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Exploring Patient Experience and Perception of Physiotherapy Intervention in Spinal Cord Injury Rehabilitation

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DECLARATION

I certify that the work I've done is original to me. Every source that was used has been properly cited. I am responsible for any errors or inaccuracies. I also reject the requirement that I get my supervisor's written consent before publishing or disseminating any information about the study.

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ACRONYMS

ADLs - Activities of Daily Living

AIS - American Spinal Injury Association Impairment Scale

CNS - Central Nervous System

CRP - Centre for the Rehabilitation of the Paralysed

EMG - Electromyography

FIM - Functional Independence Measure

ICF - International Classification of Functioning, Disability, and Health

NFI - Neurological Functional Impairment

OT - Occupational Therapy

PT - Physiotherapy

QoL - Quality of Life

SCI - Spinal Cord Injury

TBI - Traumatic Brain Injury

WHO - World Health Organization

ABSTRACT

Introduction: Spinal cord injury (SCI) profoundly affects individuals’ physical, emotional, and social well-being, necessitating comprehensive rehabilitation to restore functionality and improve quality of life. Physiotherapy is a cornerstone of SCI recovery, offering tailored interventions to enhance independence and daily functioning. This qualitative study explores the experiences and perceptions of SCI patients undergoing physiotherapy rehabilitation to identify beneficial techniques, coping mechanisms, and barriers encountered during recovery. **Methodology:** A qualitative approach was adopted, utilizing semi-structured interviews with 14 SCI patients from the Centre for the Rehabilitation of the Paralysed (CRP) in Dhaka. Data were analyzed using thematic content analysis to uncover key themes related to satisfaction, coping strategies, physiotherapy techniques, and challenges faced during rehabilitation. **Results:** Six primary themes emerged from the data: general satisfaction with physiotherapy, coping mechanisms, beneficial techniques, barriers to access, improvements in daily functioning, and increased independence. Participants reported positive outcomes, such as enhanced mobility, improved self-care, and reduced dependence on others, often linked to tailored therapy plans and supportive networks. However, significant barriers were identified, including financial constraints, geographical challenges, and limited access to physiotherapists, which disrupted progress for some patients. **Conclusion:** The study underscores the transformative impact of physiotherapy on the physical and psychological recovery of SCI patients. Despite the positive experiences shared by most participants, systemic barriers highlight the need for improved accessibility, affordability, and infrastructure within rehabilitation services. Integrating emotional support and patient-centered approaches into rehabilitation programs is critical to addressing the holistic needs of SCI patients. Future research should explore the long-term effects of physiotherapy interventions and the potential of emerging technologies to enhance rehabilitation outcomes.

Keywords: *Spinal Cord Injury, Physiotherapy Rehabilitation, Patient Perceptions, Qualitative Study, Barriers to Access*

CHAPTER-I INTRODUCTION

1.1 Background: Spinal Cord Injury (SCI) remains a significant global challenge, impacting individuals and societies on multiple levels, including physical, psychological, and social dimensions. The burden of SCI varies significantly across different regions, with prevalence rates demonstrating stark differences. For instance, SCI prevalence in the United States is as high as 906 per million, whereas in Rhone-Alpes, France, it stands at 250 per million, and in Taiwan, it is as low as 14.6 per million (Singh et al. 2014, p. 310). These variations in incidence rates highlight the need for tailored healthcare and rehabilitation strategies based on regional epidemiological trends.

Beyond the physical limitations associated with SCI, various environmental and societal barriers contribute to the overall burden experienced by affected individuals. Key challenges include inaccessibility to public transportation, inadequate healthcare facilities, and insufficient rehabilitation services. Among these, lack of access to essential services and negative societal attitudes pose the most significant obstacles to the well-being of individuals with SCI. Furthermore, financial burdens, limited government support, and inadequate insurance coverage further complicate the rehabilitation process, making it difficult for patients to receive the necessary care (Dorjbal et al. 2019, p. 428).

Rehabilitation interventions play a crucial role in enhancing functional independence and improving the quality of life for individuals with SCI. Shackleton et al. (2023, p. 789) reported that 87.5% of participants in their study experienced improved functional independence after undergoing rehabilitation. Rehabilitation not only minimizes secondary complications but also maximizes overall well-being by addressing both physical and psychological challenges. Psychological issues, such as depression and stress, were significantly reduced, with patients reporting a greater sense of peace and emotional stability. This aligns with the findings of Munce et al. (2014, p. 48), who established that caregiver support and peer affiliation facilitate self-management and help overcome barriers such as caregiver burnout and financial constraints.

An important extension of rehabilitation is participation in sports, which has been shown to provide additional benefits to individuals with SCI. Stephens, Neil & Smith (2012, p. 2061) demonstrated that involvement in sports reduces social isolation, enhances self-confidence, and instills a sense of purpose among SCI patients. However, financial constraints and inadequate infrastructure remain major barriers to participation in sporting activities. To maximize the rehabilitative benefits of sports, improved support systems and resources must be developed to facilitate greater engagement in physical activities.

Alongside rehabilitation and sports participation, physical exercise and assistive devices play a crucial role in post-SCI recovery. Nikbakht-Nasrabadi et al. (2019, p. 171) emphasized the importance of exercise, mobility aids, and assistive devices such as canes and wheelchairs in preserving organ function and enhancing patient independence. However, certain treatment modalities, such as acupuncture, have been met with dissatisfaction, indicating a need for ongoing evaluation and refinement of rehabilitation strategies to better suit patient needs.

Beyond the individual challenges faced by SCI patients, the condition places a substantial burden on families and healthcare systems. Kang et al. (2018, p. 1) highlighted that SCI affects not only the physical and psychological well-being of individuals but also imposes economic and social stress on their families. Understanding the epidemiology of SCI is critical for developing effective preventive measures, allocating healthcare resources, and optimizing rehabilitation strategies. Zurcher, Tough & Fekete (2019, p. 69) further emphasized the financial burden as a key factor influencing social relationships and psychological well-being, complicating the rehabilitation process even further.

The prevalence of SCI also varies significantly depending on the etiology of the injury. Generally, traumatic paraplegia and traumatic tetraplegia remain the most common diagnoses, with falls and road traffic accidents identified as the leading causes of injury. This variation in etiological factors necessitates the development of prevention strategies and individualized rehabilitation interventions to ensure optimal patient outcomes (Rahman et al. 2017, p. 367).

In summary, SCI presents a complex set of challenges, including environmental barriers, financial strains, and limitations in rehabilitation resources, making its management a multifaceted issue. Effective rehabilitation requires a multi-dimensional approach that integrates physical exercises, assistive devices, and psychological and social support to optimize recovery outcomes. Additionally, given the regional variations in SCI prevalence and causes, context-specific strategies must be developed to improve the overall quality of life for SCI patients (Rahman et al. 2017, p. 367).

1.2 Rationale: This study is thus based on the rationale of increasing awareness of the tremendous difficulties associated with SCI and the urgent need to improve the quality and effectiveness of physiotherapy rehabilitation by a better understanding of the experiences of the patients. Whereas medical and rehabilitation techniques have clearly improved, persons with spinal cord injury often face complex problems beyond the physical impairments and extending into the realms of psychological, social, and financial domains. This calls for in-depth study regarding experiences and perceptions among patients, as a basis for the formulation of more effective rehabilitation strategies, which can be patient-centered. The purpose of this study is to outline the various and complex perspectives of patients with SCI regarding their experiences during rehabilitation, focusing on physiotherapy interventions, which are at the core of the rehabilitation process. This will, therefore, be a study that ascertains critical insights driving improvement in rehabilitation practices through in-depth analysis of views held by patients on rehabilitation programs, including caregiver involvement, and the effects of systemic and environmental influences. Furthermore, the understanding of how patients would adapt to their injury, and how peer support and community involvement influence them in their journey of recovery, will provide valuable guidance in the creation of holistic approaches toward rehabilitation. The aspects identified above were explored in this study to identify important areas where physiotherapy interventions can be optimized to suit the needs and preferences of the patients with SCI better. These findings have as their ultimate goal the shaping of tailored rehabilitation programs toward enhanced functional outcomes, reduced psychological stress, and thus social reintegration for individuals living with SCI. This is further enhanced by addressing the gaps in knowledge and practice to ultimately provide healthcare services in a manner that is more equitable and effective, thus supporting patients with SCI through all aspects of their rehabilitation. This study therefore supports the call for embedding the perspective of the patient in physiotherapy practice, with calls for systemic improvement in the accessibility and affordability of rehabilitation services. By bridging the gaps in the patients' experiences and their rehabilitation strategies, this study will try to enhance the well-being and quality of life in SCI patients while advancing the field of physiotherapy rehabilitation.

1.3 Research question:

What is the experience and perception of spinal cord injury patients about physiotherapy rehabilitation?

1.4 Objectives

1.4.1 General Objectives

i. To explore the experience and perception of spinal cord injury patients towards physiotherapy rehabilitation

1.4.2 Specific objectives

i. To determine the socio-demographic information of spinal cord injury patients.
ii. To explore the experiences of SCI individuals regarding physiotherapy rehabilitation at CRP, Savar, Dhaka.
iii. To understand the perceptions of SCI individuals about the effectiveness of physiotherapy rehabilitation.

1.5 Operational definition

Spinal Cord Injury (SCI) is a physical condition derived from traumatic injury, disease, or degeneration of the spinal cord and is characterized by partial or complete loss of motor and sensory functions below the level of injury. In this paper, SCI refers to those patients who have been diagnosed with permanent motor and/or sensory impairments and undergo physiotherapy rehabilitation.

Physiotherapy Rehabilitation: A systematic set of therapeutic interventions, exercises, manual therapy, and functional training that aim to promote motility, muscular strength, and independency gained by the patient after an injury to the spine. In the context of the current study, this would mean treatment programs received at CRP.

Patient Satisfaction: The level of satisfaction a patient feels from physiotherapy treatment in relation to the meeting of expectations and contribution toward recovery goals, as perceived by participants in respect of subjective experience of improvement in functional abilities, quality of therapist-patient interaction, and access to resources.

Coping Mechanisms: These are strategies and behaviors adopted by the SCI patient in response to physical, emotional, and social challenges during rehabilitation. It is either intrinsic motives, like motivation from progress, or extrinsic motives, such as encouragement from family and friends or from therapists, mentioned during interviews.

Barriers of Access to Rehabilitation: This refers to the extrinsic obstacles/difficulties of SCI patients to full participation in physiotherapy programs. In the context of this research, barriers are defined as: financial constraints, long distances that need to be travelled to reach the rehabilitation centers and poor availability of professionals to carry out physiotherapy, determined from the answers of the respondents.

Spinal cord injury is a severe condition resulting from damage to the spinal cord, causing loss of motor and sensory function below the level of injury. It could be partial or complete loss of sensation and motor capability, which really affects the physical, psychological, and social well-being of a person (Mohammadi et al. 2021, p. 102). The injury disrupts the nerve pathways that carry messages from the brain to the rest of the body, resulting in varying degrees of paralysis and potentially multiple organ dysfunction. The impacts of SCI extend beyond the individual to families, communities, and health care systems, imposing significant burdens and challenges (Kang et al. 2018, p. 12).

The reported national rates of incidence of SCI also happen to be quite different. The prevalence in Iran has been estimated to be 4.4 for each population of 10,000 people (Rahimi-Movaghar et al. 2016, p. 428). In the United States, the prevalence is quite high at 906 cases per million people, as identified by (Singh et al. 2014, p. 309). This may mean that SCI may impose quite a serious burden on certain countries hence effective management and rehabilitation strategies.

The causes of SCI, however, may vary globally due to regional factors. For example, MVAs have traditionally been the leading cause of SCI in developed countries, but recent data indicates that falls are now more common (Kang et al. 2018, p. 12). In less developed regions, however, falls and other accidents may still be the most common causes. The prevalence rates are not constant in all regions: in Rhone-Alpes, France, it is 250/million, while in the United States, the rate is 906/million. Regions such as Taiwan and Fiji have very low rates, with 14.6/million and 10/million accordingly, as Singh et al. (2014, p. 30) state. Such variations underline the local environmental and societal factors that are at the core of SCI incidence.

The distribution of age among these patients indicates the tendency for the occurrence of injury within younger and middle-aged adults. For instance, (Rahman et al. 2017, p. 367) noted that most cases of SCI occur during the third decade of life because 25.7% of the respondents occurred within this class. This indicates that this category is the biggest casualty and represents the massive contribution or burden of SCI at the peak of productive years among citizens.

The sex distribution among the SCI patients is dominated by males. 86.8% of the respondents were males, while 13.1% were females out of 2184 respondents (Rahman et al. 2017, p. 367).

Common groups in the population affected by SCI include traumatic injuries due to accidents, falls, and violence. Rahman et al. (2017, p. 367) reported that falls from height were leading causes, at 45.4%, followed by road traffic accidents. This distribution suggests the implementation of specific preventive measures in environments and activities of high risk.

Survival rates for the SCI patient depend on the extent of the injury and on the access to medical facilities. The severity of the injury may be rated according to the ASIA, the American Spinal Injury Association, in which Category A complete injuries are the most serious, Rahman et al. 2017, p. 367. The prevalence of complete injuries in the study population was 59.8%, indicating a large number of people suffer from severe functional impairments. The survival rate and long-term outcome depend on the level of injury, availability of rehabilitation services, and follow-up medical care.

Spinal Cord Injury is a global health concern but its prevalence varies across different regions. According to Singh et al. (2014, p. 309), the prevalence of SCI varies highly across the globe. While it is the highest in the United States with 906 per million people, some of the areas with the lowest prevalence include Rhone-Alpes, France, and Taipei, Taiwan, with prevalence rates of 250 and 14.6 per million respectively. These further denote the geographical variability in the SCI rate because of different access to health care, rates of accidents, and reporting mechanisms.

