

Level of Community Re-integration after Rehabilitation  
Services for Patients with Guillain Barre Syndrome:  
A Cross-Sectional Study



By

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*This thesis is submitted in total fulfilment of the requirements for the subject  
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## STATEMENT OF AUTHORSHIP

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## DEDICATION

*Dedicated to my dignified and beloved parents and to all those who participated and contributed their time and knowledge.*

<b>TABLE OF CONTENTS</b>
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## Contents

<b>LIST OF TABLES.....</b>	<b>vii</b>
<b>LIST OF FIGURES.....</b>	<b>viii</b>
<b>LIST OF ABBREVIATION.....</b>	<b>ix</b>
<b>ABSTRACT.....</b>	<b>X</b>
<b>CHAPTER I: INTRODUCTION.....</b>	<b>1</b>
<b>1.1 Background.....</b>	<b>1</b>
<b>1.2 Justification of the study.....</b>	<b>2</b>
<b>1.3 Operational Definition.....</b>	<b>4</b>
<b>1.3.1 Community re-integration.....</b>	<b>4</b>
<b>1.3.2 Rehabilitation service.....</b>	<b>4</b>
<b>1.3.3 Guillain-Barre Syndrome (GBS).....</b>	<b>4</b>
<b>1.4 Research Aim, Objectives, and Questions.....</b>	<b>5</b>
<b>1.4.1 Research Question.....</b>	<b>5</b>
<b>1.4.2 Aim.....</b>	<b>5</b>
<b>1.4.3 Objectives.....</b>	<b>5</b>
<b>CHAPTER II: LITERATURE REVIEW.....</b>	<b>6</b>
<b>2.1 Sociodemographic Characteristics.....</b>	<b>8</b>
<b>2.1.1 Overview of GBS.....</b>	<b>8</b>
<b>2.1.2 Years of rehabilitation.....</b>	<b>9</b>
<b>2.1.3 Complications after Rehabilitation.....</b>	<b>9</b>
<b>2.1.4 Assistive Devices.....</b>	<b>10</b>
<b>2.2 Community reintegration.....</b>	<b>11</b>
<b>2.2.1 Physical Independence.....</b>	<b>11</b>
<b>2.2.2 Cognitive Independence.....</b>	<b>11</b>
<b>2.2.3 Mobility.....</b>	<b>12</b>
<b>2.2.4 Occupation.....</b>	<b>12</b>
<b>2.2.4.1 Daily living activities (ADL &amp; IADLs).....</b>	<b>13</b>
<b>2.2.4.2 Employment.....</b>	<b>14</b>
<b>2.2.5 Social Integration.....</b>	<b>14</b>
<b>2.2.6 Economic Self-sufficiency.....</b>	<b>15</b>
<b>2.3 Key Gaps.....</b>	<b>16</b>

<b>CHAPTER III: RESEARCH METHODOLOGY .....</b>	<b>17</b>
<b>3.1 Research Design.....</b>	<b>17</b>
3.1.1 Method .....	17
3.1.2 Approach .....	17
<b>3.2 Study Setting and Period .....</b>	<b>18</b>
3.2.1 Study setting .....	18
3.2.2 Study Period .....	18
<b>3.3 Study Participants.....</b>	<b>18</b>
3.3.1 Study population.....	18
3.3.2 Sampling Techniques.....	18
3.3.3 Inclusion Criteria .....	19
3.3.4 Exclusion Criteria .....	19
3.3.5 Sample Size .....	19
3.5 Ethical Consideration .....	20
<b>3.6 Data Collection Process .....</b>	<b>22</b>
3.6.1 Participant recruitment Process .....	22
3.6.2 Data collection setting.....	23
3.6.3 Data collection method .....	23
3.6.4 Data Collection Instrument.....	23
<b>3.7 Data Management and Analysis .....</b>	<b>25</b>
<b>3.8 Quality Control and Quality Assurance .....</b>	<b>25</b>
<b>CHAPTER IV: RESULTS.....</b>	<b>26</b>
<b>4.1 Socio-Demographic Information .....</b>	<b>26</b>
<b>4.2 Level of Community functioning as for the community re-integration .....</b>	<b>31</b>
4.2.1 Physical Independence .....	31
4.2.2 Cognitive Independence .....	32
4.2.3 Mobility .....	32
4.2.4 Occupation .....	32
4.2.5 Social Integration .....	33
4.2.6 Economic Self-sufficiency .....	33
<b>CHAPTER IV: DISCUSSION .....</b>	<b>37</b>
<b>CHAPTER VI: CONCLUSION.....</b>	<b>43</b>
<b>6.1 Strengths and Limitations .....</b>	<b>43</b>
6.1.1 Strengths.....	43
6.1.2 Limitations .....	43
<b>6.2 Practice Implication .....</b>	<b>44</b>



6.2.1 Community Based practice Implication .....	44
6.2.2 Recommendation for further research .....	44
6.3 Conclusion.....	45
<b>List of Reference .....</b>	<b>46</b>
<b>APPENDICES.....</b>	<b>54</b>
Appendix A: Ethical Approval Form .....	54
Appendix B: Author permission letter .....	55
Appendix C: Information sheet and consent form [English Version].....	56
Appendix D: Information sheet and consent form [Bengali Version].....	60
Appendix E: Demographic Question [ English and Bengali Version] .....	65
Appendix F: Questionnaire [ English and Bengali Version] .....	70
Appendix G: Permission Letter from CRP-Savar .....	80
Appendix H: Permission Letter from CRP-Mirpur .....	81
Appendix H: Supervision record sheet.....	82

**LIST OF TABLES**

<b>Serial Number</b>	<b>Name of the table</b>	<b>Page no</b>
Table 4.1	Demographic variables of the participants.	26
Table 4.2	Disease-related information	28
	CHART-SF dimensions of Community re-integration	31
Table 4.4	Comparison of demographic variables with mean CHART-SF domain scores	34

**LIST OF FIGURES**

<b>Serial Number</b>	<b>Name of the figures</b>	<b>Page No</b>
Figure 2.1	Overview of Literature review	7
Figure 3.1	Overview of participant recruitment process	22
Figure 4.1	Current Complication after rehabilitation	30

**LIST OF ABBREVIATION**

<b>AMAN</b>	Acute motor axonal neuropathy
<b>AMSAN</b>	Acute sensory and motor axonal polyneuropathy
<b>AIDP</b>	Acute inflammatory demyelinating polyneuropathy
<b>AFO</b>	Ankle Foot Orthosis
<b>ADLs</b>	Activities of Daily Living
<b>BADLs</b>	Basic activities of daily living
<b>BHPI</b>	Bangladesh Health Professions Institute
<b>CRP</b>	Centre For the Rehabilitation of the Paralysed
<b>CHART-SF</b>	Craig Handicap Assessment and Reporting Technique Short form
<b>CBR</b>	Community-Based Rehabilitation
<b>GBS</b>	Guillain -Barre Syndrome
<b>IADLs</b>	Instrumental Activities of Daily Living
<b>OT</b>	Occupational Therapy
<b>PADLs</b>	Personal activities of daily living
<b>SPSS</b>	Statistical Package of Social Science
<b>SD</b>	Standard deviation
<b>WHO</b>	World Health Organization

## ABSTRACT

**Background:** Guillain-Barre Syndrome (GBS) is a rare neurological condition that impairs a person's ability to participate in their daily activities physically and socially. The majority of patients made a full recovery after post rehabilitation, but some of them persistent symptoms and psychosocial problems that made daily tasks challenging and had a significant negative impact on a patient's individual's life and community participation.

**Aim:** The aim of the study is to identify about the level of Community re-integration after Rehabilitation services for Patients with Guillain Barre Syndrome.

**Methods:** A cross-sectional study of the quantitative research design was carried out by using telephone survey among the 121 participants who received rehabilitation services from the CRP and currently living in the community for at least 12 months. Outcome measures through Craig Handicap Assessment and Reporting Technique Short Form (CHART-SF) scale to identify about the community reintegration level. The Mann-Whitney test and the Kruskal-Walli's test was used for data analysis.

**Results:** The mean and standard deviation scores for each CHART-SF, the following domains, participants displayed higher community reintegration scores. physical independence ( $96.21 \pm 13.94$ ) and cognitive independence ( $95.33 \pm 15.20$ ). Followed by social integration ( $73.04 \pm 30.06$ ), economic self-sufficiency ( $72.58 \pm 37.14$ ), occupation ( $64.06 \pm 36.40$ ) and mobility ( $53.81 \pm 23.64$ ) domains. Occupation, mobility, social integration, and economic self-sufficiency are seeing major declines in CHART-SF score. Gender and occupation, social integration domains, age and physical independence, mobility, occupation, social integration domains, occupational status and cognitive independence, mobility, occupation, economic self-sufficiency domains, education and economic self-sufficiency domains, and duration of rehabilitation and physical independence, economic self-sufficiency domains were all found to have statistically significant differences.

**Conclusion:** A significant proportion of the individuals were able to go back to occupation, mobility independence and reintegrated into the society. Therefore, community-based rehabilitation should be emphasized on patient's quality of life, mobility and ability to return to their occupation.

**Keywords:** GBS, Rehabilitation, Community Re-integration.

## CHAPTER I: INTRODUCTION

### 1.1 Background

Bangladesh is a developing country, and along with the development, the number of disabled people is increasing day by day. The population of this country is around 165 million, with a large number of burdensome people. The worldwide incidence of GBS is 1–2/100,000 people (Nehal & Manisha, 2015). Guillain Barre Syndrome (GBS) is a rare neurological disorder that affects part of the peripheral nervous system. It is an acute inflammatory polyneuropathy. Although it may happen at any age, it most frequently does so between the ages of 30 and 50. Men are slightly more affected than women (Sriganesh et al., 2013).

Approximately 50% return to normal health in 1 year, but almost one-third continue to have some muscle weakness and residual disability present even after 3 years (Tomita et al., 2016). Among the residual disabilities mainly reduced walking ability within 1-2 years and it's persistent for a long period of time 10 years (Forsberg et al., 2012). Most patients recovered well after GBS but complained of residual symptoms and psychosocial problems that interfered with engaging in daily life (Chowdhury et al., 2019). Over 90 % of GBS patients had a more or less complete functional recovery, and almost 30 % of them had to make substantial changes in daily life. These findings indicate that GBS still has a significant impact on a patient's life and the impact on their social life (Bersano et al., 2006). Nearly one-third of individuals diagnosed still experience some muscle weakness after three years, however, 50% of those who are diagnosed recover to normal health by that time (AANEM, 2023).

The prognosis for many individuals following the rapid onset of Gullain Barre

Syndrome is unknown, not only in terms of the time needed to recover but also in terms of the degree to which they can be impacted by long-standing disability. To determine what kind of support should be offered to manage daily tasks as well as family and employment responsibilities. It is necessary to investigate the experience of people with GBS regarding disability and the health of the patient.

There are various treatments applied in the recovery phases for the rehabilitation of GBS patients at CRP. Providing splints, modified self-care techniques, adapting daily activities, encouraging access to the community, adapting equipment, home modification, fine motor program etc. After this phase when participants return to the community, there have arisen residual disabilities, ventilator support, psychosocial problems, and social status changes which are shown in the literature. For those persistent residual problems, participants will not reintegrate into the community properly. They will face many barriers and social interaction and family roles will be changed. Through this research, the researcher will be able to identify the level of community re-integrate after Rehabilitation services for GBS patients.

## **1.2 Justification of the study**

Guillain -Barre Syndrome (GBS) is a rare neurological disorder. After the disease onset, more than 30% of GBS patients have had to make changes in their job, hobbies, or social activities. Thus, that has a broad impact on the medical, social, and physiological, psychological aspects.

Most Patients recovered well after GBS but complained of residual symptoms and psychosocial problems that interfered with engaging in daily life. GBS persons face different types of challenges in the community. To reintegrate into the community, it is important to know what barriers exist in the community.

Through this research, the researcher will find out what are the barriers and levels to

community reintegration are when their residual disability is present. According to a review of research publications, in Bangladesh has not conducted any studies of this kind on the long-term management and community reintegration process for patients with GBS.

Occupational Therapist plays a significant role in physical, psychosocial restoration, accessibility, environmental, developmental, and emotional ailments. An Occupational Therapist helps the client to achieve maximal independence through accurate evaluation, retraining, and adaptive technique and equipment also support participation in life situations to maximize their functional potential. This research will help occupational therapists to update, restructure, and expand the occupational therapy program in outpatient and community-based settings. This will be beneficial for the clients and for the occupational therapy profession. Thus, the goal of OT will be more realistic, which will ultimately lead to the benefit of patients. It will be more effective for GBS patients in case of successful community reintegration.

By utilizing this research study in Bangladesh, occupational therapists and occupational therapy students will be able to expand their knowledge and resources. Additionally, they will set up various care plans for the GBS patients and their neighborhoods. GBS persons will be able to involve themselves in the mainstream of society and make a huge contribution to the economy of Bangladesh. Resources will increase in the research sector of Bangladesh.

The discovery may have implications for occupational therapists and other medical professionals in terms of designing interventions for care and rehabilitation and give us a platform to create evidence-based protocols and tools for better rehabilitation in society for GBS patients in the acute, sub-acute and chronic phases.



## **1.3 Operational Definition**

### **1.3.1 Community re-integration**

Community reintegration is defined as the return to and full involvement in community life, with the disabled person being permitted to participate in community life in all respects, including social interactions, independent living, and work or other useful endeavors.

### **1.3.2 Rehabilitation service**

Rehabilitation is defined as “a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment” (World Health Organization, 2021).

Rehabilitation aims to maintain and regain functional independence. In order to minimize disability and maximize function and community involvement, rehabilitation uses an interdisciplinary team (e.g., Doctor, a physiotherapist, an occupational therapist, a speech and language therapist, a nurse, and a social worker). This strategy promotes active patient and family education and participation using a time-based, goal-focused, functional approach (Radomski & Latham, 2008).

### **1.3.3 Guillain-Barre Syndrome (GBS)**

Guilin Barre syndrome (GBS) is a rare autoimmune condition that affects the peripheral nervous system. Additionally, trouble breathing and swallowing, it might result in numbness and tingling in the extremities. Immunoglobulin treatment is used to treat GBS, which typically follows an infection or vaccine. While symptoms could gradually get better over time, some people might still have long-term consequences, including numbness and weakness. While symptoms could gradually get better over time, some people might still have long-term consequences, including numbness and weakness (Wijdicks & Klein, 2017).

## **1.4 Research Aim, Objectives, and Questions**

### **1.4.1 Research Question**

What is the level of community reintegration after rehabilitation services for patients with Guillain -Barre Syndrome (GBS)?

### **1.4.2 Aim**

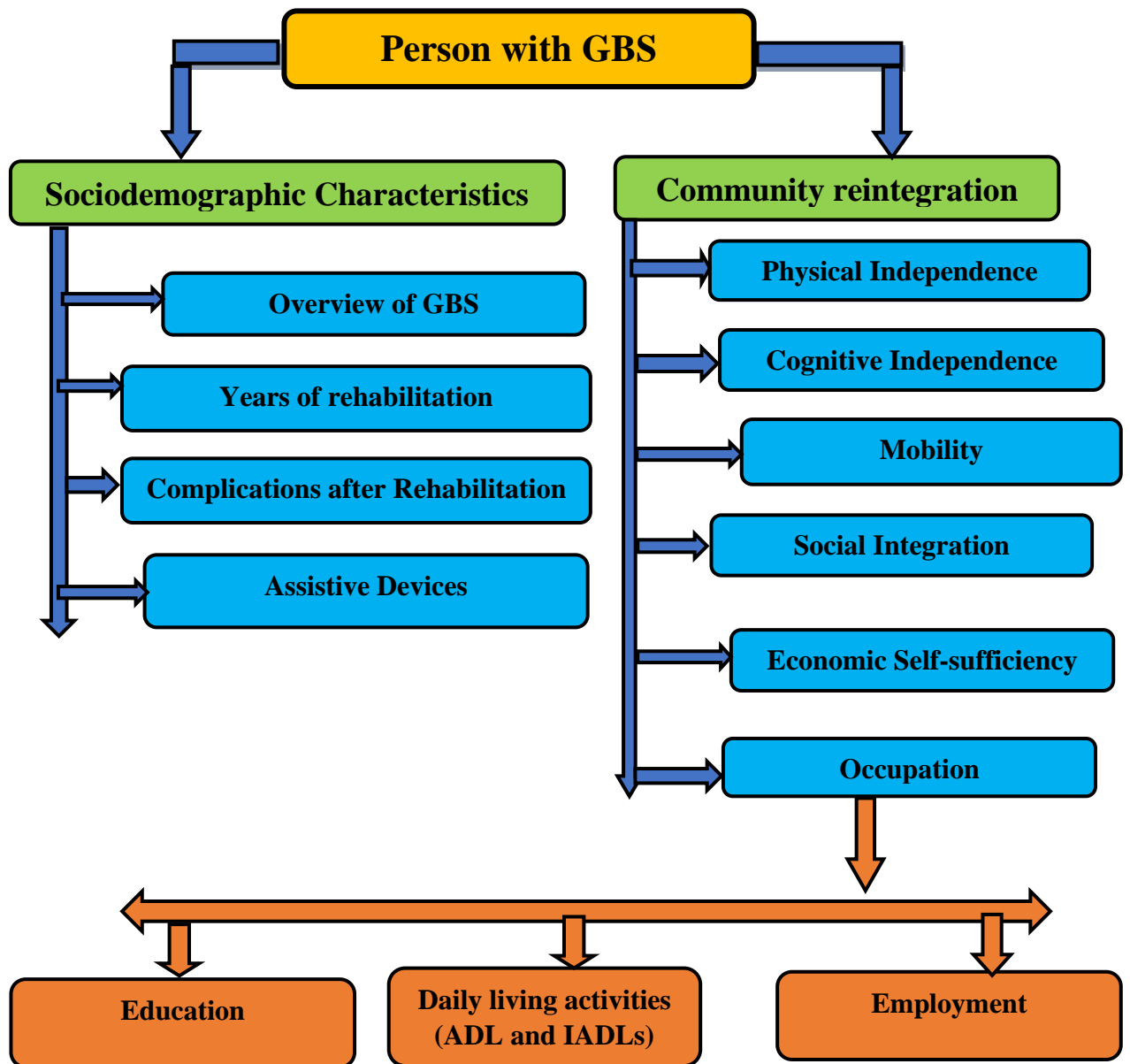
The aim of the study is to identify about the level of Community re-integration after Rehabilitation services for Patients with Guillain Barre Syndrome

### **1.4.3 Objectives**

1. To identify the sociodemographic characteristics of the patient with GBS.
2. To find out the community reintegration status of person with GBS such as in physical Independence, cognitive independence, mobility, occupation, social integration, economic self-sufficiency domains.
3. To find out the association between sociodemographic variables (age, gender, marital status, level of education, occupational status, and duration of rehabilitation status) on the level of community reintegration domains.

