Faculty of Medicine

University of Dhaka

BIOPSYCHOSOCIAL IMPACT ON PERSON WITH PHYSICAL DISABILITIES

By

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

DU Roll no: 832

Reg. no: 6855

Session: 2016-2017

BHPI, CRP, Savar, Dhaka-1343

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

Biopsychosocial Impact on person with physical disabilities

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

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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 B.Sc. in Physiotherapy.

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. I confirm that the electronic copy is identical to the bound copy of the Thesis.

In case of dissemination the finding of this project for future publication, research supervisor will highly concern, it will be duly acknowledged as graduate thesis and consent will consent taken from the physiotherapy department of Bangladesh Health Professions Institute (BHPI).

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CONTENTS

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Acronyms

ADL	Activity of Daily Living
BHPI	Bangladesh Health Professions Institute
CRP	Centre for the Rehabilitation of the Paralysed
CVA	Cerebro Vascular Accident
DALYs	Disability-Adjusted Life Years
ICF	International Classification of Functioning, Disability and Health
IRB	Institutional Review Board
PCFS	Post COVID-19 Functional Status
PD	Physical Disability
SCI	Spinal Cord Inhury
SPSS	Statistical Package for the Social Sciences
TIA	Transient Ischemic Attack
WHO	World Health Organization
WHODAS 2.0	World Health Organization Disability Assessment Schedule 2.0

List of Tables

List of Figures

Figure   **Page no.**

Abstract

Objectives: We aimed to explore the biopsychosocial impact on person with physical disability (PD) at a specialised rehabilitation centre in Bangladesh.

Methods: This is a cross–sectional study conducted at the Centre for the Rehabilitation of the Paralysed. We used the biomedical, social and psychological status measurement questionnaires, the post COVID-19 functional status (PCFS) and World Health Organization Disability Assessment (WHODAS 2.0) questionnaires to assess the level of disability and functional status. Data was analyzed using Pearson Chi-square, Spearman correlation, Mann-Whitney-U and Kruskal–Wallis tests.

Results: Two hundred twelve persons with PDs were recruited. Prior to rehabilitation at CRP they perceived as having a moderate level of disability, and good functional status in physical and psychological health domains. They indicated poor functional status between socio-demographic factors and type of disability, occupation, monthly family income and comorbidities. There were some specific differences in overall scores when comparing type of disability, occupation, monthly family income and comorbid diseases. Age of the participants is found significantly correlated with the stress and fear impact of the participants. Between groups comparisons indicated that female participants had a significantly higher functional status in the total WHODAS 2.0 score and those with a hemorrhagic stroke had a significantly higher functional level than ischemic stroke patients in the Physical Health and psychological Domain.

Conclusion: During their rehabilitation person with disability had a relatively positive perception of level of disability and functional activity. However, the results of other research have found that post-discharge their disability level increase and functional level decrease across all domains. Hence, it is recommended that more monitoring of level of disability and functional level is conducted post-discharge, along with a greater focus on community-based rehabilitation strategies and procedures to contribute to long-term reduction in level of disability and improved functional activity.

Key words: Biopsychosocial impact, COVID-19, Persons with physical disability

| CHAPTER – I | INTRODUCTION |

1.1 Background

Coronavirus Disease-19 (COVID-19) is a type of acute respiratory infection that has spread worldwide after being manifested in Hubei province in China in December in 2019. A global pandemic was declared due to the novel SARS-CoV-2 (COVID-19) at the end of 2019, which resulted in more than 22 million cases by August 20, 2020. The ongoing COVID-19 pandemic and associated isolation and protective measures are leading to drastic changes in the lives of the general population. In addition to the possibility of having COVID-19 and its health-related complications, the general population is experiencing major consequences in their daily lives, such as high stress exposure, low-mood, disturbed sleeping patterns and financial worry and depression. Projections show that increased suicide rates may result from this pandemic. In sum, COVID-19 has resulted in tremendous impact both the non-disabled and disabled population (Mohan & Nambiar, 2020).

Considering the COVID-19 pandemic, the World Health Organization (WHO) stated that additional considerations from governments, healthcare systems, disability service providers, institutional settings, communities and actors are needed for people with disabilities. This global pandemic has the potential to significantly increase the daily challenges of people with disabilities and may have a greater impact compared to the general population (Lebrasseur et al., 2021). Indeed, people with disabilities are often directly impacted by deficiencies and gaps in the healthcare system (Margaret, 2011). They may have a higher risk of contracting COVID-19 and increased complications associated with additional barriers to respect social distancing measures. For example, people with disabilities may rely on public and adapted transportation, have regular healthcare or rehabilitation appointments, and need close contact from caregivers or health professionals to achieve their daily routine, or have reduced ability to communicate with face masks (both speaking and hearing others). People with disabilities are considered a marginalized group and reduced access to healthcare and community support services, among other restrictions, could amplify their daily

difficulties. Given their dependence on services and others to meet specific needs and their increased susceptibility to COVID-19, people with disabilities are considered vulnerable in this crisis (Lee, 2020).

Individuals living with disabilities, who represent 15% of the global population, commonly encounter challenges while carrying out their daily life activities, without the COVID-19 context, such as barriers to community mobility, difficulties accessing public transportation, reduced access to healthcare services and barriers to communication. Compared to the general population, individuals with disabilities have a higher risk of depression, lower life satisfaction and increased loneliness (Reid et al., 2021)

Depression, anxiety, and insomnia were highly prevalent among individuals with a disability during the COVID-19 period. Multiple socio-demographic and disability-related factors were associated with this high psychopathology. Attention has to be given by the government and other stakeholders to intervene in psychopathology and its associated factors (Necho et al., 2020). In addition, the COVID-19 pandemic was associated to a decline in quality of life (QoL) (Zhang & Ma, 2020). Patients who have co-morbidities have a greater chance of having a severe or dangerous phenotype of the disease, and immunosuppressed patients may be more prone to developing problems from COVID-19 (Wu et al., 2020).

Patients suffering from chronic conditions may experience a worsening of their symptoms as a result of this issue. The principal manifestations of COVID-19 are fever, cough and dyspnea; the most severe complication of the infection is the acute respiratory distress syndrome (Wu et al., 2019). In a recent editorial Manji et al. (2020) highlighted the concern of neurologists for vulnerability to COVID-19 in patients with neurological diseases such as stroke. Worldwide, stroke is a significant cause of disability (Mondal et al., 2012). About 2.9% of the adult have had a stroke, of whom nearly a third live with a disability is American (Sergeev, 2011). It is the leading cause of disability in the developed world and all industrialized countries (Belda-Lois et al., 2011). Stroke is one of the major causes of morbidity and mortality in the elderly (Kalvin & Margaret, 2011).

International data illustrates the disproportionate impact of COVID-19 has had on people with disabilities. Data from the UK demonstrate that 59% of COVID-19 deaths have been among people with disabilities. After adjusting for age, socio demographic, and other risk-factors, in the pandemic's first wave, people with disabilities, as measured by census data, were found to have mortality rates 2.4 and 2.0 times higher for women and men, respectively, regardless of disability type (Rotenberg et al., 2021). With this process there was serious concern that medical rationing would disproportionately impact the disability community (Lund & Ayers, 2020), including individuals with spinal cord injury (SCI). For instance, the American Bar Association highlighted problematic provisions of medical care for disabled people, such as categorical exclusions based on disability, failing to allow longer time on ventilators due to disability status, and authorizing reallocation of ventilators from chronic ventilator users to other patients (Hoogenes et al., 2020).

The purpose of the present study is to provide a descriptive account of the impact of the COVID-19 pandemic on the disable community. Specifically, this article describes participants' concerns about impact of the COVID-19 pandemic on overall health and also mental health.

1.2 Rationale

The COVID-19 pandemic has impacted and continues to change the daily life of the entire population. There is dearth of information regarding the COVID-19 with physical disabilities though this groups of people are more vulnerable for getting appropriate health services. In general, the people who are out of any sort of disabilities, are very anxious and seeking the available services as per their needs. Conversely, people with disabilities are still behind for quality services and sometimes, they are out of the social mainstream inclusion. It is crucial that governments, healthcare providers and the general population understand the reality of people with disabilities to support their needs on this COVID crisis with adequate policies, such as ensuring the continuity of necessary community-based social services, providing access to important information and developing adapted guidelines. The impact of COVID-19 on people with disabilities is therefore urgent to minimize long-term consequences and optimize their quality of life and social participation in respect to the convention of the rights of person with physical disabilities.

It is evident that there is lacking literature regarding the biopsychosocial impact of COVID-19 on the disable population. In Bangladesh, no study had been found in this area and for this reason, it was crucial to gather more information. This study provided valuable information about biopsychosocial factors regarding COVID-19 person with physical disabilities and also focused on changes regarding areas of functioning, health conditions and contextual factors and possible additional burden experienced by people with physical disabilities.

1.3 Research question

What are the biopsychosocial impacts on the person with physical disabilities?

1.4 Study Objectives

1.4.1 General Objectives:

The aim of this study is to determine the biopsychosocial impact on person with physical disabilities.

1.4.2 Specific objectives:

1. To elicit the socio-demographic information.
2. To deliniate the health and COVID-19 related information.
3. To elucidate the COVID-19 symptoms.
4. To explore the comorbidities of people with physical disabilities.
5. To measure the functional status after COVID-19 with person with physical disabilities
6. To assess the functional status of person with physical disabilities without affecting COVID-19.
7. To gaze at the level of stress, fear, and anxiety for person with physical disabilities.
8. To find out the social impact on person with physical disabilities with or without having COVID-19.

1.5 Conceptual framework

Independent Variables

Dependent Variable

Socio demographic Characteristics (Eg. Age, Sex, Occupation, Education)

Clinical and Biomedical information of COVID-19 patients

Biopsychosocial Impact on person with Physical disability

Overall symptoms of both COVID and Non-COVID patients

Disability status of both COVID and Non-COVID patients
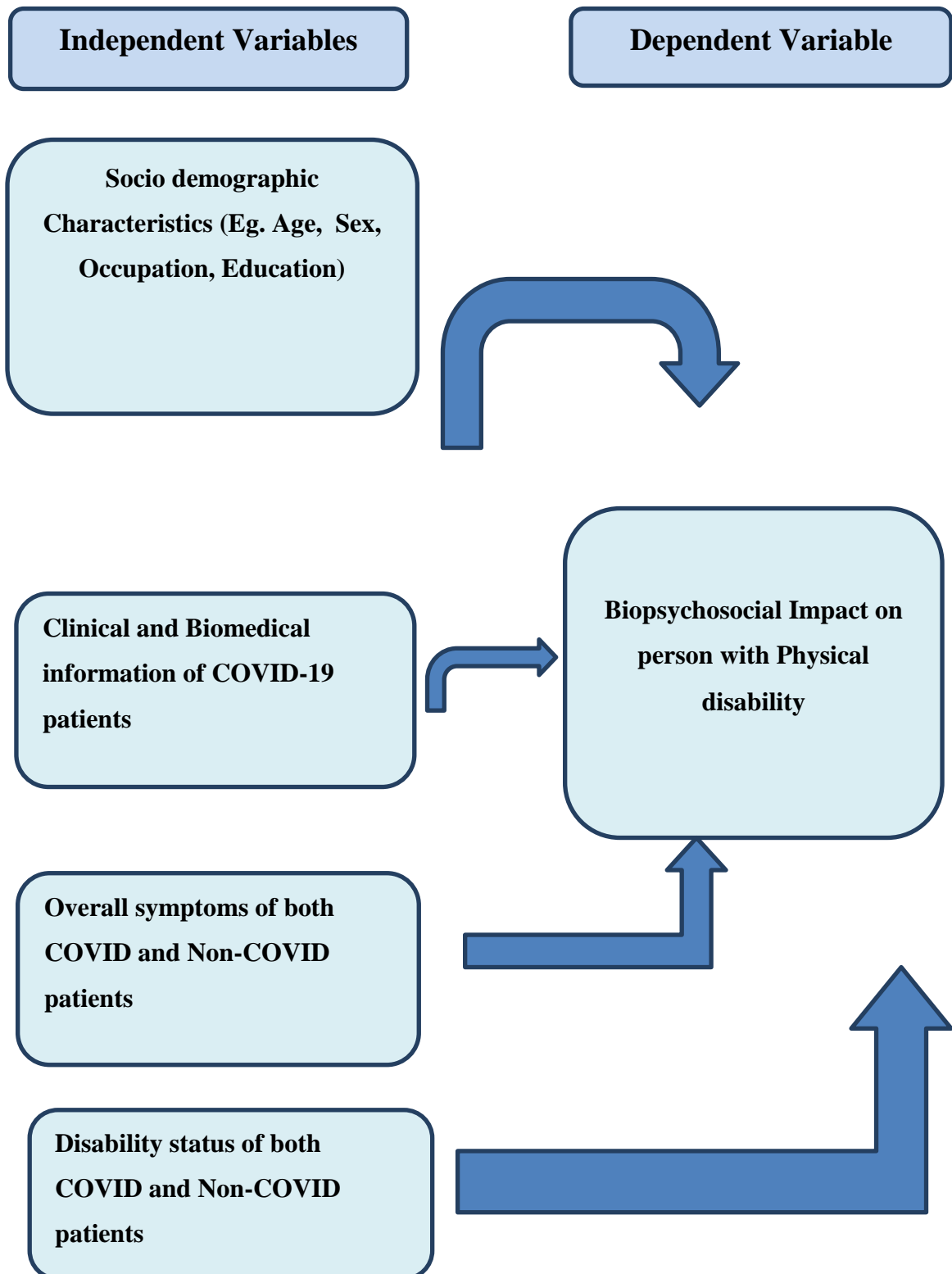
1.6 Operational definitions:

Bio psychosocial Model of Health

George L. Engel (1977) asserted that biopsychosocial model reveals the development of illness through the interaction of biological factors: genetic, biochemical; psychological factors: mood, personality, behavior; and social factors: cultural, familial, socioeconomic, medical. Engel developed bio psychosocial model as an alternative to biomedical model that was readily used by the physicians. He was of the view that bio psychosocial model would make it easier for health professionals to better understand their patients' subjective view of their illness and suffering.

COVID-19

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the virus that causes coronavirus disease (COVID-19). The current coronavirus disease 2019 (COVID-19) outbreak is a worldwide emergency, as its rapid spread and high mortality rate has caused severe disruptions.

Person with physical disabilities

According to the International Classification of Functioning, Disability and Health (ICF) of the World Health Organization (WHO, 2001), defining disability is a complex concept with multiple dimensions. Disability is "the umbrella term for impairments, activity limitations, and participation restrictions, referring to the negative aspects of the interaction between an individual (with a health condition) and that individual's contextual factors (environmental and personal factors)" (Vornholt et al., 2018).

Stroke

The World Health Organization (WHO) definition of stroke is: "rapidly developing clinical signs of focal (or global) disturbance of cerebral function, with symptoms lasting 24 hours or longer or leading to death, with no apparent cause other than of vascular origin".

Spinal Cord Injury

Spinal cord injury is defined as the occurrence of an acute traumatic lesion of neural elements in the spinal canal resulting in temporary or permanent sensory and/or motor deficit.

Paraplegia

Partial or complete paralysis of the lower half of the body with involvement of both legs that is usually due to injury or disease of the spinal cord in the thoracic or lumbar region.

Tetraplegia

Tetraplegia is caused by damage to the brain or the spinal cord at a high level C1–C7—in particular, spinal cord injuries secondary to an injury to the cervical spine. The injury, which is known as a lesion, causes victims to lose partial or total function of all four limbs, meaning the arms and the legs.

CHAPTER –II:	LITERRATURE REVIEW

2.1 History of COVID-19

Coronavirus disease-2019 (COVID-19) is a novel virus that causes a respiratory infection. The World Health Organization designated the COVID-19 outbreak a public health emergency on January 30, 2020. The World Health Organization labeled the COVID-19 outbreak a pandemic on March 12, 2020. There have been roughly 2,954,222 confirmed cases and 202,597 COVID-19-related fatalities worldwide, according to the WHO. By June 6, 2020, COVID-19 had infected almost 7 million individuals throughout the world and more than 400,857 people died in 213 nations (Mahase, 2020).

COVID-19 has been studied in a number of trials to see how it affects individuals with chronic conditions. The CFR for cardiovascular disease patients was 10.5 percent, 7.3 percent for diabetes, 6.3 percent for chronic respiratory syndrome, and 6 percent for hypertension, according to a review of 72.314 cases in China, while the CFR for the general population was 2.3 percent (Wu, 2020).