Rahimi-Movaghar et al. (2016, p. 428) enumerates further that in Iran, it is 4.4 per 10,000, representing a moderate rate in comparison to those of more developed areas; this suggests a difference influenced by regional health systems and socio-economic factors on SCI prevalence.

Regarding the distribution of genders, Rahman et al. (2017, p. 367) indicated that the majority of the patients with SCI were males, 86.8%, and a greater incidence in the third decade of life. This preponderance of males agrees with worldwide patterns whereby males generally suffer more from SCI due to engagement in risky activities associated with motor vehicle accidents and falls (Kang et al., 2018, p. 12).

The global epidemiology of SCI demonstrates a trend of both increases and decreases depending on the region. According to Dorjbal et al. (2019, p. 428), although motor vehicle accidents classically represented the leading cause of SCI in developed countries, recent trends have shown a shift towards falls being more common. This may reflect improvements in vehicle safety and a change in societal behavior but also points to the need for updated preventive measures.

Regarding the environmental barriers in Bangladesh, as identified by Mohammadi et al. (2021, p. 102), there is poor access to wheelchair-friendly infrastructure, health services are not good enough, and finally, financial constraints among other challenges that make it hard for a patient with SCI to manage their condition or seek rehabilitation services. In addition, failure to apply the laws that promote disabled people worsens these issues.

The global trend in the prevalence of SCI is influenced by various factors. In countries with well-established health care systems, such as the United States, there are comprehensive strategies for managing SCI and preventing secondary complications, which has led to significant improvements in functional independence and quality of life for many patients (Mir et al. 2019, p. 3234). In poorer regions, SCI prevalence is relatively high due to variables of poor healthcare, lack of or no access to rehabilitative services, as well as socioeconomic issues (Munce et al., 2014, 48).

For the trend, it has been noted that some regions have seen a rise in the prevalence of SCI, especially where healthcare systems are not yet well-established or are confronted with serious issues. For example, in areas prone to traffic and fall incidents, prevalence would increase if the necessary prevention measures and healthcare interventions were not appropriately implemented or addressed (Rahman et al. 2017, p. 367).

Whereas in developed countries with good healthcare systems and prevalence of effective prevention strategies, SCI might have reached a plateau or is likely to reduce. For instance, improved vehicle safety and proper fall prevention strategies have, over time, lowered the incidence of new cases of SCI in some of the developed nations (Kang et al. 2018, p. 12).

The epidemiological trends in SCI reflect the interaction of healthcare accessibility, preventive care, and general prevailing socioeconomic conditions. Understanding such epidemiology is, of course, essential for devising targeted interventions that ensure improvement in the quality of care (Munce et al., 2014, 48).

SCI can have a profound effect on mental health, causing considerable psychological distress, which may include depression. Dorjbal et al. (2019, p. 428) disclose that the "challenging environmental aspects of SCIs include poor physical environment accessibility, lack of adequate health and rehabilitation facilities, and negative attitudes at the social level". All these factors tend to lower the threshold for both physical and psychological health and aggravate the symptoms of depression among patients with SCI.

Munce et al. (2014, p. 48) also identifies peer support as a method of coping with depression. The participants realized that affiliations with others with similar injuries offer emotional support and thus assisted in coping with depressive symptoms. However, Munce identifies caregiver burnout and lack of sufficient funding as issues that may further exacerbate depression among SCI patients since these issues add to the patients' stress and financial burden.

Anxiety is another common psychological problem in patients with SCI. There are various environmental and systemic barriers that may lead to increased anxiety levels. The lack of accessibility to assistive devices, financial problems, and poor healthcare services are some of the factors that make the environment stressful for SCI patients and thus contribute to anxiety (Dorjbal et al. 2019, p. 428).

Similarly, Shackleton et al. 2023, p. 789 also describe an improvement in the anxiety level of patients following rehabilitation. The anxiety levels would reduce because of a reduction in the secondary complications of immobility and an improvement in the quality of life among such patients.

Caregiver support and peer affiliation can also be a source of reducing anxiety. However, caregiver burnout and financial burden continue to be major factors causing anxiety among the SCI patients, Munce et al., (2014, p. 48).

Insomnia is a common problem in individuals with SCI, a condition which is further irritated by the psychological and physical complicated issues that most of them experience. Impairment of motor and sensory functions, along with the secondary complications associated with the condition, can result in sleep problems (Kennedy et al. 2010, p. 762).

Dorjbal et al. (2019, p. 428) further explain that the inability to have proper healthcare services and environmental barriers contribute to the sources of stress that cause insomnia in SCI patients. Inaccessible facilities and resources increase the level of difficulty in managing life, hence affecting sleep quality.

SCI patients face many barriers that make their lives difficult. Some of the most important barriers are physical environmental barriers, such as lack of access to entrance and restroom facilities, which are very crucial in the daily life of SCI patients. Lack of transportation facilities with wheelchair access and lack of access to assistive devices add to these problems (Dorjbal et al. 2019, p. 428).

Claire Shackleton et al. (2023, p. 789) also show that with the development of rehabilitation, barriers still exist, particularly concerning secondary complications and the need to continue improving the quality of life.

The contribution of sport in eliminating some of the barriers; note that sport contributes to reducing social isolation and builds self-confidence, but the participants faced a lack of financial support and infrastructural challenges which were not conducive enough to participate in sports effectively Whitehurst et al. 2014, p. 50.

Lam, Su & Law 2024, p. 2388, lists caregiver burnout and under-funding. The physical support from the caregivers required and the financial burden associated with the treatment added to the challenges faced by SCI patients in general in quality-of-life metrics.

Indeed, the epidemiological data by Singh et al. (2014, p. 309) provide the various prevalence of SCI in different regions. Though important in bringing into light the global burden of the condition, this again brings into focus inequality of access to health care and support in different locations.

SCI patients have to deal with complicated interactions of social, financial, and psychological factors. Overcoming these challenges is possible only with a multi-sectoral approach of promoting environmental access, enhancing rehabilitative services, and providing necessary support and resources for both the patients and their caregivers. Efficient intervention and support systems are, therefore, called for in bringing up an improved quality of life among people living with SCI (Pasipanodya et al. 2024, p. 23).

SCI has its various challenges as it affects not only the physical but also psychological and social realms of a patient's life. One of the most influential barriers affecting patients includes environmental barriers. According to Dorjbal et al. (2019, p. 428), inability to access all levels of the physical environment is a major deterring factor involving transportation that has not been adjusted for wheelchairs, along with poorly designed open areas. These affect both physical and psychological health in a very negative way. The study further indicated that such is compounded by inadequate access to assistive devices, negative attitude by society, and limited financial resources in the families (Pasipanodya et al. 2024, p. 23). Moreover, the prevalence of SCI and its complications may also impact the challenges experienced by the patients. For example, Rahimi-Movaghar et al. (2016, p. 428) showed that the prevalence in Iran is 4.4 per 10,000 people, thus showing the severity of the condition. Similarly, Zürcher, Tough & Fekete (2019, p. 69) established that financial burden and social relationships associated with low household income have a great impact on the general well-being of SCI patients.

Lack of societally-oriented and governmental support makes a large difference in their living standards Alshorman et al. (2024, p. 112) noticed that the legislation designed for the protection of the disabled had inappropriate implementation hence causing a lack of appropriate supportiveness towards SCI patients in practice, Zürcher, Tough & Fekete 2019, p. 69). This study further identified inadequate funding by the government and limited access to such services as issues that further complicate the lives of SCI patients. A study by Byrne et al. (2025, p. 112) identifies the burning issue of caregivers' burnout and insufficiency created by funding policies. Caregivers play an important role in providing physical assistance, and caregiver burnout prevents the effective delivery of self-management for SCI patients.

This is further compounded by the financial issues, as the patients usually incur a lot of expenses due to their care. The inaccessibility of healthcare facilities and infrastructure exacerbates these issues further . Munce et al. (2014, p. 48). Social support is considered one of the most important factors in the psychological rehabilitation of SCI patients. Kennedy et al. (2010, p. 762) note that sports participation significantly decreases feelings of social isolation and increases patients' self-confidence and sense of competence. It is underlined that social support through sport and community involvement can positively affect the psychological health of patients, giving them a purpose and reducing the negative impact of isolation. Other essential issues that could improve the psychological status for the SCI patients are the financial supports. According to Rahman et al., 2017, p. 367 financial burden is linked with poor social relationships and also mental health problems like depressive symptoms. Financial freedom might alleviate some of the pressure related to health care expenditures and improved general well-being.

There is the need for government support in terms of resource provision and service provision to the patients. Dorjbal et al. (2019, p. 428) indicated that while there are protective laws, implementation often remains poor hence resulting in inadequate support for the patients. Increased government funding and proper implementation of the set laws would increase the quality of life among SCI patients through provision of appropriate services and resources.

Self-independence is an important determinant that can facilitate the psychological adjustment of SCI patients. Stephens, Neil & Smith (2012, p. 2061) pointed out that different physical activities along with support technologies, such as canes and wheelchairs, are associated with greater levels of functional independence. The greater the self-independence, the more the patients develop self-esteem and lesser levels of dependence.

It has also been appreciated that peer-support serves as an important facilitator in self-management and psychological well-being. Rahimi-Movaghar et al. (2016, p. 428) emphasized that contact with others with similar injuries is a source of great support and encouragement. A network of peers can offer practical advice and emotional comfort that is very much needed for the management of problems associated with SCI.

This scoping review has established that patient experiences and perceptions towards physiotherapy rehabilitation in spinal cord injury represent various significant issues that will affect the effectiveness and quality of care. Although existing research has illuminated a large number of aspects related to SCI rehabilitation, several gaps and limitations have been identified within the current literature, which indicate a further need for studies (Kudo et al. 2019, p. 93).

Poor physical environments, transport, negative societal attitudes, and inadequate health resources all range from the environmental barriers that affect the quality of life for the patients suffering from SCI (Dorjbal et al. 2019, p. 428).

These barriers influence not only physical health but also have psychological impacts. Even so, studies investigating the interaction between environmental factors and patient experiences in rehabilitation explicitly after an injury such as SCI remain scanty. Further studies are required to establish how improved physical environment and enhanced access can contribute to better rehabilitation outcomes and satisfaction among patients. Indeed, Shackleton et al. (2023, p. 789) indicated that the majority of participants considered the rehabilitation interventions helpful, thus providing an improved level of functional independence with reduced secondary complications. However, whereas such findings underline the positive effects of rehabilitation, few studies have actually explored the longer-term impact of such interventions on quality of life and psychological well-being.

Much-needed further research is needed to establish whether benefits are sustained and also to explore which rehabilitation strategies are most effective for which patient subgroups. Mir et al. (2019, p. 3234) also stated that caregivers are highly valuable in giving physical support, though peer support is equally invaluable for the purpose of effective self-management among SCI sufferers. Yet, even amidst these identified insights, comprehensive studies on the dynamics of caregiver burden and their implications in rehabilitation outcomes are still lacking.

Further research is also needed to explore how peer support mechanisms can be systematically integrated into rehabilitation programs to maximize patient self-management and well-being. Pasipanodya et al. (2024, p. 23) realized that sports participation greatly reduced social isolation and improved self-confidence in SCI patients (Stephens et al., 2012). However, barriers to sports participation have not been investigated regarding a lack of financial support and infrastructure. It will be further necessary to explore how increased recreational activity can be promoted and the ways in which such activities contribute to psychological and social well-being. Zürcher, Tough & Fekete (2019, p. 69) also pointed out that financial burden coincided with disturbed social relations in SCI patients. This calls for research into how financial constraints impact social support networks and mental health. These relationships can be documented and used as the basis for targeted interventions that minimize the negative impact of financial strain.

Various studies, by Singh et al. (2014, p. 309) among others, provide valuable epidemiological data concerning the prevalence of SCI in different parts of the world. However, much more local research is needed to explain the causes for these regional differences in prevalence and to delineate specific needs within different populations. Additionally, such comprehension of the roots of these differences in prevalence rates and their implications for the practice of rehabilitation would be very useful knowledge for resource allocation and policy development.

Mahooti et al. 2020, p. 93 have highlighted that the majority of assistive devices, namely wheelchairs, canes, and braces, are applied in an effort to enhance functional independence among the patients with a spinal cord injury. However, the effectiveness and patient satisfaction level with these assistive devices do require further study. This is to be geared toward the design and functionality of the assistive devices for optimization, understanding patients' preference, enhancing their usability, and contributing to rehabilitation outcomes.

Shackleton et al. (2023, p. 789) provided an excellent overview of the diverse etiologies and wide-ranging impacts of the injury on physical, psychological, and social well-being. While the above impacts are realized, the need for more longitudinal studies to follow up the long-term outcome of different rehabilitation interventions is real.This would give insights into the effectiveness of different rehabilitation approaches over extended periods and help refine treatment protocols based on long-term patient experiences.

Evidence by Dorjbal et al. (2019, p. 428) has further demonstrated that implementation gaps exist concerning policies that could give necessary support to disabled people. Researches are needed, thus, with regard to identifying potential impediments to effective policy implementation in their full sense, which will again have an additional advantage in advocacy for better policy frameworks to make sure that the legislative and organizational supports address the needs of SCI patients.

In summary, the literature currently indeed provides insight on most aspects of rehabilitation in SCI but simultaneously has identified deficiencies in the research literature that need further exploration.

Future research should be channeled toward a better understanding of environmental barriers, long-term effects of rehabilitation interventions, caregiver dynamics, financial strain, use of assistive devices, and policy implementation.