## **CHAPTER II: LITERATURE REVIEW**

Literature review provides a comprehensive overview of the literature in regards to the sociodemographic characteristics and community reintegration of people with GBS. Existing literature shows that the information about the Overview of GBS, Years of rehabilitation, complications after rehabilitation, assistive devices. This chapter emphasized about the community reintegration domain such as physical independence, cognitive independence, mobility, social integration, occupation, and economic self-sufficiency. Here also divided the occupation domain in two categories employment and daily living activities (IADLs, ADLs).

**Figure 2.1***Overview of Literature review*

## **2.1 Sociodemographic Characteristics**

### **2.1.1 Overview of GBS**

Guillain-Barre Syndrome (GBS) is a rare neuromuscular condition that impacts sections of the peripheral nervous system. It is a polyneuropathy with an acute inflammatory feature. Although it may happen at any age, it most frequently does so between the ages of 30 and 50 years. Men are slightly more affected than women. GBS usually occurs in ascending paralysis, weakness occurs from the legs and continues to the upper limbs. The GBS exact cause is unknown but the majority of cases occurred after respiratory, gastrointestinal infections, or pervasive immune response. GBS variants include acute inflammatory demyelinating polyneuropathy (AIDP), acute motor and sensory axonal polyneuropathy (AMSAN), Miller Fisher syndrome (MFS), and acute motor axonal neuropathy (AMAN). Signs & Symptoms increased within 1-2 weeks after effect. Proximal muscles are more affected than distal ones, and the severity of the back pain gradually worsens. Leg involvement is more critical than the upper parts of the body. In most cases, facial muscles also affect and need ventilation. This is very crucial for the patient with GBS due to the intensive care and prolonged rehabilitation care. This includes mental, physical, social, and economical issues (Wijdicks & Klein, 2017; Esposito & Longo, 2017). In China and Bangladesh the most common variation is AMAN and in Japan, Pakistan, central and south America has the most common axonal variation (Islam et al., 2010).

In 2006-2007, a prospective case control study on AFP (acute flaccid paralysis) was conducted in Bangladesh. Bangladesh was divided into 6 divisions and sub-districts for data collection. GBS case signs were fulfilled in 608 (37%) and 855 (46%) cases. Incidence rate was higher in southern divisions than northern ones. A Hospital-based

study in Khulna diagnosed 25 children as GBS, meeting National Institute of Neurological Disorders criteria. GBS primarily affected young adults males in rural areas with a seasonal peak in January and March (Islam et al., 2010).

Besides the medication, the Rehabilitation program included ROM exercise, stretching, strengthening, sensory integration, bed mobility, gait training, ADL, vocational and psychological training orthosis, and assistive devices provided according to the patient's needs by an occupational therapist and physical therapist (Swami et al., 2021; Athanasopoulos et al., 2019).

### **2.1.2 Years of rehabilitation**

The average length of stay in the hospital and rehabilitation facility was 131 days, with stays ranging from 34 to 273 days. One year later 33% get-welled (Bernsen et al., 2006).

The mean duration of stay in rehabilitation is 32.91 days (Gupta et al., 2010).

### **2.1.3 Complications after Rehabilitation**

A sample of 29 participants (mean age 49) with GBS patients has conducted in a Quantitative Cohort prospective study in Sweden in 2012. This study was administrated by GBS disability score, EGOS, Barthel Index, Frenchay Activity Index, Sickness Impact Profile (SIP), Overall Neuropathy Limitations Scale (ONLS), Walk-12, and Fatigue Severity Scale. Where found that After 10 years later additional symptoms occur, mainly limited walking ability 52%, limitation in their upper limb 28% and terrible facial paralysis (Forsberg et al., 2012).

In Bangladesh from January 2004 to December 2017 discharged participants from the hospital were invited for participating in cross-sectional studies. 28 out of 38 patients were required ventilator support. The major deficit was the impairment in lower extremities about 50%, residual symptoms at 63% (Chowdhury et al., 2019). After 1

and 3 years of acute GBS episodes, sensory disturbances and musculoskeletal pain changed respectively from 60% to 30 % and 40% to 33% which is mostly presented in the legs. Fatigues founded after 3 years 7 % (Martic et al., 2018; Bernsen et al., 2006). A prospective longitudinal follow-up study was conducted with the aim of analyzing long-term functional recovery, deficits, and requirement of lower limb orthosis (LLO) for locomotion in patients with Guillain-Barre Syndrome (GBS) among 35 patients. They found that 9 patients complained of pain and two patients had residual weakness after one year (Gupta et al., 2010).

#### **2.1.4 Assistive Devices**

Maximum participants were able to carry out their activities sometimes 9% (n=6) needed assistive aid for some hours of the day (Bersano et al., 2006).

With the aim to evaluate changes in standing and walking associated with AFO use in a patient in the first year after the onset of GBS, a case study was conducted. Findings found that, the participants were unable to work without the assistance of two persons. They could not stand without the support of walking frame. After fitting this device, participant could balance himself for 30 seconds after 2 weeks improved in walking with a frame, and gradually increases after 16 weeks gait. By the use of rigid custom AFOs, the participants walking speed and independent standing time are high. This device is very effective for the improvement of muscle function (Young, 2020).

In a qualitative interview study with the mean age of 50 years among 35 persons found that for restrictions in the upper limb, they are dependent on assistive devices (Forsberg et al., 2015). Bi-lateral resting hand splint used 2 patients, bi-lateral ankle-foot orthosis used 12 patients, walker used 4 patients, cane used 2 patients, elbow crutches used 1 patient after 1-year follow-up (Gupta et al., 2010).

## **2.2 Community reintegration**

### **2.2.1 Physical Independence**

Physical independence evaluates the degree of an individual's ability to manage daily activities independently or needs assistance for accomplishing physical needs such as eating, bathing, dressing, toileting, and mobility (Tzanos et al., 2016; Sekaran et al., 2010; Tzanos et al., 2014; Whiteneck et al., 1999). In Italy, the recent literature showed that 64% completed functional recovery, and 27% had minor limitations in daily living activities. Which aim of the study was to have long-term effects on the daily activities, working, and social status of GBS patients (Bersano et al., 2006).

With the aim to examine factors impacting long-term health-related outcomes in survivors of Guillain-Barre syndrome (GBS), a Quantitative study was conducted at Royal Melbourne Hospital within 157 participants and age more than 18 years interviewed which is administered by FIM, The Depression Anxiety Stress Scale-21 (DASS-21), PIPP-23, and The Medical Research Council (MRC). Where found that 60% functional recovery, 22% substantial impact on mood, depression 8%, Anxiety 22%, and stress 17% (khan et al., 2010). After 3 years can take some functional disability. 24% were not unable to run and 4% walked with assistance. 2% were bed bound (Martic et al., 2018). Forsberg et al. (2012) found that dependent on a person's daily activities 2% after 2 years and 0% after 10 years during follow-up.

### **2.2.2 Cognitive Independence**

Cognitive independence subscale evaluates the amount of assistance needed in remembering, decision-making, and understanding (Tzanos et al., 2014; Tzanos et al., 2016). Arnett et al, (2010) said that it is significant to highlight that there is currently no evidence to support the widely held assumption that GBS only affects peripheral



nerve function and not central nervous system activity. The incidence or severity of any related cognitive impairment is yet unknown in the majority of GBS cases. A cross-sectional study of 77 GBS survivors in the community reported that 33% of the difficulty focusing attention and decision-making is related to fatigue level (khan et al., 2010).

### **2.2.3 Mobility**

Getting out of bed and visiting the neighborhood, or performing an activity that is accessible to the people in the community context (Tzanos et al., 2016; Sekaran et al., 2010; Tzanos et al., 2014; Whiteneck et al., 1999). Due to their mobility issues, individuals require preparations to participate in activities outside of their houses. They stayed indoors as they were too fatigued to go outside (Forsberg et al., 2015). 10 years after the onset of GBS reported that 40 % of participants had limited walking speed, distance, and inability to run or walk long distances. Longer walking distance needs physical capacity and higher dysfunction in physical Health Related Quality of Life (HRQL) (Forsberg et al., 2012). Person's mobility may be affected by a variety of personal aspects, including physical and psychological well-being, the capacity for autonomous transfers, and ambulation. Higher mobility function is also influenced by environmental factors, such as the availability of barriers to entering public spaces, buildings, transit, and private houses (Samuelkamaleshkumer et al., 2010).

### **2.2.4 Occupation**

It measures how the individuals productively use their time for socially benefits activities such as school, work, household activities, and recreational activities (Tzanos et al., 2016; Sekaran et al., 2010; Tzanos et al., 2014). According to AOTA occupational therapy practice framework occupational performance area is ADLs, IADLs, rest and

sleep, education, work, and play, leisure, and social participation (Pendleton & Schultz-Krohn, 2013).

#### **2.2.4.1 Daily living activities (ADL & IADLs)**

Daily living activities can be separated into two areas: activities of daily living (ADLs) (also called personal activities of daily living [PADLs] and basic activities of daily living [BADLs]) and instrumental activities of daily living (IADLs). ADLs means focusing on activities to take care of one's own body. Self-care activities such as dressing, eating (or swallowing), feeding, functional mobility including transfers and bed mobility, sexual activity, toilet maintenance, and maintaining personal equipment like splints, orthotics, and hearing aids are all included in ADLs (Pendleton & Schultz-Krohn, 2013).

IADLs required greater interaction with the physical and social environments and may include physical or cognitive demands than ADLs. IADLs require Child rearing, Care of pets, Communication management, Community mobility, financial management, Health management and maintenance, home establishment and management, Meal preparation and cleanup, religious observance, Safety and emergency maintenance, and Shopping (Pendleton & Schultz-Krohn, 2013). 27 % actual changes in job, leisure, and social activities of 45 participants (Bersano et al., 2006). 157 participants were participated in Royal Melbourne Hospital study, where found that 16% moderate to extreme impact on the ability to participate in work, family, and social activities (F. Khan et al., 2010). Participants acknowledged in that their physical limitations interfere their daily tasks, and they experienced a variety of symptoms in their arms and legs as well as a loss of energy (Forsberg et al., 2015). Motor function, functional deficits, and pain may interfere during ADLs (Gupta et al., 2010). A prospective longitudinal study was conducted in Sweden from April 1998 to December 1999 in 8 hospitals. They

found that after 2 years of onset of GBS 12 % have limitations in activities of daily living and 26 % have dependent in instrumental activities of daily living (Forsberg et al., 2005).

#### **2.2.4.2 Employment**

The Journal of the Neurological Sciences published a study in 2002, three to six years after the onset of GBS, 82 patients had a regular job. 31 patients of them (38%) changed their employment for muscle weakness, strength, depression, and impaired concentration to the work. From that the 17 patients who received disability benefits or retired earlier (Bernsen et al., 2002). Bernsen et al, (2002) also said that 62% were able to return to their previous work, 52 (44%) Patients reported that their leisure activities were changed and 49 patients required that the GBS had reduced their capacity to engage in their hobbies. In Turkey study, nine patients out of twenty-one patients engaged in work which is conducted in an in-patient rehabilitation hospital setting. One of them returned to his previous jobs, eight required different works with less physical needs (Demir & KoseoGlu, 2018).

Some of the participants said that they did not have any body restrictions and they returned to their previous occupations with full body strength. They do not see this as a major problem which will disagree with their physical activities (Forsberg et al., 2015).

#### **2.2.5 Social Integration**

Social Integration is how broadly an individuals interact and communicate with others (Tzanos et al., 2016; Sekaran et al., 2010; Tzanos et al., 2014). Extended families offer vital financial, emotional, and physical assistance to family members who have impairments. The most important goal is to feel a sense of belonging. Isolation and

social rejection are prevented by social visits, which are a significant part of life that strengthen the family and social bonds (Samuelkamaleshkumer et al., 2010). In 2015 a Qualitative interview study was conducted in Sweden aimed that to describe experiences of disability in everyday life and manage the recovery process two years after falling ill with Guillain-Barré syndrome. The study found that due to limitation in daily activities, they also face difficulties in social participation (Forsberg et al., 2015).

### **2.2.6 Economic Self-sufficiency**

Economic Self-sufficiency is the ability to maintain household's activities earnings of the individuals and their family in a year (Tzanos et al., 2016; Sekaran et al., 2010). Among the 77 GBS patients, 71.4 % (n= 55) reported limitations in important living areas like economic self-sufficiency, remunerative employment (khan et al., 2010).

### **2.3 Key Gaps**

- In Bangladesh no study has been conducted about long-term management and community reintegration process for patients with GBS.
- Did not identify the level of Community functioning after the recovery from GBS.
- It was not explained what kind of barriers they are being faced in the community.

## CHAPTER III: RESEARCH METHODOLOGY

### 3.1 Research Design

#### 3.1.1 Method

Quantitative research method was carried out. The researcher used this method because Quantitative research methods measure the level of occurrences based on numeric descriptions and calculations. Moreover, the questions “How many?” and “How often?” are often asked in quantitative studies. It means testing objective theories by examining the relationship among variables. Numbered information can be analyzed through statistical procedures (Creswell, 2009).

#### 3.1.2 Approach

A cross-sectional study approach was used in this study. A cross-sectional study produces a ‘snapshot’ of a population at a particular point in time (Cohen et al., 2007). “A cross-sectional study is an observational study. It includes identifying the events that occurred in the population at a particular point in time, measuring a range of variables on an individual basis, and at the same time measuring the outcome of interest” (Goyal, 2013). A cross-sectional study helps identify the association between the variables of the questionnaire (Mann, 2003).

In this study, the researcher selected the population from CRP Savar and CRP Mirpur (specific rehabilitation center) for a specific period from 2018 to 2021. The researcher analyzed data over a period of time. This resembles a snapshot. That’s why the student researcher chose this design for this study.

## **3.2 Study Setting and Period**

### **3.2.1 Study setting**

From the outpatient and in-patient units of CRP Savar and CRP Mirpur.

### **3.2.2 Study Period**

The study period was from April 2022 to March 2023. Data collection period was from November,01,2022 to December, 01, 2022.

## **3.3 Study Participants**

### **3.3.1 Study population**

The study population is the person with Guillain Barre Syndrome (GBS) who take treatment services from the outpatient and in-patient units of CRP Savar and CRP Mirpur and who meet the inclusion and exclusion criteria.

### **3.3.2 Sampling Techniques**

Sampling means a selection of participants who are best suited for my study and effectively accomplish the study goal (Vanderstoep & Johnston, 2009). Purposive sampling was used in this study. Purposive sampling is a sampling technique of non-probability sampling where researchers select the cases based on their judgment and typicality and follow the pre-determined criteria to meet the specific needs (Cohen et al., 2007). In this study, the sampling technique was used by the inclusion and exclusion criteria. This method selected the participants to find out the picture of the situation. The researcher selected the participants by the predetermined criteria for a representative subset of the whole (Kothari, 2004).

### 3.3.3 Inclusion Criteria

- GBS participants who have already completed their rehabilitation from CRP Savar outpatient and Mirpur CRP inpatient-outpatient unit between (January 2018- November 2021) and have at least experience 12 months of living in the community.
- Both males and females were included.

### 3.3.4 Exclusion Criteria

- Persons who have hearing impairment & speech problems.

### 3.3.5 Sample Size

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

$$= \frac{z^2 \times p(1-p)}{d^2}$$

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

$$= 384.16$$

n= required sample size

z= sample size estimated for this study according to the formula 95% confidence interval

p= 50% =0.5; proportion of the population having the characteristic; though the prevalence of persons with GBS is yield, so the total amount of disability (50%) is considered.

q= (1-q) = 0.5; the proportion in the target population not having the particular characteristics

d= 0.05; 5% confidence error. Degree of accuracy required (level of significance/margin of error).



