

VOCATIONAL TRAINING IMPACT ON REINTEGRATION AND COMMUNITY PARTICIPATION FOR SPINAL CORD INJURY PATIENTS

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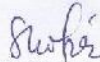
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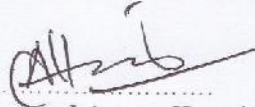
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**VOCATIONAL TRAINING IMPACT ON REINTEGRATION AND
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PATIENTS.**

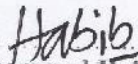
Submitted by **Fahamida Akter Bipa** for partial fulfillment of the requirements for the degree of Bachelor of Science in Physiotherapy (B. Sc. PT)



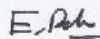
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DECLARATION

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 bound to take written consent from the Department of Physiotherapy of Bangladesh Health Professions Institute (BHPI).

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Abbreviations

BHPI: Bangladesh Health Professions Institute

BMI: Body Mass Index

BMRC: Bangladesh Medical Research Council

CRP: Centre of the Rehabilitation for the Paralysed

IRB: Institutional Review Board

NHIS: National Health Interview Survey

SPSS: Statistical Package for the Social Sciences

WHO: World Health Organization

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Abstract

Objective: To evaluate the vocational training impact on reintegration and community participation for spinal cord injury patients. **Methodology:** A cross sectional study was conducted with a structured and close ended interviewer administered questionnaire to collect information from 65 spinal cord injury patients who has completed their rehabilitation in respects through purposive sampling procedure. Data was numerically coded and captured in Microsoft excel, using an SPSS 20 version software program. **Result:** This study found that, among the participants 25-34 age group more affected (41.5%) group, male are most vulnerable, most of the participants were unmarried (78%), 73.6% participants had primary level education, most of the patients lived in urban area and most of the patients did not do any work after injury. Most of the participants depend on others for groceries and house-hold necessary (71.7%), preparing meal 88.7%, normal every day work (47.2%), caring for the children (67.9%), looking after personal care (73.6%) and most of the patients participate in shopping (41.5%) 1-4 times, 43.4% patients never participate in leisure activities, 60.5% less visit friends and relatives of their own, 66% go for outing seldomly, 79.2% do not attain for any school and training, 94.3% never participate for any voluntary activities. **Conclusion:** The conclusion from this study that increase life satisfaction and community participation were in person with SCI in the long run. High vocational status, financial status, marital status, ability to self-care, family life was related to high life satisfaction.

1.1: Background:

Spinal cord injury (SCI) is one of the most common severe disabilities which negatively influences physical and psychological aspects of health quality of life. It is generally a debilitating disorder that can have a profound impact on independence and life style, related to loss of motor and sensory function as well as associated problems such as bladder, bowel, sexual dysfunction, chronic pain, increase risk of mental health problems, increased risk of re-hospitalization, relationship and marital difficulties, and poor vocation prospects. Therefore, restoring persons with SCI to their optimum level of functioning and participation and improving their quality of life are essential goals of a rehabilitation program (Kumar et al., 2012).

Community reintegration has been defined as acquiring/resuming age/gender/culture appropriate roles/statuses including independence/interdependence in decision making and productive behaviors carried out as a part of multi-varied relationships with family, friends and others in natural community setting. Reintegration extends beyond the person, it promotes his/her fullest inclusion and participation within the physical and psychosocial environment. For persons with spinal cord injury (SCI), reintegration is a key issue in the entire rehabilitation process because in most instances SCI happens to persons who were healthy and actively integrated into social life. Although the rehabilitation process is assumed to have substantial influence on the extent of one's performance or participation in the community by either the process of functional restoration or environmental modification factors such as lack of transportation, physical and architectural barriers, diminished availability and inaccessibility of healthcare pose significant barriers to people with SCI living in rural areas, as they strive to be integrated into their community. Although community reintegration was considered as an essential part of Community Based Rehabilitation (CBR) program launched in developing countries, most program have found it difficult to achieve adequate levels of community participation. Despite its importance, few studies have focused on measuring the concept of community reintegration and the

effects of various factors on promoting or facilitating community reintegration after SCI (Sekaran et al., 2010).

Vocational reintegration is the service that is available to assist individuals with SCI and other disabilities begin or return to work. The goal of vocational reintegration services is to assist people with disabilities to successfully obtain and maintain competitive employment in a field of interest, in order to support increased autonomy and full participation in society. Vocational rehabilitation programs to focus on in order to improve their effectiveness in assisting individuals with SCI in obtaining and maintaining employment (Meade et al., 2006).

Return to paid work is regarded as one of the most important outcomes of reintegration in society following a spinal cord injury (SCI). It gives people a social status and meaning to life and makes them more financially independent. As the majority of patients with traumatic SCI are relatively young, attention to vocational reintegration is of particular importance, not just to the patients themselves but also from a wider social point of view. Job reintegration of disabled people has been an important point of political interest. Several studies have shown that reintegration interventions do not enable all people with chronic diseases and disabilities to resume work. The purpose of this study was to extend our knowledge about the process and the outcomes of reintegration in paid work following a SCI. Percentages of success have varied from 25 to 48% in publications from various countries in the last decades. Factors related to the success of vocational reintegration include several personal and injury-related variables, such as age, type of lesion and Barthel score, and work-related variables, such as educational level, pre-injury type of work and social security system. Focused on the relation between vocational outcome and more subjective indicators such as work interests and values, educational and vocational plans and societal attitudes. Nevertheless, the role of the individual patient seems very important in the process to successful job reintegration. Recommendations to improve vocational outcome are tailor-made educational and vocational counselling, contact with peer groups, changing employer perceptions, improving transport and equal access and reducing financial disincentives to working. Most of these proceedings take place after the rehabilitation period. Aiming at optimal participation for people with SCI, we have to know

which interventions promote adequate skills and strategies and create opportunities for return to work. (Hansen et al., 2007)

A small number of non-governmental organizations are involved in rehabilitation and vocational training for disabled people in Bangladesh. CRP (Centre for the Rehabilitation of the Paralyzed) is a non-governmental organization specializing in the rehabilitation of people with spinal cord lesion in Bangladesh. Great emphasis is placed upon vocational training at CRP. Given the difficult employment situation for disabled people, the organization recognizes work rehabilitation as vital to most rehabilitation programs. Similarly, a return to paid employment is regarded as the most important outcome measure of successful reintegration into society (Hansen et al., 2007).

Reintegration extends beyond the person: it promotes his/her fullest inclusion and participation within the physical and psychosocial environment. The environment represents the vast space that surrounds the person. For the purpose of intervention and analysis, the environment can be divided into sectors represented in diagram form by a series of concentric circles surrounding the person. The process of adaptation after SCI is unique for each person, it has eluded characterization and prediction. Attributes associated with successful adaptation include younger age at injury, internal locus of control, effective social skills, employment, independent transportation, financial resources, assertiveness, and problem-solving ability. These include psychological adaptation, social role function, vocational and architectural accessibility, and spiritual participation (Stiens et al., 2002).

The adaptive response after SCI, termed adjustment, is a summary term that includes the many spontaneous and applied processes that enable a person to achieve optimal health, assertiveness and problem-solving ability, independent transportation, employment, and financial resources. Adaptation is a process that occurs in response to new life challenges and focused, goal-directed activity. Mechanisms for adaptation after SCI operate in a variety of systems as outlined in the community. Integration is a part of the mainstream of family and community life, fulfilling normal roles and responsibilities and being an active and contributing member of one's social groups and society as a whole' Physical, psychological and social consequences of acquiring an SCI are evident in both the acute and chronic phases of the condition and have the potential to influence reintegration into

the community. Social participation, the social consequences of SCI produce changes in an individual's social roles and interactions, resulting in need in several areas. In a study examining the unmet needs of people with SCI living in the community, a high or very high need relating to employment was reported by 22% of the sample. Results from such studies vary due to many factors, for example, the characteristics of the sample and the definition of employment used. However, re-employment rates have been reported as ranging from 14 to 44% (Stiens et al., 2002).

Outcomes of rehabilitation efforts to help SCI patients reintegrate into the community relate primarily to the patient in the environment plane of experience termed participation (for effective integration) or handicap (for barriers to performance) in social roles. Participation is defined as an individual's involvement in life situations despite health conditions, bodily function, structures, activity capability, and contextual factors (Stiens et al., 2002).

1.3 Justification

Nowadays Spinal cord Injury is the most commonly occurring disabling condition in all developing and developed countries in the world. It is also increasing day by day for different reasons in Bangladesh. Injuries that affect the spinal cord and associated physical and psychological damage are important health problems in Bangladesh as they carry high morbidity and mortality rates.

SCI is a life-changing event that makes the people losing their mobility power in maximum case and make dependent on assistive device, but it depends on the extent and severity of injury. So the treatment varies from patient to patient to reintegrate them into their community. Greater community reintegration improves one's quality of life. It not only restore quality of life, but also decrease mortality rate in spinal cord injury. Greater community reintegration can achieve by receiving vocational training.

Vocational rehabilitation is not a matter for healthcare alone. It is a combination of both healthcare and restore capacity for work that helps a person with spinal cord injury to participate in the community. Social support and life satisfaction can also achieve by vocational rehabilitation. In Bangladesh there are only a very few research studies in this area among SCI people. This study will be helpful to measure the life satisfaction and community participation after vocational training of people with spinal cord injury.

This data will show that people with SCI have to fight with the rights of having access to the mainstream treatment facility across the country. The rehabilitation program will be unfulfilled without raising awareness among the family and community people about the ability of the person with SCI. Therefore, prevention, proper acute medical treatment and rehabilitation only can increase survival expectation of persons with SCI.

Research makes a profession strongest. So there is no alternative option to do research as a professional to develop the profession. In our country there is no such study about the life satisfaction of the people with spinal cord injury in the community.

1.4: Research question

Does vocational training impact on reintegration and community participation for spinal cord injury patients?

1.5 Aim of the study

To evaluate the vocational training impact on reintegration and community participation for spinal cord injury patients.