CHAPTER-III METHODOLOGY

3.1 Study design

The qualitative methodology has been chosen by the researcher in this study since it allowed for an exploration of the perceptions of individuals in specific contexts with a deeper understanding of these perceptions. Qualitative research was exploratory, providing insight into participants' views, opinions, feelings, and beliefs within their natural environments. It utilized a semi-structured questionnaire and face-to-face interviews, which were recorded for socio-demographic characteristics, physical and social challenges, psychological problems, and other difficulties the participants faced. Such aspects, like perceptions, beliefs, fears, and attitudes, are best understood through qualitative methods rather than quantitative approaches. This qualitative approach was chosen to explore the perceptions of SCI patients, allowing them to express themselves freely regarding their thoughts and feelings. This is to ensure a complete understanding of how they perceive and experience physiotherapy rehabilitation.

3.2 Study area

The research took place at the Centre for the Rehabilitation of the Paralysed (CRP).

3.3 Study population

The study population consisted of spinal cord injury patients who had undergone at least one month of physiotherapy rehabilitation.

3.4 Participant Selection Procedure

A purposive sampling technique was used for selecting participants from the population by using predefined inclusion criteria. Purposive sampling was done in this study based on specific needs of the study, hence participants were selected if they fulfill the selection criteria set by the researcher. Inclusion criteria for participating in this study included individuals diagnosed with SCI and admitted at CRP, Savar, Dhaka, who had a history of spinal cord injury of at least 1 month. Eligible patients identified from the

CRP. It only selected the participants who provided permission to the investigator for a study.

3.4.1 Inclusion criteria

i. Subjects who were willing to participate

ii. Subjects with at least 1 months history of a spinal cord injury

iii. Age ranging from 19–63 years

iv. Both tetraplegic and paraplegic SCI patients

v. Both male and female participants

vi. Participants who were easy to communicate with

3.4.2 Exclusion criteria

i. Subjects who were not willing to participate

ii. Age below 19 and above 63 years

iii. Subjects with severe head injury

iv. SCI patients with speech problems and those who were medically unstable

v. Patients with cognitive problems

vi. Undiagnosed patients

3.5 Sample size

Fourteen participants were taken as sample from CRP indoor facility according to data saturation

3.6 Data collection method

Data collection was done through face-to-face interviews using open-ended questions. Open-ended questions can allow participants to give a greater opinion. Such interviews also provide the researcher with an opportunity to observe the facial and non-verbal expressions of the participants during the interview. The surroundings were made quiet with the help of the relevant authorities before the start of the formal interviews, and the participants were put in a comfortable environment by establishing rapport with them. The research questions and objectives of the study were explained to him. The permission was taken in Bangla by providing an information sheet and consent form. In-depth interviews in Bangla were recorded using a mobile phone recorder. Each interview took approximately 10–15 minutes during the daytime at different community settings.

3.7 Duration of data collection

Data were collected from 13th August 2024 to 15th August 2024. Each participant provided time to collected data. Each interview took approximately 20-30 minutes to complete

3.7 Data analysis method

Thematic content analysis was conducted during the data analysis phase, which was facilitated at all levels through the use of NVivo software for efficient and organized data management. The researcher first listened to the recorded interviews multiple times and transcribed them in Bangla. Transcripts were reviewed for accuracy and then translated into English. These transcripts were then imported into NVivo, where the approach of QCA was applied to identify and interpret emergent themes.

Three steps of analysis were performed for the paper, namely coding, categorizing, and theme generation. The codes were developed through using the full capability of NVivo to underscore key segments of text representative of participants' expression and perception. Patterns and data relationships were viewed with the assistance of visualization tools like word clouds and node matrices in NVivo. Related codes were grouped together into broader categories in order not to miss even the minutest details of participants' experiences.

Key codes to set up the umbrella themes of this study were identified, reviewed, and re-refined for consistency and coherence in NVIVO. Features supporting data tracking and organization allowed for easy cross-referencing of data and triangulation of findings. The themes identified are interpreted based on a systematic review of data that is coded for comprehensive perspectives and experiences. NVivo ensured rigor and transparency in the analysis process to ensure that no analyzed data was superficial and unsystematic.

3.8 Data collection tools and materials

An audio recorder was utilised to capture the participants' interview. A pen, paper, and clipboard were utilised to record observation notes. A consent form and information sheet were utilised to obtain permission from the participants. An open-ended questionnaire was utilised to conduct the interview.

3.9 Questionnaire

For data collection a semi-structured open-ended questionnaire was used. The questionnaire was formed based upon the related literature.

3.10 Ethical consideration

The research study has to be strictly in accordance with the ethical guidelines. A project proposal has been forwarded to the Department of Physiotherapy, Saic College of Medical Science and Technology (SCMST), and the Institutional Review Board of SCMST approved the same for conducting the study. The present study is part of research done in compliance with the guidelines from the WHO and BMRC. The questionnaires will guarantee the confidentiality of responses at all times. The data collection has been permitted by concerned authorities in the study area. Informed consent to participate will be obtained after a clear explanation of the study's aims and objectives has been provided. Written consent will be obtained from each of the respondents in addition to explaining the procedure to them verbally. The participants will be assured that the information is confidential and for the use of the research supervisor only. The rights of participants, such as the right to withdraw from participation at any stage without any penalty, will also be made known to them. In protecting anonymity, participation numbers will be assigned to every note and transcript, as no participant names or addresses will be used. It will be explained that data collected may be used in presentations, seminars, or written papers, but without any trace of information leading to identification and causing them harm. It will also be made known that participants have every right to discuss any apprehension that they may have with regard to the research study with senior authorities. The ethical standards for this study will be upheld in a manner that protects participant welfare while preserving the integrity and confidentiality of the research process.

3.11: Rigor of this study

The rigorous manner was maintained to demeanor the study. This study was conducted in a systemic way by next steps of research under supervision of an experienced supervisor. During the interview session and analyzing data, never tried to influence the process by own value, perception and biases. Be accepted the answer of the questions whether they were of positive or negative impression. Information from the participant was coded accurately, followed by the supervisor going through any probable mistakes. Try to maintain confidentiality for any information and documents regarding participants.

CHAPTER-IV RESULTS

The results section presents the key findings of the study on the experiences and perceptions of spinal cord injury (SCI) patients undergoing physiotherapy rehabilitation at the Centre for the Rehabilitation of the Paralysed (CRP), Dhaka. Through qualitative thematic analysis, six overarching themes emerged: general satisfaction, coping mechanisms, beneficial techniques, increased independence, barriers to access, and improvement in daily function.

The demographic profile of the participants highlights a diverse group in terms of age, gender, education, and occupation, with the majority residing in rural areas. The findings reveal a spectrum of patient satisfaction, ranging from positive experiences and mixed feelings to negative perceptions, largely influenced by the effectiveness of treatment, accessibility, and the emotional challenges of long-term rehabilitation. Coping strategies varied among participants, with motivation from progress and support from family, friends, and physiotherapists playing a crucial role in their perseverance.

Participants identified personalized physiotherapy plans, manual therapy, and strengthening exercises as the most beneficial techniques. Physiotherapy significantly contributed to increased independence, enabling patients to perform daily activities with reduced reliance on assistance. However, financial constraints, long distances to rehabilitation centers, and limited availability of physiotherapists emerged as major barriers. These findings emphasize the need for patient-centered rehabilitation strategies that address both physical and psychological recovery.

Table 4.1: Socio-demographic information of participants

Variable	Frequency (n)	Percentage (%)
Age		
20-24	5	35.7
25-29	2	14.3
30-34	1	7.1
35-39	3	21.4
40-44	2	14.3
50-54	1	7.1
Gender		
Female	5	35.7
Male	9	64.3
Marital Status		
Married	10	71.4
Unmarried	4	28.6

Family Type		
Joint family	9	64.3
Nuclear	5	35.7
Living area		
Rural	11	78.6
Urban	3	21.4
Educational Qualification		
Bachelor	1	7.1
Higher secondary	2	14.3
Illiterate	4	28.6
Primary	1	7.1
Secondary	6	42.9
Occupation		
Day labor	1	7.1
Desk job	2	14.3
Farmer	2	14.3
Others	9	64.3

Type of injury		
F/H	8	57.1
Patho	1	7.1
RTA	5	35.7
Cause of injury		
Non_traumatic	2	14.3
Traumatic	12	85.7

The socio-demographic profile of the respondents indicates a diversified profile. Most of the respondents, 35.7%, were in the age group of 20-24 years, followed by the age group 35-39 years, which accounted for 21.4%. Thus, the study predominantly consisted of young and middle-aged people. Male participants were 64.3%, indicating a male-dominant sample. A significant proportion, 71.4%, were married, reflecting familial responsibilities. Most of them, 64.3%, came from joint family systems, and 78.6% lived in rural areas, indicating the socio-cultural influence on their rehabilitation. About education, 42.9% had completed secondary education, while 28.6% were illiterate, showing disparities in access to education. Occupation-wise, 64.3% fell under "others," while only 7.1% were day laborers, pointing toward diverse occupational backgrounds. The main type of injury was falls from height at 57.1%, and 85.7% of the injuries were traumatic, hence the need for targeted preventive measures. These findings underline the complex interplay of socio-economic, educational, and environmental factors in spinal cord injury rehabilitation.

Table 2: Theme 1: General satisfaction with with physiotherapy of patients as experience and perception

Category 1: Satisfaction of patients

Theme-1			
General satisfaction			
Subthemes			
Participants	**Positive experience**	**Mixed feelings**	**Negative experience**
P-1		✓	
P-2	✓		
P-3		✓	
P-4		✓	
P-5	✓		
P-6		✓	
P-7		✓	
P-8		✓	
P-9	✓		
P-10	✓		
P-11	✓		
P-12		✓	
P-13			✓
P-14		✓	

Figure 10: General Satistfaction mind map theme produced using NVivo 15

Theme 1: General Satisfaction

This theme explored the participants' overall experience with physiotherapy rehabilitation, classified into three subcategories: **Positive Experience**, **Mixed Feelings**, and **Negative Experience**.

Key Findings:

1. **Positive Experiences**:
    - Participants P-2, P-5, P-9, P-10, and P-11 expressed an overall positive outlook towards their rehabilitation process.
    - Their satisfaction likely stems from visible progress, effective therapist-patient communication, or an improvement in their functional abilities.
2. **Mixed Feelings**:
    - A majority of participants (P-1, P-3, P-4, P-6, P-7, P-8, P-12, and P-14) had mixed feelings about their rehabilitation experience.
    - Their responses may reflect inconsistencies in their progress, emotional struggles with the long-term nature of recovery, or fluctuations in their perceived quality of care.
3. **Negative Experiences**:
    - Participant P-13 reported a predominantly negative experience.
    - This response could stem from unmet expectations, ineffective communication, or limited perceived progress in rehabilitation.

Table 3: Theme 2: Coping mechanisms with physiotherapy of patients as experience and perception

Category 2: Coping mechanism with spinal cord injury

Theme-2		
Coping mechanisms		
Subthemes		
Participants	**Motivation from progress**	**Support from family/friends/physiotherapist**
P-1	✓	
P-2	✓	
P-3		✓
P-4	✓	
P-5		✓
P-6	✓	
P-7		✓
P-8		✓
P-9		✓
P-10		✓
P-11	✓	
P-12	✓	
P-13	✓	
P-14		✓

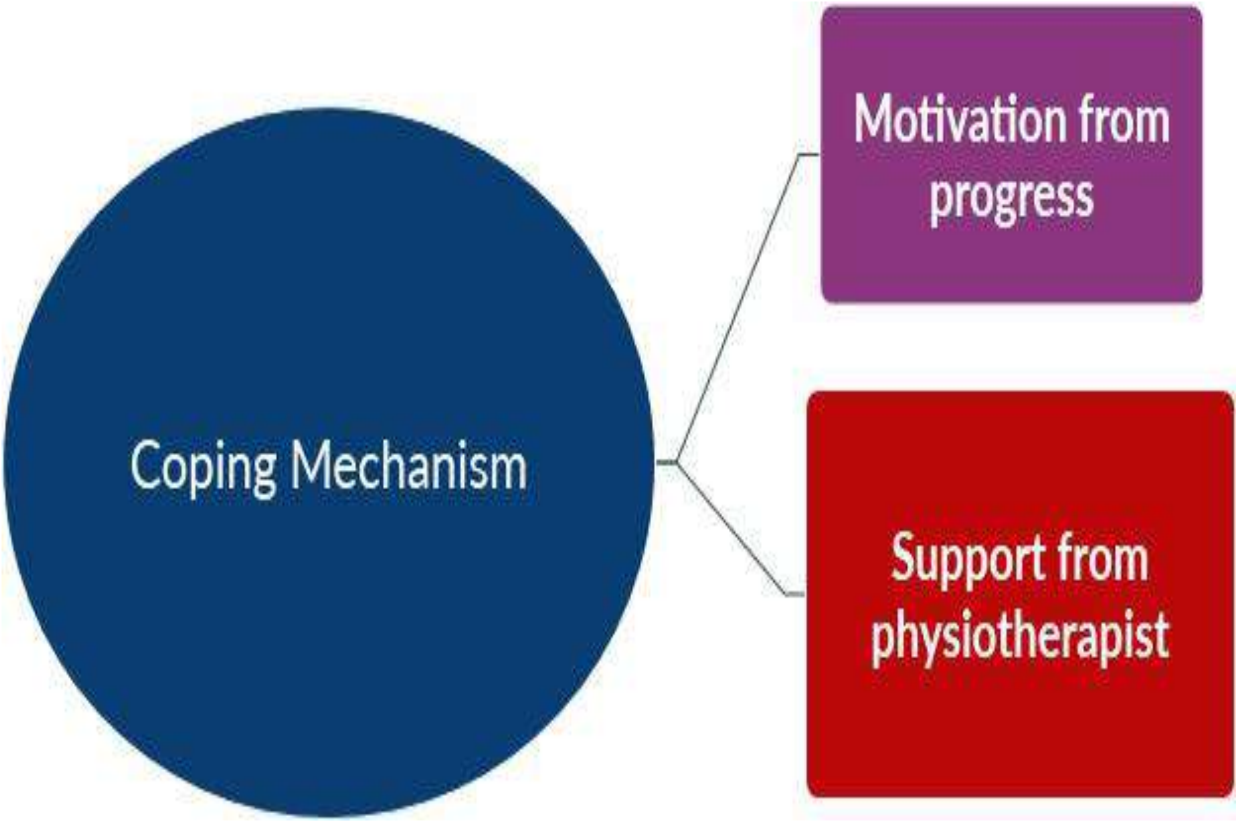


Figure 11: Coping Mechanism mind map Theme and subthemes produced using NVivo 15

Theme 2: Coping Mechanisms

This theme examined how patients adapted to their rehabilitation journey, focusing on two key subthemes: **Motivation from Progress** and **Support from Family/Friends/Physiotherapist**.

