

Health related quality of life of primary caregivers of persons with tetraplegia attending at a specialized rehabilitation centre

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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.

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Submitted by, **Md. Nazmul Hassan**, for partial fulfilment 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 of my supervisor & Head of Physiotherapy Department of Bangladesh Health Professions Institute (BHPI).

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Acronyms

ADL	Activity of Daily Living
BHPI	Bangladesh Health Professions Institute.
CRP	Centre for the Rehabilitation of the Paralysed
PT	Physiotherapy
SPSS	Statistical Package for the Social Sciences
USA	United States of America
WHO	World Health Organization
ASIA	American Spinal Injury Association
SCI	Spinal Cord Injury
SPSS	Statistical Package of Social Science
BMRC	Bangladesh Medical Research Association
HRQoL	Health Related Quality of Life
IBR	Institutional Review Board

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Abstract

Purpose: To assess the health related quality of life among the caregivers of Tetraplegic patient. **Objectives:** Assessment of the health-related quality of life (HRQoL) of primary caregivers of persons with tetraplegia owing to traumatic SCI. **Methodology:** The study design was cross-sectional. Total 48 samples were selected conveniently for this study from Centre for the rehabilitation of the paralysed (CRP), Spinal cord injury unit, at Savar. Data was collected by using of questionnaire and health-related quality of life (HRQoL) was assessed by the Short Form-36 (SF-36) health survey questionnaire. Descriptive statistics through using SPSS software version 16.0 was used for data analysis which focused through Column, pie chart and doughnut. **Results:** Among 48 caregivers evaluated, 39 (81.2%) were female and 9 (18.8%) were male where 22 persons (45.8%) were either husbands or wives and 15 persons (31.2%) were parents of persons with tetraplegia. It was found that the most of the caregivers (62.5%) spend about 13-18 hrs/day caring for individuals with tetraplegia. The subjects reported lower scores on social functioning and emotional well being than the other dimensions of SF-36. **Conclusion:** The primary caregivers of spinal-cord injured persons reported low scores on all of the SF-36 dimensions, social functioning and emotional well-being the SF- 36dimensions that characterize poor quality of life (QoL) among all.

Key words: Tetraplegia, HRQoL, Caregivers, CRP

1.1Background

Spinal cord injury (SCI) is one of the most common type of injury and generally a devastating disorder that can cause impairment in physical, psychological, and social functioning (Gurcay et al., 2010). It is almost always occurs suddenly & unexpectedly which is the major cause of paralysis that changes the person's lifestyle (Smith et al., 2013). Spinal cord injury is a frequent cause of mortality, and it results in a high level of individual disability, which is reflected in radical changes in lifestyle (Kawanishi and Greguol, 2013). It is an important public health problem and one of the most costly occupational health problems and one of the disability oriented injury is spinal cord lesion that mostly occurs in young male of low social status (Islam et al., 2011).

Persons with SCI may have to live with their disability for a much longer period of time till the natural end of their lives (Lee, 2000). According to their level of injury, people with SCI often have significant functional limitations and lack of independence (Notara et al., 2012) and the patients are supported by the caregiver for a longer duration. Thus the health of caregivers is of great importance (Bardak et al., 2012).

Primary caregivers are “The person who is primarily involved in the care of the patient and provides the most support and/or assistance” (Blanes et al., 2007). Family caregivers of persons with SCI may experience a wide range of lifestyle and quality of life changes after assuming the role as primary caregiver (Ebrahimzadeh et al., 2008). Primary caregivers, living together with the patients in the community, often have to take over many of the responsibilities of the patient (Lam et al., 2001). The responsibility of care giving can lead to physical injury (Bardak et al. 2012).

SCI patients have longer life expectations than other degenerative conditions. As a result caregivers of persons with SCI have to engage themselves for a long time in care giving for the patient. Many studies found that the primary caregivers and/ or spouses of SCI

survivors may experience various problems due to this disorder. Research in the literature regarding the quality of lives of primary caregivers of SCI survivors is relatively limited. SCI significantly interferes with the care givers quality of life independently of the severity of the injury (Unalan et al., 2001).