According to this equation, the sample should be more than 385 participants. Here another factor is resource limitations to get the sample. Because the researcher collected data from CRP Savar and CRP-Mirpur. So, the finite correction of the sample is

$$n_c = \frac{n}{1 + \frac{n}{N}}$$

Here,

$n_c$  = Finite Correction

$n$  = initial sample size

$N$  = Required sample, (From Savar and Mirpur founds 240 participants)

According to this equation, the sample size is approximately 148 participants. But the student researcher collected data from 121 respondents because the rest of the participants were not responded and were not interested. And also, it is undergraduate research.

### **3.5 Ethical Consideration**

Researcher maintained ethical considerations according to Helsinki act's 2014 guideline:

- Before conducting the study, ethical clearance (CRP/BHPI/IRB/09/22/644) has been sought from the institutional review board of the Bangladesh Health Professions Institute (BHPI) through the Department of Occupational Therapy by explaining the purpose of the study (see Appendix A).
- Permission was also obtained from CRP Savar and CRP-Mirpur before collecting the information from the participants.

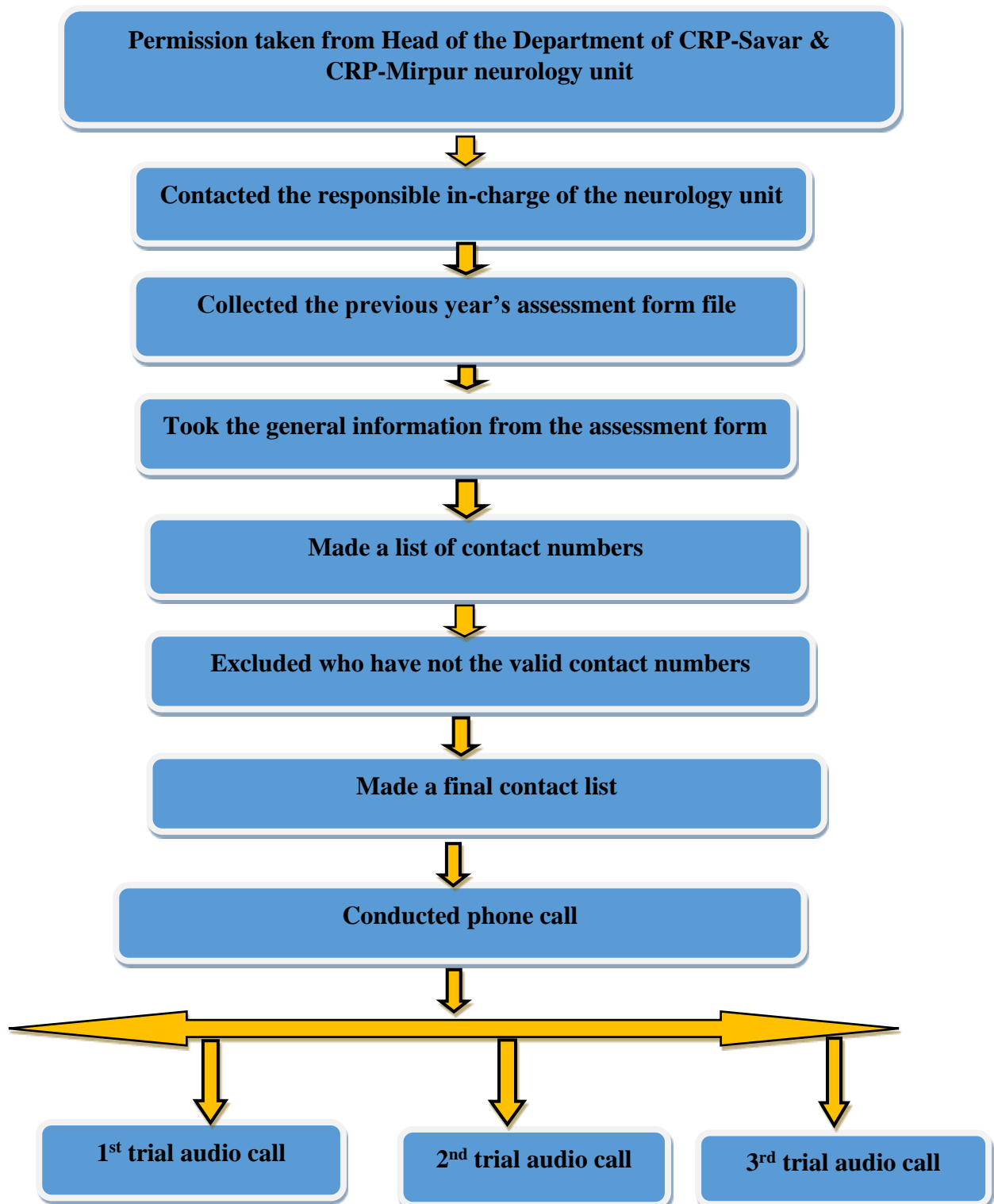
- The researcher also obtained permission from the responsible author to use the CHART-SF version of the questionnaire and translate it into Bengali (see appendix F for translation to Bengali).
- The researcher clearly stated the purpose of the study, those who are willing to participate in this study, and the information collected. Verbal consent was obtained, as they were interviewed over the phone.
- If any participant does not wish to participate in the interview, they can withdraw participation within 2 weeks from the interview time, whether this study was willing to participate or not.
- The information provided by the participants was confidential. During the interview, they were informed that their name and personal information will not share with anyone except the supervisor. Results will be used for publication, conference, and educational purposes.
- The student researcher did have no unequal or power relationship with the participants.
- The researcher secured the well-being of participants by not harming them.
- Participants did not get any monetary benefit from this study which was mentioned in the information sheet.

### 3.6 Data Collection Process

#### 3.6.1 Participant recruitment Process

Figure 3.1

*Overview of the participant recruitment process*



### **3.6.2 Data collection setting**

The study was carried out among residents who had finished their rehabilitation for Guillain Barre Syndrome (GBS) in a community setting.

### **3.6.3 Data collection method**

The data were collected through a telephone interview by the researcher and trained interviewers. In this method, interviewers collected data in a sequence. The interviewers maintain the integrity of the sequencing of the questionnaire because someone cannot complete the question in a sequence that's can make it in a bias (Kielhofner, 2006). Participants were contacted over the phone because the participants were from different districts of Bangladesh. So, it is not possible to reach the whole participants within a short period of time for data collection, and it is also costly to travel for the student researcher. The advantages of the telephone survey are researcher do not have to travel all parts of the country and the cost incurred through the travel (Denscombe, 2010). A short data collection period, and telephone interview usually cost less (Kielhofner, 2006). So, data has been taken over the phone.

### **3.6.4 Data Collection Instrument**

The researcher used a structured questionnaire for demographic data (See appendix E).

#### **The Craig Handicap Assessment and Reporting Technique Short Form (CHART-SF)**

The Craig Handicap Assessment and Reporting Technique (CHART) was developed to assess the WHO dimensions of handicaps. The questionnaire was created to give a quick, objective measurement of the level to which disabilities and impairments lead to restrictions in the years after initial rehabilitation. It quantifies the degree to which individuals with disabilities are reintegrated back into the community. Evidenced suggests that Craig Handicap Assessment and Reporting Technique is reliable and

Valid. As the test-retest reliability correlation coefficient for all assessment domains was determined to be 0.93. The overall correlation coefficient was 0.83, indicating that there was good agreement in the ratings between the participants and their proxies (Whiteneck, 2011). The WHO identified six dimensions: physical independence, mobility, occupation, social integration, and economic self-sufficiency. Physical independence evaluates the degree of an individual's needs assistance for in accomplishing physical needs such as eating, bathing, dressing, toileting, and mobility. Cognitive independence measures the number of hours needs assistance for remembering, decision making or making judgments in the house and visiting outside of the house. Mobility is the individual's ability to move around within the environment and it is measured by how many hours a day out of bed, per week out of the house, and spent nights away from home without a hospital stay. Occupation means socially favorable activities such as paid and unpaid work, education, household activities, and leisure activities. Social Integration means how individuals interact with and communicate with others. It is measured by the number of people live with, and their relations, engagement in business and organization associate's communication through the visits, phone, and text, and took initiative with stranger's persons for conversation. Economic self-sufficiency measured the economic independence of individuals that include family units and disability benefits in a year. From the yearly earnings subtract the medical care expenses. Each domain contains a 100 score. Where 100 or more scores means independent in the reputed domains and have no handicap. Fewer scores mean dependent on those domains and less full participation (Whiteneck et al., 1999; Sekaran et al., 2010). This tool was used for the community reintegration of GBS patients (see appendix F).

### **3.7 Data Management and Analysis**

To ensure the timing and keep track of the numbers of trials to call, the participants data was initially stored in a word file table. Statistical package for the social Sciences (SPSS) version 26 was used to analyze all data. Quantitative data analysis was doing using descriptive analysis. Frequency tables and bar charts were used to display the results. The correlation between the demographic factors and each individual Craig Handicap Assessment and Reporting Technique short form domain score was compared using the Mann-Whitney test and the Kruskal-Walli's test. The sample size was calculated with a power of 0.5. The alpha level was set at 0.05.

### **3.8 Quality Control and Quality Assurance**

All data was entered accurately with the concern of the respective supervisor and by following all instructions. Before collecting data, a pilot survey was conducted to evaluate the participants' understanding of the CHART-SF questionnaires translated into Bengali. The student researcher selected 5 participants for piloting. After completing the pilot survey, the researcher modified the translated Bengali questionnaires based on the piloting experience. Firstly, a participant's contact list was made. To track the participants, data were recorded in an Excel spreadsheet, which aided in providing accurate information about participants as well as keeping track of who did not receive a call and the number of trials to call.

## CHAPTER IV: RESULTS

In this chapter, the researcher showed statistical findings about socio-demographic information and the CHART-SF scale's level of community reintegration status.

where after completing rehabilitation services, 121 participants were continuing to live in the community.

### 4.1 Socio-Demographic Information

**Table 4.1**

*Demographic variables of the participants.*

Variable	Category	Frequency n=121	Percent (%)
Gender	Male	90	74.4 %
	Female	31	25.6 %
Age (year)	≤40 years	79	65.3 %
	>40 years	42	34.7 %
Occupational status	Employed	104	86 %
	Unemployed	17	14 %
Education	≤ P.S.C	23	19 %
	S.S.C	31	25.6 %
	H.S.C	17	14 %
	≥ Bachelor	50	41.3 %
Division	Dhaka Division	62	51.2 %
	Chattogram Division	20	16.5 %
	Rajshahi Division	11	9.1 %
	Khulna Division	12	9.9 %
	Barishal Division	3	2.5 %
	Sylhet Division	3	2.5 %
	Mymensingh Division	6	05 %
	Rangpur Division	4	3.3 %
Living Area	Urban	77	63.6 %
	Rural	44	36.4 %

Table 4.1 shows the findings of the participant's gender, age, occupational status, education, division, and living area. The total number of participants in this study was 121. Among them, male was 74.4 % (n=90) and female was 25.6 % (n= 31). Most of the participants age were 40 years or below 40 years 65.3 % (n=79) and the 34.7 % (n=42) were above 40 years.

After the rehabilitation service occupational status showed that most of the participants were employed. Employed participants the percentage was 86 % (n=104) and 14 % (n=17) were unemployed.

Among the participants, 41.3% (n=50) had graduated with a bachelor's or higher degree, 14% (n=17) had finished H.S.C level, 25.6% (n=31) had finished S.S.C level, and 19% (n=23) had completed primary school or below the primary level.

Most of the participants came from the Dhaka division 51.2 % (n=62), 16.5% (n=20) were in the Chattogram division, 9.1 % (n=11) in the Rajshahi division, 9.9 % (n=12) in Khulna division, 2.5% (n=3) in Barishal division, 2.5% (n=3) in Shylet division, 5% (n=6) in Mymensingh division, 3.3% (n=4) in Rangpur division. From them, most of the participants 63.6 % (n=77) lived in an urban area, 36.4 % (n=44) in a rural area.



**Table 4.2***Disease-related information*

<b>Variable</b>	<b>Category</b>	<b>Frequency n= 121</b>	<b>Percent (%)</b>	
Types of GBS:	AMAN	114	94.2 %	
	AMSAN	2	1.7 %	
	AIDP	5	4.1 %	
Year of disease attack	2018 (January-June)	36 (n=52)	29.8 %	43 %
	2018 (July-December)	16	13.2 %	
	2019 (January-June)	18 (n=35)	14.9 %	28.9 %
	2019 (July-December)	17	14 %	
	2020 (January-June)	15 (n=26)	12.4 %	21.5 %
	2020 (July-December)	11	9.1 %	
	2021 (January-June)	5 (n=8)	4.1 %	6.6 %
	2021 (July-November)	3	2.5 %	
Duration of Rehabilitation	≤ 8 months	98	81 %	
	9-17 months	20	16.5 %	
	18-24 months	3	2.5 %	
Assistive Device	Wheelchair	1	0.8 %	
	Walking frame	1	0.8 %	
	Crutch	2	1.7 %	
	Walking frame	2	1.7 %	
	Walking stick	8	6.6 %	
	AFO	7	5.8 %	
	Splint	1	0.8 %	
	None	99	81.8 %	
During Device Use	Less than 1 year	5	4.1 %	
	1 year	3	2.5 %	
	2 years	11	9.1 %	
	3 years	3	2.5 %	

Table 4.2 indicates that among the 121 participants of 116 participants (not specified the types n=5), the percentage of GBS types was AMAN 94.2 % (n=114), AMSAN 1.7 % (n= 2), and AIDP 4.1% (n=5). Most of the participants' years of disease attack were between 2018 (January-June) & this number is 29.8 % (n=36). Other participants 13.2 % (n=16) year of disease attack range between 2018 (July-December) 14.9 % (n=18)

participants in 2019 (January-June) 14 % (n=17) in 2019 (July-December), in the range 2020 (January-June) were 12.4% (n=15), 2020 (July-December) were 9.1% (n=11) 2021 (January-June) were 4.1% (n=5) & disease attack were 2.5% (n=3) in 2021 (July-November). That shows that in 2018 43% (n=52), in 2019 28.9 % (n=35), in 2020 21.5% (n=26) total percentage rate between January – December, and in 2021 the total percentage rate was 6.6 % (n=8). From those 4 years 2018 percentage rate was high than the other years.

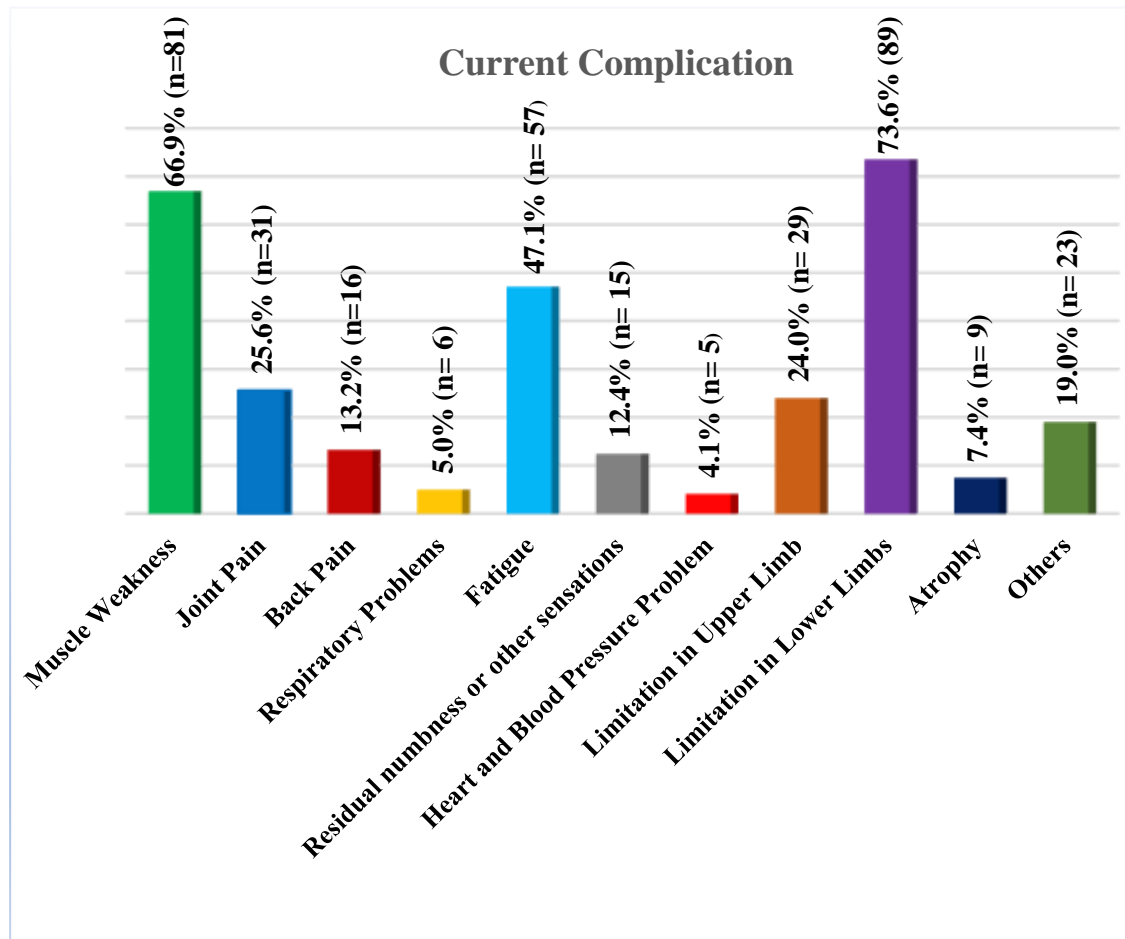
The duration of rehabilitation services among the participants reported, 81 % (n=98) were less than or equal 8 months, 16.5 % (n=20) were 9-17 months, and 2.5 % (n=3) were in 18-24 months.