Key Findings:

1. **Motivation from Progress**:
   - Participants P-1, P-2, P-4, P-6, P-11, P-12, and P-13 derived motivation from observing their own progress during rehabilitation.
   - Visible improvement, even incremental, seems to play a pivotal role in fostering optimism and a sense of control over their recovery..
2. **Support from Family, Friends, or Physiotherapist**:
   - Participants P-3, P-5, P-7, P-8, P-9, P-10, and P-14 emphasized the critical role of external support systems.
   - Support from family, friends, and physiotherapists not only provided emotional stability but also motivated participants to persevere through challenges.

Table 4: Theme 3: Beneficial Techniques physiotherapy of patients as experience and perception

Group: Beneficial Techniques of physiotherapy

Theme-3			
Beneficial Techniques			
Subthemes			
Participants	**Manual therapy**	**Personalized plan**	**Strengthening exercise**
P-1	✓		
P-2	✓		
P-3		✓	
P-4		✓	
P-5		✓	
P-6			✓
P-7	✓		
P-8		✓	
P-9			✓
P-10	✓		
P-11		✓	
P-12			✓
P-13			✓
P-14			✓

Figure 12: Beneficial technique according to patient-I

(This concept is produced using NVivo 15)

Theme 3: Beneficial Techniques

This theme explores specific physiotherapy techniques participants found most helpful, with subthemes covering **Manual Therapy**, **Personalized Plans**, and **Strengthening Exercises**.

Key Findings:

1. **Manual Therapy**:
    - Participants P-1, P-2, P-7, and P-10 identified manual therapy as a crucial aspect of their recovery.
    - Manual therapy likely contributed to pain relief, improved joint mobility, and enhanced muscle function.
2. **Personalized Plans**:
    - Participants P-3, P-4, P-5, P-8, and P-11 highlighted the importance of personalized rehabilitation plans tailored to their specific needs and goals.
    - Customized interventions likely fostered a sense of agency and alignment with recovery goals.
3. **Strengthening Exercises**:
    - A significant proportion of participants (P-6, P-9, P-12, P-13, and P-14) valued strengthening exercises in their rehabilitation process.
    - These exercises likely aided in rebuilding muscle strength, improving endurance, and regaining functional independence.

Table 5: Theme 4: Increased Independence as experience and perception of SCI patients

Category 4: Increased Independence

Theme-4			
Increased Independence			
Subthemes			
Participants	**Daily activities**	**Self-care**	**Reduced reliance on assistance**
P-1	✓	✓	✓
P-2	✓	✓	✓
P-3	✓	✓	
P-4		✓	✓
P-5	✓		
P-6		✓	
P-7	✓	✓	
P-8	✓	✓	
P-9	✓	✓	
P-10	✓	✓	✓
P-11	✓	✓	✓
P-12	✓	✓	✓
P-13	✓	✓	
P-14		✓	

Figure 13: Word frequency of theme (increased independence) produced using NVivo 15

Theme 4: Increased Independence

This theme reflects on the role of physiotherapy in enhancing mobility and independence, with subthemes related to improvements in **Daily Activities**, **Self-Care**, and **Reduced Reliance on Assistance**.

Key Findings:

1. **Daily Activities**:

   o Participants P-1, P-2, P-3, P-5, P-7, P-8, P-9, P-10, P-11, P-12, and P-13 reported that physiotherapy significantly improved their level of performance in daily activities.

   o Activities like walking, standing, and even the use of assistive devices were easier.

2. **Self-Care**:

   o Participants P-1, P-2, P-3, P-4, P-7, P-8, P-9, P-10, P-11, P-12, and P-13 reported an improved ability to undertake self-care activities such as dressing and grooming.

   o Self-care is a critical milestone for spinal cord injury patients, often reflecting significant progress in mobility and coordination.

3. **Reduced Reliance on Assistance**:

   o Participants P-1, P-2, P-4, P-10, P-11, and P-12 demonstrated a reduction in reliance on support either from caregivers or assistive devices.

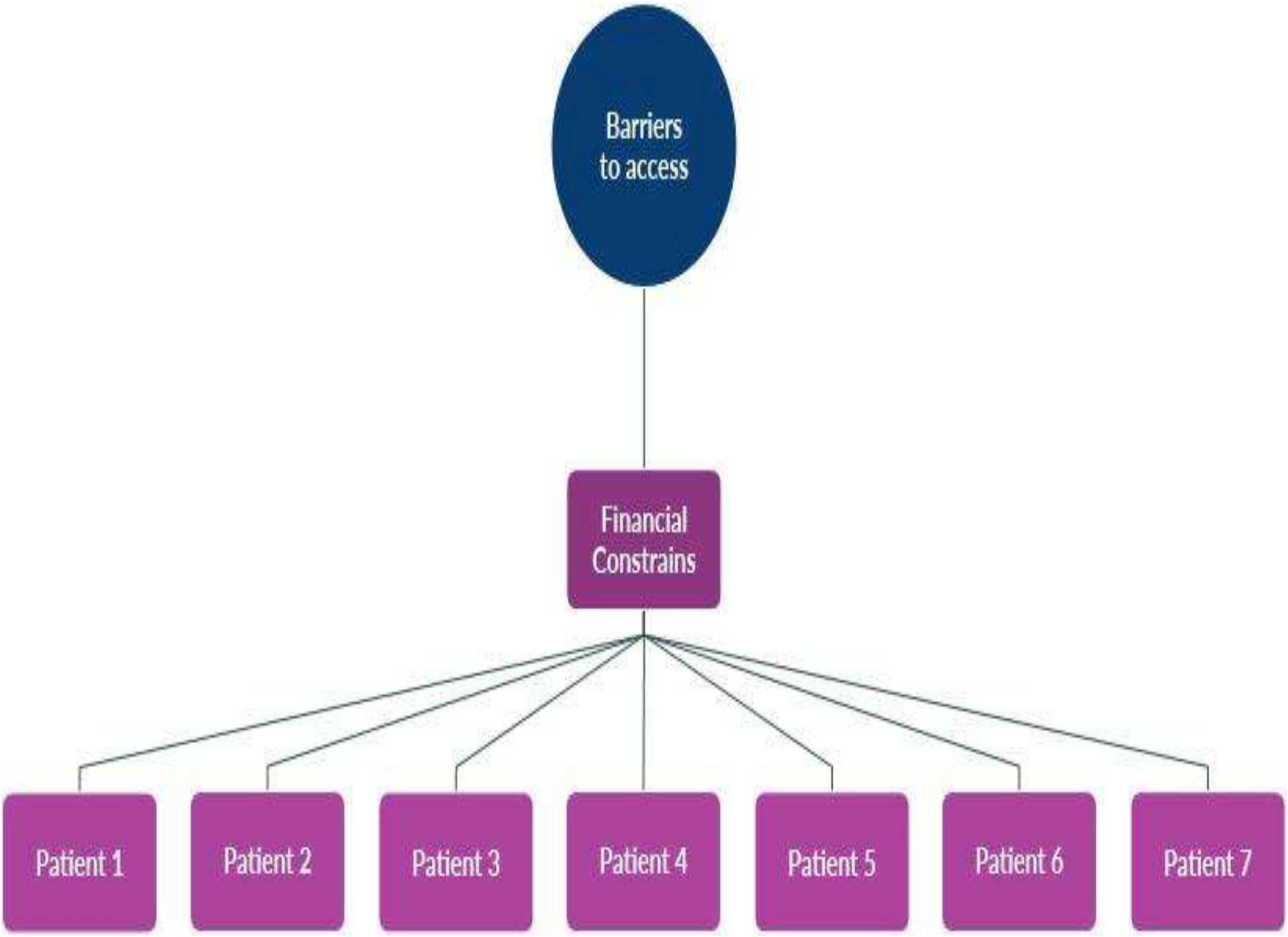
   o These patients probably attained a higher level of independence due to muscle strengthening, improvement in motor skills, and adaptive techniques.

Table 5: Theme 5: About barriers to access experience and perception of SCI patients

Category 5: Barriers to Access

Theme-5			
Barriers to Access			
Subthemes			
Participants	**Financial constraints**	**Distance to rehabilitation centers**	**Availability of physiotherapists**
P-1		✓	✓
P-2			
P-3			✓
P-4			✓
P-5	✓		✓
P-6	✓		
P-7	✓		
P-8	✓		
P-9	✓		
P-10			✓
P-11			✓
P-12		✓	
P-13	✓		
P-14	✓		✓

Financial contrain reported as barrier according to patients:



Theme 5: Barriers to Access

This theme identifies structural and logistical challenges affecting patients' ability to access physiotherapy services, including **Financial Constraints**, **Distance to Rehabilitation Centers**, and **Availability of Physiotherapists**.

Key Findings:

1. **Financial Constraints**:

   o Financial problems-the participants who mentioned a big hindrance were P-5, P-6, P-7, P-8, P-9, P-13, and P-14.

   o The expenses of continued sessions, along with the long-term recovery period, may frustrate patients and make them forego much-needed care.

2. **Distance to Rehabilitation Centers**:
   - Participants P-1, P-12, and P-14 faced difficulties due to the distance between their homes and rehabilitation centers.
   - Traveling long distances, often without adequate transportation options, is a significant obstacle for patients.
3. **Availability of Physiotherapists**:
   - Participants P-1, P-3, P-4, P-5, P-10, and P-11 noted limited access to physiotherapists, possibly due to staffing shortages or high demand for services.

Table 6: Theme 6: Experience and perception of SCI patients Improvement in Daily Function

Category 6: Improvement in Daily Function

Theme-6			
Improvement in Daily Function			
Subthemes			
Participants	**Personal hygiene**	**Household tasks**	**Work-related activities**
P-1		✓	✓
P-2		✓	✓
P-3		✓	✓
P-4	✓	✓	✓
P-5	✓	✓	
P-6	✓	✓	✓
P-7	✓	✓	
P-8	✓	✓	✓
P-9	✓	✓	✓
P-10	✓	✓	✓
P-11	✓	✓	✓
P-12	✓	✓	
P-13	✓		✓
P-14		✓	✓

Theme 6: Improvement in Daily Function

This theme reflects how physiotherapy has positively impacted participants' ability to manage daily life, with subthemes focused on **Personal Hygiene**, **Household Tasks**, and **Work-Related Activities**.

Key Findings:

1. **Personal Hygiene**:
    - Most participants, except P-1, P-2, P-3, and P-14, reported improvements in performing personal hygiene tasks like bathing and dressing.
2. **Household Tasks**:
    - Participants consistently noted progress in household management, with only P-13 not mentioning this improvement.
3. **Work-Related Activities**:
    - Participants P-4, P-6, P-8, P-9, P-10, and P-11 achieved significant improvements in work-related functions, while others still faced challenges.

This theme stipulates the participants' level of satisfaction with their experiences, which have been categorized as Positive Experiences, Mixed Feelings, and Negative Experiences in physiotherapy. Response varies because of progress by the individual, expectation, and perceived quality of care. Each participant contributes to at least one insight into strengths and gaps in the rehabilitation practices.

Participants like P-2, P-5, P-9, P-10, and P-11 expressed satisfaction with the rehabilitation process. The participants highlighted functional independence, management of daily tasks, and quality of life. For example, P-2 stated the following: "*Physiotherapy has considerably influenced my everyday life. It has facilitated doing simple tasks such as cooking and managing personal hygiene, which in turn increase my independence*." Such favorable outcomes are attributive to the fact that physiotherapies are organized and goal-directed,thus intended for functionality recovery with time.

This is supported by the findings of Whalley Hammell, 2017, who points out that physiotherapy is an intervention used in the restoration of patients' autonomy and making them get back to their normal lives. Satisfaction may be achieved by progress, good communication between the therapist and the patient, as well as treatment specific to individual needs.

P-10 expressed similar satisfaction, stating, "I’ve seen real improvements in my strength and mobility, and it’s made me feel more capable in handling everyday activities." These accounts underscore the psychological benefits of visible progress, including increased confidence and motivation to persist with therapy.

For instance, P-1, P-3, P-4, and P-6 described their experience, mentioning that positive and negative feelings coexisted. On the one hand, participants confirmed the positive sides of the physiotherapy treatment in their responses; on the other hand, they showed dissatisfaction with its slowness, logistic challenges, or psychological issues.

For instance, P-3 stated, "*The progress is there; it is slow and frustrating at times, and I just wish there was more resources to make it easier*." This means that one of the psychological effects of long-term rehabilitation is that such patients feel overwhelmed by the extended periods necessary for noticeable improvements. This finding corroborates the view of Johnston et al. (2016) that patients' satisfaction with rehabilitation fluctuates since recovery is an unpredictable process.

