

Evaluation of Daily Life Participation and Depression among Person with Spinal Cord Injury after Rehabilitation: A Cross-Sectional Study



By

Md Anamul Haqae

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Bachelor of Science in Occupational Therapy

Bangladesh Health Professions Institute (BHPI)

Faculty of Medicine

University of Dhaka

Thesis completed by:**Md Anamul Haqae**4th year, B.Sc. in Occupational Therapy

Bangladesh Health Professions Institute (BHPI)

Centre for the Rehabilitation of the Paralysed (CRP)

Chapain, Savar, Dhaka: 1343

.....
Signature**Supervisor's Name, Designation, and Signature****Md. Habibur Rahman**

Assistant Professor & Course Coordinator, MSc in OT

Department of Occupational Therapy

Bangladesh Health Professions Institute (BHPI)

Centre for the Rehabilitation of the Paralysed (CRP)

Chapain, Savar, Dhaka: 1343

.....
Signature**Head of the Department's Name, Designation, and Signature****Prof. Sk. Moniruzzaman**

Professor & Head

Department of Occupational Therapy

Bangladesh Health Professions Institute (BHPI)

Centre for the Rehabilitation of the Paralysed (CRP)

Chapain, Savar, Dhaka: 1343

.....
Signature

BOARD OF EXAMINERS

Prof. Sk. Moniruzzaman

Professor and Head

Department of Occupational Therapy

Bangladesh Health Professions Institute (BHPI)

Centre for the Rehabilitation of the Paralysed (CRP)

Chapain, Savar, Dhaka: 1343


.....
Signature**Dr. Md. Shakhaoat Hossain, PhD**

Chairman & Associate Professor

Department of Public Health and Informatics

Jahangirnagar University

Savar, Dhaka-1342, Bangladesh.


.....
Signature

STATEMENT OF AUTHORSHIP

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Md Anamul Haqae

4th year, B.Sc. in Occupational Therapy

Bangladesh Health Professions Institute (BHPI)

Centre for the Rehabilitation of the Peralysed (CRP)

Chapain, Savar, Dhaka: 1343

.....

Signature

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DEDICATION

Dedicated to my beloved parents, teachers, friends and to all those who participated and contributed their time, experience and knowledge.

TABLE OF CONTENTS

BOARD OF EXAMINERS	II
STATEMENT OF AUTHORSHIP	III
ACKNOWLEDGEMENT.....	IV
DEDICATION.....	V
TABLE OF CONTENTS	VI
LIST OF TABLES	IX
LIST OF FIGURES	X
LIST OF ABBREVIATIONS	XI
ABSTRACT.....	XII
CHAPTER I: INTRODUCTION	1
1.1 Background	1
1.2 Justification of the study	3
1.3 Operational definition	4
1.3.1 Spinal Cord Injury	4
1.3.2 Participation	4
1.3.3 People Living with Spinal Cord Injury (PLWSCI):	5
1.3.4 Depression:	5
1.4 Aim of the study	5
CHAPTER II: LITERATURE REVIEW	6
2.1 Associated Demographic Factors.....	7
2.1.1 Age	7
2.1.2 Gender	7
2.1.3 Severity of Injury	8
2.1.4 Employment Status	9
2.1.5 Mobility Status.....	10
2.2. Participation in Daily Life.....	11
2.2.1 Frequency of Engagement	11

2.2.2 Barriers to Participation	12
2.2.3 Facilitators of Participation.....	13
2.2.4 Satisfaction with Participation	13
2.3 Depression in SCI.....	14
2.3.1 Prevalence	14
2.3.2 Factor Associated with Depression.....	15
2.3.3 Impact on Depression on Quality of Life.....	15
2.4 Key Gap of the Study	16
CHAPTER III: METHODS & MATERIALS	17
3.1 Study Question, Aim & Objective: 3.1.1 study Question	17
3.1.2 Aim.....	17
3.1.3 Objectives	17
3.2 Study Design	18
3.2.1 Study Method	18
3.2.2 Study Approach.....	18
3.2.3 Conceptual Framework	19
3.3 Study Setting and Period	20
3.3.1 Study Setting	20
3.3.2 Study period.....	20
3.4 Study Participant	20
3.4.1 Study Population.....	20
3.4.2 Sample Size	20
3.4.3 Sampling Techniques	21
3.4.4 Inclusion and Exclusion Criteria.....	21
3.5 Ethical Consideration	22
3.5.1 Ethical Clearance	22
3.5.2 Informed Consent	22
3.5.3 Unequal relationship	22
3.5.4 Risk and Beneficence	22
3.5.5 Confidentiality	23

3.6 Data Collection Process	23
3.6.1 Participant Recruitment Process:	23
3.6.2 Data Collection Method	24
3.6.3 Data Collection Instrument	24
3.6.4 Field Test	25
3.7 Data management and Analysis	26
3.8 Quality Control and Quality Assurance	26
CHAPTER VI: RESULT.....	28
CHAPTER V: DISCUSSION.....	50
CHAPTER VI: CONCLUSION.....	55
6.1 Strength and Limitations	55
6.1.1 Strength.....	55
6.1.2 Limitations	55
6.2 Practice Implication.....	56
6.2.1 Recommendations for Future Practice	56
6.2.2 Recommendation for Further Research	57
CHAPTER VII: REFERENCE	58
CHAPTER VII: APPENDICES	68
Appendix A: Ethical Approval and Permission Letter.....	68
Appendix B	71
Information Sheet, Consent and Withdrawal Consent Form (English Version)	71
Consent Form	76
Information Sheet, Consent and Withdrawal Consent Form (Bangla Version)	77
Appendix C: Questionnaire	82
Section-1: Socio-demographic part	82
Section-2 USER-P Questionnaire.....	86
Utrecht Scale for Evaluation of Rehabilitation-Participation Questionnaire (Bangla version)	83
Appendix D: Supervision Contact Schedule	89

LIST OF TABLES

Serial No	Name of the Table	Page No
Table 4.1	<i>Sociodemographic characteristics among respondents</i>	29
Table 4.2	<i>Respondents regarding Spinal Cord Injury</i>	32
Table 4.3	<i>Level of Participation</i>	34
Table 4.4	<i>Severity of depression</i>	34
Table 4.5	Group difference analysis (bivariate) with USER-P (frequency and satisfaction of participation) scores	35
Table 4.6	<i>Group differences analysis with restriction of participation</i>	36
Table 4.7	Linear regression assessing the association between age in years and Restriction of participation	37
Table 4.8	Linear regression assessing the association between severity of injury and Restriction of participation	37
Table 4.9	<i>Group differences analysis with restriction of participation</i>	38
Table 4.10	Linear regression assessing the association between occupation after rehabilitation and Restriction of participation	39
Table 4.11	Linear regression assessing the association between family income before injury and Restriction of participation	40
Table 4.12	<i>Linear regression assessing the association between mobility status and Restriction of participation)</i>	40
Table 4.13	<i>Group differences analysis with severity of depression</i>	41
Table 4.14	Linear regression assessing the association between family income after rehabilitation and severity of depression	42
Table 4.15	Linear regression assessing the association between secondary complication at present and severity of depression	43
Table 4.16	Linear regression assessing the association between If you checked off any problems between the questions of PHQ-9, how difficult have those problems made it for you to do your work, take care of things at home, or get along with other people? and severity of depression	44
Table 4.17	<i>Group differences analysis with severity of depression</i>	45
Table 4.18	Linear regression assessing the association between severity of injury and restriction of participation	45
Table 4.19	<i>Group differences analysis with severity of depression</i>	46
Table 4.20	Pearson correlation matrix	47
Table 4.21	Linear regression analysis predicting the frequency of participation, restriction of participation and age in years towards the participation	48
Table 4.22	Linear regression assessing the association among frequency of participation, restriction of participation and severity of depression	49

LIST OF FIGURES

Serial number	Name of the Figures	Page no
Figure 2.1	Overview of literature review	7
Figure 3.6.1	Overview of participant recruitment process	24

LIST OF ABBREVIATIONS

ADLs	Activities of Daily Living
AIS	American Spinal Injury Association (ASIA) Impairment Scale
BHPI	Bangladesh Health Professions Institute
CRP	Centre for the Rehabilitation of the Paralysed
CBR	Community Based Rehabilitation
CI	Confidence Interval
IRB	Institutional Review Board
OT	Occupational Therapy
PHQ-9	Patient Health Questionnaire-9
PLWSCI	People Living with Spinal Cord Injury
QoL	Quality of Life
RCT	Randomized Controlled Trial
SCI	Spinal Cord Independence Measure
SCIM	Spinal Cord Injury
SPSS	Standard Deviation
SD	Statistical Package for the Social Sciences
USER-P	Urinary Tract Infection
UTI	Utrecht Scale for Evaluation of Rehabilitation–Participation
WHO	World Health Organization

ABSTRACT

Background: Spinal cord injury (SCI) is a life-altering condition that can lead to long-term physical limitation and reduce person's ability to participate in daily life activities. Participation in daily life is a key indicator of successful community reintegration after rehabilitation. Many persons with SCI still experience participation restrictions and psychological problems within community setting after completing rehabilitation.

Aim: To evaluate the level of daily life participation and severity of depression among person with SCI after rehabilitation and to find out the relationship between participation and depression.

Methods: A cross-sectional study was conducted among 126 community-dwelling persons with SCI who had completed rehabilitation. Data were collected using a socio-demographic questionnaire, The Utrecht Scale for Evaluation of Rehabilitation-Participation (USER-P) to assess participation frequency, restrictions, satisfaction and the Bangla version of the Patient Health Questionnaire-9 (PHQ-9) to measure depression severity. Descriptive and inferential statistical analyses were performed to examine associations and correlations.

Results: Among 126 participants, 78.6% were male and the mean age 38.9 ± 12.06 years. Total family income before injury <16000 BDT was 15.9% and after injury it is 53.2%. Incomplete SCI was reported 74.6% and 69.0% were wheelchair dependent. Level of participation analysis showed that lower participation frequency 87.3%, higher participation restrictions 54.0% and 61.9% had higher satisfaction with participation. Regarding depression severity 43.7% had minimal depression while 27.0% mild, 18.3% moderate, 7.1% moderately severe and 4.0% severe depression. Statistical analysis showed significant differences in severity of depression across participation frequency ($p=0.002$), participation restrictions ($p=0.001$) and participation satisfaction ($p=0.001$). Severity of depression showed a negative correlation with participation frequency and participation restriction ($r = -.505$, $p < 0.001$; $r = -.538$, $p < 0.001$). Gender was significantly associated with participation frequency & satisfaction ($p=0.001$). Family income after injury was significantly associated with severity of depression ($p=0.005$) and mobility status significantly associated with participation restriction ($p<0.001$).

Conclusion: Participation limitations and depression are common among persons with SCI after rehabilitation. Lower participation is significantly associated with greater depression severity. Improving rehabilitation follow-up, accessibility and reducing environmental barriers may enhance daily life participation. Public awareness, family support and inclusive policies may improve daily life participation and quality of life for persons with SCI.

Keywords: Spinal Cord Injury, After Rehabilitation, Participation, Depression.

CHAPTER I: INTRODUCTION

1.1 Background

SCI is characterized by an impairment of any part of the spinal cord that extends from the spinal cord. This impairment frequently leads to persistent changes in motor and sensory abilities, as well as other bodily functions below the injury site. The physical disabilities caused by SCI differ according to the extent and severity of the damage. After SCI, a person's physical health, employment and occupation, interpersonal connections, and leisure activities can all be impacted (Dixon & Budd, 2017). People with SCI have difficulty in participation who are not going between the rehab-phase research shows that participation is a key outcome of rehabilitation and other medical and social service programs that support person who are less involved their daily living activities for their impairments. Participation means being involved in life situations, which involves having some degree of autonomy or control over one's own life, even if one is not actually doing things themselves (Dijkers, 2010). Study shows that people with SCI have significant obstacles when it comes to engaging in everyday activities. These barriers includes environmental impediments, limited access to rehabilitative services, financial limitations, and social shame are some of these barriers these issues are particularly noticeable in low- and middle-income nations(Das et al., 2024). The situation is severe in Bangladesh, where a large number of SCI survivors experience major side effects such pressure ulcers, UTIs, and psychological distress. According to surveys, the majority still lack a job, are mostly confined to their homes, and have a low standard of living (Hossain et al., 2016). About 16 million people or 10% population of Bangladesh between 160

million live with a disability. From 2011 to 2016, CRP Dhaka recorded 2,184 cases of SCI in which 52% were traumatic paraplegia and 42.6% were traumatic tetraplegia. SCI seems to be most common among individuals (Rahman et al., 2017). Many survivors face a harsh reality following acute care and inpatient rehabilitation. Societal stigma, poverty-driven vulnerabilities, and inaccessible locations constitute significant obstacles to reintegration. High unemployment, homebound status, and secondary problems such as pressure ulcers were found along with mild depression and a lower quality of life (Hossain et al., 2016). Post-rehab involvement is further complicated by gender relations. Research indicates that compared women with SCI frequently face additional environmental barriers than men, such as limited access, transportation, and social support (Forschheimer et al., 2004a). During recovery women report less engagement in decision-making but they occasionally express greater satisfaction with the treatments they got (Bychkovska et al., 2024). In terms of the injury type tetraplegic individuals need more help and significantly have greater challenges in everyday duties than people who are paraplegic (Razzak et al., 2016).

Following a SCI depression and anxiety problems and/or symptoms are frequently observed (Arafat et al., 2018). Depression is also a common outcome following SCI, affecting daily functioning and participation. Studies report that 20–40% of individuals with SCI experience clinically significant depressive symptoms, which negatively influence rehabilitation outcomes and community reintegration (Craig et al., 2017). According to the DSM-IV, a minimum number of symptoms must be present for at least two weeks in order to be diagnosed as a depressive disorder. For instance, three or four significant weight loss episodes, insomnia or hypersomnia, psychomotor agitation or

retardation, exhaustion, feelings of worthlessness, difficulty thinking or concentrating, and recurrent thoughts of death or suicide are all indicators of major depressive disorder (MDD) (Sakakibara et al., 2009).

1.2 Justification of the study

Participation in daily life is recognized as a central outcome of rehabilitation for individuals with spinal cord injury (SCI). According to the International Classification of Functioning, Disability and Health (ICF) participation refers to an individual's involvement in life situations which directly reflects their functional independence and social reintegration.

In Bangladesh, while some organization like the Centre for the Rehabilitation of the Paralysed (CRP) offer organized rehabilitation services, the majority of individuals with spinal cord injuries face significant challenge when they return to their home and try to reintegrate into everyday activities and participation in everyday life such as engaging in paid or unpaid work, education household responsibilities, social and Leisure activities and relationships is essential for living a meaningful and independent life.

Depression is a common psychological consequence among people with SCI and has a significant negative impact on motivation, role performance, and community engagement. However, in Bangladesh limited research has examined how depression interacts with participation after rehabilitation. By assessing both daily life participation and depressive symptoms this study will provide a more comprehensive understanding of the factors influencing post-rehabilitation outcomes.

In contrast to earlier research that was limited to a particular location this study includes people who finished rehabilitation from different parts of Bangladesh giving a more comprehensive and representative picture of involvement rates across the country. This study will be beneficial for the Occupational Therapy department and occupational therapists, because many occupational therapists are already working in different settings and work about SCI. This study will help them to identify the differences in participation based on their gender and injury level and can set individualized rehabilitation goals that are realistic on actual challenges and abilities rather than assumption.

The researcher is highly interested in this field as a student of occupational therapy. It is hoped that further resource will be developed in this area after completing this study. And in future when anyone wants to do future research in this area, health professionals can get ideas and valuable information's from this study that will help them.

1.3 Operational definition

1.3.1 Spinal Cord Injury

SCI is a destructive neurological and pathological state that causes major motor, sensory and autonomic dysfunctions. Acute and chronic phases make up its pathophysiology, which includes a series of harmful events like ischemia, oxidative stress, inflammation, apoptotic pathways, and locomotor dysfunctions (Anjum et al., 2020).

1.3.2 Participation

Participation refers to a person's involvement in daily life situations, including productive, leisure, social, and household activities, as defined by the International

Classification of Functioning, Disability and Health (ICF) (Hemmingsson & Jonsson, 2005). In this study, participation measured using the USER-P Participation Scale which assesses frequency of engagement, restrictions, and satisfaction (Mader et al., 2025).

1.3.3 People Living with Spinal Cord Injury (PLWSCI):

Due to long-term impairment and early mortality, spinal cord injury (SCI) is a significant cause of health loss. Globally, 20.6 million (95% UI 18.9 to 23.6) individuals were living with SCI in 2019. SCI rates increased substantially from 1990 to 2019 for global prevalence (81.5%, 74.2 to 87.1), incidence (52.7%, 30.3 to 69.8), and YLDs (65.4%, 56.3 to 76.0). However, global age-standardized rates per 100 000 population showed small changes in prevalence (5.8%, 2.6 to 9.5), incidence (−6.1%, −17.2 to 1.5), and YLDs (−1.5%, −5.5 to 3.2) (Safdarian et al., 2023).

