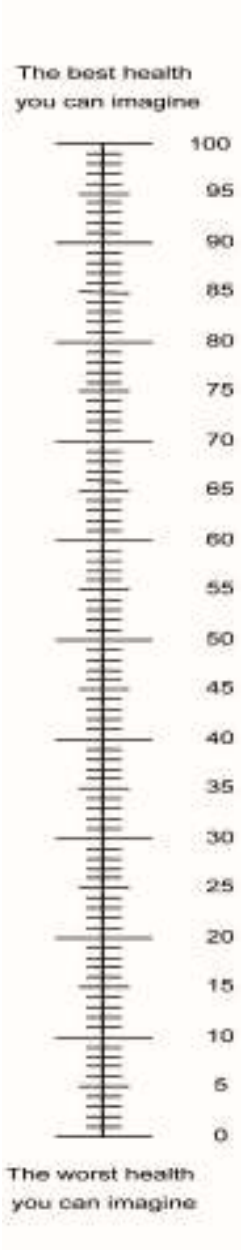
This scale is numbered from 0 to100.

100 means the best health you can imagine.0 means the worst health you can imagine.

Mark an X on the scale to indicate how your health is TODAY.

Now, please write the number you marked on the scale in the box below.

Your health today = ☐



Section: 4. IMPACT OF EVENT SCALE-REVISED (IES-R)

Instructions: Below is a list of difficulties people sometimes have after stressful life events.

Please read each item and then indicate how distressing each difficulty has been for you DURING THE PAST SEVEN DAYS with respect to_____, how much were you distressed or bothered by these difficulties?

Not at all=0, Little bit =1, Moderately=2, Quite a bit = 3, Extremely= 4

No	Statement	0	1	2	3	4
4.1.	Any reminder brought back feelings about it					
4.2.	I had trouble staying asleep.					
4.3.	Other things kept making me think about it.					
4.4.	I felt irritable and angry.					
4.5.	I avoided letting myself get upset when I thought about it or was reminded of it.					
4.6.	I thought about it when I didn't mean to					
4.7.	I felt as if it hadn't happened or wasn't real					
4.8.	I stayed away from reminders about it.					
4.9.	Pictures about it popped into my mind.					
4.10.	I was jumpy and easily startled.					
4.11.	I tried not to think about it.					
4.12.	I was aware that I still had a lot of feelings about it, but I didn't deal with them.					
4.13.	My feelings about it were kind of numb.					
4.14.	I found myself acting or feeling like I was back at that time.					
4.15.	I had trouble falling asleep.					
4.16.	I had waves of strong feelings about it.					
4.17.	I tried to remove it from my memory.					
4.18.	I had trouble concentrating.					
4.19.	Reminders of it caused me to have physical reactions, such as sweating, trouble breathing.					
4.20.	I had dreams about it.					
4.21.	I felt watchful and on-guard.					
4.22.	I tried not to talk about it.					

Thank you for giving me your precious time

(প্রশ্নপত্র বাংলা)

শিরোনামঃ

কোভিড-১৯ আক্রান্ত ব্যক্তিদের জীবনযাত্রার মান ও মানসিক অবস্থা।

কোড নাম্বারঃ					তারিখঃ				সময়ঃ			এএম	পিএম

অংশগ্রহণকারীর
নামঃ.....

ঠিকানাঃ.....

মোবাইল
নাম্বারঃ.....

পর্বঃ ১-সামাজিক জনসংখ্যা সংক্রান্ত তথ্য

প্রশ্ন নং	**প্রশ্ন**	**উত্তর**	**কোড**
১.১	আপনার বয়স কত?	**..... বছর**	
১.২	অংশগ্রহণকারীর লিঙ্গ	১= পুরুষ ২= মহিলা	
১.৩	আপনি কোথায় থাকেন?	১= শহর ২= গ্রাম	
১.৩	বৈবাহিক অবস্থা	১= অবিবাহিত ২= বিবাহিত ৩= তালাকপ্রাপ্ত ৪= বিধবা ৫= বিচ্ছিন্ন, ৬= অন্যান্য.....	
১.৫	আপনার শিক্ষাগত যোগ্যতা?	১= প্রাতিষ্ঠানিক শিক্ষা নেই ২= প্রাথমিক ৩= মাধ্যমিক ৪= এস,এস,সি ৫= এইচ, এস, সি, ৬= স্নাতক ৭= মাস্টার্স ডিগ্রী ৮= অন্যান্য.....	
১.৬	বর্তমান পেশা	১= চাকুরী ২= ব্যবসা ৩= ছাত্র	