1.6 Objectives

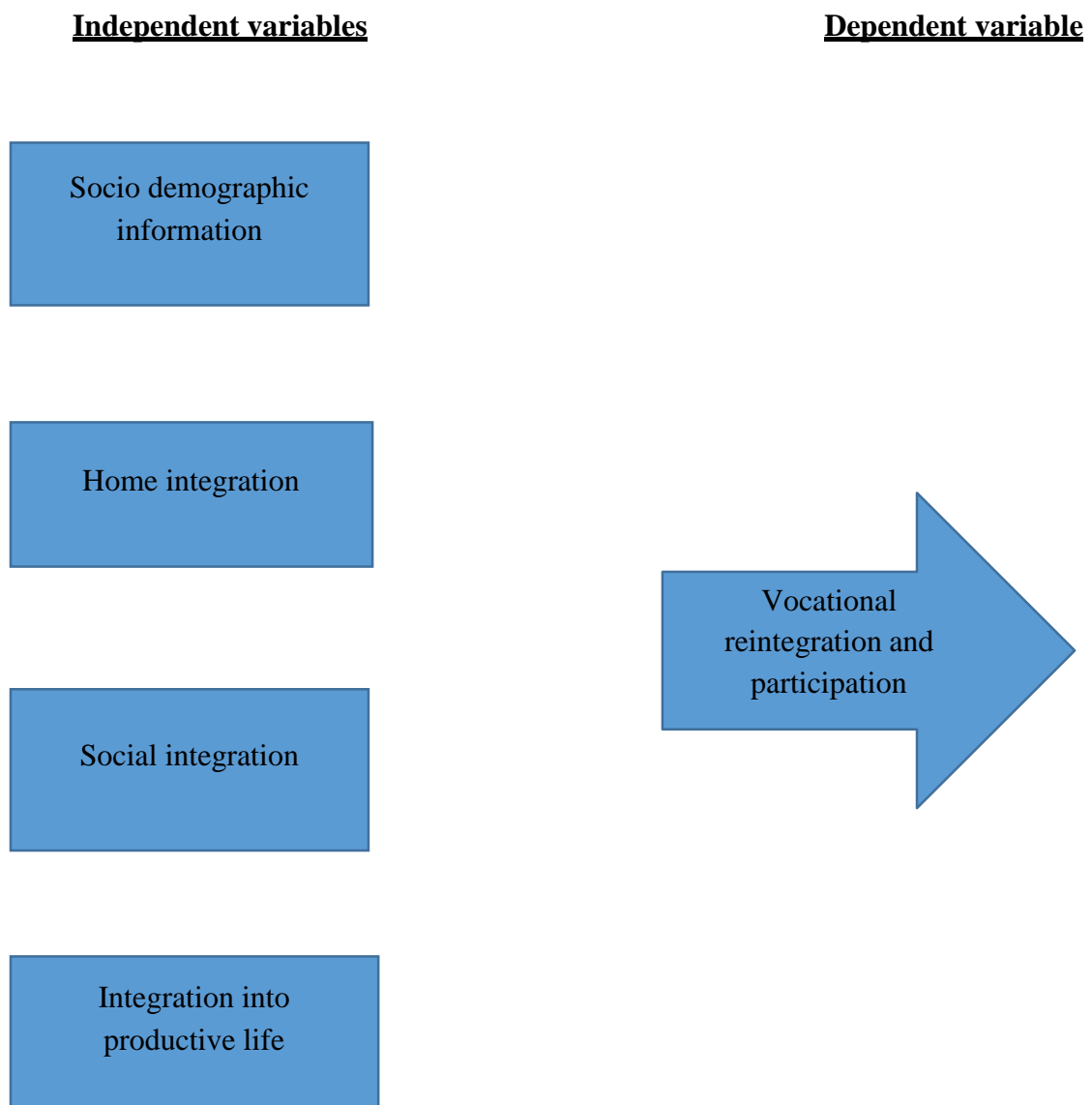
1.6. 1. General Objectives

To evaluate the vocation training impact on community reintegration and participation for spinal cord injury patients.

1.6. 2. Specific Objectives

- To find out the socio-demographic information
- To find out home integration, social integration and integration into productive actives as per Community Integration Questionnaire
- To find the association of socio demographic information in terms of different integrations in relation to Community Integration Questionnaire

1.7 Conceptual framework



1.8: Operational Definition

Spinal Cord Injury

Spinal cord injury is damage to the spinal cord. When the spinal cord is damaged by any causes like trauma or disease that result sensory and motor loss is called spinal cord injury. It may result from direct injury to the cord itself or indirectly from damage to surrounding bones, tissues, or blood vessels.

Vocational reintegration

Vocational reintegration is an active process that depends on the participation, motivation and effort of the individual, supported by the workplace and healthcare.

Community

A common definition of community is, a group of people with various characteristics who are linked by social bonds, share common perspectives, and or involved in joint actions in geographical locations or settings.

Spinal cord is an important and vital part of human body. The Spinal Cord is the major reflex center and conduction pathway between the body and the brain. It begins at the foramen magnum in the skull and it continuous with the medulla oblongata in the brain. It terminates inferiorly at the level of the lower border of the first lumber vertebra. The location of the spinal cord is within the vertebral foramen which is called the vertebral canal (Snell, 2010). In the spinal canal the continuous end of the spinal cord is the cauda equine (or“horses tail”). The spinal cord has neurological segmental levels which correspond to the nerve roots that exit the spinal column between each of the vertebrae. There are 31 pairs of spinal nerve roots: cervical nerve roots 8, thoracic nerve roots 12, lumbar nerve roots 5, sacral nerve roots 5 and coccygeal nerve roots 1. The neurological levels do not necessarily line up to the vertebral segments due to the difference in length between the spinal column and the spinal cord (International perspective of spinal cord injury, 2013).

The spinal cord contains longitudinally oriented (white matter) surrounding (gray matter) spinal tracts (white matter) around the central areas (gray matter) where most vertebrate neurological cells are situated. The gray matter is organized into segments of sensory and motor neurons. Axons from spinal sensory neurons enter and axons from motor neurons leave the spinal cord through nerves or roots. (Kirshblum et al, 2011). Spinal cord anteriorly protect by the vertebral bodies and laterally and posteriorly protect by vertebral arches. It is a link between the vertebral nerves and the brain. The spinal cord is the major canal through which motor and sensory information travels between the brain and the body (Kirshblum et al, 2011).

The body receptor receives adjacent stimuli from the environment that sends signals in the brain, and then the brain sends its messages to the nerves of the library, which is the cause of motion of the body (Snell, 2010). If spinal cord becomes damage or gets injury then it is called spinal cord injury. Injury in the spinal cord breaks up the signals (Mediline Plus, 2014) and interrupting whole body communication. It is a medical emergency. Long-term effects can reduce if immediate treatment has taken. Outline the impact of the SCI on

individuals and society clear that after the initial spinal cord trauma effective therapies reduce tissue destruction and improving neurologic outcomes (Fehlings et al 2012).

A Spinal cord injury is damage to any part of the spinal cord or nerves at the end of the spinal canal. This frequently causes permanent changes in strength, sensation and other body functions below the site of the injury (Mayo Clinic, 2015). Spinal cord injury (SCI) is an insult to the spinal cord resulting in a change, either temporary or permanent, in the cord's normal motor, sensory, or autonomic function. "The clinical definition of spinal cord injury excludes intervertebral disc disease, vertebral injuries in the absence of spinal cord injury, nerve root avulsions and injuries to nerve roots and peripheral nerves outside the spinal canal, cancer, spinal cord vascular disease, and other non-traumatic spinal cord diseases" (National spinal cord injury statistical center 2011). The most common sites this injury affects are at the level of the neck vertebrae C5, C6 and C7 and at the level of the chest and back vertebrae, T12 and L1. Spinal cord injury mostly happens at youth and middle age which create great problems in the life of the affected individual's previous social and occupational life roles (Babamohammadi, 2011).

According to the international standards set forth by the American Spinal Injury Association (ASIA), the intensity of an injury is classified as either complete or incomplete. A complete injury is defined as the absence of sensory and motor function in the lower segments of sacral (Grossman et al., 2012) and the person is completely paralyzed below their lesion. Whereas an incomplete injury, means only part of the spinal cord is damaged. A person with an incomplete injury may have sensation below their lesion but no movement. The following classification is also used in terms of spinal cord injury-

Tetraplegia: This term refers to impairment or loss of motor and /or sensory function in the cervical segments of the spinal cord due to damage or neural elements within the spinal canal (Kirshblum et al., 2011). Injury to the spinal cord in the cervical region is associated with loss of muscle strength in all four extremities.

Paraplegia: According to American spinal cord injury association (2011) "Paraplegia is refer to the impairment or loss of motor and sensory function in the thoracic lumber or sacral segment of the spinal cord, secondary to damage of neural element within the spinal

canal". The symptom of paraplegia differs from each other patient and it depend on the severity of the damage of the spine. It may include paralyzed muscle,

Especially, in arm and leg, instability to move or feel anything below the damage area, inability to control bowel and bladder and chest complication. Spinal cord injuries cause when damage occurs to the vertebrae, ligaments or disks of the spinal column or to the spinal cord itself. Spinal cord injury mainly traumatic or non-traumatic and the disadvantages of the spinal cord injury concern for the world of medical science, the people, their families and society completely (Van den Berg et al. 2010). Spinal cord injuries are most often traumatic caused by blow to the spine that fractures, dislocates, crushes, or compresses one or more vertebrae. It can also be a gun or knife wound which enters and presses the spine (Mayo Clinic, 2015). Furlan et al., (2013) stated that in traumatic spinal cord injury motors, sensitivities and autonomy may be disrupted, which can be devastating for all individuals, both socially and economically of the spine. A non-traumatic spinal cord injury caused by inflammation, cancer, arthritis, infections or disk degeneration. The other most common causes of spinal cord injury are- motor vehicle accidents, falls, acts of violence, sports and recreation injuries (Mayo Clinic, 2015). The causes of spinal cord injury is comprehensive life-long consequences, epidemiological data are of fundamental importance in tracing its occurrences, make up one's mind upon preventing strategies and plot clinical resources and conversable services (den Berg et al. 2010).

In Bangladesh it is a common practice to carry heavy load on the head (Mahbub et al., 2006). Most of the SCI takes place due to accidental fall while carrying load (Hoque et al. 1999). Farmers and laborers carry their products during their sowing and transport them from local crop storage or from multiple vehicles in Bangladesh (Hoque et al. 2012). The coolies (labors who undertake heavy load) of Bangladesh carries a burden of about 50-100 kg (Mahbub et al., 2006). The common causes of SCI in Bangladesh are fall while carrying heavy load on head, road traffic accidents, falling from a height, fall of a heavy object onto the head or neck, bull attack and diving into shallow water (Razzak et al., 2011). The large number of falls in Bangladesh is a result of food harvesting which is an important part of our largely agricultural economy. Among the spinal cord injuries caused by road traffic

accidents, mostly involve passengers of 'three wheel vehicles' like baby, taxis and rickshaws.

The incidence of Traumatic Spinal Cord Injury (TSCI) a recent review reported that worldwide varied between 3.6 to 195.4 patients per million (Jazayeri et al., 2014). About 15–17 cases per million per year over the past decade the age-adjusted incidence rate of traumatic spinal cord injury in adults aged 15 years has remained at and older surviving to reach hospital. In currently 11.9 cases per million adults per year is the incidence in Victoria in Australia (Sundararajan, 2008).

The acute phase ranges from 10 to 25/million inhabitants per year which data is recently published in Europe on the incidence of SCI in survivors. Showing consistent rates between 22 and 25/100 000 inhabitants, in the Nordic countries, two register-based studies have been published (Dahlberg et al., 2005). The retrospective study of Japan showed that the annual incidence of spinal column injuries ranges from 19-88/100,000. 15-50 per million per year is the incidence of spinal cord injury. 480-813 per million is the prevalence of SCI. In Pakistan exact incidence of these injuries in this region is not known though there are few reports on demographics of spinal injuries (Qureshi et al., 2010). Recent study (Ning et al., 2012) suggested that the range of incidence in Asia was between 12.06 and 61.6 per million. In comparison, the European incidence was between 10.4 and 29.7 per million, the incidence in North America ranged from 27.1 to 83 per million, and incidence of SCI in Asia was lower than that in North America.

