SATISFACTION OF SPINAL CORD INJURY PATIENTS TO BALANCE GROUP THERAPY IN A SPECIALIZED REHABILITATION CENTRE IN BANGLADESH

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

"SATISFACTION OF SPINAL CORD INJURY PATIENTS TO BALANCE GROUP THERAPY IN A SPECIALIZED REHABILITATION CENTRE IN BANGLADESH"

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Declaration

I declare that the work presented here is my own. All sources used have been cited appropriately. Any mistakes or inaccuracies are my own. I also declare that for any publication, presentation or dissemination of information of the study I would be bound to take written consent from Department of Physiotherapy of Bangladesh Health Profession Institute.

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Acronyms

ASIA American Spinal Injury Association

BGT Balance Group Therapy

BHPI Bangladesh Health Professions Institute

BMRC Bangladesh Medical and Research Council

CBR Community Based Rehabilitation

CRP Centre for the Rehabilitation of the Paralysed

GPT Group Physical Therapy

GT Group Therapy

IRB Institutional Review Board

ICF International Classification of Functioning, Disability and Health

IDT Inter-Disciplinary Team

MDT Multi-Disciplinary Team

NGO Non-Government Organization

NTSCI Non-Traumatic Spinal Cord Injury

PT Physiotherapy

QCA Qualitative Content Analysis

RTA Road Traffic Accident

SCI Spinal Cord Injury

TSCI Traumatic Spinal Cord Injury

WHO World Health Organization

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Abstract

Aim:The aim of the study was tofind out Spinal Cord Injury (SCI) inpatients satisfaction towards Balance Group Therapy (BGT) during theirstayat CRP in ward or half way hostel before their discharge and community reintegration. *Objectives:* To gather patient's concepts, ideas, needs and recommendation's towards balance group therapy, to find out the satisfaction or dissatisfaction of patients along with their reasons, to interpret the confidence as a preparation for go back to the community and understanding of the patients towards their community reintegration through balance group therapy. To identify the understanding between patients andthe clinical therapists, to find out the significant and importance of balance group therapy in their daily living and to gather the patients' opinions towards the overall environment and times. *Methodology:* Qualitative research method was used. With self-administered questionnaire. Ten participants (Male: Female= 7: 3) were interviewed at Centre for the Rehabilitation of the Paralyzed (CRP), Savar, Dhaka. *Data analysis:* Qualitative content analysis was used to analyze the data. *Results:* The major finding was; every participant expressed their satisfaction for balance group therapy interventions process which was provided during their stay at CRP, in here overall environment wasperfect.Duration & frequency which was selected and organized by the authority should be increased and the total items &repetitions of balance group therapy was enough for the participants, there was a good understanding between patients & the therapist, there were so many significance of balance group therapy to solving the problem and had the importance in their daily life. Towards community reintegration they fully prepared to do any kind of works and their confidence were improved, lastly they recommended: the therapy should start in time and the duration of balance group therapy should be extended. *Conclusion:* This study is a reflection of patient's satisfaction towards balance group therapy service. This is also the first study in this area.

Key words: Balance Group therapy, Spinal cord injury, Satisfaction.

CHAPTER-I: INTRODUCTION

1.1 Background

Spinal cord injury (SCI) could be a kind of medical condition which is very serious because functional, psychological and socioeconomic disorder are caused by it. For this reason patient with Spinal Cord Injury faces important impairments in various parts of their life. To enhance functional level, decrease secondary morbidity and enhance health-related quality of life are the goals of rehabilitation and different treatment approaches in Spinal Cord Injury (Sezer et al., 2015).

World Health Organization (2013) define as “The term ‘spinal cord injury’ refers to damage to the spinal cord resulting from trauma (e.g. a car crash) or from disease or degeneration (e.g. cancer)”.

Spinal cord injury (SCI) happen with a yearly frequency of 12.1-57.8 cases for each million populations worldwide and in creating nations the occurrence of Spinal Cord Injury(SCI) is 25.5 for each million populations for every year(Movager et al., 2013). Spinal cord lesion (SCL) is accidental and unanticipated. It can demolish and exorbitant in human and social terms.Owing to inadequate services, most of the people with Spinal Cord Lesion(SCL) in low-resource countries died at intervals two years of deed spinal injury.SCL continues to be a significant reason behind disability throughout Asia similarly as in Bangladesh (Islam et al., 2011).

There is only one non-governmental organization for treatment and rehabilitation of patients with Spinal Cord Injury in Bangladesh named Centre for the rehabilitation of the paralysed (CRP)(Islam et al., 2011). CRP has set up both the Multi-Disciplinary Team (MDT) and Inter-Disciplinary Team (IDT) and has been operating for most recent thirty yearfor proper rehabilitation and community reintegration of the affected individual (Islam et al., 2011).

Spinal Cord Injury (SCI) may be a life threatening conditionin associate individual’s life because it creates such a large amount of dysfunctions. The results of SCI may be an

advanced condition, area unit with multiple impairment, most distinctively, variable degrees of motor and sensory loss(Teeter et al., 2012).It is a typical problem of health sector everywhere the world however the incidence varies from country to country. As mentioned by DeVivo, once analyzing the epidemiologic studies through the world, it's been found that the incidence and prevalence of traumatic SCI in United States of America (USA) is more than the other countries within the world(Devivo et al., 2012).

SCI is additionally a significant public health problem in Bangladesh. CRP is presently providing the management of spinal cord Lesion (SCL) in Bangladesh. An epidemiological investigation of 1994-1995 of CRP demonstrated that there is both the tetraplegic and paraplegic patient gets conceded in CRP. Among them 60% were paraplegic and 40% were tetraplegic and therefore the male: female magnitude relation was 7.5:1.5 (Hoque et al., 1999).The last yearly report of CRP demonstrated that, from 2010-2011 there got admitted 395 patient with SCI of whom 87% were male and 13% were female (Annual Report of Center for the Rehabilitation of the Paralyzed, 2010-2011). Some countries like Australia, Europe, North America uses some policy of discharge planning for older adults that is developed by National Health Service of Department of Health (Atwal et al., 2008).

A global-incident rate (2007) is evaluated at 23 TSCI cases per million (179 312 cases per annual). Regional information are accessible fromNorth America (40 per million), Western Europe (16 per million) and Australia (15 per million). Extrapolated regional information are accessible fromAsia-Central (25 per million), Asia-South (21 per million), Caribbean (19 per million), Latin America, chain (19 per million), Latin America, Central (24 per million), Latin America-Southern (25 per million), sub-Saharan Africa-Central (29 per million), sub-Saharan Africa-East (21 per million) (Lee et al., 2014). Non Traumatic spinal cord Injury (NTSCI) has only a few regional information, that only found regarding Canada (prevalence of 1120 per million population) and India (prevalence of 2310 per million population, Jammu and Kashmir region) (New et al., 2013).
Spinal cord injury, is certainly a debilitating and devastating condition in terms of its effect on a person's physical, mental, familial as well as social life. Due to its profound impact on a person's overall quality of life and increasingly high incidence, injury to spinal cord

due to any pathology is now considered as a morbid condition as well as a threat to both personal and national economy. Spinal cord injury itself is a crippling condition, at the same time may lead to a variety of complications which can affect the life of the patient as it increases the treatment cost significantly and accelerate the disease process which link to early mortality. The frequency of Spinal cord injury is expanding all through the world with a yearly rate of 15 to 40 per million with a male predominance, additional prevalence in low socio-economic society and therefore the causes ranges from traumatic in most of the case like motor vehicle accident to gunshot injury and physical violence, but non traumatic causes like Tuberculosis (TB) of the spine is additionally accountable for this (Quadir et al., 2017).

Long-term survival of people with SCI has expanded and for this gathering of population, a sound existence with a subjective feeling of well-being has become an ultimate goal (Lannem et al., 2010). Progression is gradually being created within the treatment and rehabilitation of SCI to limit injury, improve function, enhance recovery, prevent or treat complications and prolong survival (Dawson et al., 2008). It is necessary to adequately prepare people with disabilities to understand, manage their own health and it also has emerged as a very important public health priority (Rimmer et al., 2006).

Group therapy, in which >2 patients participate in therapy activities together, may be a common component of rehabilitation programs and is assumed to offer unique advantages beyond those obtained from individual (1-on-1) therapy.1-8 group therapy sessions offer a chance to interact with others with similar conditions, thus providing opportunities for peer support and reducing social isolation. In group sessions, feedback and encouragement could also be provided by both the therapist(s) leading the group and by group members, increasing motivation to participate in therapy. Group sessions provide opportunities to interact and communicate with others to a larger extent (Zanca et al., 2013).
Study of USA from six rehabilitation center confirmed that, most Physical Therapy treatment time 77% was provided in individual therapy session and approximately 23% of Physical Therapy treatment time was provided in group and the majority of patients participated in Group Physical Therapy session. Group Physical Therapy offer benefit for

both the effectiveness and efficiency of care, and is considered as an important component of therapy programs (Zanca et al., 2013). There are many kind of activities used in Group Physical Therapywhich is varied with injury categories. Group are used for a variety of reason: as addition to Individual Therapy (IT) sessions and enhance generalization of foundational skill, to reinforce functional goals, to provide peer interactions, and to allow patient to share alternative method of skill performance (Schroeder et al., 2011).

Better reintegration is related with increase satisfaction so it is said that reintegration has positive weight (Tonack et al., 2008). Enabling the disabled person to return to their community with independent and satisfactory life quality is the most important goal of rehabilitation (Schonherr et al., 2005). For community re-integration providing special services and resources such as peer mentoring and role modeling,access to transportation, accessible housing, and attendant care personnel and general knowledge about independent living, advocacy and other community resources are very important of an individual (Forchheimer & tate, 2004).

1.2 Rationale

Patient with spinal cord Lesion (SCL) and their rehabilitation system take issue in objective, policies and in handling the significant demand of care (Amit et al., 2009).

The one and only organization in Bangladesh, CRP ensures the highest possible services that include treatment and rehabilitation. CRP includes Balance Group Therapy (BGL) before patient discharge and community reintegration.

Balance group therapy may be used to benefit impairment, activity limitation and participation restriction which contribute to disability(Dibble et al., 2009). Balance group therapy enhance opportunities for peer support, cost-effective treatment delivery and practice of skills.

It is generally agreed that quality service are those, which satisfy the consumer. Finding the satisfaction of the patient to Balance group therapy (BGT) will include patient's concepts, ideas, needs and recommendation. So the study result help the service provider to know about their service as how the patients received those therapies and also include system weakness, performance and thus management, because satisfaction is a yardstick that measure the success of service.

In this study patient reflection of concepts is very valuable, because this study is qualitative, which allow explanation of the concept of the recipients. This study may help to modify, redesign, continue the therapy service for Spinal Cord Injury patients who will get benefited in future and also it will help to develop therapy service itself in Bangladesh.

As balance group therapy is a new concept in Bangladesh and yet there is no study on it, so the study result helps the service provider to know about their service as how the patient viewed this process and their reflection. Last of all, the incorporation of the findings of the study is also helpful to make the future plan by rethinking the activities according to the service user's suggestion's to make it more effective. Besides this, as CRP is planning to establish balance group therapy in their general practice. Thus, these are furthermore helpful in delivering service to the Spinal Cord Injury people of CRP.

1.3 Research Question

How satisfied are the patients with spinal cord injury to balance group therapy?