This is further corroborated by external factors such as access and availability. As P-4 summarized it: "*While the therapy helps, getting to appointments sometimes seems a greater challenge than the actual therapy*." Such logistical barriers decrease overall satisfaction in circumstances when the therapy in question might be helpful.

Only one of the respondents reported a mostly negative experience: P-13. He seemed discontent with the perceived lack of personal treatment: "*I felt the therapy wasn't tailored enough, and the progress was minima*l." Answers like this point to the very important aspect of care planning, which has to be focused on each particular patient and his problems and expectations.

Complaint 13 is befitting the latest experiences from Akter, et al. (2019), who, after rehabilitation, showed less involvement and outcomes from patients if very specific needs are not met. Their negative perception outlines the requirement for refining therapeutic measures coupled with building up the patient's psychology through effective communication techniques.

This theme describes the participants overcoming various setbacks in rehabilitation by drawing on intrinsic motivation and available support systems. Coping mechanisms were an important means of maintaining emotional resilience and adhering to therapy, in particular considering the physical and emotional demands associated with SCI rehabilitation.

Motivation became a significant coping strategy, especially when the participants witnessed visible changes in their condition. For example, participants like P-1, P-2, P-4, and P-6 said that any noticeable improvement in their physical abilities assured them of their motivation to continue.

P-1 shared one such moment: "A big moment was standing up with help after therapy. It gave me confidence to keep trying." For most participants, these moments were some sort of reminders that their efforts were indeed paying off and helped create a sense of hope and self-agency. Similarly, P-2 said, "*Witnessing improvement in my strength gave me the feeling that I am getting parts of my life back.*" These accounts show the psychological effect of even minor accomplishments in shifting the focus of patients from disability issues to possibilities of recovery.

This is in line with Williams et al. (2018), who noted that incremental successes not only build optimism but also result in increased engagement by the patient in rehabilitation programs. In the light of this, celebrating progress, no matter how small, acts as a reinforcement mechanism for patients to maintain their commitment to therapy.

The external support systems-family, friends, and physiotherapists were also important in shaping the coping strategies. There was consistency in identifying emotional and practical benefits of having a strong support network during the rehabilitation journey. P-7 shared, *"Having my family encourage me made a huge difference. I felt less alone in this journey.*" Such expressions outline the role that family and friends can play in terms of emotional stability, a sense of belonging, and possibly being a turning point in the lives of people who feel isolated because of their condition.

The participants also added that physiotherapists were major sources of motivation and encouragement. P-3 explained, *"My physio didn't only help me physically; she gave me confidence in myself, which is what helped me keep going through tough days."* It also underlines the dual role played by the physiotherapist-a medical expert and an emotional supporter. They are confident enough and treat the patients individually to make them feel that the rehabilitation can be done as a collective effort.

These findings are supported by Smith and Sparkes (2005), who, while exploring the salience of support, both social and professional, in promoting psychological resilience to ensure long-term recovery, maintained that such supportive networks serve to buffer the challenges presented throughout the rehabilitation process, often physically demanding and emotionally debilitating for the individual with a spinal cord injury.

Respondents reported those areas of physiotherapy that had been most helpful. These coalesced around three key themes: manual therapies, individualized plans, and strengthening exercises.

Some, like P-1, P-2, and P-10, have found the manual treatments they received from their physiotherapist very helpful. For example, P-10 said, *"Hands-on techniques really helped ease my pain and improved my mobility*." This shows that manual therapy, including massage or joint adjustments, alleviates pain and enhances mobility. Other literature also highlights how this approach decreases stiffness while enhancing flexibility.

Some, for example, have pointed out that treatment has to be provided in an individual manner: P-3, P-8. P-3 expressed this as follows: *"Having a plan suited to my needs made me feel understood and supported."* That is to say, if the physiotherapist prepares exercises and objectives which correspond to what the patient needs, this will not only be good for the physical aspect but also for the motivation and taking care of the patient.

For example, P-6, P-12, and P-14 reported that strengthening exercises played a huge role in their recovery. Indeed, P-6 stated, *"Building strength helped me regain control over daily tasks."* These exercises would indeed enable patients to gain their muscle strength back, and thus, everyday tasks were much easier to do.

Physiotherapy assisted participants in becoming more independent by enhancing their capacity to conduct activities of daily living easily, taking good care of their persons, and being less dependent on other people.

Most participants (e.g., P-1 and P-9) reported that they were now able to do tasks such as cooking and cleaning, which they could not manage earlier. P-9 shared, "I can now do household chores, like cooking and cleaning, which hitherto seemed impossible." This goes to show how it can make an individual independent and confident in the way of life.

The self-care statement among some of the participants, such as P-11 was that they can look after themselves once again.

"Getting dressed or grooming myself is no more an issue, owing to the therapy.", as cited from P-11. These small mundane activities gave them the sense of being independent and self-respecting.

A few participants reported that they needed less help from others anymore, for example, P-4 and P-12. Accordingly, P-12 explained how great it feels "*not to be dependent on someone in every little thing."* This independence is empowering and helps patients feel less of a burden on their families.

Participants also discussed challenges regarding access to physiotherapy. Some of the reasons given are high costs of accessing it, a long distance to clinics, and few physiotherapists. Most participants, for instance, P-5 and P-14, indicated cost as a big challenge in therapy. P-5 said, *"Therapy is expensive, and it's hard to keep up with the costs."* This shows that there is a need to make therapy affordable for all so that people can access it easily.

For instance, some participants, such as P-1 and P-12, could not access therapy because the clinics were too far away. P-1 states, "*The hospital is far, and to get to it is exhausting."* This indicates that either transportation means should be improved or the therapy centers should be closer to the residents.

The ability to regain personal hygiene is one of the first and most important milestones in recovery from SCI. Most participants reported substantial improvements in managing personal care routines such as dressing, grooming, and bathing, which are basic needs for self-esteem and independence.

For example, P-8 said, *"I can now dress and groom myself without help, which is a big relief."* This statement not only denotes the emotional relief of becoming independent in self-care but also the practical one. Most participants were dependent on their caregivers or family members before the rehabilitation program, which created feelings of dependency and frustration among them. Physiotherapy helped them get the necessary mobility, coordination, and even confidence to manage these activities themselves.

This is in line with research by Whalley Hammell (2007), who points out that the recovery of the ability to perform basic self-care tasks significantly contributes to improving psychological well-being. The ability to independently care for personal hygiene usually signals the start of a patient's road to wider functional recovery and reintegration into daily life.

Limitations of the Study

A number of limitations in this study should be considered while placing the findings in context. First, the sample size was relatively small, consisting of 14 participants, which may limit the generalizability of the results to larger populations of SCI individuals. Further, the research was confined to a single rehabilitation center, namely the Centre for the Rehabilitation of the Paralysed (CRP), located in Dhaka. This regional focus may well mask variations in the experiences of SCI patients from diverse geographical, cultural, and socio-economic backgrounds, which could influence their rehabilitation outcomes and perceptions.

Another limitation includes the self-reporting nature of data from interviews; people might have recall bias, social desirability bias, or influences of emotional state when they were interviewed. Besides, qualitative methods gave an in-depth understanding of experiences of patients, but measuring quantitative outcomes and establishing causation-that is, something that might be beyond the scope of this study design-might have added empirical evidence to the results by adding weight to the findings.

This is compounded by methodological challenges in the study, such as the limited availability of participants due to their rehabilitation schedules, which may have constrained the diversity of the perspectives captured. Finally, while thematic analysis did extract some very useful patterns and insights from the data, the interpretation of qualitative data inherently includes elements that may be subjective to the perspective of the researcher, introducing a degree of bias.

Considering the stated limitations, the research still contributes much to the interpretation of experiences and perceptions of patients who underwent physiotherapy rehabilitation due to their conditions. Future research, considering such a limitation, may discuss larger and different populations, including quantitative measures that can be able to establish follow-up on the recovery in the rehabilitation process.

CHAPTER- VI CONCLUSION & RECOMMENDATION

This study has explored experiences of persons with spinal cord injuries throughout their physiotherapy rehabilitation process and has identified a few themes that seem to emerge throughout the analysis. The study deepened the understanding of challenges, coping strategies, and transformational influences of physiotherapy in the lives of participants as depicted by their voices. As reflected by the six major themes identified, physiotherapy treatment forms the very basis of recovery for persons with SCI. Overall, patients shared varied satisfaction that ranged from fully positive experiences to mixed feelings and at times dissatisfaction with the rehabilitation process. While some participants reported appreciation for personalized attention and noticeable improvement, others also reported challenges related to logistics, disappointment with expectations not met, and the psychological burden of a very lengthy process. Such findings denote the importance of the treatment to be individualized and accessible for the experience to become positive and meaningful. One of the most relevant features of this study was the ways in which respondents coped with their rehabilitation process. Other strong coping mechanisms included motivation through observable improvement and encouragement by family, friends, and physiotherapists. Respondents described how minor improvements in either mobility or strength provided them with hope and the will to continue. There was also identification of the importance of support systems from the outside. Many had appreciation for emotional encouragement and support which allowed them to commit to their recovery process. It is thus a cornerstone during recovery from SCI in providing a route to physical, emotional, and social rehabilitation. If the full potential of physiotherapy is to be realized, accessible, affordable, personalized services will be required to meet the diverse needs of persons with SCI. Future efforts are indicated to reduce systemic barriers, enhance support networks, and stimulate innovative approaches to rehabilitation so that all patients can reach their full potential and live an independent, meaningful life.

Recommendations

The following recommendations based on this study's findings in improving the rehabilitation experience and outcomes of the patients with SCI:

1. The ease of access to physiotherapy Rehabilitation services should ease these financial and logistic burdens with subsidy costs of therapies, the creation of more such centers in the rural, less privileged parts, and alternatives to transportation to such that all such patients are benefited without much added burden.

2. Patient-Centric Rehabilitation Plans: Rehabilitation plans have to be charted and put into operation concerning the patient's needs, targets, and advances. This kind of approach can allow the optimization of functional recuperation and gratification of the patients by looking into the peculiar challenges and wishes of each case.

3. Include Psychosocial Support Rehabilitation programs need to address the involvement of the psychological and emotional states of the patients with SCIs. Access to counselors, support groups, or psychiatrist supports facilitates the smoothing of some difficult psychological stages for the SCI victims in their process of recovery.

4. Enhancing Training for Rehabilitation Professionals: There is an absolute need for continuous professional development in keeping physiotherapists and other rehabilitation staff updated with the latest knowledge and techniques. Training should also include communication and empathy skills to foster stronger therapeutic relationships with patients.

5. Public Awareness and Advocacy: Better education of the public about the needs and capabilities of persons with SCI may lead to less stigmatization by society. The aim of advocacy would be the promotion of inclusiveness, barrier-free environments, and policies that support improved vocational and social opportunities for the patient with SCI.

CHAPTER VII REFERENCE

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APPENDIX

সম্মতিপত্র (বাংলা)

অনুগ্রহ করে মনযোগ দিয়ে পড়ুন

আসসালামুয়ালাইকুম!

আমি মোঃ ওমর ফারুক, বিএসসি ফিজিওথেরাপিতে, ৪র্থ বর্ষ, ২০১৮-১৯ সেশন, মেডিসিন অনুষদের অধীনে ঢাকা বিশ্ববিদ্যালয়ের অধিভুক্ত সাইক কলেজ অফ মেডিকেল সায়েন্স অ্যান্ড টেকনোলজিতে পড়াশোনা করছি। আমি "ফিজিওথেরাপি পুনর্বাসনের প্রতি রোগীর অভিজ্ঞতা এবং উপলব্ধি অন্বেষণ: স্পাইনাল কর্ড পুনর্বাসনে ফিজিওথেরাপির ভুমিকা" শিরোনামের একটি গবেষণা প্রোগ্রাম পরিচালনা করছি, এই গবেষণায়, আমি ফিজিওথেরাপি পুনর্বাসনের প্রতি রোগীর অভিজ্ঞতা এবং ধারনা সম্পর্কে জানতে চাই। আমি আপনার সামাজিক তথ্য সংক্রান্ত কিছু প্রশ্ন করতে চাই, এবং চিকিৎসা সংক্রান্ত তথ্য-সম্পর্কিত প্রশ্ন করতে চাই, অনুগ্রহ করে মনে রাখবেন যে এই একাডেমিক গবেষণা সাক্ষাৎকারটি সম্পূর্ণ হতে প্রায় ২০-৩০ মিনিট সময় লাগবে। এই গবেষণায় অংশগ্রহণ করা আপনার বর্তমান বা ভবিষ্যতের চিকিৎসাকে কোনোভাবেই প্রভাবিত করবে না। এটি উল্লেখ করা গুরুত্বপূর্ণ যে সংগৃহীত তথ্য শুধুমাত্র একাডেমিক গবেষণার উদ্দেশ্যে ব্যবহার করা হবে, এবং আপনার দেওয়া সমস্ত তথ্য গোপন রাখা হবে। কোনো প্রতিবেদন বা প্রকাশনার ক্ষেত্রে, আমরা নিশ্চিত করব যে আপনার পরিচয় গোপন থাকবে।

এই গবেষণায় আপনার অংশগ্রহণ স্বেচ্ছায়, এবং আপনি এই গবেষনা চলাকালীন যেকোনো সময় কোনো নেতিবাচক পরিণতি ছাড়াই প্রত্যাহার করতে পারেন। সাক্ষাত্কারের সময় আপনি পছন্দ করেন না বা উত্তর দিতে চান না এমন প্রশ্নের উত্তর না দেওয়ার অধিকারও আপনার আছে।