Quality of life refers to an individual's satisfaction which includes person's health, relationships, emotional, social, and physical function, and also happiness and satisfaction with living situation and finances and also person's fitness and physical activity may correlate with the handicap and quality of life (Manns and Chad, 1999). Specific health status and health related quality of life (HRQoL) is important because they can be vary person to person due to different disease condition (Andresen et al., 1999). Patient's age, educational and neurologic levels, employment and functional status, and presence of complications etc. affects the QoL of that patients (Gurcay et al., 2010). However lifestyle and physical activity is the main factor for the improvement of functional independence and the quality of life (Kawanishi and Greguol, 2013).

Regarding children with SCI, a similar study found that the caregiver's sex, the child's age at injury and the child's mental health were all related to caregiver outcomes. The caregiver's mental health and education, and the child's social relationships, predicted the outcome for the child. Neither injury level nor injury severity was related to caregivers or child outcomes (Kelly et al., 2011).

1.2 Rationale

The aim of the study was to assess the HRQoL among the caregivers of Tetraplegic Spinal Cord Injury patient.

When a person is injured with SCI, it affects all aspects of the person's life. SCI is a life altering experience for both the patients and the caregivers. Caregivers assist patients in managing medications, therapy, and medical emergencies; provide supervision, emotional support, assist in personal care, mobility and other basic daily living activities. In Bangladesh it is seen that the close relatives are mostly engaged in care giving for a person with SCI. The disabling conditions of patients impact on the usual daily living activities of the caregivers. They have to struggle to keep sound both the body and the mind.

Occupation of the caregiver is very important because this indicates how he/she can balance his/her occupation and the care of the patient. If the caregiver is very busy with his occupation he cannot concentrate on taking care of the patient properly.

It is important to know the marital status of the caregivers. Understandably an unmarried caregiver can give much more time than a married person because unmarried caregivers have less responsibility to the family and they can concentrate their work easily. Family size is also an important determinant because if the family size is big, there is a possibility for a care giver to be available. On the contrary, if the family size is small the caregiver may not be available and the family size also indicates the possibility of more or less family income (Barrett and Lynch, 1999). So, it was important to know the caregivers demographic factors as well as the HRQoL.

About 40% of patients with SCI need assistance in performing their important activities of daily living such as eating, dressing, personal hygiene, mobility and providing them emotional support and physical care as well. They depend on their caregivers. The information of demographic factor of caregivers of spinal cord injury is essential, because from this we will able to know: who are the caregivers, what is the relationship between

the caregiver and client, their age in years, their educational level, their culture and their socioeconomic condition. As community centred practice is a major role of occupational therapy so for this it is also necessary to gather caregiver's demographic information.

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 health related quality of life of primary caregivers of persons with tetraplegia.

Socio-economic status can be measured in a number of ways. The most common schemes relate to income, ownership of goods, type of and/or ownership/tenancy status of residence, classification of occupation, and educational attainment. Education is very important to both personal and professional life, in a number of significant ways.

Family caregivers often feel unprepared, have inadequate knowledge, and receive little guidance from the in-charge team for providing care to the SCI patient. Older caregivers are especially vulnerable because they may present with co morbidities, they may be living on fixed incomes, and their available social support networks may have shrunk. In addition, older caregivers of the patients may neglect their own health needs, have less time to exercise, forget to take their own prescription medications, and become fatigued from interrupted sleep. It is therefore common for care giving by older people to lead to poor physical health, depression, and even increased mortality. Younger caregivers must generally juggle work, their own family responsibilities, and sacrifices involving their social lives. Middle-aged caregivers typically worry about missed workdays, interruptions at work, taking leaves of absence, and reduced productivity.

Age and its measurement are relatively non problematic, (the number of days, months and years since birth). But for some societies birth is not relevant, and dates of birth may not be known or be exact, to say nothing of differences in calendar.

In this study, I took the data after asking the participants' age, sex and gender are often used in the literature interchangeably and thus incorrectly. Sex refers to a biological

entity; gender to social construction, and includes social, cultural or psychological dimensions.