22 participants used Assistive devices after the rehabilitation program. 6.6 % (n=8) used a walking stick, AFO was used by 5.8 % (n=7), a Crutch (n=2), and a walking frame (n=2) were used by 1.7 %. Wheelchair (n=1), Walking frame (n=1) and splint (resting splint) (n=1) were used at 0.8%. The duration of device use for the person who used assistive devices for Less than 1 year is 4.1 % (n=5), 2.5 % (n=3) is 1 year, 2 years is 9.1 % (n=11), and 2.5 % is used 3 years.

## Current Complication after rehabilitation

**Fig 4.1**

*Current Complication after rehabilitation*



The bar chart represents the current complication after rehabilitation that occurred after the rehabilitation services. Among the participants of this study (n=121) up to 73.6 % had limitations in the lower limb, 66.9% had muscle weakness, 24% had limitations in the Upper limb, 47.1 % had fatigue, 25.6 %, and 13.2 % gradually had joint pain and back pain, 5 % had respiratory problems, Residual numbness and other sensation problem had 12.4 %, Heart and blood pressure related problems had 4.1 %, atrophy had

7.4 % and others (Diabetes, kidney problems, Thyroid, foot drop, arthritis, Insomnia, Sexual problem, stammering, poor nutrition, HBS (hepatitis), HTN, Allergy) had 19 %.

## 4.2 Level of Community functioning as for the community re-integration

### *CHART-SF dimensions of Community re-integration*

Domain	Category	Frequency (n= 121)	Percent (%)
Physical Independence	Yes	103	85.1 %
	No	18	14.9 %
Cognitive Independence	Yes	109	90.1 %
	No	12	9.9 %
Mobility	Yes	0	0 %
	No	121	100 %
Occupation	Yes	45	37.2 %
	No	76	62.8 %
Social Integration	Yes	46	38 %
	No	75	62 %
Economic self-sufficiency	Yes	69	57 %
	No	52	43 %

Yes=show that the participant's score in that domain is  $\geq 100$  and independent.

No= show that the participant's score in that domain is  $<100$  and dependent.

### 4.2.1 Physical Independence

Physical independence evaluates the degree of an individual's needs assistance for in accomplishing physical needs such as eating, bathing, dressing, toileting, and mobility. In table 3 from 121 participants 85.1 % (n=103) scored 100 or above and it is calculated as an independent in this domain. They are performing their daily living activities without needs assistance or supervision. Moreover, 14.9 % (n=18) scored below 100. That is calculated as they are not independent in this domain. They need assistance with

their physical needs.

#### **4.2.2 Cognitive Independence**

Cognitive independence is measured by the number of hours needs assistance for remembering, decision making, or making a judgment in the house and visiting outside of the house. In that domain, most of the participants were independent 90.1 % (n=109). They do not need for supervision both inside and outside of the home. They do not have difficulty in remembering and communicating. Moreover, 9.9 % (n=12) are not independent in the cognitive domain. They are difficulty in remembering, communicating

#### **4.2.3 Mobility**

Mobility is the individual's ability to move around within the environment and it is measured by how many hours a day out of bed, per week out of the house, and spent nights away from home without a hospital stay. Table 3 represents the greatest dependency 100 % (n=121) in mobility. As seen by the number of hours per day spent out of bed, the number of days and nights spent away from home each week, the accessibility of the residence, and the usage of transportation, they have limitations in their surroundings.

#### **4.2.4 Occupation**

Occupation means socially favorable activities such as paid and unpaid work, Education, household activities, and leisure activities. Only 37.2 % (n=45) scored 100 score. 62.8 % (76) scored below 100. Here showing that the majority of the participants were dependent on this mobility domain. Less (n=45) were independent. They were independent in their employment, education and active home making and maintenance, as well as other components included self-improvement activities, leisure activities, and volunteer works.

#### **4.2.5 Social Integration**

Social Integration means how individuals interact with others and communicate with others. It is measured by the number of people live with, and their relations, engagement in business and organization associate's communication through visits, phone, and text, took initiative with stranger's persons for conversation. In table 3 social integration shows that 38 % (n=46) scored 100 which means they are independent and interact with others, written and oral contract was maintained and 62 % (n=75) scored below 100 which means they are not independent.

#### **4.2.6 Economic Self-sufficiency**

Economic self-sufficiency measured the economic independence of individuals that include family units and disability benefits in a year. From the yearly earnings subtract the medical care expenses. This is measured following the poverty level. In this study yearly earnings were taken in Bangladeshi currency and then it was converted into dollar on the date 1<sup>st</sup> December when their dollar rate was (1 \$ =102 taka) (UK, 2022). Table 3 it represents that of most of the participants 57 % scored 100. And on the other hand, 43 % (n=52) scored below 100 in the domain of economic self-sufficiency. They are not independent in their financial status.

**Table 4.4***Comparison of demographic variables with mean CHART-SF domain scores*

	n	Physical Independence		Cognitive Independence		Mobility		Occupation		Social Integration		Economic Self-sufficiency	
CHART-SF scores (Mean ±SD)	121	96.21 ± 13.94		95.33 ± 15.20		53.81 ± 23.64		64.06 ± 36.40		73.04 ± 30.06		72.58 ± 37.14	
Variable		Mean ± SD	p	Mean ± SD	p	Mean ± SD	p	Mean ± SD	p	Mean ± SD	p	Mean ± SD	p
<b>Gender</b>													
Male	90	60.74 ± 15.06	0.822	61.04 ± 14.15	0.963	63.91 ± 24.99	0.120	64.90 ± 35.83	<b>0.032*</b>	66.96 ± 28.40	<b>0.001*</b>	60.81 ± 37.11	0.908
Female	31	61.76 ± 10.22		60.87 ± 18.13		52.56 ± 18.86		49.68 ± 35.86		43.71 ± 30.99		61.56 ± 37.85	
<b>Age</b>													
≤40 years	79	64.13 ± 4.764	<b>0.029*</b>	63.08 ± 14.03	0.085	66.97 ± 23.65	<b>0.010*</b>	65.46 ± 35.58	<b>0.048*</b>	56.42 ± 30.88	<b>0.043*</b>	63.01 ± 33.13	0.339
>40 years	42	55.11 ± 22.13		57.10 ± 17.15		49.76 ± 22.14		52.61 ± 36.65		69.61 ± 27.36		57.23 ± 43.37	
<b>Return to work status</b>													
Employed	104	62.53 ± 7.36	0.055	62.33 ± 13.11	<b>0.046*</b>	66.50 ± 21.72	<b>0.000*</b>	66.15 ± 34.16	<b>0.000*</b>	60.28 ± 30.25	0.567	63.91 ± 34.66	<b>0.012*</b>
Unemployed	17	51.62 ± 31.52		52.85 ± 23.99		27.32 ± 20.50		29.47 ± 31.39		65.38 ± 29.57		43.21 ± 44.25	
<b>Education</b>													
≤ P.S.C	23	61.57 ± 20.88		61.67 ± 14.41		57.80 ± 27.01		56.65 ± 37.62		47.09 ± 31.01		41.89 ± 41.59	
S.S.C	31	58.35 ± 8.64	0.468	56.90 ± 23.26	0.205	54.90 ± 23.32	0.495	52.60 ± 39.42	0.269	57.81 ± 31.28	0.095	61.75 ± 32.04	<b>0.007*</b>
H.S.C	17	55.74 ± 23.70		56.74 ± 14.68		69.74 ± 21.64		65.79 ± 30.93		66.26 ± 29.10		60.18 ± 35.34	
≥ Bachelor	50	64.17 ± 6.03		64.68 ± 6.66		63.28 ± 22.94		66.58 ± 35.05		67.59 ± 29.17		69.60 ± 34.92	
<b>Duration of Rehabilitation</b>													
≤ 8 months	98	63.36 ± 98.24	<b>0.045*</b>	61.37 ± 15.77	0.492	63.17 ± 22.81	0.365	60.81 ± 36.38	0.592	61.10 ± 31.18	0.808	64.80 ± 34.88	<b>0.004*</b>
9-17 months	20	51.50 ± 22.85		61.03 ± 13.11		51.23 ± 27.85		64.63 ± 35.48		58.78 ± 25.77		49.85 ± 39.27	
18-24 months	3	47.17 ± 55.42		48.67 ± 12.70		55.17 ± 18.33		43.17 ± 49.79		72.50 ± 19.63		11.33 ± 10.77	

The mean scores were obtained using Craig's handicap assessment and reporting technique-short form are displayed in table 4.4. Higher scores suggest a higher level of reintegration into the community. In the following domains, participants displayed higher community reintegration scores, Physical independence ( $96.21 \pm 13.94$ ) and cognitive independence ( $95.33 \pm 15.20$ ). Followed by social integration ( $73.04 \pm 30.06$ ), economic self-sufficiency ( $72.58 \pm 37.14$ ), occupation ( $64.06 \pm 36.40$ ) and mobility ( $53.81 \pm 23.64$ ). Occupation, mobility, social integration, and economic self-sufficiency are seeing major declines in CHART-SF score. The mobility dimension had the most variability and the lowest mean score. Table 4.4 also shows the association between sociodemographic variables (age, gender, marital status, level of education, occupational status, and duration of rehabilitation status) on the community reintegration domains. On comparing the level of community re-integration scores showed that the gender statistically significantly difference was found in the occupation ( $p < 0.032$ ), social integration ( $p < 0.001$ ) domains of the Craig Handicap Assessment and Reporting Technique-Short form. Findings demonstrate that on the occupation domain and social integration domain, male scores achieved significantly higher mean scores gradually ( $64.90 \pm 35.83$ ) and ( $66.96 \pm 28.4$ ). A comparison showed that the age statistically found significant difference in the physical independence ( $p < 0.029$ ), Mobility ( $p < 0.010$ ), Occupation ( $p < 0.048$ ), Social Integration ( $p < 0.043$ ) domains of the Craig Handicap Assessment and Reporting Technique-Short Form. Age of 40 years or below 40 years showed significantly better scores in physical independence ( $64.13 \pm 4.764$ ), mobility ( $66.97 \pm 23.65$ ), occupation ( $65.46 \pm 35.58$ ), and social integration domains ( $56.42 \pm 30.88$ ). Occupational status, statistically significant difference was seen in area cognitive independence ( $p < 0.046$ ), Mobility ( $p < 0.000$ ), Occupation ( $p < 0.000$ ), economic self-sufficiency ( $p < 0.012$ ). Participants who were employed had



higher mean scores in cognitive independence ( $62.33 \pm 13.11$ ), mobility ( $66.50 \pm 21.72$ ), Occupation ( $66.15 \pm 34.16$ ), Economic self-sufficiency domains ( $63.91 \pm 34.66$ ). Education statistically significant differences among the economic self-sufficiency ( $p < 0.007$ ) domains. Results indicate that  $\leq$  P.S.C scores were lower in the economic self-sufficiency ( $41.89 \pm 41.59$ ) domain. The duration of rehabilitation was statistically significant difference were seen in both physical independence ( $p < 0.045$ ) and economic self-sufficiency ( $p < 0.004$ ) domains.

From the six domains Physical Independence, Cognitive Independence, Mobility, Occupation, Social Integration, and Economic self-sufficiency it is showing that without physical and cognitive independence other domains participants are not fully independent properly. Their community participation, mobility, and occupation need fulfillment of a proper community reintegration which is poor.

## CHAPTER IV: DISCUSSION

The primary objectives of rehabilitation are return to the person into their community and work independently in their occupations, reintegrate into society, and enhance their quality of life (Radomski & Latham, 2008). The study aimed to know about the level of community re-integration after rehabilitation services for patients with Guillain Barre Syndrome, which is conducted with 121 participants.

The first objective of this study was to describe the sociodemographic characteristics of the patient with GBS. Most of the participant's age was found below 40 or 40 years in 65.3% (n=79) and beyond 40 years in 34.7% (n=42). Where the minimum age is 13 and the maximum age is 65. In Sweden, a cohort prospective study found that the mean age after 10 years of GBS onset was 49 years (Forsberg et al., 2012). In this study, the sociodemographic characteristics showed that male participants are more affected than females. The article also showed that men are slightly more affected than females (Doets et al., 2018). The GBS variant founds in this study AMAN, AMSAN, AIDP. Another study also supports this GBS variant (Wijdicks & Klein, 2017; Esposito & Longo, 2017). In this study majority of the cases are AMAN variants. In a prospective case-controlled study also found the same results (Islam et al., 2010). Most of the cases found from January to June comparatively affected rate were high and the participants lived in rural areas (36.4%) in this study. Islam et, al (2010) found that there is a seasonal variation in the number of GBS patients peaking in January to March and affected young adult males (47%) who lived in rural settings. Islam et, al (2010) another important report indicates that the northern division's incidence rate is lower than the southern division. Results found in this study; the Dhaka division percentage is high. But it may happen for the wide variety of people who come to Dhaka and live with their

families for livelihood and educational purposes. After the rehabilitation service most of the participants were employed 86 % (n=104) and 14 % (n=17) were unemployed in this study. Bernsen et al. (2002) said that 62% were able to return to their previous work and 31 patients of them (38%) changed their employment due to muscle weakness, strength, depression, and impaired concentration to the work. In Turkey study, nine patients out of twenty-one patients engaged in work who lives in community for 6 months after completed in-patient rehabilitation services. One of them returned to his previous jobs and others required for different works with less physical needs (Demir & KoseoGlu, 2018). In this study found that some complication arises after rehabilitation, these are 66.9% had muscle weakness, 73.6 % had limitations in the lower limb, 24% had limitations in the upper limb, 25.6 % and 13.2 % gradually had joint pain and back pain, 5 % had respiratory problems, 12.4 % had residual numbness and other sensation problem. Most studies found that 10 years later 52 % had limitation in walking ability, and 28% limitation in their upper limb occurred (Forsberg et al., 2012). In this study also a limitation of lower limbs percentage is high. Literature shows that the limitation in lower limb, the percentage is higher than others complications (Martic et al., 2018). Activity participation limited due to 47.1 % fatigue was found in this study. In Serbia, Republic of Srpska and Montenegro study, 7 % fatigues were found after 3 years of rehabilitation (Martic et al., 2018). Few individuals with GBS needed assistive devices after rehabilitation services likes 6.6% utilized a walking stick, 5.8% uses AFO, crutch 1.7 %, and 1.7% uses walking frame, splints, walking frames and wheelchairs were utilized in 0.8% of cases in this study. Another study also found that, a maximum number of participants were able to carry out their activities, sometimes 9% (n=6) needed assistive aid for some hours of the day and bi-lateral resting hand splint used 2 patients, bi-lateral ankle-foot orthosis used 34.3 % patients,

walker used 4 patients, cane used 2 patients, elbow crutches used 1 patient after 1-year follow-up (Gupta et al., 2010). Young (2020) figured out that by the use of rigid custom AFOs, the participant's walking speed and independent standing time were high and this also very effective for the improvement of muscle function.

The second and third objective of this study was to find out the community reintegration status of person with GBS such as in physical independence, cognitive independence, mobility, occupation, social integration, economic self-sufficiency domain, and the association between among demographic variables with domains.

In this study 85.1 % were independent in physical independence domain and the mean scores found ( $96.21 \pm 13.94$ ), which indicates the high level of independence. There is no research was found on using the CHART-SF scale in good accordance with GBS was discovered, but another condition was investigated. Few publications on SCI and Traumatic Brain Injury (TBI), that have been studied to assess the level of community reintegration using the CHART-SF scale. A cross-sectional study was conducted in south India to explore the community reintegration level using the CHART scale with the person with traumatic brain injury found that the physical independence means score ( $91 \pm 23$ ) (Samuelkamaleshkumer et al., 2022). Forsberg et al, (2012) reported that independent on a person's daily activities 98% and 100%, respectively after 2 and 10 years of follow-up. In other literature, it is also said that the majority of the participants 64% completed functional recovery, 27% had minor limitations in daily living activities (Bersano et al., 2006). Another study found that some of the participants did not have any physical restrictions and they do not see these physical restrictions as a major problem that will impede their physical activities (Forsberg et al., 2015).

Cognitive independence showed that 90.1 % were independent in this study, 9.9%

dependent, and mean scores was  $(95.33 \pm 15.20)$ . They also had high level of independence. In another study, cognitive independence mean score was found on SCI patients is  $92 \pm 17$  (Samuelkamaleshkumar et al., 2010). In general, GBS patients do not have cognitive issues, but sometimes it occurs because of severe fatigue, depression, or severe muscle weakness. Literature also showed that for particular complications it may happen (Alexandrescu et al., 2014; khan et al., 2010).