Patients who have been suffering from spinal cord injury often face life threatening complications (Muldoon & Muldoon., 2010), so they need appropriate management and specialized rehabilitation to reintegrate within the community (Momin, 2003). Patients with spinal cord injury often go into different hospitals for the treatment, but these do not always have enough facilities for their treatment. There is no specialized government hospital in Bangladesh for the treatment and rehabilitation of people with spinal cord injury. There is just one non- governmental organization for the treatment of spinal cord injury. This is the Centre for the Rehabilitation of the Paralyzed. For the last 30 years this centre has conducting a rehabilitation program through which the patients can improve their life style (Islam et al., 2011).

In Bangladesh, Centre for the Rehabilitation of the Paralyzed is a renowned non-governmental organization which provides physical, psychological and economic rehabilitation services for people with spinal cord injury. This is one of the largest acute spinal cord injury care institute in South Asia and here about 411 patients with spinal cord injury admits in a year and this makes providers (Centre for the Rehabilitation of the Paralyzed Annual Report, 2016). After discharge, it emphasizes on the importance of successful reintegration of individuals with spinal cord injury in the community and to evaluate this reintegration performs regular follow-up home visits by outreach teams (Centre for the Rehabilitation of the Paralyzed Annual Report, 2015). This study will help to further enhance our knowledge about SCI in Bangladesh, and help to develop effective programs and policies. In developing countries, the lack of advanced care in Intensive Care Units (ICU), and accurate and long term management and rehabilitation of SCI patients.

The ability of a person to work can be deeply influenced by his illness, disability and a number of contextual factors. Rehabilitative medicine is an integral part of the process leading to working life after an illness or injury, but other rehabilitation disciplines are also essential. It is important to understand what medical rehabilitation or rehabilitative medicine trainees need to know about vocational rehabilitation (VR). This applies to those with temporary and permanent impairments (Chamberlain et al., 2009). Vocational reintegration is a multidisciplinary intervention to help people get back to work after a job injury, or a period of unemployment or illness, that is, integration or reintegration of work. These are actors from different professions, organizations and sectors of society (Chamberlain et al., 2009; Gobelet et al., 2007). Vocational rehabilitation usually includes various health and social services, occupational health services, employment services and social or personal insurance depending on the type of welfare method (Andersson et al., 2011). Vocational reintegration can be performed in the community, hospitals, therapy departments, workplaces and other places (Chamberlain et al., 2009). Any kind of rehabilitation can affect the initial phase of functioning, but if applied as the only means of reintegration then it could be ineffective (Kuoppola et al., 2008).

Vocational rehabilitation programs play an important role in bringing persons with a health condition returning to work while encouraging the reconsideration of the workplace (Finger et al., 2012). Vocational rehabilitation is a multi-disciplinary approach which main aim is to improved participation in work and provided in various settings, services and activities to work people with health related disability, limitation or restrictions with work program (Escorpizo et al., 2011).

People who suffer from traumatic spinal cord injury, returns to work have been difficult after injury (Murphy et al., 2013). People with spinal cord injury benefit from these special vocational rehabilitation programs by improving functional independence and employment. Ottomanelli & Lind (2009) concluded that the average rate of any profitable employment for individuals after spinal cord injury is only approximately 35%. But after receiving vocational rehabilitation services, employment opportunities for people with disabilities are highly available (Dutta et al., 2008), a system aimed at optimizing the participation of labor force for people with health problems and limitations (Johnston et al., 2016).

Vocational reintegration program efficiently improve the people with spinal cord injury, coordinating their life, and providing necessary resources for the community life, including vocational reintegration. Spinal cord injury -specialized vocational rehabilitation programs helps to address specific vocational search, evaluation, counseling, training, job adjustment and transportation options, accessibility and overcoming architectural and financial barriers for profitable employment after an injury (Gobelet & Franchignoni, 2006). In spinal cord injury people are faced with different type of health-related problems which is related to body functions and body structures, activities and participation, and environmental barriers (Biering-Sorensen et al., 2006) and where interconnected approaches for optimal care and vocational rehabilitation are important (Kirshblum et al., 2007).

When spinal cord injury is occurred body structures and functions are damaged as a result activities of daily living (ADLs) is limited that affect the participation of the patient (Franca et al. 2011). A spinal cord injury represents an important challenge to vocational reintegration and participation, research shows this effect is negotiated by the residence of

the country (Songhuai et al., 2009). Spinal cord injuries can also reduce the physical ability, functional independence; daily routine carries out, social networking and occupational activities (Craig et al., 2009). Many immediate results are not affected by the spinal cord injury people but they face with difficulties in physical, social, and economic sectors when return and start live in the community (Biering-Sorensen et al., 2011).

Madhab Memorial Vocational Training Institute (MMVTI), part of the NGO Centre for the Rehabilitation of the Paralyzed, especially planned vocational training and reintegration of disabled people through employment. After complete a assessment, the care of the people is combined with training requirements and skills, conducted by a multidisciplinary team of doctors, therapists, social workers, consultants and other professionals, who consider the physical and financial status of the trainees, education, family support, interest, mobility, home environment and individual needs (Nuri et al., 2012).

The focus of reintegration research in developed countries has recently been shifted towards community participation of individuals as they return home following a discharge from inpatient reintegration facilities. In order to work with an acquired spinal cord injury person, reintegration professionals point to their practice by proving that it is client-centered and meets the needs of people with spinal cord injury. For this assistance, a critical review of literature related to the barriers and benefits for the social and community participation of spinal cord injury compliant people is required (Barclay et al., 2015).

Community participation is an important component of a complete reintegration process, especially for traumatic spinal cord injury, these are mostly active in healthy functioning adults with an active family and social life (Sekaran et al., 2010). Many factors impact the quality of life and economic productivity of individuals who sustain spinal cord injury once they return to the community.

Participation can be seen as a way to gain active participation in community level and social experience, attachment to other people and communities (Hammel et al., 2008). Community participation is defined as ‘a one person involved in interacting with others in society or with the community’ (Levasseur et al., 2010). Chang et al. (2013) defined community participation as ‘active participation in activities that happen outside the home or are part of a nondomestic role’.

Major components of social participation are: home and family roles and activities, other productive roles (work, school and volunteering), social networks, leisure activities, mobility and economic self-sufficiency. If social participation is considered to be the major aim of outpatient rehabilitation, the extent to which individuals with disabilities lack integration into each of these aspects of life can be considered to constitute a need. Measuring peoples' level of social participation can therefore be used to identify community needs. Very few instruments have been designed to measure social participation comprehensively and even fewer are directly related to the SCI population (Kennedy et al., 2006).

3.1 Study design

This was a cross sectional survey. Descriptive study design was chosen because the aims of the study is to know community participation after vocational reintegration of people with spinal cord injury.

3.2 Study area

Community in Bangladesh

3.3 Study population

The target population was the peoples with Spinal Cord Injury who had already completed Rehabilitation and receiving vocational training from the Centre for the Rehabilitation of the Paralyzed (CRP).

3.4 Sample size

The study population was the persons with spinal cord injury who had completed the rehabilitation process and receiving vocational training from the Centre for the Rehabilitation of the paralyzed (CRP). As per register maintain by vocational training institute, patients list were scrutinized from July 2012 to June 2013. In the mentioned time frame it was observed that 53 patients has taken vocational training as per their capacity assessed by the expert team of the Centre for the Rehabilitation of the Paralysed (CRP). So, these 53 patients were selected as sample in conveniently to conduct this study.

3.5 Sampling technique

The convenience sampling method was used in this study. Convenient sampling was a process in which a sample was draw from the subjects conveniently available. The

procedure was including all of people with spinal cord injury actually who met the inclusion and exclusion criteria.

3.6 Inclusion criteria

- i. Persons with spinal cord injury.
- ii. Persons who received vocational training.
- iii. Living in the community.
- iv. Age range 16-65 years.
- v. Both male and female were included.

3.7 exclusion criteria

- i. Patient who didn't take rehabilitation.
- ii. Undiagnosed injury.
- iii. Spinal cord injury patient with cognitive problem.
- iv. A progressive disease.
- v. Loss of vision or hearing.
- vi. Age more than 65 years.

3.8 Data collection

3.8.1 Data collection tools

Socio demographic profile sheet: This questionnaire was developed by researcher included items related to personnel characteristic for collect socio-demographic details of the persons such as name, age, gender, marital status, education, occupation, duration of illness etc.

Community integration questionnaire:

In this study, the Community Participation instrument was community integration Questionnaire. This questionnaire largely consisted of selected items. This community

Participation instrument consisting of the disease-specific items, main earning member, monthly income, educational level, pre injury and current employment situation- job type, job contract, opinions about the current working conditions and social atmosphere. The CIQ assessment also included health, situation of those who stopped working, but these were not analyzed in this study.

Paper, pen, pencil, eraser, sharpener, writing board, information sheet and consent form.

3.8.2 Procedure of data collection

The study had been conducted face to face interview about the community participation through community integration questionnaire to collect data from the participants. Face to face interview were needed to develop understanding with the participants for collect accurate data. Firstly, permission was taken from the Head of the Physiotherapy Department to collect data. Then a date and time was fixed with the participant, according to his available time. The study aim and study procedures were explained to participants before collecting data. The participant was given information sheets and consent forms that were explained previously. Participant had opportunity to ask question and they signed the consent form after being satisfied. After completing the questionnaire the participants had signed in the consent form with regards to demographic data. After that, collected demographic information from the participant was completed and the community integration questionnaire also completed through face to face interview in a silent place rather than work place.

3.9 Data analysis

By using descriptive statistic method, data was analyzed through data entry and analysis performed using the Statistical Package for Social Science (SPSS), Inc. version 23, and Microsoft excel spreadsheet, at a descriptive level. Community integration questionnaire and Demographic questionnaire was analyzed. Demographic factors were discussed such as sex, age, occupation, marital status and duration of injury. The Statistical Package for

Social Sciences (SPSS) was used to calculate all statistical data. Here researcher use different bar diagrams, pie chart.

3.10 Ethical consideration

Researcher followed the Bangladesh Medical Research Council (BMRC) guide line & WHO research guideline. This protocol presentation was firstly submitted to the Institutional Review Board (IRB) of BHPI and initial permission was taken. Permission was taken from the Head of the Department of Physiotherapy, BHPI. Researcher maintained the confidentiality of the collected data from the individuals. The ethical consideration was obtained through an informed consent letter to the participant. Consent was obtained by providing each participant a clear description of the study purpose, the procedure involved in the study and also informing them that if they wish they could withdraw themselves any time from the study. Participant were explained about their role in the study and it was explained that there was no direct benefit from the study but in future, cases like them may would be benefited from it. Participants were also advised that they were free to decline answering any questions during interview. The necessary information had been kept secure place to also ensure confidentiality. They were also assured that it would not cause any harm. Then they signed the consent form.