		৪= গৃহিনী, ৫= কৃষক ৬= অন্যান্য.....	
১.৭	পরিবারের মাসিক খরচ	.... টাকা	

পর্বঃ ২-স্বাস্থ্য এবং কোভিড সম্বন্ধিয় তথ্য

প্রশ্ন নং	**প্রশ্ন**	**উত্তর**	**কোড**
২.১	আপনি কতদিন আইসোলেশনে ছিলেন?	.....দিন।	
২.২	কোভিড পজেটিভ হওয়ার পরে কোন ধরনের ব্যবস্থা গ্রহণ করেছেন?	১= ঔষধ ২= হাসপাতালে ভর্তি ৩= অন্যান্য.....	
২.৩	আগে থেকে বিদ্যমান কোমরবিটি	১= হাইপারটেনশন ২= ডায়বেটিস ৩= হৃদরোগ ৪= কিডনি রোগ ৫= আগে থেকে বিদ্যমান ফুসফুসের রোগ ৬= লিভারের রোগ ৭= স্থূলতা ৮= হাইপোথাইরয়ডিজম ৯= ক্যানসার ১০= অন্যান্য.....	
২.৪	কোভিড থেকে সুস্থ্য হওয়ার পরে আপনি কি কোন উপসর্গে ভুগেছেন?	১= হ্যা ২= না	
২.৫	কোভিড থেকে সুস্থ্য হওয়ার পরে আপনি কোন ধরনের উপসর্গে ভুগেছেন?	১= ক্লান্তি ২= শ্বাসকষ্ট ৩= কাশি ৪= মাথা ব্যথা ৫= মাথা গোড়া ৬= উদ্বেগ ৭= দূর্বলতা ৮= মাংসপেশির ব্যথা ৯= জোড়ায় ব্যথা ১০= ভারসাম্যের সমস্যা ১১= গুরুত্বপূর্ণ অঙ্গের রোগ ১২= অন্যান্য.....	

২.৬	আপনি কতদিন উপসর্গে ভুগেছেন?	.....দিন।	
২.৭	কোভিড থেকে সুস্থ্য হওয়ার পরে নতুন করে রোগ নির্ণয়	১= শ্বাস জনিত রোগ ২= হৃদরোগ ৩= ডায়বেটিস ৪= কিডনি রোগ ৫= লিভারের রোগ ৬= স্নায়োরোগ ৭= অন্যান্য.....	
২.৮	আপনার নতুন স্বাস্থ্য সমস্যার জন্য কোন ধরনের ব্যবস্থা গ্রহণ করেছেন?	১= ডাক্তারের পরামর্শে ঔষধ গ্রহণ ২= হাসপাতালে ভর্তি ৩= অন্যান্য.....	
২.৯	কোভিড-১৯ থেকে সুস্থ্য হওয়ার পর আপনি কি কোন ফিজিওথেরাপী গ্রহণ করেছেন?	১= হ্যা ২= না যদি হ্যা হয় তাহলে উল্লেখ করুন ৩= চেষ্ট ফিজিওথেরাপী ৪= অন্যান্য ফিজিওথেরাপী	

পর্বঃ ৩. EQ-5D-5L

প্রতিটি শিরোনামের অধীনে অনুগ্রহ করে একটি বাক্সে টিক দিন, যেটি আপনার স্বাস্থ্যকে আজ সবচেয়ে ভালভাবে বর্ণনা করে

৩.১ চলাচল

আমার চলাফেরা করতে কোন সমস্যা নেই	□	১
আমার চলাফেরা করতে একটু সমস্যা হয়	□	২
আমার চলাফেরা করতে মাঝারি ধরনের সমস্যা হয়	□	৩
আমার চলাফেরা করতে খুব সমস্যা হয়	□	৪
আমি হাটতে অক্ষম	□	৫

৩.২ নিজের যত্ন

আমার নিজেকে ধোয়া বা কাপড় পরিধান করতে কোন সমস্যা হয়না	□	১
আমার নিজেকে ধোয়া বা কাপড় পরিধান করতে সামান্য সমস্যা হয়	□	২
আমার নিজেকে ধোয়া বা কাপড় পরিধান করতে মাঝারি সমস্যা হয়	□	৩
আমার নিজেকে ধোয়া বা কাপড় পরিধান করতে গুরুতর সমস্যা হয়	□	৪
আমি নিজেকে ধোয়া বা কাপড় পরিধান করতে অক্ষম	□	৫