In the mobility domain 100% of the participants were dependent, the mean score was  $(53.81 \pm 23.64)$  and which means less community participation. In a cross sectional study, mobility mean score was found on SCI patients is  $65 \pm 18$  (Samuelkamaleshkumar et al., 2010). According to the Forsberg et al, (2015) they must plan activities to go outside of their home due to mobility limitations and tiredness they avoided traveling outside. Another study, 10 years after the onset of GBS reported that 40 % of participants had limited walking speed, distance, and inability to run or walk long distances, because of longer walking distance needs physical capacity (Forsberg et al., 2012). Person's mobility may be affected by a variety of personal aspects, including physical and psychological well-being, the capacity for autonomous transfers, ambulation, but higher mobility function is also influenced by environmental factors, such as the availability of barriers to entering public spaces, buildings, transit, and private houses (Samuelkamaleshkumer et al., 2010). Other things that, for someone with mobility issues, the majority of Bangladeshi villages and towns have several obstacles. Rarely there are slopes or lifts near the stairs, and getting to buses and trains is difficult. These things may have contributed to the study participants generally poor mobility ratings.

In the occupation domain 37.2% were independent and the mean score was  $(64.06 \pm 36.40)$ . Samuelkamaleshkumar et al, (2010) in occupation domain mean score was

found on SCI patients is  $70 \pm 34$ . Participants acknowledged in that their physical limitations interfere their daily tasks, and they experienced a variety of symptoms in their arms and legs as well as a loss of energy (Forsberg et al., 2015). Gupta et al, (2010) showed in the literature, motor function, functional deficits, and pain may interfere with personal activities of daily living (ADLs). Another literature shows that 16% moderate to extreme impact on the ability to participate in work, family, and social activities (F. Khan et al., 2010). Low independence rates may be interfered due to the lower level of mobility support.

In this study the social integration domains, 62% were dependent and the mean score was  $(73.04 \pm 30.06)$ . Social integration mean score was found on SCI patients is  $96 \pm 11$  (Samuelkamaleshkumar et al., 2010). The study found that due to limitation in daily activities, they also face difficulties in social participation (Forsberg et al., 2015). Another study said that joint families help financially, emotionally, and physically to family members who have impairments and the most important goal is to feel a sense of belonging. Isolation and social rejection are prevented by social visits, which are a significant part of life and strengthen family and social bonds (Samuelkamaleshkumer et al., 2010). It indicates the factor limiting mobility and occupation is simultaneously obstructing social participation and involvement. The study also found that 57% of participants were economically sufficient and the mean score was  $(72.58 \pm 37.14)$ . Literature shows that 71.4 % have a dependency on economic self-sufficiency but it depends on the country's economic status (khan et al., 2010).

The participants who had returned to work after the onset of GBS demonstrated significantly better scores in cognitive, Mobility, Occupation, Social integration domains of the Craig Handicap Assessment and Reporting Technique-Short form than those who were unemployed. The results of this study support the holistic rehabilitation

programs that have a positive impact on everyday functioning and community inclusion. Other things that occupation and social integration domain male participants was significantly better scores than female. Below the 40 years participants were significantly better scored in physical independence, mobility, occupation, social integration domain and this can be happened for the ageing process.

## CHAPTER VI: CONCLUSION

### 6.1 Strengths and Limitations

#### 6.1.1 Strengths

- It was able to be completed quickly and efficiently. Because telephone surveys have enabled individual participants from many divisional regions.
- The study has a particular and focused specific group in mind.
- The author has been given permission to use the CHART-SF questionnaire.
- This was the first study about community reintegration among persons with GBS in Bangladesh and world-wide.

#### 6.1.2 Limitations

- The sample was specially chosen because this is an academic research endeavor and the researcher had only a few months to carry it out. This investigation was carried out from CRP Savar and Mirpur branches. But In CRP has another branch. Because of the limited amount of time and cost, the researcher was unable to collect data from the other center of CRP.
- In addition, the researcher did not find enough literature relevant to the GBS condition, hence there is insufficient literature to support the key domains of community handicapped as measured by the CHART-SF scales.
- On CHART-SF scales there are just two scores mentioned: 0 and 100. However, it was impossible to identify those with scores below 100, such as 80, 70, 60, etc. Despite being independent in other cases.
- There were several phone numbers were invalid in the assessment form, which limits the number of people to reach.



- This study was conducted by telephone, which has significant limitations. Despite three calls being made to the participants, several of them did not answer.

## **6.2 Practice Implication**

### **6.2.1 Community Based practice Implication**

The evidence from this study suggests that, as an Occupational Therapist can learn more about the degree of community re-integration. As a result, they may offer appropriate education on these issues and should be aware of the needs and barriers of the community.

### **6.2.2 Recommendation for further research**

- Identify the psychosocial impact of GBS.
- For accurate information from the GBS survivors in the community, additional research should be done with a large number of participants and also using a mixed strategy.
- Can find out the effect of complications in the level of community reintegration domains.

### **6.3 Conclusion**

The main goal of the current study was determined to know about the level of Community re-integration after Rehabilitation services for Patients with Guillain Barre Syndrome. The study has identified the sociodemographic characteristics, and community functioning status after post rehabilitation of person with GBS. A significant proportion of the individuals was able to go back to occupation, mobility independence and reintegrated into the society. Therefore, community-based rehabilitation should be emphasized on patient's quality of life, mobility and ability to return to their occupation.

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<sup>1</sup> This The reference lists are followed by *Publication manual of the American Psychological Association : the official guide to APA style*. (2020). (Seventh edition. ed.). American Psychological Association.

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## APPENDICES

### Appendix A: Ethical Approval Form


	<b>বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)</b> <b>Bangladesh Health Professions Institute (BHPI)</b> <i>(The Academic Institute of CRP)</i>								
Ref:	Date:								
CRP/BHPI/IRB/09/22/644	28 <sup>th</sup> September, 2022								
<p>Md. Wali Ullah Chowdhury            4<sup>th</sup> Year B.Sc. in Occupational Therapy            Session: 2017-18 Student ID: 122170261            BHPI, CRP, Savar, Dhaka-1343, Bangladesh</p>									
<p><b>Subject:</b> Approval of the thesis proposal "Level of Community Re-Integration after Rehabilitation Services for Patients with Guillain Barre Syndrome (GBS)" by ethics committee.</p>									
<p>Dear Md. Wali Ullah Chowdhury,            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/author and Md. Habibur Rahman, Lecturer, Department of Occupational Therapy, BHPI, CRP as thesis supervisor. The Following documents have been reviewed and approved:</p>									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Sr. No.</th> <th style="width: 90%;">Name of the Documents</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Thesis Proposal</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Questionnaire</td> </tr> <tr> <td style="text-align: center;">3</td> <td>Information sheet &amp; consent form.</td> </tr> </tbody> </table>		Sr. No.	Name of the Documents	1	Thesis Proposal	2	Questionnaire	3	Information sheet & consent form.
Sr. No.	Name of the Documents								
1	Thesis Proposal								
2	Questionnaire								
3	Information sheet & consent form.								
<p>The purpose of the study is to determine about the level of Community re-integration after Rehabilitation services for Patients with Guillain Barre Syndrome. The study involves use of a <b>Craig Handicap Assessment and Reporting Technique Short Form (CHART-SF)</b> questionnaire to find out the level of community re-integration that may take approximately 20 to 30 minutes to fill in the questionnaire and there is no likelihood of any harm to the participants or participation in the study. 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 27<sup>th</sup> August, 2022. at BHPI (32<sup>nd</sup> IRB Meeting).</p>									
<p>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.</p>									
<p>Best regards,              Muhammad Millat Hossain            Associate Professor, Dept. of Rehabilitation Science            Member Secretary, Institutional Review Board (IRB)            BHPI, CRP, Savar, Dhaka-1343, Bangladesh</p>									
<p>সিআরপি-চাপাইন, সাভার, ঢাকা-১৩৪৩, বাংলাদেশ। ফোন: +৮৮ ০২ ২২৪৪৪৪৬৪-৫, +৮৮ ০২ ২২৪৪৪১৪০৪, মোবাইল: +৮৮ ০১৭৩০ ০৫৬৪৭            CRP-Chapain, Savar, Dhaka-1343, Bangladesh. Tel: +88 02 224445464-5, +88 02 224441404, Mobile: +88 01730059647            E-mail: principal-bhpi@crp-bangladesh.org. Web: bhpi.edu.bd</p>									

## Appendix B: Author permission letter

Permission For CHART-SF Scale 



wali miraj

2 Sept 2022, 07:36 

Dear Sir, Greetings from Bangladesh Health Professions Institute (BHPI) Hope this mail finds you well in this pandemic situation. My name is "Md. Wai Ulah Ch



Mellick, Dave <dmellick@craighospital.org>

2 Sept 2022, 19:20   

to me 

This message was sent securely using Zix®

Thank you for your interest in CHART-SF. Feel free to use it in your research.

Best of luck!

Dave

**Dave Mellick, PhD**

**Director Of Research Operations**

Co-Project Director, Rocky Mountain Regional Brain Injury System

Co-Project Director TBI Model Systems National Data and Statistical Center

Tel: 303.788.8563



[craighospital.org](http://craighospital.org)

## Appendix C: Information sheet and consent form [English Version]

### BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)

Department of Occupational Therapy

CRP-Chapain, Savar, Dhaka-1343, Tel: 02-7745464-5, 7741404, Fax: 02-7745069

Code no.: .....

#### **Participants Information sheet**

**Research Title:** “Level of Community Re-integration after Rehabilitation Services for patients with Guillain Barre Syndrome (GBS).”

**Researcher:** Md. Wali Ullah Chowdhury, 4<sup>th</sup>-year student of B.Sc. in Occupational Therapy, Session: 2017-2018, Bangladesh Health Professions Institute (BHPI), CRP-Savar, Dhaka-1343.

**Supervisor:** Md. Habibur Rahman, Lecturer in the Department of Occupational Therapy, Bangladesh Health Professions Institute (BHPI), CRP- Savar, Dhaka-1343.

**Place of research:** The study will be conducted in the community over face-to-face and mobile phones.

#### **Part -1 Information sheet:**

---

#### **Introduction:**

I am Md. Wali Ullah Chowdhury student of 4th year B.Sc. in Occupational Therapy, session (2017-2018) studying under the Medicine Faculty of Dhaka University in Bangladesh Health Professions Institute. To complete B.Sc. in Occupational Therapy from BHPI, conducting a research project is mandatory. This research project will be done under the supervision of Md. Habibur Rahman, Lecturer in Occupational Therapy. The purpose of the research project is the collection of data and how it will be related to the research and this will be presented to you in detail through this participant paper. if you are willing to participate in this research, in that case, a clear idea about the research topic will be easier for decision-making. Of course, you do not have to make sure you participate now. Before taking any decision, you can discuss it with your relatives, or guardians about this. On the other hand, after reading the information sheet if you feel a problem understanding the content or if you need to know more about something, you can freely ask.

#### **Research Background and Objectives:**

You are invited to be a part of this research because, in Bangladesh, there is no research on the long-term treatment of and community reintegration process for patients with GBS. It will be investigating the level of community functioning of individuals in the community. Your information will be helpful to reveal the level of community functioning of this population through your voluntary participation in this study.

#### **Let's Know about the topic related to participation in this research work:**

Before signing the consent form from you, the details of managing the research project will be presented to you in detail through this participation note. If you want to

participate in this study, you will have to agree to participate in the study. If you ensure participation, a copy of your consent will be given. After a representative of collection data till by the researcher will call you. At any given time taken from you by a question paper information will be collected. Your participation in this research project is optional. If you do not agree then you do not have to participate. Despite your consent, you can withdraw your participation at any time without giving any explanation to the researcher.

**The Benefits and risks of participation:**

You will not get any benefit directly to participate in this research project. Participation in this study can lead to many difficulties in your daily work. However, we are hopeful that the benefits direct from the results of this research will remove the disadvantages. 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:**

By signing this agreement, you are allowing the research staff to study this research project to collect and use your resources. Any information gathered for this research project, which can identify you, will be confidential. The information collected about you will be able to access this information directly. Symbolic ways identified data will be used for the next data analysis. Information sheets will be kept in a locker drawer. The Electronics versions of the data analysis will be collected in BHPI's Occupational Therapy department and on the research's laptop. It is expected that the results of this research project will be published and presented in different forums. In any publication and presentation, the information will be provided in such a way that you cannot be identified in any way without your consent. Data will be initially collected over phone.

**Information about promotional result:**

The result of this study will be published in various social media, websites, conference, discussion, and reviewed journals.

**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).

**Contact address with the researcher:**

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. Wali Ullah

Chowdhury, B.Sc. in Occupational Therapy, Department of Occupational Therapy and  
Contact number: 01642998512, Gmail: [Walimiraj.ot@gmail.com](mailto:Walimiraj.ot@gmail.com)

**Complaints:**

If there is any complaint regarding the conduct of this research project, contact with the Association of Ethics (77454645). This proposal has been reviewed by the institutional Reviewed Board (IRB), Bangladesh Health Professions Institute (BHPI), CRP, Savar, Dhaka-1343, Bangladesh, which is a committee whose task it is to make sure that research participants are protected from harm. If you wish to find about more about the IRB, contact Bangladesh Health Professions Institute (BHPI), CRP, Savar, Dhaka-1343, Bangladesh.

**Participant’s Withdrawal Form**  
**(Applicable only for voluntary withdrawal)**

Reason for withdrawal:

.....  
.....  
.....  
.....

Whether permission to previous information is used?

Yes/No

Participant’s Name:

**BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)**  
 Department of Occupational Therapy  
 CRP-Chapain, Savar, Dhaka-1343, Tel: 02-7745464-5, 7741404, Fax: 02-7745069

**Consent form**  
**(Please read out to the participant)**

Assalamualaikum. I am (Md. Wali Ullah Chowdhury), 4th Year B.Sc. in Occupational Therapy student, at Bangladesh Health Professions Institute (BHPI), affiliated to the University of Dhaka. To fulfill the requirement of a B.Sc. in Occupational therapy degree I have to do a research project. My research title is “(Level of Community Reintegration after Rehabilitation Services patients with Guillain Barre Syndrome (GBS).)” The purpose of this research is to find out the “Level of Community reintegration after Rehabilitation services for Patients with Guillain Barre Syndrome”. Data will be gathered over the phone. This will take approximately 10 – 15 minutes.

I am committed that the study will not harmful or risky for you. There is no payment for taking part in the study. All information provided by you will be treated as confidential and in the event of any report or publication, it will be ensured that the source of information remains confidential. Your participation in this study is voluntary and you may withdraw yourself at any time during this study without any negative consequences. You also have the right not to answer a particular question that you don't like or do not want during the interview.

If you have any queries about the study, you may contact with me (Md. Wali Ullah Chowdhury) or my supervisor Md. Habibur Rahman (Lecturer, Department of Occupational Therapy).

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

YES

NO

Signature & Date of Participant

Signature & Date of Researcher

.....

.....



## Appendix D: Information sheet and consent form [Bengali Version]

### বাংলাদেশ হেলথ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)

#### অকুপেশনাল থেরাপি বিভাগ

সিআরপি-চাপাইন, সাভার, ঢাকা ১৩৪৩ টেলিঃ০২-৭৭৪৫৪৬৪-৫, ৭৭৪১৪০৪, ফ্যাক্সঃ  
০২-৭৭৪৫০৬

কোড নংঃ

#### অংশগ্রহণকারীদের তথ্য এবং সম্মতিপত্র

**গবেষণার বিষয়ঃ** “গুইলেন ব্যারে সিনড্রোম (জিবিএস) রোগীদের পুনর্বাসন সেবার পরে সমাজে পুনরায় প্রতিষ্ঠিত হওয়ার স্তর কতটুকু। “

**গবেষকঃ** মোঃ ওয়ালী উল্লাহ চৌধুরী, বি. এস. সি ইন অকুপেশনাল থেরাপি (৪র্থ বর্ষ),  
সেশনঃ ২০১৭-২০১৮ বাংলাদেশ হেলথ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই),  
সিআরপি, সাভার, ঢাকা-১৩৪৩

**তত্ত্বাবধায়কঃ** মোঃ হাবিবুর রহমান, প্রভাষক, অকুপেশনাল থেরাপি বিভাগ, বাংলাদেশ  
হেলথ প্রফেশন্স ইনস্টিটিউট(বিএইচপিআই), সিআরপি, সাভার, ঢাকা-১৩৪৩

#### পর্ব-১ তথ্যপত্রঃ

আমি মোঃ ওয়ালী উল্লাহ চৌধুরী, ঢাকা বিশ্ববিদ্যালয়ে চিকিৎসা অনুষদের অধীনে বাংলাদেশ হেলথ প্রফেশন্স ইনস্টিটিউটে বি.এস.সি ইন অকুপেশনাল থেরাপি বিভাগের ৪র্থ বর্ষের ছাত্র হিসেবে (২০১৭-২০১৮) সেশনে অধ্যয়নরত আছি। বিএইচপিআই থেকে অকুপেশনাল থেরাপি বি.এস.সি শিক্ষা কার্যক্রমটি সম্পূর্ণ করার জন্য একটি গবেষণা প্রকল্প পরিচালনা করা বাধ্যতামূলক। এ গবেষণা প্রকল্পটি অকুপেশনাল থেরাপি বিভাগের প্রভাষক মোঃ হাবিবুর রহমান এর তত্ত্বাবধায়নে সম্পন্ন করা হবে। এ অংশগ্রহণকারী তথ্যপত্রের মাধ্যমে গবেষণার প্রকল্পটির উদ্দেশ্য, উপাত্ত সংগ্রহের প্রণালী গবেষণাটির সাথে সংশ্লিষ্ট বিষয়ে কিভাবে রক্ষিত হবে তা বিস্তারিত ভাবে আপনার কাছে উপস্থাপন করা হবে, যদি এই গবেষণায় অংশগ্রহণ করতে আপনি ইচ্ছুক থাকেন, সে ক্ষেত্রে এ গবেষণার সম্পৃক্ত বিষয় সম্পর্কে স্বচ্ছ ধারণা থাকলে সিদ্ধান্তগ্রহণ সহজতর হবে। অবশ্য এখন আপনার অংশগ্রহণ আমাদের নিশ্চিত করতে হবে না, যেকোনো সিদ্ধান্ত গ্রহণের পূর্বে, যদি চান আপনার আত্মীয়-স্বজন বন্ধু অথবা আস্থাভাজন যে কারো সাথে এই ব্যাপারে আলোচনা করে নিতে পারেন। অপরপক্ষে, অংশগ্রহণকারী তথ্যপত্রটি পড়ে, যদি কোনো বিষয়বস্তু বুঝতে সমস্যা হয় অথবা যদি কোন কিছু সম্পর্কে আরও বেশি জানা প্রয়োজন হয় তবে নির্দিষ্ট প্রশ্ন করতে পারেন।