2.2 The International Classification of Functioning, Disability and Health (ICF)

The level of functioning is defined by the ICF as a dynamic interaction between the health conditions of an individual and his contextual factors (personal and environmental). According to the International Classification of Functioning, Disability and Health (ICF) of the World Health Organization (WHO, 2001), the term disability is used to define impairments, activity limitations and participation restrictions, which result from a non-optimal interaction between the health conditions, environmental factors, and personal factors. A disability is therefore characterized by difficulties encountered in the following areas of functioning: participation, activities, and body functions and structures. The ICF framework provides a biopsychosocial model of disability, allowing the classification of human level of functioning and the identification of related

physiological functions, anatomical structures, actions, tasks, areas of life, and external influences (Lebrasseur et al., 2021).

The biopsychosocial model represents the health discipline such as public health, psychology, psychiatry, medicine and all other allied health sciences. Its founder George L. Engel (1977) asserted that bio-psychosocial model reveals the development of illness through the interaction of biological factors: genetic, biochemical; psychological factors: mood, personality, behavior; and social factors: cultural, familial, socioeconomic, medical. Bio-psychosocial model shows a great potential to improve patient satisfaction, better adherence to prescriptions and better physical and psychological health (Taukeni, 2020).

2.2 Epidemiology of Stroke

In 1970, the World Health Organization defined stroke as 'rapidly developed clinical signs of focal (or global) disturbance of cerebral function, lasting more than 24 hours or leading to death, with no a:arent cause other than of vascular origin' (Coupland et al., 2017).

Another definition of disability, according to the U.N. (United Nations), Convention on the Rights of Persons with Disabilities, "persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others" (Vornholt et al., 2018).

Cerebrovascular diseases (CVDs) including stroke are the leading cause of death worldwide accounting for an estimated 6.2 million deaths per year, representing 11% of global deaths and ranked 7th among the major causes of disability- adjusted life year (DALY) loss in 2002, and it will become the second top cause of death and sixth leading cause of DALY loss globally by the year 2030 (Saha et al., 2018).

American Stroke Association (2016) stated that, it is the approximately five number leading cause of death (Mathers & Loncar, 2006). An estimated 62 million stroke survivors are present across the globe (Strong et al., 2007).

In Bangladesh, non-communicable diseases (NCDs) account for 52% of all causes of deaths, and 'CVDs alone account for 27% of those deaths. A systematic review showed that the prevalence of hypertension and type 2 diabetes were 13.7% and 6.7%, respectively (Saquib et al., 2012)

A study which is one of the largest population-based studies on the prevalence of stroke conducted in rural Bangladesh found the prevalence of stroke was 1.96. The highest prevalence was 9.65 per 1000 population, identified among patients aged 65 to 79 years. Males had higher prevalence (2.38 per 1000 population) than females (1.55 per 1000 population). Of the 24% of patients who had radiological examination (magnetic resonance imaging and computed tomography scan) reports 17.2% of stroke cases were ischemic, 4.8% were intracerebral, and about 1.1% were subarachnoid. Approximately 67% of patients were diagnosed as hypertensive, and 37% of patients had elevated blood glucose level. While 15% of patients were found to be overweight or obese, 45% of patients had raised blood cholesterol level. More than 10% of patients reported that they had heart disease before the occurrence of stroke. About 40% of patients had the history of tobacco consumption (Saha et al., 2018).

According to the age and sex-adjusted prevalence of disability in Lower Middle-Income Countries (LMICs) was 15.1% which was significantly higher than that observed in higher-income countries (10.8%). Followed by India (24.9%), the highest prevalence of disability was reported in Bangladesh (32%). It is noticeable that the prevalence of disability in most LMICs is higher in rural areas than in urban areas. In Bangladesh, they added that there are different estimates of the prevalence of disability, and the reported prevalence ranges from a minimum of 0.5% to a maximum of 31.9%. They also added that older age, lower socioeconomic status, and lower level of education are consistently associated with a higher prevalence of disability in Bangladesh (Islam et al., 2016).

Now a day's stroke is the major familiar cause of impairment in (ADLs) activities of daily living and it is increasing worldwide (Hsieh & Sheu, 2001). Stroke patients face many difficulties including hand function, balance problem, gait problem, and movement difficulties. Stroke imposes a substantial impact on the physical and psychological well-

being of both patients and their families. Up to 5 years after a stroke, 36% of stroke survivors are left with significant disabilities (Hankey et al., 2002). In the elderly population, Cerebrovascular accident (CVA) is the third most common cause of death worldwide, and one of the most common causes of disability. In addition, stroke survivors undergo lifelong disabilities about 15 to 30% and return to work only 13% (Rayegani et al., 2016).

When the coronavirus disease 2019 (COVID19) outbreak became paramount, medical care for other devastating diseases was negatively impacted. A potential challenges and solutions for stroke care during the COVID-19. The American Heart Association and American Stroke Association also issued a temporary emergency guidance for stroke care during the COVID-19 pandemic for stroke centers. There is no evidence that patients with stroke are more (or less) susceptible to COVID-19. Patients with COVID-19 can, however, develop a new stroke, and the neurological symptoms of COVID-19 could potentially make stroke recognition more difficult (Venketasubramanian et al., 2020)

2.3 Epidemiology of Spinal Cord Injury

Spinal cord injury results in a high level of individual disability, which is reflected in radical changes in lifestyle (Kawanishi & Greguol, 2013). According to Wyndaele & Wyndaele (2007), worldwide prevalence has been estimated to range between 223 and 755 per million people and because of improved survival rates, SCI prevalence is increasing. On the basis of a national data base of 30,822 SCI people in the United States, life expectancy of persons with SCI has been shown to increase over the past 30 years, with mortality rates reducing by approximately 40% in the first 2 years after the injury (Saadat et al., 2010).

The worldwide incidence and prevalence of SCI are increasing progressively. Chen et al. (2013) formulate a global mapping of spinal cord injury epidemiology, he found that the range of reported global prevalence is between 236 and 1009 per million. Asian countries particularly China and India are not appropriately represented, with available Asian statistics likely underestimating the overall prevalence within this populous region.

Prevalence data is only exits for the Kashmir region in India with a prevalence of between 236-464 per million traumatic SCI (Geyh et al., 2010).

2.4 Biopsychosocial Impact of COVID-19 on disable people according to ICF conceptual framework

The biopsychosocial model of COVID-19 highlights the complex interactions between the physical, psychological, and social underpinnings of the virus (Wong et al., 2020). The impact of COVID-19 on health after infection can be recognized in multiple biological systems. For example, patients with pre-existing cardiovascular disease have experienced worsening of their condition. Additionally, kidney dysfunction may occur, as well as olfactory and gustatory dysfunction (Laher et al., 2021). Furthermore, COVID-19 has been implicated in declines in cognitive and motor function, as well as the development of new psychiatric diagnoses.

The people with disability belong to a population with a higher prevalence of multiple chronic conditions, disability often results in lower economic status during the adult years and it frequently necessitates living in group communities, and disability status is documented associated with disparities in health care. The ICF conceptualises a person's level of functioning as a dynamic interaction between her or his health conditions, environmental factors, and personal factors. It is a biopsychosocial model of disability, based on an integration of the social and medical models of disability (Lebrasseur et al., 2021).

2.4.1 COVID-19 impact on transportation services, systems and policies among person with physical disabilities

A study investigated the major changes in stroke care during the COVID-19 outbreak. They found an insufficient ambulance resources were a potential reason for decreased stroke admission during the COVID-19 pandemic. They also found that insufficient public transportation was a potential reason for decreased stroke admission (Zhao et al., 2020).

2.4.2 COVID-19 impact on health services, systems and policies among person with physical disabilities

In some studies, the areas of stroke care considered as being the most affected by the current situation were rehabilitation and acute stroke care. According to the perspective of health care professionals, 1% of the respondents said that, within chronic diseases, the stroke area was the most impacted by COVID-19 due to the reduction of care (Aguiar et al., 2020). Discontinuation of physiotherapy because of COVID-19 pandemic restrictions has been found in a patients with ALS (Amyotrophic Lateral Sclerosis) (Capozzo et al., 2020).

A study showed that during COVID-19 pandemic there were needed urgent neurological care of patients chronic neurological disorder, deferred due to the pandemic; patients suspended hospital treatments, physiotherapy or other support interventions; and also reported a subjective worsening of neurological symptoms and the highest prevalence among patients were affected by stroke (82%) with hypertension (Piano et al., 2020).

2.4.3 COVID-19 impact on body functions and body structures (Biomedical impact) on person with physical disabilities

The coronavirus disease 2019 (COVID-19) pandemic has been placing a serious burden on health systems, thus threatening their ability to operate effectively for acute conditions in which treatments are highly time sensitive, such as cerebrovascular disorders and myocardial infarction (Aguiar et al., 2020). Hypertension, diabetes, cardiovascular disorders, pulmonary disorders, and cancer have been associated with an increased risk of severe Coronavirus disease 2019 (COVID-19) and mortality (Zhai et al., 2020). A recent review found a frequency ranging from 1.4 to 40%, with a pooled percentage of having a pre-existing neurological disease of 8.0% and the presence of comorbidities of stroke patients may have an increased mortality risk (Herman et al., 2020). In another study showed that COVID-19 patients requiring intensive care unit (ICU) admission had prior history of cerebrovascular disease more frequently (Wang et al., 2020)

Since the first edition of the clinical management protocol of COVID-19 with severe acute respiratory infection, the World Health Organization (WHO) recommended that those patients, even if they present with mild symptoms, should be admitted to a designated unit for close monitoring (WHO, 2020).

A study evaluated the presence of comorbid chronic neurological disorders (CND) is associated with a worse prognosis in patients with COVID-19 disease. Patients with CND were older, more disabled, had more vascular risk factors and comorbidities and fewer clinical symptoms of COVID-19. They presented 1.43 days earlier to the emergency department and need of ventilation support was similar. Presence of CND was an independent predictor of death (García et al., 2020).

A study conducted on 41 suspected 2019-nCoV patients who were admitted to a designated hospital in Wuhan, China and the more common symptoms at onset of illness were reported by fever 98%, cough 76%, and myalgia or fatigue 44%; less common symptoms were sputum production 28%, headache 8%, haemoptysis 5%, and diarrhoea 3%. All 41 patients had pneumonia with abnormal findings on chest CT scan report. (Huang et al., 2020).

Diabetes (38%) was the condition reported in a research to be most impacted by the reduction in health care resources due to COVID-19, followed by chronic obstructive pulmonary disease (COPD, 9%), hypertension (8%), heart disease (7%), asthma (7%), cancer (6%) and depression (6%). Additionally, the two most common co-occurring chronic diseases for which care was impacted by COVID-19 were diabetes and hypertension (30%), diabetes and COPD (13%), heart failure and COPD (8%) (Chudasama et al., 2020).

People with spinal cord injury (SCI) represent a unique diagnostic challenge as it relates to coronavirus disease COVID-19 pandemic. Individuals with SCI develop a myriad of physiological changes that not only increase their risk of morbidity from COVID-19, but may also mask the presentation of an acute respiratory illness which can potentially delay the diagnosis of COVID-19. These include temperature dysregulation (poikilothermia), impaired cough, and abnormal sensations at or below the neurological level of injury

15

(NLI). In addition, individuals with SCI may develop nonspecific symptoms during infection, including new or worsening spasticity, neuropathic pain, AD and/or fatigue, not consistent with the current Centers for Disease Control and Prevention (CDC) guidelines for COVID-19. In an international survey of health care professionals (n=783) who care for individuals with SCI, 10.3% reported their patients with COVID-19 had increased spasticity, 6.9% reported that their patients had rigors, and 6.9% reported that their patients had been asymptomatic. This early report warrants special consideration during triage of people with SCI for suspected COVID-19 (Korupolu et al., 2020)

2.4.4 Psychological impact of COVID-19 on person with physical disabilities

COVID-19 patients are likely to develop depression, anxiety, and sleep disturbances, according to recent case reports and observational studies, and these disorders should be properly diagnosed and treated by clinicians to improve prognosis, reduce length of stay, and avoid long-term mental health issues. A systematic review and meta-analysis was conducted to assess the prevalence of depression, anxiety, and sleep disturbances in COVID-19 patients in order to build a comprehensive picture of the pandemic's impact on COVID-19 patients' mental health, as well as to raise awareness for the importance of psychiatric screening and treatment in COVID-19 patients (Fu, 2020).

A study found that, both COVID-19 infected patients (19.3%) and the general population (14.3%) exhibited a higher proportion of severe depression symptoms. Anxiety-like behavior, such as getting quickly upset or irritated, was seen in the general population and COVID-19 patients (Zhang, 2020).

In a study, the result showed that, participants during COVID-19 were significantly more depressed than before COVID-19 and the loss in daily routine combined with physical distancing led to increased isolation and loneliness, ultimately reducing mental health and overall well-being. This study also stated that, it was important to consider how these psychosocial changes may occur for families with young children, those living with disabilities such as SCI and stroke, and older adults. Vulnerable populations may be more vulnerable to mental health problems posed by the coronavirus disease 2019 (COVID-19) pandemic. Meanwhile the older group scores showed no significant differences. (García et al., 2021).

A significant proportion of individuals living with disability had psychopathologies; 46.2% for depression symptoms, 48.1% for generalized anxiety disorder symptoms, and 71% for insomnia symptoms. Depression, anxiety, and insomnia were found highly prevalent among individuals with a disability during the COVID-19 period. Multiple socio-demographic and disability-related factors showed association with this high psychopathology (Necho et al., 2020) and in a study, patients with disability were not coming to the hospital for fear of virus infection was also a likely key factor (Xu et al., 2018).

According to a study by Kimberly et al. (2020), the COVID-19 pandemic has negatively impacted mental health and increased concerns of social isolation as well as access to medical supplies among the SCI population. Individuals with SCI have experienced difficulty accessing medical supplies due to the pandemic, and approximately half of our participants (52%) perceived that discrimination through medical rationing was occurring. Furthermore, compared to the general U.S. population, the pandemic had a greater negative impact on their mental health and access to medical supplies. Rehabilitation psychologists must advocate alongside the disability community to limit health disparities and to conduct outreach, specifically with regard to mental health issues (Kimberly et al., 2020).

A study revealed that, people living with SCI during the COVID-19 pandemic experienced a variety of personal, physical, psychological, and social challenges, each of which could disrupt daily functioning and quality of life (Hearn et., 2021)

2.4.5 Social impact of COVID-19 on person with physical disabilities (Activity and participation limitations)

The COVID-19 pandemic has led to wide-scale changes in societal organization. This has dramatically altered people's daily activities, especially among families with young children, those living with disabilities such as Spinal cord injury those who have experienced a stroke, and older adults (Reid et al., 2021).

Many studies were conducted on the social and activities participation for the person with physical disabilities. There was mixed evidence on the impact of the pandemic on physical exercise, with some studies finding no change in physical activity and others reporting a reduction; generally, participants with reduced physical activity had poorer mental health and greater worsening of symptoms. In a study, participants attributed anxiety symptoms to the perception of having to reconstruct normal life and adapt to new routines (Hormann et al., 2021). Lack of support appeared to be associated with poor well-being. In a study, patient with parkinson disease felt particularly stressed by lack of contact with grandchildren and being restricted in visiting loved ones in hospital or not being able to attend the funeral of a loved one (Brooks, 2020).

Participants in many studies reported loss of daily activities, including outdoor activities, social activities and obtaining food which were significantly associated with worsening psychiatric symptoms. At this time, there is limited understanding of how prolonged restrictions influence social and daily activities as well as health and well-being, particularly among families with children, people with disabilities such as SCI or stroke, and older adults. It is crucial to consider the unique challenges that COVID-19 restrictions create for those who may not have been considered when these policies were developed (Piano et al., 2020).

CHAPTER –III: METHODOLOGY

3.1 Study design

A cross-sectional study was chosen to conduct the study and as it was found to be an appropriate design to find out the objectives. Cross-sectional studies measure simultaneously the exposure and health outcome in a given population and in a given geographical area at a certain time.

This study included the maximum proportion of the population who came for receiving treatment at the Neurology & Spinal cord unit of Centre for the rehabilitation of the paralyzed (CRP) from December 2021 to May 2022. Moreover, this design was cost and time-effective for the researcher compared to an experimental study.

3.2 Study site and study area

In this study, biomedical information was collected from the outdoor and indoor neurology unit and spinal cord injury (SCI) unit of the CRP at Savar and Mirpur, Dhaka, while their social and psychological factors were collected from the participant's own community.

3.3 Study Population

The study populations were stroke and spinal cord injury patients who came to receive treatment at CRP- Savar and Mirpur and people with stroke and spinal cord injury were living in the community after completing their rehabilitation.