৩.৩ সাধারণ কার্যকলাপ (যেমন কাজ, অধ্যয়ন, বাড়ির কাজ, পারিবারিক বা অবসর কার্যক্রম)

আমার স্বাভাবিক কাজকর্ম করতে কোন সমস্যা নেই	□	১
আমার স্বাভাবিক কাজকর্ম করতে সামান্য সমস্যা হয়	□	২
আমার স্বাভাবিক কাজকর্ম করতে মাঝারি সমস্যা হয়	□	৩
আমার স্বাভাবিক কাজকর্ম করতে গুরুতর সমস্যা হয়	□	৪
আমি আমার স্বাভাবিক কাজকর্ম করতে অক্ষম	□	৫

৩.৪ ব্যথা/অস্বস্তি

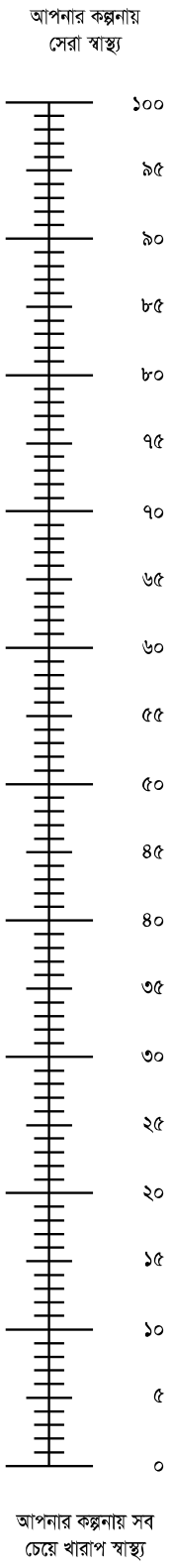
আমার কোন ব্যথা বা অস্বস্তি নেই	□	১
আমার সামান্য ব্যথা বা অস্বস্তি আছে	□	২
আমার মাঝারি ব্যথা বা অস্বস্তি আছে	□	৩
আমার তীব্র ব্যথা বা অস্বস্তি আছে	□	৪
আমার চরম ব্যথা বা অস্বস্তি আছে	□	৫

৩.৫ উদ্বেগ/বিষন্নতা

আমি উদ্বিগ্ন বা বিষন্ন নই	□	১
আমার সামান্য উদ্বেগ বা বিষন্নতা আছে	□	২
আমার মাঝারি উদ্বেগ বা বিষন্নতা আছে	□	৩
আমি মারাত্বক ভাবে উদ্বিগ্ন বা বিষন্ন	□	৪
আমি অত্যন্ত উদ্বিগ্ন বা বিষন্ন	□	৫

আমরা জানতে চাই আজ আপনার স্বাস্থ্য কতটুকু ভাল বা খারাপ।
এই স্কেলটি ০ থেকে ১০০ পর্যন্ত সংখ্যাযুক্ত
১০০ মানে আপনার কল্পনায় সেরা স্বাস্থ্য
০ মানে আপনার কল্পনায় সবচেয়ে খারাপ স্বাস্থ্য
'×' চিহ্নদিয়ে আজ আপনার স্বাস্থ্যকে চিহ্নিত করুন
এখন দয়া করে নিচের বক্সে আপনার নম্বরটি বসান

আজ আপনার স্বাস্থ্য = ☐



পর্বঃ ৪. IMPACT OF EVENTS SCALE-REVISED (IES-R)

নিচে জীবনের নানা চাপ জনিত ঘটনায় অসুবিধার জন্য একটি তালিকা রয়েছে। অনুগ্রহ করে প্রতিটি আইটেম পড়ুন এবং তারপর নির্দেশ করুন যে গত সাত দিনের মধ্যে আপনার জন্য আইটেমগুলো কতটুকু প্রভাব ফেলেছে।