1.3.4 Depression:

Depression refers to the presence and severity of depressive symptoms such as lack of interest, sadness, low energy, and sleep disturbance. In this study, depression was assessed by using the Patient Health Questionnaire-9 (PHQ-9) which categorizes depression as minimal, mild, moderate, moderately severe, or severe. (Arafat et al., 2018)

1.4 Aim of the study

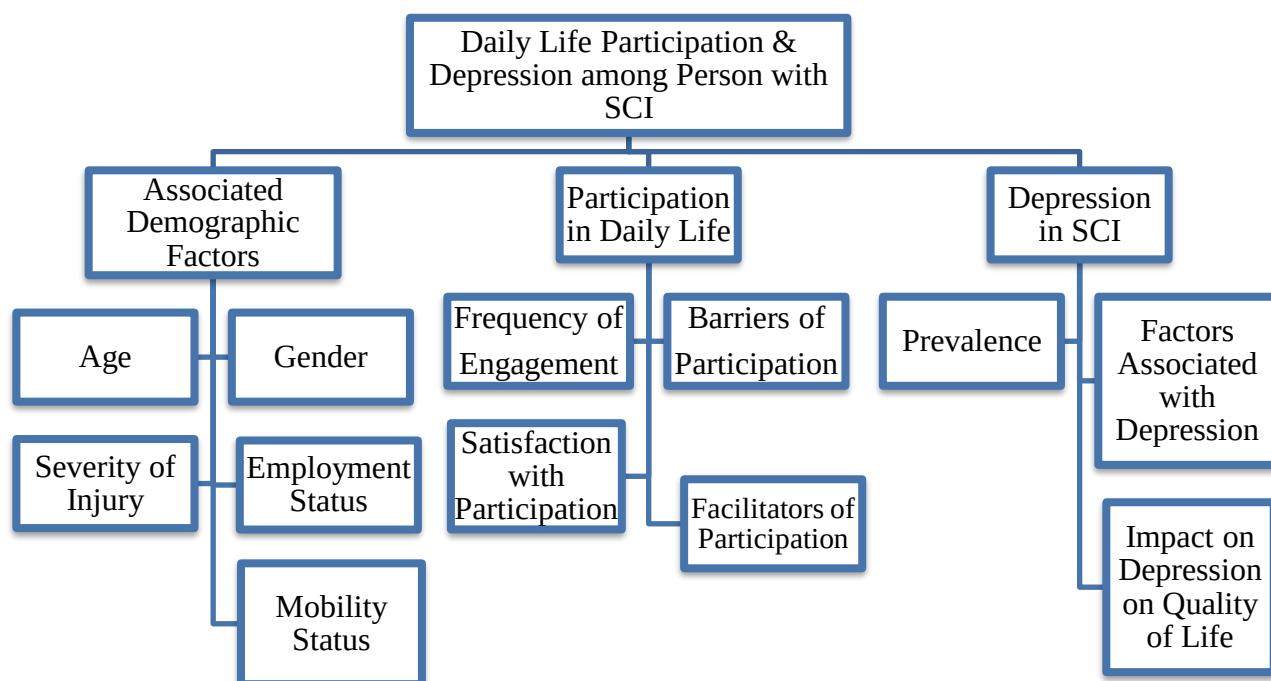
The study aims to evaluate the level of daily life participation and severity of depression among person with SCI after rehabilitation and to find out the relationship between participation and depression.

CHAPTER II: LITERATURE REVIEW

The chapter reviews the existing literature regarding participation, depression and associated demographic factor among person with spinal cord injury. The student researcher searched PubMed, research gate and Google Scholar to find relevant articles regarding this topic.

Figure 2.1

Overview of Literature Review



2.1 Associated Demographic Factors

2.1.1 Age

A cross-sectional study conducted in India which shows that age significantly impacts participation levels in individuals with spinal cord injuries. The significant difference in participation levels among the age group 16-30 years. But in this study gender, etiology of SCI and employment status did not significantly impact on participation level. The limitation of this study is its small sample size which was 80 (Walia et al., 2024). Between 128 individuals with SCI a cross-sectional study was conducted 2012 in 4 European countries where shows that lower age at onset was associated with better participation and life satisfaction also higher education and having paraplegia were significant determinants of increased participation. The instruments were used in this study to measure participation was the Frequency scale of the Utrecht Scale for Evaluation-Participation and life satisfaction was measured with 5 items of the World Health Organization Quality of Life abbreviated form (Post & Reinhardt, 2015). In Sweden at 2014 a cross-sectional study was conducted on 73 traumatic spinal cord injury persons which shows increasing secondary health complications (pain, fatigue and decrease muscle strength) and energy conservation needs negatively impact participation in activities, especially for those 36-55 years (Lundström et al., 2017). A study of Iran conducted in 2012 to 2013 was shows that no correlation between depression scores and age at the time of SCI or current age which indicating age was not a significant factor in predicting depression in this population. In this study involved 134 adults with SCI. (Khazaeipour et al., 2015).

2.1.2 Gender

A cohort study conducted at Metropolitan Detroit where participants were 140 SCI persons this study shows that women with spinal cord injuries perceive more risks and leading to lower community integration and participation. In this study participants were

just over 40 years old and had been living with SCI for 10.8 years where one-third were women. In this study outcome measured by RISC score, community integration measure (CIM), and level of and satisfaction with community participation. This study also found that women who perceived higher risks reported lower levels of community integration and participation as well as lower satisfaction with their participation (Lysack et al., 2014). Another study shows that gender is associated with environmental barriers in SCI here women experiencing more barriers gender differences were found for the Occupation scale of the CHART but not for its other scale. This study conducted in 2004 the total sample used for this study consisted of 2048 participants where 1595 (77.9%) were men and 453 (22.1%) were women (Forchheimer et al., 2004b). The study conducted in England, Canada and United States in 2004 with 134 SCI persons where 67 were men and 67 women this study shows that women experiencing pain, fatigue, skin problems and transportation problems while men experienced more health problems, diabetes and change in adaptive equipment highlighting different challenges. The abstract also notes that older men and women with SCI spent their time differently aligning with traditional gender roles which suggest differences in participation or activities based on gender (Mccoll et al., 2004). The study conducted in Iran with 134 participants confirmed that gender have significant predictor of depression. Here shows that being female, tetraplegia and low education level are associated with a higher probability of depression (Khazaeipour et al., 2015).

2.1.3 Severity of Injury

A cross-sectional was conducted in India at 2024 shows that no significant difference in participation levels based on injury severity (Khazaeipour et al., 2015). On the other

hand, another research shows severity of injury increases difficulty or need for assistance in life habits particularly for those with tetraplegia. This study was involving 482 participants and using the “assessment of life habits” tool (Noreau & Fougereyrollas, 2000). Another cross-sectional study conducted in Switzerland the data collection period was 2011-2013, the population of this study was 1,549 SCI persons this study shows individual with tetraplegia or complete lesions and those who have their injury for less than 10 years indicating a focus on severity of injury. This study also shows the results which indicate participation restriction and satisfaction are crucial for buffering the negative effects of pain on mental health and quality of life, especially in those with more severe injuries cause in this study pain is associated with depressive symptoms and quality of life and that participation restriction and satisfaction mediate this relationship. The instrument was using in this numerical rating scale for pain intensity; Utrecht Scale of Evaluation of Rehabilitation–Participation; USER-Participation for participation frequency, restriction and satisfaction; 5-item Mental Health Index of the Short Form Health Survey; MHI-5 used for depressive symptoms and World Health Organization Quality of Life Scale; WHOQoL-BREF for selected quality of life items (Halvorsen et al., 2021).

2.1.4 Employment Status

Employment is an essential component of good health and quality of life of persons with disabilities (Schedin et al., 2016). A study in United Kingdom shows that after spinal cord injury employment levels decrease significantly. In this study the limitation was a small sample size which 45 (Tasiemski & Bergstro, 2000). A cross-sectional survey study globally conducted in 22 countries with 9875 participates where shows that the

worldwide employment rate for individual with spinal cord injury is 38%, the variation in employment rates across the countries: 10.3% to 61.4%, the gaps in employment rates compared to the general population was 14.8% to 54.8% and men are slightly higher employment rates rather than others gender also smaller employment gaps in women. The biggest strength of this study was the identification of country-specific factors which influencing employment rates (Marcel et al., 2026). A semi-structured interviews conducted in Europe which qualitatively analysed using a grounded theory approach and 74 SCI people participated shows that employment is highly valued by individuals with spinal cord injuries for personal identity, social recognition, time structure, and social interaction(Schedin et al., 2016). A sequential mixed method study was conducted in Queensland, Australia where participators were 270 people with SCI this study shows paid or unpaid employment is the strongest independent factor associated with community participation and time since injury, completeness of injury, secondary conditions, functional independence also associated. This study also shows rehabilitation services need for the individuals with SCI to find out a meaningful employment (Carr et al., 2017). A study conducted in New England with 149 SCI persons where used the standardized questionnaire shows that participation in organized sports was positively associated with employment in adults with SCI (Blauwet et al., 2014).

2.1.5 Mobility Status

A cross-sectional study with CHART-SF questionnaire conducted in India at Karnataka shows individual with spinal cord injury experience severe mobility-related participation restrictions (Mahaveer et al., 2025). At the United States a cross-sectional study was conducted in 2024 with 129 participants of spinal cord injury person where shows

manual wheelchair users with spinal cord injuries are more satisfied with social roles and activities compared to ambulatory individuals (Abou et al., 2024). A Sweden study shows that by optimizing housing accessibility for older adults with spinal cord injuries is associated with increased their autonomy and participation. The instruments used in this study were Impact on Participation and Autonomy questionnaire (IPA) and Housing Enabler (HE) assessment tools and total participation in this study were 123 people with spinal cord injury (Norin et al., 2017). A UK study shows the distinct differences in mobility between participants with SCI and those without SCI which is relevant to understanding the mobility status of individual with SCI. This study found that participants with spinal cord injuries who only used wheelchairs spent a considerable amount of time moving in their wheelchairs, with a range of 4 to 13 hours over a week this provide the insight the mobility patterns of this group and the distance covered by these participants ranged from 7 to 28 kilometers which is another measure of their mobility (Wilson et al., 2008).

2.2. Participation in Daily Life

2.2.1 Frequency of Engagement

A cross-sectional study in 2019 was conducted in Switzerland by using Utrecht Scale for Evaluation of Rehabilitation-Participation (USER-Participation) tool this study shows the factors such as more severe SCI, higher age, being female, not having a partner and lower educational level associated with lower participation. In this study specific activities with high engagement levels are mentioned like domestic leisure activities 65.4% and maintaining social relationships 76.1% (Gross-Hemmi et al., 2019). A Canadian study conducted in 2016 where used structured telephone interviews using the PARA-SCI

interview protocol the paper provides detailed results on the frequency and intensity of daily physical activities among adults with spinal cord injury the adults with spinal cord injury engage in an average time spent on daily activities is 127.92 ± 142.79 minutes per day, time spent on mild-intensity activities: 78.93 ± 104.62 minutes per day, time spent on moderate-intensity activities: 40.23 ± 68.71 minutes per day and time spent on heavy-intensity activities: 8.75 ± 24.53 minutes per day (Perrier et al., 2017).

2.2.2 Barriers to Participation

A cross-sectional study at United State with 3,162 individuals in 2017 shows environmental barriers are negatively associated with social participation in individual with SCI where the tools were Craig Hospital Inventory of Environmental Factors-Short Form (CHIEF-SF) and Craig Handicap Assessment and Reporting Technique-Short Form (CHART-SF). This study finding suggest that addressing assistance barriers could be a key strategy to improve social participation among individual with SCI (Nicolas W. et al, 2017). A semi-structured interview in 2016 shows barriers to participation for SCI individuals include physical environment, unsupportive social attitudes, and mental health issues (Barclay et al., 2016). Another Denmark cross-sectional survey shows physical limitations, time constraints and activity suitability are the main barriers to participation in leisure-time activities among SCI people here the survey was conducted between 479 participants (Skovbjerg et al., 2025). A semi-structured review in 2020 identified the five major categories of environmental barriers to travel participation for people with SCI those categories are partial accessibility, systemic ignorance, travel hassles, poor service performance and lack of support (Cole et al., 2022).

2.2.3 Facilitators of Participation

In 2015 a systemic review of 23 studies shows adequate personal care assistance, social support, specialized equipment, and occupational therapy input facilitate social and community participation for SCI individuals (Barclay et al., 2015).

In 2010 at South Carolina conducted a study that identify facilitators of participation for SCI individuals are most frequently found in the built environment (Newman, 2010). A semi-structured in-depth interview was conducted at Yogyakarta Province, Indonesia in 2021 it shows the facilitators of participation for SCI individuals include perceived importance of work and social participation, adaptations to disability conditions and social support (Newman, 2010). Another semi-structured interviews shows that adequate financial resources and social support from friends, family and peer mentors facilitate social participation for SCI individual (Barclay et al., 2016). A study conducted at low and middle income countries including Nepal, India, Nigeria, Indonesia, Zimbabwe and Mongolia in 2021 shows that spirituality, family/friends support, self-efficacy and resilience are identified as facilitators of participation for individual with SCI (Mohan & Deb, 2021)

2.2.4 Satisfaction with Participation

A qualitative study conducted between 17 people in Nigeria at 2020 shows participation with SCI reported dissatisfaction in sexual, marital and social aspect of life (Malomo et al., 2020). On the other hand a cross-sectional study conducted in British Columbia shows individual with SCI are generally satisfied with their participation outcomes particularly in community, social and domestic life (Rushton et al., 2010). A study at

Netherlands with 261 SCI peoples shows that disability management self-efficacy is associated with higher participation and life satisfaction where use the University of Washington Self-Efficacy Scale Short Form (UW-SES-6) as instrument and tool (Cijssouw et al., 2017). Based on a review of 28 studies shows spirituality is positively associated with life satisfaction and quality of life in individuals with SCI (Jones et al., 2016). Another study conducted in 2020 shows that religiosity and spirituality may positively impact mental well-being and satisfaction in SCI individuals (Serpanou et al., 2020).

2.3 Depression in SCI

2.3.1 Prevalence

A cross-sectional study in Iran shows that 49.3% of participants had mild to severe depression which indicating a high prevalence of depression in individual with SCI. The prevalence of depression varied by time post-SCI with higher rates in the first year and decreasing rates over time (Khazaeipour et al., 2015). Another meta-analysis in Iran at 2020 shows the prevalence of depression among SCI patients 22.6% is mild, 19.6% is moderate and 12.1% is severe (Hatefi et al., 2019). A study used Centre for Epidemiologic Studies Depression Scale (CSE-D) as it instrument tool and it was conducted between 64 women with SCI where shows high prevalence (59.4%) of depression among them and it associated with perceived stress and lack of social support (Hughes et al., 2001). A systemic review study show approximately 30% of people with SCI are at risk of depressive disorder during rehabilitation and 27% have raised depressive symptoms in the community (Craig et al., 2009).

2.3.2 Factor Associated with Depression

A cohort study at Southeast and Midwest conducted with 801 adults with SCI which shows that health behaviors like pain medication use, activity levels and exercise and demographic factors such as race, gender, age, and time since injury are significantly associated with probable major depression in SCI individuals (Saunders et al., 2012). A cross-sectional study in Iran between 134 adults with SCI shows that the factors associated with higher probability of depression like being female, tetraplegia, suicidal thoughts, low education level and specific family care (Khazaeipour et al., 2015). A retrospective study with 2,256 participants at United States using Patient Health Questionnaire-9 (PHQ-9) which identified specific factors associated with a higher risk of Major Depressive Disorder (MDD) at both 1- and 5-years post-injury including age, employment status, bladder management and ASIA motor index score and at 5 years post-injury additional factors such as sex and education level are noted to be associated with MDD (Arango-Lasprilla et al., 2011).

2.3.3 Impact on Depression on Quality of Life

A cross-sectional study conducted in Sweden shows that over 55 years and mental disorders negatively affect work participation in men with traumatic spinal cord injury (Valtonen et al., 2006). A study conducted in Southern California with 134 SCI participants this study highlights that depression is a significant barrier to achieving higher Quality of Life (QOL) and also shows addressing depression is crucial for improving QOL in SCI individuals (Kemp et al., 2014). A cross-sectional study between 134 participants shows that depression is highly prevalent in SCI individuals affecting quality of life (Khazaeipour et al., 2015). A cross-sectional study conducted in Turkey

where the participants were 140 patients with SCI shows presence of chronic pain was associated with higher depression ratings measured by Beck Depression Inventory (BDI) the BDI scores were correlated with several domains of the SF-36, which assesses quality of life. Specifically, these correlations were negative, indicating that higher depression scores were associated with lower quality of life (Ataoğlu et al., 2013).

2.4 Key Gap of the Study

- Most research on participation and depression among persons with SCI has been conducted in high-income countries. Due to socio-cultural and economic differences, these findings cannot be directly generalized to the Bangladeshi context.
- Many studies have examined participation or depression separately with limited research exploring their interrelationship alongside socio-demographic and injury-related factors within a single framework.
- Findings on factors such as age, gender, injury severity, employment, and mobility remain inconsistent and standardized tools like USER-P and PHQ-9 have not been widely applied among community-dwelling persons with SCI in Bangladesh indicating the need for context-specific evidence.

CHAPTER III: METHODS & MATERIALS

3.1 Study Question, Aim & Objective:

3.1.1 study Question

How is the daily life participation and depression and relation between participation & depression among person with SCI after rehabilitation?

3.1.2 Aim

To evaluate the level of daily life participation and severity of depression among person with SCI after rehabilitation and to find out the relationship between participation and depression.

3.1.3 Objectives

- To describe the socio-demographic characteristics of the participants.
- To assess the level of daily life participation (frequency of participation, restriction of participation and satisfaction of participation) among the person with SCI after rehabilitation.
- To find out the severity of depression among the person with SCI after rehabilitation.
- To identify the factors associated with daily life participation and severity of depression
- To explore the relationship between daily life participation and depression.

3.2 Study Design

3.2.1 Study Method

The researcher used a quantitative study design to evaluate the participation in daily life and its associated factors in person with SCI after rehabilitation. The researcher used this method because quantitative research methods are designed to be objective and unbiased. It allowing for generalizability to larger populations and widely used in various fields (Hasan, 2024). Quantitative research methods are used to obtain accurate and reliable measurements for statistical analysis (Downey et al., 2017).