3.4 Sampling technique

A convenient sampling technique was selected by the researcher to draw out the sample from the population and as it is one of the easiest, cheapest and quicker methods of sample selection. It is a type of nonprobality or nonrandom sampling where members of the target population that meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate are included in the study (Etikan et al., 2016).

3.5 Sample size Calculation (Cross-sectional): (Hannan, 2016)

Sampling procedure for a cross-sectional study done by the following equation-

The equation of sample size calculation are given below,

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

Where

d is the precision

p is the expected prevalence

q is 1-p

If p = 0.3 now let's say we want 95% confidence, and at least 5% plus or minus precision (Islam et al., 2013).

A 95% confidence level gives us Z values of 1.96, per the normal tables,

Sample size

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

$$n = \frac{(1.96)^2 \times 0.3 \times 0.7}{(0.05)^{\wedge}2}$$

$$= 322.56$$

$$= 323$$

According to this equation, the sample should be 323 people. The unavailability of the patients, lack of opportunity, and the interruption during the data collection period caused in reduction of the sample size, therefore only 212 patients were selected.

3.6 Selection Criteria

3.6.1 Inclusion criteria

1. **Patients diagnosed as stroke**: Stroke patients with ischemic or hemorrhagic stroke based on MRI or CT scan were included (Winstein et al., 2016).
2. Patient with both paraplegic and tetraplegic spinal cord injury were included in this study.
3. Person with physical disabilities of having COVID-19 or without COVID-19.
4. **Both gender:** Both male and female stroke and spinal cord injury patients were included because Sherrington, et al. (2016) showed that prevalence of male and female both are at high risk.
5. **Adult participants aged ≥18 years**: This age range was selected because most of the people suffering from stroke around this age range showed most vulnerability (Timmermans et al., 2014). Age more than 18 years as WHODAS 2.0 is not administered below 18 years of age (Ustun et al., 2010).
6. Patients who willingly participated and were readily accessible.
7. People who were medically stable.

3.6.2 Exclusion criteria

1. Patient who were not interested to participate.
2. Patient who had cognitive problem (Morich & Wijck, 2012).
3. ICU patient /medically unstable patient (Kim et al., 2017).

3.7 Outcome measurement Tool

- Post-COVID-19 Functional Status (PCFS) Scale
- The COVID Stress Scales (CSS)
- Fear of COVID-19 Scale (FCV-19S)
- COVID-19 anxiety scale (CAS)
- WHODAS 2.0 -36-item version, interviewer-administered.

3.7.1 The Post-COVID-19 Functional Status scale: A tool to measure functional status over time after COVID-19

The PCFS scale focuses on key elements of everyday living and is designed to assist users become aware of existing functional limits in COVID-19 patients, whether or not these restrictions are due to the specific illness, and to objectively quantify the degree of impairment. As a result, the scale is not intended to replace other relevant measures for measuring quality of life, fatigue, or dyspnea, but rather to serve as an additional tool for assessing long-term effects of COVID-19 functional status. During follow-up following infection, the questionnaire was administered.

3.7.2 Fear of COVID-19 Scale (FCV-19S)

The seven-item FCV-19S was developed to quickly assess individuals' fear towards COVID-19. Responding to items on a five-point Likert scale (1= strongly disagree; 5=strongly agree), the FCV-19S has been found to be psychometrically sound in assessing fear of COVID-19 in different populations, including different ethnic groups (Rachaniotis et al., 2021)

3.7.3 COVID Stress Scales (CSS)

The CSS was constructed by examining the relevant literature and by consulting experts on health-related anxiety. The following domains were identified: (1) fear about the dangers of COVID-19 (14 items), (2) fear about sources of COVID-19 related contamination (e.g. objects, surfaces; 8 items), (3) COVID-19-xenophobia (e.g. fear that foreigners are sources of COVID-19; 7 items), (4) fear about the personal social and economic consequences of COVID-19 (e.g. fear of disruption in the supply chain, fear of looting or rioting; 10 items), (5) COVID-19 related checking (e.g., checking news media or social media, seeking reassurance from friends or medical professionals; 7 items), and (6) traumatic stress symptoms related to COVID-19 (e.g. unwanted intrusive thoughts or nightmares relating to COVID-19; 7 items).

3.7.4 COVID-19 anxiety scale (CAS)

The coronavirus anxiety scale (CAS) is a self-reported mental health screener of dysfunctional anxiety associated with the coronavirus crisis. Because a significant number of people experience clinically significant fear and anxiety during an infectious disease outbreak, the CAS was developed to help clinicians and researchers efficiently identify cases of functionally impaired individuals due coronavirus-related anxiety (Lee, 2020).

3.7.5 World Health Organization Disability Assessment Schedule (WHODAS) 2.0 -36-item version, interviewer-administered

The adult self-administered version of the World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0) is a 36-item measure that assesses disability in adults aged 18 years and older. Each item on the WHODAS 2.0 asks the individual to rate how much difficulty he or she has had in specific areas of functioning during the past 30 days. It assesses disability across six domains, including understanding and communicating, getting around, self-care, getting along with people, life activities (i.e., household, work, and/or school activities), and participation in society (Arowoiya et al., 2017).

3.8 Data collection

3.8.1 Data collection tools
- Informed Consent Structured questionnaire in Bangla.
- Self-structured questionnaire containing socio-demographic information and another question for medical information, PCFS, and the original version of WHODAS 2.0-36-item version.
- Some other necessary materials like pen, pencil, and white paper, clip board & note book are also needed

3.8.2 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, 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 a face to face interview and asked questions. Physical environment was considered strictly. Stimuli that can distract interviewee were removed to ensure adequate attention of interview. Interviewee was ask questions alone as much as possible with consent as sometimes close relatives can guide answer for them. The researcher built report 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). Face to face interviews were also effective to describe characteristics of a population. Face to face interview was used to find specific data which describes the population descriptively during discussion. According to the participants" understanding level, sometimes the questions were described in the native language so that the patients can understand the questions perfectly and answer accurately. All the data were collected by the researcher own to avoid the errors.

3.8.3 Data analysis

Data was analyzed using the Statistical Package for the Social Science (SPSS) software for windows (version 25). Pearson Chi-square test was used to find the association between two qualitative variables. The non-parametric Mann-Whitney-U test and Kruskal–Wallis test were utilized to find out the difference in scores between two and more than two groups respectively. Spearman correlation coefficient was used to determine correlation between two quantitative variables.

3.9 Ethical consideration

The whole process of this research project was done by following the Bangladesh Medical Research Council (BMRC) guidelines, Institution Review Board (IRB), and World Health Organization (WHO) Research guidelines. The proposal of the dissertation including methodology was approved by Institutional Review Board and obtained permission from the concerned authority of the ethical committee of Bangladesh Health Professions Institute (BHPI). Informed consent was used to take permission from all participants. Participants' rights and privileges were ensured. All the participants were aware of the aim and objectives of the study. Findings of the study were disseminated with the approval of regarding authority. The researcher strictly maintained the confidentiality regarding participant's condition and treatment.

3.10 Rigor of the study

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

Results

Data was collected on 212 persons with physical disability with 143 male and 69 female participants. These results were based on socio-demographic, clinical and biomedical related and functional disability related variables.

Participant Demographics

A total of two hundred twelve persons with physical disabilities completed the survey. The demographic information of the participants is summarized in Table 1. The age range of the participants was 18 to 80 years. The mean±SD of the age of participants was 45.21±13.88, with 187 (88.2%) married and 93 (43.8%) had regular job. More than half of the participants (54.2%) had secondary education or higher and almost half (47.6%) lived in rural areas. The monthly family income of the participants ranged from Bangladeshi Taka (BDT) 17000 to 42500 equivalent to US$185 to 462.

Table 1: Socio-demographic information of participants

Variables	(Mean ±SD)/ n (%)
Age (years)	45.21 ± 14.06
Age ≥45 years	124 (58.5)
Gender (Male)	143 (67.5)
Marital status (married)	187 (88.2)
Educational status (Secondary education or higher)	115 (54.2)
Occupation (Regular job)	93 (43.8)
Living area (rural)	101 (47.6)
Monthly family income [Median (IQR)] BDT	20000 (Q1=17000 – Q3=42500)

Out of the 212 participants, only 27 (12.73%) persons with a physical disability were COVID-19 positive. The COVID-19 related and biomedical information of these participants are summarized in Table 2. There were 13 participants (48.1%) in each of the ischemic and hemorrhagic stroke groups and 1 (3.7%) participant had paraplegic spinal cord injury. Duration of disability was for less than 6 months in 23 (85.2%) respondents and the rest had suffered for a longer duration.

Among the persons with disability who had COVID-19, 10 (37.0%) had high blood pressure, 7 (25.9%) had diabetes, and 4 (14.8%) had heart disease. The rest of them suffered from conditions like back pain, lung disease, and depression. Comorbid conditions were present in 23 (85.2%) respondents for which they had taken treatment while 12 (44.4%) suffered from activity limitation due to comorbid diseases. Among the non COVID-19 participants, 77 (41.6%) had hemorrhagic stroke and 62 (33.5%) had ischemic stroke. The remaining 46 (24.9%) had paraplegic spinal cord injuries. Majority (n=147, 79.5%) struggled with their disability for less than 6 months and the rest (n=30, 16.2%) suffered for almost one year. Most of the non-COVID-19 affected participants (n=160, 86.5%) had taken COVID-19 vaccine and almost two/third had completed second dose (n=117, 63.2%). Comorbidities in non-COVID-19 participants included high blood pressure in 50 (27.0%), diabetes in 24 (13.0%), heart disease in 25 (13.5%), depression in 21 (11.4%) and back pain in 20 (10.8%). The rest of them suffered from different conditions like lung disease, kidney disease, liver disease, cancer, osteoarthritis, and degenerative arthritis, whereas 4 (2.2%) had no comorbid disease. Majority (n=151, 81.6%) had taken treatment for respected comorbid diseases, and 91 (49.2%) had suffered from activity limitation due to comorbid diseases. Receiving treatment for comorbid conditions was significantly higher in COVID-19 positive respondents compared to those who were COVID-19 negative (p= 0.031), (Table 2).

Table 2: Clinical and biomedical information of the participants (Pearson Chi-square test)

Clinical & biomedical parameters	Non-COVID participants n (%)	COVID-19 participants n (%)	p-value
Type of disability			
Ischemic stroke	62 (33.5)	13 (48.1)	0.563
Hemorrhagic stroke	77 (41.6)	13 (48.1)	
Paraplegic (SCI)	46 (24.9)	1 (3.7)	
Duration of experiencing disability			
0 – 6 months	147 (79.5)	23 (85.2)	0.672
>6 months to 1 year	30 (16.2)	3 (11.1)	
>1 – 2 years	8 (4.3)	1 (3.7)	
Comorbid diseases			
Heart diseases	28 (15.1)	4 (14.8)	0.795
High blood pressure	53 (28.6)	10 (37.0)	
Lung disease	10 (5.4)	1 (3.7)	
Diabetes	36 (19.5)	7 (25.9)	
Depression	25 (13.5)	2 (7.4)	
Back pain	33 (17.8)	2 (7.4)	
Received treatment for Comorbid diseases			
Yes	151 (81.6)	23 (85.2)	**0.031**
No	34 (18.4)	4 (14.8)	
Limiting activities due to Comorbid diseases			
Yes	91 (49.2)	12 (44.4)	0.825
No	94 (50.8)	13 (55.6)	
COVID-19 vaccine taken			
No	25 (13.5)	-	0.683
1st dose completed	29 (15.7)	4 (14.8)	
2nd dose completed	117 (63.2)	22 (81.5)	
Booster dose completed	14 (7.6)	1 (3.7)	

Overall COVID-19 symptoms of people with physical disability (Among 27 COVID-19 affected participants)
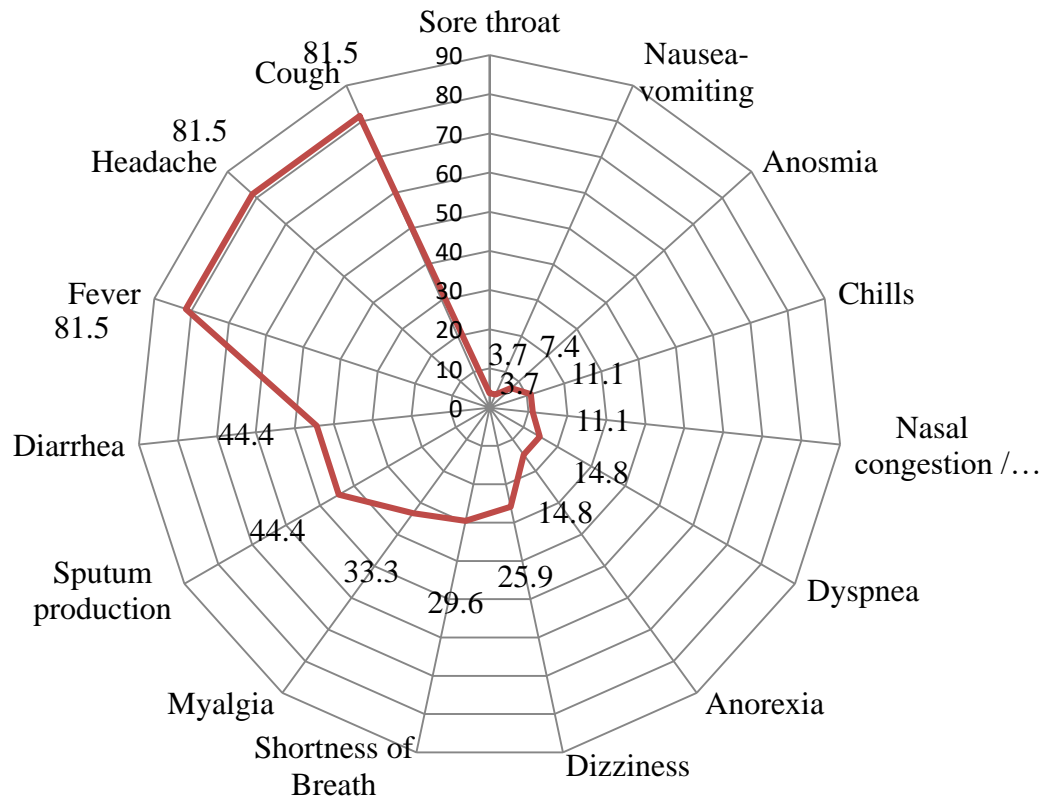
Figure 1: Radar plot for symptoms frequency.

Overall COVID-19 symptoms of people with physical disability is shown in figure. This radar plot illustrates that out of 27 participants 22 (81.5%) were suffering from fever, cough and headache. About one third (29%) suffered from breathlessness, another one third (33.3%) suffered from myalgia, 14.8% had dyspnea and anorexia, 44.4% had diarrhea and only 11.1% reported suffering from chills and nasal congestion.

Table-3 shows information on COVID-19 positive cases. Among them, 11 (40.7%) were hospitalized due to COVID-19, 6 (22.2%) had a smoking history. Cough (n=11, 40.7%) and fever (n=10, 37%) were the most common symptoms of COVID-19 in the first fourteen days, while cough (n=12, 44.4%) and headache (n=11, 40.7%) were the common symptoms in the second fourteen days. Twelve respondents (44.4%) tested negative after twenty-eight days of isolation, while 10 (37%) tested negative after fourteen days of isolation. Majority were treated for COVID-19 with medicine only (n=23, 85.2%), whereas 4 (14.8%) required both medication and oxygen inhalation. Among the COVID-19 affected respondents, 22 (81.5%) completed the second dose of COVID-19 vaccination, and among them, 12 (44.4%) received the vaccine of Sinopharm (Beijing). In case of overall symptoms experienced by the COVID-19 affected respondents fever (n=22, 81.5%), cough (n=22, 81.5%), fatigue (n=23, 85.2%), headache (n=22, 81.5%), sputum production (n=12, 44.4%), diarrhea (n=12, 44.4%) and myalgia (n=9, 33.3%) were the most common among the other symptoms. Among 212 participants, about 185 (87.27%) persons with a physical disability who were not COVID-19 positive had taken part in the survey.