1.4Objectives of the study

1.4.1 General Objective:

To find outspinal cord injury patient’s satisfaction to balance group therapy in a specialized rehabilitation center in Bangladesh before their discharge and community reintegration.

1.4.2 Specific Objectives:

- To find out patients concept, expectation, needs and recommendation toward balance group therapy.
- To know patients’ satisfaction in relation to distribution of time in balance group therapy.
- To find out the satisfaction of patients along with their reasons toward balance group therapy.
- To understand the patient toward their community reintegration through balance group therapy.
- To identify the understanding of the patients toward the attitude and explanation of the clinical physiotherapist during balance group therapy.
- To identify patients’ view about the significance of balance group therapy.
- To understand the importance of balance group therapy.
- To find out how the patient described their confidence regarding balance group therapy.
- To gather the patient’s opinion toward the overall environment and total items as they received in balance group therapy.

1.5 Operational Definition

Spinal Cord Injury:

A spinal cord injury (SCI) is injury to the spinal cord that causes functional changes, it can be either temporary or permanent. For this changes the muscle function, sensation, or involuntary function of the part of the body is lost or preserved below the level of the lesion.

Patient Satisfaction:

Satisfaction means fulfillment of one's desires, expectations, or needs, or the pleasure derived from the target sources.

So patient satisfaction is a measure of the extent to which a patient is satisfied with the health care which they received from their health care provider.

Group Therapy:

Group therapy is a part of physical therapy where two or more than two patients participate in therapy activities together.

Balance:

In biomechanics, balance is a capacity to keep up the line of gravity (vertical line from center of mass) of a body within the base of support with insignificant postural influence.

Balance Group Therapy:

Balance group therapy is a special part of Physical Therapy where utilization of particular exercises, postures, and movements to maintain, improve, or reestablish balance.

Rehabilitation center:

Rehabilitation center is a facility providing therapy and training devoted to the rehabilitation of patients with various neurological, musculo-skeletal, orthopedic and other medical conditions following stabilization of their acute medical issues.

CHAPTER-II LITERATURE REVIEW

A group treatment is outlined as a treatment within which the quantity of patients is larger than the quantity of therapists (Langeveld et al., 2011). Another study included, Group Therapy (GI), in which two patients take an interest in treatment exercises together and now a days it is a typical component of rehabilitation program. Individual therapy is considered as the standard of look after patient rehabilitation facilities and prescribed that group therapy be utilized as an "extra" to individual therapy, not as a replacement for it(Zanca et al., 2013).

Group Therapy provide an opportunity to maneuver with others with similar conditions, therefore providing opportunities for peer support and reducing social isolation. It put together permits lots of patients to be seen by fewer clinical staff members, which can reduce waiting times for services and worth of care by reducing the clinical staff time required for therapy delivery. In spinal cord injury rehabilitation patients received 7.4 hours of physical therapy (IT and GT combined) per week (Zanca et al., 2013).

A study in Netherlands enclosed that, it's vital to include group therapy sessions to check Netherlands spinal cord injury rehabilitation programmes with alternative setting of alternative centers. They hypothesized and located that there's no major variations within the contents of therapy, however there's variations between the three centers within the approach therapy is delivered (e.g., frequency and time per week, in group Therapy) and therefore the quantity of individual to group treatment sessions differed considerably between centers (Langeveld et al., 2011).

Range of motion (ROM) or stretching, strengthening, transfer training, manual wheelchair mobility training, and gait training were the foremost common physical therapy activities delivered in group therapy. Activities utilized in group therapy varied among injury categories; strengthening was the foremost common group therapy for patients in each of the injury categories and group therapy is used for a range of reasons: to supplement individual therapy and enhance generalization of foundational skills, to strengthen

purposeful goals, to supply peer interactions, and to permit patients to share various ways of skill performance. group therapy needs fewer therapists and consumes fewer resources. (Schroeder el al., 2011).

Patients with Asia Impairment Scale (AIS)- D injuries spent time on gait training 25% and endurance 6% (Schroeder el al., 2011).

Another result found that patients with injuries classified as AIS- D who was additional possible to work on gait training, strengthening, and balance exercise. There was 21 physical therapy activities delivered throughout group therapy including categories, clinics, and conferences lead by physiotherapists (Teeter et al., 2012).

Most of the patients received group therapy, and nearly one fourth of all documented therapy time was provided in group therapy (Zanca et al., 2013). Physical therapy interventions time about 77% was provided in individual therapy and the remaining 23% was delivered in group therapy (Schroeder et al., 2011).

In an international (Australia, Canada, Netherlands, USA, Switzerland, Italy. Ireland, India, Pakistan) study, a number (n) of units= Nine spinal rehabilitation centers offered a range of group programs for patients in addition to individual therapy sessions. The groups offered by units included the following: wheelchair skills (n=4), fitness (n=4), band function or upper limb (n=4), health education (n=4): breakfast or lunch (n=3). Community outing (n=3), woodwork (n=3), balance (n=2), gardening (n 2), relaxation (n=Z), hydrotherapy (n=1), running (n=l), transfer skills (n=1) and vocational retraining (n=l) (New et al., 2013).

The majority (98%) of patients participated in at least one group therapy session, with 83%, 81%, 80% and 54% of patients receiving group physiotherapy, occupational therapy, therapeutic recreation and psychological therapy. On average, 24% of treatment sessions and 27% of treatment time was provided in group sessions (Zanca et al., 2013).

Group therapy is used in physiotherapy to improve global health status and bring relief from typical disability symptoms of several diseases, competing with individual rehabilitation at least in short-term follow-up. A result suggested that group physical therapyimproves gait, balance and activity of daily life of patients with Parkinson disease.

Group therapyprovides greater psychological and social awareness and educational opportunities and can go beyond functional improvements (Dias et al., 2009).

The combination of individual physical therapy and group physical therapymay be used to benefit impairments, activity limitations, and participation restrictions that contribute to disability. Group physical therapyenhance opportunities for peer support, cost-effective treatment delivery and practice of skillstaught in both Individual physical therapy and Group physical therapy(Zanca et al., 2013).

Physical therapy, both individual and group, work in specific areas; transfers, posture, reaching and grasping, balance, gait and physical capacity and is comprised of mobility exercises, gait training (with or without external cues), training of daily activities, relaxation therapy and breathing exercises (Dias et al 2009).

To compare between the two interventions after hip surgery was based on the desire to evaluate common physical therapists practice, the interventions were; class-based exercise program and home-based individual exercise regime. Greater benefit was found from a supervised class-based exercise program than from a home-based individual exercise regime. Significant improvements in functional physical abilities were noted in both interventions, more improvements were identified in the four areas of balance, vitality, social well-being and emotional status were demonstrated in the class-based exercise group (Carmeli et al., 2006).

During the rehabilitation period the individually rehabilitated subjects improved the strength and flexibility more than that of group-rehabilitated subjects and the costs of the two rehabilitation programs were approximately equal.

In individual rehabilitation, the entire programme can be planned according to individual needs, without having to consider the demands and limitations of the group. All individually rehabilitated patients participated in back school, and some also took part in neck school later back and neck school was included in group rehabilitation. By clinical experience it seemed obvious that individually rehabilitated persons felt mere relief of their

symptoms at the end of the treatment period than did group-rehabilitated persons (Nykanen & Koivisto, 2004).

The spinal cord is the major channel through which motor and sensory information travels between the brain and body and it contains longitudinally oriented spinal tracts (white matter) surrounding central areas (gray matter) where most spinal neuronal cell bodies are located.

The gray matter is structured into segments comprising sensory and motor neurons. Axons of spinal sensory neurons enter and axons of motor neurons leave the spinal cord via segmental nerves or roots (Kirshblum et a1., 2011). Spinal Cord Injury (SCI) is initially diagnosed in terms of the level at which the injury has occurred, which tries to equate with the observed degree of neurological and functional deficit (Dawson et al., 2008).

The Spinal Cord extends from the medulla oblongata to the distal most part the conus medullaris. There are segments of spinal cord which are divided into cervical, thoracic, lumber and sacral.

In the cervical spine, there are 8 nerve roots (C1-C7) and named according to the vertebra, above which they exit (i.e. C1 exits above the C2 vertebra, C6 nerve roots pass between the C5 and C6 vertebrae and just below the skull) whereas C8 exists between the C7 and T1 vertebra; as there is no C8 vertebra(Kirshblum et al., 2011).

There is no sensory component of C1 nerve root which was tested on the International Standards Examination. The thoracic spine has 12 distinct nerve roots (T1-T12) and the lumbar spine consists of 5 distinct nerve roots (L 1-L5) that are each named accordingly as they exit below the level of the respective vertebrae. Lastly the sacrum with 5 embryonic sections, have fused into one bony structure consist of 5 distinct nerve roots that exit via the sacral foramina. The spinal cord ends at approximately the L1-2 vertebral level. From originating in the region of the conus medullaris the cauda equina is a cluster of paired (right and left) lumbo-sacral nerve roots that travel down through the sac and exit via the inter vertebral foramen below their respective vertebral levels (Kirshblum et al., 2011).

There is a classification dividing human spinal cord injuryinto four groups based on gross findings are; solid cord injury, contusion or cavity, laceration, and massive compression. The solid cord injury refers to a grossly appears normal cord, without evidence of softening, discoloration, or cavity formation; contusion or cavity shows no breach or disruption in the surface anatomy and there are no adhesions to the dura; laceration results in clear-cut disruption of the surface anatomy this lesion is characterized by a break in the glia limitans, with damage to the underlying cord parenchyma; in massive compression the cord macerated to a varying degree. This lesion is often accompanied by severe vertebral body fractures (Norenberg et al., 2004).

Each root of spinal cord segment receives sensory information from skin areas called dermatomes and similarly innervates a group of muscles called a myotome. Usually a dermatome represents a discrete and contiguous skin area, most roots innervate more than one muscle, and most muscles are innervated by more than one root.

Spinal cord injuryaffects conduction of sensory and motor signals across the site(s) of lesion(s), as well as the autonomic nervous system. By systematically examining the dermatomes and myotomes of spinal cord the level of injury is diagnosed (Kirshblum et al., 2011).

Nearly half of all spinal cord injuries are functionally incomplete, with some function preserved below the level of the lesion (Dawson et al., 2008).

There are some terms regarding the diagnosis; incomplete, complete, tetraplegia and paraplegia. Incomplete injury is used when there is preservation of any sensory and/or motor function below the lowest sacral segments S4-S5 (i.e. presence of "sacral sparing"). Sensory sacral sparing is sensation preservation (intact or impaired) at the anal mucocutaneous junction (S4-5 dermatome) on one or both sides or light touch or pin prick or deep anal pressure and motor sacral sparing is the presence of voluntary contraction of the external anal sphincter.

Complete injury is when there is an absence or sensory and motor function in the lowest sacral segments (S4-S5) (i.e. no sacral sparing)(Kirshblum et al. 2011).

Tetraplegia refers to impairment or loss of motor and/ or sensory function in the cervical segments of the spinal cord due to damage of neural elements within the spinal canal which results in impairment of function in the arm as well as typically in the trunk, legs and pelvic organs i.e. including the four limbs. It does not include brachial plexus lesions or injury to peripheral nerves outside the neural canal.

Paraplegia refers to impairment or loss of motor and/or sensory function in the thoracic, lumbar or sacral (but not cervical) segments of the spinal canal, secondary to damage within the spinal canal. With paraplegia, arm functioning is spared, but the trunk, legs and pelvic organs may be involved and this term is also used in referring to cauda equina and conus medullaris injuries, but not to lumbosacral plexus lesions or injury to peripheral nerves outside the neural canal (Kirshblum et al. 2011).