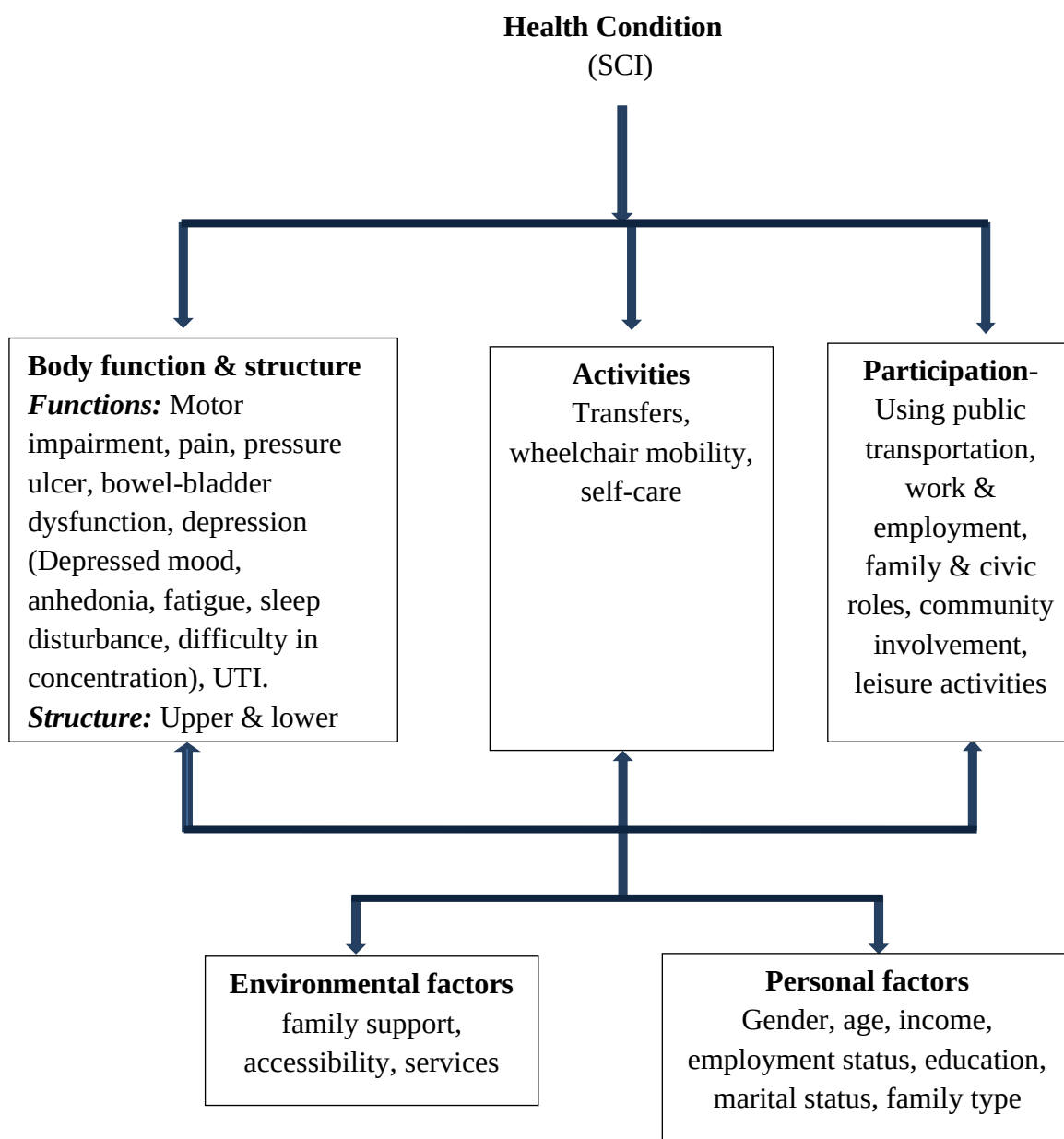
3.2.2 Study Approach

In this study, the researcher used a cross-sectional approach. A cross-sectional study was chosen because the nature of cross-sectional studies as observational studies that analyze data at a single point in time. Cross-sectional studies are less expensive and easier to conduct and which is a practical advantage in research planning (Mulyani, 2024). Cross-sectional studies provides a snapshot of the current situation and the advantages of cross-sectional studies include being cheaper, faster and to perform with no recall bias and representative samples (Grujičić & Nikolić, 2021).

3.2.3 Conceptual Framework

ICF-Based Conceptual Framework for Participation and depression in Person with SCI:

The ICF is useful for identifying and evaluating participation problems in SCI rehabilitation particularly for reintegration into community life (Rauch et al., 2010).



3.3 Study Setting and Period

3.3.1 Study Setting

Living area of people with spinal cord injury in the community. The researcher conducted this study in Urban, semi-urban & rural areas some of the division of Bangladesh.

3.3.2 Study period

The period of the study was June 2025 to December 2025, and the data collection period was from August 2025 to September 2025.

3.4 Study Participant

3.4.1 Study Population

Study population was the people with spinal cord injury living in community of and completed their in-patient rehabilitation service from CRP.

3.4.2 Sample Size

For calculating Sample size: the investigator used the principle of sample size determination:

$n = z^2 \cdot pq / r^2$. Sample size was estimated for this study according to the following formula- 95% confidence interval and 5% sampling error.

Here, the confidence interval is $(z) = 1.96$ and the sampling error $(r) = 0.05$ precise number of people with spinal cord injury was unknown as well as prevalence of was assumed $p=0.5$, where $q= 0.5 (1-p)$ and then the sample size (n) it was stand for:

$$\begin{aligned} n &= \frac{(1.96)^2 \times 0.5 \times 0.5}{(0.05)^2} \\ &= 0.9604/0.0025 \\ &= 384.16 \end{aligned}$$

According to this equation, the sample should be 384 participants. After matching the inclusion and exclusion criteria within a short period of time, the researcher reached 126 participants.

3.4.3 Sampling Techniques

Convenience sampling technique used to conduct this study. In convenience sampling, participants are selected based on their availability and willingness to take part (Wang & Cheng, 2020). The student researcher selected convenience sampling because the study had some inclusion and exclusion criteria and collected data based on participant's availability and their willingness. Therefore, convenience sampling is the most suitable sampling technique to select the participants for this study.

3.4.4 Inclusion and Exclusion Criteria

Inclusion Criteria

- Traumatic and non-traumatic people with SCI including both male and female
- The age of people with SCI at least 18 years old
- Take rehabilitation service from CRP
- Community living experience minimum 3 month

Exclusion Criteria

- Physically ill like having of typhoid, jaundice, pneumonia, severe fever for this reason unable to talk and give their information.
- Participants who have non-verbal communication

3.5 Ethical Consideration

The researcher maintained ethical considerations according to the Helsinki Act's 2014 guidelines:

3.5.1 Ethical Clearance

The researcher took permission from the Institutional Ethical Review Board of Bangladesh Health Professions Institute (BHPI) through the Department of Occupational Therapy. The IRB number is: CRP BHPI/IRB/07/2025/1120 (Please See Appendix- A).

3.5.2 Informed Consent

All the participants were informed about the purpose and aim of the study. The researcher took consent forms from the participants. The participants participated voluntarily (Please See Appendix- B). The participants got an opportunity to ask questions before the interview started.

3.5.3 Unequal relationship

The researcher gathered data using a standardized questionnaire, and the participants completed it independently. This approach eliminated potential bias, ensuring a balanced power relationship.

3.5.4 Risk and Beneficence

Participation in this study did not involve risk and beneficence. There was no monetary or any other benefit involved in this study.

3.5.5 Confidentiality

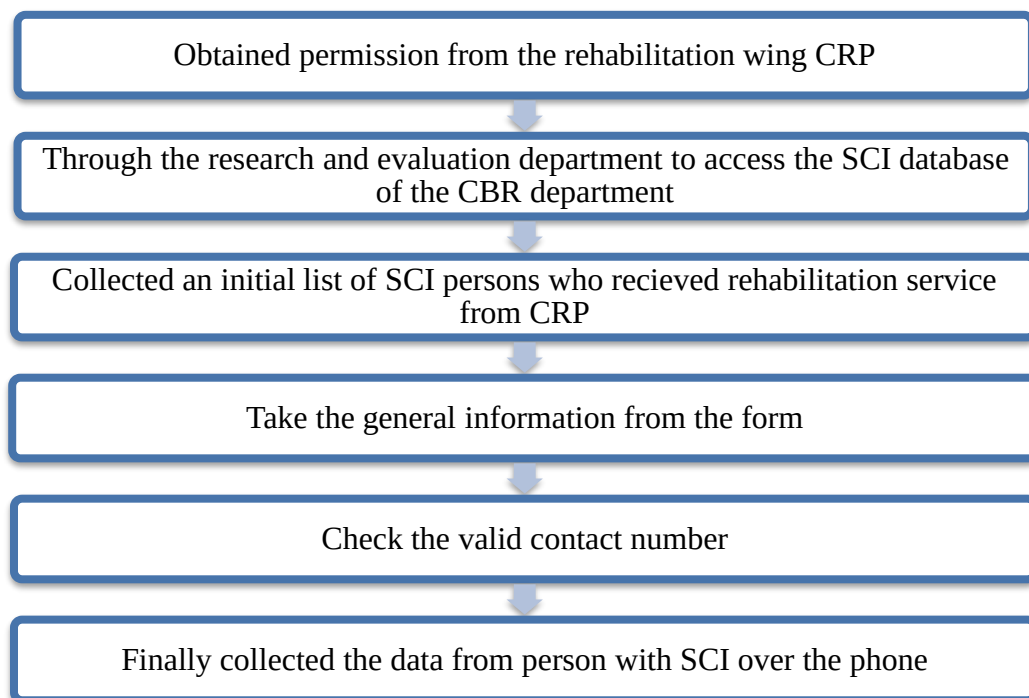
The researcher was highly concerned about keeping the participants' information confidential. Their names, identities, and other personal details were only shared with the supervisor, which was clearly mentioned in the information sheet. Furthermore, any identifiable information about the participants would not be disclosed for future purposes like reports, publications, conferences, or discussions. The participants were informed about all of the confidential issues through an information sheet.

3.6 Data Collection Process

3.6.1 Participant Recruitment Process:

Figure 3.6.1

Overview of the participant recruitment process



3.6.2 Data Collection Method

The researcher conducted a telephone survey to gather data from participants because all the participants live in communities in different regions. So, it was not easy to reach the participants for face-to-face interviews. Telephone surveys are widely used for cost-effective and timely data collection (Sripriya et al., 2012).

3.6.3 Data Collection Instrument

- Structured questionnaire for demographic data. The Researcher used the demographic information sheet to collect data (**Please see Appendix -E**).
- Utrecht Scale for Evaluation of Rehabilitation-Participation (USER-Participation)
The USER-Participation is a self-report questionnaire of 32 items with 3 separate scales: Frequency, Restrictions, and Satisfaction. The Frequency scale consists of 11 items, 4 items on vocational activities and 7 items on leisure and social activities. The 4 items on vocational activities address the number of hours spent per week, and are scored on a 6-point ordinal scale from 0 (not at all) to 5 (36 h or more). The 7 items on leisure and social activities address the frequency in the last 4 weeks scoring from 0 (not at all) to 5 (19 times or more). The Restrictions scale consists of 11 items that address activities that may be restricted by their health condition. The perceived difficulty in performing the activity is rated on a 4-point scale, ranging from 0 (not possible at all) to 3 (no difficulty at all). If any item is not relevant to the person or the restrictions are not related to the person's health status, the option "not applicable" is available. The Satisfaction scale consists of 10 items on satisfaction with vocational, leisure and social activities. Items are rated on a scale from 0 (not satisfied at all) to 5 (very satisfied). For the

items on vocational activities and partner relationship a “not applicable” option is available. The sum score of each scale is based on all applicable items and is converted to a 0–100 scale, with higher scores indicating better participation (more time spent/ higher frequency, less restrictions, higher satisfaction). There is no total USER-Participation score aggregating the scores from each scale. (Mader et al., 2016)

- The Patient Health Questionnaire (PHQ-9). The PHQ-9 is a self-report measure that asks subjects how often they have been bothered by the following problems in the past 2 weeks: (1) little pleasure or interest in doing things; (2) feeling down, depressed, or hope less; (3) sleeping too little or too much; (4) feeling tired or having little energy; (5) poor appetite or overeating; (6) feelings of worthlessness or guilt; (7) concentration problems; (8) psychomotor retardation or agitation; and (9) thoughts of suicide. Subjects were asked to rate how often each symptom occurred: 0 (not at all), 1 (several days), 2 (more than half the days), or 3 (nearly every day). First and most commonly, the PHQ-9 can be summarized by the sum of the 9-item scores, ranging from 0 to 27 (Bombardier et al., 2012). The severity was calculated based on the PHQ-9 scale score distribution as mentioned; 0–4 minimal depression, 5–9 mild depression, 10–14 moderate depression, 15–19 moderately severe depression, and 20–27 severe depression (Arafat et al., 2018).

3.6.4 Field Test

The researcher translated the questionnaire into Bengali, the native language of Bangladesh, with the help of a supervisor and a volunteer who was an expert in formal Bengali writing. The researcher conducted the field test with two persons with

disabilities. Through this field test, some changes were fixed later, which helped to maintain the question 's quality.

3.7 Data management and Analysis

- The data were analysed using the latest software, Statistical Package for Social Science (SPSS).
- Descriptive data were analysed by simple frequency distribution (mean, standard deviation, percentage).
- An inferential statistical test was performed to find out the association (such as normality test, independent t test, One way ANOVA test, and Linear regression)
- Cross tabulation was used to determine the difference between the dependent and independent variables. The statistically significant difference was set at a 95 % confidence interval (CI).

3.8 Quality Control and Quality Assurance

During the study period, Quality control and quality assurance were strictly maintained. The researcher chose an appropriate study design that best suited the aim and objectives of this study. The researcher followed the five stages of the data management cycle to ensure the quality of the data. 126 persons with disabilities participated in this study. The researcher shared participants with an information sheet explaining the aim, objective, and purpose of the study during a phone call. To ensure the safety and security of all the documents were photocopied and kept as soft copies of documents by scanning. The data was placed into a Statistical Program for Social Sciences (SPSS) file with each question as a variable to set up the database for analysis. Additionally, these files were stored in

Google Drive with strong passwords to ensure high security, preventing unauthorized access. All data were archived in Google Drive for future reference. The researcher and supervisor emphasized the importance of this archival process. They decided to destroy the data after five years to ensure safety, as the data might not be usable after that period.

CHAPTER VI: RESULT

This section provides a statistical analysis of the findings. The findings of the study have been analyzed and represented by using table in a systematic way.

Table 4.1

sociodemographic characteristics among respondents

Socio-demographic		Frequency n=126	Percentage (%)
Variable	Category		
Gender	Male	99	78.6
	Female	27	21.4
Age in years	18 - 45	88	69.8
	46 -65	38	30.2
	Mean= 38.9, SD= 12.057, Minimum=18, Maximum=65		
Family type	Joint family	105	83.3
	Single family	17	13.5
	Staying alone	4	3.2
Family members	1 - 4	68	54.0
	4 - 8	55	43.7
	>8	3	2.4
	Mean=4.53, SD=1.59, Minimum=1, Maximum=13		
Occupation before injury	Self-employed (Business, Shop)	21	16.7
	Day labor	21	16.7
	Agriculture	5	4.0
	Govt. job	5	4.0
	Private job	24	19
	Student	22	17.5
	Home making/housewife	14	11.1
	Unemployment	4	3.2
	Others	10	7.9
Occupation after rehabilitation	Self-employment (Business, Shop)	19	15.1
	Agriculture	3	2.4
	Govt. job	5	4.0
	Private job	8	6.3
	Student	11	8.7
	Home	14	11.1

	making/housewife		
	Unemployment	60	47.6
	Others	6	4.8
Family income before injury	<16000	20	15.9
	16000 - 30000	49	38.9
	>30000	57	45.2
	Mean=42976.19, SD=37399.778, Minimum=4000, Maximum=200000Tk		
Family income after injury	<16000	67	53.2
	16000 - 30000	32	25.4
	>30000	27	21.4
	Mean=25855.36, SD=33558.849, Minimum=2000, Maximum=300000Tk		
Educational level	Illiterate	16	12.7
	Primary education	46	36.5
	Secondary education	32	25.4
	Higher secondary	15	11.9
	Bachelor or above	17	13.5
Marital status	Married	72	57.1
	Unmarried/single	39	31.0
	Separated/divorced	8	6.3
	Widowed	7	5.6
Living area	Rural	58	46.0
	Urban	33	26.2
	Semi-urban	35	27.8

Table 4.1 presents the socio-demographic and clinical characteristics of the 126 respondents with spinal cord injury (SCI). The majority of the participants were male 78.6% (n=99), while females constituted 21.4% (n=27). The age of the participants ranged from 18 to 65 years with a mean age of 38.9 years (SD $\pm$ 12.06). Most respondents 69.8% (n=88) were between 18–45 years. Regarding family type most participants lived in joint families 83.3% (n=105) followed by single family structures 13.5% (n=17) while 3.2% (n=4) were living alone. More than half 54.0% (n=68) had 1–4 family members and the mean family size was 4.53 (SD $\pm$ 1.59). Before injury participants were involved in a variety of occupations. Private job holders 19.0% (n=24), students 17.5% (n=22), day

laborers 16.7% (n=21), and self-employed individuals 16.7% (n=21) were the most common groups. However, after rehabilitation the unemployment rate increased sharply with nearly half of the participants 47.6% (n=60) reporting no engagement in income-generating activities. A smaller proportion continued as homemakers 11.1% (n=14), students 8.7% (n=11), private job holders 6.3% (n=8), and self-employed workers 15.1% (n=19). Family income also demonstrated a marked reduction after injury. Before injury 45.2% (n=57) earned more than 30,000 BDT per month. After injury only 21.4% (n=27) remained in this income range while more than half 53.2% (n=67) reported earning less than 16,000 BDT per month. The mean family income before injury was 42,976.19 BDT (SD $\pm$ 37,399.77) which declined to 25,855.36 BDT (SD $\pm$ 33,558.85) after injury. Educational background showed that 36.5% (n=46) completed primary education while 25.4% (n=32) had secondary education and 13.5% (n=17) completed a bachelor's degree or higher. More than half of the respondents were married 57.1% (n=72) while 31.0% (n=39) were unmarried. Regarding place of residence 46.0% (n=58) lived in rural areas, 27.8% (n=35) in semi-urban, and 26.2% (n=33) in urban settings.