Table 3: COVID-19 related information of persons with disability (Among 27 COVID-19 affected participants)

COVID-19 information	n (%)	COVID-19 information	n (%)
Hospital admission due to COVID-19		**Smoking history before COVID-19**	
Yes	11 (40.7)	Yes	6 (22.2)
No	16 (59.3)	No	21 (77.8)
First 14 days symptoms		**Second 14 days symptoms**	
Fever	10 (37.0)	Cough	12 (44.4)
Cough	11 (40.7)	Headache	11 (40.7)
Headache	5 (18.5)	Body pain	3 (11.1)
Body pain	1 (3.7)	Fever	1 (3.7)
Time of tested negative		**Treatment received due to COVID-19**	
After 14 days	10 (37.0)	Medication	23 (85.2)
After 28 days	17 (63.0)	Medication & oxygen supplementation	4 (14.8)
Overall COVID-19 symptoms		**Overall COVID-19 symptoms**	
Symptoms	**n (%)**	**Symptoms**	**n (%)**
Fever	22 (81.5)	Cough	22 (81.5)
Fatigue	23 (85.2)	Sputum production	12 (44.4)
Headache	22 (81.5)	Diarrhea	12 (44.4)
Myalgia	9 (33.3)	Shortness of Breath	8 (29.6)
Sore throat	1 (3.7)	Nausea-vomiting	1 (3.7)
Chills	3 (11.1)	Nasal congestion / Rhinorrhea	3 (11.1)
Dyspnea	4 (14.8)	Anorexia	4 (14.8)
Dizziness	7 (25.9)	Anosmia	2 (7.4)

The correlation between demographical factors like age and monthly family income with psychological (Stress, fear & anxiety) impacts of participants using the Spearman correlation test is presented in Table 4. In the correlation between the age of the participants and the total stress score provided, the correlation coefficient value (r) was 0.418, and the p-value was 0.030 ($p < 0.05$), which indicated a significant and positive correlation between both variables. Respectively the correlation between the age of the participants and total fear score provided the correlation coefficient value (r) 0.573, and the p-value was 0.002 ($p < 0.01$), which indicated a highly significant and positive correlation between both variables. So, it can be said that the age of the participants is significantly correlated with the stress and fear impact of the participants. They all have positive correlations with each variable but not significant ones with the other factors.

Table 4: Correlations between demographical factors (age, monthly family income) of COVID-19 affected patients with psychological (Stress, fear & anxiety) impacts of participants using Spearman correlation coefficients (n=27)

Variables	Stress		Fear		Anxiety	
	Correlation Coefficient (r)	p-value	Correlation Coefficient (r)	p-value	Correlation Coefficient (r)	p-value
Age	0.418	**0.030**	0.573	**0.002**	0.216	0.279
Monthly income	0.152	0.448	0.097	0.630	0.030	0.882

The mean and standard deviation for the total Post COVID-19 Functional Status (PCFS) score and WHODAS 2.0 score associated with demographic and clinical factors are presented in Table 5. Respondents below 45 years were found functionally impaired after post-COVID-19 functional status. Female participants, those with higher education, teachers, service workers and farmers, urban participants and those with monthly family income above 32000 BDT were more prone to functional limitation in post-COVID-19 active status. In terms of clinical and biomedical status, participants with paraplegic spinal cord injury were more vulnerable to post COVID-19 functional rate, while those suffering from disability for at least one to two years were found to be more functionally challenged to post COVID-19 functional status. Higher functional vulnerability was observed in respondents admitted to the hospital due to COVID-19, those who continued smoking and those with symptoms like cough, headache, and fever in both the first and second fourteen days, those who tested negative in the first fourteen days and patients who had only received the first dose of the vaccine. Comorbid conditions like diabetes, depression, back pain, heart diseases, and high blood pressure were associated with more functional limitations than other comorbidities. Now as for non-COVID participants, higher vulnerability to physical disability was seen in male patients, those below 45 years, participants who had less than secondary level education, students, laborers, and service workers, those living in rural areas, and those with a monthly income below 32000 BDT. Type of disability differed significant ($p < 0.01$) by total WHODAS 2.0 score where it was found that persons with paraplegic spinal cord injury were more functionally disabled than other persons with disability and respondents who have been suffering from disability for at least one to two years were found more vulnerable to physical disability. Comorbidity showed higher functional disability status among disabled persons ($p < 0.05$). Participants who had suffered from heart diseases, high blood pressure, lung disease, diabetes and back pain were found in more disability prone status than others.

Table 5: Mean and standard deviation of demographic and clinical factors of COVID-19 affected patients for Post COVID-19 Functional Status (PCFS) Scale and non-COVID affected patient for WHODAS 2.0 score. (Mann-Whitney U test or Kruskal-Wallis test)

Demographic factors		PCFS (COVID patients) Mean±SD	p-value	WHODAS (non-COVID patients) Mean±SD	p-value
Age	<45 years	45.44±5.43	0.717[a]	113±32	0.068[a]
	≥45 years	45.39±5.05		107±27	
Gender	Male	45.33±5.17	0.977[a]	112±28	0.189[a]
	Female	45.67±5.20		106±32	
Educational status	No formal education	41.00±0.00	0.394[b]	112±25	0.955[b]
	Primary education	44.57±3.10		110±26	
	Secondary education	44.69±5.07		111±28	
	Higher secondary	49.00±0.00		108±41	
	Bachelor or above	48.50±8.35		107±37	
Occupation	Businessmen	45.44±3.36	0.541[b]	105±27	**0.014[b]**
	Housewife	42.83±4.31		110±28	
	Service worker	46.80±8.47		122±33	
	Farmer	46.00±5.79		114±30	
	Teacher	48.00±1.41		105±29	
Living area	Rural	44.57±4.01	0.642[b]	115±27	0.074[b]
	Semi-urban	45.17±5.98		103±32	
	Urban	47.29±6.42		110±29	
Monthly family income	< 32000 BDT	44.71±3.82	0.338[a]	113±30	**0.005[a]**
	≥ 32000 BDT	46.60±6.79		101±26	
Clinical and biomedical factors		Mean±SD	p-value	Mean±SD	p-value

Type of disability	Ischemic stroke	46.77±5.17	0.096[b]	108±26	**0.001[b]**
	Hemorrhagic stroke	43.38±4.07		104±31	
	Paraplegic (SCI)	54.00±0.00		112±27	
Duration of experiencing disability	0 – 6 months	45.17±5.13	0.297[b]	111±27	0.714[b]
	Almost 1 year	44.33±2.52		107±34	
	1 – 2 years	54.00±0.00		94±49	
COVID-19 vaccine taken	No	-	0.831[b]	105±39	0.865[b]
	1st dose completed	46.50±7.14		108±29	
	2nd dose completed	45.18±4.98		111±28	
	Booster dose completed	46.00±0.00		110±25	
Comorbid diseases	Heart disease	44.25±4.43	0.578[b]	115±30	**0.003[b]**
	High blood pressure	44.90±3.78		118±27	
	Lung disease	40.00±0.00		100±33	
	Diabetes	45.86±7.58		106±24	
	Depression	48.00±8.49		105±20	
	Back pain	47.67±1.15		116±27	
Limited activities due to Comorbid diseases	Yes	43.92±3.78	0.202[a]	112±31	0.134[a]
	No	46.60±5.77		107±28	

(a = Mann-Whitney U test and b = Kruskal Wallis test)

Mean and standard deviation of demographic and clinical factors of COVID-19 affected patients for Participation in usual social roles and non-COVID affected patient for Participation in society domain of WHODAS 2.0 are presented in Table 6. Respondents with below 45 years in both COVID-19 and non-COVID group had significant limitation ($p < 0.05$) in social participation and also for comorbid conditions like heart disease, high blood pressure, diabetes etc. Among non-COVID respondents service workers, those with below 32000 BDT family income had also significant limitation in social participations. In terms of clinical factors, it was found that persons with paraplegic spinal cord injury had suffered significant activity limitations ($p < 0.05$) in social participation rather than other persons with disability.

Table 6: Mean and standard deviation of demographic and clinical factors of COVID-19 affected patients for Participation in usual social roles and non-COVID affected patient for Participation in society domain of WHODAS 2.0. (Mann- Whitney U test or Kruskal-Wallis test)

Demographic factors		Participation in usual social roles (COVID patients) Mean±SD	p-value	Participation in society (non-COVID patients) Mean±SD	p-value
Age	<45 years	15±2	**0.035[a]**	28±9	**0.006[a]**
	≥45 years	13±3		25±8	
Gender	Male	13±3	0.595[a]	23±6	0.169[a]
	Female	15±2		20±2	
Educational status	No formal education	12±0	0.616[b]	27±8	0.715[b]
	Primary education	14±2		26±7	
	Secondary education	13±3		26±8	
	Higher secondary	15±0		27±12	
	Bachelor or above	13±4		26±9	
Occupation	Businessmen	13±3	0.889[b]	24±8	**0.027[b]**
	Housewife	14±1		28±9	
	Service worker	15±2		30±10	
	Farmer	14±3		28±9	
	Teacher	11±6		25±7	
Living area	Rural	14±2	0.750[b]	28±8	0.060[b]
	Semi-urban	14±2		24±9	
	Urban	12±4		26±8	
Monthly family income	< 32000 BDT	13±3	0.879[a]	27±9	**0.005[a]**
	≥ 32000 BDTBDT	14±2		24±7	

Clinical and biomedical factors		Mean±SD	p-value	Mean±SD	p-value
Type of disability	Ischemic stroke	14±2	0.238[b]	25±7	**0.001[b]**
	Hemorrhagic stroke	13±3		24±9	
	Paraplegic (SCI)	18±0		31±9	
Duration of experiencing disability	0 – 6 months	14±2	0.098[b]	27±8	0.539[b]
	Almost 1 year	11±4		25±9	
	1 – 2 years	18±0		23±12	
COVID-19 vaccine taken	No	-	0.225[b]	24±9	0.958[b]
	1st dose completed	16±2		26±9	
	2nd dose completed	13±3		27±9	
	Booster dose completed	13±0		26±7	
Comorbid diseases	Heart disease	11±3	**0.038[b]**	29±9	**0.006[b]**
	High blood pressure	13±3		28±9	
	Lung disease	9±0		23±8	
	Diabetes	15±1		25±8	
	Depression	16±3		23±6	
	Back pain	15±1		27±8	
Limited activities due to Comorbid diseases	Yes	14±3	0.473[a]	29±9	**0.001[a]**
	No	13±3		24±7	

(a = Mann-Whitney U test and b = Kruskal Wallis test)

This study aimed to determine the biopsychosocial factors that contribute to the effects of COVID- 19 on the persons with disabilities as measured by PCFS and the same on non-COVID patients measured with WHODAS 2.0. The measurement tools were valid and discriminatory and suggested that people with stroke and SCI perceived themselves as having a moderate level of disability during COVID-19. Handberg et al. (2021) conducted a research on health perception of neuromuscular disease patients and found similar findings suggesting that 40% of adults had worse general health, than the previous year and this epidemic was responsible for 30% of the alterations.

In the current study, among the non-COVID participants, service workers and farmers and those with lower income showed higher disability level. The supportive nature of the rehabilitation setting and the availability of medical and allied health staff, along with the accessible environment, may have contributed to participants' experiencing moderate disability in the domains overall.

According to this study, comorbid conditions contributed to higher disability or functional incapacitation in non-COVID-19 respondents than COVID-19 positive cases, however, the sample size in the COVID group was much smaller and a higher sample size may have shown different results. The pandemic lasted for months and this could jeopardize the use of medical services to patients with chronic diseases (Chudasama et al., 2020).

The SARS-CoV-2 infection is of clustering onset and is more likely to affect older males with comorbidities. This group is likely to have higher risk factors associated with acute ischemic stroke or embolization of vascular events. The typical symptoms are fever, sore throat, fatigue, cough or dyspnea coupled with recent exposure (Zhai et al., 2020). The findings of our study revealed that cough and fever were the most common COVID-19 symptoms in the first fourteen days, while cough and headache were reported more commonly in the second fourteen days in the disabled individuals having stroke (ishchaemic and haemorrhagic) and spinal cord injury. Wnuk et al. (2021) described the neurological symptoms during initial period of COVID-19, where 84.5% of affected

persons experienced fatigue, myalgia and muscle weakness. Patients who died during hospitalisation were older and more often had decreased level of consciousness, delirium, arterial hypotension or stroke during or before hospitalization, whereas those who survived suffered from headache or decreased mood.

Participants with paraplegic spinal cord injury were more vulnerable to post COVID-19 functional disability, while those suffering from disability for at least one to two years were found to be more functionally challenged to post COVID-19 functional status. The COVID-19 pandemic environment presented a special diagnostic challenge for the SCI population. Given the altered physiology described in SCI, an elevated index of suspicion for COVID-19 infection is required in cases of unusual presentation of a respiratory illness (Korupolu et al., 2021). It is plausible that COVID-19 overburdened an already vulnerable state of these patients.

Older patients with stroke and spinal cord injury showed higher levels of stress and fear and therefore it is critical to determine individuals' mental and psychological states during this unusual, challenging, and vital period. Quick transmission of COVID-19, high death rate, and fear about the future, showed significant psychological consequences such as sadness, anxiety, and post-traumatic stress symptoms in other studies (Mackolil & Mackolil, 2020). A prior research on mental health in the Chinese general population during the COVID-19 outbreak, found that 35% of the population experienced psychological distress (Qiu et al., 2020). Among people most affected psychologically by the COVID-19 are those with an accompanying chronic disease (Ozamiz-Etxebarria et al., 2020; Özdin & Bayrak Özdin, 2020). Therefore, it was expected that stroke and spinal cord injury patients have pronounced psychological distress than the general population during the COVID-19 outbreak. Another study reported the impact of COVID-19 pandemic on the psychological status of relapsing-remitting multiple sclerosis (RRMS) and the result elicited had different degrees of fear of COVID-19 disease (Stojanov et al., 2020)

Anxiety has a significant effect on the immune system of the body, increasing the likelihood of catching the virus (World Health Organization, 2020). Low mental and psychological ratings might be due to the stroke itself. Post-stroke consequences have

been identified as psychological symptoms such as sadness and anxiety (Langhorne et al., 2000). In addition, the inability of the individuals to perform the duties they previously had, might lead to sadness (Dowswell et al., 2000). Another psychological component that might have had a role in the poor results is depression. Post-stroke depression has been linked to significant impairment, a poor overall prognosis, and the inability to return to work in young adults. The fact that vitality was the highest-scoring domain in the current study sample might indicate that, despite limits in physical and psychological dimensions, the participants did not suffer from severe exhaustion (Neau et al., 1998). However, a longer follow-up is necessary to establish the causal relationship between psychosocial deterioration and functional impairment in stroke patients. Frequent concurrent presentation of depression with stroke was found to be the cause of the decline in physical and psychosocial function among stroke patients.

The COVID-19 pandemic has led to wide-scale changes in societal organization. This has dramatically altered people's daily activities, especially among families with young children, those living with disabilities such as SCI, those who have experienced a stroke, and older adults (Reid et al., 2021). Our study found that the persons with physical disabilities like stroke, SCI who were below 45 years and those with comorbid conditions like heart disease, high blood pressure, diabetes etc. in both COVID-19 and non-COVID group had significantly limited participation in social activities. Brooks et al. (2020) revealed that patient with Parkinson disease felt particularly stressed by lack of contact with their grandchildren and being restricted in visiting loved ones in hospital or not being able to attend the funeral of a loved one.

5.1 Limitations:

- The main obstacle was not getting large number of patients with COVID-19 with a physical disability because most patients were reluctant to provide information.
- Fear of the consequences of COVID-19, prevented some patients to come to a consensus for the inclusion in the study.

- Patients with COVID-19 who were admitted in hospital often fail to provide information to data collectors due to wrong perceptions regarding the society where they live.

- Only 27 participations from COVID-19 with stroke and paraplegic SCI were reported, and therefore it was hard to generalize to the whole stroke patients' population.

- This study couldn't identify other neurological types of physical disability such as GBS, Multiple sclerosis, Parkinson Disease etc.

CHAPTER –VI: CONCLUSION AND RECOMMENDATION

6.1 Conclusion

The findings provide a snapshot of the level of disability and functional activity of participants at the time of their rehabilitation. At the point of rehabilitation services, the participants perceived to have a moderate level of disability and good functional activity. The impact of biopsychosocial factors for this physical disability was moderate, implying that they were experiencing more challenges with comorbidity, psychological and social functioning. A greater focus on community-based rehabilitation strategies and procedures may be required to contribute to reduce levels of disability and improve functional activity. The outcomes of this study may be used to identify areas of inpatient and outpatient rehabilitation that need to be improved but, perhaps more importantly, provide a baseline for comparing and monitoring the level of disability and functional activity for people with a disability once they return to their communities.

6.2 Recommendations

The following recommendations are-

- Future studies should include huge number of stroke and disability as this factors could affect the biopsychosocial factors of individual.
- Future studies can be conducted the whole Bangladesh considering tertiary level Hospital for better benefit of people with physical disabilities.
- It will be better to collect samples from the community, different hospitals, clinics, institutes, and organizations in different districts of Bangladesh to generalize the result.
- A follow up-cohort study which will assist to identify the unpredictable reason in the long run which help this group of participants.

