LIFE SATISFACTION AND COMMUNITY PARTICIPATION AFTER VOCATIONAL TRAINING OF PEOPLE WITH SPINAL CORD INJURY

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

"LIFE SATISFACTION AND COMMUNITY PARTICIPATION AFTER VOCATIONAL TRAINING OF PEOPLE WITH SPINAL CORD INJURY"

Submitted by **Nabila Tasnin**, 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 be bound to take written consent from the Department of Physiotherapy, Bangladesh Health Professions Institute (BHPI).

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Contents

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Abbreviation

ADL	Activity of Daily Living
BHPI	Bangladesh Health Professions Institute
BMRC	Bangladesh Medical Research Council
CRP	Centre for the Rehabilitation of the Paralysed
ICU	Intensive Care Unite
IRB	Institutional Review Board
LiSAT-9	Life Satisfaction Questionnaire-9
LS	Life Satisfaction
QoL	Quality of Life
SCI	Spinal Cord Injury
SPSS	Statistical Package for the Social Sciences
TSCI	Traumatic Spinal Cord Injury
WHO	World Health Organization

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Abstract

Purpose: The purpose of the study was to describe the level of life satisfaction and community participation after vocational training of people with spinal cord injury. Objectives: To assess and describe life satisfaction and community participation after vocational training of people with spinal cord injury. Methodology*:* The study design was cross-sectional survey. Total 54 samples were selected conveniently for this study from Savar those who has completed rehabilitation services and receiving vocational training from the Centre for the Rehabilitation of Paralysed (CRP), Savar, Dhaka. Data was collected by using of questionnaire (LiSAT-9) and Modified TNO Arbeid Questionnaire. Descriptive statistic was used for data analysis which focused through different bar diagrams, pie charts and tables. Results: This study showed that, 54 participants with SCI where most of them were 20-30 years 44.4% (n=24) and 31-40 years 27.8% (n=15), 56% (n=30) were male and 44% (n=24) were female. 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.

Key words: SCI, vocational training, life satisfaction, community participation

CHAPTER-I INTRODUCTION

1.1 Background

In the South Asian region Bangladesh is one of the developing countries (Haider, Country Report: Bangladesh)**.** There are many people live in Bangladesh among them there are many people who are disabled global part in human condition. Disability is a common to which no one is (Haider Country Report: Bangladesh). In Bangladesh there are 16 million people who are lived with disabilities (Disability in Bangladesh, 2016)**.** In health related sector spinal cord injury (SCI) is a very serious physical disability (Ramakrishnan et al., 2011). Because of lacking of information about SCI there is more than 80% SCI patients who are living in more than 100 developing countries (Rathore, 2010). The unexpected occurrence of a spinal cord injury may dramatically change the work, family and daily life of the individual with spinal cord injury (Kang et al., 2014**)** and it requires a wide range of health-related problems such as long-term disability, morbidity and mortality and patients with spinal cord injury suffer from a broad range of medical, social, psychological and economic problems (Razzak et al., 2011). It is one of the major causes of locomotor disabilities, both in developing and developed countries and has an adverse effect on the society and social structure in which the person lives (New et al., 2013). Spinal cord injury can cause temporary or permanent change in normal motor, sensory, or autonomic function of the spinal cord (Segun, 2011). The structures and functions of the spinal cord are damaged in a spinal cord injury which is caused by trauma, inflammation, tumors or other causes, as a consequence of dysfunction occurs in movement, feeling, sphincters and autonomic nerves below the damaged level (Yang et al., 2014).

Spinal cord injury (SCI) can cause multiple impairments, which interact with a person's environment, as a result activity and participation is limited, such as employment (Middleton et al., 2015). Employment is a function which is important for social participation and contribution to society (Piccenna et al., 2015). It also helps a person in many other sectors, it makes an individual economically independent, gives an

opportunity for communicate with other people, able to provide optimal reintegration in the society, able to do one's daily activities routinely, helps to develop owns identity and provide life satisfaction and improved well-being (Piccenna et al., 2015).

Unemployment is a most severe problem for spinal cord injury people (Ashekin, 2013). But after receiving vocational rehabilitation employment rate for people with spinal cord injury increase day by day. Now-a-days, vocational rehabilitation plays an important role for preventing disability and enhancing participation in work (Kvam & Eide, 2014).

The term vocational rehabilitation derived from the Latin word ''vocation'' which means''summons'' or ''call'', to a particular state or action (Escorpizo et al., 2010). Vocational Rehabilitation is the process which enable a person with spinal cord injury to access, maintain or return to employment or useful occupation after illness or disability (Ottomanelli et al., 2015).Vocational rehabilitation (also called occupational rehabilitation or work rehabilitation) is conducted the result of employment (Waddell et al., 2008).Vocational rehabilitation (VR) is described as 'whatever helps someone with a health problem stay at, return to or remain in work'(Waddell et al., 2008). The intention of this statement to enclose the efforts to support to work or job retention from all sectors (Phillips et al., 2014).

Vocational Rehabilitation helps the people to overcome and cope with the impairment (Waddell et al., 2008). The International Labour Organization (ILO) referred vocational rehabilitation as a process that ables a disabled people to perform a suitable employment and it is raised the idea of individual reintegration in the society (Escorpizo et al., 2010). Vocational rehabilitation is defined as a multidisciplinary intervention in the process related to returning the job or in relation to work loss prevention (Gobelet et al., 2007).

Life satisfaction is a main key point of a person welfare (Erdogan et al 2012).Life satisfaction (LS) is a main issue in the reintegration of patients with SCI. Life satisfaction describe the state of being well, being happy and desire or willingness to do something in an individual life (Volkan & GENC, 2017). In both physiological and psychological conditions, life satisfaction brings a great deal of influence on

health status (Siahpush et al., 2008). A poor life satisfaction is targeted as a general health risk indicator; it is as a predictor of death (Koivumaa-Honkanen et al., 2000).

Spinal cord injury is one kind of greater disasters that can happen to a human being, which may lead to physical impairments and psychological distress severely. An integral model of physical (functional independence and pain) and psychological factors (social support and self-efficacy) explained 66% of the difference between life satisfaction. After discharge from the Rehabilitation centre improve functional independence, low pain, improve everyday social support, and improve self-efficacy were significant determinants of a positive pathway of life satisfaction (Christel et al., 2012).

In the reintegration of patients with spinal cord injury life satisfaction is a main problem. Life satisfaction is generally described as a quantitative assessment of happiness or satisfaction with those aspects of life which are important for a particular person. In addition, the value is seen as consistent with the satisfaction and life satisfaction is considered to represent an assessment of complete life based on how well special goals match with personal achievements (Budh & Osteraker, 2007). Life satisfaction is generally described as a quantitative assessment of happiness or satisfaction with those aspects of life which are important for a particular person. Worldwide research on happiness levels around the world uses life satisfaction as a measure of happiness (Tsai, 2009). Life satisfaction is a personal and general examination of physical, social and psychological aspects of the present life situation. Life satisfaction a social indicator is used as a measure of the outcome of medical interventions (Chen et al., 2013).

Various instruments or reports for life satisfaction assessment have been described. Some instruments constitute one single item, for instance a visual analogue scale, on the other hand some are constituted as multiple item inventories, usually application of combined score to identify the level of life satisfaction as realized by the reactionary, but not necessary to apparently mentioning satisfaction in the items. Instead of explaining these types of instruments, it clearly shows what the authors mean by life satisfaction (Lucke et al., 2004).

Life satisfaction is very important to understand what makes people happy (Erdogan et al., 2012).The first goal of this study is to describe the satisfaction of life after one year of the rehabilitation process. The second goal of the study is to investigate any type of spinal cord injury, physical or psychosocial characteristics are determinants of life satisfaction after the rehabilitation process, and which of these determinants are associated with changes in life satisfaction (Christel et al., 2012).

Participation in the community is belived to be one of the most important goals in the rehabilitation of people living with spinal cord injury (SCI), and Evidence shows that participation in physiological and mental health in both areas of disability and powerful population is important(Lucas et al., 2004; Ostir et al., 2007).

The Overall levels of satisfaction, including life and emotional well-being have been found to be related to engagement in the community and participation in the society by people with spinal cord injury living in the community. Participation in community is very important for rehabilitation outcomes (Christel et al., 2012).

Spinal cord injury continues to be a major cause of disability throughout Asia as well as in Bangladesh (Islam et al., 2011). These injuries can also devastating condition with enormous financial, social, and personal costs (Rahimi-Movaghar et al. 2013).

1.2 Rationale

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 shows 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. Even though Bangladesh is a developing country, accidents are more prominent due to lack of structural development, poor medical facility and lack of awareness among the people about safety precautions during performing any risky job (Rathore et al., 2011). 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.

1.3 Research question

What is the level of life satisfaction and community participation after vocational training in persons with spinal cord injury?

1.4 Aim of the study

The aim of the study was to find out the level of life satisfaction and community participation after vocational training of people with spinal cord injury.

1.5 Objectives

1.5.1 General objective

To describe the level of life satisfaction and community participation after vocational training of people with spinal cord injury .

1.5.2 Specific objectives

I. To gather the socio-demographic information (Age, Sex, Occupation, Marital status etc.)

II. To describe the vocational situation

III. To find out the financial situation

IV. To identify the leisure situation

V. To know about the contact with friends and acquaintances

VI. To determine about the sexual life

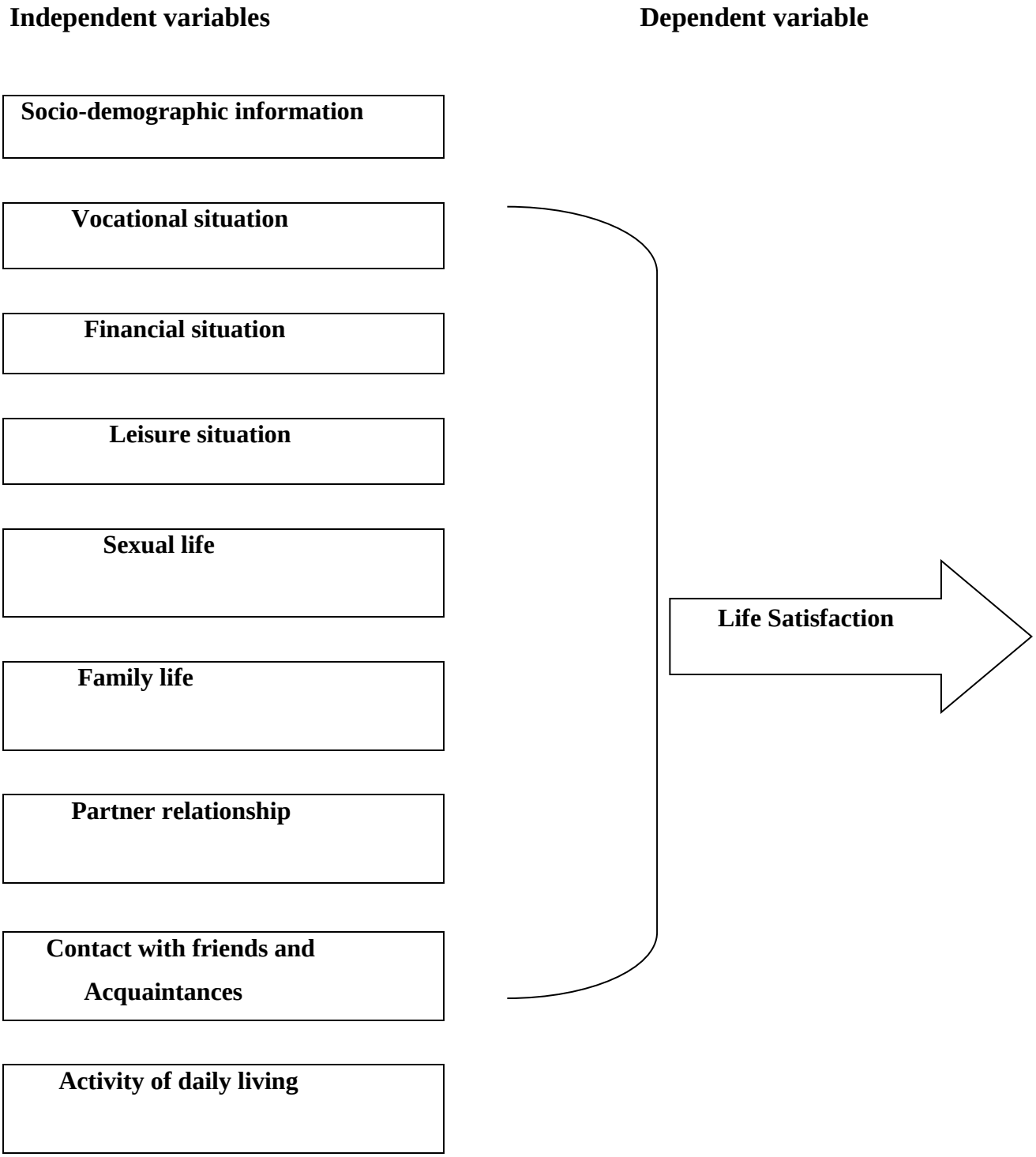
VII. To find out the ability to manage self-care (dressing, hygiene, transfers etc.)

VIII. To describe the family life

IX. To explain the partner relationship

1.6 List of Variables

Conceptual Framework



1.7 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 rehabilitation

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

Life Satisfaction

Life satisfaction is defined as a perception of being happy with one's own life and a belief that one's life is on the right track. Life satisfaction is a more specific concept defined as an individual's personal evaluation of his or her life.

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.

CHAPTER-II LITERATURE REVIEW

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 (Van 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 (New & 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, leads to a low survival rate and life expectancy. The holistic treatments for SCI patients at CRP lead to better survival rates (Islam et al., 2011).

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 Rehabilitation 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 rehabilitation 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 rehabilitation then it could be ineffective (Kuoppola et al., 2008).

Vocational rehabilitation programs play a 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 improvized 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).

The vocational attitude of rehabilitation should be started in the medical rehabilitation program as soon as possible. In the initial stage of a full medical rehabilitation program, a multidisciplinary vocational rehabilitation approach has been introduced through a medical evaluation of the geographical rehabilitation system. Vocational rehabilitation teams will be involved in discipline of physiotherapy, occupational therapy, psychology, psychiatry, job counseling, job training, job education and others depending on the vocational rehabilitation agency in certain countries (Gobelet et al., 2007). People with spinal cord injury when complete a long-term multidisciplinary medical rehabilitation program then vocational rehabilitation usually starts as an outgoing or community-based activity (Johnston et al., 2016).

Effective and intelligent intervention of line managers at the workplace is very important if the work is closed and initially assisted at the risk of losing a job, such as a councilor or occupational health worker at work. They can prevent losing their mortgage, help the worker to be temporal or long-term, or changes in the job or environment or equipment that helps the person continue to work (Gobelet et al., 2007).

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 rehabilitation.

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 releated 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 quality of life of the patient (Franca et al. 2011). A spinal cord injury represents an important challenge to quality of life, life satisfaction and mood, and 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 Paralysed, especially planned vocational training and rehabilitation 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 rehabilitation research in developed countries has recently been shifted towards community participation of individuals as they return home following a

discharge from inpatient rehabilitation facilities. In order to work with an acquired spinal cord injury person, rehabilitation 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 rehabilitation 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'.

Life satisfaction is the way a person evaluates his or her life and how he or she feels about where it is going in the future. It is a measure of well-being and may be assessed in terms of mood, satisfaction with relations with others and with achieved goals, self-concepts, and self-perceived ability to cope with daily life (Mediline Plus, 2014).