The prevalence of spinal cord injurywas of 223 per million inhabitants to be representative for a worldwide estimate and reported incidence ofspinal cord injury lies between 10.4 and 83 per million inhabitants per year.

Patients with spinal cord injuryone-third are reported to be tetraplegic and 50% of patients with spinal cord injuryto have a complete lesion.

The mean age of patients sustaining their injury at is reported as 33 years old, and the sex distribution is men: women= 3.8: 1 (Wyndaele & Wyndaele, 2006).

On global level, traffic accidents involving motor vehicles, bicycles, or pedestrians account for the largest number of spinal cord injuries, typically 50% of all injuries. Sports and recreational causes have increased and work-related accidents have decreased in some countries, as work safe practices have improved. The logging, mining, and construction industries are safer now than ever before. Conversely, recreational activities, such as parachuting, hang gliding, surfing, abseiling, and rock climbing, by virtue of the major forces transmitted to the spinal column in potentially uncontrolled situations, haveincreased the frequency of sports and recreational injuries, which in some countries are more common than work-related injuries. Falls, tending to affect the older population, may exceed even traffic accidents as a cause of spinal cord injuryin the population more than 65 years of age. These falls occur especially at home (Sekhon & Fehlings. 2001).

One of the major causes of spinal cord injuryis traumaticspinal cord injury; a catastrophic event occurs sudden and unexpected and can be devastating and costly in human and social terms. The incidence of traumaticspinal cord injury from land transport is increasing in developing countries but decreasing or stable in developed countries.

Globally in 2007, there would have been between 133 and 226 thousand incident cases of Traumatic Spinal Cord Injury (TSCI) from accidents and violence (Lee et al., 2013).

Spinal cord injurycan arise from many causes other than trauma, often referred to as Non-Traumatic Spinal Cord Injury (NTSCI). Developing countries, tended to have a higher proportion of infections, particularly tuberculosis and HIV, although it is reported tumors as a major cause. Developed countries in comparison, tended to have a higher proportion of cases with degenerative conditions and tumors (New et al., 2013).

Younger victims are subject to differing physiologic stresses at the time of injury because of increasingly elastic vertebral ligaments and underdeveloped spinal musculature. They have a greater preponderance of injuries in high velocity or high impact pursuits, such as motor sports and diving, and are usually subjected to greater forces of injury than older victims. Violence, which comprises the forth category, has shown alarming increases most obviously in developing nations, where communal violence is rife. Many of these injuries are penetrating in nature.

Prevalence data indicate that 45%of spinal cord injuryinjuries in the United States are caused by motor vehicle accidents, with 16% caused by falls and recreational injuries (Sekhon & Fehlings, 2001).

In Bangladesh, The most common cause of traumatic lesions was a fall from a height followed by falling when carrying a heavy weight on the head and road traffic accidents. Most of the patients were between 20- 40 years old and the overall age group ranged from 10-70 years. The male: female ratio was 7.5:1.0. Among the traumatic spinal cord lesions, 60% were paraplegics and 40% tetraplegics. Among the non-traumatic spinal cord lesions cases 84% were paraplegics and 16% tetraplegics. The leading cause of death resulted from

respiratory complications and these deaths occurred in the very early period of admission (Hoque et al., 1999).

The prognostic factors afterspinal cord injurydemonstrates that, patients with lesions at C1-C3 have a 6.6 times higher mortality than the mortality rate for those with paraplegia. Similarly, the relative risks for those lesions at C4 or C5and C6-C8were 2.5and 1.5times higher, respectively, Then the mortality rate for those with paraplegia. Other associated factors are; cost, level of injury, age and sex, associated vertebral column injury, alcohol and substance abuse, length of stay after spinal cord injuryand complications after spinal cord injury(Sckhon & Fehlings, 2001).

Literature shows the complications are typically pressure sores, chills and fevers secondary to urinary sepsis, atelectasis, pneumonia, and deep vein thrombosis. Patients admitted to spinal cord injurycenters had a lower risk of developing contractures, heterotopic calcification, atelectasis, cardiac arrest, abnormal renal function and pressure sores, when compared with patients with a delayed admission (2-60 days post injury), although the ranking of the leading complications was similar, When comparing tetraplegics and paraplegics, an increased incidence of urinary tract infections and pressure sores is seen (Sckhon & Fehlings, 2001).

Research on physical exercise in persons with spinal cord injuryhas primarily focused onphysiological benefits. However, there are reports on quality of life and well-being as outcomes in relation to a physically active lifestyle. Exercisers with complete spinal cord injuryreported significantly higher perceived exercise mastery (P=0.002) and exercisers with incomplete SCI reported a significantly lower perceived exercise mastery (P=0.012) than non-exercisers (Lannem et al., 2010).

The most important goal of rehabilitation is enabling disabled persons to return to independent and satisfactory lives in their community. In order to provide successful rehabilitation programmes based on realistic goals, insight is needed in outcome of participation and satisfaction following spinal cord injury. (Schonherr et al., 2005).

Those who exercised regularly experienced significantly higher life satisfaction and higher perceived physical fitness than persons who did not exercise regularly (Lannem et al., 2010). In Bangladesh, While 50% of the disabilities are preventable, the current Government Organization (GO) and Non-Government Organization (NGO) services are inadequate, and little is being done to support persons with disabilities to return to work (Hansen et al., 2007).

Outcomes and rehabilitation interventions of spinal cord injuryhave tended to particularly focus on functional status (Dawson et al., 2008). Rehabilitation goals of restoring patients' independence, quality of life, self-sufficiency and greater control over their lives cannot be achieved by medical rehabilitation services alone. Once the inpatient rehabilitation phase is completed, most people with spinal cord injuryare discharged into the community to resume their social life roles. It is during this period of time that most people face many obstacles associated with their return into the community(Forchheimer & Tate, 2004).

Community re-integration after hospitalization is an important goal of rehabilitation, given the current emphasis on cost containment of patient care and the need for decreased length of stay. Historically, the concept of community re-integration began receiving attention from rehabilitation providers during the 1970's with the advent of the independent movement. Participating fully in community life, fulfilling a range of social roles, and making decisions that lead to self-determination are key to achieving a sense of personal growth and well-being (Forchheimer & Tate, 2004).

Reintegration has positive weight indicating that better reintegration is associated with increased satisfaction. Persons who had been injured longer, were unable to work, had more health complications, had a psychological complication, and rated their overall health as low were less likely to participate in their communities (Tonack et al., 2008).

After spinal cord injurycommunity re-integration is done by providing special services and resources such as peer mentoring and role modeling, access to transportation, accessible

housing and attendant care personnel and general knowledge about independent living, advocacy and other community resources (Forchheimer & Tate, 2004).
To achieve greater levels of recovery in people with newly acquired disabilities or those returning to rehabilitation for a new injury or health condition, stronger connections must be established between rehabilitation and community-based exercise(Rimmer, 2016).

The interest and commitment in continuing patients recovery after rehabilitation ends can serve as a catalyst for higher levels of motivation to start an exercise program after rehabilitation and the patient often experiences satisfaction from making progress in rehabilitation. People with disabilities who reported a higher level of physical activity after rehabilitation also indicated a higher level community reintegration compared with participants who described their physical activity as low or inactive (Rimmer, 2016).

CHAPTER-III	METHODOLOGY

3.1. Study Design

Qualitative method was used to conduct the study where the participants shared their views, feelings, opinions and experience on a particular event. It is said that, Qualitative Content Analysis facilitates to create a contextual meaning of text from the actual words through the development of emergent theme (Priest et al., 2002).

Creswell characterized in a definition that, in subjective investigation the scientist fabricates a perplexing, all-encompassing picture, examinations words, report point by point perspectives of witnesses and leads the examination in a characteristic setting (Ohman, 2005).

The study aimed to seek out spinal cord patient's satisfaction thought, expectation, desires and recommendation to balance group therapy in a very specialized rehabilitation center before their discharge and community reintegration. As mentioned by Ohman that, there have been increasing the quantity of qualitative methods in rehabilitation analysis because qualitative approaches facilitate to derive new concept, theory and several of traditional treatment model. Moreover, it explores concerning human's practical life phenomenon (Ohman, 2005).

This examination was directed on the regular setting of the participants. researcher needed to demonstrate the participant's experience not the researcher's view and on this respect, there have been said that, qualitative research tells about standard individuals' understanding and clarification of their own existence, not the researcher's preconceived views and impression of others' reality. (Ohman, 2005).

This approach of qualitative method helped to show the participants actual response of their practical experience which lastly formed the theme of the study by the interpretation and judgment of the collected data.

3.2. Study area

The data were collected in the spinal cord injury unit, CRP, Savar, Dhaka. Qualitative analysis is ought to be conducted in their natural setting (Ohman, 2005). Interview in the spinal cord injury unit which is a natural setting, as they are used to in their room and bed. Moreover, interview in their own place helped them to interact with the researcher comfortably. Otherwise, the necessary data cannot be obtained if the participant cannot provide the exact information of what and how they feel about the event.

3.3.Study population

A group of individual who shared one or more characteristics from which data could be gathered and analyzing is known population of a study (Dirscoll, 2007). In this study, the population were impatient with SCI of spinal cord unit, at CRP.

3.4. Sampling procedure

Purposive sampling procedure was used for the qualitative study. This sampling procedure allow choosing atypical case for the study. By using this sampling procedure can make a judgment about sample and able to collect in depth data from the participant according to research need. Purposive sampling strategies are design to enhance the understanding of selected individual or group experience or for developing theories and concept. So, 10 participants as a sample group by using purposive sample were taken to represent the population group for the study.

3.5. Inclusion criteria

- Spinal cord injured patients attaining balance group therapy.
- Participant with traumatic and non-traumatic SCI. Because both of the conditions of spinal cord injury patient have balance problem. (Islam et al., 2011)
- Both male and female participant were selected by participant willingness, easy access for the interview and no ratio was maintained. (hoque et al., 1999).
- Participant whose age at least 20-60 years (hoque et al., 1999) because of the mature thinking and judgment of the questionnaire, the above selection age was important for the discussion of participant’s option during the interview.

- Participant who received at least 2 session of balance group therapy (Zanca et al., 2013). Because the participant who had received this therapy intervention for this days, had knowledge and experience to carry out the answer of the questionnaire.

3.6. Exclusion Criteria

- Participants who did not sign the consent form.
- Participants who was severe ill, may lack of attention, thinking, talking, problem solving and judgment.
- Other information (wheel chair sports, group class, group activity and other group sports therapy.) This exclusion criteria was fulfilled in the study of (Schroeder et al., 2011).

3.7. Sample size

Ten participants were taken as sample from Spinal Cord Injury Unit of CRP according to data saturation.

3.8. Materials of data collection

A semi-structured questionnaire was mainly used to collect the data (Please see Appendix 2 for the questionnaire). All other materials were: audio tape recorder, pen, paper, pencil, information sheet and consent form. Audio tape recorder was used to record the interview. It is a fundamental data-recording strategy in naturalistic inquiry that is primarily used when conducting face-to-face interviews. It is especially important to conduct the open ended interview. In open ended interview, participants provide long detailed answer which is difficult to write verbatim by the researcher (Depoy and Gitlin, 1998). Other materials had been used as support when needed.