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Bangladesh Health Professions Institute (BHPI),CRP
Savar, Dhaka-1343.Bangladesh

Subject: Application for review and ethical approval.

Dear Sir,

With due respect, I am Saiba Muhammad Sabrin, student of final year B.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 research project entitled **"Biopsychosocial impact of COVID 19 on person with physical disabilities"** under the supervision of Ehsanur Rahman, Associate Professor, Department of Physiotherapy, BHPI.

The purpose of the study is to gain in-depth insight and understanding from people with physical disabilities in order to understand their biopsychosocial impact of COVID 19. The study involves a face-to-face interview by using a questionnaire to explore the biopsychosocial impact of COVID 19 on the physically disabled person who received their treatment at Savar and Mirpur CRP that may take 20 to 30 minutes to fill in the questionnaire. There is no likelihood of any harm to the participants. 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 research project and starting data collection. I can also assure you that I will maintain all the requirements for the study.

Sincerely, Thesis presentation date: 12th October, 2021

Saiba

Saiba Muhammad Sabrin
Final Year B.Sc. in Physiotherapy
Session: 2016 – 2017,
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Shofiz 12.03.22

Head of Department
B.Sc. in Physiotherapy, BHPI.
Md. Shofiqul Islam
Associate Professor & Head
Department of Physiotherapy
Bangladesh Health Professions institute (BHPI)
CRP, Chapain, Savar, Dhaka-1343

Recommendation from the Supervisor

E.Rahman 12.03.22

Ehsanur Rahman
Associate Professor
Department of Physiotherapy, BHPI.

Ref: Date:
        CRP/BHPI/IRB/02/2022/555
                                                        20/02/2022

Saiba Muhammad Sabrin
4th Year B.Sc. in Physiotherapy
Session: 2016 – 2017
BHPI, CRP, Savar, Dhaka- 1343, Bangladesh

Subject: Approval of the research project proposal **"Biopsychosocial impact of COVID-19 on person with physical disabilities"** by ethics committee.

Dear Saiba Muhammad Sabrin,
Congratulations.
The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application to conduct the above-mentioned dissertation, with yourself, as the Principal Investigator. The following documents have been reviewed and approved:

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

The purpose of the study is to gain in-depth insight and understanding from people with physical disabilities in order to understand their biopsychosocial impact of COVID-19. Since the study involves questionnaire that takes maximum 20-30 minutes and have 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 October 12, 2021 at BHPI (30th IRB 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 October 12, 2021at BHPI.

Best regards,

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

ANNEXURE 2: Data Collection Permission

Permission letter

March 09, 2022

Head of the Physiotherapy Department

Centre for the Rehabilitation of the Paralysed (CRP)

Chapain, Savar, Dhaka-1343.

Through: Head, Department of Physiotherapy, BHPI

Subject: Seeking permission for data collection of 4th year Physiotherapy Research Project.

Sir,

With due respect and humble submission to state that I am Saiba Muhammad Sabrin, a student of 4th year B.Sc. in Physiotherapy at Bangladesh Health Professions Institute (BHPI). In 4th year course curriculum, I have to conduct a research project. The ethical committee has approved my research project entitled on "Biopsychosocial impact of COVID 19 on person with physical disabilties" under the supervision of Ehsanur Rahman, Associate Professor, Physiotherapy Department, Bangladesh Health Professions Institute (BHPI). I would like to collect data, for which I need your kind approval. I assure that anything of my study will not be harmful for my participants.

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

Yours faithfully

Saiba

Saiba Muhammad Sabrin

4th year, B.Sc. in Physiotherapy

Roll:05, Session: 2016-2017, ID No: 112160326

Bangladesh Health Professions Institute (BHPI)

CRP, Chapain, Savar, Dhaka-1343.

Forwarded
E. Rahman
12/03/22

Recommended
Shofir
12·03·2022
Md. Shofiqul Islam
Associate Professor & Head
Department of Physiotherapy
Bangladesh Health Professions Institute BHPI,
CRP, Chapain, Savar, Dhaka-1343

Approved

MUHAMMAD ANWAR HOSSAIN
Senior Consultant &
Head of Physiotherapy Dept
Associate Professor, BHPI
CRP Savar Dhaka-1343

54

<u>সম্মতি-পত্র</u>

আসসালামু আলাইকুম

আমি সায়বা মুহাম্মদ সাবরিন, বাংলাদেশ হেলথ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই), সিআরপি-তে ফিজিওথেরাপিতে বিএসসি চতুর্থ বর্ষের ছাত্রী। আমি একটি গবেষনা করছি, যার শিরোনাম, "শারীরিক প্রতিবন্ধী ব্যক্তিদের উপর COVID-19-এর বায়োসাইকোসাল প্রভাব"। এই অধ্যয়নের মাধ্যমে এটি শারীরিক প্রতিবন্ধী ব্যক্তির উপর COVID-19-এর বায়োসাইকোসাল প্রভাব অনুসন্ধানের উপর দৃষ্টি নিবদ্ধ করা হবে। এটি স্বাস্থ্য এবং COVID-19 সম্পর্কিত তথ্য ফোকাস করবে। আমি যদি সফলভাবে অধ্যয়নটি সম্পূর্ণ করতে পারি, তাহলে শারীরিক অক্ষমতার উপর জৈব-সামাজিক প্রভাব অন্বেষণ করা যেতে পারে। আমার গবেষণা প্রকল্প বাস্তবায়নের জন্য, আমাকে শারীরিক অক্ষম ব্যক্তিদের কাছ থেকে তথ্য সংগ্রহ করতে হবে। অতএব, আপনি অধ্যয়নের জন্য আমার মূল্যবান বিষয় হতে পারে।

আমি প্রতিশ্রুতিবদ্ধ যে অধ্যয়নটি আপনার কোন ক্ষতি বা ঝুঁকি তৈরি করবে না। কোনো দ্বিধা বা ঝুঁকি ছাড়াই যেকোনো সময় প্রত্যাহার বা বন্ধ করার পরম অধিকার আপনার আছে। আমি আপনার কাছ থেকে প্রাপ্ত সমস্ত তথ্য গোপন রাখব এবং অংশগ্রহণকারীর ব্যক্তিগত পরিচয় কোথাও প্রকাশ করা হবে না।

অধ্যয়ন সম্পর্কে আপনার কোন প্রশ্ন থাকলে, আপনি আমার সাথে এবং/ অথবা আমার সুপারভাইজার, এহসানুর রহমান, সহযোগী অধ্যাপক, ফিজিওথেরাপি বিভাগ, বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউট (বিএইচপিআই), সাভার, ঢাকা সাথে যোগাযোগ করতে পারেন।আমি শুরু করার আগে আপনার কোন প্রশ্ন আছে?

তাই ইন্টারভিউ নিয়ে এগিয়ে যাওয়ার জন্য আমি কি আপনার সম্মতি পেতে পারি? হ্যাঁ...........

অংশগ্রহণকারীর স্বাক্ষর এবং তারিখ ……………………………….

গবেষকের স্বাক্ষর এবং তারিখ ……………………………….

সাক্ষীর স্বাক্ষর ও তারিখ……………………………….

ANNEXURE 4: Questionnaire (English)

Verbal Consent Form

Assalamuaalaikum\ Namashker,

I am Saiba Muhammad Sabrin , the 4th year B.Sc. (Hon's) in Physiotherapy student of Bangladesh Health Professions Institute (BHPI) under Medicine faculty of University of Dhaka. To obtain my Bachelor degree, I shall have to conduct a research and it is a part of my study. The participants are requested to participate in the study after reading the following.

My research title is "**Biopsychosocial impact of COVID-19 on person with physical disabliities**". Through this study it will be focused on exploration of biopsychosocial impact of COVID-19 on person with physical disabilities. It will focus the health and COVID-19 related information. If I can complete the study successfully, the biopsychosocial impact on physical disability may be explored. To implement my research project, I need to collect data from the persons with physical disable. Therefore, you could be one of my valuable subjects for the study.

I am committed that the study will not pose any harm or risk to you. You have the absolute right to withdraw or discontinue at any time without any hesitation or risk. I will keep all the information confidential which I obtained from you and personal identification of the participant would not be published anywhere.

If you have any query about the study, you may contact with me and/or Ehsanur Rahman, Associate professor, Department of Physiotherapy, Bangladesh Health Professions Institute (BHPI), Savar, Dhaka. Do you have any questions before I start?

So, may I have your consent to proceed with the interview? Yes……., No………

Signature of the participant & Date…………………………….

Signature of the researcher & Date……………………………..

Signature of the witness & Date……………………………..

শারীরিক প্রতিবন্ধী ব্যক্তির উপর কোভিড-১৯ এর প্রভাব.

সাক্ষাৎকারের সময়সূচী	
অংশ ১: রোগীর সনাক্তকরণ এবং সামাজিক-জনসংখ্যা সংক্রান্ত প্রশ্ন	
	অংশগ্রহণকারীদের নাম	
১.১	সাক্ষাৎকারের তারিখ:	
১.২	ঠিকানা:	
১.৩	মোবাইল নম্বর:	
১.৪	সম্মতি নেওয়া হয়েছে:	হ্যাঁ / না

অংশ ১. সামাজিক-জনসংখ্যা সংক্রান্ত তথ্য:

প্রশ্ন এবং ফিল্টার	প্রতিক্রিয়া	কোড
১.১	বয়স	.... বছর
১.২	লিঙ্গ (আপনার উত্তরে √ রাখুন)	১= পুরুষ ২= মহিলা
১.৩	বৈবাহিক অবস্থা (আপনার উত্তরে √ রাখুন)	১= বিবাহিত ২= অবিবাহিত ৩= বিধবা / বিপত্নীক ৪= ডিভোর্সি
১.৪	শিক্ষাগত অবস্থা (আপনার উত্তরে √ রাখুন)	১= কোন প্রাতিষ্ঠানিক শিক্ষা নেই ২=প্রাথমিক শিক্ষা ৩= মাধ্যমিক শিক্ষা ৪= উচ্চ মাধ্যমিক ৫=স্নাতক বা তার উপরে
১.৫	পেশা (অনুগ্রহ করে লিখুন)	
১.৬	বসবাসের এলাকা (আপনার উত্তরে √ রাখুন)	১= গ্রামীণ ২= আধা শহুরে ৩= শহুরে

১.৭	গড় মাসিক পারিবারিক আয় (অনুগ্রহ করে বিডিটিতে লিখুন)	
১.৮	পরিবারের সদস্য সংখ্যা (অনুগ্রহ করে লিখুন)	
১.৯	উপার্জনকারী সদস্য (অনুগ্রহ করে সংখ্যায় লিখুন)	

পার্ট ২. স্বাস্থ্য এবং কোভিড-19 সম্পর্কিত তথ্য:		
শুরু করার আগে, আপনার রক্তের গ্রুপ উল্লেখ করুন:		
২.১	প্রতিবন্ধিতার ধরন	
২.২	আপনি কতদিন ধরে প্রতিবন্ধিতার সম্মুখীন হচ্ছেন? (দয়া করে মাসে লিখুন)	
২.৩	আপনার কি কোভিড-১৯ ধরা পড়েছে?	১ = হ্যাঁ
		২ = না
২.৪	যদি হ্যাঁ, আপনি কখন কোভিড পজিটিভ নির্ণয় করেছিলেন? (দয়া করে তারিখ লিখুন)	
২.২	আপনি কতক্ষণ বিচ্ছিন্ন ছিলেন? (অনুগ্রহ করে লিখুন)	……….. দিন
২.৩	হাসপাতালে ভর্তি করা হয়েছিল? (√ বসান এবং আপনার উত্তর লিখুন)	১ = হ্যাঁ
		২ = না
		(যদি হ্যাঁ, সময়কাল উল্লেখ করুন……………… দিন)
২.৪	উপসর্গ শুরু থেকে হাসপাতালে ভর্তি হওয়ার দিন (অনুগ্রহ করে লিখুন)	…………… days
২.৮	কোভিড পজিটিভ ধরা পড়ার আগে আপনার কি ধূমপানের ইতিহাস ছিল? (আপনার উত্তরে √ রাখুন)	১ = হ্যাঁ
		২ = না

২.৯	কোভিড পজিটিভ ধরা পড়ার আগে আপনার কি বিদেশ থেকে ভ্রমণের ইতিহাস ছিল?	১ = হ্যাঁ
		২ = না
	(√ বসান এবং আপনার উত্তর লিখুন)	(যদি হ্যাঁ, দেশের নাম উল্লেখ করুন…………………
২.১০	কোভিড পজিটিভ ধরা পড়ার আগে আপনি কি বাংলাদেশের লকডাউন এলাকা/ প্রভাবিত এলাকা পরিদর্শন করেছেন?	১ = হ্যাঁ
		২ = না
	(√ বসান এবং আপনার উত্তর লিখুন)	(যদি হ্যাঁ, এলাকার নাম উল্লেখ করুন……………………
২.১১	আপনি কখন কোভিড নেতিবাচক নির্ণয় করেছিলেন?	
	(তারিখ লিখুন)	
২.১২	COVID-19 অবস্থার সময় আপনি কি ধরনের চিকিৎসা পেয়েছেন?	১= ঔষধ
		২= ঔষধ এবং অক্সিজেন পরিপূরক
		৩= (Ventilation) অবাধে বায়ু-চলাচলের ব্যবস্থা
২.১৩	আপনাকে কি COVID-19-এর জন্য ICU-তে ভর্তি হতে হয়েছিল?	১ = হ্যাঁ
		২ = না
২.১৪	আপনি কি COVID-19 থেকে পুনরুদ্ধার করার পরে কোনও ফিজিওথেরাপি হস্তক্ষেপ পান?	১ = হ্যাঁ
		২ = না
		If yes, mention the name
		৩= Chest Physiotherapy
		৪= Other Physiotherapy interventions
২.১৫	আপনি কি কোভিড ভ্যাকসিন গ্রহণ করেন?	১= না
		২= হ্যাঁ, ১ম ডোজ সম্পন্ন হয়েছে
		৩= হ্যাঁ, ২য় ডোজ সম্পন্ন
		৪= হ্যাঁ, বুস্টার ডোজ সম্পন্ন হয়েছে
২.১৬	যদি হ্যাঁ, আপনি কোন ধরনের COVID-19 ভ্যাকসিন পান?	মডার্না।
		ফাইজার/বায়োটেক
		স্পুটনিক ভি
		জ্যানসেন (জনসন অ্যান্ড জনসন)

	কোভিশিল্ড (অক্সফোর্ড/অস্ট্রাজেনেকা ফর্মুলেশন)	
	সিনোফার্ম (বেইজিং)	
	সিনোভাক	

৩. COVID-19 উপসর্গ: আপনার লক্ষণগুলি কী ছিল? (আপনার উত্তরে √ রাখুন)		
৩.১ উপসর্গহীন	১ = হ্যাঁ	২ = না
৩.২ জ্বর	১ = হ্যাঁ	২ = না
৩.৩ কাশি	১ = হ্যাঁ	২ = না
৩.৪ ক্লান্তি	১ = হ্যাঁ	২ = না
৩.৫ কফ উৎপাদন/ শ্লেষ্মা-নির্গমন	১ = হ্যাঁ	২ = না
৩.৬ মাথাব্যথা	১ = হ্যাঁ	২ = না
৩.৭ ডায়রিয়া	১ = হ্যাঁ	২ = না
৩.৮ মায়ালজিয়া বা শরীরে ব্যথা	১ = হ্যাঁ	২ = না
৩.৯ শ্বাসকষ্ট	১ = হ্যাঁ	২ = না
৩.১০ গলা ব্যথা/ফ্যারিঙ্গালজিয়া	১ = হ্যাঁ	২ = না
৩.১১ বমি বমি ভাব বা বমি হওয়া	১ = হ্যাঁ	২ = না
৩.১২ ঠাণ্ডা	১ = হ্যাঁ	২ = না
৩.১৩ নাক বন্ধ হওয়া/ রাইনোরিয়া	১ = হ্যাঁ	২ = না
৩.১৪ শ্বাসকষ্ট	১ = হ্যাঁ	২ = না
৩.১৫ অ্যানোরেক্সিয়া	১ = হ্যাঁ	২ = না
৩.১৬ মাথা ঘোরা	১ = হ্যাঁ	২ = না
৩.১৭ অ্যানোসমিয়া	১ = হ্যাঁ	২ = না
৩.১৮ অন্যান্য (অনুগ্রহ করে উল্লেখ করুন)..	১ = হ্যাঁ	২ = না

৪. স্ব-শাসিত কমরবিডিটি প্রশ্নাবলী:

(আপনার যদি নিম্নলিখিত কমরবিড রোগগুলির মধ্যে কোনটি থাকে তবে দয়া করে এতে √ দিন। আপনার একাধিক রোগ থাকতে পারে; আপনি একাধিক পয়েন্টে √ রাখতে পারেন।)

	আপনার কি সমস্যা আছে?		আপনি কি এটির জন্য চিকিৎসা পান?		এটা কি আপনার কার্যকলাপ সীমিত?	
সমস্যা	না(০)	হ্যাঁ (১)	না(০)	হ্যাঁ (১)	না(০)	হ্যাঁ (১)

	না	হ্যাঁ	না	হ্যাঁ	না	হ্যাঁ
হৃদরোগ সমুহ						
উচ্চ রক্তচাপ	না	হ্যাঁ	না	হ্যাঁ	না	হ্যাঁ
ফুসফুসের রোগ	না	হ্যাঁ	না	হ্যাঁ	না	হ্যাঁ
ডায়াবেটিস	না	হ্যাঁ	না	হ্যাঁ	না	হ্যাঁ
আলসার এবং পেটের রোগ	না	হ্যাঁ	না	হ্যাঁ	না	হ্যাঁ
কিডনি রোগ	না	হ্যাঁ	না	হ্যাঁ	না	হ্যাঁ
যকৃতের রোগ	না	হ্যাঁ	না	হ্যাঁ	না	হ্যাঁ
অ্যানিমিয়া বা অন্যান্য রক্তের রোগ	না	হ্যাঁ	না	হ্যাঁ	না	হ্যাঁ
ক্যান্সার	না	হ্যাঁ	না	হ্যাঁ	না	হ্যাঁ
বিষণ্নতা	না	হ্যাঁ	না	হ্যাঁ	না	হ্যাঁ
অস্টিওআর্থারাইটিস, ডিজেনারেটিভ আর্থ্রাইটিস	না	হ্যাঁ	না	হ্যাঁ	না	হ্যাঁ
পিঠে ব্যাথা	না	হ্যাঁ	না	হ্যাঁ	না	হ্যাঁ
রিউমাটয়েড আর্থ্রাইটিস	না	হ্যাঁ	না	হ্যাঁ	না	হ্যাঁ
অন্যান্য চিকিৎসা শর্ত।	না	হ্যাঁ	না	হ্যাঁ	না	হ্যাঁ
(নির্দিষ্ট করুন)						
	না	হ্যাঁ	না	হ্যাঁ	না	হ্যাঁ
	না	হ্যাঁ	না	হ্যাঁ	না	হ্যাঁ

6.কার্ডিওরসপিরেটরি ফাংশন:

সিস্টোলিক রক্তচাপ: …………mm/Hg

ডায়াস্টোলিক রক্তচাপ: ……………….mm/Hg

SpO$_2$: ……………………

BPM: ……………………………..

পোস্ট-COVID-19 কার্যকরী অবস্থা (PCFS) স্কেল: (আপনার উত্তরে √ রাখুন)

স্ট্রাকচার্ড ইন্টারভিউ	উত্তর 'হ্যাঁ' হলে সংশ্লিষ্ট PCFS স্কেল গ্রেড
১.বেঁচে থাকা	
১.১ রোগী কি COVID-19 নির্ণয়ের পরে মারা গেছে?	i) হ্যাঁ (যদি হ্যাঁ, ৫ = মৃত্যু)
	ii) না (পরবর্তী প্রশ্নগুলিতে এগিয়ে যান)
২. ধ্রুবক যত্ন	
২.১ আপনি ক্রমাগত যত্ন প্রয়োজন?	০ = কোন কার্যকরী সীমাবদ্ধতা নেই
	১= নগণ্য কার্যকরী সীমাবদ্ধতা
	২= সামান্য কার্যকরী সীমাবদ্ধতা
	৩= পরিমিত কার্যকরী সীমাবদ্ধতা
	৪= গুরুতর কার্যকরী সীমাবদ্ধতা
৩. দৈনিক জীবনযাপনের মৌলিক কার্যক্রম (ADL)	
৩.১ খাওয়ার জন্য সহায়তা কি অপরিহার্য?	০= কোন কার্যকরী সীমাবদ্ধতা নেই
	১= নগণ্য কার্যকরী সীমাবদ্ধতা
	২= সামান্য কার্যকরী সীমাবদ্ধতা
	৩= পরিমিত কার্যকরী সীমাবদ্ধতা
	৪= গুরুতর কার্যকরী সীমাবদ্ধতা
৩.২ টয়লেট ব্যবহারের জন্য সহায়তা কি অপরিহার্য?	০= কোন কার্যকরী সীমাবদ্ধতা নেই
	১= নগণ্য কার্যকরী সীমাবদ্ধতা
	২= সামান্য কার্যকরী সীমাবদ্ধতা
	৩= পরিমিত কার্যকরী সীমাবদ্ধতা
	৪= গুরুতর কার্যকরী সীমাবদ্ধতা
৩.৩ নিয়মিত দৈনিক স্বাস্থ্যবিধির জন্য সহায়তা কি অপরিহার্য?	০= কোন কার্যকরী সীমাবদ্ধতা নেই
	১= নগণ্য কার্যকরী সীমাবদ্ধতা
	২= সামান্য কার্যকরী সীমাবদ্ধতা
	৩= পরিমিত কার্যকরী সীমাবদ্ধতা
	৪= গুরুতর কার্যকরী সীমাবদ্ধতা

৩.৪ হাঁটার জন্য সহায়তা কি অপরিহার্য?	০= কোন কার্যকরী সীমাবদ্ধতা নেই
	১= নগণ্য কার্যকরী সীমাবদ্ধতা
	২= সামান্য কার্যকরী সীমাবদ্ধতা
	৩= পরিমিত কার্যকরী সীমাবদ্ধতা
	৪= গুরুতর কার্যকরী সীমাবদ্ধতা
৪.ডেইলি লিভিং (iADL) এর ইনস্ট্রুমেন্টাল অ্যাক্টিভিটিস	
৪.১ দৈনন্দিন জীবনের জন্য গুরুত্বপূর্ণ গৃহস্থালী কাজের জন্য কি সহায়তা অপরিহার্য?	০= কোন কার্যকরী সীমাবদ্ধতা নেই
	১= নগণ্য কার্যকরী সীমাবদ্ধতা
	২= সামান্য কার্যকরী সীমাবদ্ধতা
	৩= পরিমিত কার্যকরী সীমাবদ্ধতা
	৪= গুরুতর কার্যকরী সীমাবদ্ধতা
৪.২ স্থানীয় ভ্রমণের জন্য সহায়তা কি অপরিহার্য?	০= কোন কার্যকরী সীমাবদ্ধতা নেই
	১= নগণ্য কার্যকরী সীমাবদ্ধতা
	২= সামান্য কার্যকরী সীমাবদ্ধতা
	৩= পরিমিত কার্যকরী সীমাবদ্ধতা
	৪= গুরুতর কার্যকরী সীমাবদ্ধতা
৪.৩ স্থানীয় কেনাকাটার জন্য সহায়তা কি অপরিহার্য?	০= কোন কার্যকরী সীমাবদ্ধতা নেই
	১= নগণ্য কার্যকরী সীমাবদ্ধতা
	২= সামান্য কার্যকরী সীমাবদ্ধতা
	৩= পরিমিত কার্যকরী সীমাবদ্ধতা
	৪= গুরুতর কার্যকরী সীমাবদ্ধতা
৫. স্বাভাবিক সামাজিক ভূমিকায় অংশগ্রহণ	
৫.১ সমন্বয় কি অপরিহার্য কারণ বাড়িতে বা কাজ/অধ্যয়নের দায়িত্ব/ক্রিয়াকলাপগুলির জন্য আপনি নিজে এগুলি সম্পাদন করতে অক্ষম? (যেমন, দায়িত্বের স্তরে পরিবর্তন, ফুল-টাইম থেকে পার্ট-টাইম কাজের পরিবর্তন, বা পরিবর্তন শিক্ষা)?	০= কোন কার্যকরী সীমাবদ্ধতা নেই
	১= নগণ্য কার্যকরী সীমাবদ্ধতা
	২= সামান্য কার্যকরী সীমাবদ্ধতা
	৩= পরিমিত কার্যকরী

	সীমাবদ্ধতা
	৪= গুরুতর কার্যকরী সীমাবদ্ধতা
৫.২ আপনার কি মাঝে মাঝে বাড়িতে বা কর্মক্ষেত্রে/অধ্যয়নের দায়িত্ব/ক্রিয়াকলাপগুলি এড়ানো বা কমাতে হবে বা সময়ের সাথে সাথে এইগুলি ছড়িয়ে দেওয়ার দরকার আছে (যদিও আপনি এই সমস্ত ক্রিয়াকলাপ সম্পাদন করতে পারেন)?	০= কোন কার্যকরী সীমাবদ্ধতা নেই
	১= নগণ্য কার্যকরী সীমাবদ্ধতা
	২= সামান্য কার্যকরী সীমাবদ্ধতা
	৩= পরিমিত কার্যকরী সীমাবদ্ধতা
	৪= গুরুতর কার্যকরী সীমাবদ্ধতা
৫.৩ আপনি কি আর আগের মতো প্রিয়জনদের ভাল যত্ন নিতে পারবেন না?	০= কোন কার্যকরী সীমাবদ্ধতা নেই
	১= নগণ্য কার্যকরী সীমাবদ্ধতা
	২= সামান্য কার্যকরী সীমাবদ্ধতা
	৩= পরিমিত কার্যকরী সীমাবদ্ধতা
	৪= গুরুতর কার্যকরী সীমাবদ্ধতা
৫.৪ COVID-19 নির্ণয়ের পর থেকে, সম্পর্কের ক্ষেত্রে সমস্যা হয়েছে বা আপনি কি বিচ্ছিন্ন হয়ে পড়েছেন?	০= কোন কার্যকরী সীমাবদ্ধতা নেই
	১= নগণ্য কার্যকরী সীমাবদ্ধতা
	২= সামান্য কার্যকরী সীমাবদ্ধতা
	৩= পরিমিত কার্যকরী সীমাবদ্ধতা
	৪= গুরুতর কার্যকরী সীমাবদ্ধতা
৫.৫ আপনি কি সামাজিক এবং অবসর ক্রিয়াকলাপে অংশগ্রহণে সীমাবদ্ধ?	০= কোন কার্যকরী সীমাবদ্ধতা নেই
	১= নগণ্য কার্যকরী সীমাবদ্ধতা
	২= সামান্য কার্যকরী সীমাবদ্ধতা
	৩= পরিমিত কার্যকরী সীমাবদ্ধতা
	৪= গুরুতর কার্যকরী সীমাবদ্ধতা
৬ .লক্ষণ চেকলিস্ট	
৬.১ আপনি কি এমন লক্ষণ রিপোর্ট করেন যার মাধ্যমে স্বাভাবিক দায়িত্ব/ক্রিয়াকলাপ এড়ানো, কমানো বা সময়ের সাথে ছড়িয়ে দেওয়া প্রয়োজন?	০= কোন কার্যকরী সীমাবদ্ধতা নেই
	১= নগণ্য কার্যকরী সীমাবদ্ধতা
	২= সামান্য কার্যকরী সীমাবদ্ধতা

		৩= পরিমিত কার্যকরী সীমাবদ্ধতা
		৪= গুরুতর কার্যকরী সীমাবদ্ধতা
৬.২ আপনি কি কার্যকরী সীমাবদ্ধতার সম্মুখীন না হয়ে COVID-19 এর ফলে সৃষ্ট কোন উপসর্গ রিপোর্ট করেন?		০= কোন কার্যকরী সীমাবদ্ধতা নেই
		১= নগণ্য কার্যকরী সীমাবদ্ধতা
		২= সামান্য কার্যকরী সীমাবদ্ধতা
		৩= পরিমিত কার্যকরী সীমাবদ্ধতা
		৪= গুরুতর কার্যকরী সীমাবদ্ধতা
৬.৩ আপনার কি শিথিল হতে সমস্যা আছে বা আপনি কি ট্রমা হিসাবে COVID-19 অনুভব করছেন?		০= কোন কার্যকরী সীমাবদ্ধতা নেই
		১= নগণ্য কার্যকরী সীমাবদ্ধতা
		২= সামান্য কার্যকরী সীমাবদ্ধতা
		৩= পরিমিত কার্যকরী সীমাবদ্ধতা
		৪= গুরুতর কার্যকরী সীমাবদ্ধতা
চূড়ান্ত PCFS স্কেল গ্রেড		

১০. কোভিড স্ট্রেস স্কেল

নিম্নলিখিতটি বিভিন্ন ধরণের উদ্বেগ সম্পর্কে জিজ্ঞাসা করে যা আপনি গত সাত দিনে অনুভব করেছেন। নিম্নলিখিত বিবৃতিতে, আমরা কোভিড=১৯ কে "ভাইরাস" হিসাবে উল্লেখ করি।

	মোটেই না	সামান্য	পরিমিতভাবে	খুব	চরমভাবে
১. আমি ভাইরাস ধরার জন্য চিন্তিত	০	১	২	৩	৪
২. আমি উদ্বিগ্ন যে আমি আমার পরিবারকে ভাইরাস থেকে নিরাপদ রাখতে পারব না	০	১	২	৩	৪
৩. আমি চিন্তিত যে আমাদের স্বাস্থ্যসেবা ব্যবস্থা আমার প্রিয়জনদের রক্ষা করতে সক্ষম হবে না	০	১	২	৩	৪
৪. আমি উদ্বিগ্ন যে আমাদের স্বাস্থ্যসেবা ব্যবস্থা আমাকে	০	১	২	৩	৪

ভাইরাস থেকে নিরাপদ রাখতে অক্ষম					
৫. আমি উদ্বিগ্ন যে মৌলিক স্বাস্থ্যবিধি (যেমন, হাত ধোয়া) আমাকে ভাইরাস থেকে নিরাপদ রাখতে যথেষ্ট নয়	০	১	২	৩	৪
৬. আমি উদ্বিগ্ন যে সামাজিক দূরত্ব আমাকে ভাইরাস থেকে নিরাপদ রাখতে যথেষ্ট নয়	০	১	২	৩	৪
৭. আমি মুদি দোকানে খাবার ফুরিয়ে যাওয়া নিয়ে চিন্তিত	০	১	২	৩	৪
৮. আমি চিন্তিত যে মুদি দোকান বন্ধ হয়ে যাবে	০	১	২	৩	৪
৯. আমি মুদির দোকানে পরিষ্কার বা জীবাণুনাশক সরবরাহ শেষ হওয়ার বিষয়ে চিন্তিত	০	১	২	৩	৪
১০. আমি চিন্তিত যে মুদি দোকানে ঠান্ডা বা ফ্লুর প্রতিকার ফুরিয়ে যাচ্ছে	০	১	২	৩	৪
১১। আমি মুদি দোকানে পানি ফুরিয়ে যাওয়া নিয়ে চিন্তিত	০	১	২	৩	৪
১২. প্রেসক্রিপশনের ওষুধ ফুরিয়ে যাওয়ার জন্য আমি চিন্তিত	০	১	২	৩	৪
১৩। আমি উদ্বিগ্ন যে বিদেশীরা আমার দেশে ভাইরাস ছড়াচ্ছে	০	১	২	৩	৪
১৪। আমি যদি বিদেশী খাবারে বিশেষায়িত কোনো রেস্তোরাঁয় যাই, আমি ভাইরাস ধরার বিষয়ে চিন্তিত হব	০	১	২	৩	৪
১৫। আমি বিদেশীদের সংস্পর্শে আসার বিষয়ে উদ্বিগ্ন কারণ তাদের ভাইরাস থাকতে পারে	০	১	২	৩	৪
১৬। যদি আমি একটি বিদেশী দেশের একজন ব্যক্তির সাথে দেখা করি, আমি চিন্তিত হব যে তাদের ভাইরাস থাকতে পারে	০	১	২	৩	৪
১৭। আমি যদি একদল বিদেশীর সাথে একটি লিফটে থাকতাম,	০	১	২	৩	৪

আমি চিন্তিত হতাম যে তারা ভাইরাসে আক্রান্ত					
১৮. আমি উদ্বিগ্ন যে বিদেশীরা ভাইরাস ছড়াচ্ছে কারণ তারা আমাদের মতো পরিষ্কার নয়	০	১	২	৩	৪
১৯। আমি উদ্বিগ্ন যে আমি যদি কোনো পাবলিক স্পেসে কিছু স্পর্শ করি (যেমন, হ্যান্ডেল, দরজার হাতল), আমি ভাইরাসটি ধরব	০	১	২	৩	৪
২০। আমি চিন্তিত যে কেউ যদি আমার কাছাকাছি কাশি বা হাঁচি দেয় তবে আমি ভাইরাসটি ধরব	০	১	২	৩	৪
২১। আমি উদ্বিগ্ন যে আমার চারপাশের লোকেরা আমাকে ভাইরাস দ্বারা সংক্রামিত করবে	০	১	২	৩	৪
২২। আমি নগদ লেনদেনের পরিবর্তন নিয়ে চিন্তিত	০	১	২	৩	৪
২৩। আমি উদ্বিগ্ন যে আমি টাকা পরিচালনা বা ডেবিট মেশিন ব্যবহার করে ভাইরাসটি ধরতে পারি	০	১	২	৩	৪
২৪। আমি চিন্তিত যে আমার মেইলটি মেল হ্যান্ডলারদের দ্বারা দূষিত হয়েছে	০	১	২	৩	৪

অনুগ্রহ করে প্রতিটি বিবৃতি পড়ুন এবং নির্দেশ করুন যে আপনি গত সাত দিনে প্রতিটি সমস্যা কতবার অনুভব করেছেন।

	কখনই না	খুব কমই	মাঝে মাঝে	প্রায়ই	প্রায় সবসময়
২৫। আমার মনোযোগ দিতে সমস্যা হয়েছিল কারণ আমি ভাইরাস সম্পর্কে ভাবতে থাকি	০	১	২	৩	৪
২৬। ভাইরাস সম্পর্কে বিরক্তিকর মানসিক চিত্রগুলি আমার ইচ্ছার বিরুদ্ধে আমার মনে পপ করে	০	১	২	৩	৪
২৭। আমার ঘুমাতে সমস্যা হয়েছিল কারণ আমি ভাইরাস নিয়ে চিন্তিত	০	১	২	৩	৪

ছিলাম					
২৮। যখন আমি চাইনি তখন আমি ভাইরাস সম্পর্কে চিন্তা করেছি	০	১	২	৩	৪
২৯। ভাইরাসের অনুস্মারকগুলির কারণে আমার শারীরিক প্রতিক্রিয়া হয়েছে, যেমন ঘাম হওয়া বা হৃদস্পন্দন	০	১	২	৩	৪
৩০। ভাইরাস সম্পর্কে আমার খারাপ স্বপ্ন ছিল	০	১	২	৩	৪

নিম্নলিখিত আইটেমগুলি আচরণ পরীক্ষা করার বিষয়ে জিজ্ঞাসা করে। গত সাত দিনে, কোভিড-১৯ নিয়ে উদ্বেগের কারণে আপনি নিম্নলিখিত কতটা করেছেন?