অংশগ্রহণকারী হিসাবে আপনার অধিকার সম্পর্কে আপনার যদি কোন প্রশ্ন থাকে, অনুগ্রহ করে তদন্তকারী মোঃ ওমর ফারুক, অথবা গবেষণা তত্ত্বাবধায়ক ডাঃ জাকিয়া রহমান (পিটি), প্রভাষক ফিজিওথেরাপি বিভাগ, এস সি এম এস টি, মিরপুর, ঢাকা-এর সাথে নির্দ্বিধায় যোগাযোগ করুন।

ইন্টারভিউ শুরুর আগে কি আপনার কোন প্রশ্ন আছে?	হ্যা		না	
তাহলে, ইন্টারভিউ নিয়ে এগিয়ে যেতে আমি কি আপনার সম্মতি পেতে পারি?	হ্যা		না	

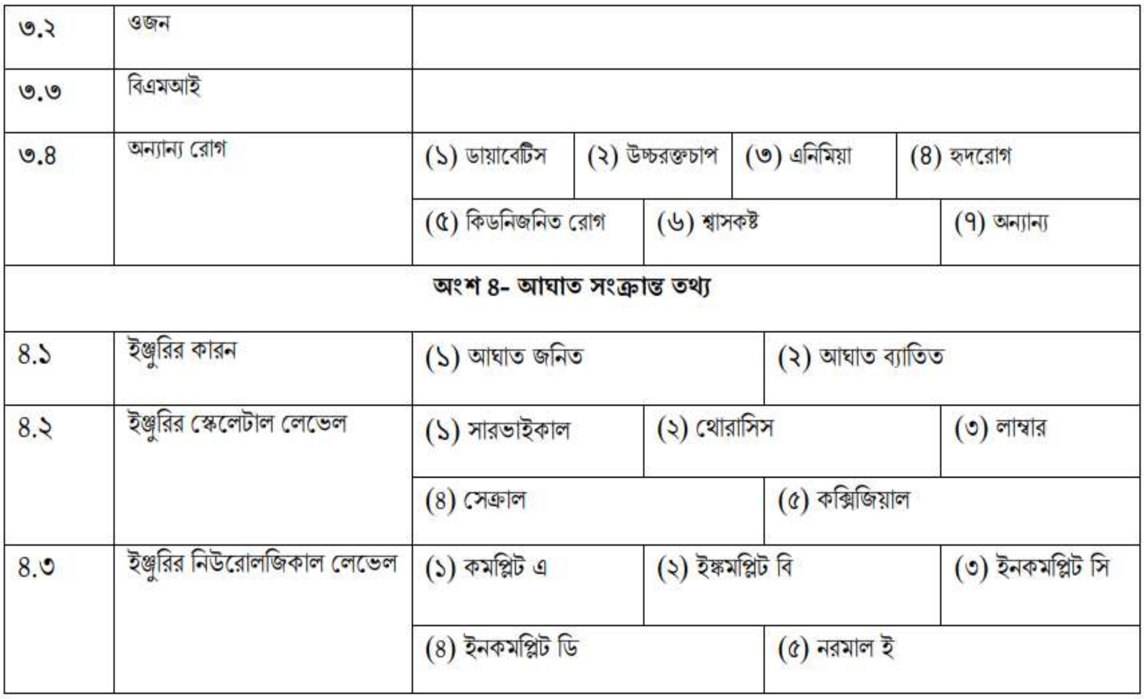
অংশগ্রহনকারীর স্বাক্ষর .... তারিখ....................................

ইন্টারভিউয়ারের স্বাক্ষর .... তারিখ ....

শিরোনাম: "ফিজিওথেরাপি পুনর্বাসনের প্রতি রোগীর অভিজ্ঞতা এবং উপলব্ধি অন্বেষণ: স্পাইনাল কর্ড পুনর্বাসনে ফিজিওথেরাপির ভুমিকা"

প্রশ্নপত্র (বাংলা)

অংশ ১: ব্যাক্তিগত তথ্য					
রোগীর আইডি:					
ইন্টারভিউয়ের তারিখ:					
অংশগ্রহণকারীর নাম:					
কোড:					
ঠিকানা:		গ্রাম:	পোস্ট অফিস:		
		উপজেলা:	জেলা:		
ফোন:					
অংশ ২: রোগীর সামাজিক জন-তাত্ত্বিক তথ্য					
ক্রমিক নং	প্রশ্ন	উত্তর			
২.১	বয়স:	[ ] বছর			
২.২	লিঙ্গ:	(১) পুরুষ	(২) নারী		
২.৩	বৈবাহিক অবস্থা:	(১) বিবাহিত	(২) অবিবাহিত		
২.৪	পরিবার:	(১) একক পরিবার	(২) যৌথ পরিবার		
২.৫	বসবাসের স্থান:	(১) গ্রাম	(২) শহর		
২.৬	শিক্ষাগত যোগ্যতা:	(১) অশিক্ষিত	(২) প্রাথমিক	(৩) মাধ্যমিক	
		(৪) উচ্চমাধ্যমিক	(৫) স্নাতক	(৬) স্নাতকোত্তর	
২.৭	পেশা:	(১) বেকার	(২) দিনমজুর	(৩) চাকরিজীবী	(৪) কৃষক
		(৫) খেলোয়াড়	(৬) সামরিক/পুলিশ		(৭) অন্যান্য
২.৮	উপার্জনক্ষম পরিবারের সদস্য				
অংশ ৩: মেডিকেল তথ্য					
৩.১	উচ্চতা				



৩.২	ওজন				
৩.৩	বিএমআই				
৩.৪	অন্যান্য রোগ	(১) ডায়াবেটিস	(২) উচ্চরক্তচাপ	(৩) এনিমিয়া	(৪) হৃদরোগ
		(৫) কিডনিজনিত রোগ	(৬) শ্বাসকষ্ট	(৭) অন্যান্য	
অংশ ৪- আঘাত সংক্রান্ত তথ্য					
৪.১	ইঞ্জুরির কারন	(১) আঘাত জনিত	(২) আঘাত ব্যাতিত		
৪.২	ইঞ্জুরির স্কেলেটাল লেভেল	(১) সারভাইকাল	(২) থোরাসিস	(৩) লাম্বার	
		(৪) সেক্রাল	(৫) কক্সিজিয়াল		
৪.৩	ইঞ্জুরির নিউরোলজিকাল লেভেল	(১) কমপ্লিট এ	(২) ইঙ্কমপ্লিট বি	(৩) ইনকমপ্লিট সি	
		(৪) ইনকমপ্লিট ডি	(৫) নরমাল ই		

অংশ ৫ ইন্টারভিউ প্রশ্নপত্র

অভিজ্ঞতা সম্পর্কিত প্রশ্ন

১। আপনি কি আপনার মেরুদন্ডের আঘাতের পর থেকে ফিজিওথেরাপি পুনর্বাসনের সাথে আপনার সামগ্রিক অভিজ্ঞতা বর্ণনা করতে পারেন?

২। ফিজিওথেরাপির কোন নির্দিষ্ট দিকগুলি আপনি আপনার রিহ্যাবিলিটেশনের ক্ষেত্রে সবচেয়ে উপকারী বলে মনে করেছেন?

৩। আপনি কি এমন কোন অভিজ্ঞতা শেয়ার করতে পারেন, যেখানে ফিজিওথেরাপি আপনার চলাফেরা বা স্বাধীনতার ক্ষেত্রে উল্লেখযোগ্য পরিবর্তন এনেছে?

৪। আপনি কি আপনার ফিজিওথেরাপি সেশনগুলি পেতে বা চালিয়ে যেতে কোন বাধা বা অসুবিধার সম্মুখীন হয়েছেন কিনা?

৫। কিভাবে ফিজিওথেরাপি আপনার দৈনন্দিন জীবনযাপন এবং দৈনিক কাজ করার ক্ষমতাকে প্রভাবিত করেছে?

ধারনা সম্পর্কিত প্রশ্ন

১। আপনি যখন প্রথম ফিজিওথেরাপি শুরু করেছিলেন তখন আপনি কেমন অনুভব করেছিলেন এবং সময়ের সাথে সাথে আপনার অনুভুতিগুলো কী পরিবর্তন হয়েছে?

২। আপনার পুনর্বাসন যাত্রায় আপনার ফিজিওথেরাপিষ্টের ভুমিকা আপনি কিভাবে দেখছেন?

৩। আপনি যে ফিজিওথেরাপি চিকিৎসা পেয়েছেন তার কার্যকারিতা সম্পর্কে আপনার চিন্তাভাবনা কি?

৪। আপনি কি মনে করেন যে আপনার অনুভতি এবং মানসিক সুস্থতা আপনার ফিজিওথেরাপির চিকিৎসা দ্বারা প্রভাবিত হয়েছে?

৫। মেরুদন্ডের আঘাতপ্রাপ্ত রোগীদের জন্য ফিজিওথেরাপির কার্যকারিতা এবং সহজলভ্যতা বাড়ানোর জন্য আপনি কোন উন্নতি বা পরিবর্তনের পরামর্শ দিবেন?

CONSENT STATEMENT (English)

Please Read It Carefully

Assalamualaikum!

I am Md Omar Faruk, a student of B.Sc. in physiotherapy, 4th year 2018-19 session, at Saic College of Medical Science & Technology, affiliated with the University of Dhaka under the faculty of Medicine. I am conducting a research program entitled “Exploring patient experiences and perception towards physiotherapy rehabilitation: A qualitative analysis of physiotherapy intervention in spinal cord injury rehabilitation” In this study, I would like to explore patient experiences and perception towards physiotherapy rehabilitation. I would like to request some information regarding your sociodemographic, and medical information-related questions. Please note that this academic research interview will take approximately 20-30 minutes to complete. Participating in this study will not affect your current or future treatment in any way. It is important to mention that the information collected will only be used for academic research purposes, and all your provided data will be kept confidential. In the case of any report or publication, we will ensure that your identity remains anonymous.

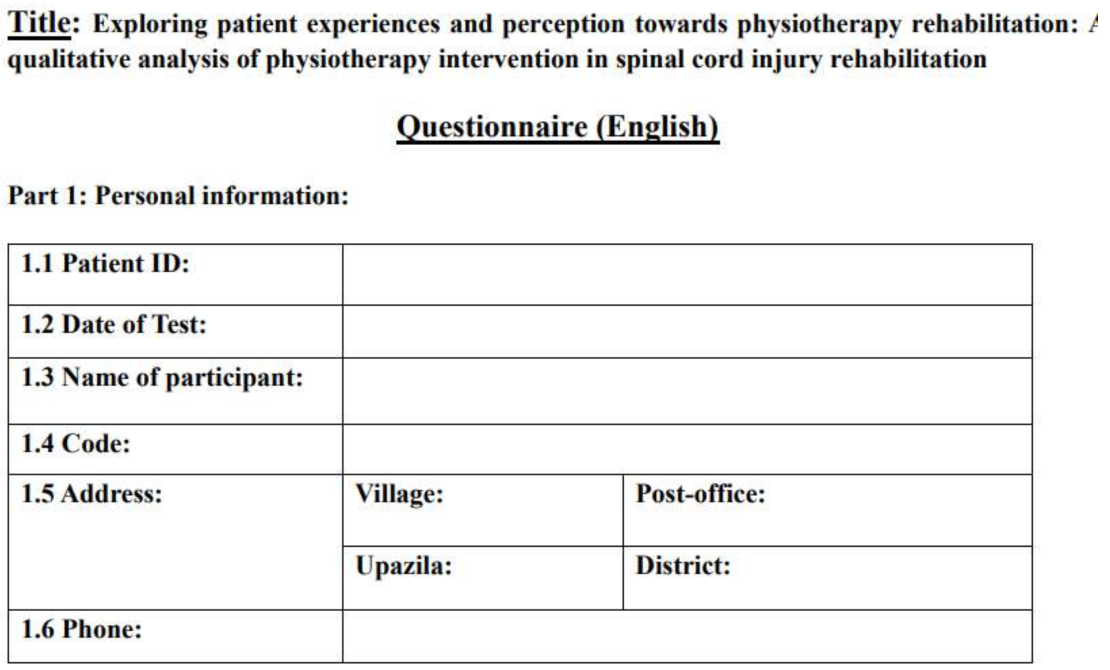
Your participation in this study is voluntary, and you may withdraw at any time during this study without any negative consequences. You also have the right not to answer a question you don’t like or do not want to answer during the interview.

If you have any questions regarding the study or your rights as a participant, please feel free to contact the investigator Md Omar Faruk, or the research supervisor Dr. Zakia Rahman (PT), Lecturer Department of Physiotherapy, SCMST, Mirpur, Dhaka.

Do you have any questions before I start?	Yes		No	
So, may I have your consent to proceed with the interview?	Yes		No	

Signature of the Participant ………………………………….. Date……………………………...

Signature of the Interviewer …………………………………. Date……………………………...