3.9. Questionnaire

For data collection a semi-structured questionnaire was used. The questionnaire was formed based upon the related literature, determine of the study title and also pilot study.

3.10. Duration of data collection

Data were collected from 20th April from 11th May 2017. Each participant provided particular time to collect data. Each questionnaire toke approximately 20-30 minutes to complete.

3.11. Data collection procedure

A face-to-face interview by self-administered questionnaire was used to collect the data from participants. Interviewing is one of the techniques used to gather data in qualitative research. It is said that, in ethnographic research, interviews are always conducted in face-to-face manner. It is easy for both of the interviewer and the participant to interact easily and comfortably during interview time. Additionally, the interviewer has a chance to read the non-verbal cue of the interviewee (Bailey, 1997).

First of all, the researcher selected the participant who participate in balance group therapy. Contacting with the selected participant and provided them a little brief about the study was the second step.
Then, the researcher collect data from the participant. The interview session was based on the questionnaire. The interviewee was asked according to the questions listed on the questionnaire with some probing question when it was seemed to be incomplete statement and to keep the interviewee in track during his response. The interview session was in Bengali and the session was recorded by audio tape recorder. The mean time of the interview was 20-30 minute.

3.12. Data analysis

The researcher selected Qualitative method to analyze the data. It facilitates the formation of core data through a systematic method of reduction and analysis. By systematic reduction and analysis of data, the theme of the study was created. Qualitative method follows three steps (coding, categorizing and generating theme) to show the result of the study. In a short line, it is said that, texts are coded into established categories to support the generation of ideas (Priest et al.,2002).

The first step of analysis was transcription of data from the audio tape. The transcription was done verbatim and it was written in Bengali. There was some general information on the questionnaire which was also filled up by the researcher and was used for generating the main theme. Each of the transcript were translated into English by 3 different individuals, one is the researcher and another two were such people who were not present in the study setting and don't know about the aim or objectives of the research question. After completing the transcription, researcher verified those to check the consistency of each of the participants' transcripts individually.

Initially the questions of the questionnaire were categorized into different meaning units. Under each of those categories, the interviewed data were coded by line by line analysis of the sentences and phrases. Then, according to the meaning and insights, the categorized data were formed together to make final category. Then the interpretation of those data by progression and reduction process was ended into forming a theme. (Please see Appendix 4 for the tables of Data analysis).

3.13. Ethical considerations

Ethics is a moral issue. It tells about the rights. Proper ethical consideration tells about the transparency of any work which is mandatory to avoid conflicts. So to keep the accountability and transparency of the work, the researcher needed to maintain all the ethical considerations from the first phase of the study.

The researcher was followed the guidelines given by ethical review committee according to role and guidelines of World Health Organization (WHO) and Bangladesh Medical Research Council (BMDC).

Then, it comes about the data collection procedure. The participants were selected after getting the permission of data collection. The selected participants were informed a detail of the study by the information sheet and gave their permission of participating in the study by the consent form. Confidentialities were maintained at each step during the study was being conducted. The audio tape, identities of participants and other information were not revealed at anywhere except the information needed in the study.All the data was reviewed

in strict and maintained confidentially. Participants were also informed and assured that the study was not harmful to them at any chance. (Please see Appendix 1 & 2 for the Permission letters).

3.14. Informed consent

The researcher had used an information sheet and consent form to take the participant's consent for participating in the study. Researcher let the participant knew details of the study by the information sheet which included the aim, objectives, way of collecting data from the participant and the ethical considerations of the study. There was also a witness on the every session of data collection with each of the participant. The participant or the witness was asked to read the information sheet, but in case of the participant/witness, who was not educated, researcher read that out to them. There had also been used the consent form containing the consent of the participant that he is participating in the study and giving permission to the researcher to start the data collection session. (Please see Appendix 3 for the Information sheet and Consent form).

3.15. Pilot Study

Before the start of collecting final data, a pilot study was conducted with 1 participant. Carrying out pilot study is a preparation of starting final data collection. It helped to make a plan that how the data collection procedure can be carried out, sorting out the difficulties during questioning, making a basic plan of questioning and if there is needed any modification of the questionnaire. The collected data by the pilot study was firstly transcribed from the audio tape recording. Then the transcription copy was translated into English. The pilot study helped the researcher to make the plan on how the ways can be for collecting data, how a question can be asked on different ways and what can be the probing question to find out the participant's actual response on the event.

3.16. Rigor of the study

Trustworthiness or maintaining rigorous manner in qualitative study is an important thing to ensure the accuracy of the process. The concept of trustworthiness deals whether the

process of the study is apparently bias free or there is the fabrication of the researcher in the final interpretation (Depoy, 1998).

The researcher maintained the rigor of the study. There was no biasness in selection of the participants, the data were collected and recorded with awarenessand therewere no leading question during data collection. The translated copies were checked by the researcher to check the consistency of meaning. The result of the study was not influenced by the researcher and the final result or the theme of the study is neutral.

CHAPTER- IV RESULTS

The magnitude of qualitative research article is result and dictation. Result section summaries what are actually found in the study. Whatever is the nature of the study, the meaning of the results should be made clear to the reader. For large set of data, pictorial representations such as tables, graphs and charts can help to stick to the facts (Hicks, 1999).

4.1 Summary of Data Analysis

Table-1: Objective along with finding of categories and themes

Aim of the study	Specific objective	Categories	Themes
spinal cord injury patient to balance group therapy in a specialized rehabilitation center	To gather the patient opinion about the environment ofbalance group therapy.	Opinion about the overall environment	The environment was perfect.
	To know the participants opinion about frequency, duration ofbalance group therapy.	Opinion about thefrequency, duration of balance group therapy.	The duration & frequency should be increased.
	To know the participants opinion about total items & repetitions of balance group therapy.	Opinion about the total items & repetitions of balance group therapy.	Thetotal items & repetitions ofbalance group therapywas adequate.
	To know about the understanding between patients and physiotherapist (PT)	Participants understanding about the explanation of physiotherapistduring	There had a very good understanding between patients

during balance group therapy.	balance group balanceOpinion about the attitude of physiotherapist during balance group therapy.	and physiotherapist (PT) during balance group therapy.
To know the significance of balance group therapy.	Significance balance group therapy. on solving their problem	There were a lotof significanceof balance group therapyon solving the problemsof participants.
To know theimportance of balance group therapy.	Importance of balance group therapy. in their daily life	Balance group therapywas important in their daily life.
To identify the understanding of balance group therapy as a preparation for community reintegration	Participants understanding of balance group therapy as a preparation for community reintegration	By taking balance group therapyparticipants prepared for their community reintegration.
To find out the improvement of their confidence after balance group therapy.	Improvement of confidence after balance group therapy.	Balance Group Therapy had improved their confidence.
To find out the satisfaction or dissatisfaction of participants along with reasons	Participantssatisfaction with reasons Participants dissatisfaction with reasons	Participants satisfied with balance group therapy.

	To gather participants recommendations.	Participant's recommendations.	Time & items should be extended.

4.2 Information of the participant

Participants Socio-demographic information and personal information at a glance:

Table-2: Information of the participant

Participation	Age in years	Sex	Level of injury	Cause of injury	Education	Occupation	Earning member	Residual area
1	46	M	SL=D11 NL=D12	Fall of heavy object	Class-3	Bus driver	None	Village
2	46	M	SL=C4 NL=C4	RTA	Graduate	Teacher	None	Village
3	28	M	SL=L1 NL=L2	RTA	Class 5	Bus driver	One	Village
4	50	M	SL=C2 NL=C2	RTA	Illiterate	Farmer	One	Village
5	32	F	SL=C3 NL=C4	RTA	Class 4	Housewife	One	Village
6	52	M	SL=C2 NL=C2	Fall of heavy object	Class 6	Farmer	None	Village
7	21	M	SL=C5 NL=C5	RTA	H.S.C.	Student	One	Village
8	30	F	SL=C7 NL=C7	Fall of heavy object	Class 8	Housewife	One	Village
9	33	F	SL=D11 NL=D12	Occupational cause	Class 10	Housewife	One	Village
10	27	M	SL=D11 NL=D11	Fall from height	Class 4	Building construction	None	Village

Here is this table, from left to right; Sex, M=Male and F=Female; Level of injury, SL=Skeletal Level; NL=Neurological Level and C= Cervical; L= Lumber; D= Dorsal; Cause of injury, RTA= Road Traffic Accident.

4.2.1. Age range of the participant

The study was conducted on 10 participants. Among the participants mean age of patients was 36.5 years. Here minimum age 21 years and maximum age 52 years.

Table-3: Age of the participants

	Total number	Minimum age	Maximum age	Mean
Age of the participants	10	21	52	±36.5

Here,the age range between 21-30 years had 4 participants, 31-40 years had 2 participants, 41-50 years had 3 participants, and 51-60 years had 1 participant.

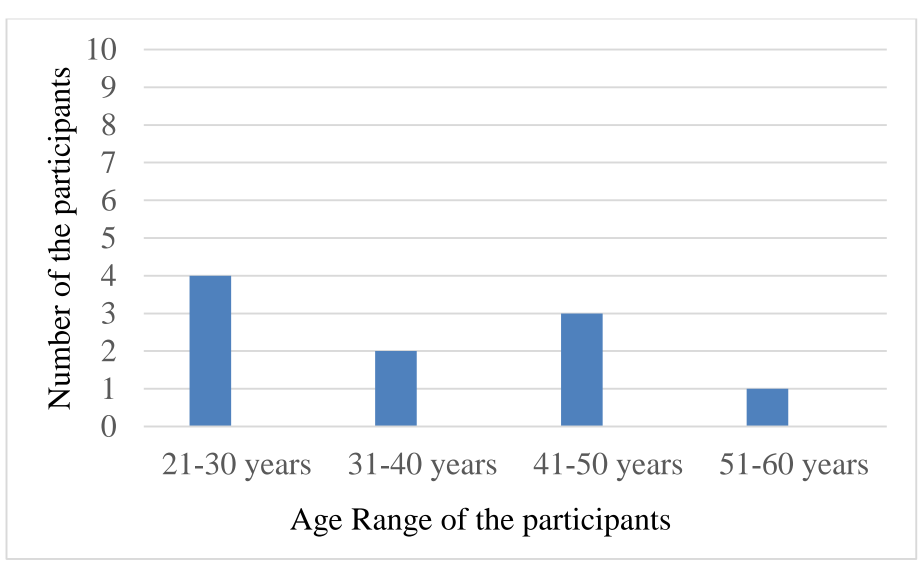

Figure-1: Age of the participants

4.2.2. Sex of the participants

In between 10 participants 7 (70%) participants were male and 3 (30%) participants were female.

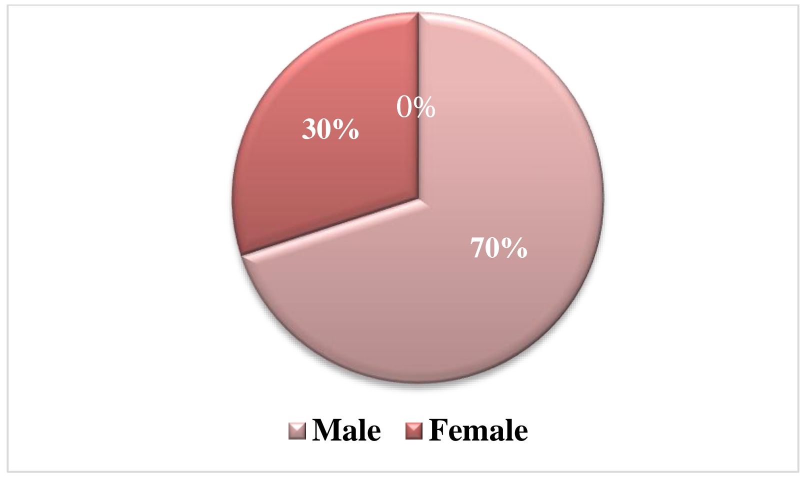

Figure-2: Sex of the participants

4.2.3. Causes of injury

Among 10 participants, most of the participants injured by road traffic accident (RTA). The number of them were 5 and 3 participants injured by falling heavy object on them. 1 of them fall from heightand 1 participant injured by occupational cause.