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).

1.3 Research Question

What is the health related quality of life of primary caregivers of persons with tetraplegia attending at a specialized rehabilitation centre?

1.4 Objectives

1.4.1 General objective

To assess the HRQoL of primary caregivers of persons with tetraplegia attending at a specialized rehabilitation centre.

1.4.2 Specific objective

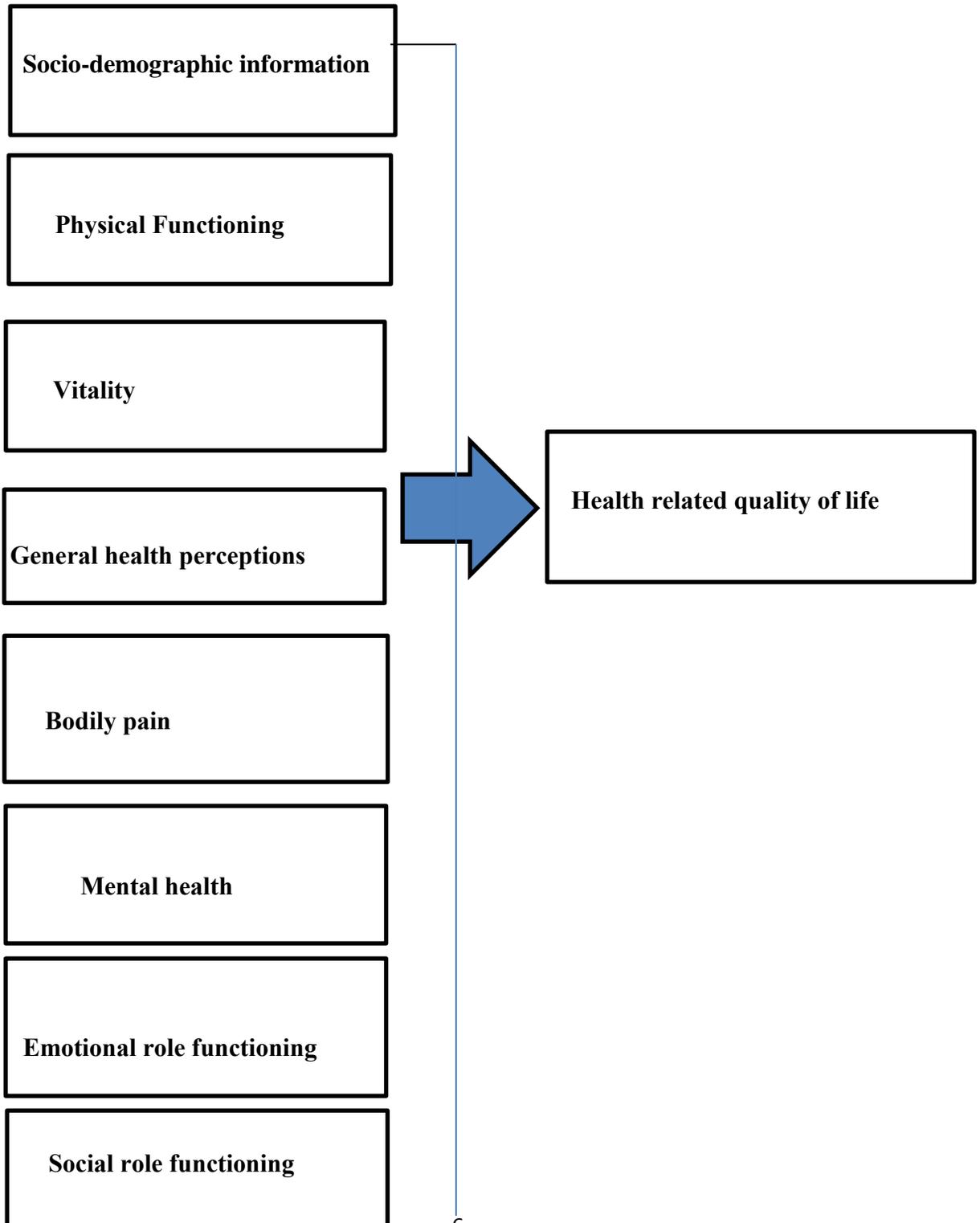
- To determine the socio-demographic information of the caregivers of tetraplegic patient.
- To figure out physical functioning of the caregivers of tetraplegic patient.
- To find out any bodily pain among the caregivers of tetraplegic patient.
- To know the general health perceptions of the caregivers of tetraplegic patient.
- To figure out the functioning of social role of the caregivers of tetraplegic patient.
- To know about mental health of the caregivers of tetraplegic patient.