Written consent (appendix) was given to all participants prior to completion of the questionnaire. The researcher explained to the participants about his or her role in this study and aim and objective of this study. The researcher received a written consent from every participants including signature. So the participant assured that they could understand about the consent from and their participation was on voluntary basic. The participants were informed clearly that their information would be kept confidential. The researcher assured the participants that the study would not be harmful to them. It was explained that there might not a direct benefit from the study for the participants but in the future cases like them might be get benefit from it. The participants had the rights to withdraw consent and discontinue participation at any time without prejudice to present or future care at the

spinal cord injury (SCI) unit of CRP. Information from this study was anonymously coded to ensure confidentiality and was not personally identified in any publication containing the result of this study.

3.10.1 Rigor of the study

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

4.1 Socio-demographic information**4.1.1 Age Groups**

The study was conducted with 53 participants. Among them 15-24 years were 24.5% (n=13), 25-34 years were 41.5% (n=22), 35-44 years were 18.9% (n=10), 45-54 years were 13.2% (n=7), 55-64 years were 1.9% (n=1).

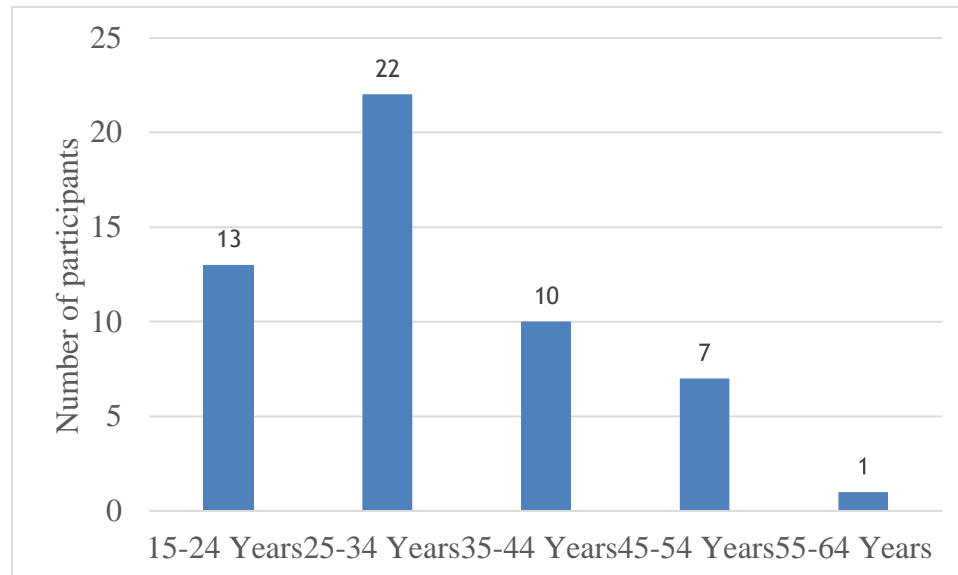


Figure-1: Age group of the participants

4.1.2 Gender of the participants

Out of 53 patients, most of them were male about 98% (n=52) and only 2% (n=1) was female (2).

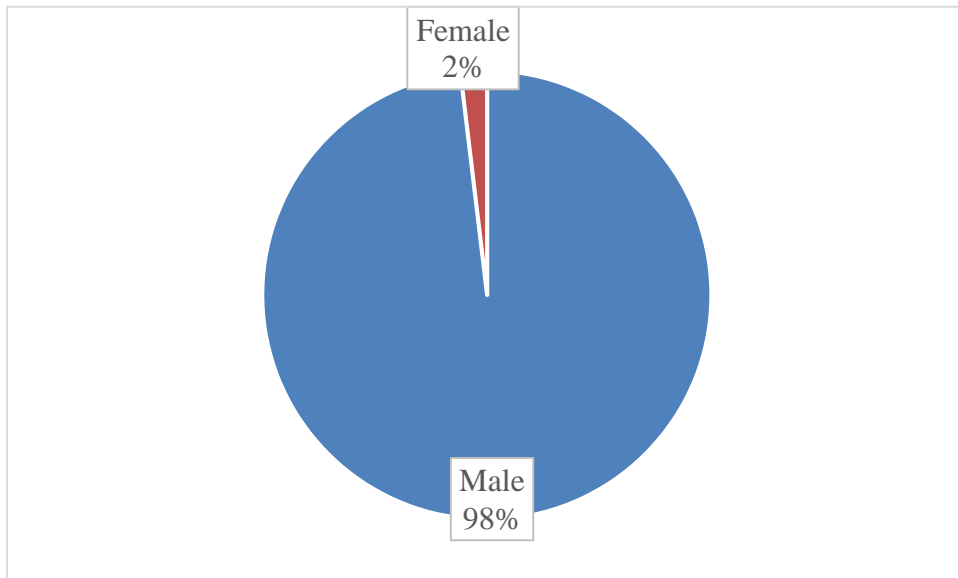


Figure-2: Male & Female percentages of the participants

4.1.3 Marital status of the participants

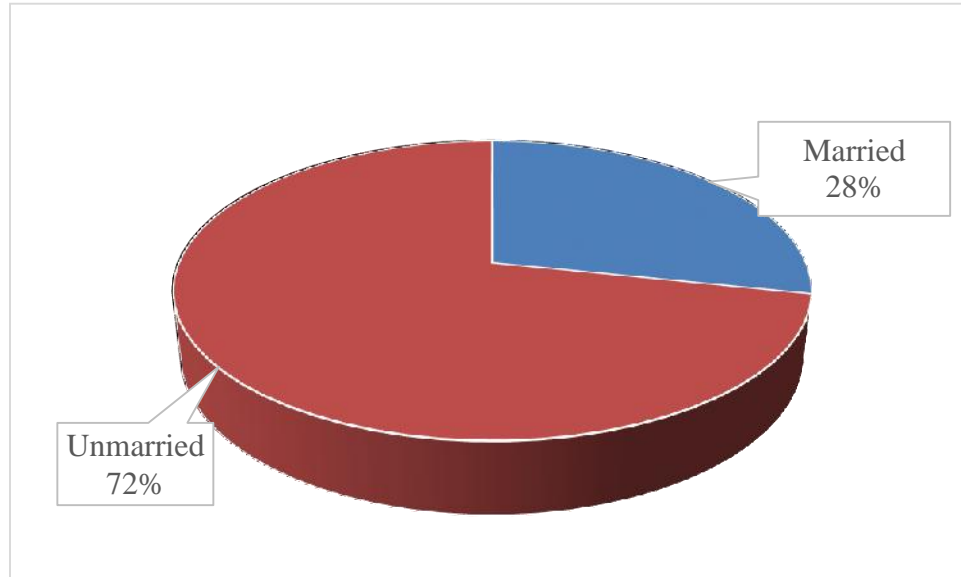


Figure-3: Married & unmarried percentage of the participants

Among the 53 participants researcher found married person 28.3% (n=15), unmarried 71.7% (n=38). Most frequent status is unmarried that was higher than married.

4.1.4 Educational status of the participants

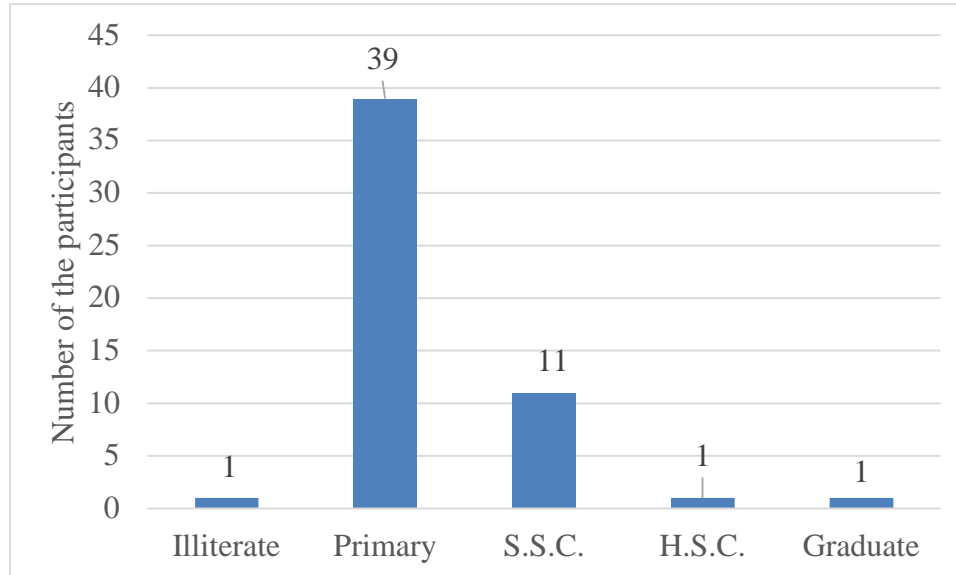


Figure-4: Educational status of the participants

. Among the 53 participants 1.9 % (n=1) participants were illiterate, 73.6% (n=39) participants primary passed, 20.8% (n=11) participants were S.S.C. passed, 1.9% (n=1) participants completed H.S.C. level, 1.9% (n=1) participant were graduated and only 1.9% (n=1) participant were completed masters.

4.1.5 Living area of the participants

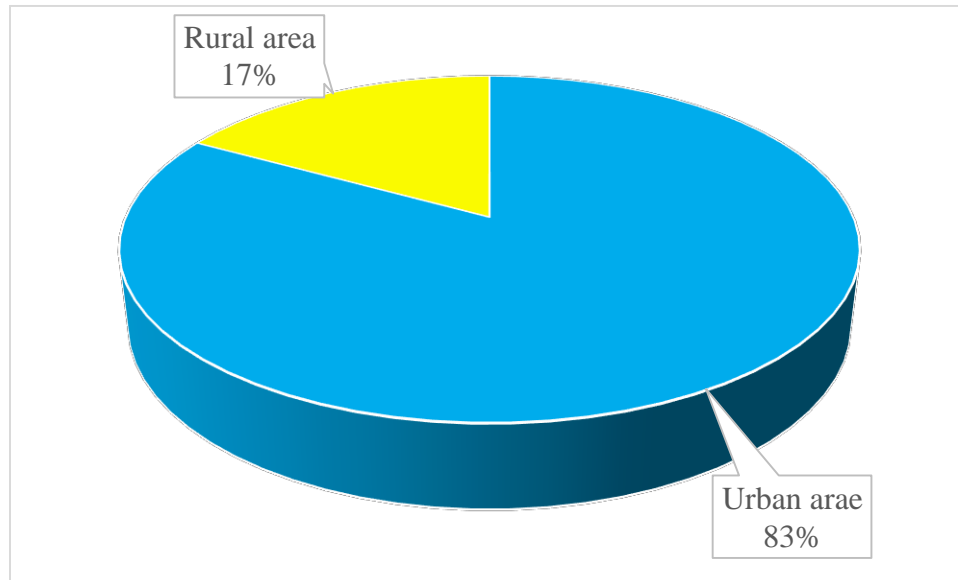


Figure-5: Living area of the participants

In this study total 53 participants among them 83.0 % (n=44) were living in the rural area and 17.0 % (n=9) were living in the urban area. According to data view, the investigator could say that the frequency of living area among the participants was highest in rural area than urban area.