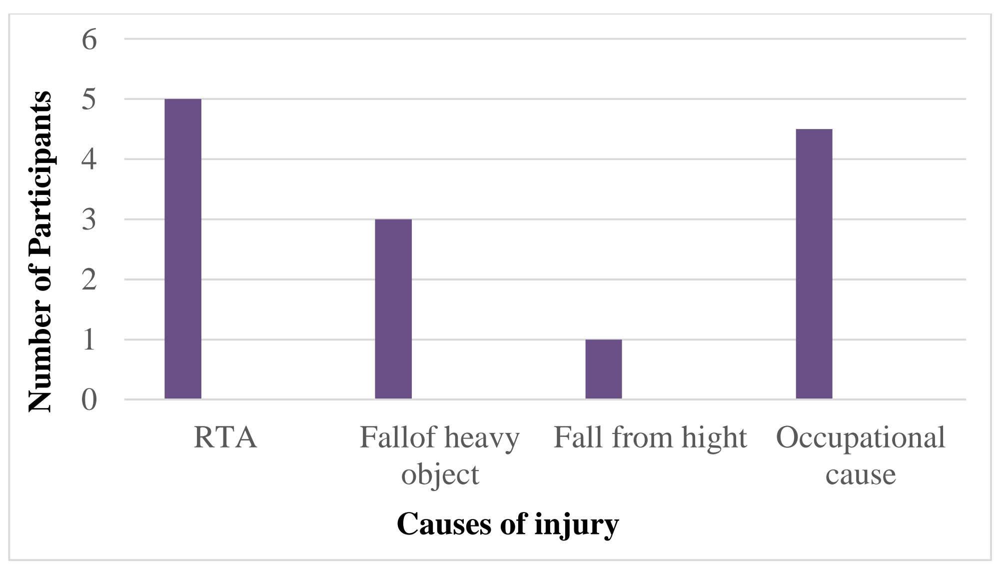

Figure-3: Causes of injury

4.2.4. Educational status of the participants

Among the participants the education level were: 1 participant was illiterate, 4 of them were in primary level, 3 of them were in secondary level and 1 was graduate.

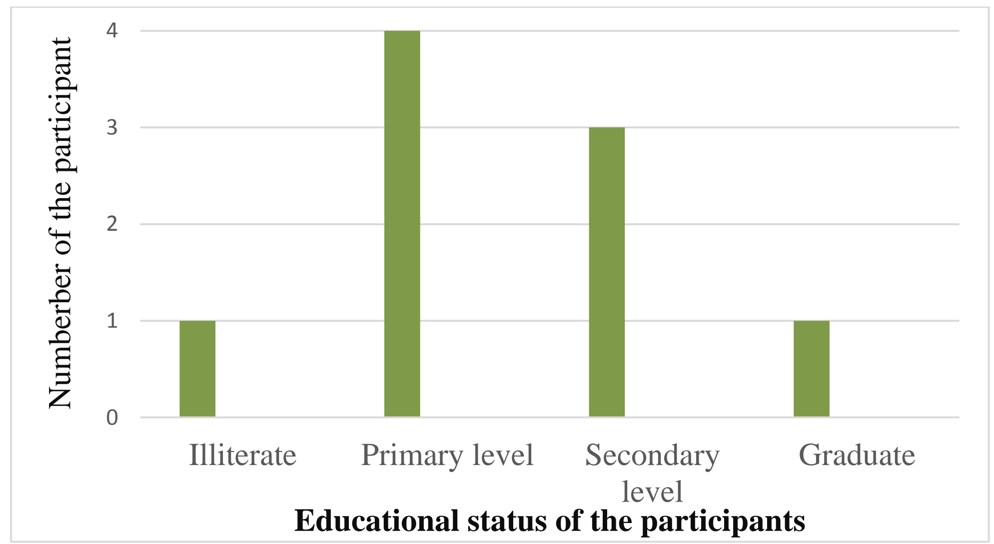

Figure-4: Educational status of the participants

4.2.5.Earning member of the participant's family

6 (60%) participants had 1 earning member in their family and on the other hand 4 (40%) participants had no any earning member.

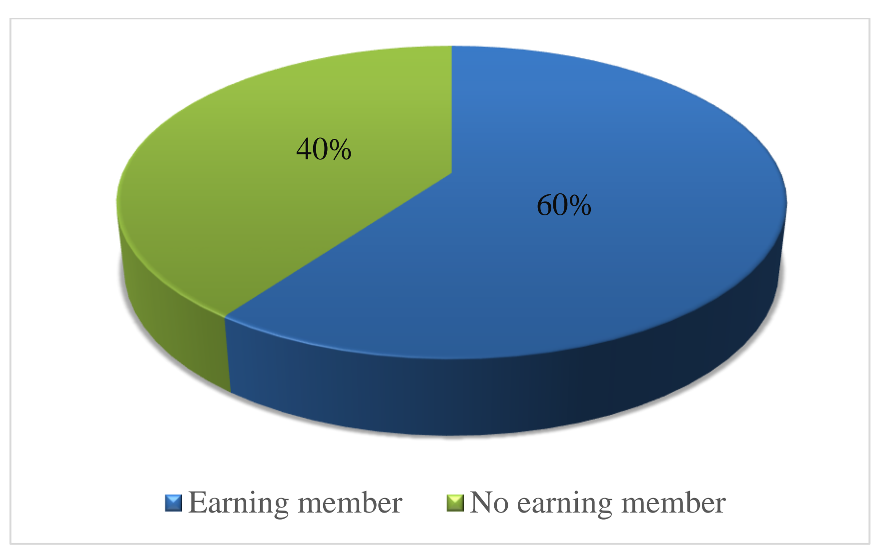

Figure-5: Earning member of the participant's family

CHAPTER- V DISCUSSION

For easy visualization of the participant, any study should yield rich descriptions that are used throughout the discussion portion of an article, which result in lengthy report. Illustrative quotations are usually use to convey an understanding of participant's verbal data (bailey, 1999).

The interviewer identified published papers and determined the relevance with the acquired data, then discussed with the acquired data findings of the study.

In bellow discussion, each table describes the interview findings and is described with coding. The tick was given only for those columns in accordance with participant's response. The description is according to category and coding. Here 'P' was used for coding to participants. The subscript number 1,2,3…10 used to mention the number of participants.

Table-4: Code name of the participants

Participantsnumber	Code name
1stparticipant	P1
2ndparticipant	P2
3rdparticipant	P3
4th participant	P4
5thparticipant	P5
6thparticipant	P6
7thparticipant	P7
8thparticipant	P8
9thparticipant	P9
10thparticipant	P10

Category 1: **Opinion about the overall environment**.

CRP provides a unique treatment and rehabilitation service for SCI inpatients in different stage. Balance Group Therapy (BGT) is one of them. Here is the coding from the participants data description about overall environment during Balance Group Therapy (BGT).

Table-5: Opinion coding about the overall environment

Codes	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Response (total)
Very good	√	√	√			√	√	√	√	√	8
Like the environment	√			√	√		√	√	√	√	7
Clam and quite				√	√	√	√				4
Feel happy there	√	√			√	√	√				5
Plenty of air							√			√	2
Enjoy togetherness		√				√	√				3
Can understand everything there	√		√								2

Among all the participants, equally eight different participants confirmed that it was very good and seven participants said that they liked the environment. One participant said that, *"I like the environment because the environment is very good. Everything is favorable to me there and everything seem to be perfect to me there,"*

Three other participants said that they feltenjoy to take the therapy all together. And five were added that feel happy to do the therapy together and liked to play with everybody which was a part of therapy. One participant said that,

"It is good to take therapy together and the therapist sir also entertains us. Feel light to see the other people's sorrow. Thai's so I feel happy to go there."

Four were discuss that the place was clam & quiet and two were mention that there also had plenty of air. One said,

Plenty of air, suitable for discussion and therapy, clam & quite, nice environment."

One participant says, *"When therapy start we try not to talk and try to understand and can understand everything there."*

Some study confirmed that the inclusion of environment factors in model of disability supported. But they were found to be more strongly related to life satisfaction than to social participation (whiteneck et al., 2004). SCI rehabilitation process was to prepare the individual with a maximum level of functional independence and the necessary resources to assist in returning to the home environment (Babamohamodi et al., 2011).

Lastly, observing the participants opinion, among ten participants most were described the environment as very good and seven were directly opined as they like the environment. And all had the positive opinion toward environment. So the emerging theme was;

Theme 1: The environment was perfect.

Category 2:Opinion about the frequency and duration of balance group therapy.

The time of balance group therapy was in Sunday, 2-3pm. The participant's discussion about frequency (once in a week) and duration (1hour) was very much enrich though the interviewer manage to find out some coding. Option about thefrequency and duration in response to participants at a glance:

Table-6: Opinion coding about the frequency and duration of balance group therapy

Codes	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Response (total)
Duration is enough for a day		√	√	√	√	√	√	√			7
Time should be increased rather than 1 hour	√									√	2
It is better to have 2 days a week	√			√		√	√	√	√		6
It is even better to have 2 or 3 days a week		√	√								2
It can't be reduced even if the time is not extended						√		√		√	3
Time should be changed									√		1
This time is very enjoyable						√					1

Most of the participants confirmed that the duration of balance group therapywas enough for a day. Because they were fear to face problem with extension of time, they thought that one hour was enough for them. One participant said that,

"*One hour is enough. I shall feel uneasy if it is done more than that. I can't sit for a long time, I feel pain.*"

But some people added that it's better if the time would be increase. Like as a one participant's opinion,

"It is better to increase the time about 30 minutes."

Among of ten participants six of them wanted to have the therapy in twice a week for their more improvement. One of them also added that they enjoy the therapy. Two of the participants didn't confirm the days in a word but they wanted more, such as It would be two or three days in a week. One of them said,
"It's better to have two or three days in a week"

One participant confirmed that though one hour was enough and the therapist wanted to use the full duration but all patients didn't go in the right time that, so they didn't get the one hour fully. She mentioned the time as important and wait for that time to take therapy. She said,
"Time should be changed. We delay for eating food. So it's better to have the time from 2.30-3.30 pm."

Some literature shows that, GT creates the possibility to increase social integration, motivation, peer teach (Langeved et al., 2011). In SCI rehabilitation patient received 7.4 hours of physical therapy (PT) (both IT & GT) per week. Most of the patient received GT (Zanka et al., 2013). PT intervention time about 23% was delivered in GT (Schroeder et al., 2011)

Lastly comparison of the interviews about the frequency and duration of balance group therapy, among ten participants most of the time, described that the duration was enough for a day but the frequency should be increased. So, the emerging theme was;

Theme 2: The duration & frequency should be increased

Category 3: Opinion about the total items &repetitions of balance group therapy.