	কখনই না	খুব কমই	মাঝে মাঝে	প্রায়ই	প্রায় সবসময়
৩১। কোভিড-১৯ এর চিকিৎসার জন্য ইন্টারনেটে সার্চ করেছেন	০	১	২	৩	৪
৩২। কোভিড-১৯ সম্পর্কে পরামর্শের জন্য স্বাস্থ্য পেশাদারদের (যেমন, ডাক্তার বা ফার্মাসিস্ট) জিজ্ঞাসা করা হয়েছে	০	১	২	৩	৪
৩৩। কোভিড-১৯ সম্পর্কে ইউটিউব ভিডিও চেক করা হয়েছে	০	১	২	৩	৪
৩৪। সংক্রমণের লক্ষণগুলির জন্য আপনার নিজের শরীর পরীক্ষা করা হয়েছে (যেমন, আপনার তাপমাত্রা নেওয়া)	০	১	২	৩	৪
৩৫। কোভিড-১৯ সম্পর্কে বন্ধু বা পরিবারের কাছ থেকে আশ্বাস চাওয়া হয়েছে	০	১	২	৩	৪
৩৬। কোভিড-১৯ সংক্রান্ত সোশ্যাল মিডিয়া পোস্ট চেক করা হয়েছে	০	১	২	৩	৪

১১। কোভিড-১৯ এর ভয়ের মাপকাঠি

অনুগ্রহ করে প্রতিটি আইটেমের প্রতি পাঁচটি (৫) প্রতিক্রিয়ার একটিতে (√) টিক চিহ্ন দিয়ে প্রতিক্রিয়া জানান যা প্রতিফলিত করে যে আপনি কোভিড-১৯ এর প্রতি কেমন অনুভব করেন, চিন্তা করেন বা কাজ করেন।

	দৃঢ়ভাবে অসম্মতি	অসম্মতি	নিরপেক্ষ	একমত	দৃঢ়ভাবে একমত
আমি করোনাকে সবচেয়ে বেশি ভয় পাই	১	২	৩	8	৫
করোনা নিয়ে ভাবতে অস্বস্তি লাগে	১	২	৩	8	৫
করোনার কথা ভাবলেই আমার হাত আঁটসাঁট হয়ে যায়	১	২	৩	8	৫
করোনার কারণে প্রাণ হারানোর ভয়ে আছি	১	২	৩	8	৫
আমি যখন সোশ্যাল মিডিয়ায় করোনার খবর এবং গল্প দেখি, তখন আমি নার্ভাস বা উদ্বিগ্ন হয়ে পড়ি।	১	২	৩	8	৫
আমি ঘুমাতে পারি না কারণ আমি করোনা নিয়ে চিন্তিত।	১	২	৩	8	৫
আমি যখন করোনা পাওয়ার কথা ভাবি তখন আমার হৃৎপিণ্ড দৌড়ে যায় বা ধড়ফড় করে।	১	২	৩	8	৫

১২. কোভিড-১৯ উদ্বেগের স্কেল

গত ২ সপ্তাহে আপনি কতবার নিম্নলিখিত কার্যকলাপগুলি অনুভব করেছেন?

	একেবারেই না	বিরল, এক বা দুই দিনেরও কম	বেশ কিছু দিন	৭ দিনের বেশি	গত ২ সপ্তাহ ধরে প্রায় প্রতিদিন
যখন আমি করোনাভাইরাস সম্পর্কে খবর পড়ি বা শুনি তখন আমার মাথা ঘোরানো,বা অজ্ঞান হয়ে পড়ি।	০	১	২	৩	8
আমি করোনাভাইরাস নিয়ে ভাবছিলাম বলে আমার ঘুমাতে বা ঘুমাতে সমস্যা হয়েছিল।	০	১	২	৩	8

যখন আমি করোনভাইরাস সম্পর্কে চিন্তা করি বা তথ্যের সংস্পর্শে এসেছি তখন আমি পক্ষাঘাতগ্রস্ত বা হিমায়িত বোধ করি।	০	১	২	৩	৪
যখন আমি করোনাভাইরাস সম্পর্কে চিন্তা করি বা তথ্যের সংস্পর্শে এসেছি তখন আমি খাওয়ার আগ্রহ হারিয়ে ফেলেছিলাম।	০	১	২	৩	৪
যখন আমি করোনভাইরাস সম্পর্কে চিন্তা করি বা তার সংস্পর্শে এসেছি তখন আমি বমি বমি ভাব অনুভব করেছি বা পেটে সমস্যা হয়েছে।	০	১	২	৩	৪

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ক্ষেত্র – ১ বোধশক্তি

বিগত ৩০ দিনে আপনি কতটুকু সমস্যায় পড়েছেন?		কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারি সমস্যা	তীব্র সমস্যা	প্রচন্ড সমস্যা বা কিছুই করতে না পারা
০১.১	কোন কিছু করতে ১০ মিনিট মনযোগ দিতে পারেন?	১	২	৩	৪	৫
০১.২	গুরুত্বপূর্ণ কোন কিছু করার কথা মনে থাকে?	১	২	৩	৪	৫
০১.৩	দৈনন্দিন কাজে সমস্যা হলে বিশ্লেষণ অ সমাধান করতে পারেন?	১	২	৩	৪	৫
০১.৪	নতুন কিছু শেখা (যেমন নতুন স্থানে কিভাবে যেতে হয়)	১	২	৩	৪	৫
০১.৫	সচরাচর মানুষ যা বলে তা বুঝতে পারেন?	১	২	৩	৪	৫
০১.৬	কোন বিষয়ে আলোচনা শুরু করতে এবং চালিয়ে যেতে পারেন?	১	২	৩	৪	৫

ক্ষেত্র – ২ চলাফেরা

বিগত ৩০ দিনে আপনি কতটুকু সমস্যায় পড়েছেন?		কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারি সমস্যা	তীব্র সমস্যা	প্রচন্ড সমস্যা বা কিছুই করতে না পারা
০২.১	একটানা ৩০ মিনিট দাঁড়িয়ে থাকতে পারেন?	১	২	৩	8	৫
০২.২	বসা থেকে দাঁড়াতে পারেন?	১	২	৩	8	৫
০২.৩	বাড়ির ভিতর চলাফেরা করতে পারেন?	১	২	৩	8	৫
০২.৪	বাড়ি থেকে বাইরে যেতে পারেন?	১	২	৩	8	৫
০২.৫	একটানা এক কিলমিটার হাঁটতে পারেন?	১	২	৩	8	৫

ক্ষেত্র – ৩ নিজের যত্ন

বিগত ৩০ দিনে আপনি কতটুকু সমস্যায় পড়েছেন?	কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারি সমস্যা	তীব্র সমস্যা	প্রচন্ড সমস্যা বা কিছুই করতে না পারা

০৩.১	নিজে নিজে গোসল করতে পারেন?	১	২	৩	8	৫
০৩.২	নিজে নিজে কাপড় পরতে পারেন?	১	২	৩	8	৫
০৩.৩	নিজে নিজে খেতে পারেন?	১	২	৩	8	৫
০৩.৪	দিন কয়েক একা থাকতে পারেন?	১	২	৩	8	৫

ক্ষেত্র – ৪ মানুষের সাথে মানিয়ে চলা

বিগত ৩০ দিনে আপনি কতটুকু সমস্যায় পড়েছেন?		কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারি সমস্যা	তীব্র সমস্যা	প্রচণ্ড সমস্যা বা কিছুই করতে না পারা
০৪.১	অপরিচিত লোকের সঙ্গে আচরণে?	১	২	৩	8	৫
০৪.২	বন্ধুত্ব রক্ষা করতে?	১	২	৩	8	৫
০৪.৩	পরিচিত লোকের সাথে থাকতে?	১	২	৩	8	৫
০৪.৪	নতুন বন্ধু তৈরি করতে?	১	২	৩	8	৫
০৪.৫	যৌন কার্যকলাপে?	১	২	৩	8	৫

ক্ষেত্র – ৫ জীবনযাপন প্রণালী

73

বিগত ৩০ দিনে আপনি কতটুকু সমস্যায় পড়েছেন?		কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারি সমস্যা	তীব্র সমস্যা	প্রচন্ড সমস্যা বা কিছুই করতে না পারা
০৫.১	গৃহস্থালি দায়িত্বগুলো পালন করতে পারেন?	১	২	৩	8	৫
০৫.২	সবচেয়ে গুরুত্বপূর্ণ গৃহস্থালি কাজগুলো ভালভাবে করতে পারেন?	১	২	৩	8	৫
০৫.৩	প্রয়োজনীয় সকল গৃহস্থালী কাজগুলো সমাপ্ত করতে পারেন?	১	২	৩	8	৫
০৫.৪	গৃহস্থালি কাহগুলো যথাসম্ভব দ্রুত করতে পারেন?	১	২	৩	8	৫
০৫.৫	আপনার দৈনন্দিন বা স্কুলের কাজ করতে?	১	২	৩	8	৫
০৫.৬	আপনার পেশাগত বা স্কুলের জরুরি কোন কাজ সমাধাণ করতে?	১	২	৩	8	৫
০৫.৭	আপনার প্রয়োজনীয় সকল কাজ করতে?	১	২	৩	8	৫
০৫.৮	আপনার কাজগুলো নির্দিষ্ট সময়ে প্রয়োজনীয় দ্রুততার সাথে শেষ	১	২	৩	8	৫

		করতে?					

ক্ষেত্র – ৬ সামাজিক অংশগ্রহণ

বিগত ৩০ দিনে আপনি কতটুকু সমস্যায় পড়েছেন?		কোন সমস্যা নাই	খুব অল্প সমস্যা	মাঝারি সমস্যা	তীব্র সমস্যা	প্রচন্ড সমস্যা বা কিছুই করতে না পারা
০৬.১	সামাজিক অনুষ্ঠানগুলোতে (যেমন উৎসব, ধর্মীয় অনুষ্ঠান বা অন্যান্য কর্মকান্ড) অন্যদের মত অংশগ্রহণ করতে গিয়ে কোন অসুবিধার মুখোমুখি হয়েছেন?	১	২	৩	৪	৫
০৬.২	আপনার পারিপার্শ্বিক বাধা-বিঘ্নের দরুন কতটুকু সমস্যায় পড়েছেন?	১	২	৩	৪	৫
০৬.৩	অন্যের দৃষ্টিভঙ্গি অ কাজের কারনে আপনি মর্যাদাপূর্ণ জীবনযাপনে কতটুকু সমস্যায় পড়েছেন?	১	২	৩	৪	৫
০৬.৪	আপনার শারীরিক	১	২	৩	৪	৫

	সমস্যা ও এর ফলে উদ্ভূত সমস্যাগুলোর জন্য কতটুকু সময় ব্যয় করেন?					
০৬.৫	নিজের শারীরিক সমস্যার জন্য কতটুকু আবেগ তাড়িত হন?	১	২	৩	৪	৫
০৬.৬	আপনার শারীরিক সমস্যার কারনে আপনার বা আপনার পরিবারের কী পরিমাণ আর্থিক ক্ষতি হচ্ছে?	১	২	৩	৪	৫
০৬.৭	আপনার শারীরিক সমসায়র কারনে আপনার পরিবার কতটুকু ভুক্তভোগী?	১	২	৩	৪	৫
০৬.৮	বিশ্রাম বা বিনোদনের জন্য কিছু করতে গিয়ে আপনি কতটুকু সমস্যায় পড়েছেন?	১	২	৩	৪	৫

১	সব মিলিয়ে, গত ৩০ দিনে, মোত কতদিন উপরোক্ত সমস্যা গুলো হয়েছে?	দিনগুলোর হিসাব রাখুন
২	বিগত ৩০ দিনের মধ্যে কতদিন আপনি আপনার সাধারণ কাজে সম্পূর্ণ অপারগ ছিলেন?	দিনগুলোর হিসাব রাখুন
৩	বিগত ৩০ দিনের অসুস্থতার কারণে কতদিন স্বাভাবিক কাজকর্ম করেছেন?	দিনগুলোর হিসাব রাখুন

Bio-psychosocial Impact of COVID-19 on people with physical disabilities

Interview schedule Part-1: Patient's Identification & Socio-demographic questions.		
1.1	**Name of Participants**	
1.2	**Date of Interview:**	
1.3	**Address:**	
1.4	**Mobile number:**	
1.5	**Consent Taken:**	**Yes / No**
1.6	**Patient ID**	

Socio-demographic information:		
Question and filters	**Response**	Code
1.7	Age	………….. years
1.8	Gender (Put √ on your answer)	1= Male 2=Female
1.9	Marital status (Put √ on your answer)	1=Married 2=Unmarried 3=Widow/widower 4= Divorcee

1.10	Educational status (Put √ on your answer)	1= No formal education 2=Primary education 3=Secondary education 4=Higher secondary 5=Bachelor or above	
1.11	Occupation (Please write)		
1.12	Living area (Put √ on your answer)	1=Rural 2=Semi Urban 3=Urban	
1.13	Average monthly family income (Please write in BDT)		
1.14	Number of family members (Please write)		
1.15	Earning member (Please write in number)		
1.16	Have you been diagnosed COVID-19?	1. Yes 2. No	
1.17	If yes, when did you diagnose COVID-19 positive? (Please write the date)		
1.18	How long you were in isolation due to COVID-19? (Please write)	………….. days	

Part 2. Health and COVID-19 related information:

Before starting, please mention your blood group:

2.1	Type of disability	1=Stroke	1=Ischaemic stroke
		2=Spinal Cord Injury	

		2=Haemorrhagic stroke
		3=Paraplegic (SCI)
		4=Tetraplegic (SCI)

2.2	How long are you experiencing Disability? (Please write in month)	
2.3	Had you been admitted to the hospital due to COVID-19? (Put √ and write your answer)	1= Yes 2= No (if yes, mention the duration…………… days)
2.4	Days from symptom onset to hospital admission (Please write)	…………… days
2.5	Did you have a smoking history before diagnosed COVID positive? (Put √ on your answer)	1= Yes 2= No
2.6	Did you have travel history from abroad before diagnosed COVID positive? (Put √ and write your answer)	1= Yes 2= No (if yes, mention the name of the country…………………..
2.7	Did you visit the lockdown area/ affected area in Bangladesh before diagnosed COVID positive? (Put √ and write your answer)	1= Yes 2= No (if yes, mention the name of the area………………………