The people with spinal cord injury were happy with their lives, until they did the survey, but knew that the end was near and that was not so optimistic for the future. There was a large factor that was talking about satisfaction of life was intelligence. The experiments talk of how life satisfaction grows as people become older because they become wiser and more knowledgeable, so they begin to see that life will be better as they grow older and understand the important things in life more (Mediline Plus, 2014).

Life satisfaction as an outcome measure of individuals with spinal cord injury has been largely ignored in rehabilitation medicine. Bangladesh is the 7th largest country in the world with respect to population size but community integration and life satisfaction have rarely been studied in here, despite being considered as important rehabilitation measures, in (Ahmed et al., 2017). There is a general and strange idea that people with spinal cord injury have less life satisfaction in developing countries (Ahmed et al., 2017). In a developing country like Bangladesh, life expectancy of spinal cord injured persons is much lower than in a developed country (Razzak et al., 2011).In the last 50 to 60 years, the life expectancy of people living on the spinal cord injury increased (Devivo, 2012). But According to Wyndaele (2010), 'life expectancy of the injured today almost the same as in the able-bodied population, if the SCI patient is correctly treated'.

According to the World Health Organisation (WHO), quality of life can be defined as "individuals' perception of their position in life, in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns" (Kawanishiand, 2013). Quality of life (QoL) measurement can provid information about the life measurement, diagnosis of disease, and health status beyond management of different domains of life (Geyh et al, 2010).

Life satisfaction determines in urban China is age, unemployment, income, marriage, and sex (Appleton & Song, 2008). In Jamaica, life satisfaction was predicted by age, marital status, and employment (Mehlsen et al., 2003). Multiple regression analyzes in Australia showed that gender, age, marital status, employment, education, and owning or purchasing home as the predictors of life satisfaction (Dear et al., 2002).

There is a significant linear collapse with age of life satisfaction; nevertheless, regression analysis, the control of many demographic and medical features, indicates that the specialty of particular ages is relatively small (Putzke et al., 2003).On the other hand The United States has shown that 30 to 39 years of age are selected as the most satisfactory decade, followed by the next decade (Mehlsen et al., 2003).

Female participants reported that the better life satisfaction than male participants, which does not correspond with the results of some research by reporting similar

equations between two sexes (Huebner et al., 2004; Fugl-Meyer et al., 2002). Another report showed that, On the general population of Jamaica, where life satisfaction was greater than men than women (Mehlsen et al., 2003).

In the current study, there was a significant change in employment opportunities associated with higher rates of life satisfaction among the participants. In France, a qualitative study showed that life satisfaction at the best personal employment stage was closer. This finding was largely independent of the young and the elderly participant and the level of education (Bouazzaoui and Mullet, 2002).

In one study, participants were not linked to the level of education their perception of satisfaction with life. On the contrary, in the case of Swedish populations, education was a predictor of the satisfaction of life (Melin et al., 2003).Similarly, in China and Australia, the tertiary education and general education life were positively involved with life satisfaction (Dear et al., 2002).

Participants were most satisfied with their family life, contact with friends and acquaintances and relationship with their partners. Overall, 70% of participants were dissatisfied with their sex life (Kennedy et al., 2006).

CHAPTER-III METHODOLOGY

3.1 Study design

A question formed in the combination of Life Satisfaction Questionnarie-9 (LISAT-9) and Modified TNO Arbeid Questionnaire and this was a cross sectional survey. Descriptive study design was chosen because the aims of the study were to know "Life satisfaction and community participation after vocational training of people with spinal cord injury". According to Levin (2006) Cross-sectional study was analysis that present situation and carried out at one time point or over a short period. Data could also be collected on individual characteristics including exposure to risk factors, along with information about the outcome. In this way cross sectional studies provide a snapshot of the outcome and characteristics associated with it, at a specific point in time. Usually there was no hypothesis as such, but the aim was to describe a population or a subgroup within the population with respect to an outcome and set risk factors. Cross-sectional studies were sometimes carried out to investigate associations between risk factors and the outcome of interest. They were limited, however, by the fact that they were carried out at one time point and give no indication of the sequence of events whether exposure occurred before, after or during the onset of the disease outcome.

3.2 Study area

Community of Savar, Dhamrai, Manikgong 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 Paralysed (CRP).

3.4 Sample size

The equation of sample size calculation are given below

$$n = \left\{ \frac{Z\left(1 - \frac{\alpha}{2}\right)}{d} \right\}^2 \times pq$$

Here, Z (1- $\frac{\alpha}{2}$) = 1.96

P= 0.5 (here, p = prevalence)

q = 1-p

= 1- 0.5

= 0.95

d= 0.05

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). Researcher was selected 54 persons conveniently to conduct this study. Here researcher used the formulation of sample size determination: (n). The researcher used 95% confidence interval for this study. So the confidence interval (z) = 1.96. The researcher used 5% sampling error for this study. So sampling error is (d) = 0.05. Researcher did not know the total number of persons with SCI in the Bangladesh. So, the prevalence of SCI is (p) = 0.5 & (q) = 0.5. So the total sample was required 384. But researcher was selected 54 numbers of persons (male & female) with spinal cord injury who were receiving treatment from Centre for the Rehabilitation of the Paralysed (CRP) conveniently to conduct this study due to limited time for this study. The participants were selected based on inclusion criteria & exclusion.

3.5 Sampling procedure

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

- Persons with spinal cord injury.
- Persons who received vocational training.
- Living in the community.
- Age range 20-70 years.
- Both male and female were included.

3.7 Exclusion criteria

- Patient who didn't take rehabilitation.
- Undiagnosed injury.
- Spinal cord injury patient with psychological problem.
- A progressive disease.
- Loss of vision or hearing.
- Age more than 70 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.

The Life Satisfaction Questionnaire-9 (Lisat-9):

In this study, the Life Satisfaction instrument LiSat-9 has used. LiSat-9 was a self-rating life satisfaction instrument consisting of the global item 'life as a whole' and the eight domain-specific items vocational situation, financial situation, leisure situation, contacts with friends, sexual life, activities of daily living (ADL), family life

and partnership relationship. These nine different variables were rated on an ordinal scale from 1 to 6 where 1 represents ‘very dissatisfying’ and 6 ‘very satisfying’. The instrument is not recommended for use as a sum-score instrument.

The Modified TNO Arbeid Questionnaire:

In this study, the Community Participation instrument was Modified TNO Arbeid Questionnaire. This questionnaire largely consisted of selected items of a questionnaire developed as part of the Vocational Handicap Research Programme of TNO Arbeid (Dutch Organisation for Applied Scientific Research). This community Participation instrument consisting of the disease-specific items, main earning member, monthly income, educational level, preinjury and current employment situation- job type, job contract, opinions about the current working conditions and social atmosphere. The TNO assessment also included health, situation of those who stopped working, but these were not analysed 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 level of life satisfaction through a structured questionnaire (LiSAT-9) and community participation through Modified TNO Arbeid Questionnarie 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 “LiSAT-9” and the Modified TNO Arbeid

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. Lisat-9 questionnaire, TNO Arbeid Questionnarie 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.

3.10.2 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.

CHAPTER – IV: RESULTS

In this study descriptive study design is chosen because the aims of the study were to know level of life satisfaction and community participation after vocational training of people with spinal cord injury using Life Satisfaction Questionnarie-9 (LISAT-9) and TNO Arbeid Questionnaire. For this study 54 persons were taken as a sample from Savar, Dhamrai and Manikgong upozila those who completed rehabilitation services at Center for the Rehabilitation of Paralysed (CRP).

4.1 Age Groups

The study was conducted with 54 participants. Among them 20-30 years were 44.4% (n=24), 31-40 years were 27.8% (n=15), 41-50 years were 18.5% (n=10), 14 years were 9.5% (n=19), 51-60 years were 5.6% (n=3), 61-70 years were 3.7% (n=2). Most of them were 20-30 years 44.4% (n=24) and 31-40 years 27.8% (n=15).

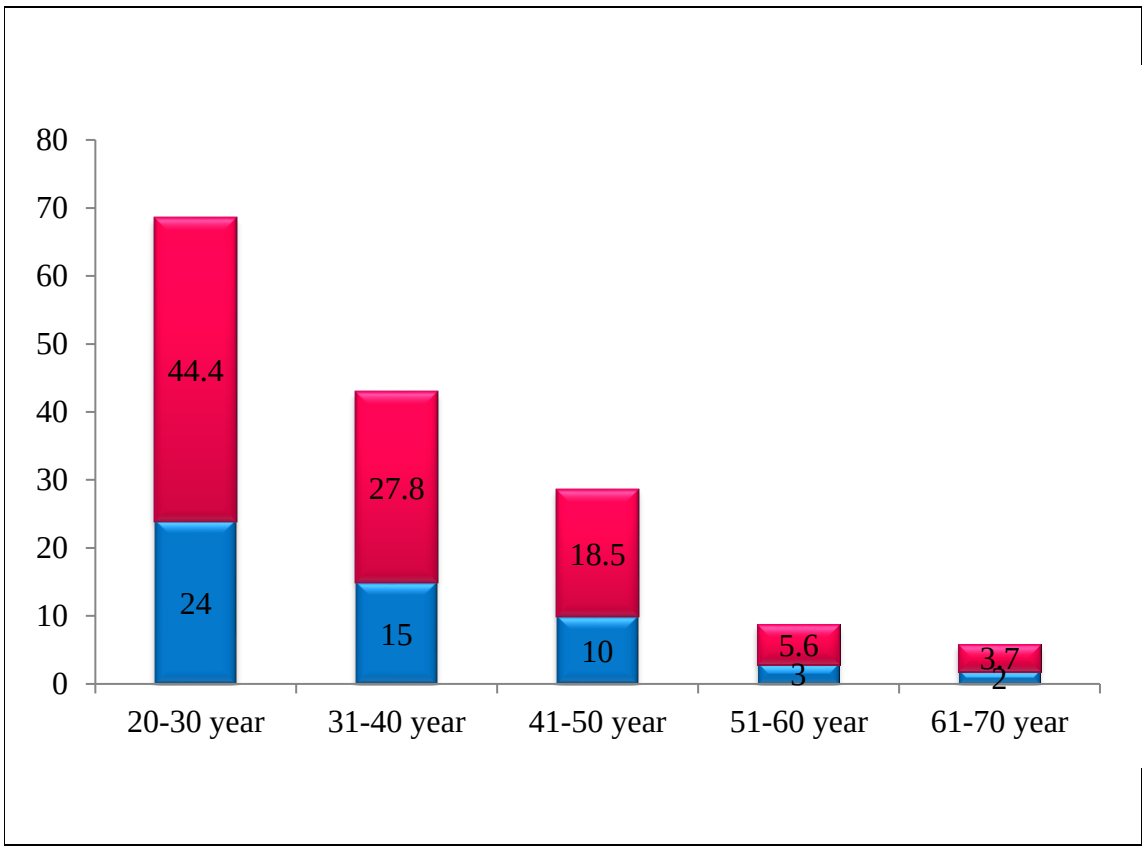


Figure-1: Age of the participants

4.2 Sex

Among the 54 participants 56% (n=30) were male and 44% (n=24) were female.

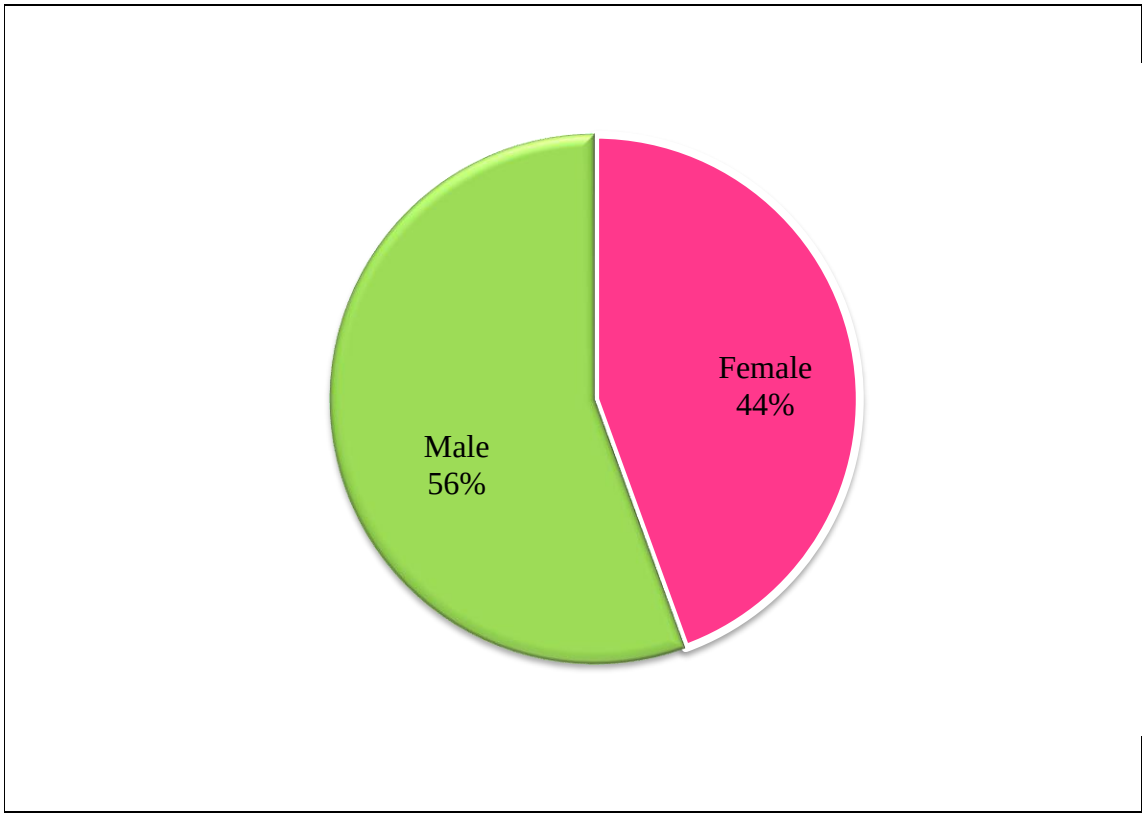


Figure-2: Sex of the participants

4.3 Residential area

In this study total 54 participants among them 61% (n=33) were living in the rural area and 39% (n=21) were living in the urban area. According to data view, the investigator could say that the frequency of residential area among the participants was highest in rural area than urban area.

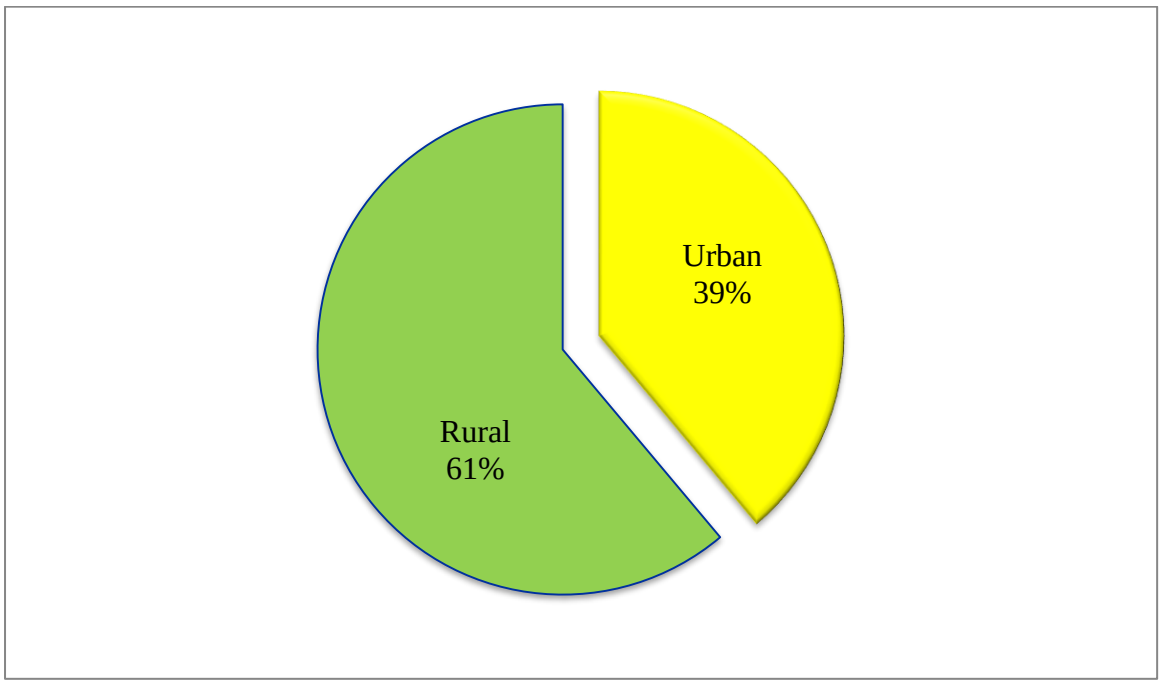


Figure-3: Residential area of the participants

4.4 Marital status

Among the 54 participants researcher found married person 63% (n=34), unmarried 28% (n=15), divorced person 5% (n=3), widow 4% (n=2). Most frequent status in married that was higher than unmarried divorced and widow.