1.5 Variables

Conceptual Framework

Independent variables

Dependent variable



1.6 Operational definition

- **Spinal Cord Injury**

When the spinal cord is damaged following trauma to the spine or disease process then it is called spinal cord injury which resulting in either temporary or permanent change in its normal motor, sensory, or autonomic functions.

- **Quality of life**

Quality of life refers to an individual's satisfaction which includes person's health, relationships, emotional, social, and physical function, and also happiness and satisfaction with living situation and finances.

- **Paraplegia**

It refers to a spinal injury from thoracic 2 (T-2) on down through sacral 5 (S-5). Typically these injuries result in some degree of weakness and sensory changes in the trunk, legs and feet.

- **Tetraplegia**

It refers to a spinal cord injury at or above the thoracic (T-1) spinal level. Tetraplegia, is a symptom in which a human experiences paralysis affecting all four limbs, although not necessarily total paralysis or loss of function. Injury to the spinal cord in the cervical region, with associated impairment or loss of muscle strength in all four extremities and trunk are called Tetraplegia.

- **Caregiver**

People who "provide unpaid care by looking after an ill, frail or disabled family member, friend or partner are caregivers.

- **Physical health**

It is the soundness of the body, freedom from disease or abnormality. It includes pain present in the body, how much physical health interferes in ADL, limitation in bathing or dressing, energy, tiredness etc.

- **Mental status**

Mental health refers to our cognitive, and/or emotional wellbeing. It includes depression, sadness, happiness, how much emotional problem interferes in ADL, satisfaction with relationship etc.

- **Environmental status**

It includes how much clean the hospital environment, satisfaction with treatments, get support from the other staff, opportunity for recreational activities, have enough money to meet the need etc.

Spinal cord injury is devastating and costly event which occur in sudden and unexpected for human and social life. Life threaten complications are developed after these injury (Islam et al. 2011). The neural elements in the spinal canal that are spinal cord and cauda equina damage which can arise resolving or permanent neurological deficit (New & Marshall, 2013).

The incidence of spinal cord injury lies down between 10.4 and 83 per million people affected per year (Kennedy and Chessell, 2013).

The life altering experience that affects not only the patients with SCI but also their spouses, parents, siblings and children and the significant cause of mortality and morbidity (Ali & Tawfiq, 2013). Spinal cord injury results in a high level of individual disability, which is reflected in radical changes in lifestyle (Kawanishi and Greguol, 2013). In developing country like Bangladesh, life expectancy of spinal cord injury patients was much lower than developed country (Razzak et al., 2011).

The common dysfunction of the spinal segments occurs as a result of trauma to the spinal cord. Spinal cord injury occurs as a result of both traumatic and non-traumatic incidences. There are many causes of spinal cord injury in Bangladesh. The most common causes are, a fall from a height, road traffic accidents, falling down while carrying a heavy load on the head, the fall of a heavy object on the back, bull attack, bullet or gunshot injury, physical attack, disease process or diving in shallow water and others (Ekman, 2002).

Recent research (Kong et al., 2013) suggests that primary nerve injury occurs due to acute injury to the spinal cord that causes secondary damage by producing inflammation, ischemia, and toxicity. Deficit function in motor control occurs after SCI that causes disturb in daily activities (Rahman et al., 2012). One of the debilitating condition is SCI that causes paralysis of the limb and injury such as compression, contusion or laceration,

disrupts autonomic function occurs at the site of injury or below, then permanent disability such as paralysis, loss of sensation, neuropathic pain etc. can occur depending on the level of the lesion (Mothe & Tator, 2013). Spinal cord injury or damage can cause a wide range of impairments, activity limitations and participation restrictions which has an adverse impact on the society (New et al., 2013).