4.1.6 Occupation of the participants

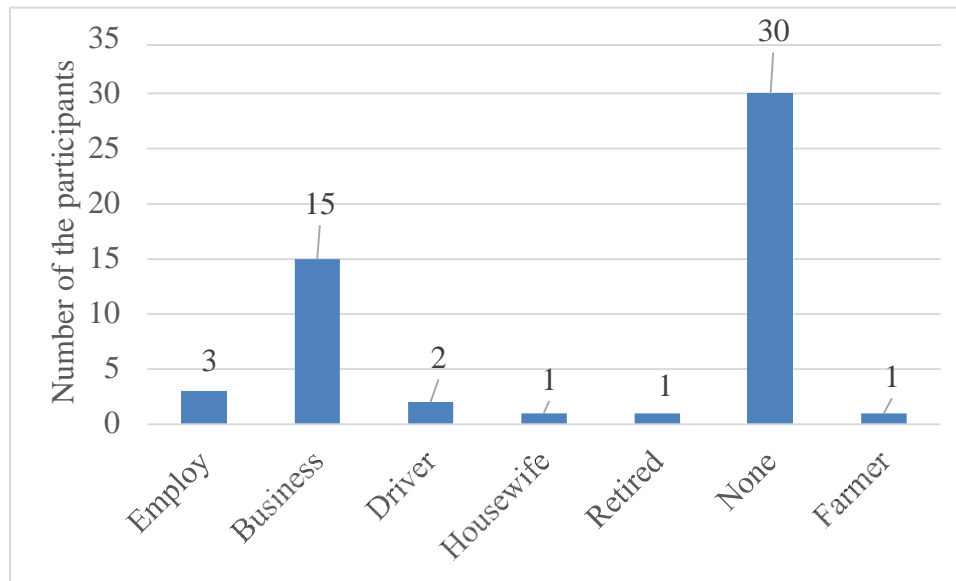


Figure-6: Occupation of the participants

Among 53 participants the frequency of occupation was 5.7% (n=3) participants were employee, 28.3% (n=15) were business, 3.8 % (n=2) were driver, 1.9 % (n= 1)housewife, 1.9% (n=1) were retired 56.6 % (n=30) were none and 1.9% (n=1) were farmer.

4.2 Home integration

4.2.1 Responsible person for shopping for groceries or other necessities in household

Among 53 participants, 71.7% (n=38) shopped for groceries by someone else, 13.2% (n=7) go for shopping for groceries with someone else and 15.1% (n=8) go for shopping for groceries alone.

Table-1: Responsible person for shopping for groceries or other necessities in household

Shopping for groceries	Number (n)	Percentage (%)
Someone else	38	71.7
Yourself and someone else	7	13.2
Yourself alone	8	15.1
Total	53	100

4.2.2 Responsible person for preparing meals in household

Among 53 participants, 88.7 % (n=47) prepared meals by someone else, 9.4 % (n=5) prepare meals with someone else and 1.9 % (n=1) prepare meals alone.

Table-2: Responsible person for preparing meals in household

Preparing for meals	Number (n)	Percentage (%)
Someone else	47	88.7
Yourself and someone else	5	9.4
Yourself alone	1	1.9
Total	53	100.0

4.2.3 Responsible person for doing normal everyday housework

Among 53 participants, 47.2% (n=25) performed normal every day house work by someone else, 35.8 % (n=19) perform normal every day house work with someone else and 17.0% (n=9) perform normal every day house work alone.

Table-3: Responsible person for doing normal everyday housework

Normal everyday house work	Number (n)	Percentage (%)
Someone else	25	47.2
Yourself and someone else	19	35.8
Yourself alone	9	17.0
Total	53	100

4.2.4 Responsible person for caring for the children in home

Among 53 participants, 47.2% (n=25) cared for children in home by someone else, 35.8 % (n=19) care for children in home with someone else and 17.0% (n=9) care for children in home alone.

Table-4: Responsible person for caring for the children in home

Caring for the children	Number (n)	Percentage (%)
Someone else	36	67.9
Yourself and someone else	14	26.4
Yourself alone	3	5.7
Total	53	100.0

4.2.5 Responsible person for planning social arrangements such as get-together with family and friends

Among 53 participants, 32.1 % (n=17) planed social arrangements such as get-together with family and friends by someone else, 62.3 % (n=33) plan social arrangements such as get-together with family and friends with someone else and 5.7 % (n=3) plan social arrangements such as get-together with family and friends alone.

Table-5: Responsible person for planning social arrangements such as get-together with family and friends

Planning social arrangements	Number (n)	Percentage (%)
Someone else	17	32.1
Yourself and someone else	33	62.3
Yourself alone	3	5.7
Total	53	100

4.2.6 Responsible person for looking after personal finances such as banking or paying bills

Among 53 participants, 73.6 % (n=39) look after personal finances such as banking or paying bills by someone else, 17.0 % (n=9) look after personal finances such as banking or paying bills with someone else and 9.4 % (n=5) look after personal finances such as banking or paying bills alone.

Table-6: Responsible person for looking after personal finances such as banking or paying bills

Looking after personal finance	Number (n)	Percentage (%)
Someone else	39	73.6
Yourself and someone else	9	17.0
Yourself alone	5	9.4
Total	53	100.0

4.2.7 Participation in shopping

Among 53 participants, 26.4% (n=14) never went for shopping, 41.5 % (n=22) go for shopping 1-4 times and 32.1% (n=17) go for shopping 5 or more.

Table-7: Participation in shopping

Shopping	Number (n)	Percentage (%)
Never	14	26.4
1-4 times	22	41.5
5 or more	17	32.1
Total	53	100.0

4.2.8 Participation in leisure activities

Among 53 participants, 43.4% (n=23) never participated in leisure activity, 32.1% (n=17) 1-4 times participate in leisure activity and 24.5% (n=13) participate in leisure activity 5 or more times.

Table-8: Participation in leisure activities

Leisure activities	Number (n)	Percentage (%)
Never	23	43.4
1-4 times	17	32.1
5 or more times	13	24.5
Total	53	100

4.2.9 Participation in visiting friends or relatives

Among 53 participants, 7.5% (n=4) never participated in visiting friends or relatives, 60.4% (n=32) 1-4 times participate in visiting friends or relatives and 32.1% (n=17) participate in visiting friends or relatives 5 or more times.

Table-9: Participation in visiting friends or relatives

Visiting friends or relatives	Number (n)	Percentage (%)
Never	4	7.5
1-4 times	32	60.4
5 or more	17	32.1
Total	53	100.0

4.2.10 Participate in leisure activities alone or with other

Among 53 participants, 22.6% (n=12) participated in Leisure activity mostly alone, 52.8% (n=28) participate in Leisure activity mostly with family members or friends who have head injuries and 24.5% (n=13) participate in Leisure activity mostly with family or friends who do not have head injuries.

Table-10: Participate in leisure activities alone or with other

Leisure activity alone or with other	Number (n)	Percentage (%)
Mostly alone	12	22.6
Mostly with family members or friends who have head injuries	28	52.8
Mostly with family or friends who do not have head injuries	13	24.5
Total	53	100.0

4.2.11 Having a true best friend

Among 53 participants, 43.4% (n=23) don't have a true best friend and 56.6% (n=30) have a true best friend.

Table-11: Having a true best friend

A true best friend	Number (n)	Percentage (%)
No	23	43.4
Yes	30	56.6
Total	53	100

4.3 Integration into productive activities

4.3.1 Traveling outside of the home

Among 53 participants, 66% (n=35) seldom travel outside of the home, 22.6% (n=12) travel outside of the home almost every week and 32.1% (n=17) travel outside of the home almost every day.

Table-12: Traveling outside of the home

Traveling outside of the home	Number (n)	Percentages (%)
Seldom	35	66.0
Almost every week	12	22.6
Almost every day	6	11.3
Total	53	100.0

4.3.2 Current work situation

Among 53 participants, 60.4% (n=32) worked as Full-time employee, 5.7% (n=3) are not working but actively looking for work, 7.5% (n=4) not working, not looking for work and 26.4% (n=14) not applicable, retired due to age.

Table-13: Current work situation

Current work situation	Number (n)	Percentages (%)
Full-time employment (>20 hours/week)	32	60.4
Not working, but actively looking for work	3	5.7
Not working, not looking for work	4	7.5
Not applicable, retired due to age	14	26.4
total	53	100.0

4.3.3 Current school or training program situation

Among 53 participants, 79.2% (n=42) did not attend school or training program, 9.4% (n=5) participate in school or training as part time and 11.3% (n=6) participate in school or training as full time.

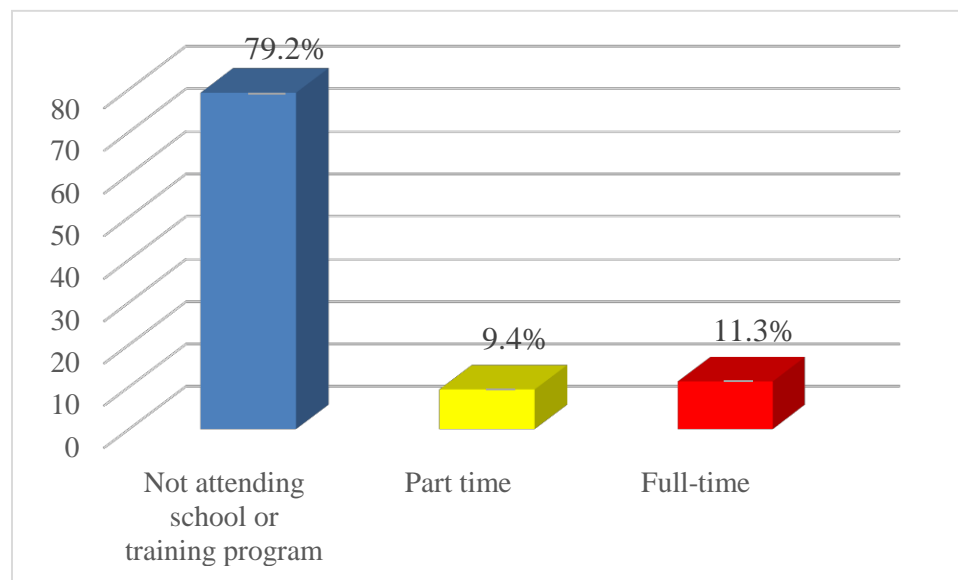


Figure-7: School or training program situation

4.3.4 Engagement in volunteer activity

Among 53 participants, 94.3% (n=50) never engage themselves in voluntary activity and 5.7% engage themselves in voluntary activity 1-4 time.

Table-14: Engagement in volunteer activity

Engagement in volunteer activity	Number (n)	Percentages (%)
Never	50	94.3
1-4 times	3	5.7
Total	53	100.0

4.4 Association between gender and major component of community integration questionnaire

Table-15: Association between gender and major component of community integration questionnaire

Gender	Major components	Chi-square value	P-Value	Significance
	Home integration	5.184	.023	Significant

Table no. 15 showed chi-square test for gender and major component of community integration questionnaire. The result revealed that is significant because the result P- value of Home integration is .023 ($P < .05$) and there is relationship between gender and Home integration in spinal cord injury patients.