Table 4.2*Distribution of respondents regarding Spinal Cord Injury*

Socio-demographic		Frequency	Percentage
Variable	Category	n=126	(%)
Causes of injury	Traumatic	112	88.9
	Fall from high	42	33.3
	Road traffic accident (RTA)	50	39.7
	Carrying load on head	7	5.6
	Struck by object	9	7.1
	Other traumatic	3	2.4
	Non-traumatic	14	11.1
	Tuberculous spondylitis (TB) spine	2	1.6
	Spinal tumor	5	4.0
	Other non-traumatic	8	6.3
Type of injury	Traumatic	112	88.9
	Non-traumatic	14	11.1
Severity of injury	Complete	32	25.4
	Incomplete	94	74.6
Types of paralysis	Paraplegia	72	57.1
	Tetraplegia	54	42.9
Rehabilitation time (months)	1 - 4	86	68.3
	>4	40	31.7
	Mean=4.18 SD=1.891, Minimum=1, Maximum=14		
Stay community after rehabilitation (years)	1 – 5	89	70.6
	>5	37	29.4
	Mean=51.00, SD=32.421, Minimum=3, Maximum=120		
Vocational training for income generates after rehabilitation	Yes	16	12.7
	No	110	87.3
Mobility status	Walking	22	17.5
	To walk depending on something or someone else	17	13.5
	Wheelchair dependent	87	69.0
Secondary complications	No complication	56	44.4
	Pressure ulcer	22	17.5

Pain	27	21.4
UTI	9	7.1
Respiratory infection	8	6.3
Other	4	3.2

The table 4.2 presents the majority of injuries were traumatic 88.9% (n=112), mostly caused by road traffic accidents and falls; non-traumatic injuries accounted for 11.1% (n=14). In terms of clinical characteristics, 57.1% (n=72) had paraplegia and 42.9% (n=54) had tetraplegia. Regarding severity, most participants 74.6%, (n=94) had incomplete SCI, whereas 25.4% (n=32) had complete injury. most participants received rehabilitation for 1–4 months 68.3% (n=86), with a mean rehabilitation duration of 4.18 months (SD ± 1.89). After discharge, the majority 70.6% (n=89) had stayed in the community for 1–5 years. Mobility status revealed that the majority of the participants were wheelchair-dependent 69.0% (n=87). Additionally, 17.5% (n=22) could walk independently, while 13.5% (n=17) required support for ambulation. Only a small proportion 12.7% (n=16) reported receiving vocational training for income generation after rehabilitation. Secondary complications were reported by more than half of the participants. Pain was the most common complication 21.4% (n=27), followed by pressure ulcers 17.5% (n=22), and respiratory problems 10.3% (n=13). However, 44.4% (n=56) reported no secondary complications.

4.3 Level of Participation

Figure 4.1

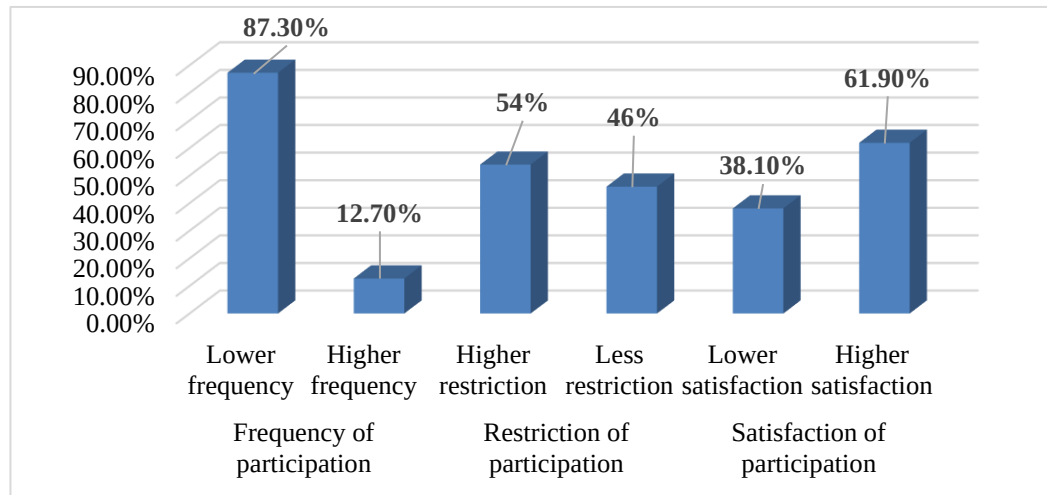


Figure 4.1 represent the level of participation among the participants. Three types of participation frequency of participation, restriction of participation and satisfaction of participation and each have two categories including lower/less and higher. The results shows that 87.3%, (n=110) participants have lower participation frequency and 12.70% (n=16) have higher participation frequency. The distribution of restriction presented 54.0% (n=68) participants experienced higher restriction of participation while 46.0% (n=58) experienced less restriction. A total of 61.9% (n =78) participants reported higher satisfaction whereas 38.1% (n=48) participants expressed lower satisfaction.

4.4 Severity of depression

Figure 4.2

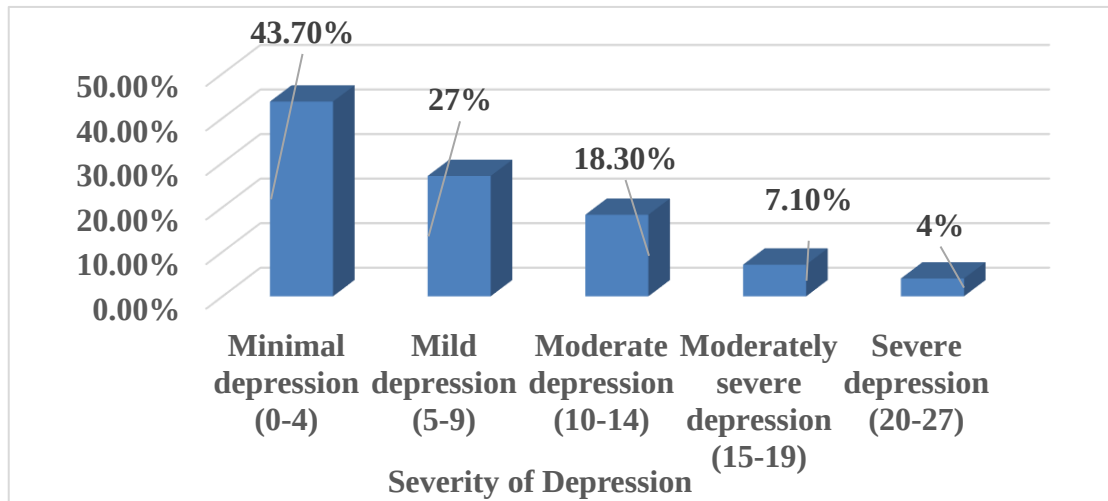


Figure 4.2 represent the severity of depression among the participants. Severity of depression divided into five categories with its score minimal (0-4), mild (5-9), moderate (10-14), moderately severe (15-19), severe (20-27). The result shows between 126 participants 43.70% (n=55) were in minimal depression, 27% (n=34) mild depression, 18.30% (n=23) moderate depression, 7.1% (n=9) moderately severe and 4% (n=5) severe depression.

Table 4.5

Group difference analysis (bivariate) with USER-P (frequency and satisfaction of participation) scores

Variable		Frequency & Satisfaction of Participation		
		Mean±SD	t/F	P value
Gender	Male	21.5±7.7	3.273	0.001
	Female	16.3±4.96		
Severity of Injury	Complete	17.81±6.45	-2.270	0.025
	Incomplete	21.24±7.67		
Occupation before injury	Self-employed (Business, Shop)	21.29±7.988	2.633	0.011
	Day labor	17.43±6.870		
	Agriculture	19.80±5.413		
	Govt. job	21.60±7.824		
	Private job	20.42±8.410		
	Student	24.59±5.405		
	Home making/Housewife	14.86±7.047		
	Unemployment	20.50±5.038		
	Others	22.60±5.413		
	Self-employed (Business, Shop)	24.79±6.042		
Occupation after rehabilitation	Agriculture	24.33±6.658	6.086	0.001
	Govt. job	23.00±3.536		
	Private job	29.38±9.441		
	Student	22.36±5.988		
	Home making/Housewife	15.43±5.445		
	Unemployment	17.93±7.088		
	Others	22.50±3.271		
	Others	22.50±3.271		
Family income before injury	<16000	15.70±7.399	7.551	0.001
	16000 - 30000	19.59±6.782		
	>30000	22.68±7.359		
Family income after rehabilitation	<16000	18.42±7.035	5.452	0.005
	16000 - 30000	21.97±7.119		
	>30000	23.33±7.942		
Living area	Rural	17.76±6.819	7.298	0.001
	Urban	23.06±7.504		
	Semi-urban	22.17±7.378		

Table 4.5 represents the group mean difference in participation of frequency and satisfaction scores within the gender, severity of injury, occupation before injury, occupation after rehabilitation, family income before injury, family income after rehabilitation, living area. This table shows that the mean score of participation was significantly higher among participants who are male, incomplete SCI, students or self-employed before injury, business/self-employment and private job after rehabilitation, greater than 30000 BDT per month for both before injury and after rehabilitation, and whose from Urban area.

Table 4.6

Mann Whitney U Test for group differences analysis with restriction of participation

Variable	Category	Frequency n=126	Restriction of Participation		
			Mean rank	Z	p-value
Age in years	18-45	88	69.57	-2.843	0.004
	46-65	38	49.45		
Severity of injury	Complete	32	46.52	-3.050	0.002
	Incomplete	94	69.28		

Table 4.6 represents Mann Whitney U test results (dependent variable is restriction of participation. Independent variables are age in years with two levels 18-45, 46-65 and severity of injury with two levels complete, incomplete). The p value of chi square test is 0.004 which means the restriction of participation among the respondents who is 18-45 years and who is 46-65 years. The p value of chi square test is 0.002 which means the restriction of participation among the respondents who is complete injury and who is incomplete injury.

Table 4.7

Linear regression assessing the association between age in years and Restriction of participation

Predictor	Restriction of participation	
	B 95%(CI)	P value
Age in years	Unstandardized Coefficient	
18-45	Reference	
46-65	-1.990 (-3.329, -.652)	0.004

Table 4.7 in regression output, age in years 46-65 is associated with 1.990 times lower the USER-P score that means higher restriction of participation. It is statistically significant with a range of -3.329 to -.652 and p value is 0.004.

Table 4.8

Linear regression assessing the association between severity of injury and Restriction of participation

Predictor	Restriction of participation	
	B 95%(CI)	P value
Severity of injury	Unstandardized Coefficient	
Complete	Reference	
Incomplete	2.348 (.949, 3.748)	0.001

Table 4.8 in regression output, severity of injury incomplete is associated with 2.348 times higher the USER-P score that means lower restriction of participation. It is statistically significant with a range of .949 to 3.748 and p value is 0.001.

Table 4.9

Kruskal-Wallis H test for group differences analysis with restriction of participation

Variable	Category	Frequency n=126	Restriction of Participation			
			Mean Rank	χ^2	df	P value
Occupation after rehabilitation	Self-employed (Business, Shop)	19	87.13	26.824	7	0.000
	Agriculture	3	82.00			
	Govt. job	5	70.00			
	Private job	8	94.25			
	Student	11	74.55			
	Home making/Housewife	14	51.82			
	Unemployment	60	49.61			
	Others	6	78.92			
Family income before injury	<16000	20	42.98	9.502	2	0.009
	16000 - 30000	49	62.01			
	>30000	57	71.98			
Mobility status	Walking	22	87.91	17.232	2	<0.001
	To walk depending on something or someone else	17	76.94			
	Wheelchair dependent	87	54.70			

Table 4.9 shows the Kruskal–Wallis test reveals a statistically significant difference in restriction of participation across occupation after rehabilitation groups (p-value=0.000), family income before injury groups (p-value=0.009) and mobility status groups (p-value=0.000 which are <0.05).

Table 4.10

Linear regression assessing the association between occupation after rehabilitation and Restriction of participation

Predictor	Restriction of participation	
	B 95%(CI)	P value
Occupation after rehabilitation	Unstandardized Coefficient	
Self-employed (Business, Shop)	Reference	
Agriculture	-.211 (-4.235, 3.814)	.918
Govt. job	-1.074 (-3.244, 1.097)	.329
Private job	.301 (-1.064, 1.666)	.663
Student	-.484 (-1.466, .498)	.331
Homemaking/Housewife	-1.077 (-1.831, -.310)	.006
Unemployment	-1.077 (-1.564, -.590)	.000
Others	-.240 (-.999, .518)	.532

Table 4.10 in regression output, occupation of homemaking/housewife 1.077 times lower the USER-P score that means higher restriction of participation. It is statistically significant with a range of -1.831 to -.310 and p value is 0.006. Occupation of unemployment 1.077 times lower the USER-P score which indicates higher restriction of participation it is statistically significant with a range of -1.564 to -.590 and p value is 0.001.

Table 4.11

Linear regression assessing the association between family income before injury and Restriction of participation

Predictor	Restriction of participation	
Family income before injury	B 95%(CI)	P value
	Unstandardized Coefficient	
<16000	Reference	
16000 - 30000	1.773 (-.053, 3.600)	0.057
>30000	1.897 (.704, 3.090)	0.002

Table 4.11 in regression output, Family income before injury greater than 30000 is associated with 1.897 times higher the USER-P score that means lower restriction of participation. It is statistically significant with a range of .704 to 3.090 and p value is 0.002.

Table 4.12

Linear regression assessing the association between mobility status and Restriction of participation

Predictor	Restriction of participation	
Mobility status	B 95%(CI)	P value
	Unstandardized Coefficient	
Walking	Reference	
To walk depending on something or someone else	-1.432 (-3.573, .710)	0.188
Wheelchair dependent	-2.280 (-3.335, -1.225)	0.001

Table 4.12 in regression output, being wheelchair dependent 2.280 times lower the USER-P score that means lower restriction of participation. It is statistically significant with a range of -3.335 to -1.225 and p value is 0.001.

Table 4.13*Kruskal-Wallis test for group differences analysis with severity of depression*

Variable	Category	Frequency n=126	Severity of Depression			
			Mean Rank	χ^2	df	P value
Occupation after rehabilitation	Self-employed (Business, Shop)	19	41.53	15.461	7	0.031
	Agriculture	3	56.67			
	Govt. job	5	48.10			
	Private job	8	72.25			
	Student	11	57.05			
	Home making/Housewife	14	58.04			
	Unemployment	60	74.68			
	Others	6	50.50			
Family income before injury	<16000	20	91.60	15.990	2	0.001
	16000 - 30000	49	63.36			
	>30000	57	53.76			
Family income after rehabilitation	<16000	67	73.28	10.563	2	0.005
	16000 - 30000	32	54.56			
	>30000	27	49.83			
Secondary complication at present	No complication	56	51.02	14.616	5	0.012
	Pressure ulcer	22	79.14			
	Pain	27	74.20			
	UTI	9	55.72			
	Respiratory infection	8	72.88			
	Others	4	78.75			
If you checked off any problems between the questions of PHQ-9, how difficult have those problems made it for you to do your work, take care of things at home, or get along with other people?	Not difficult at all	83	50.21	37.173	3	<0.001
	Somewhat difficult	30	81.52			
	Very difficult	8	111.88			
	Extremely difficult	5	98.60			

Table 4.13 shows the Kruskal–Wallis test reveals a statistically significant difference in Severity of depression across occupation after rehabilitation groups (p-value=0.031), family income before injury groups (p-value=0.001), Secondary complication at present groups (p-value=0.012) and also reveals a statistically significant difference in severity of depression across difficulty to do the work, take care of things at home or get along with other people (p-value= 0.001), which are <0.005.

Table 4.14

Linear regression assessing the association between family income after rehabilitation and severity of depression

Predictor	Severity of depression	
	B 95%(CI)	P value
Family income after rehabilitation	Unstandardized Coefficient	
<16000	Reference	
16000 - 30000	-1.417 (-2.618, -.216)	0.021
>30000	-1.218 (-2.067--.368)	0.005

Table 4.14 in regression output, Family income after rehabilitation between 16000-30000 is associated with 1.417 times lower the PHQ-9 score that means lower severity of depression. It is statistically significant with a range of -2.618 to -.216 and p value is 0.021. Family income after rehabilitation greater than 30000 is associated with 1.218 times lower the PHQ-9 score that means lower severity of depression. It is statistically significant with a range of -2.067 to -.368 and p value is 0.005.

Table 4.15

Linear regression assessing the association between secondary complication at present and severity of depression

Predictor	Severity of depression	
	B 95%(CI)	P value
Secondary complication at present	Unstandardized Coefficient	
No complication	Reference	
Pressure ulcer	2.347(.962, 3.733)	0.001
Pain	1.157 (.297, 2.017)	0.009
UTI	0.099 (-.890, 1.088)	0.843
Respiratory infection	0.657 (-.175, 1.490)	0.121
Others	1.006 (.056, 1.956)	0.038

Table 4.15 in regression output, pressure ulcer of secondary complication is associated with 2.347 times higher the PHQ-9 score that indicates higher severity of depression. It is statistically significant with a range of .962 to 3.733 and p value is 0.001. Also, the pain of secondary complication is associated with 1.157 times higher the PHQ-9 score that indicates higher severity of depression. It is statistically significant with a range of .297 to 2.017 and p value is 0.009. Some participants have other secondary complication (convulsion, burning sensation, trigger finger, DQT) which also associated with 1.006 times higher in PHQ-9 score which is indicates higher severity of depression. It is statistically significant with a range of .056 to 1.956 and p value is 0.038.