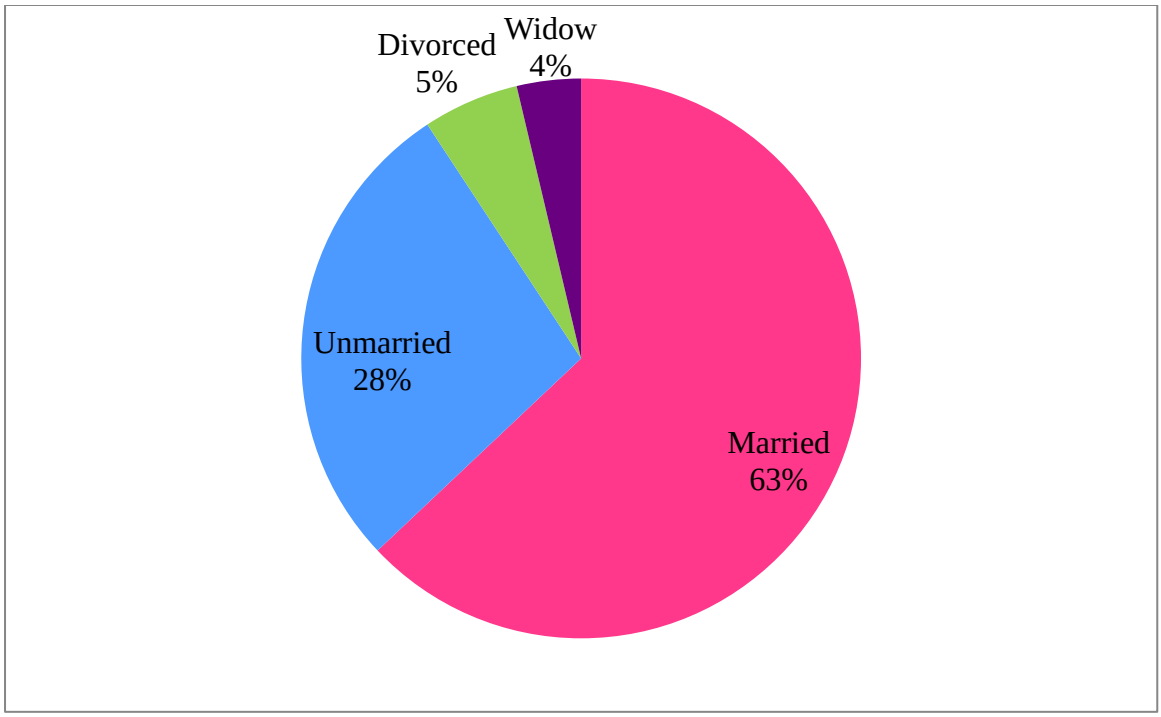


Figure-4: Marital status of the participants

4.5 Religion

In this study researcher found 94.4% (n=51) Muslim and 5.6% (n=3) Hindu persons.

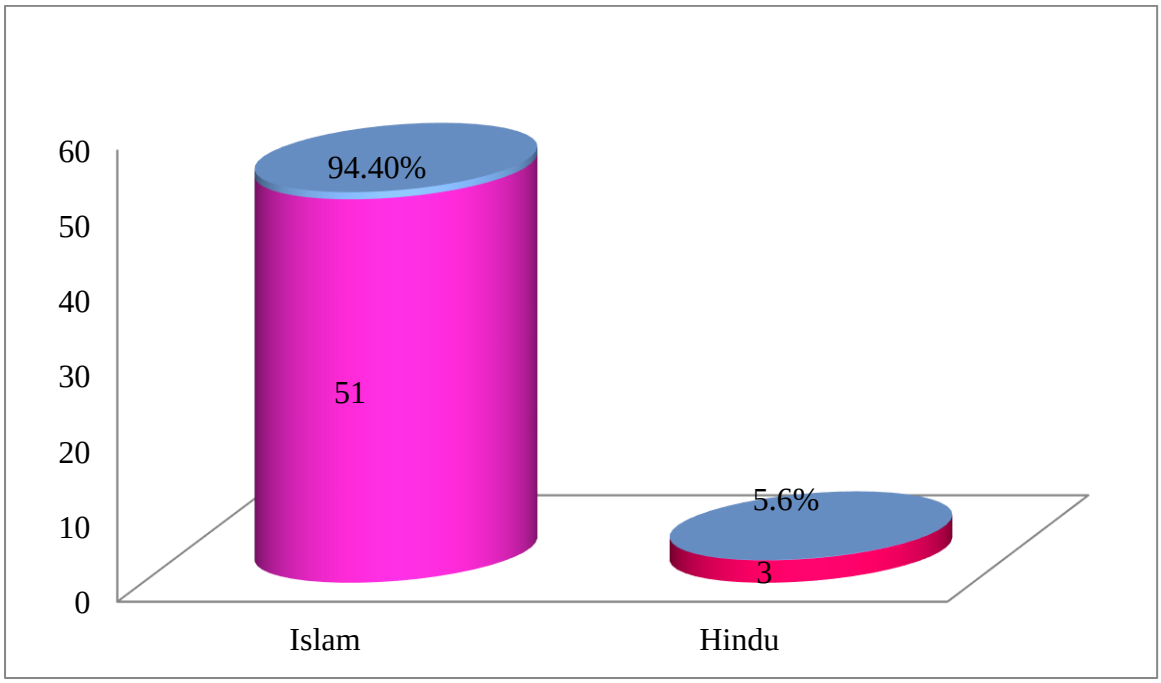


Figure-5: Religion of the participants

4.6 Family type

Among the 54 participants researcher found 7.4% (n=4) participants came from nuclear family, 61.1% (n=33) came from Small family and 31.5% (n=17) came from extended family.

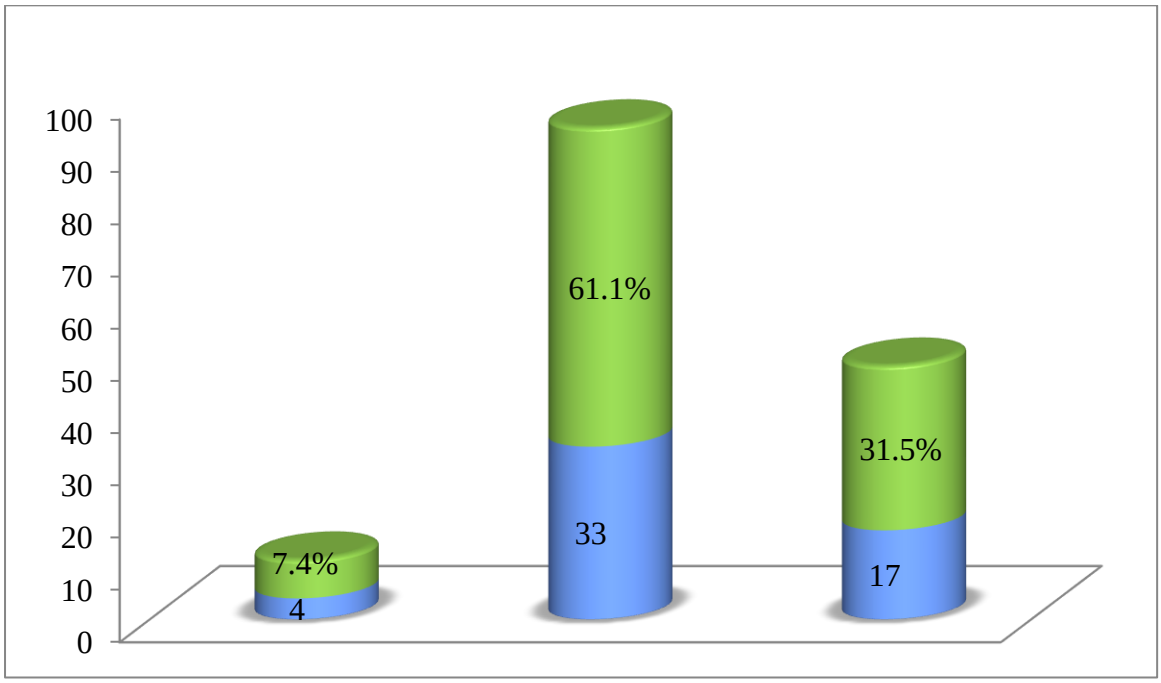


Figure-6: Family type of the participants

4.7 Type of injury

Among the participants complete paraplegia patients were 31.5% (n=17), incomplete paraplegia patient were 55.6% (n=30), complete tetraplegia 5.6% (n=3) and incomplete tetraplegia were 7.4% (n=4).

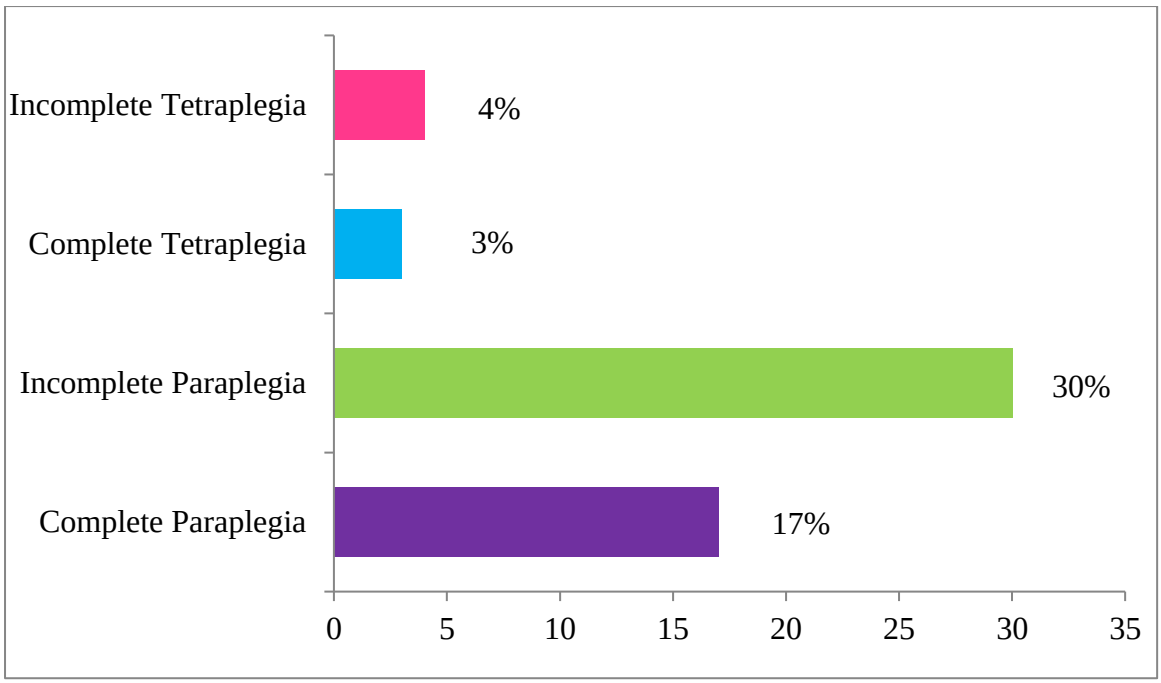


Figure-7: Type of injury of the participants

4.8 Causes of injury

In this study researcher found the major cause of Spinal Cord Injury was traumatic n=46 (85.2%) and non-traumatic cause of injury was n=8 (14.8%).

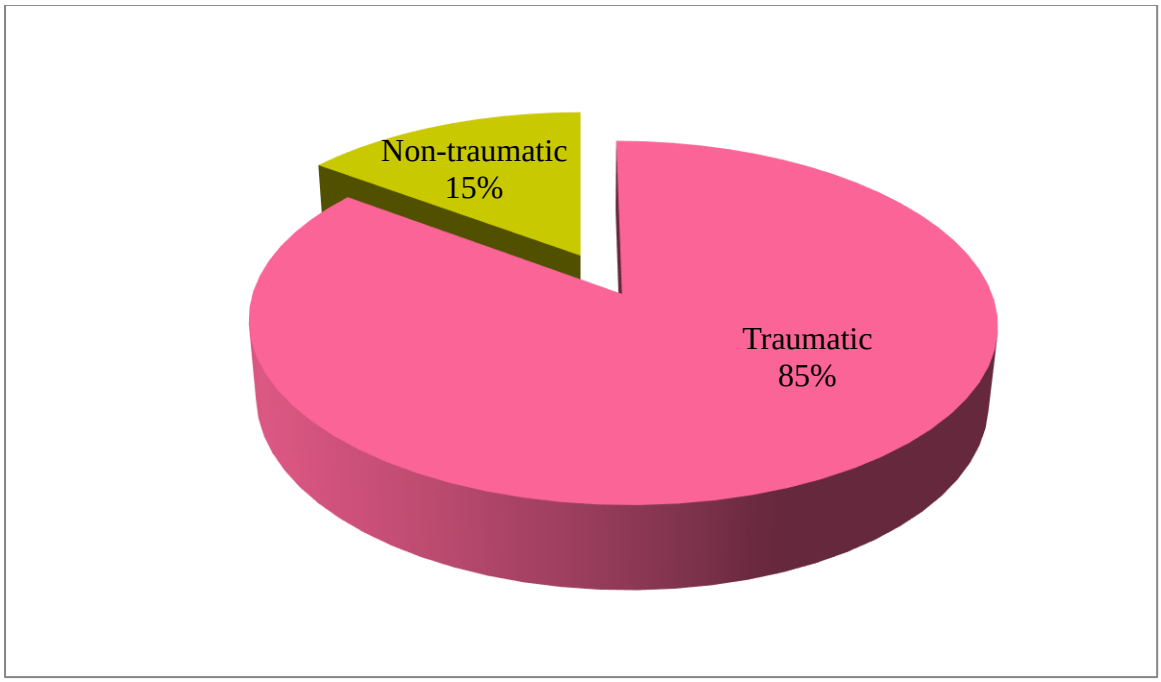


Figure-8: Causes of injury of the participants

4.9 Duration of injury

Among the 54 participants duration of injury were n=27 (50%) in 1-10 years, n=17 (31.5%) were in 11-20 years, n=8 (14.8%) in 21-30 years.