4.5 Association between educational status and major component of community integration questionnaire

Table-16: Association between educational status and major component of community integration questionnaire

Educational status	Major components	Chi-square value	P-Value	Significance
	Integration in productive activities	53.124	.011	Significant

Table no. 16 showed chi-square test for educational status and major component of community integration questionnaire. The result revealed that is significant because the result P- value of Integration in productive activities is .011 ($P < .05$) and there is relationship educational status and Integration in productive activities in spinal cord injury patients.

4.6 Association between occupation and major component of community integration questionnaire

Table-17: Association between occupation and major component of community integration questionnaire

	Major components	Chi-square value	P-Value	Significance
Occupation	Home integration	93.016	.000	Significant
	Integration in productive activities	82.870	.001	Significant

Table no. 17 showed chi-square test for occupation and major component of community integration questionnaire. The result revealed that is significant because the result P- value of home integration and integration in productive activities are .000 and .001 (both $P < .05$) and there is relationship between occupation with home integration and integration in productive activities in spinal cord injury patients.

5.1 Discussion

A cross sectional survey was used to find out the vocation training impact on community reintegration and participation for spinal cord injury patients. The aim of the study was to assess the level of life satisfaction of the spinal cord injury persons those who completed rehabilitation process receiving vocational training from the CRP and living in the community at Bangladesh. The study was based on data gathered from spinal cord injury unit, rehabilitation wing unit and community at Savar. In present study most of the participant's age group was (16-65 years). Similarly Nwankwo & Uche (2013) in their study found the highest frequency among 85 participants 37.7% was (31–45 years) age group in Nigeria. The participants were injured earlier over 50-year-old reported higher participation and life satisfaction scores than participants injured at an older age. In the several regression analysis, onset of spinal cord injury before 50 years of age was a determinant of higher life satisfaction but not of participation (Post & Reinhardt, 2015). About 75% of the participants were under 40 years of age, and half of them were groups of 20-30 years. This suggest that people affects by spinal cord injury usually during their earning life (Jahan et al., 2016). In Brazil participants had suffered the spinal cord injury in the age range from 13 to 30 years old (48.9%) (Franca et al., 2011).

Among 45 participants male participants were more than female and the ratio is 8:1 (Jahan et al., 2016). In South India out of 100 participants 92% men (Kumar et al., 2012). Islam et al. (2011) found that compared to women, the number of men is basically high with a sex ratio of 5: 1 (M / F).

In this study 54 participants were taken where most of the 42.6% participants (n=23) were primary passed and 14.8 % participants were illiterate. In this study, participants did not link education level to their perception of satisfaction with life. In Bangladesh a study

found that about half of the participants have five or less than five years of education (Ahmed et al., 2017). One study showed re-employment rates of 95% for persons with SCI who had 16 or greater years of education (Ottomanelli & Lind 2009).

The study showed that most of the participants were service holder that is around 64.8% while farmer, day laborer, businessmen were 5.6%, 1.9%, 27.8% respectively. In Nigeria it is found that 20% of students and businessmen mostly suffer from spinal cord injury (Nwankwo & Uche, 2013). Due to their higher mobility in South East Nigeria, businessmen and students (20%), most of the common people drive motor vehicles. Farmers (12.9%) were generally involved, and in this subcategory of SCI patients, primarily due to automobile accident in rural system (among 7/11 patients) (Nwankwo & Uche, 2013). Jahan et al. (2016) found that about 27% of the participants were farmers and daily labourers, service holders, business, garment workers, housewives, rickshaw pullers and students were 22%, 18%, 11%, 4%, 9%, 4%, and 4% respectively. It was different from Nigerian research, where it is found that the farmers were the fifth most common occupation group who suffered from spinal cord injury (Nwankwo & Uche, 2013).

This study found that most of the participants were married about 63% and some were unmarried about 28% and very few were divorced about 5% and widow 4% (Tasiemski et al., 2013).

The determinants of life satisfaction in the studied area includes age, employment, financial status and self-care ability where as in urban China the determinants includes age, unemployment, income, marriage and sex (Appleton & Song, 2008) and in Jamaica, the life satisfaction predicted by age, marital status and employment (Mehlsen et al., 2003). The educational achievement on behalf of a person is very strong predictors for the spinal cord injury to return to work (Ramkrishnan et al. 2011).

Since most of the participants were young and may be likely to participate in labor force during or before the injury Participants had higher commentary among social integration subcategories, they were able to maintain the previous social networks or were able to create new networks with other people with the same type of injury experience due to previous relationship damage (Ahmed et al., 2017). Sharing 57 experiences with

colleagues plays an important role in disability management in Bangladesh (Maloni et al., 2010).

Social integration defines participation in various activities outside the home and social events and activities that held outside of home for which considerable amount of ambulation is needed. Ambulatory in the community refers to the access to affordable accessory aids (Habib et al., 2014). In Bangladesh for independent mobility, manual aids such as - four wheeled wheelchairs, tricycles and low trolleys are generally prescribed. Independent assistive equipment is mainly used to ensure mobility in nearby distances and wheelchair used to ensure mobility in remote places (Ahmed et al., 2017).

Employment was a significant variable associated with higher rates of life satisfaction among the participants in the present study. Pre-injury employment is a key issue in case of returning to previous job or in a new one. Pre injury employment often provides extra motivation after spinal cord injury. After injury they try to get back their previous role of employment more than those were not employed before spinal cord injury (Kurtaran et al. 2009). Before SCI all the participants had employment. Following the injury all of them are also in employment but there is difference between the pre injury and post injury employment. A study reported that more than a third of the participants feel the lack of proper work that they could perform with their disability (Ahmed et al., 2017).

5.2 Limitation of the study

There is hardly possible of employment for those who suffered a spinal injury in Bangladesh. The lower level of educational attainment and an absence of adequate vocational training for the individuals with disability in this country further complicate the process of productive integration. Though organizations like Centre for the Rehabilitation of the Paralyzed do provide vocational training appropriate for individuals with SCI, it is not adequate at all to meet all the training needs considering the presence of a large number of individuals with such health conditions in Bangladesh.

There were a number of limitations and barriers in this research project which had affect the accuracy of the study, these are as follow-

This study has provided for the first time data on the life satisfaction and community participation after vocational training of people with spinal cord injury. No research has been done before on this topic. So there was little evidence to support the result of this project in the context in Bangladesh.

A convenience sampling was used that was not reflecting the wider population under study. Life satisfaction and community participation after vocational training was identified by two questionnaires, and the validity and reliability of this method may be questionable. However, a questionnaire might be the only feasible method of assessing in large populations.

The research project was done by an undergraduate student and it was first research project for her. So the researcher had limited experience with techniques and strategies in terms of the practical aspects of research. As it was the first survey of the researcher so might be there were some mistakes that overlooked by the supervisor and the honorable teacher.

CHAPTER –VI: CONCLUSION & RECOMMENDATION

6.1 Conclusion

Spinal cord injury is a condition which can occur with traumatic or non-traumatic causes. There are many events that affect a person's lifestyle, life satisfaction and quality of life; spinal cord injury is one of them. It can hamper a person's full life at any age. It is very common in developing countries like Bangladesh. The aim of the study was to evaluate the vocational training impact on reintegration and community participation for spinal cord injury patients.

In this study among 53 participants about 98.1% (n=52) were male and 1.9% (n=1) were female so male was more vulnerable than female. Bangladesh is a highly populated country and males are mainly involved in outside occupations rather than females. Males work in every area without maintaining any safety hazard. For that reason, males are more prone to having spinal cord injury.

On the other hand, most of the participants came from rural areas and had a low educational level. From the study, it can be concluded that due to spinal cord injury, there are a lot of physical and mental problems such as the ability to self-care, contacts with friends, family life, sexual life, partner relationship, leisure situation, financial situation, vocational situation and overall quality of life. During staying at CRP, most of the participants were satisfied with treatments, got support from the staff moderately, and the environment was clean and moderate. So, the environmental level was good. Spinal cord injury greatly hampers a person's life satisfaction and quality of life, especially their physical and mental status. So, awareness should be increased and necessary steps should be taken to improve their physical and mental health. After spinal cord injury, male persons become dependent on their family and their income also decreases day by day. So, they need early vocational training to reintegrate into employment. Early positive expectations of the individual person with a SCI are an important indicator of successful reintegration. If professional work on this expectation resumption of work can improve and enhance the vocational rehabilitation program. The rehabilitation team can play an active role in drawing up a vocational reintegration plan to prepare the patient, employer and all professionals involved for job reintegration.

6.2 Recommendations

The aim of the study was to evaluate the vocational training impact on reintegration and community participation for spinal cord injury patients. Though the study had some limitations but investigator identified some further step that might be taken for the better accomplishment of further research. The main recommendations would be as follow:

The random sampling technique rather than the convenient would be chosen in further in order to enabling the power of generalization the results.

The duration of the study was short, so in future wider time would be taken for conducting the study.

Investigator use only 53 participants as the sample of this study, in future the sample size would be more.

The ratio of complete and incomplete participants were not equal, in case of further the equality of the complete and incomplete participant should be maintained for the accuracy of the result.

In this study, the investigator took the SCI person only from the selected area of Savar, Dhaka, Bangladesh as a sample for the study. So for further study investigator strongly recommended to include the SCI person from all over the Bangladesh to ensure the generalize ability of this study

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Annexure

প্রশ্নাবলী (বাংলা)

“মেরুদণ্ডে আঘাতপ্রাপ্ত রোগীদের পুনঃপ্রতিষ্ঠা এবং সম্প্রদায়ে অংশগ্রহণের ক্ষেত্রে পেশা মূলক প্রশিক্ষণের প্রভাব”

রোগীর নাম :	
রোগীর আইডি নং:	
ঠিকানা :	
ফোন নং :	
তথ্য সংগ্রহকারীর সাক্ষর:	
তথ্য সংগ্রহকারীর সাক্ষর:	

প্রতিটি প্রশ্নের উত্তর টিক (✓) চিহ্ন এর মাধ্যমে দিন। যদি একের অধিক উত্তরের মধ্যে সন্দেহ থাকে, তাহলে আপনার কাছে যে উত্তরটি সবচেয়ে সঠিক মনে হবে সেটিকে চিহ্নিত করুন।

অধ্যায়-১- জনসংখ্যাতাত্ত্বিক ও আর্থসামাজিকগত তথ্য

১.	বয়সঃ	বছর
২.	লিঙ্গঃ	<input type="radio"/> পুরুষ <input type="radio"/> মহিলা
৩.	বৈবাহিক অবস্থাঃ	<input type="radio"/> অবিবাহিত <input type="radio"/> বিবাহিত <input type="radio"/> তালাকপ্রাপ্ত <input type="radio"/> বিধবা
৪.	শিক্ষাগত যোগ্যতাঃ	<input type="radio"/> নিরক্ষর <input type="radio"/> প্রাথমিক <input type="radio"/> মাধ্যমিক <input type="radio"/> উচ্চমাধ্যমিক <input type="radio"/> স্নাতক <input type="radio"/> স্নাতকোত্তর এবং অধিক
৫.	আবাসিক এলাকাঃ	<input type="radio"/> নগর <input type="radio"/> গ্রামীণ
৬.	পেশাঃ	