Table 4.16

Linear regression assessing the association between If you checked off any problems between the questions of PHQ-9, how difficult have those problems made it for you to do your work, take care of things at home, or get along with other people? and severity of depression

Predictor	Severity of depression	
	B 95%(CI)	P value
If you checked off any problems between the questions of PHQ-9, how difficult have those problems made it for you to do your work, take care of things at home, or get along with other people?	Unstandardized Coefficient	
Not difficult at all	Reference	
Somewhat difficult	2.232 (1.206, 3.259)	0.001
Very difficult	3.424 (2.235, 4.614)	0.001
Extremely difficult	2.449 (1.340, 3.559)	0.001

Table 4.16 in regression output, shows participants who reported their problem as somewhat difficult, very difficult, and extremely difficult is associated with 2.232, 3.424 and 2.449 times higher the PHQ-9 score respectively that indicates higher severity of depression and all category are statistically significant with a range of 1.206 to 3.259, 2.235 to 4.614 and 1.340 to 3.559 with the p value of 0.001, 0.001 and 0.001 for each category.

Table 4.17

Mann Whitney U test group differences analysis with severity of depression

Variable	Category	Frequency n=126	Severity of Depression		
			Mean rank	Z	p-value
Severity of injury	Complete	32	46.52	-3.050	0.002
	Incomplete	94	69.28		

Table 4.17 the table represents Mann Whitney U test results (dependent variable is severity of depression and independent variable is severity of injury with two levels – complete, incomplete). The p value is 0.002 which indicates significant differences in severity of depression between who is complete injury and who is incomplete injury.

Table 4.18

Linear regression assessing the association between severity of injury and severity of depression

Predictor	Severity of Depression	
Severity of injury	B 95%(CI) Unstandardized Coefficient	P value
Complete	Reference	
Incomplete	-1.328 (-2.491, -.165)	0.026

Table 4.18 in regression output, severity of injury incomplete is associated with 1.328 times lower the PHQ-9 score that means lower severity of depression. It is statistically significant with a range of -2.495 to -.165 and p value is 0.026.

Table 4.19

Mann Whitney U test for group differences analysis with severity of depression

Variables	Category	Frequency n=126	Severity of Depression		
			Mean rank	Z	p-value
Frequency of participation	Higher frequency	16	36.69	-3.153	0.002
	Lower frequency	110	67.40		
Restriction of participation	Higher restriction	68	76.31	- 4.276	0.001
	Less restriction	58	48.48		
Satisfaction of participation	Higher Satisfaction	78	89.73	-6.344	0.001
	Lower satisfaction	48	47.36		

Table 4.16 represents Mann Whitney U test results (dependent variable is severity of depression. Independent variables are frequency of participation with two levels higher frequency and lower frequency, restriction of participation with two levels higher restriction and less restriction and satisfaction of participation with two levels higher satisfaction and lower satisfaction). This table reveals the statistically significant difference in severity of depression across frequency of participation (p-value = 0.002), restriction of participation (p-value = 0.001), satisfaction of participation (p-value = 0.001), which are <0.05).

Table 4.20*Pearson correlation matrix*

	1	2	3	4	5	6	7	8	9	10
1. Age	1									
2. Family members	.042	1								
3. Family income before injury	.173	.009	1							
4. Family income after injury	.129	-.059	.652	1						
5. Rehabilitation time in time in month	-.019	.119	.246**	-.029	1					
6. Stay in community after discharge in month	.170	.021	.156	.176*	-.023	1				
7. Frequency of participation	-.224*	.045	.241**	.301**	-.050	.130	1			
8. Restriction of participation	-.209*	-.112	.150	.124	-.123	.148	.771**	1		
9. Satisfaction of participation	-.224*	.045	.241**	.301**	-.050	.130	1.000**	.771**	1	
10. Severity of depression	.022	.019	-.274**	-.198*	-.097	.014	-.505**	-.538**	-.505**	1

Note: **p<0.01, *p<0.05. 1=Age in years, 2=Family member, 3=Family income before injury, 4=Family income after injury, 5=Rehabilitation time in month, 6= Stay in community after discharge in month, 7=Frequency of participation, 8=Restriction of participation, 9=Satisfaction of participation, 10=Severity of injury.

Table 4.20 shows Pearson's correlation among the frequency of participation, restriction of participation, satisfaction of participation, severity of depression, rehabilitation time in month, stay in community after discharge in month, family member, family income before injury, family income after rehabilitation and age. The result indicates a weak negative correlation among the frequency of participation and age which was statistically significant ($r = -.224$, $p < 0.05$), restriction of participation and age which was statistically significant ($r = -.209$, $p < 0.05$) also shows a weak negative correlation among satisfaction of participation and age which was statistically significant ($r = -.224$, $p < 0.05$).

Severity of depression shows a weak negative correlation with frequency of participation and restriction of participation which were statistically significant where ($r = -.505$, $p < 0.001$; $r = -.538$, $p < 0.001$).

Table 4.21

Linear regression analysis predicting the frequency of participation, restriction of participation and age in years towards the participation

Predictor	Participation			
	Frequency of participation		Restriction of participation	
	B (95% CI) Unadjusted	P value	B (95% CI) Unadjusted	P value
Age in years	-.140 (-.247 — -.032)	.012	-.125 (-.228 — -.021)	.019

Table 4.21 shows the linear regression analysis, using this variable which was statistically significant in Pearson correlation. The predictor factor of frequency of participation were age in years (OR= -.140, $p < 0.012$) this result indicates that frequency of participation increased by .140 when age decreased by one point. On the other hand, the predictor

factor of restriction of participation were age in years (OR= -.125, $p<0.019$) which indicates restriction decreased by .125 when age decreased by one point.

Table 4.22

Linear regression assessing the association among frequency of participation, restriction of participation and severity of depression

Predictor	Severity of depression					
	Unadjusted			Adjusted		
	B (CI)	SE	P-value	B (CI)	SE	P-value
Frequency of participation	-.392 (-.511 — -.273)	.060	.001	-.172 (-.353 — .009)	.092	.062
Restriction of participation	-.437 (-.559 — -.315)	.062	.001	-.298 (-.488 — -.109)	.096	.002

Table 4.22 The regression coefficient indicates that a one-point increase in the Frequency of participation and restriction of participation score is associated with (.392, .437) times decrease in PHQ-9 scores which means decreased in severity of depression and it is statistically significant. The regression coefficient indicates that a one-point increase in the restriction of participation score is indicated with (.298) decrease in PHQ-9 scores which means decrease in severity of depression and it is statistically significant.

CHAPTER V: DISCUSSION

The present study aimed to evaluate daily life participation and depression among persons with spinal cord injury (SCI) after completion of rehabilitation and to explore the relationship between participation outcomes and depressive symptoms. This study is important in the context of Bangladesh where evidence regarding long-term community reintegration and mental health outcomes of persons with SCI remains limited. By examining participation using the USER-P scale and depression using the PHQ-9 this study provides a comprehensive understanding of both functional and psychological outcomes after rehabilitation.

The socio-demographic characteristics of the participants reflect trends commonly reported in SCI populations. The majority of participants were within the economically productive age group, which aligns with previous research indicating that SCI frequently affects younger adults. Younger age at injury has been associated with better participation and life satisfaction (Post & Reinhardt, 2015). In the present study, although younger participants demonstrated relatively better engagement in certain participation domains age was not consistently associated with overall participation outcomes. This variation may be explained by contextual factors specific to Bangladesh. Limited employment opportunities, environmental inaccessibility and financial dependency may reduce the advantage typically associated with younger age. Therefore, age alone may not determine participation outcomes without supportive environmental and structural conditions. Gender differences observed in this study partially correspond with existing literature. Women with SCI have been reported to experience lower community

integration and participation satisfaction (Barclay et al., 2016) and greater environmental barriers have also been identified among women (Forchheimer et al., 2004a). Similarly, female participants in this study demonstrated comparatively lower participation levels in certain domains. In the Bangladeshi socio-cultural context, gender norms may further restrict mobility and social engagement for women living with disability. However, the association between gender and depression was not strongly evident in this study compared to findings reported in other populations (Paper, 2015). This difference may reflect the protective role of family support or cultural coping strategies within Bangladeshi communities.

Regarding severity of injury, participants with tetraplegia and more severe lesions experienced greater participation restrictions. Previous research has indicated that higher injury severity increases difficulty in performing life habits (Æ & Æ, 2000) and is associated with greater participation restrictions and reduced satisfaction (Report, 2021). However, similar to findings from some international studies where injury severity did not independently determine participation outcomes, the present study suggests that neurological level alone does not fully explain participation variation. Within the framework of the International Classification of Functioning, Disability and Health (ICF), body structure impairment interacts dynamically with environmental and personal factors. Access to assistive devices, family assistance, vocational opportunities, and environmental accessibility may significantly modify the impact of injury severity on participation.

Employment status demonstrated a meaningful association with participation outcomes. Participants engaged in employment or productive roles reported higher levels of participation. Employment has been identified as a strong determinant of community participation (Cole et al., 2022) and it contributes to identity, social interaction, and daily structure (Schedin et al., 2016). However, employment rates in the present study appear lower compared to global findings among persons with SCI (Marcel et al., 2026). In Bangladesh, workplace inaccessibility, lack of inclusive employment policies, and social stigma may limit opportunities for economic reintegration.

Mobility status also influenced participation outcomes. Individuals with greater functional mobility reported better engagement in activities. Severe mobility-related participation restrictions among persons with SCI have been previously documented (Mahaveer et al., 2025). However, satisfaction with participation in this study was not solely dependent on mobility type, suggesting that autonomy, environmental support, and social inclusion play critical roles. According to the ICF model, mobility falls under the activity domain, but its influence on participation depends largely on environmental facilitators and barriers.

In relation to participation domains measured by USER-P, participants demonstrated moderate engagement in domestic and social activities but reported restrictions in broader community and work-related participation. Lower participation levels associated with age and educational factors have also been reported in previous research (Bychkovska et al., 2024). Environmental barriers negatively affecting social participation have been widely documented (Nicolas W. Cortes-Penfield, Barbara W.

Trautner & Halberstadt, 2017). In Bangladesh, infrastructural limitations, transportation barriers, and limited community-based rehabilitation follow-up may further contribute to participation restrictions.

The prevalence of depression observed in this study reflects a substantial psychological burden among persons with SCI. Elevated depressive symptoms during rehabilitation and community living have been reported in previous studies (Craig et al., 2017). Considerable levels of mild to severe depression have also been documented in other populations (Hatefi et al., 2019) with some studies reporting even higher prevalence rates (Hughes et al., 2001). The comparatively moderate prevalence observed in this study may be influenced by cultural factors affecting self-reporting or the presence of strong family support systems in Bangladesh that provide emotional buffering.

A significant negative relationship was identified between participation and depression. Participants who reported greater participation restrictions and lower satisfaction also demonstrated higher PHQ-9 scores. Participation has been shown to mediate the relationship between physical impairment and psychological well-being (Hughes et al., 2001) and depression has been identified as a significant barrier to achieving higher quality of life (Kemp et al., 2014). Within the ICF framework, participation represents involvement in life situations, and limitations in this domain may negatively influence mental health. The findings of this study therefore indicate that participation is not merely a functional outcome but also a determinant of emotional well-being.

The relationship between participation and depression appears to be bidirectional. Reduced engagement in meaningful roles may contribute to social isolation and diminished self-worth, increasing vulnerability to depressive symptoms. Conversely, depressive symptoms may reduce motivation and activity engagement, further limiting participation. This interaction highlights the importance of addressing both physical and psychological dimensions in long-term rehabilitation planning.

From an Occupational Therapy perspective, the findings emphasize the need for participation-focused and community-based interventions following discharge from rehabilitation services. Routine screening for depressive symptoms using standardized tools such as the PHQ-9 should be incorporated into follow-up care. Vocational rehabilitation, mobility training, environmental modification advocacy, and family-centered interventions may enhance participation outcomes. Occupational therapists should prioritize not only independence in basic activities but also meaningful role engagement and psychosocial well-being.

In conclusion, this study contributes important context-specific evidence regarding participation and depression among persons with SCI living in the community in Bangladesh. While several findings are consistent with international literature, contextual differences underscore the influence of socio-cultural and environmental factors. Guided by the ICF framework, this study demonstrates that participation outcomes are shaped by the interaction of body impairment, activity limitations, environmental barriers, and personal factors. Addressing these interconnected dimensions is essential for improving long-term rehabilitation outcomes and quality of life for persons with SCI in Bangladesh.

CHAPTER VI: CONCLUSION

6.1 Strength and Limitations

6.1.1 Strength

- The data collection from participants and the data entry process was non-biased.
- The researcher could have a wide geographical variation of participants, as it was a telephone survey.
- Data life cycle management was followed to maintain the quality of the data in this study.
- To ensure data validity, all data used in this study destroyed after a certain period.
- This study is among the first in Bangladesh to simultaneously assess daily life participation and depression among persons with SCI after rehabilitation using the USER-P scale, thereby contributing new and valuable evidence to the field of SCI rehabilitation research.
- This study's findings assist rehabilitation health professionals in creating a comprehensive rehabilitation service plan for patients with spinal cord injury.

6.1.2 Limitations

- There are some limitations of the study. They are,
- There were multiple invalid phone numbers in the database, which restricted reaching the overall population.
- Telephone interviews limited direct observation, relying fully on self-reported information.

- Cross-sectional design cannot determine causality, only find out associations.
- The sample size (n = 126) may limit generalizability and subgroup comparisons.

6.2 Practice Implication

6.2.1 Recommendations for Future Practice

- May strengthen community-based rehabilitation (CBR) follow-up services for persons with SCI to improve participation in daily activities after discharge.
- Can improve accessibility and remove environmental barriers within communities. Local authorities and NGOs can give support for wheelchair-friendly roads, transportation options and accessible public facilities to promote greater participation.
- May increase public awareness programs to reduce stigma related to disability and mental health. Community education can enhance social acceptance and encourage SCI individuals to take part in social and cultural activities.
- Can educate families/caregivers on supporting ADL performance, participation in social roles and reducing activity restrictions at home and community settings.
- Can encourage policymakers to develop supportive national guidelines that improve access to rehabilitation, financial support, disability rights and inclusive participation opportunities.

6.2.2 Recommendation for Further Research

Some research recommendations are as follows:

- Use longitudinal research designs to observe changes in participation and depression over time, particularly during the transition from rehabilitation to long-term community living.
- Use mixed-methods or qualitative studies to better understand personal experiences, environmental barriers, stigma, and daily life challenges of people with SCI in Bangladesh.
- Conduct studies with larger and more diverse sample sizes to enhance generalizability
- Assess caregiver-related factors, including caregiver burden, knowledge, and support, to determine how they influence the participation and mental health of persons with SCI.

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CHAPTER VII: APPENDICES

Appendix A: Ethical Approval and Permission Letter

Ethical Approval Letter from IRB



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

Ref: CRP-BHPI/IRB/07/2025/1120

Date: 21.07.2025

To
 Md. Anamul Haque
 4th Year, B.Sc. in Occupational Therapy
 Session: 2020-21, Student ID: 122200421
 BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Subject: Approval of the thesis proposal Evaluation of Daily Life Participation among Persons with Spinal Cord Injury after Rehabilitation: A Cross-Sectional Study by ethics committee.

Dear Md. Anamul Haque,
 Congratulations.

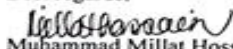
The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application to conduct the above mentioned dissertation, with yourself, as the principal investigator and Md. Habibur Rahman, Assistant Professor and Course Coordinator, MSc in OT, Department of Occupational Therapy, Bangladesh Health Professions Institute (BHPI), CRP as thesis supervisor. The Following documents have been reviewed and approved:

SL No.	Name of the Documents
1	Research Proposal
2	Utrecht Scale for Evaluation of Rehabilitation-Participation (USER-Participation)
3	Information sheet & consent form

The purpose of the study is to determine to assess daily life participation among person with SCI after rehabilitation. The study involves use of the Utrecht Scale for Evaluation of Rehabilitation-Participation (USER-Participation) to evaluate daily life participation after rehabilitation that may take 20 to 25 minutes to fill in the questionnaire and there is no likelihood of any harm to the participants. There is no benefit 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 8:30 AM on 17 June, 2025 at BHPI (50th IRB Meeting).

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

Best regards,


 Muhammad Millat Hossain
 Associate Professor, Project and Course Coordinator, MRS
 Member Secretary, Institutional Review Board (IRB)
 BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Permission letter from CBR Department of CRP

Date: 12/08/2025

To

Head of Rehabilitation wing

Centre for the Rehabilitation of the Paralyzed (CRP)

Chapain, Savar, Dhaka-1343

Through: Research & Evaluation Department

Subject: Application for access to discharged patient data from the CBR Department

Sir,

With due respect I would like to draw your kind attention that I am a student of 4th Year B.Sc. in Occupational Therapy at Bangladesh Health Professions Institute (BHPI) which is an academic institute of Centre for the Rehabilitation of the Paralyzed (CRP), affiliated to Faculty of Medicine, University of Dhaka. According to my course curriculum, I have to conduct research, and my research title is "Evaluation of Daily Life Participation among Person with Spinal Cord Injury after Rehabilitation: A Cross-sectional Study" with myself & Md. Habibur Rahman as my thesis supervisor. The purpose of the study is to assess the daily life participation among person with SCI after rehabilitation. To find out the participation level I am using Utrecht Scale for Evaluation of Rehabilitation-Participation (USER-Participation) and The Patient Health Questionnaire (PHQ-9). In order to fulfill the objectives of this study, I need some information such as name, age, address, contact number, date of admission and discharge about the potential participants from SCI-database of CBR Department -CRP, Savar. I assure you that collected information that will be used solely for academic purpose and confidentiality will be maintain in accordance with ethical guideline. I am looking for your kind approval to get details on the initial list of potential participants from 2015 to 2024.

So, I therefore, pray and hope that you would be kind enough to grant me permission to access data for my study and oblige thereby.