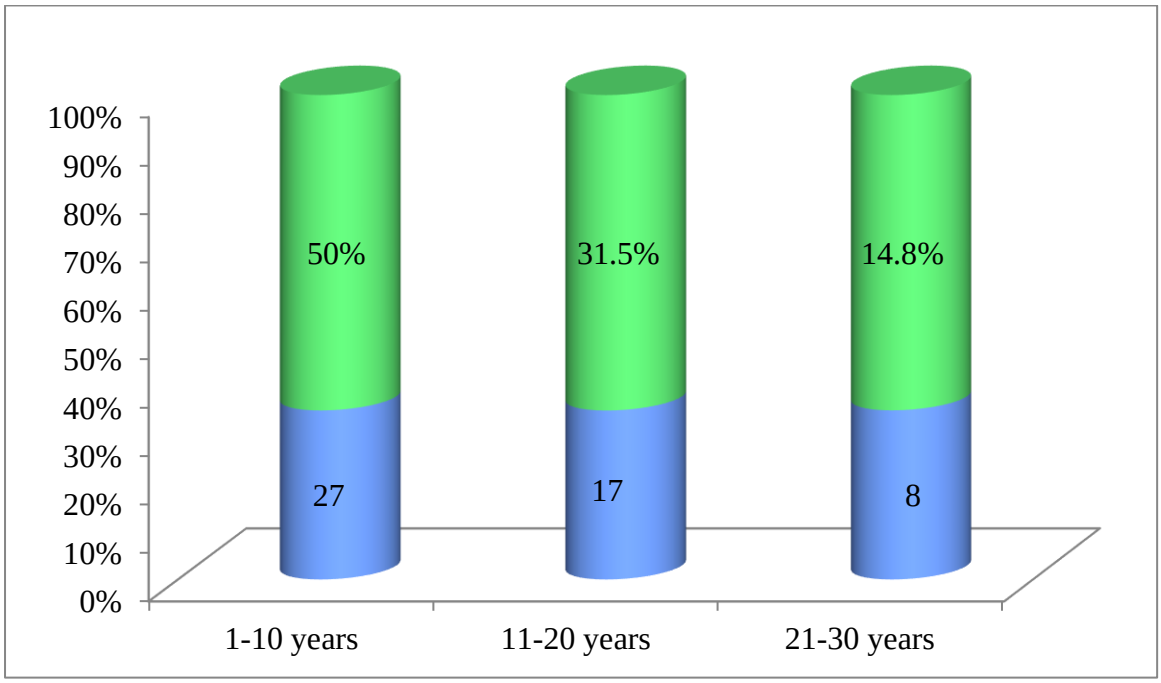


Figure-9: Duration of injury of the participants

4.10 Life as a whole

As a whole, the satisfactory percentage to the life of people with SCI among the 54 participants, about 5.6% (n=3) participants had dissatisfying, whereas 5.6% (n=3) had rather dissatisfying, 27.8% (n=15) participants had Rather Satisfying, 51.9% (n=28) had Satisfying and 9.3% (n=5) at an average had Very Satisfying has been found.

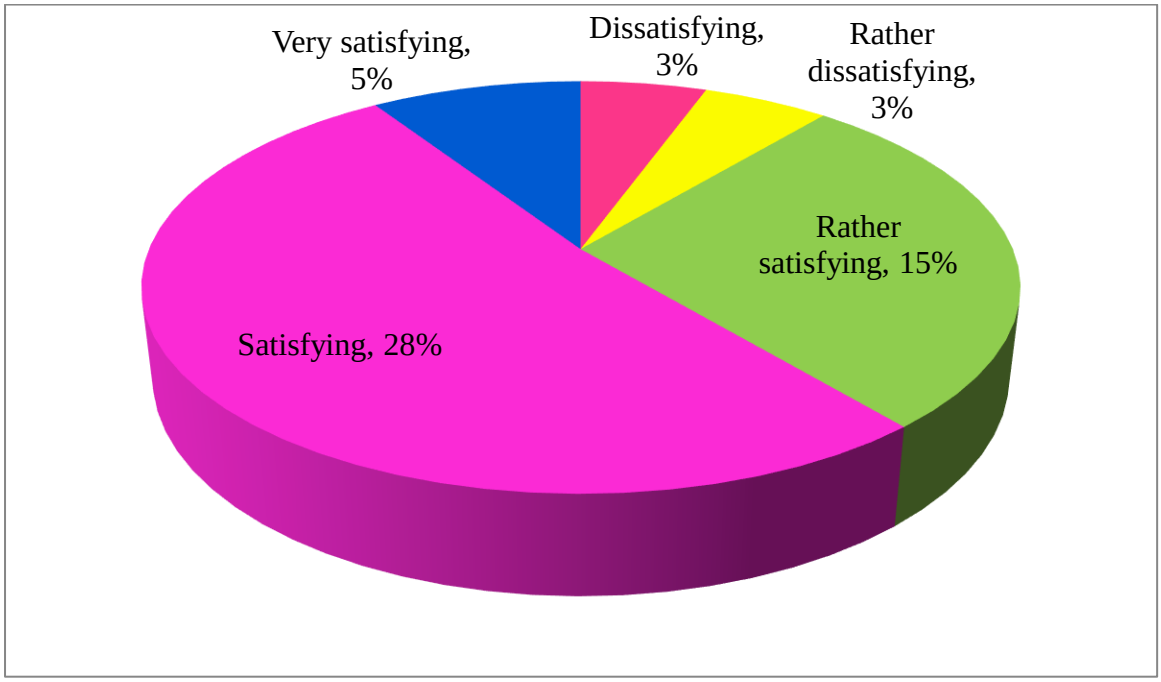


Figure-10: Life as a whole of the participants

4.11 Vocational situation

Vocational situations, a relatively occupational term closely related to the life of people with SCI. In this study it has been found that about 1.9% (n=1) had rather dissatisfying, 37% (n=20) participants had rather satisfying, 50% (n=27) had satisfying and 11.1% (n=6) at an average had very satisfying.

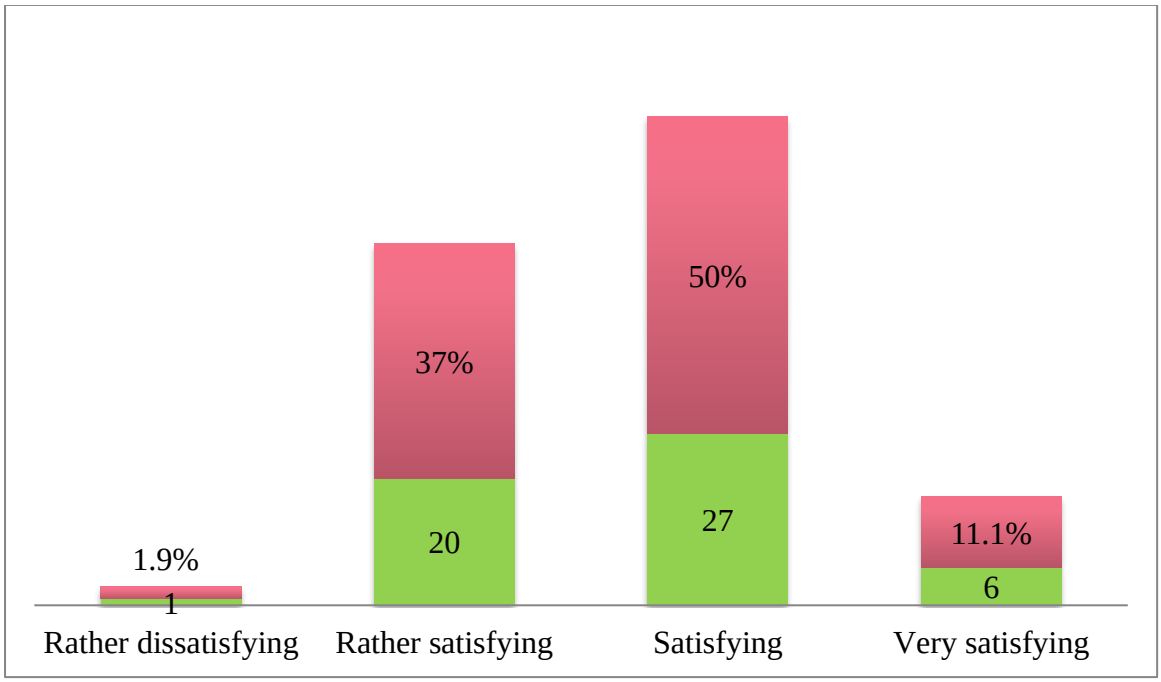


Figure-11: Vocational situation of the participants

4.12 Financial situation

Financial situation is a very important component and strongly associated to the satisfaction of life which varies in accordance with this study at a range where 1.9% (n=1) participants had very dissatisfying, 20.4% (n=11) had dissatisfying, 5.6% (n=3) had rather dissatisfying, 42.6% (n=23) had rather satisfying, 27.8% (n=15) had satisfying and 1.9% (n=1) had very satisfying.

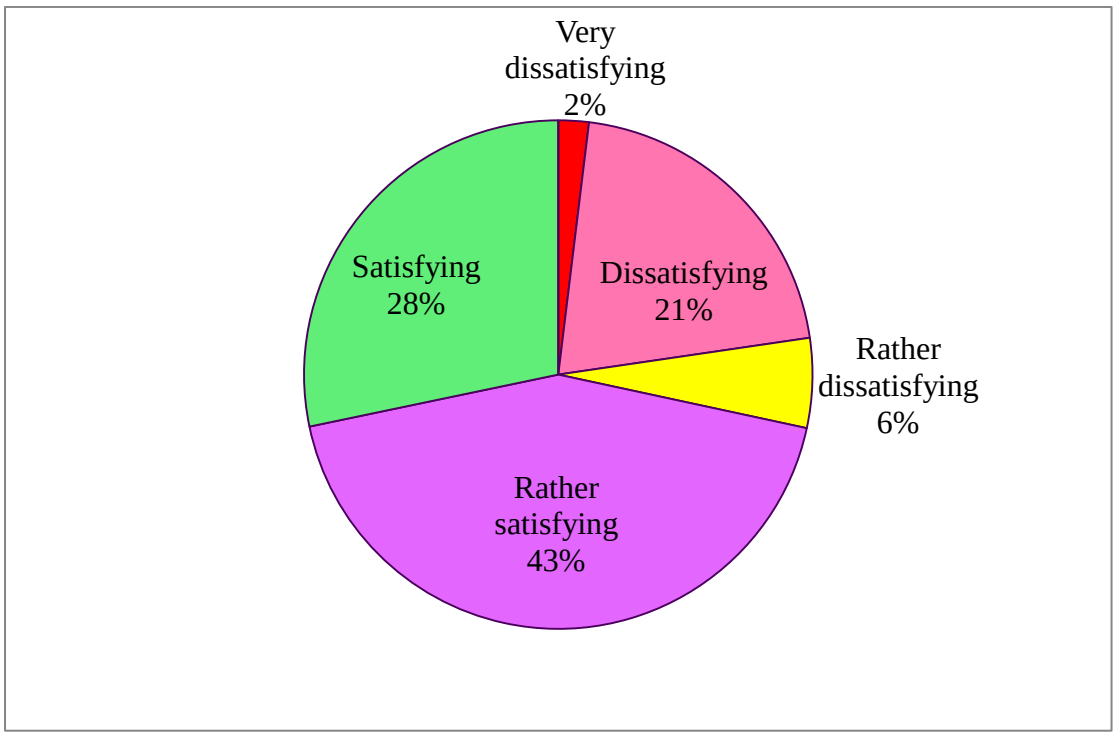


Figure-12: Financial situation of the participants

4.13 Leisure situation

Among the 54 participants with spinal cord injury about 1.9% (n=1) participants had very dissatisfying, 20.4% (n=11) had dissatisfying, 5.6% (n=3) had rather dissatisfying, 42.6% (n=23) had rather satisfying, 27.8% (n=15) had satisfying and 1.9% (n=1) had very satisfying perceptions to their leisure situation.

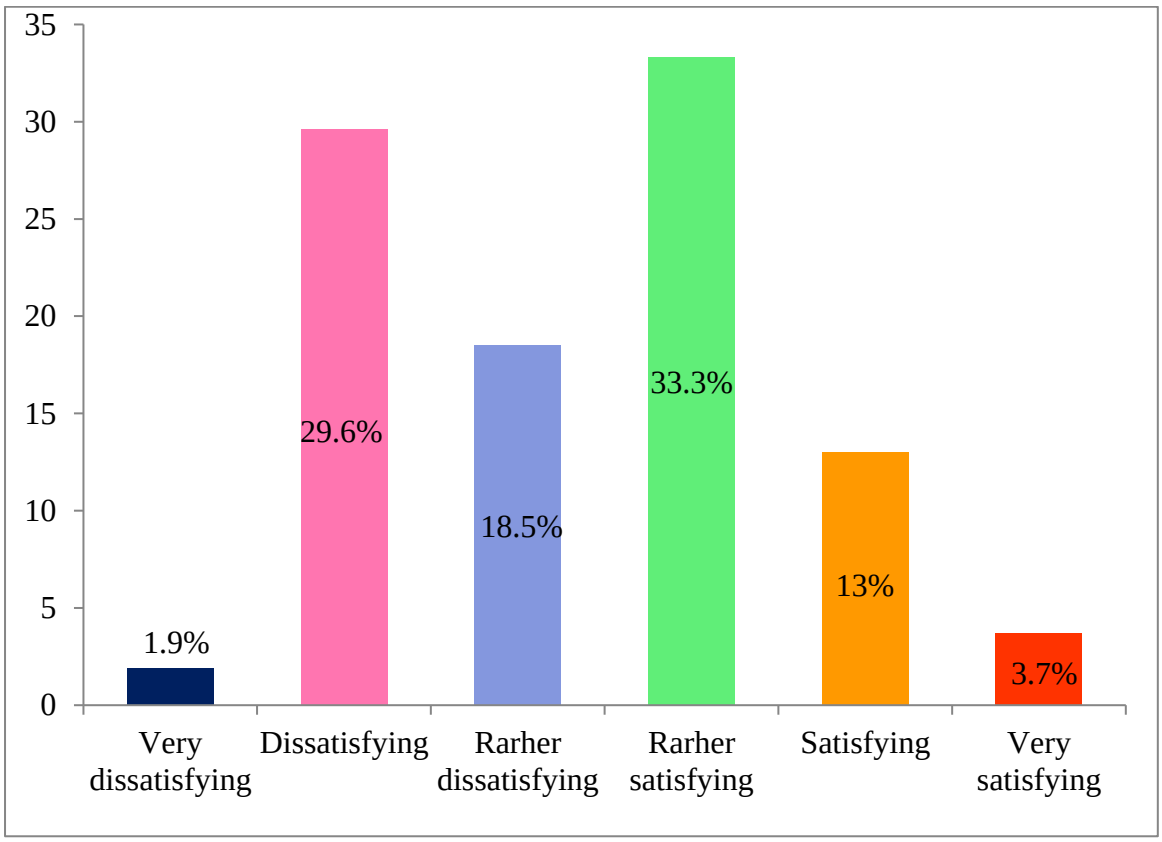


Figure-13: Leisure situation of the participants

4.14 Contact with friends

In this study it has been found that about 1.9% (n=1) participants had very dissatisfying, 29.6% (n=16) had dissatisfying, 18.5% (n=10) had rather dissatisfying, 33.3% (n=18) had rather satisfying, 13% (n=7) had satisfying and 3.7% (n=2) had very satisfying perceptions in contact with friends and acquaintances.