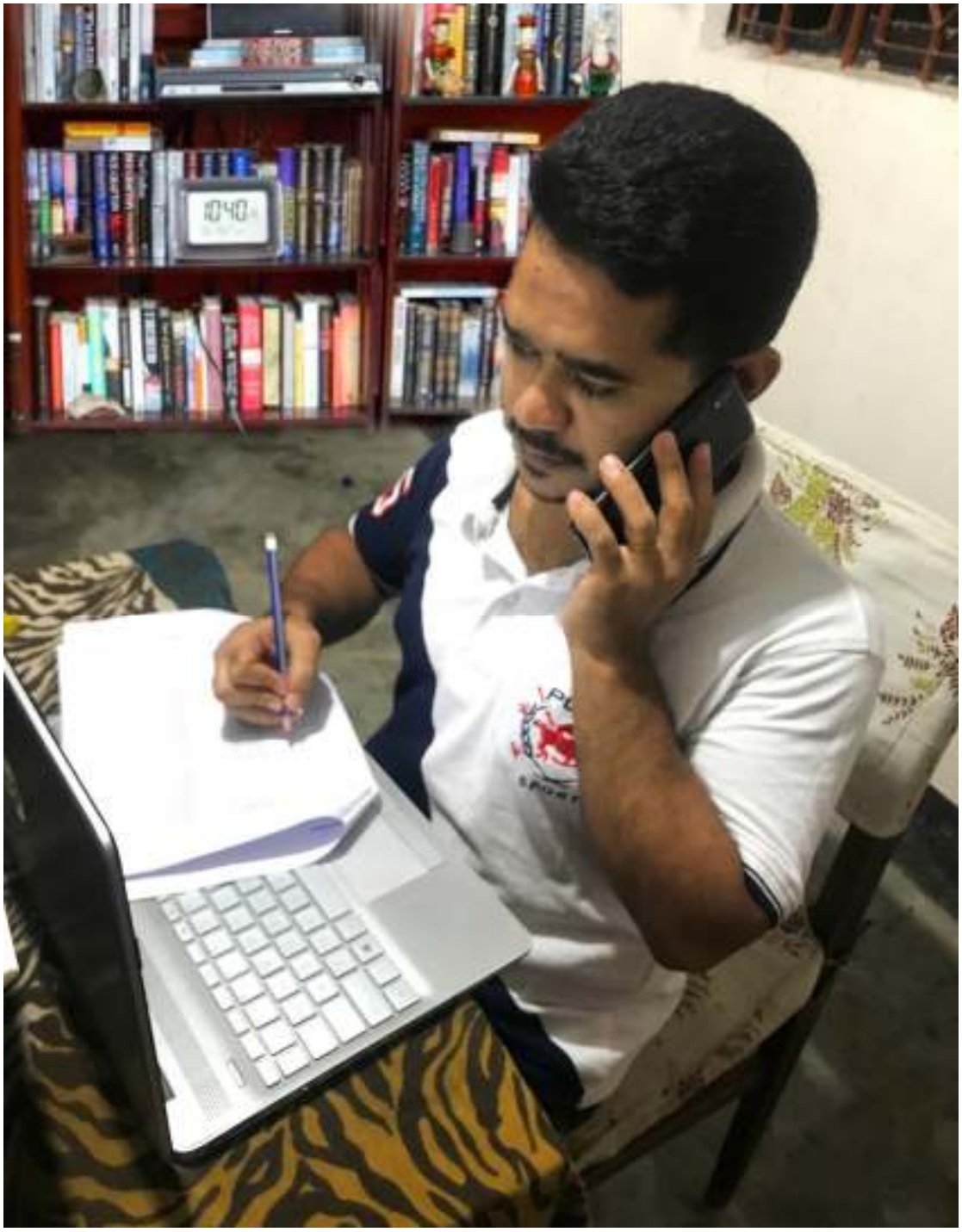
একদম না = ০, কম = ১, মোটামুটি = ২, বেশি = ৩, খুব বেশি = ৪.