In between the duration of one hour participants did ten items with ten reputations and in between the items fifteen seconds rest. It had been completed in forty-five minutes and remaining fifteen minutes was for different type of games. Option about theamount in response to participants at a glance:

Table-7:Opinion coding about the total items & repetitions of balance group therapy

Codes	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Response (total)
Adequate	√	√	√	√	√	√	√	√	√	√	10
The amount is necessary	√										1
But it is better to have little more	√					√					2
Item should be increased		√								√	2
10 times repetition is enough			√				√	√	√		4
Repetition should be increase					√			√			2
Good for health				√	√	√					3

Total items & repetitions the ten participants all are said that, the total items was adequate. Four of them thought the 10 repetitions were enough for them. One of them described it as,

"We have less strength. If it is increased, we feel troubled, problems and get tired. 10 repetitions is enough for us"

Though all participants mentioned the total items & repetitions as adequate for them but some of them expected more, they had describe it as better to have. They couldn't mention what they need actually but wanted the amount a little more. One of them said,
"If the total items & repetitions is increased, we will get more chance to exercise. The muscle will be more active and the blood circulation will be improve and we get more balance."

Two participants had described item should be increased and another two had added repetition should be increase. They seem it as a good therapy and the participants alsoconfirmed it as good for their health, so their expectation was more. One's comments was,
"That is good for my health so the repetitions should be increased"

Lastly by the above discussion, most of the participants said that the total items & repetitions was perfect for their health and 10 reputations was enough to do. So, the emerging theme was;

Theme 3: The total items & repetitions ofbalance group therapywas adequate.

Category 4:**Participants understanding about the explanation of physiotherapist during balance group therapy**.

In balance group therapypatients were followed only one physiotherapist explanations, who explained about all the therapies. But there may had another physiotherapists, physiotherapy assistants and occupational therapists. But in the answer of the question all the participants indicated the main physiotherapist who had explained in the therapy session.

Table-8: coding of participants understanding about the explanation of physiotherapist duringbalance group therapy

Codes	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Response (total)
Likethe explanations	√	√			√		√				4
Delivera good explanation	√			√		√	√	√		√	6
canunderstand everythingwhat he explains	√	√		√	√	√	√	√	√	√	9
Make fun by his speechand enjoyedvery much		√									1
Can hear easilyfrom near and far			√	√	√				√	√	5
Noproblem to hear and understand his explanations			√		√	√		√			4
If they do not understand, then explaines again			√			√	√				3

In this table nine individual participants explained that, they understandeverything what the therapist had explained. One of them said,

"I can understand everything because he uses easy words. What we have to do, is explained by him and if we have failed to understand, he explains again."
Another one says that, *"Sir uses Bangla during explanation that's I understand properly."*

Participants had a positive thought about the explanations of physiotherapist. Four of them mentioned it a good explanation as they could follow it properly. And four were directly said that they liked the explanation because of it was clear and useful. Speech of one of them was,
"He delivers a good speech and gives the importance that's so I like it."

Participants were similar in point that they easilyheards from near and far his explanation s explanationsno problem to hear and understand hi that they had edmention and they. one ,of them said
"Sir explains many things ,nicely .Can understand properly and no any problen to hear his from anywhere because he delevers his speech loudly"

ionan another informat One participant added. " ,He saidWe can do fun by his speech and we enjoy so much. we also enjoy his word."

Therapist involved in patient education in most frequent in reviewing ROM and strengthening procedure and in encouraging compliance with the standing program (May et al., 2006)

Finally thinking about the above explanation of participants there had a positive image founding in the theme. About nine participants said that understand the explanation for delivering a good explanation and they liked it.

So lastly we can say that physiotherapist delivers a good explanation and everybody could understand everything what he explained.

Category 5:Opinion about the attitude of physiotherapist during balance group therapy.

Table-9: coding about the attitude of physiotherapist during balance group therapy

Codes	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Response (total)
Friendly	√	√		√		√			√	√	6
Very nice man	√		√				√		√	√	5
Well behaved person		√	√	√				√			4
Work very good and sincerely	√					√		√			3
Doesn't neglect anybody	√			√							2
He help us		√	√			√	√		√		5
Doesn't behave bad			√	√						√	3
We are satisfied with him and like his attitude			√		√		√	√			4
He inspires us					√	√	√				3

According to the information of the table six participants out of the ten described the attitude of the physiotherapist as friendly. And five were introduce him as a very nice man. And also same number of participants said that he helped them in any situation. One of them said,

"He is very friendly person. He gives things forward to us. He is the friend of danger."

Another one says, *"He is a very nice man. Sir and other sir don't angry and bothered to us"*

Four participants said that he was a well behaved person and another four also added their opinion as they satisfied with him and liked his attitude. Three of them also ensured that he didn't use any bad and didn't do any wrong. One of them said,

"Physiotherapy sir behaved very well and we are very satisfied with him. If we fail to understand he try to understand again. He don't do any rough behave and don't use bad."

He had a lot of positive attitude according to the comments of participants. He worked very good and sincerely . He inspired them in their work place. One participant said,

"Sir is very sincere to us. He have the attitude to give us happiness. He arrange game for us. He inspired us. He is very helpful person."

Study result shows that, the therapist should be sensitive and responsive for ensuring participation of patient (Lindberg et al., 2013)

Finally by the above discussion it's proved by the comments of participants that during BGT the attitude of physiotherapist was positive as like, he was very friendly, sincere, helpful, didn't neglect them and didn't uses any bad rather he inspired them. So, lastly the emerging theme was;

Theme 4: There had a very good understanding between patients and physiotherapist (PT) during balance group therapy.

Category 6:Significant of balance group therapy on solving their problems.

Here a short description from every participants about the effect of balance group therapy on solving their problems. Almost ten participants ensure the effect of balance group therapy with their personal life experiences.A brief report is given bellow with participants' data description,

Table-10: Participants significance of balance group therapyon solving their problem

Participants	Effects
1	"When I came here I could not sit in bed, but now I can. Now I can get up and down from wheelchair by myself. It is very important to solve my problem."
2	"Most of the times felt uncomfortable with arms, legs. After doing BGT I can sit on my wheelchair very nicely. After any shaking I can stay steady in my wheelchair, I couldn't do it before. I am benefited after doing balance group therapy."
3	"I couldn't get in the wheelchair before, now I can do it by myself. I couldn't wear my shoes sitting on the wheelchair, now I can. I am benefited to do balance group therapy so it has many effect."
4	"I couldn't sit in my bed before, now this problem is resolved. Now I can stand, walk, can walking through highway. I do not have to face any problem for movement now for balance group therapy."
5	"I can sit, bring things according to my needs and work, I couldn't do it before."
6	"I feel easy to go to bathroom, eating, wearing cloths, get up & down from wheelchair, catch the ball, wear the shoes, pick the object from the floor. I couldn't do it before, now I can. I used to fear the wheelchair, now I can do it myself."

7	“The balance at my hand was low, after balance group therapy I was benefited to get back the balance of my hand. I can sit now I could not extend my hand, now I can do it, I believe that I will be better.”
8	“Could not sit in the wheelchairs and somewhere, now I can. After the balance group therapy, I have come forward a lot. Now the balance of my hands and feet has improved. I can walk and keep my balance now. I'm hopeful.”
9	“Have one or two effect. Before taking BGT I couldn’t extend and abducted my hand, now I can.”
10	“I felt uncomfortable with my hands and feet, after BGT I feel comfortable. I could not get out of bed, now I can and get to my wheelchair too. I felt pain on my waist, now it has decreased. I can wear my shoes. I could use my wheelchair on any uneven surface. I'm hopeful.”

By the following description it’s proved that balance group therapy had unmeasurable significance to solve the balance problem of the participants and ensure them a better life with proper balance. It is also able to allow the patient to do their work properly. So, lastly the theme was;

Theme 5: There were a lot of significance of balance group therapy on solving the problem of participant.

Category 7: Importance of balance group therapy in their daily life.

In this category the importance of balance group therapy is found. Every ten participants is agreed in a pointthat the therapy is importantand they confirmed it with descriptions. A brief report is given bellow with participants' data description about the importance of balance group therapy,

Table-11: Coding of importance of balance group therapy in their daily life.

Participants	Importance
1	"Very necessary, very important. I can bring things alone sitting on the bed. I can change my sides. I can complete my shopping sitting on the wheelchair."
2	"I used to lie in the bed before but now I can use my wheelchair 4-5 hours and keep my balance, in this way I am benefited. For balance group therapy I can get up from bed and feel easy to move. My sitting balance also depend on it."
3	"It is very important things. Example I can go outside sitting on the wheelchair. I can get up on the wheelchair. I can hold the bottle on the table for drinking water and bring my cloth from wheelchair."
4	"It is very important for to know, how can I sit on the wheelchair alone, do my own task, brush my hair and teeth, wear cloths and move on the wheelchair."
5	"I felt pressure in my chest, this pain has decreased after balance group therapy. I can sit now. I can move my hand. I can run my wheelchair of my own."
6	"My health condition has improved gradually. I understand my fitness. Feel free from my headache. I get courage to move alone after balance group therapy. Feel fulfil to me. I couldn't feel stabilized in wheelchair, now I can."

7	“They teach us the alternative method to do work and move. I couldn't sit on my wheelchair, now I can without any fear. They also teach how to eating and playing. It’s very important for daily life.”
8	“Drinking water, wear clothes, brush hair, wear shoes, go to take bath and can eat.”
9	“Now I can wear clothes, eating, bathing after balance group therapy. Can put up heavy object from floor. Can do what I have need by maintain proper balance.”
10	“Now I can eat myself, couldn’t before. Now I can do my own work, bathing, wear clothes. I can sit on my wheelchair about 5-7 hour for balance group therapy. I can run my wheelchair of my own.”

PT which concern in preventing of joint contracture, respiratory complication and achievement of maximum function in skill of daily living (May et al., 2006).

In the above descriptions it was find that there really had the importance of balance group therapy in their daily life and ensured them a better life with increasing their working ability. So, the emerging theme was;

Theme 6: Balance Group Therapy was important in their daily life.

Category 8:Participants understanding of balance group therapy as a preparation for community reintegration.

Balance group therapy (BGT) designed to fulfill the demand of communityreintegration of every patients who was receiving services from CRP. The understanding of patients as a preparation for their integration through balance group therapy is very important to measure the satisfaction. Participants' interviewed data description and coding toward understanding their community reintegration through balance group therapy is given below:

Table-12: Option coding Participants understanding of balance group therapy as a preparation for community reintegration.

Codes	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Response (total)
Can do my daily work					√	√	√	√	√		5
Can move in the society by my wheelchair			√							√	2
Can go through any kind of roads by my wheelchair			√	√		√	√				4
After returning home, can finish my shopping in wheelchairs	√		√	√		√					4
Can keep pace with my friends & relatives with proper balance and go to visit them		√	√	√							3
Able to do any kind of household works.					√			√	√		3

Can do anything without any heavy work					√						1

One patient said, "*After returning home from CRP, I can go alone in the society, can chat with my friends, visit to my relatives. Can finish my shopping. I can do all of things by using my wheelchair keeping the balance. I can go through any kind of road, can cross the roads and spread-breaker with my wheelchair.*

Three of the participant was woman and they described their answer as they could do their household work without any heavy work. They could keep pace with their family and could use their wheelchair independently. One of them said,

I think, I do all of my household work. I can cook, can clean my house, and can clean my cloths. But I can't do any heavy works otherwise I can do the other work for receiving BGT.