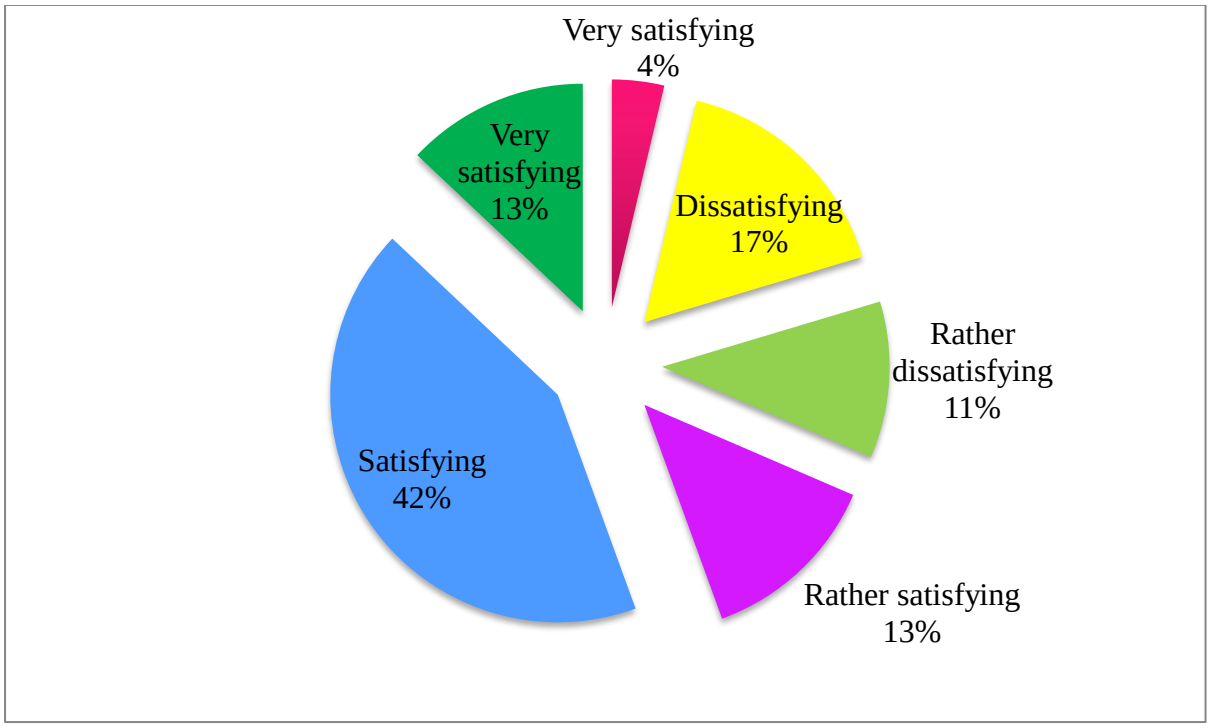


Figure-14: Contact with friends of the participants

4.15 Sexual life

Among the 54 participants with spinal cord injury about 11.1% (n=6) participants had very dissatisfying, 5.6% (n=3) had dissatisfying, 7.4% (n=4) had rather dissatisfying, 20.4% (n=11) had rather satisfying, 18.5% (n=1) had satisfying, 1.9% (n=1) had very satisfying perceptions in their sexual life.

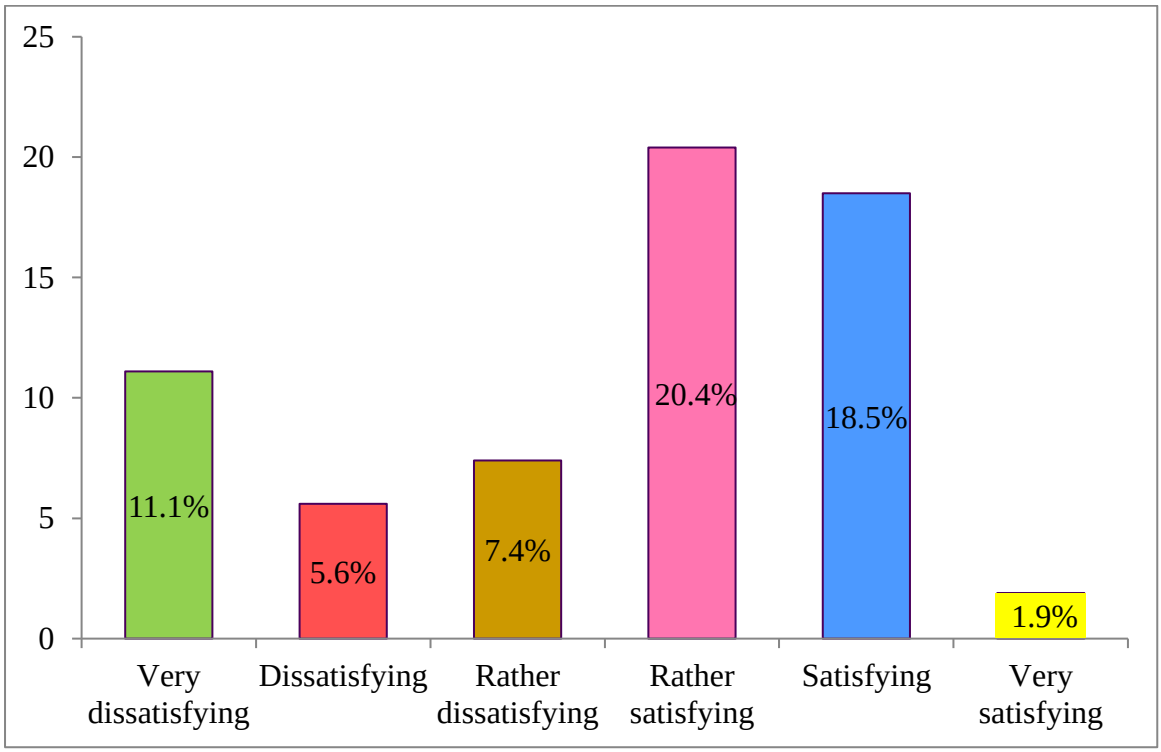


Figure-15: Sexual life of the participants

4.16 Ability to self-care

In this study it has been found that about 1.9% (n=1) participants had dissatisfying, 1.9% (n=1) had rather dissatisfying, 11.1% (n=6) had rather satisfying, 48.1% (n=26) had satisfying and 37% (n=20) had very satisfying perceptions in ability to self-care.

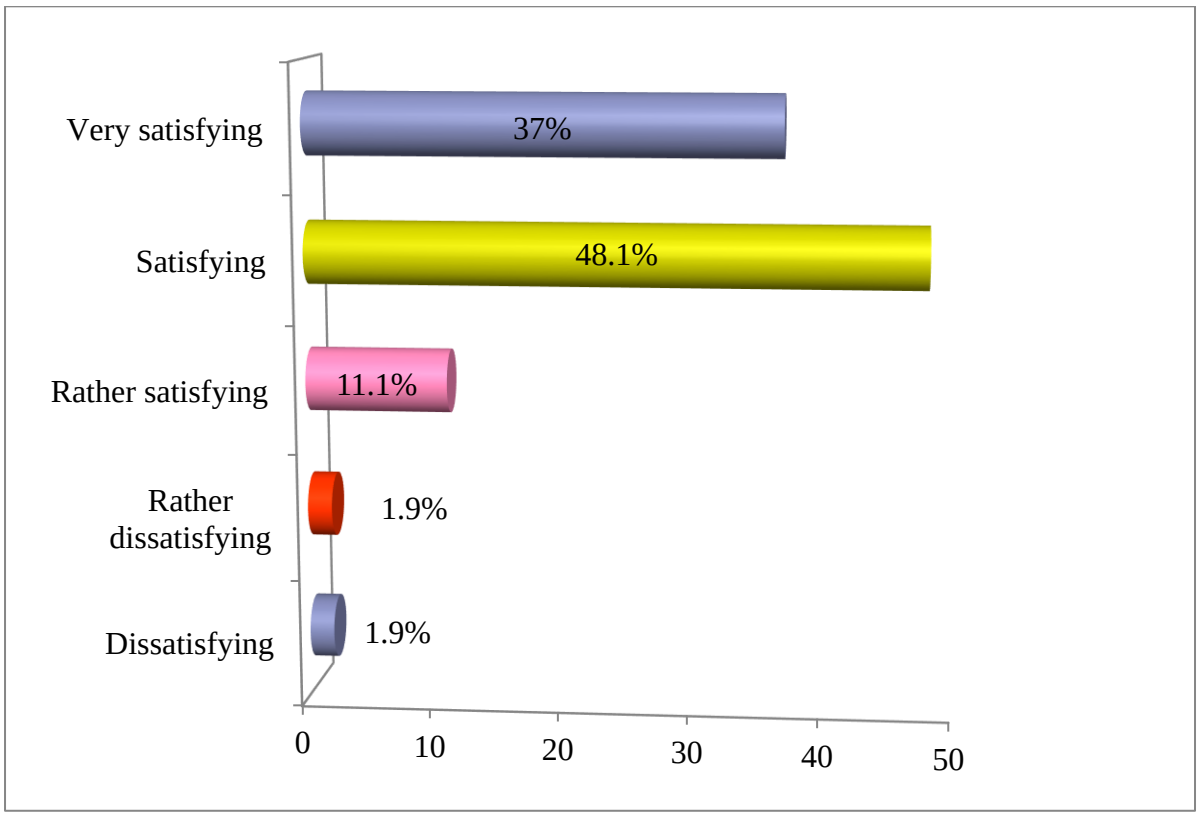


Figure-16: Ability to self-care of the participants

4.17 Family life

Among the 54 participants with SCI about 1.9% (n=1) participants had very dissatisfying, 5.6% (n=3) had dissatisfying, 1.9% (n=1) had rather dissatisfying, 11.1% (n=6) had rather satisfying, 40.7% (n=22) had satisfying, 38.9% (n=21) had very satisfying perceptions in their family life.

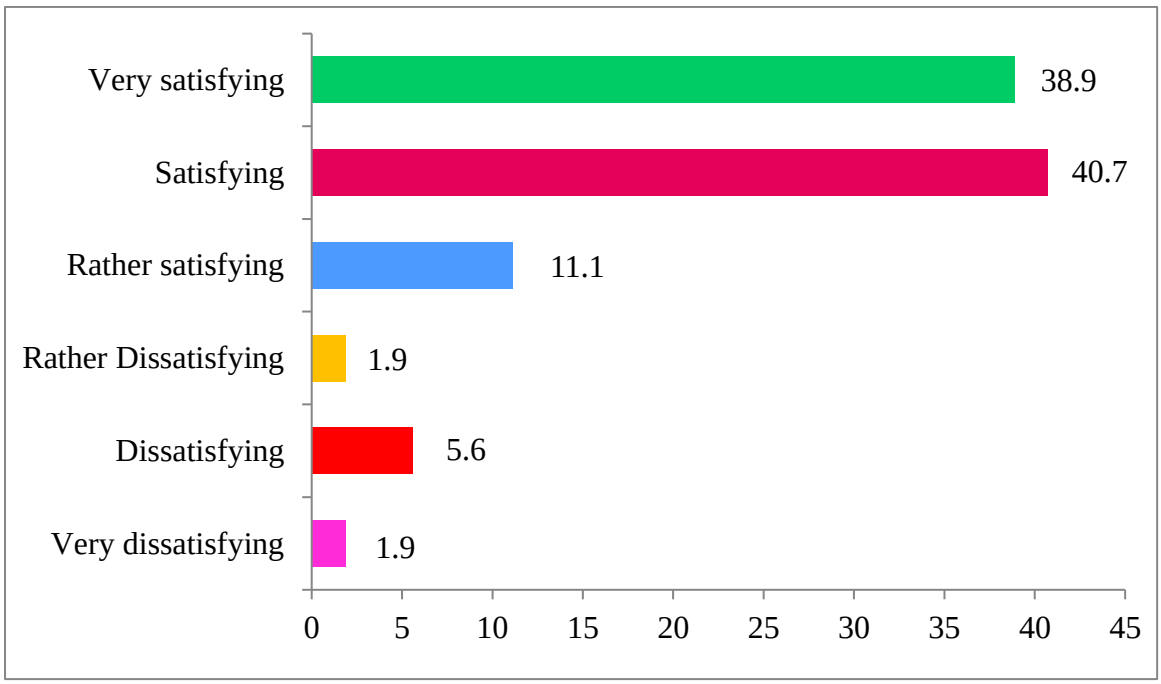


Figure-17: Family life of the participants

4.18 Partner relationship

Among the 54 participants with SCI about 11.1% (n=6) participants had very dissatisfying, 3.7% (n=2) had dissatisfying, 3.7% (n=2) had rather dissatisfying, 7.4% (n=4) had rather satisfying, 18.5% (n=10) had satisfying and 20.4% (n=11) had very satisfying perceptions to their Partner relationship.

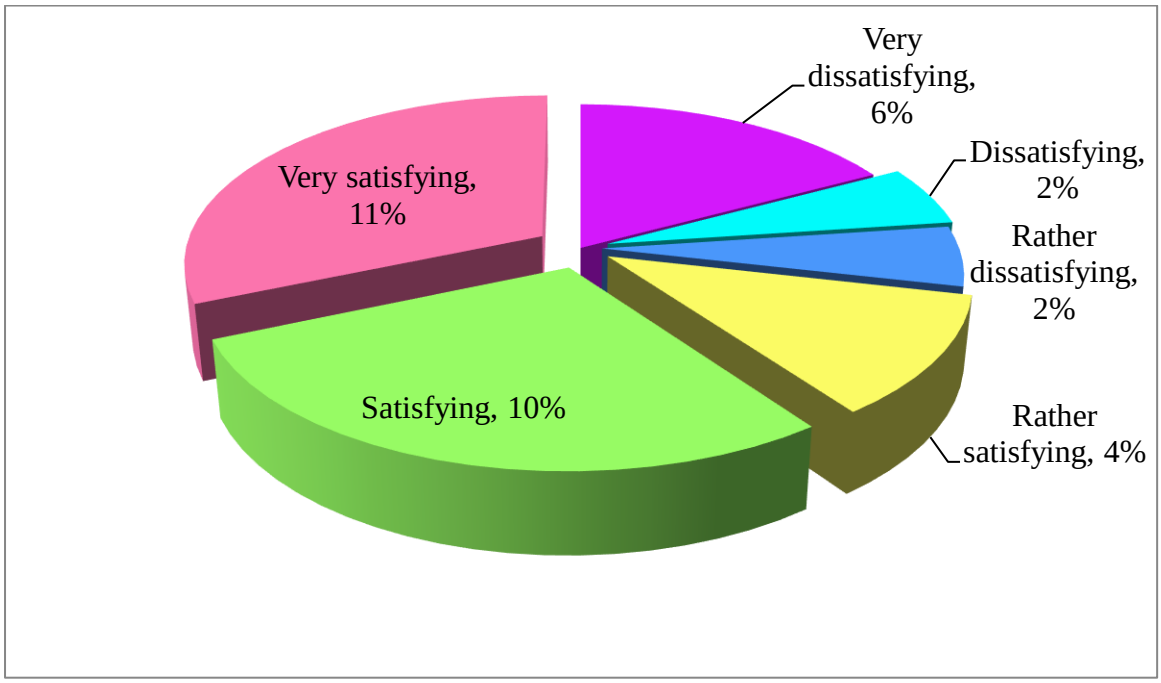


Figure-18: Partner relationship of the participants

4.19 Main earning member

Among the 54 participants with spinal cord injury about 70.4% (n=38) participants were main earning member and 29.6(n=16) participants were not main earning member.