Title: Exploring patient experiences and perception towards physiotherapy rehabilitation: A qualitative analysis of physiotherapy intervention in spinal cord injury rehabilitation

Questionnaire (English)

Part 1: Personal information:

1.1 Patient ID:		
1.2 Date of Test:		
1.3 Name of participant:		
1.4 Code:		
1.5 Address:	**Village:**	**Post-office:**
	Upazila:	**District:**
1.6 Phone:		

Part 2- Patient's Socio-demographic information

Please give a tick (√) mark on the left side of the correct answer

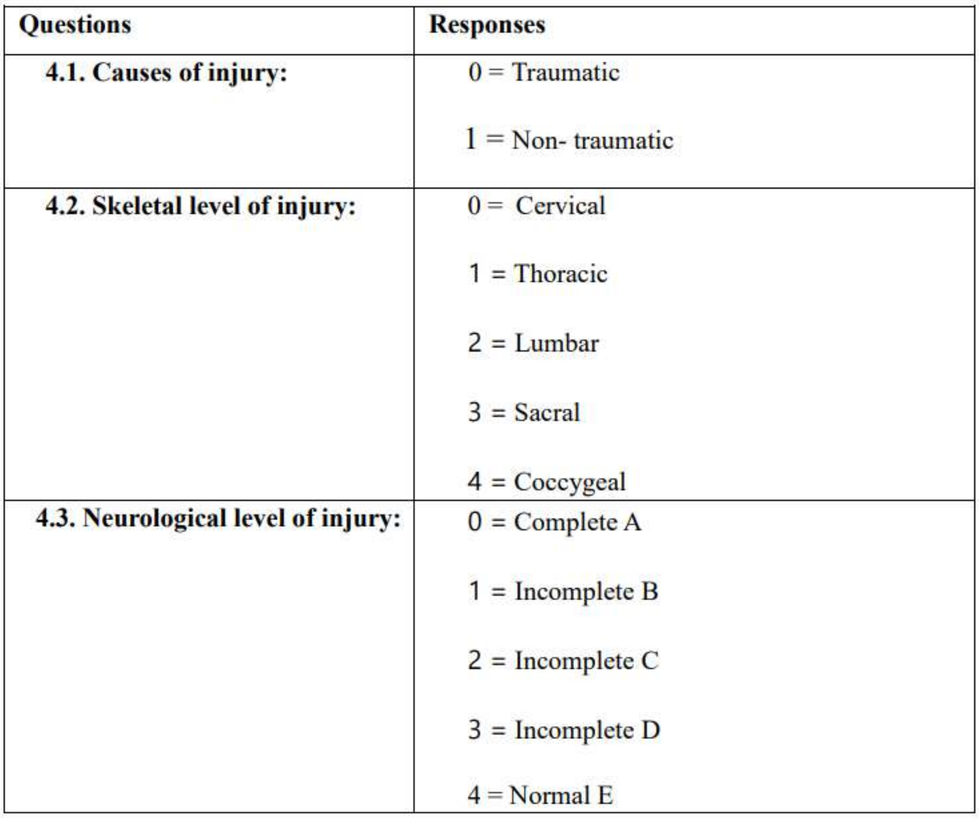
Questions	Responses
2.1. Age:	…… Years
2.2. Gender:	0 = Male 1 = Female
2.3.Marital status:	0 = Unmarried 1 = Married 2 = Separated 3 = Divorced 4 = Others
2.4.Family type:	0 = Nuclear Family 1 = Joint Family
2.5.Living area:	0 = Rural 1 = Urban
2.6.Educational qualification:	0 = Illiterate 1 = Primary 2 = Secondary 3 = Higher secondary 4 = Bachelor 5 = Masters

2.8. Occupation:	0 = Unemployed 1 = Day labor 2 = Desk job 3 = Farmer 4 = Athlete 5 = Defence/Police 6 = Others
2.9. Number of Earning members	………………………………

Part 3: Medical information

3.1 Height	**……………………………**
3.2 Weight	…………………………… kg
3.3 BMI	0 = Underweight 1 = Normal weight 2 = Overweight 3 = Obese
3.4 Co-morbidities	0 = DM 1 = HTN 2 = Anemia 3 = Heart disease 4 = Kidney disease 5 = Respiratory disease 6 = Others
3.5 What is the type of vertigo?	0 = Constant 1 = Intermittent

Part 4- Injury-related information



Questions	Responses
4.1. Causes of injury:	0 = Traumatic 1 = Non- traumatic
4.2. Skeletal level of injury:	0 = Cervical 1 = Thoracic 2 = Lumbar 3 = Sacral 4 = Coccygeal
4.3. Neurological level of injury:	0 = Complete A 1 = Incomplete B 2 = Incomplete C 3 = Incomplete D 4 = Normal E

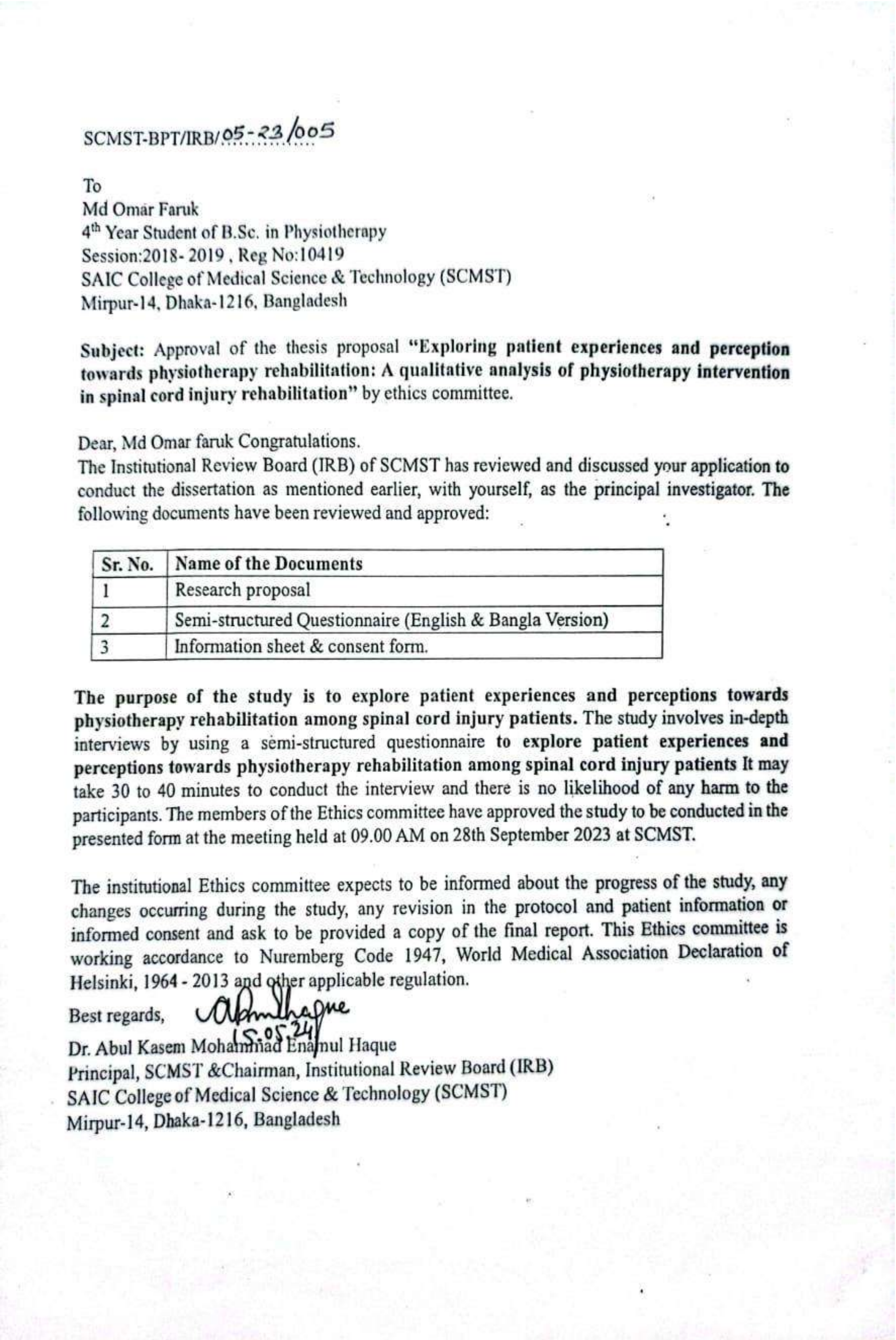
Part 5: Interview Questionnaire

Experience:

1. Can you describe your overall experience with physiotherapy rehabilitation since your spinal cord injury?
2. What specific aspects of physiotherapy have you found most beneficial in your recovery?
3. Can you share any experiences where physiotherapy made a significant difference in your mobility or independence?
4. Have you encountered any barriers or difficulties in accessing or continuing your physiotherapy sessions?
5. How has physiotherapy impacted your daily life and ability to perform everyday activities?

Perception:

1. How did you feel when you first started physiotherapy, and how have your feelings changed over time?
2. How do you perceive the role of your physiotherapist in your rehabilitation journey?
3. What are your thoughts on the effectiveness of the physiotherapy treatments you have received?
4. In what ways do you feel that your emotional and mental well-being has been influenced by your physiotherapy experience?
5. What improvements or changes would you suggest to enhance the effectiveness and accessibility of physiotherapy for spinal cord injury patients?



SCMST-BPT/IRB/05-23/005

To
Md Omar Faruk
4th Year Student of B.Sc. in Physiotherapy
Session:2018-2019 , Reg No:10419
SAIC College of Medical Science & Technology (SCMST)
Mirpur-14, Dhaka-1216, Bangladesh

Subject: Approval of the thesis proposal **"Exploring patient experiences and perception towards physiotherapy rehabilitation: A qualitative analysis of physiotherapy intervention in spinal cord injury rehabilitation"** by ethics committee.

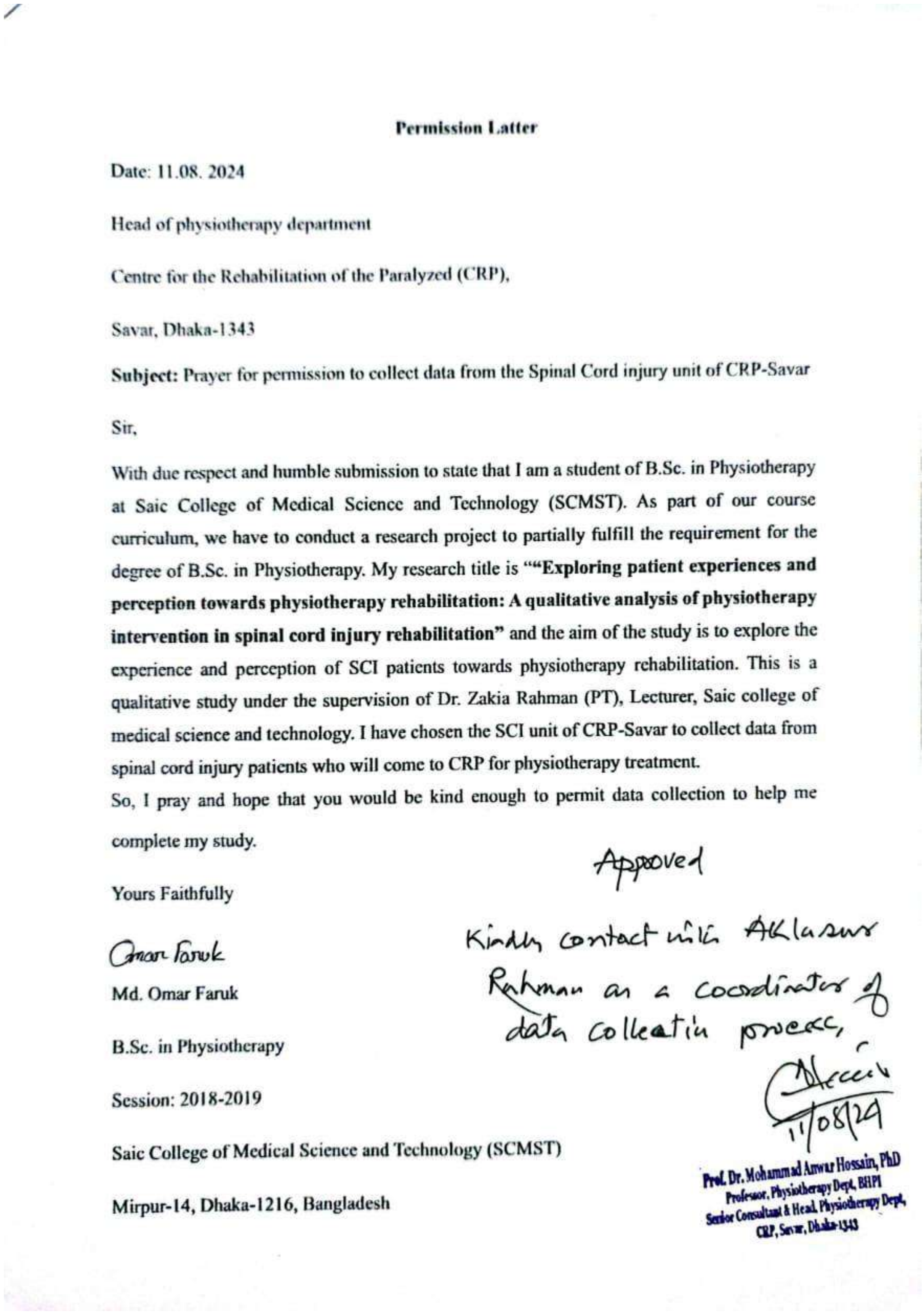
Dear, Md Omar faruk Congratulations.
The Institutional Review Board (IRB) of SCMST has reviewed and discussed your application to conduct the dissertation as mentioned earlier, with yourself, as the principal investigator. The following documents have been reviewed and approved:

Sr. No.	Name of the Documents
1	Research proposal
2	Semi-structured Questionnaire (English & Bangla Version)
3	Information sheet & consent form.

The purpose of the study is to explore patient experiences and perceptions towards physiotherapy rehabilitation among spinal cord injury patients. The study involves in-depth interviews by using a semi-structured questionnaire **to explore patient experiences and perceptions towards physiotherapy rehabilitation among spinal cord injury patients** It may take 30 to 40 minutes to conduct the interview and there is no likelihood of any harm to the participants. The members of the Ethics committee have approved the study to be conducted in the presented form at the meeting held at 09.00 AM on 28th September 2023 at SCMST.