### গবেষণার প্রেক্ষাপট ও উদ্দেশ্য:

আপনাকে এই গবেষণার অংশ হওয়ার জন্য আমন্ত্রণ জানানো হচ্ছে কারণ, বাংলাদেশে, জিবিএস রোগীদের জন্য দীর্ঘমেয়াদী চিকিৎসা এবং সমাজে পুনরায় প্রতিষ্ঠিত হওয়ার প্রক্রিয়া নিয়ে কোনো গবেষণা নেই। এটি জিবিএস রোগীদের সমাজে অংশগ্রহণের অবস্থা তদন্ত করা। আপনার কার্যকরী অংশগ্রহণ গবেষণার উদ্দেশ্য পূরণে সহায়তা করবে বলে আমরা আশাবাদী।

### এই গবেষণা কর্মটিকে অংশগ্রহণের সাথে সম্পৃক্ত বিষয় সমূহ কি সেই সম্পর্কে জানা যাক:

আপনার থেকে অনুমতি পত্রে স্বাক্ষর নেবার আগে, এই অংশগ্রহণকারী তথ্যপত্রের মাধ্যমে গবেষণা প্রকল্পটির পরিচালনা করার তথ্যসমূহ বিস্তারিত ভাবে আপনার কাছে উপস্থাপন করা হবে। আপনি যদি এই গবেষণায় অংশগ্রহণ করতে চান, তাহলে সম্মতিপত্রে আপনাকে স্বাক্ষর করতে হবে। আপনি যদি স্বাক্ষর জ্ঞান সম্পন্ন না হন বা অন্য কোনো কারণে স্বাক্ষর প্রদানের ব্যর্থ হন, সে ক্ষেত্রে আপনার কাছ থেকে একজন সাক্ষীর উপস্থিতিতে বৃদ্ধাঙ্গুলির ছাপ সম্মতি পত্রে নেওয়া হবে। আপনি অংশগ্রহণ নিশ্চিত করলে, আপনার সংরক্ষণের জন্য সম্মতিপত্রটির একটি অনুলিপি দিয়ে দেওয়া হবে। পরবর্তীতে গবেষক কর্তৃক গঠিত তথ্য-উপাত্ত একটি দলের প্রতিনিধি আপনার কাছে যাবে। আপনার থেকে চেয়ে নেওয়া যে কোন একটি নির্দিষ্ট সময়ে একটি প্রশ্নপত্রের মাধ্যমে তথ্য সংগ্রহ করা হবে। এই গবেষণার প্রকল্পে আপনার অংশগ্রহণ ঐচ্ছিক। যদি আপনি সম্মতি প্রদান না করেন তবে আপনাকে অংশগ্রহণ করতে হবে না। আপনি সম্মতি প্রদান করা সত্ত্বেও যে কোনো সময় গবেষককে কোন ব্যাখ্যা প্রদান করা ছাড়াই নিজের অংশগ্রহণ প্রত্যাহার করতে পারবেন।

### অংশগ্রহণ এর সুবিধা ঝুঁকিসমূহ কি?

গবেষণা প্রকল্পটিতে অংশগ্রহণের জন্য আপনি সরাসরি কোনো সুবিধা পাবেন না। এই গবেষণায় অংশগ্রহণে আপনার দৈনন্দিন কাজে সাময়িক অসুবিধার কারণ হতে পারে। তবে আমরা আশাবাদী যে, এ গবেষণার ফলাফল থেকে প্রাপ্ত উপকারিতা এই অসুবিধা কে অতিক্রম করবে। যে সমস্ত প্রশ্নের মাধ্যমে আপনার পরিচয় সম্পর্কে অন্যরা জানতে পারে সেই বিষয়ে উদ্বিগ্ন না হবার জন্য অনুরোধ করা হচ্ছে। অংশগ্রহণকারীর নাম, ঠিকানা উপাত্ত বিশ্লেষণের সফটওয়্যারে উল্লেখ না করে পরিচয় উন্মুক্ত হবার ঝুঁকি কমানো হবে।

### তথ্যের গোপনীয়তা কি নিশ্চিত থাকবে?

এ সম্মতি পত্রের স্বাক্ষর করার মধ্য দিয়ে, আপনি এই গবেষণা প্রকল্পের অধ্যয়নরত গবেষণা কর্মীকে আপনার ব্যক্তিগত তথ্য সংগ্রহ ও ব্যবহার করার অনুমতি দিয়েছেন। এই গবেষণা প্রকল্পের জন্য সংগৃহীত যেকোনো তথ্য, যা আপনাকে শনাক্ত করতে পারে তা গোপনীয় থাকবে। শুধুমাত্র এর সাথে সরাসরি সংশ্লিষ্ট গবেষক ও

তার তত্ত্বাবধায়ক এই তথ্যসমূহে প্রবেশাধিকার পাবেন। সাংকেতিক উপায়ে চিহ্নিত উপাত্ত সমূহ পরবর্তী উপাত্ত বিশ্লেষণের কাজে ব্যবহৃত হবে। তথ্য পত্রগুলো তালাবদ্ধ ড্রয়ার এ রাখা হবে। বিএইচপিআই এর অকুপেশনাল থেরাপি বিভাগে ও গবেষকের ব্যক্তিগত ল্যাপটপে উপাত্ত সমূহের ইলেকট্রনিক ভার্সন সংগৃহীত থাকবে। প্রত্যাশা করা হচ্ছে যে, এই গবেষণা প্রকল্পের ফলাফল বিভিন্ন ফোরামে প্রকাশিত এবং উপস্থাপিত হবে। যেকোনো ধরনের প্রকাশনা ও উপস্থাপনার ক্ষেত্রে তথ্যসমূহ এমন ভাবে সরবরাহ করা হবে, যেন আপনার সম্মতি ছাড়া আপনাকে কোনো ভাবেই সনাক্ত করা না যায়। তথ্য-উপাত্ত প্রাথমিকভাবে কাগজপত্র সংগ্রহ করা হবে।

### **ফলাফল প্রচার সম্পর্কিত তথ্য:**

এই গবেষণার ফলাফল বিভিন্ন সামাজিক মাধ্যম, ওয়েবসাইট, সম্মেলন, আলোচনা সভায় এবং পর্যালোচিত জার্নালে প্রকাশ করা হবে।

### **অংশগ্রহণকারীর পারিশ্রমিক:**

এই গবেষণায় অংশগ্রহণের জন্য কোন উদ্দীপনা ও পারিশ্রমিক দেওয়ার ব্যবস্থা নেই।

### **গবেষণা পরিচালনার ব্যয়কৃত অর্থের উৎস:**

এই গবেষণাটি খরচ সম্পূর্ণ গবেষকের নিজস্ব তহবিল থেকে ব্যয় করা হবে। এই গবেষণাটি ছোট পরিসরে করা হবে এবং এখানে কোন অর্থ বহিরাগত উৎস থেকে আসবে না।

### **অংশগ্রহণ থেকে প্রত্যাহার সম্পর্কিত তথ্যসমূহ:**

আপনি সম্মতি প্রদান করা সত্ত্বেও তথ্য দেওয়ার এক সপ্তাহের মধ্যে যে কোনো সময় গবেষককে কোনো ব্যাখ্যা প্রদান করা ছাড়াই নিজের অংশগ্রহণ প্রত্যাহার করতে পারবেন। বাতিল করার পর তথ্যসমূহ কি ব্যবহার করা যাবে কি যাবে না তার অনুমতি অংশগ্রহণকারীর প্রত্যাহারপত্রে (শুধুমাত্র স্বৈচ্ছায় প্রত্যাহারকারীর জন্য প্রযোজ্য) উল্লেখ করা থাকবে।

### **গবেষকের সাথে যোগাযোগের ঠিকানা:**

গবেষণা প্রকল্পটির বিষয়ে যোগাযোগ করতে চাইলে অথবা গবেষণা প্রকল্পটির সম্পর্কে কোন প্রশ্ন থাকলে, এখন অথবা পরবর্তীতে যেকোনো সময়ে তা জিজ্ঞাসা করা যাবে। সেক্ষেত্রে আপনি গবেষকের সাথে উল্লেখিত নাম্বারে (০১৬৪২৯৯৮৫১২, মোঃ ওয়ালী উল্লাহ) অথবা ইমেইলে ([walimiraj.ot@gmail.com](mailto:walimiraj.ot@gmail.com)) যোগাযোগ করতে পারেন।

### **অভিযোগ**

এই গবেষণা প্রকল্প পরিচালনা প্রসঙ্গে যে কোন অভিযোগ থাকলে প্রাতিষ্ঠানিক নৈতিকতা পরিষদের সাথে এই নাম্বারে (৭৭৪৫৪৬৪-৫) যোগাযোগ করবেন। এ গবেষণা প্রকল্প টি বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউট সাভারের প্রাতিষ্ঠানিক নৈতিকতা পরিষদ থেকে সিআরপি- বিএইচপিআই/ আইআরবি/১০/১৮/১২৩৪ পর্যালোচিত ও অনুমোদিত হয়েছে।

**অংশগ্রহণকারীর প্রত্যাহার পত্র**  
(শুধু মাত্র স্বেচ্ছায় প্রত্যাহারকারীর জন্য প্রযোজ্য)

অংশগ্রহণকারীর নাম: .....

প্রত্যাহার করার কারণ:

.....

.....

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পূর্ববর্তী তথ্য ব্যবহারের অনুমতি থাকবে কিনা?

হ্যাঁ/ না

অংশগ্রহণকারীর নাম:

অংশগ্রহণকারীর স্বাক্ষর:

তারিখ:

## সম্মতিপত্র

(যারা ইন্টারভিউতে অংশ নিচ্ছেন তাদের জন্য)

আসসালামু আলাইকুম,

আমি মোঃ ওয়ালী উল্লাহ চৌধুরী, ঢাকা বিশ্ববিদ্যালয়ে

চিকিৎসা অনুষদের অধীনে বাংলাদেশ হেলথ প্রফেশন্স ইনস্টিটিউটে বি.এস.সি ইন

অকুপেশনাল থেরাপি বিভাগের ৪র্থ বর্ষের একজন ছাত্র। আমার ব্যাচেলর ডিগ্রী পেতে, আমাকে একটি গবেষণা প্রকল্প পরিচালনা করতে হবে এবং এটি আমার অধ্যয়নের একটি অংশ। আমার গবেষণার শিরোনাম হলো “গুইলেন ব্যারে সিনড্রোম (জিবিএস) রোগীদের পুনর্বাসন সেবার পরে সমাজে পুনরায় প্রতিষ্ঠিত হওয়ার স্তর কতটুকু। “ 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। ফোনের মাধ্যমে তথ্যগুলো সংগ্রহ করা হবে এবং কথোপকথনের সময় হবে ১০-১৫ 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 স্বেচ্ছায় হবে। ডেটা সংগ্রহের এক সপ্তাহের মধ্যে যে কোন সময় আপনার সম্মতি প্রত্যাহার করার অধিকার থাকতে পারে। তবে ডেটা সংগ্রহ এক সপ্তাহের পরে প্রত্যাহার করতে পারবেন না।

এই গবেষণা সম্পর্কে আপনার কোন প্রশ্ন থাকলে, আপনি গবেষক মোঃ ওয়ালী উল্লাহ চৌধুরী, অথবা সুপারভাইজার মোঃ হাবিবুর রহমান (অকুপেশনাল থেরাপি বিভাগ, বিএইচপিআই, সিআরপি, সাভার, ঢাকা-১৩৪৩) এর সাথে যোগাযোগ করতে পারেন।

তথ্য প্রদান শুরু করার আগে আপনার কোন প্রশ্ন আছে?

হ্যাঁ       না

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

হ্যাঁ       না

অংশগ্রহণকারীর স্বাক্ষর এবং তারিখ: .....

তথ্য সংগ্রহের স্বাক্ষর এবং তারিখ: .....

**Appendix E: Demographic Question [ English and Bengali Version]**

Patient's ID Number:

**Sociodemographic Information**

Code:

Patient's Name ..... Data Collection Date.....

No	Information	Response of the Participants	Code No
1.1	Age(year)	..... Year	
1.2	Gender	Male .....	01
		Female .....	02
1.3	Educational Qualification	Illiterate .....	01
		Primary .....	02
		S.S.C.....	03
		H.S.C .....	04
		Bachelor .....	05
		Masters .....	06
		Others.....	07
1.4	District or (Present Place Of Residence)	Dhaka District.....	01
		Chattogram District.....	02
		Rajshahi District.....	03
		Khulna District.....	04
		Barishal District.....	05
		Shylet District.....	06
		Mymensingh District.....	07
		Rangpur District.....	08
		Immigrant.....	09
1.5	Living area	Urban.....	01
		Rural .....	02
		Semi-Urban.....	03
		Hill tracks.....	04
1.6	Year of disease attack	2018 (January-June) .....	01
		2018 (July-December) .....	02
		2019 (January-June) .....	03
		2019 (July-December) .....	04
		2020 (January-June) .....	05
		2020 (July-December) .....	06
		2021 (January-June) .....	07
		2021 (July-November) .....	08
1.7	Duration of Rehabilitation?	Less than 3 months .....	01
		4-8 months .....	02
		9-13 months .....	03
		14-18 months.....	04
		19-23 months .....	05
1.8	Types of GBS:	AMAN .....	01
		AMSAN .....	02
		AIDP .....	03
		MFS .....	04
1.9	Previous Occupation	Service Holder .....	01
		Businessman .....	02

		Housewife .....	03
		Student .....	04
		Teacher .....	05
		Labor .....	06
		Farmer .....	07
		Unemployed .....	08
		Others .....	09
1.10	Present Occupation	Service Holder .....	01
		Businessman .....	02
		Housewife .....	03
		Student .....	04
		Teacher .....	05
		Labor .....	06
		Farmer .....	07
		Unemployed .....	08
		Others .....	09
		Previous Occupation	10
		New Occupation	11
1.11	Complications:	muscle weakness .....	01
		joint pain .....	02
		back pain .....	03
		respiratory problems .....	04
		pressure sore .....	05
		fatigue .....	06
		residual numbness or other sensations	07
		heart and blood pressure problem ...	08
		limitation in upper limb .....	09
		limitation in lower limbs .....	10
		Atrophy .....	11
		Others.....	12
1.12	Assistive Device:	Wheelchair .....	01
		Walking frame .....	02
		Crutch .....	03
		Walking frame .....	04
		Walking stick .....	05
		AFO .....	06
		None .....	07
		Splint	08
1.13	During Device Use	Less than 6 months .....	01
		Less than 1 year .....	02
		1 year .....	03
		2 years .....	04
		3 years .....	05
1.14	Was infected with Covid-19?	Yes .....	01
		No .....	02

## Bengali Version

রোগীর আইডি নম্বর:

জনসংখ্যা সংক্রান্ত তথ্য

কোড: রোগীর নাম: .....

তথ্য

সংগ্রহের তারিখ: .....