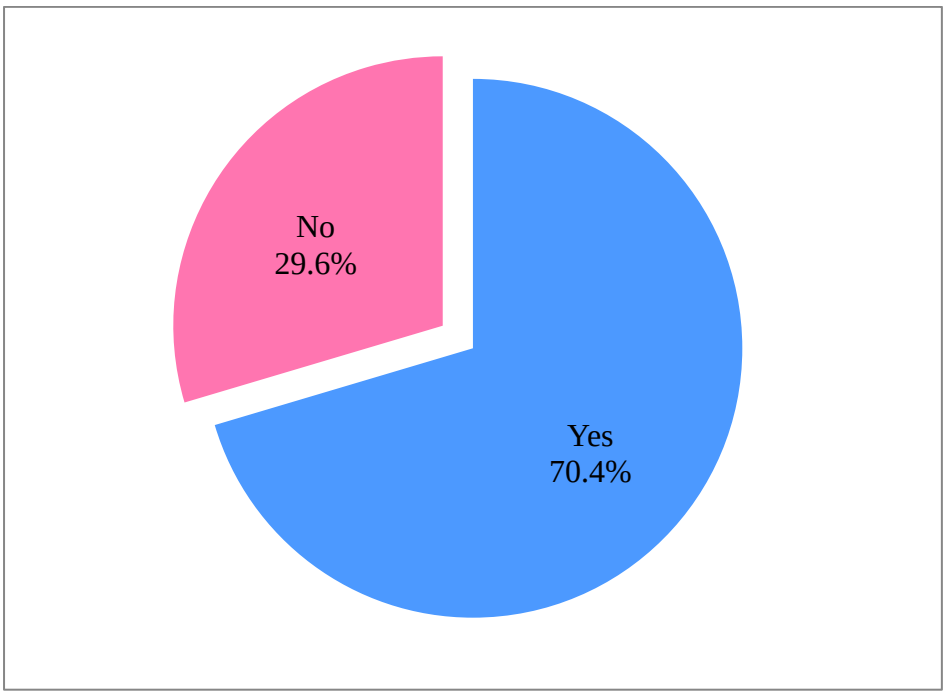


Figure-19: Main earning member of the participants

4.20 Monthly income

The researcher found average family income of the participants was 1000-10000 taka n=24 (44.4%), 11000- 20000 taka n=11 (20.4%), 21000-30000 taka n=5 (74.1%).

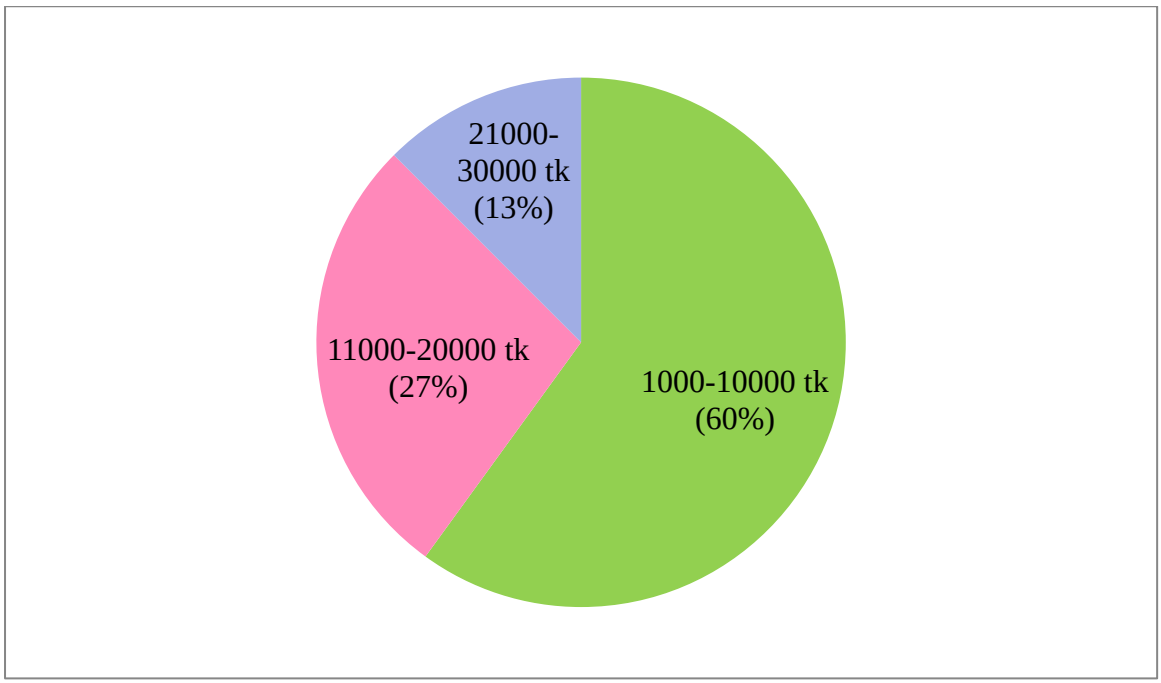


Figure-20: Monthly income of the participants

4.21 Education

Among the 54 participants 14.8 % (n=8) participants were illiterate, 42.6% (n=23) participants primary passed, 16.7% (n=9) participants were secondary passed, 16.7% (n=9) participants completed higher secondary level, 5.6% (n=3) participant were graduated and only 1.9% (n=1) participant were completed masters.

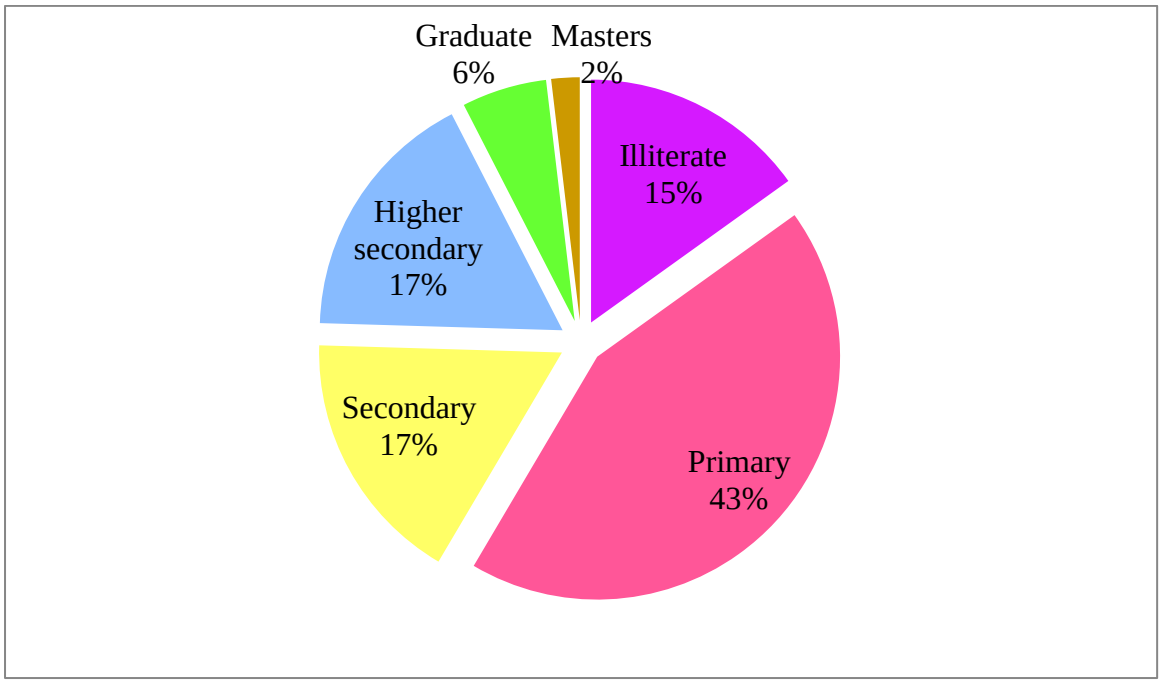


Figure-21: Education level of the participants

4.22 Pre-injury employment: Job type

Among the 54 participants 3.7% (n=2) participants were farmer, 9.3% (n=5) participants day laborer, 22.2% (n=12) participants were service holder, 14.8% (n=8) participants were doing business, and 50% (n=27) participant were doing o work.

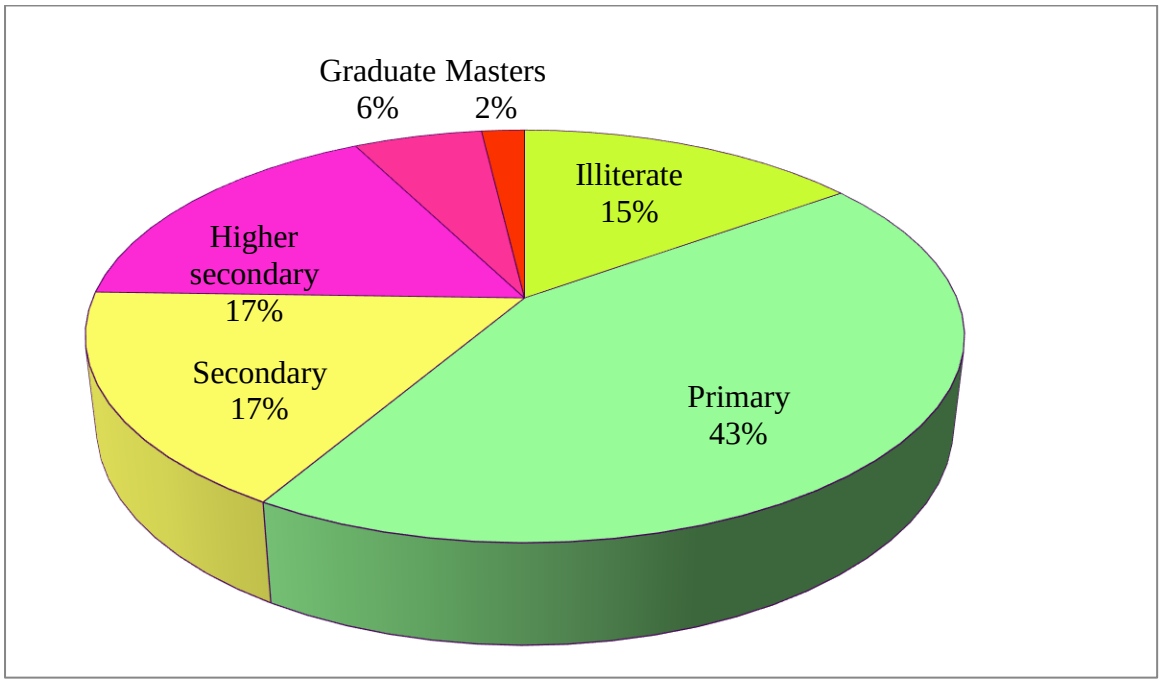


Figure-22: Pre-injury employment: Job type of the participants

4.23 Pre-injury employment: Job contract

The researcher found average pre-injury employment: job contract of the participants were n=8 (14,8%) permanent employed , n=8 (14.8%) participants were temporary employed , n=9 (16.7%) participants were self-employed, n=28 (51.9%) participants job contract was other.

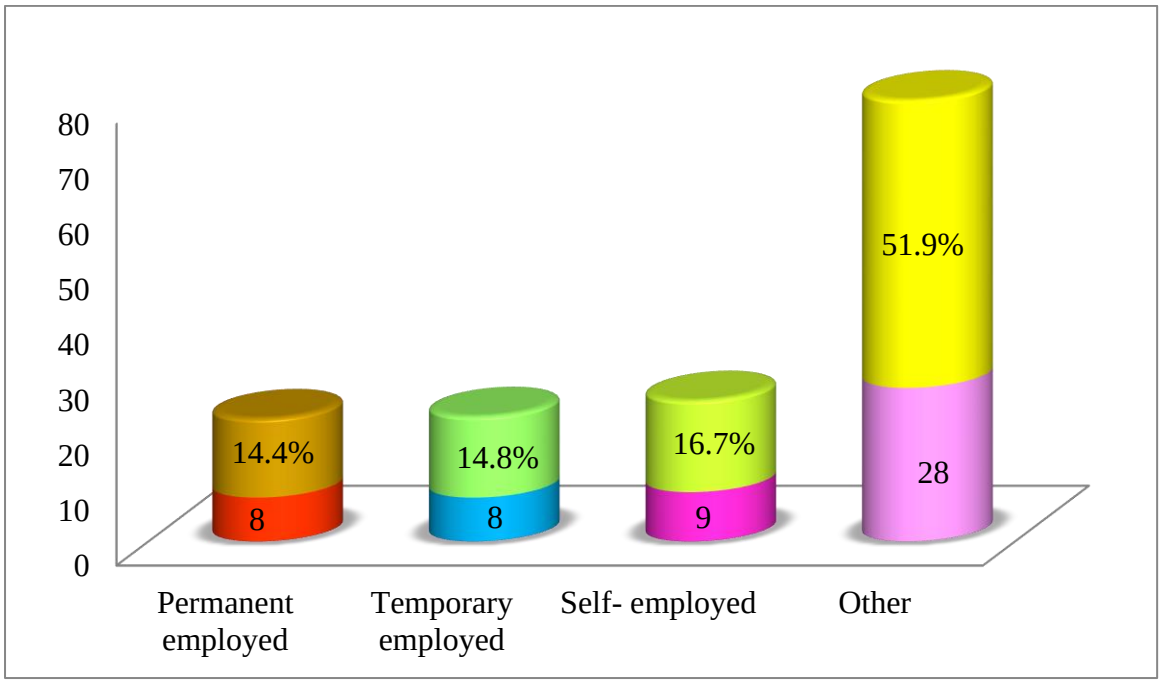


Figure-23: Pre-injury employment: Job contract of the participants

4.24 Current employment: Job type

Among the 54 participants 5.6 % (n=3) participants were farmer, 1.9% (n=1) participants day laborer, 64.8% (n=35) participants were service holder, 27.8% (n=15) participants were doing business.

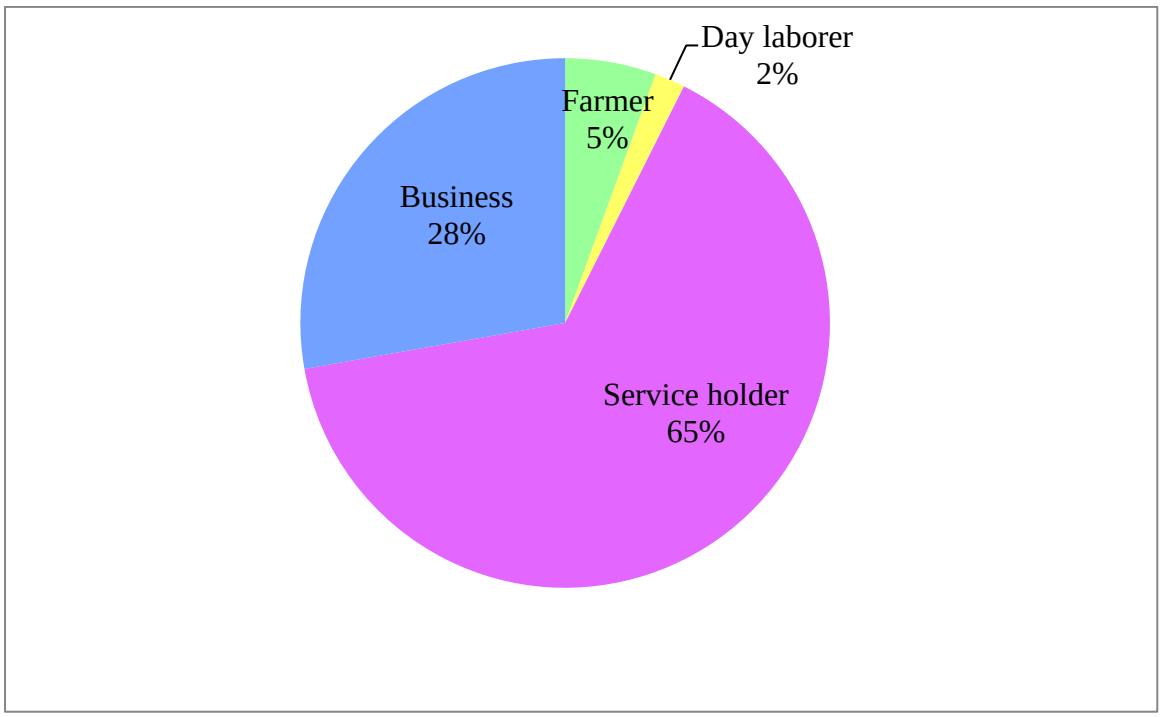


Figure-24: Current employment: Job type of the participants

4.25 Current employment: Job contract

The researcher found average current employment: job contract of the participants were n=17 (31.5%) permanent employed , n=20 (37%) participants were temporary employed , n=16 (29.6%) participants were self-employed.