Nwankwo & Uche (2013) found that in SCI, The 31–45 years age group is the most frequently affected and male is more affected than female (4.3:1), 53% injury occurred in cervical spine, 22% thoracic spine and 25% lumber spine injury. In United States the annual incidence of traumatic SCI is 40 cases per million or 1200 new cases each year (Rabadi et al., 2013). In Australia, male is more affected than female in non-traumatic SCI and the ratio is 197:169 and the prevalence of paraplegia is more about 269 per million than tetraplegia (98 per million) (New et al., 2013). The worldwide incidence of SCI is 10.4 and 83 per million per year and the mean age is 33 years old, male and female ratio is 3.8:1 and one- third of the patients are tetraplegic all over the world (Wyndaele & Wyndaele, 2006). And 2.5 million people live with SCI around the world (Oyinbo, 2011). In Asia the incidence rates of SCI is ranged from 12.06 to 61.6 per million and the average age is 26.8 to 56.6 years old, men are more vulnerable than women also in traumatic spinal cord injury main causes are motor vehicle collisions (MVCs) and falls (Ning et al., 2012). In CRP, Bangladesh, 25-29 years aged peoples are most commonly affected among them males are more 83% than female and 92% came from rural area and 8% came from urban area also majority of the patients are paraplegia 56%, Cervical lesion present in 44% cases, thoracic lesion 27% and lumber lesion 29% (Islam et al., 2011).

A person can experience by spinal cord injury which is most common among the catastrophic injuries. Young adult people are more suffering lifelong disability than other ages. Fifty four percent of spinal cord injuries occur in ages between 16 and 30 years, 75% of injuries occur in those < 45 years old (Winslow and Rozovsky 2003). Generally spinal cord injury is male's disease. Younger men are more affected in complete injuries than older adults and women. In a study, there are many causes of SCI since 2010

vehicular (36.5%), falls (28.5%), violence (14.3%), sports (9.2%) and other causes (11.4%). The affected rate is 80.7%. The average age of this injury is 46 years since 2010 (Carlson and Gorden, 2002).

Research shows that it is occurred by traumatic or non-traumatic aetiologies (Kennedy & Chessell, 2013). Traumatic spinal cord injury is caused by direct or indirect trauma. In developing countries, there are three main causes that patient is admitted into hospital. Those are fall from high, transportation accident and being struck by an object. Study says that 561 traumatic spinal cord injury whose injuries occurred between 2001 and 2010. The annual incidence in Beijing is 60.6 per million which is more than other countries and regions. TSCI patient may suffer from different conditions such as spasticity, sensory changes, exaggerated reflex activities which is depending on the different level of lesion (Carlson and Gorden, 2002).

The spinal cord begins as a continuation of the medulla oblongata; the caudal part of the brainstem (Moore and Dalley, 2006). Spinal cord injury (SCI) is an insult to the spinal cord resulting in a change, either temporary or permanent, in its normal motor, sensory, or autonomic function (International Standards for Neurological Classifications of Spinal Cord Injury, 2000).

Incomplete injuries are injuries where partial preservation of sensory and/or motor functions is found below the neurological level and includes the lowest sacral segment (Hossain et al., 2008). Another study also revealed that in general, inadequate services, poverty, negative attitudes of society towards the person with SCI, inequitable laws, the inaccessible built environment and transport systems, are the main causes of poor integration of persons with SCI into community life (Momin , 2003; Lysack et al., 2007).

According the American Spinal Injury Association (ASIA) impairment scale, the classification of SCI severity is –A (complete): no motor or sensory function is preserved in the sacral segments S4-S5. B (incomplete): sensory but no motor function is preserved bellow the neurological level and includes the sacral segment S4 -S5. C (incomplete): Motor function is preserved below the neurological level, and more than a half of key muscles below the neurological level have a muscle grade of <3. D (incomplete): Motor function is preserved below the neurological level, and at least a half of key muscles

below the neurological level have a muscle grade of ≥ 3 . E (normal): Motor and sensory functions are normal. C4 injury- tetraplegia, C6 injury- tetraplegia, T6 injury- paraplegia, L1 injury- paraplegia (Thuret et al., 2006).