Sincerely yours,

Anamul

Md Anamul Haque

4th Year, B.Sc. in Occupational Therapy

Session: 2020-21, Student ID: 122200421

Recommendation from the Head of the Department:

[Signature]
24/10

Prof. Sk. Moniruzzaman

Professor & Head

Department of Occupational Therapy

Bangladesh Health Professions Institute (BHPI)

CRP, Savar, Dhaka-1343

*"Forwarded to
RW Head for
his Approval."*
[Signature]

*Dear
CBR coordinator,
Please assist Anamul for
his study data purpose
[Signature]
18/8/2025*

Attachments: Copy of IRB Approval Letter & questionnaire.

Author Permission Letter

Utrecht Scale for Evaluation of Rehabilitation-Participation Questionnaire

Dear Vera P.M. Schepers,

I hope this message finds you well.

My name is Md. Anamul Haqae, I am currently a final year student in the Bachelor of Science in Occupational Therapy program at Bangladesh Health Professions Institute. It is an academic institute of Centre for the Rehabilitation of Paralyzed (CRP), in Bangladesh. As part of my undergraduate research project, I am conducting a study focused on individuals with spinal cord injury (SCI).

I came across your Utrecht Scale for Evaluation of Rehabilitation-Participation (USER-Participation) and found it to be highly relevant and appropriate for the objectives of my study. I am writing to respectfully request your permission to use this scale in my research. Please be assured that it will be used solely for academic purposes, and proper credit will be given to your work in all related documents and publications. If you require any further information regarding my study or if there is a specific process or form I need to complete to obtain your permission, I would be happy to comply.

Thank you very much for your time and consideration. I look forward to your positive response.

Warm regards,

Md. Anamul Haqae

BSc in Occupational Therapy

Bangladesh Health Professions Institute

anamulhaqae28@gmail.com

The Patient Health Questionnaire (PHQ-9)

PHQ and GAD-7 Instructions

P.8/9

WEBSITE

Copies of the PHQ family of measures, including the GAD-7, are available at the website:

www.phqscreeners.com

Also, translations, a bibliography, an instruction manual, and other information is provided on this website.

QUESTIONS NOT ADDRESSED IN THIS INSTRUCTION DOCUMENT

For further questions, please send an e-mail to questions@phqscreeners.com

QUESTIONS REGARDING DEVELOPMENT, ACKNOWLEDGMENTS AND USE

The PHQ family of measures (see Table 1, page 3), including abbreviated and alternative versions as well as the GAD-7, were developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke and colleagues, with an educational grant from Pfizer Inc.

All of the measures included in Table 1 are in the public domain. No permission is required to reproduce, translate, display or distribute.

Appendix B

Information Sheet, Consent and Withdrawal Consent Form (English Version)

Bangladesh Institute of Health Professions (BHPI)

Department of Occupational Therapy

CRP, Chapain, Savar, Dhaka-1343

Information Sheet

Participants Information Sheet

Research Title: “Evaluation of Daily Life Participation among Person with SCI after Rehabilitation: A Cross Sectional Study”

Name of the researcher: Md Anamul Haque,

4th year, BSc in Occupational Therapy,

Bangladesh Health Professions Institute

Call: 01567883854

Email: anamulot24@gmail.com

Supervisor: Md. Habibur Rahman

Assistant Professor and Course Coordinator, MSc in OT

Department of Occupational Therapy

Bangladesh Health Professions Institute

CRP, Savar, Dhaka-1343, Bangladesh

Email: habiburbhpi@gmail.com

Part-1 Information Sheet:**Introduction:**

I, Md Anamul Haqae, invite you to participate in the research. Before making a decision, it is important to understand the purpose of the research and your role in it. Please take the time to read the given information. Please ask me if you need any help after reading this or if you need more information.

Background and Aim of this Research

I am Md Anamul Haqae, studying for a B.Sc. in Occupational Therapy at Bangladesh Health Professionals Institute (BHPI), which is under the Medicine faculty of Dhaka University, an academic institute of Centre for the Rehabilitation of the Paralysed (CRP). As a part of the B.Sc. course curriculum, I am going to conduct a research activity under the Assistant Professor and Course Coordinator, MSc in Occupational Therapy department, Md. Habibur Rahman. The research topic is “Evaluation of daily life among person with SCI after rehabilitation: A cross sectional study”. The aim of the study is to assess the daily life participation among person with Spinal Cord Injury after rehabilitation and factors which are associated with like depression, types of paralysis, family income after rehabilitation, any other secondary complication at present etc.

What do you do to participate in the study?

I want to evaluate daily living participation and the relation between participation and depression among people with spinal cord injuries after rehabilitation. This includes answering questions about your socio-demographic factor, daily life participation

frequency, restriction and satisfaction and some following problems you bothered in the past 2 weeks. It will take about 25-30 minutes to complete answer all the questions.

Why are you invited to participate?

As the topic of my research is evaluation of daily life participation among people with SCI in the daily living activities, so I invite the people with spinal cord injury living in the community in Bangladesh. However, this study does not include individuals under 18 years of age, those with severe physical illness, and those who do not receive rehabilitation services from CRP.

Will you have to participate?

Participation in the research is completely voluntary. Before participation consent should be taken from participants. After the participants participate, they will be accounted to answer all the questions. Participants will be given a consent withdrawal paper to cancel their participation according to their wish within two weeks after conducting the survey.

What are the possible risks and opportunities of participation?

There is no direct opportunity for this participation that means participants will not get any financial opportunity. Apart from this, there is no negative question in the scale. Therefore, there is no physical or mental risk to participants. Don't worry about your identity, it's request. Patient's name, address will not be included in the data analysis software to reduce the risk of uncover identity.

Confidentialities of Information:

The Researcher will strictly maintain the secrecy of the research. The participant's names will only be cited in the consent paper, while codes will be used in the question paper to maintain confidentiality. Only the related researcher and supervisor can know about it directly. The information paper will be locked in a drawer, and the preservation of electronics will be in Occupational Therapy Department of BHPI and personal laptop of the researcher.

Information about Promotional Result:

The results of this research project will be published and presented through print media, electronic/ social media, conferences, and criticism.

Participant's Fees:

There is no stimulus and remuneration for participation in this study.

Source of Funding to Manage Research:

The cost of this research will be spent entirely by the researcher's funds. This study will be done in small areas and no money comes from an external source.

Information about Withdrawal from Participation:

Despite your consent, you can withdraw your participation within one week after giving information without giving any explanation to the researcher. If the information can be used after the cancellation, its permission will be mentioned in the participant's withdrawal letter (application only volunteer withdrawal).

If you have any questions, you can contact at the given address.

If you have any questions about the research, you can ask me now or latter. If you wish to ask a question later, you may contact any of the following: Md Anamul Haque, B.Sc. in Occupational Therapy, Bangladesh Health Professions Institute (BHPI), Session: 2020-2021, E-mail: anamulot24@gmail.com, cell No: 01567883854 for further information contact with my Supervisor Md. Habibur Rahman, Assistant Professor and Course Coordinator MSc in OT, Department of Occupational Therapy, E-mail: habiburbhpi@gmail.com, Cell No: 01670896325, BHPI, CRP, Chapain, Savar, Dhaka.

Participant's Withdrawal Form

(Applicable only for voluntary withdrawal)

Reason for withdrawal:

.....

.....

.....

.....

Whether permission to previous information is used?

Yes/No

Participant's Name:

Consent Form

(Please read out to the participant)

Assalamualaikum. I am Md Anamul Haqae, 4th year BSc in Occupational Therapy student, session: 2020-2021, Bangladesh Health Professions Institute, Medicine Faculty, University of Dhaka. To fulfill my BSc course, I have to do a research project. My research title is “Evaluation of daily life participation among person with SCI: A Cross Sectional Study”. Study Aim is to assess the daily life participation among person with Spinal Cord Injury after rehabilitation and factors which are associated with it. Data will be gathered over the phone call. This will take approximately 25-30 minutes.

I am committed that the study will not harmful or risky for you and all information will be confidential and in the event of any report or publication.

If you have any question about this study you can contact with the student researcher Md Anamul haqae or Supervisor Md, Habibur Rahman (Assistant Professor and Course Coordinator MSc in OT, Department of Occupational Therapy, BHPI, CRP, Chapain, Dhaka-1343).

Have you any question before provide information?

Have you any question before provide information?

Yes ☐ No ☐

Am I get your permission for taking interview?

Yes ☐ No ☐

Signature & Date of Participant

Mobile No of Participant

Signature & date of Researcher

.....

.....

.....

Information Sheet, Consent and Withdrawal Consent Form (Bangla Version)

Information Sheet(Bangla)

বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউট (বিএইচপিআই)

অশুপেশনাল থেরাপি বিভাগ

সিআরপি, চাপন, সাভার, ঢাকা-১৩৪৩

গবেষণার শিরোনাম: মেরুদণ্ডে আঘাতপ্রাপ্ত ব্যক্তিদের দৈনন্দিন জীবনের মূল্যায়ন: এ ক্রস-সেকশনাল স্টাডি

গবেষক: মোঃ এনামুল হক, ৪র্থ বর্ষ, বিএসসি ইন অশুপেশনাল থেরাপি, অশুপেশনাল থেরাপি বিভাগ, বিএইচপিআই, সেশন: ২০২০-২০২১

তত্ত্বাবধায়ক: মোঃ হাবিবুর রহমান, সহকারী অধ্যাপক এবং কোর্স কো-অরডিনেটর এম এস সি ইন অশুপেশনাল থেরাপি বিভাগ, বিএইচপিআই, সিআরপি, চাপাইন, সাভার, ঢাকা-১৩৪৩

ইমেইল: habiburbhpi@gmail.com

পর্ব- ১ তথ্যপত্র

ভূমিকা

আমি মোঃ এনামুল হক, আপনাকে আমার গবেষণায় অংশগ্রহণের জন্য আমন্ত্রণ জানাতে চাই। গবেষণায় অংশগ্রহণের আগে আপনাকে এর উদ্দেশ্য এবং এতে আপনার ভূমিকা সম্পর্কে বুঝতে হবে। দয়া কও নিচের তথ্যগুলো মনোযোগসহকাতে পড়ুন। পড়ার পড়ে কোনো প্রশ্ন থাকলে বা অতিরিক্ত তথ্য প্রয়োজন হলে আমাকে জিজ্ঞাসা করতে পারেন।

গবেষণার প্রেক্ষাপট ও উদ্দেশ্য

আমি : মোঃ এনামুল হক, বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউটে (বিএইচপিআই) অশুপেশনাল থেরাপিতে বিএসসি অধ্যয়ন করছি, যা ঢাকা বিশ্ববিদ্যালয়ের মেডিসিন অনুষদেও অধীনে পরিচালিত এবং

এটি প্যারালাইসড ব্যক্তিদের পুনর্বাসন কেন্দ্র (সিআরপি)-এর একটি একাডেমিক প্রতিষ্ঠান। আমার একাডেমিক কোর্সেও অংশ হিসেবে আমি এশটি গবেষণা পরিচালনা করছি। গবেষণার শিরোনাম হলো “মেরুদণ্ডে আঘাতপ্রাপ্ত ব্যক্তিদের দৈনন্দিন জীবনের মূল্যায়ন: এ ক্রস-সেকশোনাল স্টাডি”।

এই গবেষণার উদ্দেশ্য হলো মেরুদণ্ডে আঘাতপ্রাপ্ত (SCI) ব্যক্তিদের কর্মজীবনে সম্পৃক্ততার স্তর এবং তা তাদের দৈনন্দিন জীবনের সীমাবদ্ধতা, সন্তুষ্টির ও মানসিকভাবে তাদের উপর কী ধরনের প্রভাব ফেলে তা নির্ধারণ করা। গবেষণাটি তত্ত্বাবধায়ক: মোঃ মোঃ হাবিবুর রহমান, সহকারী অধ্যাপক এবং কোর্স কো-অরডিনেটর এম এস সি ইন অশুপেশনাল থেরাপি বিভাগ, বিএইচপিআই, সিআরপি, সাভার, ঢাকা-১৩৪৩।

গবেষণায় কীভাবে অংশগ্রহণ করবেন?

আমি জানতে চাই, মেরুদণ্ডে আঘাতপ্রাপ্ত ব্যক্তির কীভাবে কাজের সঙ্গে যুক্ত আছেন। এর মধ্যে বেতনভুক্ত কাজ, স্বেচ্ছাসেবামূলক কাজ, পড়াশোনা, দৈনন্দিন কাজকর্মে অংশগ্রহণ এবং এসবের প্রতি তাদের সন্তুষ্টি কেমন এবং বিগত ২ সপ্তাহে কোন সমসার কারণে কতটা বিরক্ত বোধ করেছেন -এই বিষয়গুলো নিয়ে কিছু প্রশ্ন থাকবে। প্রশ্নগুলোর উত্তর দিতে প্রায় ২৫ থেকে ৩০ মিনিট সময় লাগবে, এবং অংশগ্রহণকারীদের সকল প্রশ্নের উত্তর দেওয়া প্রয়োজন।

আপনাকে কেন অংশগ্রহণের জন্য আমন্ত্রণ জানানো হয়েছে?

আমার গবেষণার বিষয় হলো -বাংলাদেশে কমিউনিটিতে বসবাসরত মেরুদণ্ডে আঘাতপ্রাপ্ত ব্যক্তিদের পেশাগত সময় ব্যবহারের ধরন। তাই আমি বাংলাদেশের কমিউনিটিতে বসবাসরত মেরুদণ্ডে আঘাতপ্রাপ্ত ব্যক্তিদের এই গবেষণায় অংশগ্রহণের জন্য আমন্ত্রণ জানাচ্ছি।

আপনাকে কি অংশগ্রহণ করতেই হবে?

এই গবেষণায় অংশগ্রহণ সম্পূর্ণ স্বেচ্ছামূলক। অংশগ্রহণের আগে অংশগ্রহণকারীদের সম্মতি নেওয়া হবে। একবার কেউ অংশগ্রহণ করলে, তাকে সকল প্রশ্নের উত্তর দিতে হবে। তবে, অংশগ্রহণকারীদের ইচ্ছা অনুযায়ী তারা জরিপের দুই সপ্তাহের মধ্যে অংশগ্রহণ বাতিল করতে পারবেন। এ জন্য তাদের একটি সম্মতি প্রত্যাহারপত্র দেওয়া হবে।

অংশগ্রহণে কী ধরনের ঝুঁকি ও সুযোগ রয়েছে?

এই গবেষণায় অংশগ্রহণের মাধ্যমে অংশগ্রহণকারীরা কোনো আর্থিক সুযোগ-সুবিধা পাবেন না। এছাড়াও, প্রশ্নপত্রে কোনো নেতিবাচক বা সংবেদনশীল প্রশ্ন নেই, তাই এতে অংশগ্রহণকারীদের শারীরিক বা মানসিক কোনো ঝুঁকি নেই। আপনার অংশগ্রহণ আমাদেরকে কমিউনিটিতে বসবাসরত মেরুদণ্ডে আঘাতপ্রাপ্ত ব্যক্তিদের কর্মসম্পৃক্ততা সম্পর্কে ভালোভাবে বুঝতে সাহায্য করবে, যা ভবিষ্যতে অন্যদের জন্য উন্নয়নে অবদান রাখতে পারে।

আপনার অংশগ্রহণ কি গোপন রাখা হবে?