ক্রমিক নং	প্রশ্নসমূহ	অংশগ্রহণকারীর মতামত	কোড নং
১.১	বয়স (বছর)	..... বছর	
১.২	লিঙ্গ	পুরুষ .....	০১
		মহিলা .....	০২
১.৩	শিক্ষাগত যোগ্যতা	নিরক্ষর .....	০১
		প্রাইমারী .....	০২
		এস এস সি.....	০৩
		এইস এস সি .....	০৪
		স্নাতক পাশ .....	০৫
		স্নাতকোত্তর .....	০৬
		অন্যান্য.....	০৭
১.৪	বিভাগ বা (বর্তমান বসবাসের স্থান)	ঢাকা বিভাগ.....	০১
		চট্টগ্রাম	০২
		বিভাগ.....	০৩
		রাজশাহী	০৪
		বিভাগ.....	০৫
		খুলনা	০৬
		বিভাগ.....	০৭
		বরিশাল	০৮
		বিভাগ.....	০৯
		সিলেট	
		বিভাগ.....	
		ময়মনসিংহ বিভাগ.....	
		রংপুর বিভাগ.....	
		প্রবাসী.....	
১.৫	বসবাসের জায়গা	শহর.....	০১
		গ্রাম .....	০২
		উপশহর.....	০৩
		পার্বত্য	০৪
		অঞ্চল.....	
১.৬	রোগে আক্রান্তের বছর	২০১৮ (জানুয়ারী – জুন) .....	০১
		২০১৮ (জুলাই-ডিসেম্বর) .....	০২
		২০১৯ (জানুয়ারী – জুন) .....	০৩
		২০১৯ (জুলাই-ডিসেম্বর) .....	০৪
		২০২০ (জানুয়ারী – জুন) .....	০৫
		২০২০ (জুলাই-ডিসেম্বর) .....	০৬



		২০২১ (জানুয়ারী – জুন) .....	০৭
		২০২১ (জুলাই – নভেম্বর) .....	০৮
১.৭	কত সময় লেগেছে পূর্নবাসনে ?	৩ মাসের কম সময় .....	০১
		৪-৮ মাস .....	০২
		৯-১৩ মাস .....	০৩
		১৪-১৮ মাস .....	০৪
		১৯-২৩ মাস .....	০৫
১.৮	রোগে আক্রান্তের প্রকারঃ	AMAN .....	০১
		AMSAN .....	০২
		AIDP .....	০৩
		MFS .....	০৪
১.৯	পূর্ববর্তী পেশাঃ	চাকুরীজীবী .....	০১
		ব্যবসায়ী .....	০২
		গৃহিণী .....	০৩
		ছাত্র/ ছাত্রী .....	০৪
		শিক্ষক .....	০৫
		শ্রমিক .....	০৬
		কৃষক .....	০৭
		বেকার .....	০৮
		অন্যান্য .....	০৯
১.১০	বর্তমান পেশা	চাকুরীজীবী .....	০১
		ব্যবসায়ী .....	০২
		গৃহিণী .....	০৩
		ছাত্র/ ছাত্রী .....	০৪
		শিক্ষক .....	০৫
		শ্রমিক .....	০৬
		কৃষক .....	০৭
		বেকার .....	০৮
		অন্যান্য .....	০৯
১.১১	রোগের জটিলতাঃ	muscle weakness .....	০১
		joint pain .....	০২
		back pain .....	০৩
		respiratory problems .....	০৪
		pressure sore .....	০৫
		fatigue .....	০৬
		residual numbness or other sensations .....	০৭
		heart and blood pressure problem .....	০৮
		limitation in upper limb .....	০৯
		limitation in lower limbs .....	১০
		Atrophy .....	১১
		Others.....	১২
		.....	

১.১২	সহায়ক ডিভাইস	Wheelchair .....	০১
		Walking frame .....	০২
		Crutch .....	০৩
		Walking frame .....	০৪
		Walking stick .....	০৫
		AFO .....	০৬
		None .....	০৭
১.১৩	ডিভাইস ব্যবহার এর সময়	৬ মাসের কম .....	০১
		১ বছর এর কম .....	০২
		১ বছর .....	০৩
		২ বছর .....	০৪
		৩ বছর .....	০৫
১.১৪	কোভিড ১৯ এ আক্রান্ত হয়েছিলো কিনা ?	হ্যাঁ .....	০১
		না .....	০২

## Appendix F: Questionnaire [ English and Bengali Version]

### Craig Handicap Assessment and Reporting Technique Scoring Short Form

<p>1. How many hours in a typical 24-hour day do you have someone with you to provide physical assistance for personal care activities such as eating, bathing, dressing, toileting and mobility?</p> <p>_____ hours paid assistance    _____ hours unpaid (family, others)</p>	<p>A. Total the hours of paid and unpaid care; multiply by 4, and subtract that number from 100.</p>	<p><b>PHYSICAL INDEPENDENCE</b> 100 minus _____ =</p>	
<input type="text"/>			
<p>2. How much time is someone with you in your home to assist you with activities that require remembering, decision making, or judgment?</p> <p>1 _____ Someone else is always with me to observe or supervise. 2 _____ Someone else is always around, but they only check on me now and then. 3 _____ Sometimes I am left alone for an hour or two. 4 _____ Sometimes I am left alone for most of the day. 5 _____ I have been left alone all day and all night, but someone checks in on me. 6 _____ I am left alone without anyone checking on me.</p>	<p>A. Assign points as follows: response #1 = 0 points; response #2 = 1 point; response #3 = 2 points; response #4 = 3 points; response #5 = 4 points; and response #6 = 5 points.</p>	<p><b>COGNITIVE INDEPENDENCE</b> _____ x11</p>	
<p>3. How much of the time is someone with you to help you with remembering, decision making, or judgment when you go away from your home?</p> <p>1 _____ I am restricted from leaving, even with someone else. 2 _____ Someone is always with me to help with remembering, decision making or judgment when I go anywhere. 3 _____ I go to places on my own as long as they are familiar. 4 _____ I do not need help going anywhere.</p>	<p>C. Assign points as follows: response #1 = 0 points; response #2 = 1 point; response #3 = 2 points; and response #4 = 3 points.</p>	<p>= _____ x15</p>	
<p>B. Multiply points in "A" by 11.</p>	<p>=</p>	<p>+</p>	
<p>D. Multiply points in "C" by 15.</p>	<p>=</p>	<p>+</p>	
<p>Add the sums of "B" and "D". If the total sum is greater than 100, enter 100.</p>			<p>=</p>
<input type="text"/>			
<p>4. On a <u>typical day</u>, how many hours are you out of bed? _____ hours.</p>	<p>A. Multiply the number of hours out of bed by 3.</p>	<p><b>MOBILITY</b> _____ +</p>	
<p>5. In a typical <u>week</u>, how many days do you get out of your house and go somewhere? _____ days.</p>	<p>B. Multiply the number of days per week out of the house by 7.</p>	<p>_____ +</p>	
<p>6. In the last <u>year</u>, how many nights have you spent away from your home (excluding hospitalizations)? _____ none    _____ 1-2    _____ 3-4    _____ 5 or more</p>	<p>C. Assign points as follows: no nights out = 0; 1-2 nights out = 10; 3-4 nights out = 15; 5 or more nights = 20. If the total sum is greater than 100, enter 100.</p>	<p>_____ +</p>	
<p>Add the sums of "A", "B", and "C". If the total sum is greater than 100, enter 100.</p>	<p>=</p>	<p>_____ +</p>	
<input type="text"/>			
<p>7. How many hours per week do you spend working in a job for which you get paid? _____ hours</p>	<p>A. Multiply the number of hours working by 2.5.</p>	<p><b>OCCUPATION</b> _____ +</p>	
<p>8. How many hours per week do you spend in school working toward a degree or in an accredited technical training program (including hours in class and studying)? _____ hours</p>	<p>B. Multiply the number of hours in school by 2.5.</p>	<p>_____ +</p>	
<p>9. How many hours per week do you spend in active homemaking including parenting, housekeeping, and food preparation? _____ hours</p>	<p>C. Multiply the number of hours in active homemaking by 2.5.</p>	<p>_____ +</p>	
<p>10. How many hours per week do you spend in home maintenance activities such as gardening, house repairs or home improvement? _____ hours</p>	<p>D. Multiply the number of hours in home maintenance by 2.5.</p>	<p>_____ +</p>	
<p>11. How many hours per week do you spend in recreational activities such as sports, exercise, playing cards, or going to movies? Please do not include time spent watching TV or listening to the radio. _____ hours</p>	<p>E. Multiply the number of recreational activities by 1.25</p>	<p>_____ +</p>	
<p>Add the sums of "A", "B", "C", "D", and "E". If the total sum is greater than 100, enter 100.</p>	<p>=</p>	<p>_____ +</p>	
<input type="text"/>			

		<b>SOCIAL INTEGRATION</b>
12. How many people do you live with?	A. Assign 38 points if living with spouse/partner <u>OR</u> assign 25 points if living with unrelated roommate and/or an attendant.	_____
13. Is one of them your spouse or significant other?		+
14. of the people you live with how many (others) are relatives?	Add an additional six points for every relative that lives in the household.	_____
15. How many business or organizational associates do you visit, phone, or write to at least once a month? _____ Associates	B. Multiply number of business associates by 2.5. A maximum score for this component is 25 points.	+
16. How many friends (non-relatives contacted outside business or organizational settings) do you visit, phone, or write to at least once a month? _____ Friends	C. _____ Multiply by 13. A Maximum score for this component is 65 points.	_____
17. With how many strangers have you initiated a conversation in the last month (for example, to ask information or place an order)?  none ___ 1-2 ___ 3-5 ___ 6 or more	D. Assign points as follows: none = 0 points; 1-2 = 15 points; 3-5 = 23 points; 6 or more = 30 points.	_____
		=
Add the sums from "A", "B", "C", and "D". If the total sum is greater than 100, enter 100.		

		<b>ECONOMIC SELF SUFFICIENCY</b>
<p>18. Approximately what was the combined annual income, in the last year, of <b>all family members in your household?</b> (consider all sources including wages and earnings, disability benefits, pensions and retirement income, income from court settlements, investments and trust funds, child support and alimony, contributions from relatives, and any other source.)</p> <p>a. Less than 25,000 - if no ask e; if yes ask b            b. Less than 20,000 - if no code 22500; if yes ask c            c. Less than 15,000 - if no code 17500; if yes ask d            d. Less than 10,000 - if no code 12500; if yes code 5000            e. Less than 35,000 - if no ask f; if yes code 30000            f. Less than 50,000 - if no ask g; if yes code 42500            g. Less than 75,000 - if no code h; if yes code 62500            h. 75,000 or more code 80000</p>	<p>A. Calculate family size by adding respondent, plus partner (if living with respondent), plus other relatives in household.</p>	<hr style="width: 100px; margin: 0 auto;"/> Family size  <hr style="width: 100px; margin: 0 auto;"/> (#19) minus  <hr style="width: 100px; margin: 0 auto;"/>
<p>19. Approximately how much did you pay last year for medical care expenses? (Consider any amounts paid by yourself or the family members in your household and <b>not reimbursed</b> by insurance or benefits.)</p> <p>a. Less than 1000 if "no" ask b if "yes" code 500.            b. Less than 2500 if "no" ask c if "yes" code 1750.            c. Less than 5000 if "no" ask d if "yes" code 3750.            d. Less than 10000 if "no" code e if "yes" code 7500.            e. 10000 or more code 15000</p>	<p>B. Subtract the unreimbursed medical expenses from the annual income (amount in question #19 minus amount in question #20).</p> <p>C. Determine poverty level from family size calculated in "A".</p> <p>D. Divide the value from "B" by the poverty level from "C".</p> <p>E. Multiply by 50</p> <p>If the total sum is greater than 100, enter 100.</p>	<hr style="width: 100px; margin: 0 auto;"/> (#20)  =  <hr style="width: 100px; margin: 0 auto;"/> divided by  <hr style="width: 100px; margin: 0 auto;"/> Poverty level  *50 =  <hr style="width: 100px; margin: 0 auto;"/> =  <div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div>

Bengali versionক্রেগ হ্যালিক্যাপ অ্যাসেসমেন্ট এবং রিপোর্টিং টেকনিক শর্ট ফর্ম

১। একটি সাধারণ ২৪ ঘন্টা দিনে কত ঘন্টা আপনার সাথে কেউ থাকে ব্যক্তিগত যত্নের কার্যক্রমগুলো করার জন্য? যেমনঃ খাওয়া, গোসল, ড্রেসিং, টয়লেটিং এবং চলাফেরার জন্য শারীরিক সহায়তা প্রদান।

\_\_\_\_\_ ঘন্টা পরিশোধ করা সহায়তার জন্য

\_\_\_\_\_ ঘন্টা অবৈতনিক (পরিবার, অন্যান্য)।

ফিজিক্যাল ইন্ডিপেন্ডেন্স (শারীরিক সক্ষমতা)

ক) পেইড এবং আনপেইড যত্নের মোট ঘন্টা ৪ দ্বারা গুণ করুন এবং সেই সংখ্যাটি ১০০থেকে বিয়োগ করুন।

$$( \quad + \quad ) \times 8 = \boxed{\quad}$$

$$100 - \boxed{\quad} =$$

২। মনে রাখা, সিদ্ধান্ত নেওয়া বা বিচার বিবেচনার প্রয়োজন হয় এমন কাজগুলিতে

আপনাকে সহায়তা করার জন্য আপনার বাড়িতে আপনার সাথে কেউ কত সময় থাকে ?

- I. \_\_\_\_\_ পর্যবেক্ষণ বা তদারকি করার জন্য অন্য কেউ সবসময় আমার সাথে থাকে।
- II. \_\_\_\_\_ অন্য কেউ সর্বদা আশেপাশে থাকে, কিন্তু তারা কেবল আমাকেই তদারকি করেন
- III. \_\_\_\_\_ মাঝে মাঝে আমি এক বা দুই ঘণ্টা একা থাকি।
- IV. \_\_\_\_\_ কখনো কখনো আমি দিনের বেশির ভাগ সময় একা থাকি।
- V. \_\_\_\_\_ আমি সারাদিন এবং সারারাত একা থাকি, কিন্তু কেউ কেউ আমার খোজখবর নেই (দেখেতে আসে)
- VI. \_\_\_\_\_ কেউ আমাকে খোজ নেই না, আমি একাই থাকি।

। আপনি আপনার বাড়ির কাছ থেকে দুরে যাবার সময় কোন কিছু স্মরণ করতে, সিদ্ধান্ত নিতে বা কিছু বিচার বিবেচনা করতে আপনাকে সাহায্য করার জন্য আপনার সাথে কত সময় কেউ থাকেন ?

- I. \_\_\_\_\_ আমি অন্য কারো সাথেও বাসা থেকে দুরে কোথাও যেতে পারি না  
।

কগনিটিভ ইন্ডিপেন্ডেন্স (জ্ঞান ভিত্তিক সক্ষমতা)

ক) নিম্নরূপ পয়েন্টগুলি বরাদ্দ করুনঃ

উত্তর ১ = ০ পয়েন্ট

উত্তর ২ = ১ পয়েন্ট

উত্তর ৩ = ২ পয়েন্ট

উত্তর ৪ = ৩ পয়েন্ট

উত্তর ৫ = ৪ পয়েন্ট

উত্তর ৬ = ৫ পয়েন্ট

খ) ১১ দ্বারা “ক” এর পয়েন্ট গুণ করুন

\_\_\_\_\_ X ১১ =

গ) নিম্নরূপ পয়েন্টগুলি বরাদ্দ করুনঃ

উত্তর ১ = ০ পয়েন্ট

উত্তর ২ = ১ পয়েন্ট

উত্তর ৩ = ২ পয়েন্ট

উত্তর ৪ = ৩ পয়েন্ট

ঘ। ১৫ দ্বারা “গ” এর পয়েন্ট গুণ করুন

\_\_\_\_\_ X ১৫ =

“খ” এবং “ঘ” এর নম্বর যোগ করুন। যদি মোট যোগফল ১০০ অপেক্ষা বেশি হয় তবে, ১০০ লিখুন।

- II. \_\_\_\_\_ কোন কিছু স্মরণ করতে , সিদ্ধান্ত নিতে বা কিছু বিচার বিবেচনা করতে আমাকে সাহায্য করার জন্য সবসময়ই আমার সাথে কেউ থাকেন ।
- III. \_\_\_\_\_ আমি নিজের পরিচিত জায়গায় একাই যাই ।
- IV. \_\_\_\_\_ আমার কোথাও যেতে সাহায্য প্রয়োজন হয় না ।

৪। একটি সাধারণ দিনে, আপনি কত ঘন্টা বিছানা থেকে বাহিরে থাকেন ?

\_\_\_\_\_ ঘন্টা

৫। একটি সাধারণ সপ্তাহে, আপনি বাড়ির বাইরে কত দিন থাকেন এবং কোথাও যান?

\_\_\_\_\_ দিন ।

৬। গত বছরে, আপনি আপনার বাড়ি থেকে কত রাত দূরে কাটিয়েছেন (হাসপাতালে ভর্তি ব্যতীত?)

- \_\_\_\_\_ একদিনও না  
 \_\_\_\_\_ ১-২ দিন  
 \_\_\_\_\_ ৩-৪ দিন  
 \_\_\_\_\_ ৫ দিন বা তার বেশি

৭। আপনি প্রতি সপ্তাহে কত ঘন্টা কাজ করেন যে কাজের জন্য আপনি বেতন পান?

\_\_\_\_\_ ঘন্টা

৮। আপনি প্রতি সপ্তাহে কত ঘন্টা স্কুলে একটি ডিগ্রী বা একটি স্বীকৃত প্রযুক্তিগত প্রশিক্ষণ

$$( \quad + \quad ) =$$

### মোবিলিটি

ক। বিছানা থেকে বাহিরে থাকার ঘন্টা গুণ ৩

$$( \quad \times 3 ) =$$

খ। প্রতি সপ্তাহে বাড়ির বাইরে থাকা দিনের সংখ্যা গুণ ৭

$$( \quad \times 7 ) =$$

গ। নিম্নরূপ পয়েন্টগুলো বরাদ্দ করুন:

এক রাতও বাহিরে থাকেন নি = ০

১-২ রাত বাহিরে = ১০

৩-৪ রাত বাহিরে = ১৫

৫ বা তার বেশি রাত বাহিরে = ২০

“ক” “খ” এবং “গ” এর যোগফল লিখুন । মোট যোগফল

১০০ এর বেশী হলে ১০০ লিখুন।

$$( \quad + \quad + \quad ) =$$

### পেশা

ক) কাজের সময় ২.৫ দ্বারা গুণ করুন

$$( \quad \times 2.5 ) =$$



প্রোগ্রামে (ক্লাস এবং অধ্যয়নের সময় সহ) কাজ করেন?