অধ্যায়-২- সম্প্রদায়ের উপাদানের একীকরণের প্রণালী

বাড়ীর/গৃহ উপাদানের একীকরণ	উত্তর(যে কোন একটিতে গোল দাগ দিন)	হিসাব
১। সাধারণত আপনার পারিবারিক/গৃহস্থালির পণ্যদ্রব্য অথবা অন্যান্য প্রয়োজনীয় দ্রব্যাদির কেনাকাটা কে করেন?	আপনি একা (২) আপনি এবং অন্য কেউ (১) অন্য কেউ (০)	
২। সাধারণত আপনার গৃহস্থালির দৈনন্দিন খাবার কে তৈরী করেন?	আপনি একা (২) আপনি এবং অন্য কেউ (১) অন্য কেউ (০)	
৩। সাধারণত আপনার বাড়ীতে প্রতিদিনের ঘরের কাজগুলো কে করে থাকেন ?	আপনি একা (২) আপনি এবং অন্য কেউ (১) অন্য কেউ (০)	
৪। সাধারণত আপনার বাড়িতে শিশুদের যত্ন কে নেয়?	আপনি একা (২) আপনি এবং অন্য কেউ (১) অন্য কেউ (০) প্রযোজ্য নহে (হিসাব ১, ২, ৩ এবং ৫ এর গড়)	
৫। সাধারণত পরিবার ও পরিজনদের সাথে সামাজিক আয়োজন যেমন - পূর্ণমিলনী বা একত্রীকরণের পরিকল্পনা কে করে থাকেন ?	আপনি একা (২) আপনি এবং অন্য কেউ (১) অন্য কেউ (০)	
গৃহ উপাদানের একত্রীকরণের মোট হিসাব	একসাথে উপরের হিসাব যুক্ত করুন	
সামাজিক উপাদানের একীকরণ		
৬। সাধারণত আপনার ব্যক্তিগত আর্থিক সংস্থান যেমন -ব্যংকের কাজ, অথবা বিল/হুন্ডি প্রদানের এর দায়িত্ব কে পালন করে থাকেন?	আপনি একা (২) আপনি এবং অন্য কেউ (১) অন্য কেউ (০)	
আপনি কি বলতে পারেন আনুমানিক মাসে কত বার সাধারণত বাড়ির বাইরের নিম্নলিখিত কার্যকলাপে বর্তমানে আপনি অংশ গ্রহন করে থাকেন ?		

৭। কেনাকাটা	৫ অথবা তার বেশি(২) ১-৪ বার (১) কখনও না(০)	
৮। অবসরের কার্যাবলী যেমন- সিনেমা,খেলাধুলা,রেষুরা।	৫ অথবা তার বেশি(২) ১-৪ বার (১) কখনও না(০)	
৯। বন্ধু ও আত্মীয়সজন সাথে সাক্ষাত করা	৫ অথবা তার বেশি(২) ১-৪ বার(১) কখনও না(০)	
১০। যখন আপনি অবসরের কার্যাবলীতে অংশ গ্রহন করেন সাধারণত তা কি একা করেন নাকি অন্যদের ও সাথে নেন?	বেশিরভাগ সময়ই একা (০) বেশিরভাগ সময়ই বন্ধুদের সাথে যারা মস্তিষ্কের আঘাতপ্রাপ্ত (১) বেশিরভাগ সময়ই পরিবারের সদস্যদের সাথে (১) বেশিরভাগ সময়ই বন্ধুদের সাথে যারা মস্তিষ্কে আঘাতপ্রাপ্ত নয় (২) পরিবার ও বন্ধুদের সমাহারে (২)	
১১। আপনার কি এমন কোন ভাল বন্ধু আছে যাকে আপনি বিশ্বাস করেন?	হ্যাঁ (২) না (০)	
সামাজিক উপাদানের একীকরণের মোট হিসাব		
ফলদায়ক কার্যকলাপের মধ্যে একীকরণ		
১২। কিভাবে আপনি প্রায়শয় বাড়ির বাইরে ভ্রমণ করেন ?	প্রায় প্রতিদিন (২) প্রায় প্রতি সপ্তাহে (১) কদাপি অথবা কখনও না(প্রতি সপ্তাহে ১ বারের চেয়েও কম) (০)	
১৩। দয়া করে নিম্নলিখিত উত্তর বাছাই করুন যেটি আপনার বর্তমান (বিগত মাস জুড়ে) কাজের সাথে সংগতি পূর্ণ হয়ঃ- দয়া করে এই জিনিস গুলোর হিসাব পরবর্তী পৃষ্ঠায় দেখুন।	পূর্নকালীন চাকুরি (>২০ ঘণ্টা/ সপ্তাহ)(৪) খন্ডকালীন চাকুরি (>২০ ঘণ্টা/ সপ্তাহ)(৩) কাজ করছেন না কিন্তু সক্রিয়ভাবে কাজ খুজছেন(২) কাজ করছেন না এবং কাজ খুজছেন ও না(০)	

	প্রযোজ্য নহে, বয়সের জন্য অবসর প্রাপ্ত(০) সমাজের স্বেচ্ছাসেবক কাজ(১)	
১৪। দয়া করে নিম্নলিখিত উওর বাছাই করুন যেটি আপনার বর্তমান বিদ্যালয় অথবা প্রশিক্ষণ কার্যক্রমের সাথে সংগতি পূর্ণ হয়। দয়া করে এই জিনিস গুলোর হিসাব পরবর্তী পৃষ্ঠায় দেখুন।	পূর্ণকালীন (৪) খন্ডকালীন (৩) বিদ্যালয় অথবা প্রশিক্ষণ কার্যক্রমের অনুপস্থিত (০)	
১৫। কিভাবে আপনি প্রায়শয় স্বেচ্ছাসেবক কার্যকলাপে নিযুক্ত ছিলেন? দয়া করে এই জিনিস গুলোর হিসাব পরবর্তী পৃষ্ঠায় দেখুন।	৫ অথবা তার বেশী(৪) ১-৪ বার(২) কখনও না(০)	
মোট হিসাব		

১৩ থেকে ১৫ নং বস্তুর জন্য হিসাব – কার্যবিদ্যালয়

১। রোগী পাবে ০, যদি নিম্নলিখিত প্রশ্নগুলির উত্তর হয়:-

- ✓ পদ ১৩) কাজ করছেন না এবং কাজ খুজছেন ও না
- ✓ পদ ১৪) বিদ্যালয়ে অনুপস্থিত অথবা বিদ্যালয় হচ্ছে না
- ✓ পদ ১৫) কোন স্বৈচ্ছাসেবক কার্যকলাপহীন

২। রোগী পাবে ১; নিম্নলিখিত প্রশ্নগুলির উত্তর হয়:-

- ✓ পদ ১৩) কাজ করছেন না এবং কাজ খুজছেন ও না
- ✓ পদ ১৪) বিদ্যালয়ে অনুপস্থিত অথবা বিদ্যালয় হচ্ছে না
- ✓ পদ ১৫) স্বৈচ্ছাসেবক ১-৪ বার

৩। রোগী পাবে ২; যদি নিম্নলিখিত প্রশ্নগুলির উত্তর হয়:-

- ✓ পদ ১৩) স্বক্রিয়ভাবে কাজ খুজছেন এবং/অথবা
- ✓ পদ ১৫) প্রতিমাসে ৫ অথবা ততোধিক বার স্বৈচ্ছাসেবক কার্যক্রম।

৪। রোগী পাবে ৩; যদি নিম্নলিখিত প্রশ্নগুলির উত্তর হয়:-

- ✓ পদ ১৩) খন্ডকালীন চাকুরি অথবা
- ✓ পদ ১৪) খন্ডকালীন বিদ্যালয় উপস্থিতি

৫। রোগী পাবে ৪; যদি নিম্নলিখিত প্রশ্নগুলির উত্তর হয়:-

- ✓ পদ ১৩) পূর্নকালীন চাকুরি অথবা
- ✓ পদ ১৪) পূর্নকালীন বিদ্যালয় উপস্থিতি

৬। রোগী পাবে ৫, যদি নিম্নলিখিত প্রশ্নগুলির উত্তর হয়:-

- ✓ পূর্নকালীন চাকুরি এবং পদ ১৪) খন্ডকালীন বিদ্যালয়ে উপস্থিতি অথবা
- ✓ পদ ১৩) খন্ডকালীন চাকুরি এবং পদ ১৪) পূর্নকালীন বিদ্যালয়ে উপস্থিতি

যদি রোগী বয়সের কারণে অবসরপ্রাপ্ত হয়, ১৫ নং পদ ব্যবহার করুন চলমান কার্যবিদ্যালয়ের হিসাব

করার জন্য

৫ অথবা ততোধিক পায়

১-৪ বার পায় ২ পয়েন্ট

কখনও ০ পয়েন্ট পাবে না

হিসাব যোগফলঃ-

ফলদায়ক হিসাব = পদ ১২ হিসাব + চলমান কার্যবিদ্যালয়

মোট সম্প্রদায়ে বিভিন্ন উপাদানের একীকরণের হিসাব = গৃহ উপাদানের একীকরণের হিসাব
+ সামাজিক উপাদানের একীকরণের হিসাব + ফলদায়ক হিসাব

সম্মতিপত্র

আসসালামু-আলাইকুম/নমস্কার,

আমি ফাহিমদা আক্তার বিপা , বাংলাদেশ হেলথ প্রফেশনস্ ইনস্টিটিউট (বি.এইচ.পি. আই) এর বি.এস.সি.ইন ফিজিওথেরাপী কোর্সের চতুর্থ বর্ষের একজন ছাত্রী। বি.এস.সি ডিগ্রী প্রাপ্তির জন্য আমার একটি গবেষনামূলক প্রকল্প করা প্রয়োজন এবং আমার প্রকল্পটি হচ্ছে- “মেরুদণ্ডে আঘাত প্রাপ্ত রোগীদের পূর্ণঃপ্রতিষ্ঠা এবং সম্প্রদায়ে অংশগ্রহণের ক্ষেত্রে পেশা মূলক প্রশিক্ষণের প্রভাব ” এজন্য আমি আপনার কাছে কিছু তথ্য জানতে চাইব, যার জন্য শুধু মাত্র ২০-২৫ মিনিট সময় লাগবে। আমি আপনাকে আশ্রিত করছি যে, আপনার দ্বারা প্রদত্ত যাবতীয় সমস্ত তথ্য গোপন রাখা হবে।

উল্লেখ্য যে, এই গবেষণায় আপনার অংশগ্রহণ হবে ঐচ্ছিক। তাই যে কোন সময় এই গবেষণা থেকে আপনি নিজেকে প্রত্যাহার করে নিতে পারবেন। এই গবেষণায় অংশগ্রহণে অনিচ্ছুক হওয়া বা গবেষণা থেকে প্রত্যাহার করার কারণে আপনার চিকিৎসায় কোন প্রভাব পড়বে না। আপনি যদি গবেষণা চলাকালীন সময়ে কোন সমস্যার সন্মুখীন হন, তাহলে আপনি যোগাযোগ করতে পারেন আমার সাথে অথবা আমার সুপারভাইজার মোঃ শফিকুল ইসলাম, সহকারী অধ্যাপক , ফিজিওথেরাপী বিভাগ, বি.এইচ.পি.আই, সি.আর.পি, সাভার, ঢাকা-১৩৪৩ এর সাথে।

আমি শুরু করার আগে আপনি কি আরও কিছু তথ্য জানতে চান?