গবেষক এই গবেষণার গোপনীয়তা কঠোরভাবে রক্ষা করবেন। অংশগ্রহণকারীদের নাম শুধুমাত্র সম্মতিপত্রে উল্লেখ থাকবে, আর প্রশ্নপত্রে একটি কোড ব্যবহার করা হবে যাতে ব্যক্তিগত তথ্য গোপন থাকে। শুধুমাত্র সংশ্লিষ্ট গবেষক এবং সুপারভাইজার এই তথ্য সম্পর্কে সরাসরি জানতে পারবেন। তথ্যপত্র একটি নিরাপদ ড্রয়ারে সংরক্ষণ করা হবে, এবং ইলেকট্রনিক ডেটা বিএইচপিআই-এর অকুপেশনাল থেরাপি বিভাগ ও গবেষকের ব্যক্তিগত ল্যাপটপে সংরক্ষিত থাকবে।

যেকোনো প্রশ্নের জন্য যোগাযোগ করুন:

গবেষক: মোঃ এনামুল হক, বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউটে (বিএইচপিআই), বিএসসি ইন অশুপেশনাল থেরাপি সেশন: ২০২০-২১ সিআরপি, সাভার, ঢাকা-১৩৪৩,

ইমেইল: anamulot24@gmail.com যোগাযোগ: ০১৫৬৭৮৮৩৮৫৪

তত্ত্বাবধায়ক: মোঃ হাবিবুর রহমান সহকারী অধ্যাপক, অশুপেশনাল থেরাপি বিভাগ সিআরপি, সাভার, ঢাকা-১৩৪৩, ইমেইল: habiburbhpi@gmail.com, যোগাযোগ: ০১৬৭০৮৯৬৩২৫

Withdrawal of Consent Form (Bangla)

আমি,----- (অংশগ্রহণকারী), নিশ্চিত করছি যে আমি এই গবেষণা থেকে আমার সকল তথ্য প্রত্যাহার করতে ইচ্ছুক। এই অনুরোধটি তথ্য বিশ্লেষণ সম্পন্ন হওয়ার আগে করা হয়েছে এবং আমি নিশ্চিত করছি যে আমার কোনো তথ্য গবেষণার কোনো অংশে ব্যবহার বা অন্তর্ভুক্ত করা হবে না। অনুগ্রহ করে নিশ্চিত করুন যে আমার অংশগ্রহণ সম্পর্কিত সকল রেকর্ড নিরাপদভাবে অপসারণ করা হয়েছে এবং আমার সিদ্ধান্তকে সম্পূর্ণভাবে সম্মান করা হয়েছে। আমি এই বিষয়ে আপনার সহানুভূতি ও সহযোগিতার জন্য কৃতজ্ঞ।

অংশগ্রহণকারীর নাম: -----

অংশগ্রহণকারীর স্বাক্ষর/অঙ্গুলির ছাপ: -----

তারিখ: -----

Consent Form (Bangla)

আসসালামু আলাইকুম। আমি মোঃ এনামুল হক, ঢাকা বিশ্ববিদ্যালয়ে চিকিৎসা অনুষদের অধীনে বাংলাদেশ হেলথ প্রফেশনস ইন্সটিটিউটে বি.এস.সি ইন অকুপেশনাল থেরাপি বিভাগের ৪র্থ বর্ষের ছাত্র হিসেবে (২০২০-২০২১) সেশনে অধ্যয়নরত আছি। আমার বি.এস.সি ডিগ্রী সম্পন্ন করতে, আমাকে একটি গবেষণা প্রকল্প পরিচালনা করতে হবে এবং এটি আমার অধ্যয়নের একটি অংশ। আমার গবেষণার শিরোনাম হলো "পুনর্বাসন-পরবর্তী মেরুদণ্ডে আঘাতপ্রাপ্ত ব্যক্তিদের দৈনন্দিন জীবনে অংশগ্রহণের মাত্রা: একটি ক্রস-সেকশনাল স্টাডি"। আমার গবেষণার লক্ষ্য হলো - পুনর্বাসন কার্যক্রম শেষ করার পর মেরুদণ্ডে আঘাতপ্রাপ্ত ব্যক্তিদের দৈনন্দিন জীবনের অংশগ্রহণের মাত্রা মূল্যায়ন করা। আমার গবেষণার প্রকল্পটি পূরণ করতে, ডেটা সংগ্রহ করার জন্য আমার আপনার কাছ থেকে কিছু তথ্য দরকার। সুতরাং, আপনি এই গবেষণার একজন সম্মানিত অংশগ্রহণকারী হতে পারেন। ফোনে কথা বলার মাধ্যমে তথ্যগুলো সংগ্রহ করা হবে এবং কথোপকথনের সময় হবে ২৫-৩০ মিনিট।

আমি আপনাকে জানাতে চাই যে এটি একটি সম্পূর্ণরূপে একাডেমিক অধ্যয়ন এবং অন্য কোন উদ্দেশ্যে ব্যবহার করা হবে না। আমি আশ্বাস দিচ্ছি যে সমস্ত তথ্য গোপন রাখা হবে। আপনার অংশগ্রহণ স্বৈচ্ছায় হবে। ডেটা সংগ্রহের এক সপ্তাহের মধ্যে যে কোন সময় আপনার সম্মতি প্রত্যাহার করার অধিকার থাকতে পারে। তবে ডেটা সংগ্রহের এক সপ্তাহ পরে প্রত্যাহার করতে পারবেন না।

এই গবেষণা সম্পর্কে আপনার কোন প্রশ্ন থাকলে, আপনি গবেষক মোঃ এনামুল হক অথবা সুপারভাইজার মোঃ হাবিবুর রহমান (সহকারী অধ্যাপক এবং কোর্স সমন্বয়কারী, এমএসসি ইন অকুপেশনাল থেরাপি, অকুপেশনাল থেরাপি বিভাগ, বিএইচপিআই, সিআরপি-চাপাইন, সাভার, ঢাকা-১৩৪৩) এর সাথে যোগাযোগ করতে পারেন।

তথ্য প্রদান শুরু করার আগে আপনার কোন প্রশ্ন আছে?

হ্যাঁ ☐ না ☐

তাহলে, ইন্টারভিউ নেওয়ার অন্য আমি কি আপনার সম্মতি পেতে পারি?

হ্যাঁ ☐ না ☐

অংশগ্রহণকারীর স্বাক্ষর এবং তারিখঃ

অংশগ্রহণকারীর মোবাইল নং

তথ্য সংগ্রহের স্বাক্ষর এবং তারিখঃ

Appendix C: Questionnaire

Section-1: Socio-demographic part

SL	Questions and filters	Response	Code
1.	What is your gender?	Male (1) Female (2)	
2.	How old are you (in years)?	_____ Years	
3.	How many members are there in your family?	_____ People	
4.	In which type of family you live?	Joint family Single family Staying alone	1 2 3
5.	What was your occupation before injury?	Self-employed (Business, Shop) Day labor Agriculture Govt. job Private job Student Home making/Housewife Unemployment Others (_____)	1 2 3 4 5 6 7 8 9
6.	What is your Occupation after rehabilitation?	Self-employed (Business, Shop) Agriculture Govt. job Private job Student Home making/Housewife Unemployment Others (_____)	1 2 3 4 5 6 7 8
7.	What is your family income before injury (BDT per month)?	_____Taka	
8.	What is your family income after injury (BDT per month)?	_____Taka	
9.	Rehabilitation time (in month)	_____Month	
10.	Staying community after discharge (in month)	_____Month	
11.	What is your educational level?	Illiterate Primary Education Secondary Education Higher Secondary	1 2 3 4

		Bachelor or above	5
12.	What is your Marital status?	Married Unmarried/single Separated/divorced widowed	1 2 3 4
13.	In which type of environment/area you live?	Rural Urban Semi-urban	1 2 3
14.	What is your mobility status?	Walking To walk depending on something or someone else Wheelchair dependent	1 2 3
15.	After rehabilitation from CRP, did you take any vocational training for income generation?	Yes No	1 2
14.	What is the types of your paralysis?	Paraplegia Tetraplegia	1 2
15.	What is the severity of your injury?	Complete Incomplete	1 2
16.	What is your American Spinal Injury Association Impairment Scale (AIS) classification?	ASIA A ASIA B ASIA C ASIA D ASIA E	1 2 3 4 5
17.	What is the causes of your injury?	Fall from high Road traffic accident (RTA) Carrying load on head Struck by object Other traumatic (_____) Tuberculous spondylitis (TB) spine Spinal tumor Other non-traumatic (_____)	1 2 3 4 5 6 7 8
20.	At present do you have any secondary complications?	No complication Pressure ulcer Pain UTI Respiratory infection Osteoporosis Others (_____)	1 2 3 4 5 6 7

Sociodemographic Information (Bangla Version)

ব্যক্তিগত ও আর্থ-সামাজিক অবস্থাসম্পর্কিত সাধারণ প্রশ্নপত্র

ক্রমিক নং	প্রশ্নাবলী সমূহ	মতামত সমূহ	কোড
১.	আপনার লিঙ্গ কী?	পুরুষ নারী	১ ২
২.	আপনার বয়স কত (বছরে)?	_____ বছর	
৩.	আপনার পরিবারের সদস্য সংখ্যা কত?	_____ জন	
৪.	আপনি কোন ধরনের পরিবারে থাকেন?	যৌথ পরিবার একক পরিবার একা থাকেন	১ ২ ৩
৫.	আঘাতের আগে আপনি কী কাজ করতেন?	নিজস্ব ব্যবসা দিনমজুর কৃষিকাজ সরকারি চাকরি বেসরকারি চাকরি শিক্ষার্থী গৃহিণী বেকার অন্যান্য (_____)	১ ২ ৩ ৪ ৫ ৬ ৭ ৮ ৯
৬.	পুনর্বাসনের পরে এখন কী কাজ করেন?	নিজস্ব ব্যবসা কৃষিকাজ সরকারি চাকরি বেসরকারি চাকরি শিক্ষার্থী গৃহিণী বেকার অন্যান্য (_____)	১ ২ ৩ ৪ ৫ ৬ ৭ ৮
৭.	দুর্ঘটনার আগে আপনার পরিবারের মাসিক আয় কত ছিল (টাকায়)?	_____ টাকা	
৮.	এখন আপনার পরিবারের মাসিক আয় কত (টাকায়)?	_____ টাকা	
৯.	পুনর্বাসনের সময় (মাসে)	_____ মাস	
১০.	পুনর্বাসন সেবা নেওয়ার পর কত মাস বাড়িতে বা সমাজে ছিলেন?	_____ মাস	
১১.	আপনার শিক্ষাগত যোগ্যতা কী?	নিরক্ষর প্রাথমিক শিক্ষা মাধ্যমিক শিক্ষা উচ্চ মাধ্যমিক শিক্ষা স্নাতক বা তার উপরের শিক্ষা	১ ২ ৩ ৪ ৫
১২.	আপনার বৈবাহিক অবস্থা কী?	বিবাহিত অবিবাহিত তালকপ্রাপ্ত স্বামী বা স্ত্রী মৃত	১ ২ ৩ ৪

১৩.	আপনি কোন এলাকায় থাকেন?	গ্রাম শহর আধা-শহর	১ ২ ৩
১৪.	আপনি কীভাবে চলাফেরা করেন?	নিজের পায়ে হাঁটেন কাউকে বা কিছুকে ধরে হাঁটেন হুইলচেয়ারে চলাফেরা করেন	১ ২ ৩
১৫.	আপনি কি পুনর্বাসনের পরে আয় করার জন্য কোনো প্রশিক্ষণ নিয়েছেন?	হ্যাঁ না	১ ২
১৬.	আপনার প্যারালাইসিসের ধরণ কী?	প্যারাপ্লেজিয়া টেম্পোপ্লেজিয়া	১ ২
১৭.	আপনার আঘাত কতটা গুরুতর ছিল?	সম্পূর্ণ প্যারালাইসিস আংশিক প্যারালাইসিস	১ ২
১৮.	আপনার আঘাতের ASIA শ্রেণিবিভাগ কী?	ASIA A ASIA B ASIA C ASIA D ASIA E	১ ২ ৩ ৪ ৫
১৯.	আপনার আঘাতের কারণ কী ছিল?	উঁচু স্থান থেকে পড়ে গিয়ে (ছাদ অথবা গাছ) সড়ক দুর্ঘটনা মাথায় ভার বহন কিছু দ্বারা আঘাতপ্রাপ্ত অন্যান্য আঘাতজনিত কারণ () টিবি স্পাইন স্পাইনাল টিউমার অন্যান্য অ- আঘাতজনিত কারণ ()	১ ২ ৩ ৪ ৫ ৬ ৭ ৮
২০.	বর্তমানে আপনার অন্য কোন জটিলতা রয়েছে?	কোনো সমস্যা নেই প্রেসার আলসার (ঘা) ব্যথা মূত্রনালীর সংক্রমণ শ্বাসপ্রশ্বাস জনিত সমস্যা হাড়ের ক্ষয় অন্যান্য ()	১ ২ ৩ ৪ ৫ ৬ ৭

Section-2 USER-P Questionnaire

Utrecht Scale for Evaluation of Rehabilitation-Participation Questionnaire (English version)

This questionnaire is about your daily life and consists of four parts: (1A) how much time you spend working, studying and attending to household duties, (1B) how often you undertake certain activities, (2) whether you experience any limitations in your daily life and (3) how satisfied you are with your daily life.

Please answer all the questions by circling the answer that best describes your situation.

1A. How many hours per week do you usually spend on the following activities?

Explanation:

- *This is about a normal week, and holidays do not count.*
- *Please do not include any travelling time.*

Please note: This is the number of hours per week

Paid work

All forms of paid work, including work for your own business

None at all	1-8 hours	9-16 hours	17-24 hours	25-35 hours	36 hours or more
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Unpaid work

Volunteering for a society, community centre, at school or any other voluntary activities

None at all	1-8 hours	9-16 hours	17-24 hours	25-35 hours	36 hours or more
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Education

Only training courses taken in the context of your paid work or to help you obtain paid work

None at all	1-8 hours	9-16 hours	17-24 hours	25-35 hours	36 hours or more
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Household duties

Such as: cooking, cleaning, shopping, caring for or supervising children, DIY, gardening etc

None at all	1-8 hours	9-16 hours	17-24 hours	25-35 hours	36 hours or more
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1B. How often have you undertaken the following activities in the last 4 weeks?

Explanation:

- Example: if you have taken a walk twice a week, this is equivalent to eight times in four weeks and you should therefore choose the category "6-10 times".
- Do not include any activity in more than one category.
- Activities for work, school or household duties should not be included here

Please note: this is about the number of times in the last four weeks

Sports or other physical exercise

Such as: tennis, cycling, gym, long walks

Please note: do not include e.g. cycling to work

Never	1-2 times	3-5 times	6-10 times	11-18 times	19 times or more
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Going out

Such as: eating out, visiting a cafe, cinema, concert, alone or together with others

Never	1-2 times	3-5 times	6-10 times	11-18 times	19 times or more
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Day trips and other outdoor activities

Such as: shopping, attending events, going to the beach, church or mosque

Never	1-2 times	3-5 times	6-10 times	11-18 times	19 times or more
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Leisure activities at home

Such as: crafts, needlework, reading, puzzles, playing computer games

Never	1-2 times	3-5 times	6-10 times	11-18 times	19 times or more
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Going to visit family or friends

Never	1-2 times	3-5 times	6-10 times	11-18 times	19 times or more
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Family or friends coming to visit at your home

Never	1-2 times	3-5 times	6-10 times	11-18 times	19 times or more
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Contacting others by phone or computer

Such as: talking on the phone, texting, e-mailing

Never	1-2 times	3-5 times	6-10 times	11-18 times	19 times or more
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2. Does your illness or condition currently limit your daily life?

Explanation:

NA (not applicable): You do not take part in this activity, but this is not because of your condition.

Not possible: You cannot not take part in this activity, and this is because of your condition.

With assistance: You perform this activity partly by yourself, but need assistance because of your condition. Such as: a home help to perform heavy household duties, your family helps by taking you to places etc. This includes paid help and unpaid help from family or friends.

Difficulty: If your condition means this activity is considerably more difficult for you.

Such as: it takes much more time, you need to rest halfway through an activity, you now do it less frequently, for a shorter time or in a less taxing way.

Paid work, unpaid work or education	NA	Not possible	With assistance	With difficulty	Without difficulty
Household duties <i>Such as: cooking, cleaning, shopping, taking care of or supervising children, DIY, gardening</i>	NA	Not possible	With assistance	With difficulty	Without difficulty
Outdoor mobility <i>Such as: driving a car, travelling by bus or train, cycling to work or going shopping, etc</i>	NA	Not possible	With assistance	With difficulty	Without difficulty
Sports or other physical exercise <i>Such as: tennis, cycling, gym, long walks</i>	NA	Not possible	With assistance	With difficulty	Without difficulty
Going out <i>Such as: eating out, visiting a cafe, the cinema, a concert, alone or with others</i>	NA	Not possible	With assistance	With difficulty	Without difficulty
Day trips and other outdoor activities <i>Such as: shopping, attending events, going to the beach, church or mosque</i>	NA	Not possible	With assistance	With difficulty	Without difficulty
Leisure activities at home <i>Such as: crafts, needlework, reading, puzzles, playing computer games</i>	NA	Not possible	With assistance	With difficulty	Without difficulty
Your relationship with your partner <i>Such as: communication, sexuality</i>	NA	Not possible	With assistance	With difficulty	Without difficulty
Going to visit family or friends	NA	Not possible	With assistance	With difficulty	Without difficulty
Family or friends coming to visit at your home	NA	Not possible	With assistance	With difficulty	Without difficulty
Contacting others by phone or computer <i>Such as: talking on the phone, texting, e-mailing</i>	NA	Not possible	With assistance	With difficulty	Without difficulty

3. How satisfied are you with your current daily life?

Explanation:

- NA (not applicable): only enter this if you are unable to work or study or do not have partner.

Paid work, unpaid work or education

Please note: complete for the most important activity

Very dissatisfied Dissatisfied Neutral Satisfied Very satisfied NA

Household duties

Such as: cooking, cleaning, shopping, taking care of or supervising children, DIY, gardening

Very dissatisfied Dissatisfied Neutral Satisfied Very satisfied

Outdoor mobility

Such as: driving a car, travelling by bus or train, cycling to work or going shopping, etc

Very dissatisfied Dissatisfied Neutral Satisfied Very satisfied

Sports or other physical exercise

Such as: tennis, cycling, gym, long walks

Very dissatisfied Dissatisfied Neutral Satisfied Very satisfied

Going out

Such as: eating out, visiting a cafe, the cinema, a concert, alone or with others

Very dissatisfied Dissatisfied Neutral Satisfied Very satisfied

Day trips and other outdoor activities

Such as: shopping, attending events, going to the beach, church or mosque

Very dissatisfied Dissatisfied Neutral Satisfied Very satisfied

Leisure activities at home

Such as: crafts, reading, computer

Very dissatisfied Dissatisfied Neutral Satisfied Very satisfied

Your relationship with your partner

Very dissatisfied Dissatisfied Neutral Satisfied Very satisfied NA

Your relationship with your family

Very dissatisfied Dissatisfied Neutral Satisfied Very satisfied

Your contacts with friends and acquaintances

Very dissatisfied Dissatisfied Neutral Satisfied Very satisfied

Utrecht Scale for Evaluation of Rehabilitation-Participation Questionnaire (Bangla version)

এই প্রশ্নপত্রটি আপনার দৈনন্দিন জীবন সম্পর্কে এবং চারটি অংশ নিয়ে গঠিত: (১ ক) আপনি কাজ, পড়াশোনা এবং গৃহস্থালির কাজে কতটা সময় ব্যয় করেন, (১ খ) আপনি নির্দিষ্ট কিছু কাজ কতবার করে থাকেন, (২) আপনার দৈনন্দিন জীবনে কোন সীমাবদ্ধতা আছে কিনা এবং (৩) আপনার দৈনন্দিন জীবন নিয়ে আপনি কতটা সন্তুষ্ট।

আপনার পরিস্থিতিতে সবচেয়ে ভালোভাবে বর্ণনা করে এমন উত্তরটি গোল (○) করে সমস্ত প্রশ্নের উত্তর দিন।

১ ক. আপনি সাধারণত নিচের কাজগুলোতে সপ্তাহে কত ঘণ্টা ব্যয় করেন?