\_\_\_\_\_ ঘন্টা

৯। প্রতি সপ্তাহে কত ঘন্টা আপনি প্যারেন্টিং, গৃহস্থালি, এবং খাদ্য প্রস্তুত সহ সক্রিয়ভাবে গৃহস্থালির কাজে ব্যয় করেন?

\_\_\_\_\_ ঘন্টা

১০। আপনি প্রতি সপ্তাহে কত ঘন্টা বাড়ির রক্ষণাবেক্ষণের কাজে ব্যয় করেন? (যেমন বাগান করা, বাড়ি মেরামত বা বাড়ির উন্নতি করা)

\_\_\_\_\_ ঘন্টা

১১। আপনি প্রতি সপ্তাহে কত ঘন্টা বিনোদনমূলক ক্রিয়াকলাপ যেমনঃ খেলাধুলা, ব্যায়াম, তাস বা সিনেমা দেখতে ব্যয় করেন? (অনুগ্রহ করে টিভি দেখার বা রেডিও শোনার সময় অন্তর্ভুক্ত করবেন না।)

\_\_\_\_\_ ঘন্টা

খ) স্কুলের সময় ২.৫ দ্বারা গুণ করুন

$$( \quad \quad \quad \times 2.5) =$$

গ) গৃহস্থালির কাজের সময় ২.৫ দ্বারা গুণ করুন

$$( \quad \quad \quad \times 2.5) =$$

ঘ) বাড়ির রক্ষণাবেক্ষণের সময়কে ২.৫ দ্বারা গুণ করুন

$$( \quad \quad \quad \times 2.5) =$$

ঙ) বিনোদনের কাজের সংখ্যা ১.২৫ দ্বারা গুণ করুন

$$( \quad \quad \quad \times 1.25) =$$

ক খ গ ঘ ঙ এর গুণফল যোগ করুন

মোট যোগফল ১০০ এর বেশি হলে ১০০ লিখুন.

$$( \quad + \quad + \quad + \quad + \quad ) =$$

১২। আপনি কতজন মানুষের সাথে বাস করেন?  
\_\_\_\_\_

১৩। তাদের মধ্যে একজন কি আপনার পত্নী নাকি উল্লেখযোগ্য অন্য কেউ?  
\_\_\_\_\_

১৪। আপনি যাদের সাথে থাকেন তাদের মধ্যে কতজন আপনার আত্মীয়?  
\_\_\_\_\_

১৫। আপনি মাসে অন্তত একবার কতজন ব্যবসায়িক বা সাংগঠনিক সহযোগীদের সাথে দেখা করেন, ফোন করেন বা চিঠি দেন?  
\_\_\_\_\_

সহযোগী

১৬। আপনি কতজন বন্ধু (অনাত্মীয় ব্যবসায়িক বা সাংগঠনিক সেটিংস এর বাইরে যোগাযোগ করেছেন) মাসে অন্তত একবার দেখা করেন, ফোন করেন বা চিঠি লিখেন?  
\_\_\_\_\_

বন্ধুদের

### সোশ্যাল ইন্টিগ্রেশন

ক) যদি পত্নী বা সঙ্গী এর সাথে থাকে ৩৮ পয়েন্ট দিন  
অথবা

যদি সম্পর্কহীন রুমমেট এবং/অথবা একজন  
পরিচারকের সাথে থাকে ২৫ পয়েন্ট দিন

পরিবারে বসবাসকারী প্রত্যেক আত্মীয়ের জন্য অতিরিক্ত  
৬ পয়েন্ট যোগ করুন।

খ) ব্যবসায়িক সহযোগীদের সংখ্যা ২.৫ দ্বারা গুণ করুন।  
সর্বোচ্চ স্কোর এই কম্পোনেন্ট এর জন্য ২৫।

( \_\_\_\_\_ X ২.৫)=

গ) ১৩ দ্বারা গুণ করুন।

\_\_\_\_\_ X ১৩ =

সর্বোচ্চ স্কোর এই কম্পোনেন্ট এর জন্য ৬৫।

১৭। গত মাসে কতজন অপরিচিত ব্যক্তির সাথে আপনি একটি কথোপকথন নিজে থেকে শুরু করেছেন ( উদাহরণস্বরূপ তত্ত্ব জিজ্ঞাসা করতে বা অর্ডার দেওয়ার জন্য )

\_\_\_\_\_ একজনও না  
 \_\_\_\_\_ ১-২ জন  
 \_\_\_\_\_ ৩-৫ জন  
 \_\_\_\_\_ ৬ বা তার বেশি

ঘ) নিম্নরূপ পয়েন্টগুলি বরাদ্দ করুন ঃ

কেউ না = ০ পয়েন্ট

১-২ জন = ১৫ পয়েন্ট

৩-৫ জন = ২৩ পয়েন্ট

৬ অথবা অধিক = ৩০ পয়েন্ট

ক, খ, গ, ঘ যোগ করুন। যদি মোট যোগফল ১০০ এর বেশী হলে ১০০ লিখুন।

$$\left( \quad + \quad + \quad + \quad \right) =$$

১৮। গত বছরে আপনার পরিবারের সকল সদস্যের সম্মিলিত বার্ষিক আয় প্রায় কত ছিল? (মজুরি এবং উপার্জন, প্রতিবন্ধী ভাতা, পেনশন এবং অবসরকালীন আয়, আদালতে নিষ্পত্তি থেকে আয়, বিনিয়োগ এবং ট্রাস্ট তহবিল, শিশু সহায়তা এবং ভরণপোষণ, আত্মীয়দের কাছ থেকে অনুদান এবং অন্য কোন উৎস সহ সমস্ত উৎস বিবেচনা করুন। )

- ক) ২৫০০০ এর কম - যদি না হয় জিজ্ঞাসা করুন ও যদি হ্যাঁ হয় জিজ্ঞাসা করুন খ।  
 খ) ২০০০০ এর কম- যদি না হয় কোড ২২৫০০। যদি হ্যাঁ হয় গ জিজ্ঞাসা করুন।  
 গ) ১৫০০০ এর কম - যদি না হয় কোড ১৭৫০০; যদি হ্যাঁ হয় ঘ জিজ্ঞাসা করুন  
 ঘ) ১০০০০ এর কম - যদি না হয় ১২৫০০; যদি হ্যাঁ হয় কোড ৫০০০

ইকোনোমিক সেলফ সাফিসিয়েন্সি

ক) মাসিক বেতন X ১২ =

খ) বার্ষিক আয়

ডলার রেট

গ)

- ঙ) ৩৫০০০ এর কম- যদি না হয় চ জিজ্ঞাসা করুন; যদি হ্যাঁ হয় কোড ৩০০০০  
 চ) ৫০০০০ এর কম - যদি না হয় ছ জিজ্ঞাসা করুন; যদি হ্যাঁ হয় কোড ৪২৫০০  
 ছ) ৭৫০০০ এর কম - যদি না হয় জ জিজ্ঞাসা করুন; যদি হ্যাঁ হয় কোড ৬২৫০০  
 জ) ৭৫০০০ বা তার বেশি - কোড ৮০০০০

$$\frac{\quad}{1050} =$$

ঘ)  $\frac{\quad}{\quad} \times 50 =$

১৯। চিকিৎসা সেবার খরচের জন্য আপনি গত বছর আনুমানিক কত টাকা দিয়েছিলেন? (আপনার বা আপনার পরিবারের সদস্যদের দ্বারা প্রদত্ত যে কোন পরিমাণ বিবেচনা করুন এবং বীমা বা সুবিধা দ্বারা পরিশোধ করা হয় না।)

- ক) ১০০০ এর কম - না হলে খ জিজ্ঞাসা করুন। যদি হ্যাঁ হয় কোড ৫০০  
 খ) ২৫০০ এর কম - না হলে গ জিজ্ঞাসা করুন। যদি হ্যাঁ হয় কোড ১৭৫০  
 গ) ৫০০০ এর কম - না হলে ঘ জিজ্ঞাসা করুন। যদি হ্যাঁ হয় কোড ৩৭৫০।  
 ঘ) ১০০০০ এর কম - না হলে ঙ জিজ্ঞাসা করুন। যদি হ্যাঁ হয় ৭৫০০  
 ঙ) ১০০০০ অথবা তার বেশি হলে কোড ১৫০০০

## Appendix G: Permission Letter from CRP-Savar

17<sup>th</sup> October 2022

To

Head of the Department  
Occupational Therapy Department  
Centre for the Rehabilitation of the Paralyzed (CRP)  
Chapain, Savar, Dhaka-1343, Bangladesh.

**Subject:** Prayer for permission to collect data from Occupational Therapy Neurology Unit.

Sir,

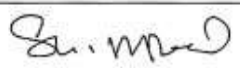

With due respect, my name is "Md. Wali Ullah Chowdhury", 4<sup>th</sup> Year student, Department of Occupational Therapy, Bangladesh Health Professions Institute (BHPI), the academic institute of the Centre for the Rehabilitation of the Paralyzed (CRP). My thesis title is "Level of Community Re-integration after Rehabilitation Services for Patients with Guillain Barre Syndrome (GBS)". The aim of the study is to find out the Level of Community Re-integration after Rehabilitation Services for Guillain Barre Syndrome (GBS) patients. This thesis is for the fulfilment of the requirements for the subject RESEARCH 2 and 3 and partial fulfilment of the requirements for the degree: Bachelor of Science in Occupational Therapy. I am seeking permission to start my data collection from the Occupational Therapy Neurology unit database. I would like to assure you that the data will not share with anyone and I will maintain confidentiality.

So, I, therefore, pray and hope that you would be kind enough to grant me permission for collecting data from the Occupational therapy Neurology unit database and oblige thereby.

Sincerely yours,

*Md. Wali Ullah Chowdhury*

Md. Wali Ullah Chowdhury  
Roll: 34 Session: 2017-18  
4<sup>th</sup> year, B.Sc. in Occupation Therapy  
Bangladesh Health Professions Institute (BHPI)  
CRP, Chapain, Savar, Dhaka-1343, Bangladesh.

Head of the Department	Comments & Signature
<b>Sk. Moniruzzaman</b> Associate Professor & Head Department of Occupational Therapy, Bangladesh Health Professions Institute (BHPI), CRP, Savar, Dhaka-1343	 17.10.2022
<b>Md. Julker Nayan</b> Consultant & Head of Occupational Therapy Department Centre for the Rehabilitation of the Paralyzed (CRP), Savar, Dhaka-1343	Permitted  17.10.22

## Appendix H: Permission Letter from CRP-Mirpur

16<sup>th</sup> November 2022

To

The Executive Director

Centre for the Rehabilitation of the Paralysed (CRP)

**Subject:** Prayer for permission to collect data from CRP-Mirpur

Sir,

With due respect, my name is "Md. Wali Ullah Chowdhury", 4<sup>th</sup> Year student, Department of Occupational Therapy, Bangladesh Health Professions Institute (BHPI), the academic institute of the Centre for the Rehabilitation of the Paralysed (CRP). My thesis title is "Level of Community Re-integration after Rehabilitation Services for Patients with Guillain Barre Syndrome (GBS)". The aim of the study is to find out the Level of Community Re-integration after Rehabilitation Services for Guillain Barre Syndrome (GBS) patients. This thesis is for the fulfilment of the requirements for the subject RESEARCH 2 and 3 and partial fulfilment of the requirements for the degree: Bachelor of Science in Occupational Therapy. I am seeking permission to start my data collection from the CRP-Mirpur, Occupational Therapy Neurology unit database. I would like to assure you that the data will not share with anyone and I will maintain confidentiality.

So, I, therefore, pray and hope that you would be kind enough to grant me permission for collecting data from the CRP-Mirpur Occupational therapy Neurology unit database and oblige thereby.

Sincerely yours,

*Md. Wali Ullah Chowdhury*


Md. Wali Ullah Chowdhury

Roll: 34 Session: 2017-18

4<sup>th</sup> year, B.Sc. in Occupation Therapy

Bangladesh Health Professions Institute (BHPI)

CRP, Chapain, Savar, Dhaka-1343, Bangladesh.

Head of the Department	Comments & Signature
<b>Sk. Moniruzzaman</b> Associate Professor & Head Department of Occupational Therapy, Bangladesh Health Professions Institute (BHPI), CRP, Savar, Dhaka-1343	<i>Forwarded for your consideration            and permission for data collection            to conduct his research.</i> <i>Sk. Moniruzzaman</i> <i>16/11/2022</i>
<b>Dr. Mohammad Sohrab Hossain</b> Executive Director Centre for the Rehabilitation of the Paralysed (CRP)	<i>Approved.</i>  <b>Dr. Mohammad Sohrab Hossain</b> Executive Director, CRP

*OT Dept Head  
 for necessary cooperation  
 Dhaka -*

## Appendix H: Supervision record sheet

Bangladesh Health Professions Institute  
Department of Occupational Therapy  
4<sup>th</sup> 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: "Level of Community Re-integration after Rehabilitation Services for Patients with Guillain Barre Syndrome (GBS)"

Name of student: Md. Wali Ullah Chowdhury

Name and designation of thesis supervisor: Md. Habibur Rahman, Lecturer, Department of Occupational Therapy, BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Appointment No	Date	Place	Topic of discussion	Duration (Minutes/Hours)	Comments of student	Student's signature	Thesis supervisor signature
1	24.08.2022	Teacher's room	Study title, aim, objectives, discussion	30 min		Md. Wali Ullah	
2	25.08.2022	Online	Research Proposal Acceptance feedback	1 hour		Md. Wali Ullah	
3	27.08.2022	BHPI Teacher's room	Scale selection	30 min		Md. Wali Ullah	

4	09.09.2022	Online	Research Proposal draft feedback	30 min		Md. Wali Ullah	
5	22.09.2022	Online	Aim, objectives, set	15 min		Md. Wali Ullah	
6	31.09.2022	BHPI Teacher's room	Author communication discussion	15 min		Md. Wali Ullah	
7	17.11.2022	Online	Permission Letter discussion	10 min		Md. Wali Ullah	
8	01.11.2022	Online	Socio-demographic information discussion	25 min		Md. Wali Ullah	
9	02.11.2022	Online	Code book set base SPSS	15 min		Md. Wali Ullah	
10	16.11.2022	Online	Data collection update	15 min		Md. Wali Ullah	
11	06.12.2022	BHPI	Result, Variable, Data analysis check	1 hour		Md. Wali Ullah	
12	12.12.2022	BHPI	SPSS Re-check	1 hour		Md. Wali Ullah	
13	18.12.2022	BHPI	Result re-check, frequency table	1 hour		Md. Wali Ullah	
14	22.01.2023	ISI department CRP	Analysis discussion on Association, related question	30 min		Md. Wali Ullah	

15	09.02.2023	Library	Feedback on result, formatting.	2 hours		Md. Wali Ullah	
16	14.02.2023	Library	Introduction part review & correction.	2 hours		Md. Wali Ullah	
17	15.02.2023	Library	Methodology part review & correction.	2 hours		Md. Wali Ullah	
18	16.02.2023	Library	Methodology part review & correction, formatting.	2 hours		Md. Wali Ullah	
19	17.02.2023	Library	Overall write-up formatting, APA 7th style check.	2 hours		Md. Wali Ullah	
20	18.02.2023	Library	Result section formatting review.	2 hours		Md. Wali Ullah	
21	19.02.2023	Library	Literature review formatting, APA 7th style check.	2 hours		Md. Wali Ullah	
22	20.02.2023	Library	Overall write-up, formatting, APA 7th style check.	2 hours		Md. Wali Ullah	
23	22.02.2023	SET Department	Mann Whitney U-test, Levene's test, t-test, analysis check.	1 hour		Md. Wali Ullah	
24	26.02.2023	BAPT teachers room	Post hoc test, correlation discussion.	15 min	Mahuya-Mam	Md. Wali Ullah	
25	28.02.2023	BHPI teachers room	Interpretation of Mann Whitney U test and Levene's test discussion.	15 min		Md. Wali Ullah	

26	29.03.2023	SET Department	Background, justification, of the study recheck.	1 hour		Md. Wali Ullah	
27	28.03.2023	SET Department	Literature review + recheck overview of SRS completion after GB.	1.5 hour		Md. Wali Ullah	
28	30.03.2023	SET Department	Literature review - recheck physical interdependence - correlation.	2 hour		Md. Wali Ullah	
29	10.04.2023	SET Department	Literature review - AD - Economic - <sup>sub-urban</sup> <sub>city</sub>	2 hour		Md. Wali Ullah	
30	11.04.2023	SET Department	Methodology check.	1 hour		Md. Wali Ullah	
31	11.04.2023	SET Department	Discussion.	2 hour		Md. Wali Ullah	
32	12.04.2023	SET Department	Discussion.	2 hour		Md. Wali Ullah	
33	13.04.2023	SET Department	Discussion.	2 hour		Md. Wali Ullah	
34	15.04.2023	SET Department	Discussion.	2 hour		Md. Wali Ullah	
35	06.05.2023	SET Department	Conclusion: strength & limitation.	2 hour		Md. Wali Ullah	
36	07.05.2023	SET Department	Conclusion: future implication.	2 hour		Md. Wali Ullah	

37	15.05.2023		Defense presentation feedback.	1 hour		Md. Wali Ullah	
38							
39							
40							

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.