আমি কি আপনার অনুমতি নিয়ে শুরু করতে পারি?

হ্যাঁ না

রোগীর স্বাক্ষর/আঙ্গুলের ছাপ :

তারিখ :

তথ্য সংগ্রাহকের স্বাক্ষর :

তারিখ :

সাক্ষীর স্বাক্ষর :

তারিখ :

Consent Form

Assalamu-alaikum/Namaskar,

I am Fahamida Akter Bipa, 4th year student of B.Sc. In Physiotherapy at Bangladesh Health Professions Institute (BHPI). I am conducting a research and my research title is **“Vocational Training Impact on Reintegration And Community Participation for Spinal Cord Injury Patients.”** I am asking you to answer some questions, which will take 20-25 minutes. It is also ensured that the information provided by you will be kept confidential.

Hereby, your participation in the study would be voluntary basis. So, you can withdraw your participation at any time within the course of the study. Withdrawing from participation of the study would not disadvantage you to receive existing service. If you face any problem within the course of the study, you can contact with me or my supervisor Md. Shofiqul Islam, Assistant Professor, Department of Physiotherapy, BHPI, CRP, Savar, Dhaka-1343.

Do you have any question before I start?

Can I start the interview with your permission?

Yes No

Signature/Fingerprint of the Patient:

Signature of the Data collector:

Signature of the Witness:



বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)
Bangladesh Health Professions Institute (BHPI)

(The Academic Institute of CRP)

Ref.

CRP-BHPI/IRB/07/18/1213

Date: 21/07/2018

To
Fahamida Akter Bipa
B.Sc. in Physiotherapy
Session: 2013-2014 Student ID:112130220
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Subject: Approval of the thesis proposal “Vocational Training Impact On Reintegration And Community Participation For Spinal Cord Injury Patients” by ethics committee.

Dear Fahamida Akter Bipa,
Congratulations.

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

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

The purpose of the study is to determine the vocational training impact on reintegration and community participation for spinal cord injury patients. The study involves use of a Community Integration questionnaire to explore the vocational training impact on reintegration and community participation for spinal cord injury patients that may take 20 to 25 minutes to answer the questionnaire and there is no likelihood of any harm to the participants. The members of the Ethics committee have approved the study to be conducted in the presented form at the meeting held at 9:30 AM on January 23, 2018 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

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

সিআরপি-চাপাইন, সাভার, ঢাকা-১৩৪৩, বাংলাদেশ, ফোন : ৭৭৪৫৪৬৪-৫, ৭৭৪১৪০৪ ক্যাক্স : ৭৭৪৫০৬৯

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

Permission letter

July 05, 2018

Head, Department of Physiotherapy,
Centre for the Rehabilitation of the Paralyzed(CRP)
Chapain,Savar, Dhaka – 1343.

Through: Head, Department of Physiotherapy, BHPI.

Subject: Permission to collect data in order to conduct my research project.

Dear sir,

With due respect and humble submission to state that I am Fahamida Akter Bipa, student of 4th professional B.Sc. in physiotherapy at Bangladesh Health Professions Institute (BHPI). According to the course curriculum, I have to conduct a research project for the partial fulfillment of the degree of B.Sc. in Physiotherapy. The title of my research project is **“Vocational Training Impact on Reintegration And Community Participation for Spinal Cord Injury Patients”**. My research project will be conducted under the supervision of Md. Shofiqul Islam, Assistant Professor, Department of Physiotherapy, BHPI, CRP-Savar, Dhaka. I want to collect data for my research project from the community with Spinal Cord Injury patients. So, I need permission for data collection in community. 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 grant my application and give me permission for data collection from the community and oblige thereby.

Yours Sincerely,

Fahamida Akter Bipa

Fahamida Akter Bipa
4th Professional B.Sc. in physiotherapy
Roll- 25, Session: 2013-2014
Bangladesh Health Professions Institute (BHPI)
CRP, Chapain, Savar, Dhaka-1343.

Allow for data collection
for 500 patient.
MUZAFFOR HOSSAIN
Junior Consultant & IPD Incharge
Physiotherapy Department
CRP, Savar, Dhaka-1343

Forwarded for kind permission.

05.07.2018
MD. SHOFIQUOL ISLAM
Assistant Professor
Department of Physiotherapy
Bangladesh Health Professions Institute (BHPI)
CRP-Chapain, Savar, Dhaka-1343

Approved
19/07/18
Mohammad Anwar Hossain
Associate Professor & Head
Physiotherapy Dept., CRP
CRP-Chapain, Savar, Dhaka-1343

05.07.18
Prof. Md. Obaidul Haque
Vice-Principal
BHPI, CRP, Savar, Dhaka.

Permission letter

July 19, 2018

Assistant Manager,

Rehabilitation Wings,

Centre for the Rehabilitation of the Paralyzed(CRP)

Chapain, Savar, Dhaka – 1343.

Through: Head of Physiotherapy department, BHPI.

Subject: Permission to collect data in order to conduct my research project.

Dear sir,

With due respect and humble submission to state that I am Fahamida Akter Bipa, student of 4th professional B.Sc. in physiotherapy at Bangladesh Health Professions Institute(BHPI). According to the course curriculum, I have to conduct a research project for the partial fulfillment to complete of the degree of B.Sc in Physiotherapy. The title of my research project is “**Vocational Training Impact on Reintegration and Community Participation for Spinal Cord Injury Patients**”. My research project will be conducted under the supervision of Md. Shofiqul Islam, Assistant professor, Department of Physiotherapy, BHPI, CRP. I want to collect data for my research project from the community with Spinal Cord Injury Patients. So, I need permission for data collection in community. I would like to assure that anything of my study will not be harmful for the participants.

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

Yours sincerely,

Fahamida AKTER BIPA

Fahamida Akter Bipa

4th professional B.Sc. in physiotherapy

Roll- 25, Session: 2013-2014

Bangladesh health professions institute (BHPI)

(an academic institute of CRP)

CRP, Chapain, Savar, Dhaka-1343.

Forwarded for kind permission.
Shofiq

19.07.2018
MD. SHOFIQUOL ISLAM
Assistant Professor
Department of Physiotherapy
Bangladesh Health Professions Institute (BHPI)
CRP-Chapain, Savar, Dhaka-1343

Forwarded to
VTI. Coordinator, CRP
Salim Rahman 28/07/18

SALIM RAHMAN
Assistant Manager
Rehabilitation Wing
CRP, Bangladesh, Savar, Dhaka-1343

Questionnaires (English)

“Vocational training impact on reintegration and community participation for spinal cord injury patients”

Patients name :	
Patients ID:	
Address :	
Phone No. :	
Name of Interviewer :	
Interview Date:	

Answer every questions by marking the tick (✓) mark. If there is any confusion between more than one answer, please give the best answer that you think.

Part-1: Socio Demonological Information

1.	Age	----- years
2.	Gender :	<input type="radio"/> Male <input type="radio"/> Female
3.	Marital status :	<input type="radio"/> Unmarried/single <input type="radio"/> Married/living with partner <input type="radio"/> Divorced <input type="radio"/> Widowed
4.	Educational status :	<input type="radio"/> Illiterate <input type="radio"/> Primary level <input type="radio"/> SSC <input type="radio"/> HSC <input type="radio"/> Graduation <input type="radio"/> Masters and above
5.	Living areas	<input type="radio"/> Rural <input type="radio"/> Urban
6.	Occupations	

Part-2: Community Integration Questionnaire

Home Integration	Anwar (Circle one)	Score
1. Who usually does shopping for groceries or other necessities in your household?	Yourself alone (2) Yourself and someone else (1) Someone else (0)	
2. Who usually prepares meals in your household?	Yourself alone (2) Yourself and someone else (1) Someone else (0)	
3. In your home who usually does normal everyday housework?	Yourself alone (2) Yourself and someone else (1) Someone else (0)	
4. Who usually cares for the children in your home?	Yourself alone (2) Yourself and someone else (1) Someone else (0) Not applicable (score is the average of 1,2,3 and 5)	
5. Who usually plans social arrangements such as get-togethers with family and friends?	Yourself alone (2) Yourself and someone else (1) Someone else (0)	
Home Integration Total Score		
Social Integration		
6. Who usually looks after your personal finances such as banking or paying bills?	Yourself alone (2) Yourself and someone else (1) Someone else (0)	
Can you tell me approximately how many times a month you now usually participate in the following activities outside your home?		

7. Shopping	5 or more (2) 1 – 4 times (1) Never (0)	
8. Leisure activities such as movies, sports, restaurants	5 or more (2) 1 – 4 times (1) Never (0)	
9. Visiting friends or relatives	5 or more (2) 1 – 4 times (1) Never (0)	
10. When you participate in leisure activities do you usually do this alone or with other?	mostly alone (0) mostly with friends who have head injuries (1) mostly with family members (1) mostly with friends who do not have head injuries (2) with a combination of family and friends (2)	
11. Do you have a best friend with whom you confide?	Yes (2) No (0)	
Social Integration Total Score		
Integration into Productive Activities		
12. How often do you travel outside the home?	almost every day (2) almost every week (1) seldom/never (less than once per week) (0)	
13. Please choose the answer below that best corresponds to your current (during the past month) work situation:	Full-time employment (>20 hours/week) Part Time Employment (< 20 hours/week) Not working, but actively	

	looking for work Not working, not looking for work Not applicable, retired due to age Volunteer job in the community	
14. Please choose the answer below that best corresponds to your current (during the past month) school or training program situation	Full-time Part-time Not attending school or training program	
15. In the past month, how often did you engage in volunteer activities?	5 or more 1 – 4 times Never	
Total Score:		

Scoring for items 13 to 15

The patient receives a 0, if answers for the following questions are:

Item 13) not working, not looking for work

Item 14) not going to school

Item 15) no volunteer activities

The patient receives a 1, if answers for the following questions are:

Item 13) not working, not looking for work

Item 14) not going to school

Item 15) volunteers 1 to 4 times

The patient receives a 2, if answers for the following questions are:

Item 13) actively looking for work

AND/OR

Item 15) volunteers 5 or more times per month

The patient receives a 3, if answers for the following questions are:

Item 13) working part-time

OR,

Item 14) attends school part-time

The patient receives a 4, if answers for the following questions are:

Item 13) working full-time

OR

Item 14) attends school full-time

The patient receives a 5, if answers for the following questions are:

Item 13) working full-time AND Item 14) attends school part-time

OR

Item 13) works part-time AND Item 14) attends school full-time

If the patient is retired due to age, use item 15 to score the JOBSCHOOL variable

5 or more receives 4 points

1 – 4 times receives 2 points

Never receives 0 points

Summing Scores:

The productivity score = item 12 score + Jobschool variable

The total CIQ score = Home integration score + social integration score + productivity score