2.8	When did you diagnose COVID positive?	
2.9	After COVID positive, what were your symptoms in first 14 days?	1=Fatigue
		2=Pain
		3=Others
2.10	After COVID positive, what were your symptoms in second 14 days?	
2.11	When did you diagnose COVID negative? (Please write the date)	
2.12	What kinds of treatment you have received during COVID-19 status?	1= Medicine
		2= Medicine and oxygen su:lementation
		3= Ventilation
2.13	Did you have to admit in ICU for COVID-19?	1= Yes
		2= No
2.14	Do you receive any Physiotherapy intervention after recovering from COVID-19	1= Yes
		2= No
		If yes, mention the name
		3= Chest Physiotherapy
		4= Other Physiotherapy interventions
2.15	Had you taken COVID vaccine?	1= No
		2= Yes, 1st dose completed
		3= Yes, 2nd dose completed
		4= Yes, Booster dose completed

2.16	If yes, Which types of COVID-19 vaccine you received?	1=Moderna.
		2=Pfizer/BioNTech
		3=Sputnik V
		4=Janssen (Johnson & Johnson)
		5=Covishield (Oxford/AstraZeneca formulation)
		6=Sinopharm (Beijing)
		7=Sinovac
		8=Others

3. COVID-19 Symptoms: what were your symptoms? (Put √ on your answer)

3.1 Asymptomatic	1= Yes	2= No
3.2 Fever	1= Yes	2= No
3.3 Cough	1= Yes	2= No
3.4 Fatigue	1= Yes	2= No
3.5 Sputum production/Expectoration	1= Yes	2= No
3.6 Headache	1= Yes	2= No
3.7 Diarrhoea	1= Yes	2= No
3.8 Myalgia or body pain	1= Yes	2= No
3.9 Shortness of breath	1= Yes	2= No
3.10 Sore throat/Pharyngalgia	1= Yes	2= No
3.11 Nausea or vomiting	1= Yes	2= No
3.12 Chill	1= Yes	2= No
3.13 Nasal congestion/Rhinorrhoea	1= Yes	2= No
3.14 Dyspnoea	1= Yes	2= No
3.15 Anorexia	1= Yes	2= No

3.16 Dizziness	1= Yes	2= No
3.17 Anosmia	1= Yes	2= No
3.18 Others (Please specify)	1= Yes	2= No
……………………………………..		

4.Self-administered Comorbidity Questionnaire;

(If you have any of these following comorbid diseases, please put √ on it. You may have multiple diseases; you can put √ on multiple points.)

	Do you have the problem?		Do you receive treatment for it?		Does it limit your activities?	
Problem	No(0)	Yes(1)	No(0)	Yes(1)	No(0)	Yes(1)
Heart diseases	N	Y	N	Y	N	Y
High blood pressure	N	Y	N	Y	N	Y
Lung disease	N	Y	N	Y	N	Y
Diabetes	N	Y	N	Y	N	Y
Ulcer and stomach disease	N	Y	N	Y	N	Y
Kidney disease	N	Y	N	Y	N	Y
Liver disease	N	Y	N	Y	N	Y
Anemia or other blood diseases	N	Y	N	Y	N	Y
Cancer	N	Y	N	Y	N	Y
Depression	N	Y	N	Y	N	Y

Osteoarthritis, Degenerative arthritis	N	Y	N	Y	N	Y
Back pain	N	Y	N	Y	N	Y
Rheumatoid arthritis	N	Y	N	Y	N	Y
Other medical conditions. (specify)	N	Y	N	Y	N	Y
	N	Y	N	Y	N	Y
	N	Y	N	Y	N	Y

6.Cardiorespiratory function:

Systolic blood pressure: …………mm/Hg

Diastolic blood pressure: ……………….mm/Hg

SpO$_2$: …………………….

BPM: ……………………………..

Post-COVID-19 Functional Status (PCFS) Scale: (Put √ on your answer)

Structured Interview	Corresponding PCFS scale grade if the answer is 'YES'
1. Survival	
1.1 Has the patient died after the COVID-19	i) Yes (if yes, 5= Death)

diagnosis?	ii) No (proceed to next questions)
2. Constant care	
2.1 Do you require constant care?	0= No functional limitations
	1= Negligible functional limitations
	2= Slight functional limitations
	3= Moderate functional limitations
	4= Severe functional limitations
3. Basic Activities of Daily Living (ADL)	
3.1 Is assistance essential for eating?	0= No functional limitations
	1= Negligible functional limitations
	2= Slight functional limitations
	3= Moderate functional limitations
	4= Severe functional limitations
3.2 Is assistance essential for using the toilet?	0= No functional limitations
	1= Negligible functional limitations
	2= Slight functional limitations
	3= Moderate functional limitations
	4= Severe functional limitations
3.3 Is assistance essential for routine daily hygiene?	0= No functional limitations
	1= Negligible functional limitations
	2= Slight functional limitations

	3= Moderate functional limitations
	4= Severe functional limitations
3.4 Is assistance essential for walking?	0= No functional limitations
	1= Negligible functional limitations
	2= Slight functional limitations
	3= Moderate functional limitations
	4= Severe functional limitations
4. Instrumental Activities of Daily Living (iADL)	
4.1 Is assistance essential for basic household chores which are important for daily life?	0= No functional limitations
	1= Negligible functional limitations
	2= Slight functional limitations
	3= Moderate functional limitations
	4= Severe functional limitations
4.2 Is assistance essential for local travel?	0= No functional limitations
	1= Negligible functional limitations
	2= Slight functional limitations
	3= Moderate functional limitations
	4= Severe functional limitations
4.3 Is assistance essential for local sho:ing?	0= No functional limitations
	1= Negligible functional limitations

	2= Slight functional limitations
	3= Moderate functional limitations
	4= Severe functional limitations
5. Participation in Usual Social Roles	
5.1 Is adjustment essential for duties/activities at home or work/study because you are unable to perform these yourself (e.g. resulting in a change in the level of responsibility, a change from full-time to part-time work, or a change in education)?	0= No functional limitations
	1= Negligible functional limitations
	2= Slight functional limitations
	3= Moderate functional limitations
	4= Severe functional limitations
5.2 Do you occasionally need to avoid or reduce duties/activities at home or work/study or do you need to spread these over time (while you can perform all those activities)?	0= No functional limitations
	1= Negligible functional limitations
	2= Slight functional limitations
	3= Moderate functional limitations
	4= Severe functional limitations
5.3 Can you no longer take good care of loved ones as before?	0= No functional limitations
	1= Negligible functional limitations
	2= Slight functional limitations
	3= Moderate functional limitations
	4= Severe functional limitations
5.4 Since the COVID-19 diagnosis, have there been problems with relationships or have you become	0= No functional limitations
	1= Negligible functional

isolated?	limitations
	2= Slight functional limitations
	3= Moderate functional limitations
	4= Severe functional limitations
5.5 Are you restricted in participating in social and leisure activities?	0= No functional limitations
	1= Negligible functional limitations
	2= Slight functional limitations
	3= Moderate functional limitations
	4= Severe functional limitations
6. Symptom Checklist	
6.1 Do you report symptoms through which usual duties/activities need to be avoided, reduced or spread over time?	0= No functional limitations
	1= Negligible functional limitations
	2= Slight functional limitations
	3= Moderate functional limitations
	4= Severe functional limitations
6.2 Do you report any symptoms, resulting from COVID-19, without experiencing functional limitations?	0= No functional limitations
	1= Negligible functional limitations
	2= Slight functional limitations
	3= Moderate functional limitations
	4= Severe functional limitations
6.3 Do you have problems with relaxing or do you	0= No functional limitations

experience COVID-19 as a trauma?	1=Negligible functional limitations
	2= Slight functional limitations
	3= Moderate functional limitations
	4= Severe functional limitations
Final PCFS scale grade	

10. The COVID Stress Scales

The following asks about various kinds of worries that you might have experienced over the past seven days. In the following statements, we refer to COVID-19 as "the virus".

	Not at all	Slightly	Moderately	Very	Extremely
1. I am worried about catching the virus	0	1	2	3	4
2. I am worried that I can't keep my family safe from the virus	0	1	2	3	4
3. I am worried that our healthcare system won't be able to protect my loved ones	0	1	2	3	4
4. I am worried our healthcare system is unable to keep me safe from the virus	0	1	2	3	4
5. I am worried that basic hygiene (e.g., handwashing) is not enough to keep me safe from the virus	0	1	2	3	4
6. I am worried that social	0	1	2	3	4

distancing is not enough to keep me safe from the virus					
7. I am worried about grocery stores running out of food	0	1	2	3	4
8. I am worried that grocery stores will close down	0	1	2	3	4
9. I am worried about grocery stores running out of cleaning or disinfectant su:lies	0	1	2	3	4
10. I am worried about grocery stores running out of cold or flu remedies	0	1	2	3	4
11. I am worried about grocery stores running out of water	0	1	2	3	4
12. I am worried about pharmacies running out of prescription medicines	0	1	2	3	4
13. I am worried that foreigners are spreading the virus in my country	0	1	2	3	4
14. If I went to a restaurant that specialized in foreign foods, I'd be worried about catching the virus	0	1	2	3	4
15. I am worried about coming into contact with foreigners because they might have the virus	0	1	2	3	4
16. If I met a person from a foreign country, I'd be worried that they might have the virus	0	1	2	3	4
17. If I was in an elevator with a	0	1	2	3	4

group of foreigners, I'd be worried that they're infected with the virus					
18. I am worried that foreigners are spreading the virus because they're not as clean as we are	0	1	2	3	4
19. I am worried that if I touched something in a public space (e.g., handrail, door handle), I would catch the virus	0	1	2	3	4
20. I am worried that if someone coughed or sneezed near me, I would catch the virus	0	1	2	3	4
21. I am worried that people around me will infect me with the virus	0	1	2	3	4
22. I am worried about taking change in cash transactions	0	1	2	3	4
23. I am worried that I might catch the virus from handling money or using a debit machine	0	1	2	3	4
24. I am worried that my mail has been contaminated by mail handlers	0	1	2	3	4

Please read each statement and indicate how frequently you have experienced each problem during the past seven days.

	Never	Rarely	Sometimes	Often	Almost Always
25. I had trouble concentrating because I kept thinking about the	0	1	2	3	4

virus					
26. Disturbing mental images about the virus po:ed into my mind against my will	0	1	2	3	4
27. I had trouble sleeping because I worried about the virus	0	1	2	3	4
28. I thought about the virus when I didn't mean to	0	1	2	3	4
29. Reminders of the virus caused me to have physical reactions, such as sweating or a pounding heart	0	1	2	3	4
30. I had bad dreams about the virus	0	1	2	3	4

The following items ask about checking behaviours. During the past seven days, how much have you done the following because of concerns about COVID-19?

	Never	Rarely	Sometimes	Often	Almost Always
31. Searched the Internet for treatments for COVID-19	0	1	2	3	4
32. Asked health professionals (e.g., doctors or pharmacists) for advice about COVID-19	0	1	2	3	4
33. Checked YouTube videos about COVID-19	0	1	2	3	4
34. Checked your own body for signs of infection (e.g., taking your temperature)	0	1	2	3	4
35. Sought reassurance from friends or family about COVID-19	0	1	2	3	4

36. Checked social media posts concerning COVID-19	0	1	2	3	4

11. Fear of COVID-19 Scale

Please respond to each item by ticking (√) one of the five (5) responses that reflects how you feel, think or act toward COVID-19.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am most afraid of Corona	1	2	3	4	5
It makes me uncomfortable to think about Corona	1	2	3	4	5
My hands become clammy when I think about Corona	1	2	3	4	5
I am afraid of losing my life because of Corona	1	2	3	4	5
When I watch news and stories about Corona on social media, I become nervous or anxious.	1	2	3	4	5
I cannot sleep because I'm worrying about getting Corona.	1	2	3	4	5
My heart races or palpitates when I think about getting Corona.	1	2	3	4	5

12. COVID-19 anxiety scale

How often have you experienced the following activities over the last 2 weeks?

	Not at all	Rare, less than a day or two	Several days	More than 7 days	Nearly every day over the last 2 weeks
I felt dizzy, lightheaded, or faint, when I read or listened to news about the coronavirus.	0	1	2	3	4
I had trouble falling or staying asleep because I was thinking about the coronavirus.	0	1	2	3	4
I felt paralyzed or frozen when I thought about or was exposed to information about the coronavirus.	0	1	2	3	4
I lost interest in eating when I thought about or was exposed to information about the coronavirus.	0	1	2	3	4
I felt nauseous or had stomach problems when I thought about or was exposed to information about the coronavirus.	0	1	2	3	4

WHODAS 2.0

WORLD **H**EALTH **O**RGANIZATION
DISABILITY **A**SSESSMENT **S**CHEDULE 2.0

36- item version, self-administered

This questionnaire asks about <u>difficulties due to health conditions</u>. Health conditions include diseases or illnesses, other health problems that may be short or long lasting, injuries, mental or emotional problems, and problems with alcohol or drugs.

Think back over the <u>past 30 days</u> and answer these questions, thinking about how much difficulty you had doing the following activities. For each question, please circle only <u>one</u> response.

Understanding and communicating

In the past 30 days, how much difficulty did you have in		None	Mild	Moderate	Severe	Extreme or cannot do
1.1	Concentrating on doing something for ten minutes?	1	2	3	4	5
1.2	Remembering to do important things?	1	2	3	4	5
1.3	Analysing and finding solutions to problems in day-to-day life?	1	2	3	4	5
1.4	Learning a new task, for example, learning how to get to a new place?	1	2	3	4	5
1.5	Generally understanding	1	2	3	4	5

		None	Mild	Moderate	Severe	Extreme or cannot do
	what people say?					
1.6	Starting and maintaining a conversation?	1	2	3	4	5

Getting around

In the past 30 days, how much difficulty did you have in		None	Mild	Moderate	Severe	Extreme or cannot do
2.1	Standing for long periods such as 30 minutes?	1	2	3	4	5
2.2	Standing up from sitting down?	1	2	3	4	5
2.3	Moving around inside your home?	1	2	3	4	5
2.4	Getting out of your home?	1	2	3	4	5
2.5	Walking a long distance such as a kilometre?	1	2	3	4	5

Self-care

In the past 30 days, how much difficulty did you have in		None	Mild	Moderate	Severe	Extreme or cannot do
3.1	Washing your whole body?	1	2	3	4	5
3.2	Getting dressed?	1	2	3	4	5
3.3	Eating?	1	2	3	4	5

3.4	Staying by yourself for a few days?	1	2	3	4	5

Getting along with people

In the past 30 days, how much difficulty did you have in		None	Mild	Moderate	Severe	Extreme or cannot do
4.1	Dealing with people you do not know?	1	2	3	4	5
4.2	Maintaining a friendship?	1	2	3	4	5
4.3	Getting along with people who are close to you?	1	2	3	4	5
4.4	Making new friends?	1	2	3	4	5
4.5	Sexual activities?	1	2	3	4	5

Life activities

In the past 30 days, how much difficulty did you have in		None	Mild	Moderate	Severe	Extreme or cannot do
5.1	Taking care of your household responsibilities?	1	2	3	4	5
5.2	Doing most important household tasks well?	1	2	3	4	5
5.3	Getting all the household work done that you needed to do?	1	2	3	4	5

5.4	Getting your household work done as quickly as needed?	1	2	3	4	5
5.5	Your day-to-day work/school?	1	2	3	4	5
5.6	Doing your most important work/school tasks well?	1	2	3	4	5
5.7	Getting all the work done that you need to do?	1	2	3	4	5
5.8	Getting your work done as quickly as needed?	1	2	3	4	5

Participation in society

In the past 30 days, how much difficulty did you have in		None	Mild	Moderate	Severe	Extreme or cannot do
6.1	How much of a problem did you have in joining in community activities (for example, festivities, religious or other activities) in the same way as anyone else can?	1	2	3	4	5
6.2	How much of a problem did you have because of barriers or hindrances in the world around you?	1	2	3	4	5
6.3	How much of a problem did you have living with dignity because of the attitudes and actions of others?	1	2	3	4	5

6.4	How much time did you spend on your health condition, or its consequences?	1	2	3	4	5
6.5	How much have you been emotionally affected by your health condition?	1	2	3	4	5
6.6	How much has your health been a drain on the financial resources of you or your family?	1	2	3	4	5
6.7	How much of a problem did your family have because of your health problems?	1	2	3	4	5
6.8	How much of a problem did you have in doing things by yourself for relaxation or pleasure?	1	2	3	4	5