ক্রঃ নং	বিবৃতি	০	১	২	৩	৪
৪.১	যে কোন স্মৃতি চিহ্নের মাধ্যমে এটি ফিরে আসে					
৪.২	আমার ঘুমাতে সমস্যা হতো					
৪.৩	অন্যান্য জিনিস আমাকে এটা নিয়ে ভাবতে বাধ্য করে					
৪.৪	আমি বিরক্ত ও রাগ অনুভব করেছি					
৪.৫	আমি যখন এটা নিয়ে ভাবতাম তখন বিরক্ত হওয়া থেকে নিজেকে এড়িয়ে নিতাম					
৪.৬	যখন প্রকাশ করতে চাইনি, তখনই আমি এটি সম্পর্কে ভেবেছিলাম					
৪.৭	আমার মনে হয়েছিল এটি ঘটেনি বা বাস্তব নয়					
৪.৮	আমি এটির স্মৃতি থেকে দুরে থাকতাম					
৪.৯	এর স্মৃতির ছবিগুলো আমার মনের মধ্যে গেথে আছে					
৪.১০	আমি ছটফট করছিলাম এবং সহজেই চমকে উঠেছিলাম					
৪.১১	এটা নিয়ে চিন্তা না করার চেষ্টা করেছি					
৪.১২	আমি সচেতন ছিলাম, এটি সম্পর্কে আমার জানা ছিল, কিন্তু আমি তাদের মোকাবেলা করিনি					
৪.১৩	এটি সম্পর্কে আমার অনুভূতি অসাড় ছিল					
৪.১৪	আমি নিজেকে কাজ ও অনুভবের মাধ্যমে বুঝতাম যে, আমি সেই সময়ে ফিরে এসেছি					
৪.১৫	আমার ঘুমাতে সমস্যা হয়েছিল					
৪.১৬	আমার এটা সম্পর্কে অনুভূতির তীব্র ঢেউছিল					
৪.১৭	আমার স্মৃতি থেকে এটি মুছে ফেলার চেষ্টা করেছি					
৪.১৮	আমার মনোনিবেশ করতে সমস্যা হয়েছিল					
৪.১৯	এটির স্মৃতির চিহ্নগুলোর কারনে আমার শারিরীক প্রতিক্রিয়া যেমন, ঘাম, শ্বাসকষ্ট, বমিভাব, হৃদপিন্ডের ধুবধুব, বারিয়ে দেয়					
৪.২০	এটা আমার স্বপ্নে থাকত					
৪.২১	আমি সতর্কতা অনুভব করেছি					
৪.২২	আমি এটা নিয়ে কথা না বলার চেষ্টা করেছি					

মূল্যবান সময় দেওয়ার জন্য আপনাকে অশেষ ধন্যবাদ।

APPENDIX

Image: Data collection by mobile phone



Bangladesh Map (Green Mark Savar Area in Dhaka)

APPENDIX

The Chairman
Institutional Review Board (IRB)
Bangladesh Health Professions Institute (BHPI)
CRP, Savar, Dhaka-1343, Bangladesh

Subject: An Application for review and ethical approval.

Dear Sir,

With due respect, I am Md. Kutub Uddin, student of part II of M.Sc. in physiotherapy program at Bangladesh Health Professions Institute (BHPI) the academic institute of Centre for the Rehabilitation of the Paralysed (CRP) under the Faculty of Medicine, University of Dhaka. As per the course curriculum, I have to conduct a thesis entitled **"Quality of life and psychological status of the people with COVID 19"** under the supervision of Ehsanur Rahman, Associate Professor of Physiotherapy, BHPI, Department of Physiotherapy, CRP. The purpose of the study is assessing the quality of life and psychological status of the people with COVID 19 according to the EQ-5D-5L and IES-R. The study involves interview by using questionnaire. It will take only 20 minutes to fill in the questionnaire and there is no likelihood of any harm to the participants. 7 under-graduate students of physiotherapy from SAIC will be trained for data collection through in-person interview. Data collectors will receive informed consent from all participants and the collected data will be kept confidential.

Therefore, I look forward to having your kind approval for the thesis proposal and to start data collection. I can also assure you that I will maintain all the requirements for study.

Sincerely

Md. Kutub Uddin
6th Batch (Part-II) M.Sc. in Physiotherapy
Session: 2019-2020, Student I D: 1111900076
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Thesis Presentation date:
30th March 2021

Course Coordinator:
M.Sc. in Physiotherapy BHPI.

Recommendation from the thesis supervisor

Ehsanur Rahman
Associate Professor & Course Coordinator (MScPT),
BHPI, Department of Physiotherapy, CRP

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

Ref: CRP/BHPI/IRB/12/2021/539

Date: 05/12/2021

Md. Kutub Uddin
Part II M.Sc. in Physiotherapy
Session: 2019-2020, Student ID: 111190076
BHPI, CRP, Savar, Dhaka- 1343, Bangladesh

Subject: Approval of the thesis proposal **"Quality of life and psychological status of the people with COVID 19"** by ethics committee.