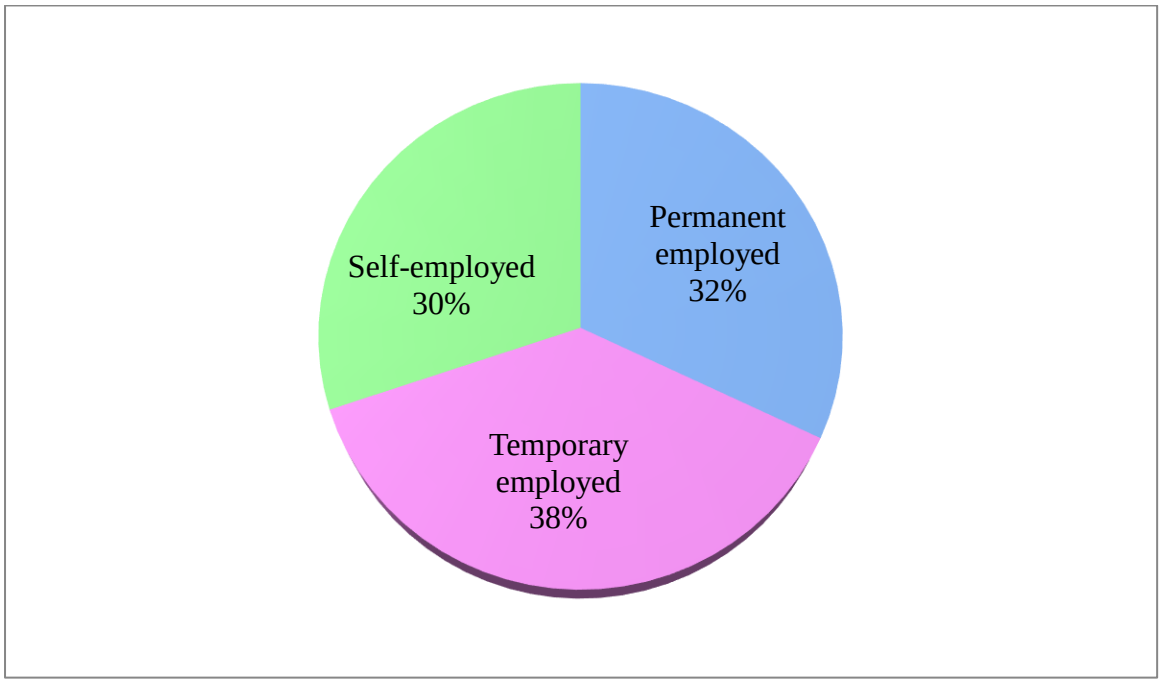


Figure-25: Current employment: Job contract of the participants

4.26 Job modification

Among the 54 participants 1.9 % (n=1) participants want to change the job or employer, 25.9% (n=14) want to material and immaterial adaptations of the job, 22.2% (n=12) want to were wish for (more) job modifications, 48.1% (n=26) participants did not need any modification.

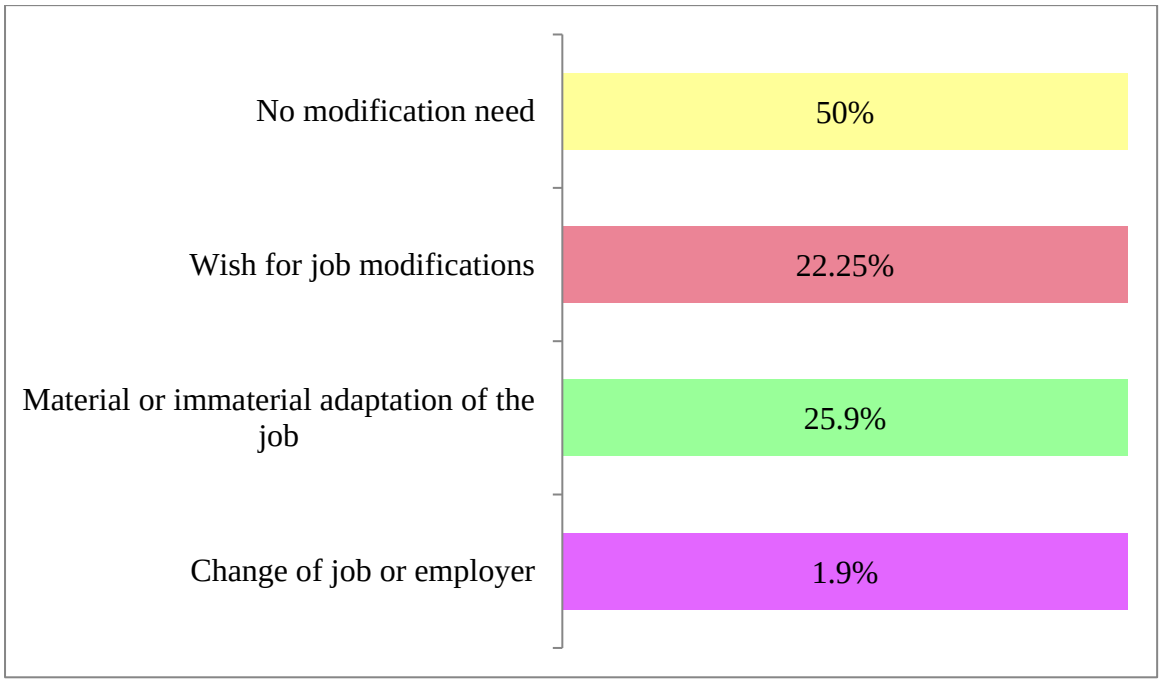


Figure-26: Job modification of the participants

4.27 Opinions about the current working conditions and social atmosphere

Among the 54 participants 24.1 % (n=13) participants said that their current working conditions and social atmosphere was excellent, 27.8% (n=15) said that their current working conditions and social atmosphere was very good and 44.4% (n=24) said that their current working conditions and social atmosphere was good.

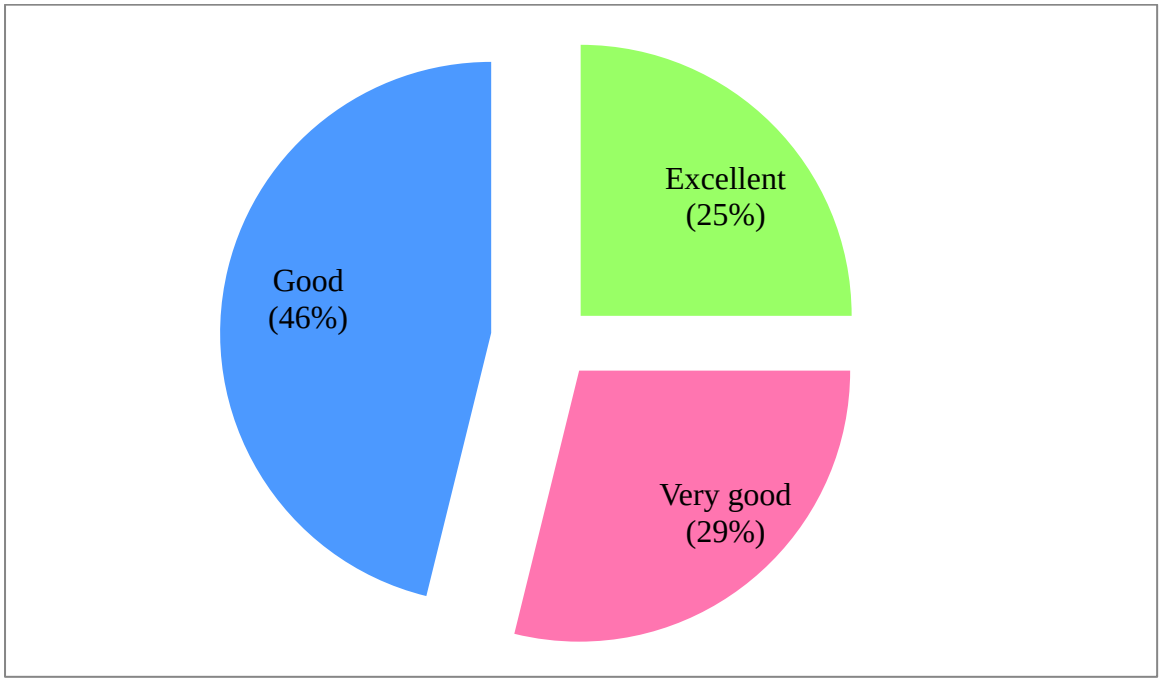


Figure-27: Opinions about the current working conditions and social atmosphere of the participants

CHAPTER-V DISCUSSION

A cross sectional survey was used to find out the level of life satisfaction and community participation after vocational training of people with spinal cord injury. 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 Savar. 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 participants age group was (20-30 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).

In this study 54 participants were taken where approximately 53% (n=30) male and 44% (n=24) female. This study was found, male participants higher than the female participants. Epidemiological studies have found that men, women ratio 4.3: 1 and 31-45 years of age in South East were often affected (Nwankwo & Uche, 2013). According to Razzak (2013) found that, among 56 participants 84% were male and 16.0% were female. Franca et al., (2011) found that among 47 participants most of the injured participants of the study were male following injury. Like other developing countries, men are in general more exposed to the outer world and involved in manual and often more risky jobs in Bangladesh (Ahmed et al., 2017). 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).

This study found most of the participants were traumatic spinal cord injury 85.2% and some were non-traumatic spinal cord injury(14.8%).The global incidence of traumatic spinal cord injury occur every year from 9.2 to 246.0 cases per million citizen a year. According to the geographic region, the approximate phenomenon is varied in many different ways: the Americas: 20.7 to 83.0 per million citizens a year, Europe: 8.0 to 130.6, Asia and the Middle East: 14.6 to 246 and Oceania: 10.0 to 77.0. In a study of Razzak (2013), found that the rate of depression after SCI in Bangladesh because of traumatic injury is 16.9% at CRP.

The main cause of traumatic spinal cord injury was motor vehicle accident then fall from height in North America (Mothe & Tator, 2013). According to Nwankwo & Uche (2013), in Southeast country like Nigeria, the most frequent cause of spinal cord injury was motor vehicle accident around 55% and falls around 23%. In this study the most common cause was fall from height about 58% then road traffic accident approximately 29%. According to the National Shriners SCI Database (NSCID), in the last 40 years, motor vehicle crashes have consistently been the main cause of the spinal cord injury, which is roughly 40% to 50% of all spinal cord injury (Chen et al., 2013). Razzak (2013) found that the main reason for the spinal cord injury was to fall from the height 43.1% (n=44).In Bangladesh other studies also found the main reason for the spinal cord injury was fall from height among 56 participants were 50%.One of the common reasons for the cervical spinal cord injury fall mainly in Bangladesh when carrying heavy loads on head (Hoque et al., 2012).

It is not unbelievable because men are facing high risk because of their job or type of job. Women around the world are less likely to see such jobs that are at risk of such types of damage, for example, fall from tree, fall from high place, that is, high-rise building, or falling while having load on neck or back (Islam et al., 2011).

This study found most of the participants 31.5% (n=17) who were injured at the level of complete paraplegia. Lowest number of injured participants had been found at the level of complete tetraplegia following injury. Chang et al. (2012) similarly mentioned that among 341 participants 42.5% who were complete paraplegia after SCI. Lowest number of participants with incomplete tetraplegia also found at this

study 17.9%. The epidemiology of spinal cord injury which reported Paraplegia among participants in 58.6% of developing countries (Rahimi-Movaghar et al., 2013). Among 237 people with spinal cord injury in three Asian Countries- India, Vietnam and Sri Lanka most of the participants were paraplegia (65–76%) as a result of road traffic accident (33–52%) (Tasiemski et al., 2013). In other major causes of spinal cord injury in Nigeria, especially in road accidents, appropriate education and sensitivity can be expanded (Nwankwo & Uche, 2013).

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 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).

In present study among 54 participants found most of the participants earned 21000 to 30000 taka per month. Another study of Bangladesh similarly found among 56 participants 32.1% (n=18) were earned more than 6,000 taka per month (Razzak, 2013). This study found a remarkable participants 26.5% (n=27) who were farmer. A

study of Razzak (2013) also found almost similar participants 48.3% who were involved in farming. Ahmed et al., 2017 suggest that a spinal cord injury participants monthly income below Taka 10,000. It is supported by the recent research conducted in recent years, spinal cord injury is among the most proposed people in the lower social-economic level (Islam et al., 2011). However, this invention does not explain that the lower social-economic location is a cause of injury or loss (Ahmed et al., 2017). Most patients make less education or had no education doing small jobs or small businesses and earning poor income. Most of them were villagers (Islam et al., 2011).

Marital status in India shows that about 57% of the marriages and 44% were unmarried (Tasiemski et al., 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%.

The determinants of life satisfaction in the studied area includes age, employment, financial status and self-care ability where as in urban Chaina the determinants includes age, unemployment, income, marriage and sex (Appleton & Song, 2008) and 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).

In a sample of Zimbabwe, the independent judges of the life satisfaction were involved in obtaining satisfaction with children's adequate respect and financial status (Appleton & Song, 2008) whereas in this study it has been found that there is a significant relationship in between age and life satisfaction.

Since most of the participants were young and 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

experiences with colleagues plays an important role in disability management in Bangladesh (Maloni et al., 2011).

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. Preinjury 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).

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 Paralysed 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-

First of all, time of the study was very short which had a great deal of impact on the study. If enough time was available knowledge on the thesis could be extended.

The samples were collected only from the selected community of Savar and the sample size was too small, so the result of the study could not be generalized to the whole population of spinal cord injury in Bangladesh.

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 AND RECOMMENDATION

6.1 Conclusion

Spinal cord injury is a condition which can occurs 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 persons full life at any age. It is very common in developing country like Bangladesh. The aim of the study was to assess the level of Life satisfaction and community participation after vocational training of people with spinal cord injury. In this study among 54 participants about 53% (n=30) male and 44% (n=24) female so male was more vulnerable than female. Bangladesh is a highly populated country and male are mainly involved in outside occupation rather than female. Males are work at every area without maintaining any safety hazard. For that reason males are more prompt to having spinal cord injury. On the other hand most of the participants came from rural areas and low educational level. From the study it can be concluded that due to Spinal cord injury there have a lot of physical and mental problem such as ability to self-care, contacts with friends, family life, sexual life, partner relationship, leisure situation, financial situation, vocational situation and over all whole life. During staying at CRP most of the participants were satisfied with treatments, get support from the staff moderately, environment was clean moderate amount so environmental level was good. Spinal cord injury is greatly hampering person's life satisfaction and quality of life specially their physical and mental status. So awareness should be increased and take necessary steps to improve their physical and mental health. After spinal cord injury male persons become depended on their family and their income also become decrease day by day. So they need early vocational training to reintegrate in 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 of can improve and enhance vocational rehabilitation programmes. 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 assess the Life satisfaction and community participation after vocational training of people with spinal cord injury. 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 54 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, Dhamrai and Manikgong 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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Verbal Consent Statement

(Please read out to the participants)

Assalamualaikum / Nomoshkar, my name is **Nabila Tasnin**, I am conducting this study as a part of my academic work of B. Sc. in Physiotherapy under Bangladesh Health Professions Institute (BHPI), which is affiliated to University of Dhaka. My study title is "**Life satisfaction and community participation after vocational training of people with spinal cord injury**". I would like to know about some personal and other related information regarding SCI. You will need to answer some questions which are mentioned in this form. It will take approximately 25-30 minutes.