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

Best regards,
15.05.24
Dr. Abul Kasem Mohammad Enamul Haque
Principal, SCMST &Chairman, Institutional Review Board (IRB)
SAIC College of Medical Science & Technology (SCMST)
Mirpur-14, Dhaka-1216, Bangladesh



Permission Latter

Date: 11.08. 2024

Head of physiotherapy department

Centre for the Rehabilitation of the Paralyzed (CRP),

Savar, Dhaka-1343

Subject: Prayer for permission to collect data from the Spinal Cord injury unit of CRP-Savar

Sir,

With due respect and humble submission to state that I am a student of B.Sc. in Physiotherapy at Saic College of Medical Science and Technology (SCMST). As part of our course curriculum, we have to conduct a research project to partially fulfill the requirement for the degree of B.Sc. in Physiotherapy. My research title is ""**Exploring patient experiences and perception towards physiotherapy rehabilitation: A qualitative analysis of physiotherapy intervention in spinal cord injury rehabilitation"** and the aim of the study is to explore the experience and perception of SCI patients towards physiotherapy rehabilitation. This is a qualitative study under the supervision of Dr. Zakia Rahman (PT), Lecturer, Saic college of medical science and technology. I have chosen the SCI unit of CRP-Savar to collect data from spinal cord injury patients who will come to CRP for physiotherapy treatment.

So, I pray and hope that you would be kind enough to permit data collection to help me complete my study.

Yours Faithfully

Omar Faruk

Md. Omar Faruk

B.Sc. in Physiotherapy

Session: 2018-2019

Saic College of Medical Science and Technology (SCMST)

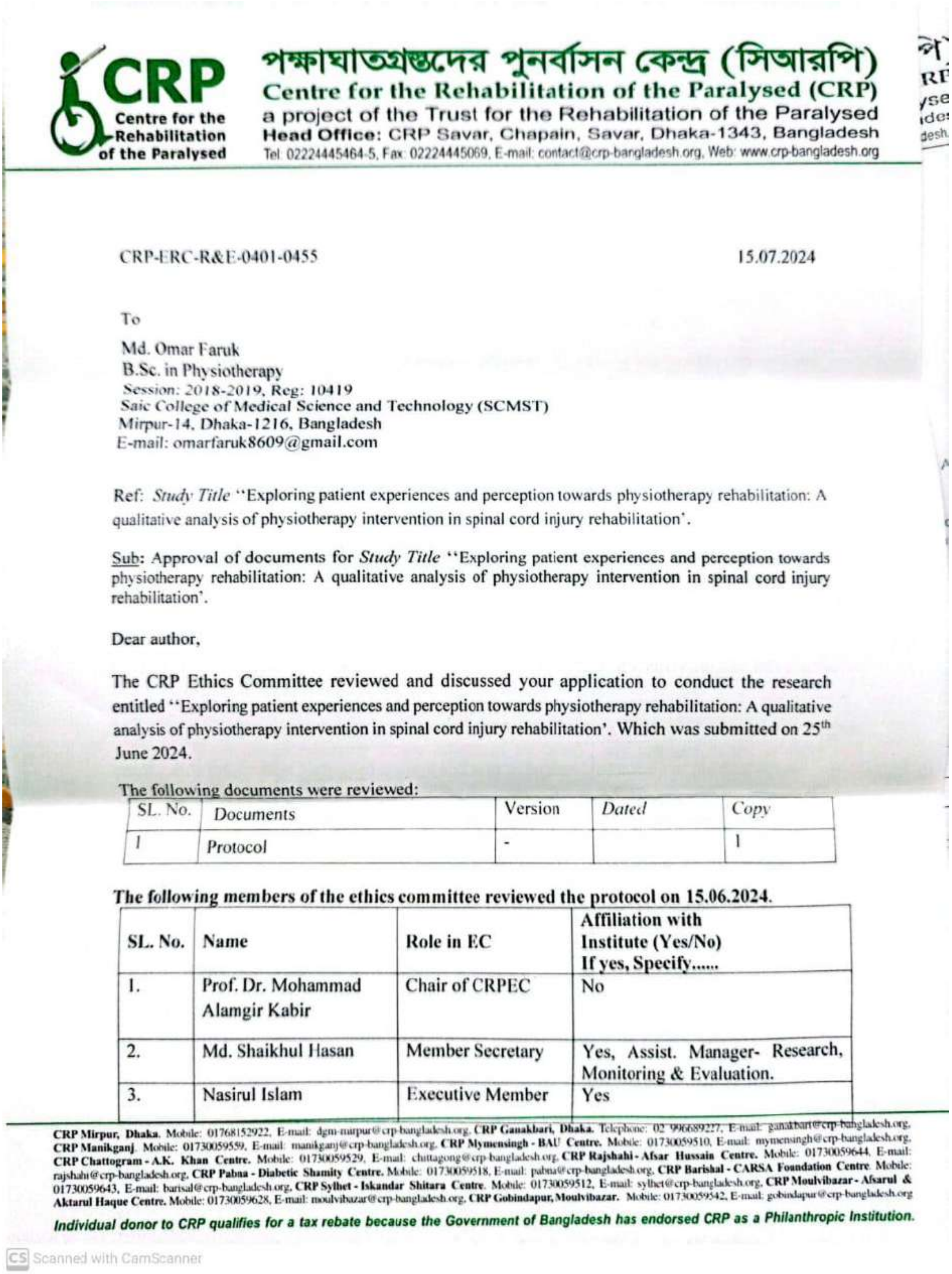
Mirpur-14, Dhaka-1216, Bangladesh

Approved

Kindly contact with Aklasur Rahman as a coordinator of data collection process,

11/08/24

Prof. Dr. Mohammad Anwar Hossain, PhD
Professor, Physiotherapy Dept, BHPI
Senior Consultant & Head, Physiotherapy Dept,
CRP, Savar, Dhaka-1343



পক্ষাঘাতগ্রস্তদের পুনর্বাসন কেন্দ্র (সিআরপি)
Centre for the Rehabilitation of the Paralysed (CRP)
a project of the Trust for the Rehabilitation of the Paralysed
Head Office: CRP Savar, Chapain, Savar, Dhaka-1343, Bangladesh
Tel: 02224445464-5, Fax: 02224445069, E-mail: contact@crp-bangladesh.org, Web: www.crp-bangladesh.org

CRP-ERC-R&E-0401-0455 15.07.2024

To

Md. Omar Faruk
B.Sc. in Physiotherapy
Session: 2018-2019, Reg: 10419
Saic College of Medical Science and Technology (SCMST)
Mirpur-14, Dhaka-1216, Bangladesh
E-mail: omarfaruk8609@gmail.com

Ref: *Study Title* ''Exploring patient experiences and perception towards physiotherapy rehabilitation: A qualitative analysis of physiotherapy intervention in spinal cord injury rehabilitation'.

Sub: Approval of documents for *Study Title* ''Exploring patient experiences and perception towards physiotherapy rehabilitation: A qualitative analysis of physiotherapy intervention in spinal cord injury rehabilitation'.

Dear author,

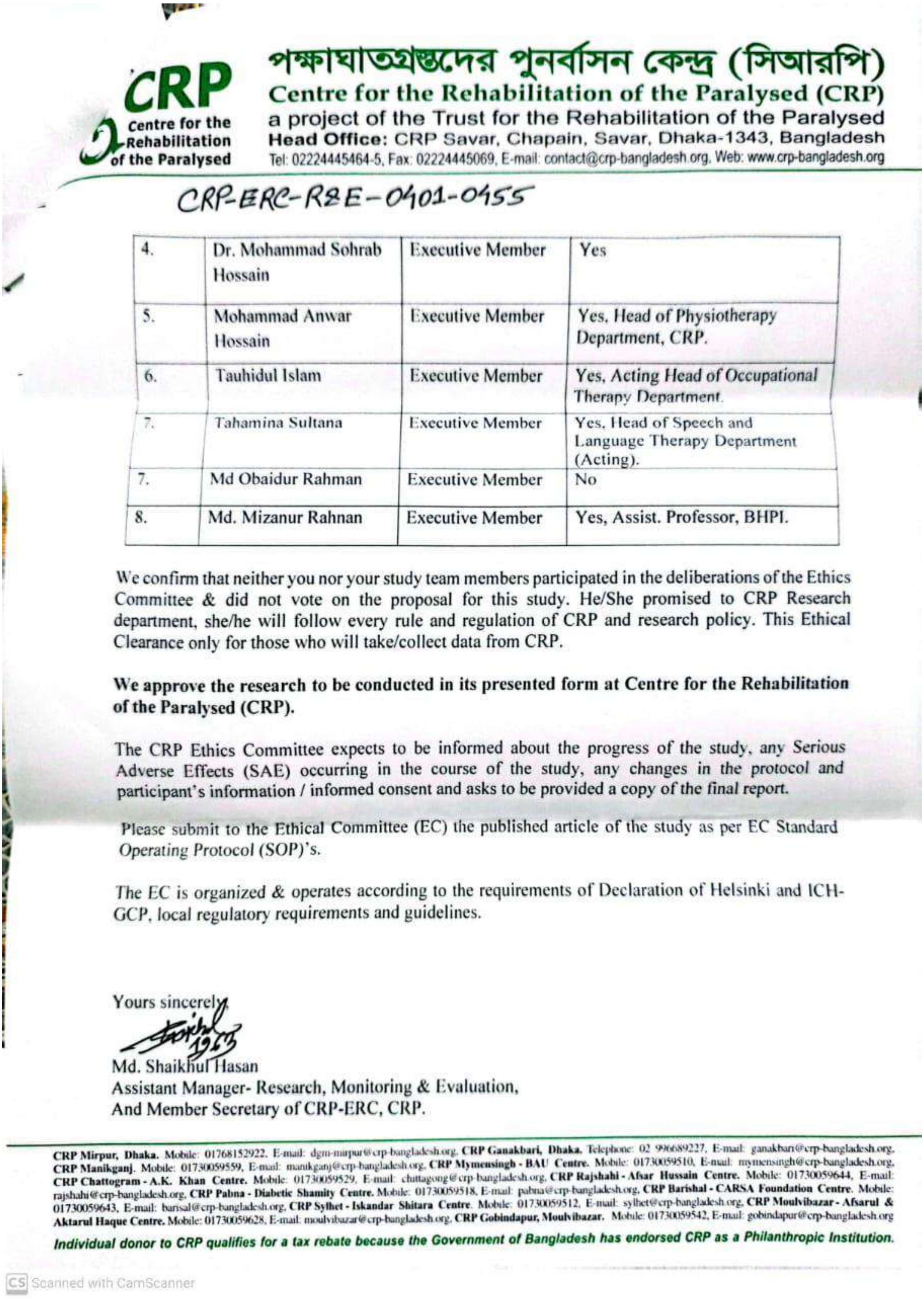
The CRP Ethics Committee reviewed and discussed your application to conduct the research entitled ''Exploring patient experiences and perception towards physiotherapy rehabilitation: A qualitative analysis of physiotherapy intervention in spinal cord injury rehabilitation'. Which was submitted on 25th June 2024.

The following documents were reviewed:

SL. No.	Documents	Version	Dated	Copy
1	Protocol	-		1

The following members of the ethics committee reviewed the protocol on 15.06.2024.

SL. No.	**Name**	**Role in EC**	**Affiliation with Institute (Yes/No) If yes, Specify......**
1.	Prof. Dr. Mohammad Alamgir Kabir	Chair of CRPEC	No
2.	Md. Shaikhul Hasan	Member Secretary	Yes, Assist. Manager- Research, Monitoring & Evaluation.
3.	Nasirul Islam	Executive Member	Yes



পক্ষাঘাতগ্রস্তদের পুনর্বাসন কেন্দ্র (সিআরপি)
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CRP-ERC-R&E-0401-0455

4.	Dr. Mohammad Sohrab Hossain	Executive Member	Yes
5.	Mohammad Anwar Hossain	Executive Member	Yes, Head of Physiotherapy Department, CRP.
6.	Tauhidul Islam	Executive Member	Yes, Acting Head of Occupational Therapy Department.
7.	Tahamina Sultana	Executive Member	Yes, Head of Speech and Language Therapy Department (Acting).
7.	Md Obaidur Rahman	Executive Member	No
8.	Md. Mizanur Rahnan	Executive Member	Yes, Assist. Professor, BHPI.

We confirm that neither you nor your study team members participated in the deliberations of the Ethics Committee & did not vote on the proposal for this study. He/She promised to CRP Research department, she/he will follow every rule and regulation of CRP and research policy. This Ethical Clearance only for those who will take/collect data from CRP.

We approve the research to be conducted in its presented form at Centre for the Rehabilitation of the Paralysed (CRP).

The CRP Ethics Committee expects to be informed about the progress of the study, any Serious Adverse Effects (SAE) occurring in the course of the study, any changes in the protocol and participant's information / informed consent and asks to be provided a copy of the final report.

Please submit to the Ethical Committee (EC) the published article of the study as per EC Standard Operating Protocol (SOP)'s.

The EC is organized & operates according to the requirements of Declaration of Helsinki and ICH-GCP, local regulatory requirements and guidelines.

Yours sincerely,

Md. Shaikhul Hasan
Assistant Manager- Research, Monitoring & Evaluation,
And Member Secretary of CRP-ERC, CRP.

Gant Chart

Activities/ months	Sep 23	Oct 23	Nov 23	Dec 23	Jan 24	Feb 24	Mar 24	Apr 24	May 24	June 24	July 24	Aug 24
Proposal presentation			🟦									
Introduction							🟧					
Literature review								🟥				
Methodology								🟩				
Data collection								🟫	🟫			
Data Analysis									🟩			
Result									🟪			
1st progress presentation									🟦			
Discussion										⬛		
Conclusion And Recommendation										🟨		
2nd progress presentation										🟥		
Communication with supervisor				🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	
Final submission											🟦	