ব্যাখ্যা:

- এটি একটি সাধারণ সপ্তাহের কার্যকলাপ বোঝাতে বলা হয়েছে; ছুটির দিন এখানে অন্তর্ভুক্ত হবে না।
- অনুগ্রহ করে এখানে কোন ভ্রমণের সময় অন্তর্ভুক্ত করবেন না।

অনুগ্রহ করে মনে রাখবেন: এটি প্রতি সপ্তাহের মোট ঘণ্টার সংখ্যা।

বেতনভুক্ত কাজ সকল ধরনের বেতনভুক্ত কাজ, যার মধ্যে আপনার নিজের ব্যবসার জন্য কাজও অন্তর্ভুক্ত থাকবে	একদমই না (০)	১-৮ ঘণ্টা (১)	৯-১৬ ঘণ্টা (২)	১৭-২৪ ঘণ্টা (৩)	২৫-৩৫ ঘণ্টা (৪)	৩৬ ঘণ্টা বা বেশি (৫)
বেতনহীন কাজ সমাজ, কমিউনিটি সেন্টার, স্কুল বা অন্য কোনও স্বৈচ্ছাসেবী কার্যকলাপের জন্য স্বৈচ্ছাসেবক হিসেবে কাজ করা	০	১	২	৩	৪	৫
শিক্ষা শুধুমাত্র আপনার বেতনভুক্ত কাজের প্রেক্ষাপটে অথবা বেতনভুক্ত কাজ পেতে সাহায্য করার জন্য নেওয়া প্রশিক্ষণ কোর্সগুলি।	০	১	২	৩	৪	৫
গৃহস্থালির কাজ রান্না করা, ধোয়া মোছা করা, বাজার করা, শিশু পরিচর্যা করা, নিজে নিজে করা কাজ, বাগান করা, ইত্যাদি	০	১	২	৩	৪	৫

১ খ. গত ৪ সপ্তাহে আপনি নিচের কার্যক্রমগুলো কতবার করেছেন?
ব্যাখ্যা:

- **উদাহরণস্বরূপ:** আপনি যদি প্রতি সপ্তাহে দুইবার হাঁটেন, তাহলে ৪ সপ্তাহে মোট ৮ বার হাঁটলেন — এক্ষেত্রে "৬-১০ বার" এই ক্যাটাগরিটি নির্বাচন করবেন।
- কোনো একটি কাজকে একাধিক ক্যাটাগরিতে গণনা করবেন না।
- চাকরি, পড়ালেখা বা গৃহস্থলির কোনো কাজ করলে এখানে তা গণনা করা যাবে না।

অনুগ্রহ করে মনে রাখবেন: এখানে গত ৪ সপ্তাহে কাজটি মোট কতবার করেছেন, সেটির সংখ্যাটি বোঝানো হয়েছে।

ক্রীড়া বা ব্যায়াম যেমন: টেনিস খেলা, হুইলচেয়ারে চালনা, জিমে যাওয়া, দীর্ঘ হাঁটা। দয়া করে মনে রাখবেন: অফিস বা অন্য কোথাও যাওয়ার উদ্দেশ্যে করা এসব কাজ এখানে গণনা করবেন না।	কখনো না (০)	১-২ বার (১)	৩-৫ বার (২)	৬-১০ বার (৩)	১১-১৮ বার (৪)	১৯ বা তার বেশি (৫)
বাইরে যাওয়া বাহিরে খাওয়া, ক্যাফে যাওয়া, সিনেমা দেখা, কনসার্টে যাওয়া, একা বা অন্যদের সাথে একসাথে	০	১	২	৩	৪	৫
দিনব্যাপী ভ্রমণ ও বাইরের অন্যান্য কার্যক্রম যেমন: শপিং, অনুষ্ঠানে অংশগ্রহণ, সমুদ্র পাড়ে যাওয়া, মসজিদে যাওয়া	০	১	২	৩	৪	৫
অবসর সময়ে বাসার বিনোদনমূলক কাজে অংশগ্রহণ যেমন: কারুশিল্প করা, সুই-সুতার কাজ করা, বই পড়া, ধাঁধার সমাধান করা, কম্পিউটার গেম খেলা	০	১	২	৩	৪	৫
আত্মীয় বা বন্ধুদের সাথে দেখা করতে যাওয়া	০	১	২	৩	৪	৫
পরিবারের সদস্য বা বন্ধুদের আপনার বাসায় আসা	০	১	২	৩	৪	৫
ফোন/কম্পিউটারযোগে অন্যদের সাথে যোগাযোগ করা যেমন: ফোনে কথা বলা, মেসেজ করা, ই-মেইল করা	০	১	২	৩	৪	৫

২. আপনার অসুস্থতা বা বর্তমান অবস্থা কি আপনার নিচের কার্যক্রমে কোন বাঁধা বা সীমাবদ্ধতা তৈরি করছে?

ব্যাখ্যা:

প্রয়োজ্য নয়: আপনি এই কাজটি করেন না, কিন্তু এর কারণ আপনার শারীরিক অবস্থা নয়।

অসম্ভব: আপনি আপনার বর্তমান শারীরিক অবস্থার কারণে কাজটি করতে পারেন না।

সহায়তা নিষে: আপনি এই কাজটি আংশিকভাবে নিজে করতে পারেন, কিন্তু আপনার শারীরিক অবস্থার কারণে অন্যের সাহায্যের প্রয়োজন হয়। যেমন: ভারী বাসার কাজ করতে একজন

কাজের লোক নিয়ে আসা, কোথাও যাওয়ার জন্য পরিবারের কারো সাহায্য নেওয়া ইত্যাদি। এখানে বেতনভিত্তিক সহায়তা এবং পরিবারের সদস্য বা বন্ধুদের বিনা বেতনে সহায়তাও অন্তর্ভুক্ত।

কষ্টসাধ্য: আপনার শারীরিক অবস্থার কারণে যদি কোনো কাজ করা আপনার জন্য অনেক বেশি কষ্টকর হয়। যেমন: ওই কাজটি করতে আপনার সময় বেশি লাগে, মাঝপথে বিশ্রাম নিতে হয়, কাজটি আগের তুলনায় কম করেন বা কম সময় করেন।

বেতনভুক্ত কাজ, বেতনহীন কাজ, শিক্ষামূলক কার্যক্রম	প্রযোজ্য নয় (√)	অসম্ভব (০)	সহায়তা নিয়ে (১)	কষ্টসাধ্য (২)	সাবলীলভাবে (৩)
গৃহস্থালির কাজ রান্না করা, ধোয়া মোছা করা, বাজার করা, শিশু পরিচর্যা করা, নিজে নিজে করা কাজ, বাগান করা, ইত্যাদি	√	০	১	২	৩
বাহিরে চলাফেরা যেমন: গাড়ি চালানো, বাস বা ট্রেনে ভ্রমণ, হুইলচেয়ারে করে বাইরে যাওয়া বা কেনাকাটা করতে যাওয়া ইত্যাদি	√	০	১	২	৩
ক্রীড়া বা ব্যায়াম যেমন: টেনিস খেলা, হুইলচেয়ারে চালনা, জিমে যাওয়া, দীর্ঘ হাঁটা।	√	০	১	২	৩
বাইরে যাওয়া বাহিরে খাওয়া, ক্যাফে যাওয়া, সিনেমা দেখা, কনসার্টে যাওয়া, একা বা অন্যদের সাথে একসাথে	√	০	১	২	৩
দিনব্যাপী ভ্রমণ ও বাইরের অন্যান্য কার্যক্রম যেমন: শপিং, অনুষ্ঠানে অংশগ্রহণ, সমুদ্র পাড়ে যাওয়া, মসজিদে যাওয়া	√	০	১	২	৩
অবসর সময়ে বাসার বিনোদনমূলক কাজে অংশগ্রহণ যেমন: কারুশিল্প করা, সুই-সুতার কাজ করা, বই পড়া, ধাঁধার সমাধান করা, কম্পিউটার গেম খেলা	√	০	১	২	৩
আপনার জীবনসঙ্গীর সাথে সম্পর্ক যেমন: বোঝাপড়া ও যৌনতা	√	০	১	২	৩
আত্মীয় বা বন্ধুদের সাথে দেখা করা বা দেখা করতে যাওয়া	√	০	১	২	৩
পরিবারের সদস্য বা বন্ধুদের আপনার বাসায় আসা	√	০	১	২	৩
ফোন/কম্পিউটারযোগে অন্যদের সাথে যোগাযোগ করা যেমন: ফোনে কথা বলা, মেসেজ করা, ই-মেইল করা	√	০	১	২	৩

৩. আপনি কতটা সন্তুষ্ট আপনার নিম্নলিখিত জীবনের অংশ নিয়ে?

ব্যাখ্যা: প্রযোজ্য নয়: এই ক্যাটাগরি কেবল তখনই ব্যবহার করুন যদি আপনি বেতনভুক্ত কাজ, বেতনহীন কাজ, শিক্ষামূলক কার্যক্রম করতে অক্ষম হন বা আপনার সঙ্গী না থাকে।

বেতনভুক্ত কাজ, বেতনহীন কাজ, শিক্ষামূলক কার্যক্রম অনুগ্রহ করে মনে রাখবেনঃ উত্তর হবে সবচেয়ে গুরুত্বপূর্ণ কাজটির জন্য	খুব অসন্তুষ্ট (০)	অসন্তুষ্ট (১)	মাঝামাঝি (২)	সন্তুষ্ট (৩)	খুব সন্তুষ্ট (৪)	প্রযোজ্য নয় (√)
গৃহস্থালির কাজ রান্না করা, ধোয়া মোছা করা, বাজার করা, শিশু পরিচর্যা করা, নিজে নিজে করা কাজ, বাগান করা, ইত্যাদি	০	১	২	৩	৪	
বাহিরে চলাফেরা যেমন: গাড়ি চালানো, বাস বা ট্রেনে ভ্রমণ, হুইলচেয়ারে করে বাইরে যাওয়া বা কেনাকাটা করতে যাওয়া ইত্যাদি	০	১	২	৩	৪	
ক্রীড়া বা ব্যায়াম যেমন: টেনিস খেলা, হুইলচেয়ারে চালনা, জিমে যাওয়া, দীর্ঘ হাঁটা।	০	১	২	৩	৪	
বাইরে যাওয়া বাহিরে খাওয়া, ক্যাফে যাওয়া, সিনেমা দেখা, কনসার্টে যাওয়া, একা বা অন্যদের সাথে একসাথে	০	১	২	৩	৪	
দিনব্যাপী ভ্রমণ ও বাইরের অন্যান্য কার্যক্রম যেমন: শপিং, অনুষ্ঠানে অংশগ্রহণ, সমুদ্র পাড়ে যাওয়া, মসজিদে যাওয়া	০	১	২	৩	৪	
অবসর সময়ে বাসার বিনোদনমূলক কাজে অংশগ্রহণ যেমন: কারুশিল্প করা, সুই-সুতার কাজ করা, বই পড়া, খাঁধার সমাধান করা, কম্পিউটার গেম খেলা	০	১	২	৩	৪	
আপনার জীবনসঙ্গীর সাথে সম্পর্ক	০	১	২	৩	৪	√
আপনার পরিবারের সাথে সম্পর্ক	০	১	২	৩	৪	
আপনার বন্ধু ও পরিচিতজনদের সঙ্গে যোগাযোগ	০	১	২	৩	৪	

বিঃদ্রঃ গবেষণার স্বার্থে প্রশ্নপত্রে "সাইকেল" শব্দ পরিবর্তন করে "হুইলচেয়ার" শব্দ ব্যবহার করা হয়েছে।

The Patient Health Questionnaire (PHQ-9) (English Version)

The Patient Health Questionnaire (PHQ-9)

Patient Name _____ Date of Visit _____

Over the past 2 weeks, how often have you been bothered by any of the following problems?	Not At all	Several Days	More Than Half the Days	Nearly Every Day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed or hopeless	0	1	2	3
3. Trouble falling asleep, staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself - or that you're a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or, the opposite - being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

Column Totals _____ + _____ + _____

Add Totals Together _____

10. If you checked off any problems, how difficult have those problems made it for you to
Do your work, take care of things at home, or get along with other people?

☐ Not difficult at all ☐ Somewhat difficult ☐ Very difficult ☐ Extremely difficult

The Patient Health Questionnaire (PHQ-9) (Bangla Version)

The Patient Health Questionnaire (Bangla Version)

গত ২ সপ্তাহে, নিচের যে কোনো সমস্যার কারণে আপনি কতটা বিরক্ত বোধ করেছেন?

আপনার উত্তর চিহ্নিত করার জন্য বক্সে (✓) ব্যবহার করুন।	একদমই না (০)	কয়েকদিন (১)	অধিকেরও বেশি দিন (২)	প্রায় প্রতিদিনই (৩)
১. কাজ করতে অল্প আগ্রহ বা আনন্দ পান	০	১	২	৩
২. মন খারাপ, বিষণ্ণ বা আশাহীন মনে হয় নিজেকে	০	১	২	৩
৩. আপনার ঘুমাতে অসুবিধা হয় বা বেশি ঘুম হয়	০	১	২	৩
৪. ক্লান্ত লাগে বা অল্প শক্তি পান	০	১	২	৩
৫. খাবার খেতে ইচ্ছে করে না বা বেশি খাওয়া হয়	০	১	২	৩
৬. নিজের সম্পর্কে খারাপ লাগা- নিজেকে ব্যর্থ মনে করা বা নিজেকে বা নিজের পরিবারকে হতাশ করছেন বলে মনে করা	০	১	২	৩
৭. কোন কিছুতে মনোযোগ দেওয়ায় সমস্যা হয়, যেমনঃ খবরের কাগজ পড়া বা টেলিভিশন দেখা	০	১	২	৩
৮. এত ধীরে চলাফেরা করেন বা কথা বলেন যে তা অন্যরা লক্ষ্য করতে পারে। অথবা, বিপরীত- খুব বেশি চঞ্চল বা অস্থির থাকা যে আপনি স্বাভাবিকের তুলনায় অনেক বেশি চলাফেরা করেন	০	১	২	৩
৯. আপনার মনে হয় মরে যাওয়া ভালো বা নিজেকে কোনভাবে আঘাত করলে ভালো	০	১	২	৩

কলামের যোগফল _____ + _____ + _____

মোট যোগফল _____

১০. আপনি যদি উপরের যেকোনো সমস্যায় টিক দিয়ে থাকেন, তবে এসব সমস্যা আপনার কাজ করা, বাসার দায়িত্ব পালন বা অন্যদের সঙ্গে মিলেমিশে চলার ক্ষেত্রে কতটা অসুবিধা তৈরি করেছে?

- | | |
|--|--|
| ☐ একদমই অসুবিধা হয়নি | ☐ কিছুটা অসুবিধা হয়েছে |
| ☐ অনেক অসুবিধা হয়েছে | ☐ খুব বেশি অসুবিধা হয়েছে |

Appendix D: Supervision Contact Schedule

Bangladesh Health Professions Institute
Department of Occupational Therapy
4th Year B. Sc in Occupational Therapy
OT 401 Research Project

Thesis Supervisor- Student Contact; face to face or electronic and guidance record

Title of thesis: Evaluation of Daily Life Participation and Depression among Person with Spinal Cord Injury after Rehabilitation.

Name of student: Md Anamul Haque

Name and designation of thesis supervisor: Md. Habibur Rahman, Assistant Professor & Course Coordinator, MSc in OT
Department of Occupational Therapy

Appointment No	Date	Place	Topic of discussion	Duration (Minutes/Hours)	Comments of student	Student's signature	Thesis supervisor signature
1	25.05.25	BHPI Office Building	Title, Aim, Objective, Scale	1 hour	Got a clear concept	Anamul	
2	27.05.25	BHPI Office Building	Proposal Presentation Guideline	1 hour	Got a clear concept	Anamul	
3	01.06.25	BHPI Office Building	Proposal Presentation Feedback	1 hour	Got a clear concept	Anamul	

4	04.06.25	BHPI Building	Discussion about sample size, data collection method	1 hour	Effective discussion	Anamul	
5	07.06.25	BHPI Building	Discussion about sociodemographic questionnaire	2 hours	Effective discussion	Anamul	
6	09.06.25	BHPI Building	Feedback on socio-demographic questionnaire	2 hours	Effective discussion	Anamul	
7	11.06.25	Reddaway Hall	Feedback on Bangla translation of the questionnaire	1 hour	Effective discussion	Anamul	
8	14.06.25	BHPI Building	Guideline on literature review	1 hour	Got a clear idea	Anamul	
9	21.06.25	BHPI Office Building	Feedback on literature review	2 hours	Got a clear idea	Anamul	
10	06.08.25	BHPI Office Building	Guideline on data collection	2 hours	Got a clear idea	Anamul	
11	19.08.25	BHPI Office Building	Discussion about data collection status	2 hours	Effective discussion	Anamul	
12	30.08.25	BHPI Classroom	Discussion about data entry and data analysis	3 hours	Got a clear idea	Anamul	
13	01.09.25	BHPI Classroom	Variables set and data entry guideline	3 hours	Got a clear idea	Anamul	

14	10.11.25	BHPI Classroom	Data entry on SPSS	3 hours	Got a clear idea	Anamul	
15	11.11.25	BHPI Classroom	Descriptive analysis	4 hours	Got a clear concept	Anamul	
16	12.11.25	BHPI Classroom	Feedback on descriptive analysis and result writing	4 hours	Got a clear concept	Anamul	
17	13.11.25	BHPI Classroom	Discussion on inferential statistics	4 hours	Effective discussion	Anamul	
18	16.11.25	BHPI Classroom	Discussion and feedback on overall result writing	3 hours	Got a clear concept	Anamul	
19	23.11.25	BHPI Building	Feedback on 1 st draft	3 hours	Got a clear concept	Anamul	
20							

Note:

1. Appointment number will cover at least a total of 40 hours; applicable only for face to face contact with the supervisors.
2. Students will require submitting this completed record during submission your final thesis.