Dear Md. Kutub Uddin,
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 and Ehsanur Rahman as supervisor. The following documents have been reviewed and approved:

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

The purpose of the study is assessing the quality of life and psychological status of the people with COVID 19 according to EQ-5D-5L and IES-R. It will take only 20 minutes to fill in the questionnaire and there is no likelihood of any harm to the participants, the members of the Ethics committee approved the study to be conducted in the presented form at the meeting held at 09:00 AM on March 30, 2021 at BHPI (27thIRB Meeting).

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. However, the members of ethics committee have approved the study to be conducted in the presented form at the meeting held at 9.00 AM on March 30, 2021 at BHPI.

Best regards.

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

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Clinical Trial Details (PDF Generation Date :- Fri, 17 Dec 2021 12:16:23 GMT)

CTRI Number	CTRI/2021/12/038706 [Registered on: 17/12/2021] - **Trial Registered Retrospectively**
Last Modified On	16/12/2021
Post Graduate Thesis	Yes
Type of Trial	Observational
Type of Study	Cross Sectional Study
Study Design	Other
Public Title of Study	Quality of life and psychological status of the people with COVID 19
Scientific Title of Study	Quality of life and psychological status of the people with COVID 19

Secondary IDs if Any

Secondary ID	Identifier
NIL	NIL

Details of Principal Investigator or overall Trial Coordinator (multi-center study)

Details of Principal Investigator	
Name	Md Kutub Uddin
Designation	MPT Students
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Details Contact Person (Scientific Query)	
Name	Ehsanur Rahman
Designation	Associate professor
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Details Contact Person (Public Query)

Details Contact Person (Public Query)	
Name	MD Wallul Islam
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বাংলাদেশ হেল্‌থ প্রফেশন্স ইনষ্টিটিউট (বিএইচপিআই)

BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)

(The Academic Institute of CRP)

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সিআরপি-বিএইচপিআই/১১/২১/৭ তারিখ : ২৫.১১.২০২১

প্রতি
ব্যবস্থাপনা পরিচালক
পপুলার ডায়গনিষ্টিক সেন্টার লিঃ (সাভার)
ই/২২, তালবাগ, আনন্দপুর,
সাভার, ঢাকা।

বিষয় : রিসার্চ প্রজেক্ট এর জন্য আপনার প্রতিষ্ঠান সফর ও তথ্য সংগ্রহ প্রসঙ্গে।

জনাব,

আপনার সদয় অবগতির জন্য জানাচ্ছি যে, পক্ষাঘাতগ্রস্তদের পুনর্বাসন কেন্দ্রে-সিআরপি'র শিক্ষা প্রতিষ্ঠান বাংলাদেশ হেলথ্ প্রফেশনস্ ইনষ্টিটিউট (বিএইচপিআই) ঢাকা বিশ্ববিদ্যালয় অনুমোদিত এমএসসি ইন ফিজিওথেরাপি কোর্স পরিচালনা করে আসছে।

উক্ত কোর্সের ছাত্রছাত্রীদের কোর্স কারিকুলামের অংশ হিসাবে বিভিন্ন বিষয়ের উপর থিসিস করা বাধ্যতামূলক।

বিএইচপিআই'র পার্ট-২ (চূড়ান্ত) এমএসসি ইন ফিজিওথেরাপি কোর্সের ছাত্র মোঃ কুতুব উদ্দিন তার থিসিস সংক্রান্ত কাজের তথ্য সংগ্রহের জন্য আগামী ২৫.১১.২০২১ থেকে ৩১.১২.২০২১ তারিখ পর্যন্ত আপনার প্রতিষ্ঠানে সফর করতে আগ্রহী।

তাই তাকে আপনার প্রতিষ্ঠান সফর এবং প্রয়োজনীয় তথ্য প্রদান সহ সার্বিক সহযোগীতা প্রদানের জন্য অনুরোধ করছি।

ধন্যবাদান্তে

Shafi

মোঃ সফিকুল ইসলাম
সহযোগী অধ্যাপক এবং বিভাগীয় প্রধান
ফিজিওথেরাপি বিভাগ
বিএইচপিআই, সিআরপি, সাভার।

Received
25.11.2021
Raju Ahmmed Khalek
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