One study result showed, there is a general decline in community reintegration over time in term of physical independence, mobility, occupation and social integration. However, as time passes economic self-sufficiency appears to improve steadily. Life satisfaction also declined over time and also related to community reintegration (Charlifue & Gerhart, 2004).

Another study result was that, after SCI the promoting factors which causes activity for a individual in his environment is by using cognitive and behavioral strategies; finding supporting environmental solutions; exploring motivation post injury; and capturing new frames of references (Kerstin et al., 2006).

Lastly according to the participants' speech most of the participants ensure their reintegration to the community well with a confident to do the all social and household works. So, the emerging theme was;

Theme 7: By taking balance group therapy participants were prepared for their community reintegration.

Category 9:Improvement of confidence after balance group therapy.

Table-13: coding of improvement of confidence after balance group therapy

Codes	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Response (total)
Improved	√		√	√	√	√		√	√	√	8
Can sit now	√		√					√	√	√	5
Can get up & down from my wheelchair	√										1
Can do any works	√		√		√	√	√		√	√	7
Can overcome the fear& have got the courage	√		√	√	√	√					5
Belief is coming that I will be fine again		√				√			√	√	4

Almost eight participants out of ten directly had agreed that their confidence improve for balance group therapy. The second most participants also added that for the improvement of their confidence they could do any works. One of them said,

"I couldn't sit on my bed, for taking this therapy I can sit in any place. I can transfer from bed to wheelchair and wheelchair to bed. I can do my works."

Another one says, *"My confidence is very much improved. There is joy in my mind that I can live long. I can get fresh air now and have courage to go anywhere. I can walk now. So don't need any career. I can do anything, walking, wearing shoes that's so my confidence is improved."*

They had got their confidence because they overcome their fear and had got the courage in their workplace. They were confident now that they would lead a better life and would be fine again. A participant said,

“I think if I get the therapy session several time, I will be completely ok. I am confident that I can do my daily works.”

Another one said, *“I couldn’t believe it before that I would be fine again and could meet with everybody. I get my believe that I will be good again after BGT. It is my full believe that I don’t go after a small shake, balance group will protect me from that.”*

By the above discussion we come into a point that most of them were confident because they were able to do any kind of work. By overcoming their fear they were able to regain their courage and faith about their better life & living ability. So, the emerging theme was;

Theme 8: Balance Group Therapy improved their confidence.

Category 10: Participants satisfaction or dissatisfaction with reasons.

In this category only participants' satisfaction was found. Every ten participants ensured their satisfaction with an answer yes and they also confirmed it with reason. A brief report is given bellow with participants' data description about reasoning of satisfaction,

Table-14: Participants satisfaction or dissatisfaction with reasons

Participants	Satisfaction or dissatisfaction with reasons
1	"Satisfied. Because I couldn't understand the balance, now I can. Now I have got my courage to do any work like as I can now sit on my bed. It's a faithful and necessary therapy."
2	"Satisfied. I can move with everybody. Balance group therapy help in work place also. As a teacher, if I will get back to my school, take my classes sitting on the wheelchair and can teach the student by taking my own balance."
3	"Satisfied. I am benefited to do balance group therapy in CRP. I couldn't do anything before, now I can do all the work sitting in the wheelchair."
4	"Satisfied. Now I can walk very smoothly that so I am satisfied. I like to do the therapy. Everything is nice, neat & clean up to environment."
5	"Satisfied. Because I am benefited. I get the courage. I can move my body."
6	"Satisfied. After getting I can be stabilized in sitting, moving, leaning down. It is beneficial in every side. My headache is also removed."
7	"Satisfied. Because I can learn every work, how to do, how to move, how to play, to go to market by keeping balance. That's so I am satisfied."
8	"Satisfied. I couldn't do anything before, now I can by balance group therapy. Can extend my hand, wear cloths, walking by taking balance group therapy."
9	"Satisfied. After operation I felt pressure on my waist, after getting therapy I fell easy. Environment, attitude of sir is good & I feel happy to take therapy with everybody there."
10	"Satisfied. I couldn't do anything before, now I can. I can run in any road with my wheelchair."

One study result was that, the reintegration had positive weight indicated, better reintegration is associated with increased satisfaction (Tonack et al., 2008).

Lastly the emerging theme was;

Theme 9: Participants satisfied with Balance Group Therapy (BGT).

Category 11:Participant's recommendations.

In this category, some recommendations is found. The participants interviewed data coding about their recommendations is given below:

Table-15: Coding of participant's recommendations.

Codes	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Response (total)
Have recommendation	√										1
Time should be increased	√		√	√	√	√	√	√	√	√	9
New item should be added		√			√	√	√			√	5
No other recommendation			√	√				√			3
I like the therapy					√						1
Should pressurized the patient to attend in the right time									√		1

In this category majority recommended that the time of balance group therapy should increase measuring its' importance. Though this point was collected in the category of duration & frequency but when this is the topic of their need, they repeated it again. Five participants also added the topic of item of balance group therapy. They also wanted new & more items. One of them said,

My recommendations is, BGT never be stopped. It should be continued by the authority. It's better to increase the time. Need to be increased one more day in a week. Don't deleted old item should be added new."

Among all the participants, one participant complained that all the patients didn't attend in the therapy at the right time because of their having lunch at 1-2pm and they went for

asleep. So either time should be changed or authority should pressurized the patients & career. She said that,

"I think if the patients attended in the perfect time, we could get the full therapy time. The therapy will be better if the authority pressurize them to attend in the right time."

One study result shows that, seven concept that encapsulated the important dimensions of rehabilitation from participants' perspective: the importance of specific staff qualities; the need for a vision of future life possibilities; the importance of peer; the relevant of programme content; the institutional context or rehabilitation; the importance of reconnecting the past to the future; the importance of meeting the need of the real world (Hammell, 2007)

Lastly from the table most of the participants' opinion was about the time. They wanted more time with new more items. Without that they had no recommendations. Lastly the emerging theme was;

Theme 10: Time & items should be extended.

Balance Group Therapy (BGT) is the most common therapeutic intervention which has been used worldwide for spinal cord injury patients. But it seem that, from the online database (Google scholar, HINARY, PubMed and other PT journals) and manual search (Books, Magazines, Library sources) there I had not found any study directly related to the satisfaction about balance group therapy.

The most appropriately related were used to support the literature, discussion and thus the study. Besides, the study result could not be compared with other studies as because other studies were not similar as this service process.

During data collection, some data discussion from the participants was overlapped with some other therapy interventions and training. The interviewer sometimes minutely eliminated some data discussion which was not according to physiotherapy perspective.

Another limitation was, during the data collection period there was no non traumatic Spinal Cord Injury participants to select and to fulfill a criteria of this study.

CHAPTER-VI CONCLUSION AND RECOMANDATION

6.1 Conclusion

There are a little previous studies about Balance Group Therapy (BGT) intervention. The patient satisfaction towards the service will give these intervention a new dimension. The participant's concepts reflected the quality of whole structure of service delivery process. The results which had been found enriched in nature which includes a different height to the service.

The major finding was; every participant expressed their satisfaction for balance group therapy interventions process which was provided during their admission time in ward and their stay at half way hostel of CRP, in here overall environment was perfect to do the balance group therapy. The frequency & duration which was selected and organized by the authority should be increased. The total items & repetitions of balance group therapy was adequate. The explanations given by clinical therapists was helpful as they learn therapy easily and could perform accurately and they also liked his attitude so it could describe as there had a very good understanding between patients and physiotherapist (PT) during balance group therapy. There were a lot of significance of balance group therapy on solving the problems of participants and that why it was important in their daily life. By taking this therapy participants were prepared for their community reintegration and they were confident to do all kind of social and their daily work. And lastly they recommended that the balance group therapy should start in time and the duration and item should be extended.

6.2 Recommendations

Recommendation for the service provider

The study carried out some significant finding but also noted some recommendations. The service provider can delay few minutes of the starting time for Balance GroupTherapy (BGT) session as to provide time to prepare those patient who have no visitor and can extend the time as to provide sufficient time for activities or daily living (such as toileting, drinking water, eating etc) of both complete and incomplete Spinal Cord Injury patients.

Recommendation for further research

There are so many opportunities of conducting research study in this area because Balance Group Therapy intervention were never selected to perform any study in the past. More study will enrich the service setting and delivery system. Some ideas are included bellow;

- Conducting the same study.The satisfaction can also be found by using different method and also ensuring a large number of participants.
- Satisfaction towards group therapy and group sports therapy of Spinal Cord Injury patients during their stay at CRP.
- Satisfaction towards the other group therapy of Spinal Cord Injury patient.

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Appendix 1

Permission letter

April 19, 2017

Head of the Department,
Department of Physiotherapy,
Centre for the rehabilitation of the paralysed (CRP)
CRP, Chapain, Savar, Dhaka-1343.

Through: Head of Physiotherapy Department, BHPI

Subject: Seeking permission for data collection to conduct my research project.

Dear Sir,

With due respect and humble submission to state that I am Marina Uprose a student of 4th Professional B.Sc. in Physiotherapy at Bangladesh Health Professions Institute (BHPI). My research project title is **"Satisfaction of spinal cord injury patients to balance group therapy in a specialized rehabilitation centre in Bangladesh".** Ethical permission is got from the Institutional Review Board (IRB) of BHPI. To conduct this research, I want to collect data from the patients with spinal cord injury form CRP. So, I need permission for data collection. I would like to assure that anything of my study will not be harmful for the participants.

I therefore, pray and hope that you would be kind enough to give me the permission to make this research projectsuccessful.

Sincerely yours,

Marina Uprose

Marina Uprose
4th Professional B.Sc. in Physiotherapy
Class Roll-13,Session: 2012-2013
Bangladesh Health Professions Institute (BHPI)
(An academic Institute of CRP)
CRP, Chapain, Savar, Dhaka-1343.

Appendix 2

বাংলাদেশ হেল্‌থ প্রফেশন্স ইনষ্টিটিউট (বিএইচপিআই)

BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)

(The Academic Institute of CRP)

Ref: CRP-BHPI/IRB/04/17/99

Date: 15/04/2017

To
Marina Uprose
B.Sc. in Physiotherapy
Session: 2012-2013, Student ID 112120013
Bangladesh Health Professions Institute (BHPI)
(An academic Institute of CRP)
CRP, Chapain, Savar, Dhaka-1343.

Subject: "Satisfaction of spinal cord injury patients to balance group therapy in a specialized rehabilitation centre in Bangladesh".

Dear Marina Uprose,

The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application on 14/08/2016 to conduct the above mentioned thesis, with yourself, as the Principal investigator. The Following documents have been reviewed and approved:

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

Since the study involves a self-administered questionnaire that takes 20 to 30 minutes, have no likelihood of any harm to the participants. The members of the Ethics committee have approved the study to be conducted in the presented form at the meeting held at 09:00 AM on August 17, 2016 at BHPI.