I would like to inform you that this is a purely academic study and will not be used for any other purpose. The researcher is not directly related with this area, so your participation in the research will have no impact on your present or future life. All information provided by you will keep in a locker as confidential and in the event of any report or publication it will be ensured that the source of information remains anonymous and also all information will be destroyed after completion of the study. Your participation in this study is voluntary and you may withdraw yourself at any time during this study without any negative consequences. You also have the right not to answer a particular question that you don't like or do not want to answer during interview.

If you have any query about the study or your right as a participant, you may contact with me and/or Md. Shofiqul Islam, Assistant Professor, Department of Physiotherapy, Bangladesh Health Professions Institute (BHPI), Savar, Dhaka-1343.

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

Signature of the Participant……..
Signature of the Interviewer…….

মৌখিক অনুমতি পত্র

(অংশগ্রহনকারীকে পড়ে শোনাতে হবে)

আসসালামুয়ালিকুম/ নমস্কার,

আমার নাম নাবিলা তাসনিন। আমি এই গবেষণাটি বাংলাদেশ হেলথ প্রকেসনস ইনস্টিটিউট এ করছি যা আমার অধিভুক্ত। আমার গবেষণার শিরোনাম হল "মেরুদন্ডের আঘাতজনিত রোগীদের পেশাগত প্রশিক্ষণের পর জীবন সন্তুষ্টি এবং সম্প্রদায়ের অংশগ্রহণ"। আমি এক্ষেত্রে কিছু ব্যাক্তিগত এবং আনুষঙ্গিক তথ্য আপনার দৈনন্দিন জীবনের কর্মকান্ড সম্পর্কে জানতে চাচ্ছি, যা আনুমানিক ২৫- ৩০ মিনিট সময় নেবে।

আমি আপনাকে অবগত করছি যে, এটা আমার অধ্যয়নের অংশ এবং অন্য কোনো উদ্দেশ্যে ব্যবহার হবে না। গবেষক সরাসরি এই মেরুদন্ডের আঘাতজনিত অধ্যয়নের সাথে সম্পর্কিত নয়। তাই এই গবেষণায় আপনার বর্তমান এবং ভবিষ্যত চিকিৎসায় কোনো প্রভাব ফেলবে না। আপনি যেসব তথ্য প্রদান করবেন তার গোপনীয়তা বজায় থাকবে এবং আপনার প্রতিবেদনের ঘটনাপ্রবাহে এটা নিশ্চিত করা হবে যে, এর উৎস অপ্রকাশিত থাকবে।

এই অধ্যয়নে আপনার অংশগ্রহন ঐচ্ছিক এবং আপনার যে কোনো সময় এই অধ্যয়ন থেকে কোন নেতিবাচক ফলাফল ছাড়া নিজেকে প্রত্যাহার করতে পারবেন। সাক্ষাৎকারের সময় কোনো প্রশ্ন পছন্দ না হলে উত্তর না দেওয়ার অথবা না দিতে চাওয়ার অধিকার আপনার আছে। এই অধ্যয়নে অংশগ্রহণকারী হিসেবে আপনার যদি কোনো প্রশ্ন থাকে তাহলে আপনি আমাকে অথবা আমার সুপারভাইসার মো. শফিকুল ইসলাম সহকারী অধ্যাপক, ফিজিওথেরাপি বিভাগ, বিএইচপিআই, সিআরপি, সাভার, ঢাকা- ১৩৪৩ এ যোগাযোগ করতে পারেন।

সাক্ষাৎকার শুরু করার আগে আপনার কি কোনো প্রশ্ন আছে?

আমি আপনার অনুমতি নিয়ে এই সাক্ষাৎকার শুরু করতে যাচ্ছি।

হ্যাঁ ☐ না ☐

অংশগ্রহণকারীর স্বাক্ষর ও তারিখ ----------

সাক্ষাৎগ্রহণকারীরর স্বাক্ষর ও তারিখ ----------

সাক্ষীর স্বাক্ষর ও তারিখ ----------

Socio-demographic Questionnaire

Name-

Age-

Date-

Gender- M / F

Address-

Vill……. Post…….

PS……. Dist…….....

Mobile no-

Education-

Religion-

Islam…… Hinduism……..

Others…….

Marital status-

Unmarried……. Married……

Divorced……

Widowed…….....

Family size-

Nuclear…….. Small…….….

Extended……..

Cause of injury-

Traumatic……..

Non-traumatic……...

Duration of injury-

Life-Satisfaction Questionnaire-9 (LISAT-9)

Patient Name: _____ Date: _____

How satisfactory are these different aspects of your life? Indicate the number which best suits your situation.

1 = Very dissatisfying	4 = Rather satisfying
2 = Dissatisfying	5 = Satisfying
3 = Rather dissatisfying	6 = Very satisfying

Score: (1-6)

Life as a whole is _____

My vocational situation is _____

My financial situation is _____

My leisure situation is _____

My contacts with friends and acquaintances are _____

My sexual life is _____

My ability to manage my self-care (dressing, hygiene, transfers, etc.) is _____

My family life is _____

My partnership relation is _____

Sum: _____

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Patient signature Date

TNO Arbeid Modified Questionnaire

Serial No:	Question	Information	Code
1.	Disease-specific items: Spinal cord injury	Complete Paraplegia…… Incomplete Paraplegia…… Complete Tetraplegia…… Incomplete Tetraplegia……	01 02 03 04
2.	Main earning member	Yes (If yes then go to the next question) …… No (If no then skip the next question) ……	01 02
2.1	Monthly income	Tk.	
3.	Educational level	Illiterate…… Primary…… Secondary…… Higher secondary…… Graduate…… Masters……	01 02 03 04 05 06
4.	Preinjury employment situation		
	Type of job	Farmer…… Day labourer…… Service holder…… Business…… Other……	01 02 03 04 05
	Job contract	Permanent employed…… Temporary employed…… Self-employed…… Other……	01 02 03 04
5.	Current employment situation		
	Type of job	Farmer…… Day labourer…… Service holder…… Business…… Others……	01 02 03 04 05
	Job contract	Permanent employed…… Temporary employed…… Self-employed…… Other……	01 02 03 04

6.	Job modifications	Change of job or employer…… Material and immaterial adaptations of the job…… Wish for (more) job modifications… Wish for (more) contacts with reintegration professionals…… No modification need…….	01 02 03 04 05
7.	Opinions about the current working conditions and social Atmosphere	Excellent…… Very good…… Good…… Poor…… Very poor……	01 02 03 04 05

প্রশ্নাবলী

নাম- পরিচয় নং-

বয়স- তারিখ-

লিঙ্গ- পুরুষ / মহিলা

ঠিকানা- গ্রাম..... পোষ্ট.....

থানা..... জেলা.....

মোবাইল নং-

শিক্ষাগত যোগ্যতা-

পেশা- বেকার..... ব্যাবসায়ী.....

ছাত্র/ছাত্রী..... গৃহিনী.....

চাকুরিজীবী.....

ধর্ম- ইসলাম..... হিন্দু.....

বৈবাহিক অবস্থা-

অবিবাহিত..... বিবাহিত.....

তালাকপ্রাপ্ত..... পতিহীনা.....

পরিবারের আকার- একক..... ছোট..... যৌথ.....

পরিবারের মাসিক আয়-

ইনজুরির ধরন-

অসম্পূর্ণ প্যারাপ্লেজিয়া..... অসম্পূর্ণ টেট্রাপ্লেজিয়া .....

সম্পূর্ণ প্যারাপ্লেজিয়া..... সম্পূর্ণ টেট্রাপ্লেজিয়া.....

ইনজুরির কারণ- আঘাতজনিত..... অ-আঘাতজনিত.....

ইনজুরির সময়কাল- ..... বছর

জীবন সন্তুষ্টি প্রশ্নাবলী

রোগীর নাম: _____ তারিখ : _____

কেমন সন্তোষজনক আপনার জীবনের এই বিভিন্ন দিক? আপনার উপযুক্ত অবস্থা অনুযায়ী নম্বর সূচিত করুন.

১ = অত্যন্ত অসন্তুষ্ট	৪ = সামান্য সন্তুষ্ট
২ = অসন্তুষ্ট	৫ = সন্তুষ্ট
৩ = সামান্য অসন্তুষ্ট	৬ = অত্যন্ত সন্তুষ্ট

মান: (১-৬)

একটি সম্পূর্ণ জীবন হিসাবে	_____
আমার বৃত্তিমূলক/পেশাগত অবস্থা	_____
আমার আর্থিক অবস্থা	_____
আমার অবসর অবস্থা	_____
বন্ধু এবং পরিচিতদের সঙ্গে আমার যোগাযোগ	_____
আমার যৌন জীবন	_____
আমার নিজের যত্ন (ড্রেসিং, স্বাস্থ্য, স্থানান্তর, ইত্যাদি) পরিচালনা করার ক্ষমতা	_____
আমার পরিবার জীবন	_____
আমার সঙ্গী সম্পর্ক	_____

সমষ্টি : _____

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রোগীর স্বাক্ষর তারিখ

সংশোধিত টিএনও আরবেইদ প্রশ্নাবলী

ক্রমিক নং	প্রশ্ন	তথ্য	কোড
১.	রোগ-নির্দিষ্ট পদ: মেরুরজ্জুর আঘাত	সম্পূর্ণ প্যারাপ্লেজিয়া …… অসম্পূর্ণ প্যারাপ্লেজিয়া…… সম্পূর্ণ টেট্রাপ্লেজিয়া…… অসম্পূর্ণ টেট্রাপ্লেজিয়া……	০১ ০২ ০৩ ০৪
২.	প্রধান উপার্জনকারী সদস্য	হ্যাঁ (যদি হ্যাঁ হয় তাহলে পরবর্তী প্রশ্নে যান)…… না (যদি না পরবর্তী প্রশ্নটি এড়িয়ে যান)……	০১ ০২
২.১.	মাসিক আয়	টাকা	
৩.	শিক্ষাগত	নিরক্ষর…… প্রাথমিক…… মাধ্যমিক…… উচ্চ মাধ্যমিক স্নাতক…… মাস্টার্স……	০১ ০২ ০৩ ০৪ ০৫
৪.	আঘাতের পূর্বে কর্মসংস্থান পরিস্থিতি		
	কাজের ধরন	কৃষক…… দিন মজুর…… চাকুরীজীবি…… ব্যবসায়…… অন্যান্য……	০১ ০২ ০৩ ০৪ ০৫

	কাজের চুক্তি	স্থায়ী নিয়োগপ্রাপ্ত..... অস্থায়ী নিয়োগপ্রাপ্ত..... স্বনির্ভর..... অন্যান্য.....	০১ ০২ ০৩ ০৪
৫.	বর্তমান কর্মসংস্থান পরিস্থিতি		
	কাজের ধরন	কৃষক..... দিন মজুর..... চাকুরীজীবি..... ব্যবসায়..... অন্যান্য.....	০১ ০২ ০৩ ০৪ ০৫
		স্থায়ী নিয়োগপ্রাপ্ত..... অস্থায়ী নিয়োগপ্রাপ্ত..... স্বনির্ভর..... অন্যান্য.....	০১ ০২ ০৩ ০৪
৬.	কাজের পরিবর্তন	চাকুরী ব নিয়োগকর্তার পরিবর্তন..... কাজের উপাদানের পরিবর্তন..... চাকরি পরিবর্তনের ইচ্ছা..... পুনর্মিলন পেশাদারদের সাথে পরিচিতি চান..... কোনো পরিবর্তন প্রয়োজন নেই.....	০১ ০২ ০৩ ০৪ ০৫
৭.	বর্তমান কাজের পরিস্থিতি এবং পরিবেশ সম্পর্কে মতামত	উত্তম..... খুব ভালো..... ভালো..... খারাপ..... খুব খারাপ.....	০১ ০২ ০৩ ০৪ ০৫

Permission letter

April 6 , 2017

Head of the Department,

Department of Physiotherapy,

Bangladesh Health Professions Institute (BHPI),

CRP,Chapain, Savar, Dhaka-1343.

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

Dear Sir,

With due respect and humble submission to state that I am Nabila Tasnin, student of 4th Professional B.Sc. in Physiotherapy at Bangladesh Health Professions Institute (BHPI). The ethical committee has approved my research project entitled on **"Life satisfaction and community participation after vocational training of people with spinal cord injury"** . To conduct this research project, I want to collect data from the patients with spinal cord injury in the community. So, I need permission for data collection from the 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 obliges thereby.

Sincerely Yours

Nabila Tasnin

Nabila Tasnin

4th Professional B.Sc. in Physiotherapy

Roll-11, Session: 2012-2013

Bangladesh Health Professions Institute (BHPI)

(An academic Institute of CRP)

CRP, Chapain, Savar, Dhaka-1343.

Seen
Shafi
08.04.17

Allowed
08.04.17
Md. Obaidul Haque
Associate Professor & Head of the Department
Department of Physiotherapy
Bangladesh Health Professions Institute (BHPI)
CRP, Chapain, Savar, Dhaka-1343

বাংলাদেশ হেল্‌থ প্রফেশন্স ইনষ্টিটিউট (বিএইচপিআই)
BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)
(The Academic Institute of CRP)
CRP-Chapain, Savar, Dhaka, Tel: 7745464-5, 7741404 , Fax: 7745069
BHPI-Mirpur Campus, Plot-A/5, Block-A, Section-14, Mirpur, Dhaka-1206. Tel: 8020178,8053662-3, Fax: 8053661

তারিখ ঃ ০৯.০৪.২০১৭

প্রতি
সমন্বয়কারী
মাধব স্মৃতি ভোকেশনাল ট্রেনিং ইনস্টিটিউট
সিআরপি, সাভার, ঢাকা।

বিষয় ঃ রিসার্চ প্রজেক্ট (dissertation) প্রসঙ্গে।

জনাব,

বিএইচপিআই'র ৪র্থ পেশাগত বিএসসি ইন ফিজিওথেরাপি কোর্সের ছাত্রী নাবিলা তাসনিমকে তার রিসার্চ সংক্রান্ত কাজের জন্য আগামী ১৫.০৪.২০১৭ তারিখ থেকে ১৫.০৫.২০১৭ তারিখ পর্যন্ত সময়ে আপনার নিকট প্রেরন করা হলো। তার রিসার্চ শিরোনাম

" Life satisfaction and community participation after vocational training of people with spinal cord injury.

তাই তাকে সার্বিক সহযোগীতা প্রদানের জন্য অনুরোধ করছি।

ধন্যবাদান্তে

মোঃ ওবায়দুল হক
সহযোগী অধ্যাপক ও বিভাগীয় প্রধান
ফিজিওথেরাপি বিভাগ
বিএইচপিআই।

RAMESH CHANDRA HALDER
Vocational Training Coordinator
CRP- Chapain, Savar, Dhaka.

বাংলাদেশ হেল্‌থ প্রফেশন্স ইনষ্টিটিউট (বিএইচপিআই)

BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)

(The Academic Institute of CRP)

Ref: CRP-BHPI/IRB/04/17/97 *Date:* 15/04/2017

To
Nabila Tasnin
B.Sc. in Physiotherapy
Session: 2012-2013, Student ID :112120011
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Subject: "Life satisfaction and community participation after vocational training of people with spinal cord injury".

Dear Nabila Tasnin,

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 Life Satisfaction Questionnarie-9(LISAT-9) and TNO Arbeid Questionnarie that takes 20 to 30 minutes, have no likelihood of any harm to the participants and have possibility of benefit of patients to design appropriate rehabilitation program. 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,

Millat Hossain

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