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

Best regards,

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

CRP-Chapain, Savar, Dhaka-1343. Tel: 02-7745464-5, 7741404 , Fax: 02-7745069,
Email: contact@crp-bangladesh.org, www.crp-bangladesh.org

Appendix 3.1

সম্মতি পত্র

আসসলামুআলাইকুম / নম্‌সকার আমার নাম মেরিনা আফরোজ। আমি একটি গবেষনা করছি যার শিরোনাম “বাংলাদেশের একটি বিশেষ পুনর্বাসন কেন্দ্রে মেরুরজ্জুতে আঘাতপ্রাপ্ত রোগীদের ভারসাম্য গ্রুপ থেরাপি-তে সন্তুষ্টি” ,৪র্থ বছরের কোর্সের জন্য যা বাংলাদেশ হেলথ প্রফেশন্স ইন্সটিটিউট (বি. এইচ. পি. আই.), ঢাকা বিশ্ববিদ্যালয় থেকে ফিজিওথেরাপীতে স্নাতক ডিগ্রি সম্পন্ন করার জন্য প্রয়োজন। আমি কিছু তথ্য সম্পর্কে জানতে চাই। আপনি অনুগ্রহপূর্বক নিম্নলিখিত প্রশ্নগুলোর উত্তর দিবেন। এটি পূরণ করতে সর্বোচ্চ ২০-৩০ মিনিট সময় লাগবে। এই গবেষনার উদ্দেশ্য হচ্ছে মেরুরজ্জুতে আঘাতপ্রাপ্ত রোগীদের ভারসাম্য গ্রুপ থেরাপীতে সন্তুষ্টি খুঁজে বের করা। আপনার অংশগ্রহন হবে স্বেচ্ছাপ্রণদিত । আপনার অধিকার রয়েছে সম্মতি ফিরিয়ে নেওয়ার অথবা প্রশ্নের উত্তর না দেওয়ার। আপনার কাছ থেকে প্রাপ্ত তথ্য টেপ রেকর্ডের মাধ্যমে রেকর্ড করা হবে। আমি নিশ্চিত করছি যে আপনি কোন ভাবে ক্ষতিগ্রস্থ হবেন না। কারন আপনি যে তথ্য দিবেন তা সম্মান করা হবে এবং গোপনীয়তা রক্ষা করা হবে। গবেষনাটি এখন সরাসরি আপনার কাজে না আসলেও থেরাপীর মানন্নোয়নে এটি কাজে লাগতে পারে, যা ভবিষ্যতে রোগীদের ক্ষেত্রেও সহায়ক হবে। এই গবেষনাটি প্রতিষ্ঠানের উন্নতির জন্য প্রয়োজন।

আমি (অংশগ্রহনকারী), সম্মতিপত্রটি পড়েছি এবং বুঝতে পেরেছি। কোন প্রকার জোর প্রয়োগ ছাড়াই আমি অংশগ্রহনে সম্মত হলাম।

আমিশুরুকরারপূর্বেআপনারকোনোপ্রশ্নআছেকি? তাহলেআমিকিএইসাক্ষাতকারশুরুকরতেপারি?

ক. হ্যাঁ খ. না

ক) অংশগ্রহনকারীর সাক্ষরঃ	তারিখঃ
খ) গবেষকের সাক্ষরঃ	তারিখঃ
গ) তথ্য সংগ্রহকারীর সাক্ষরঃ	তারিখঃ

Appendix 3.2

Consent Form

Assalamualaikom/ Namasker, my name Marina Uprose. I am conducting a study which is a part of 4th year course curriculam as partial fulfillment of Bachelor of science in Physiotherapy degree titled, "***Satisfaction of spinal cord injury patients to balance group therapy in a specialized rehabilitation center in Bangladesh***" from Bangladesh Health Profession Institute (BHPI), University of Dhaka. I would like to know about some information. You will kindly answer some questions which are mentioned in this form. This will take approximately 20-30 minutes. The objectives of this study are to discover spinal cord patients' satisfaction to balance group therapy. Your participation will be voluntary. You have the right to withdraw consent and discontinue participation at any time. Although the research is no longer directly involved in your work, it can be useful in future therapies. I assure you would not get harmed because your information will be respected and your confidentiality should be maintained. This project is for the development of the organization.

I (participant) have read and understand the consent form. I agree to participate in the research without any force.

Do you have any questions before start? So may I have your consent to proceed with the interview?

a. Yes b. No

Signature of the participant:	Date:
Signature of the interviewer:	Date:
Signature of Information collector:	Date:

Appendix 4.1

প্রশ্নাবলী

“বাংলাদেশের একটি বিশেষ পুনর্বাসন কেন্দ্রে মেরুরজ্জুতে আঘাতপ্রাপ্ত রোগীদের ভারসাম্য গ্রুপ থেরাপি-তে সন্তুষ্টি।”

অংশগ্রহণকারীর ব্যাক্তিগত তথ্যাবলি:

<table>
<tr><td colspan="3">অংশগ্রহণকারীর নাম:</td></tr>
<tr><td>কোড নং:</td><td colspan="2">রোগীরআইডি নং:</td></tr>
<tr><td>রোগীরবয়স:</td><td colspan="2">তারিখ:</td></tr>
<tr><td>ভারসাম্য গ্রুপ থেরাপিরসময় শুরু:</td><td colspan="2">ভারসাম্য গ্রুপ থেরাপিরসময় শেষ:</td></tr>
<tr><td colspan="3">রোগনির্ণয় অথবা লেভেল অফ ইঞ্জুরি:</td></tr>
<tr><td>সম্মতিপত্র গ্রহন হয়েছে:</td><td>হ্যা:</td><td>না:</td></tr>
<tr><td colspan="3">গবেষক এর সংখ্যা:</td></tr>
<tr><td colspan="3">গবেষক এর নাম:</td></tr>
</table>

পর্ব - ১ সামাজিক-জনসংখ্যামূলক তথ্য:

লিঙ্গ:	ক.পুরুষ	খ. নারী	
ধর্ম:	ক.মুসলমান	খ. হিন্দু	
	গ. খ্রিষ্টান	ঘ.বৌদ্ধ	
বৈবাহিক অবস্থা:	ক. বিবাহিত	খ. অবিবাহিত	
	গ. তালাকপ্রাপ্ত	ঘ. বিচ্ছেদ	
	ঙ. বৈধব্যপ্রপ্ত		
শিক্ষাগত যোগতা:			
আবাসিক এলাকা:	ক. গ্রামাঞ্চল	খ. মফস্বল	গ. শহর
পরিদর্শক:	ক. উপস্থিত	খ. অনুপস্থিত	
মেরুরজ্জুতে আঘাতের কারন:			
পরিবারের আকার:	ক. একক পরিবার	খ. যৌথ পরিবার	
পেশা:			
উপার্জনক্ষম ব্যক্তি:	ক. কেউনেই	খ. একজন	
	গ. দুইজন	ঘ. তিনজন বা অধিক	
ঠিকানা:			
যোগাযোগ নাম্বার:			

পর্ব - ২ প্রশ্ন:

১।ভারসাম্য গ্রুপ থেরাপীর পরিবেশ সম্পর্কে আপনার মতামত কী?(অনুগ্রহ করে বর্ননা করুন)।

২। ভারসাম্য গ্রুপ থেরাপীর ব্যাপ্তিকালএবং পুনরাবৃত্তি সম্পর্কে আপনার মতামত কী? (অনুগ্রহ করে বর্ননা করুন) ।

৩। আপনি যে ভারসাম্য গ্রুপ থেরাপী গ্রহন করেছেন তার প্রকার সম্পর্কে আপনি কী মনে করেন? এটাকি পর্যাপ্ত? (অনুগ্রহ করে বর্ননা করুন) ।

৪। ভারসাম্য গ্রুপ থেরাপি চলাকালীন ফিজিওথেরাপিস্ট দ্বারা প্রদত্ত ব্যাখ্যা সম্পর্কে আপনার মতামত কী? (অনুগ্রহ করে বর্ননা করুন)।

৫। ভারসাম্য গ্রুপ থেরাপী চলাকালীন ফিজিওথেরাপিস্টের মনোভাব সম্পর্কে আপনার মতামত কী? (অনুগ্রহ করে বর্ননা করুন)

৬। আপনার সমস্যায় ভারসাম্য গ্রুপ থেরাপীর তাতপর্যকী? (অনুগ্রহ করে বর্ননা করুন) ।

৭। আপনার দৈনন্দিন জীবনে ভারসাম্যগ্রুপ থেরাপীর গুরুত্ব কী? (অনুগ্রহ করে বর্ননা করুন) ।

৮। সমাজে ফিরে যাওয়ার জন্য আপনাকে প্রস্তুত করায় ভারসাম্য গ্রুপ থেরাপী সম্পর্কে আপনি কী বুঝেন? (অনুগ্রহ করে বর্ননা করুন)।

৯। ভারসাম্য গ্রুপ করার পর আপনার আত্মবিশ্বাসের উন্নতি সম্পর্কেআপনার মতামত কী? (অনুগ্রহ করে বর্ননা করুন) ।

১০। আপনি যে ভারসাম্যগ্রুপথেরাপী গ্রহনকরেছেনতাতে কি আপনি সন্তুষ্ট?

(ক) যদিহ্যাহয়, তাহলেকেন? (অনুগ্রহকরেবর্ননাকরুন) ।

(খ) যদিনাহয়, তাহলেকেন? (অনুগ্রহকরেবর্ননাকরুন) ।

১১। ভারসাম্য গ্রুপ থেরাপীর ব্যাপারে আপনার পরামর্শ কী? (অনুগ্রহ করে বর্ননা করুন)

Appendix 4.2

Questionnaire

"Satisfaction of spinal cord injury patients to balance group therapy in a specialized rehabilitation center in Bangladesh"

Participant's personal information:

<table>
<tr><td colspan="3">Name of participant:</td></tr>
<tr><td colspan="2">Code no:</td><td>patient'sid no:</td></tr>
<tr><td colspan="2">patient'sage:</td><td>Date:</td></tr>
<tr><td colspan="2">Balance group therapystarting time:</td><td>Balance group therapyendingtime:</td></tr>
<tr><td colspan="3">Diagnosis or level of injury:</td></tr>
<tr><td>Consent formtaken:</td><td>Yes:</td><td>No:</td></tr>
<tr><td colspan="3">Number of interviewer:</td></tr>
<tr><td colspan="3">Name of interviewer:</td></tr>
</table>

Section – 1: Socio-demographic information:

Sex:	a. Male b. Female		
Religion:	a. Islam b. Hindu c. Christian d. Buddha		
Marital status:	a. Married c. Discard e. Widowed	b. Unmarried d. Separated	
Educational status:			
Residential area:	a. Rural	b. Semirural	c. Urban
Visitor:	a. Present	b. Absent	
Cause of injury:			
Family size:	a. Nuclear family	b.Extended family	
Occupation:			
Earning member:	a. None c. Two	b. One d. Three or more	
Address:			
Contract no.:			

Section – 2: Questionnaire

1. What is your opinion about the environment ofbalance group therapy? (Please explain)
2. What is your opinion about the duration & frequency of your balance group therapy?(Please explain)
3. What do you think about the totalitems&repetitions of balance group therapy that you received, is it adequate? (Please explain)
4. What do you think about the explanation given by the physiotherapist during balance group therapy? (Please explain)
5. What is your opinion about the attitude of your physiotherapist during balance group therapy? (Please explain)
6. What has been the significance of balance group therapy on your problem? (Please explain)
7. What is the importance of balance group therapy in your daily life? (Please explain)
8. What is your understanding of balance group therapy as a preparation for you to go back to the community? (Please explain)
9. What is your opinion about the improvement of your confidence after balance group therapy? (Please explain)
10. Are you satisfied with the therapy intervention that you have received in balance group therapy?
    a. If yes, then why?(Please explain)
    b. If no, then why? (Please explain)

11. What are your recommendations about the balance group therapy?(Please explain)