A 10yrs study aimed to investigate the life expectancy of people with SCI revealed that only 16.4% of the study population survived for 10 years in Bangladesh which was much lower than in developed countries like Finland (97.9%), Australia (86%), Canada (92%), UK (85%), and USA (80.7%). Beside this the study also found that the situation in Bangladesh is worse than other developing countries.

The data indicates that Bangladesh has very poor medical facilities to promote the safe and worthwhile life after having a spinal cord injury. The study also pointed out some possible causes of poor life expectancy of persons with SCI, including inadequate acute management and lack of proper social reintegration (Razzak et al., 2011).

According to the Oxford Advanced Learner's Dictionary (2001) "Caregiver is a person who looks after a sick or old person".

Other research found that the quality of life of primary caregivers of a spinal cord injured victim is significantly affected, but the severity of the injury does not seem to have an additional impact on them and caregivers usually have to care for a person with SCI for a long duration of time. This is because the life expectation for persons with SCI is more than other chronic diseases such as Alzheimer or AIDS. The caregivers of patients with SCI have to suffer for a longer time than other caregivers (Unalan et al., 2001).

A similar study found that female caregivers with a child with mental health problems predicted caregiver anxiety and depression. In addition, having a child who was older at the time of injury predicted caregiver depression at a less spectrum. Poor social relationships, having a caregiver with mental health problems and having a caregiver with less education of the child predicted both the anxiety and depression (Kelly et al., 2011).

Primary caregivers are "The person who is primarily involved in the care of the patient and provides the most support and/or assistance" (Blanes et al., 2007).

Nowadays in developed countries as well as worldwide Spinal Cord Injury (SCI) remains a major public health issue. A significant increase of incidence of the SCI has been

observed due to the increase of road traffic accidents (Notara et al., 2012). According to literature 2.5 million people are affected worldwide by SCI (Thuret et al., 2006).

Spinal cord injuries are the most common among catastrophic injuries. Young adults are more likely to suffer lifelong disability from SCI than other ages. 54% of SCI occur in the ages between 16 and 30 years. 75% of injuries occur in those < 45 years old (Winslow and Rozovsky, 2003). As a result of recent advances in medical technology, persons surviving a spinal cord injury (SCI) are living longer, and often require varied degrees of assistance over their life span (Ebrahimzadeh et al., 2014).

With increased survival rate and life-span, persons with SCI may have to live with their disability for a much longer period of time till the natural end of their lives (Lee, 2000).

According to their level of injury, people with SCI often have significant functional limitations and lack of independence (Notara et al., 2012)

Improvements in post-accident survival rates and life expectancy mean that these patients are supported by a caregiver for longer. Thus the health of caregivers is of great importance (Bardak et al., 2012).

Caregivers enter into this new role without formal preparation or training (Elliott & Rivera, 2003). Caregivers are frequently required to undertake heavy lifting, often with a bent or twisted posture, and biomechanical investigations have confirmed that such tasks generate high spinal stress. These risk factors have been experimentally associated with the development of injuries in spinal tissues (Warming et al., 2009).

Quality of life is a multidimensional concept and a person's own sense that stems from satisfaction or dissatisfaction with the area they live which is important to him, different factor such as physical, psychological and social function, ability to work, and relation with the other people in the society etc. can affects the QoL of a patients (Kreuter et al., 2005).

According to world health organization 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"

(Kawanishi & Greguol, 2013). Quality of life (QoL) can be defined as an individual's perception about his or her position in the society and life in the context of the culture and value systems in which they live and also his or her expectations to achieve goal (Munce et al., 2013). Quality of life measurement can give information about the health states beyond diagnosis, impact of disease and its management on different domains of life (Geyh et al., 2010).

In this regard, spinal cord injuries remain neglected, as there is not enough data and services for persons with SCI. As a result, SCI has become a major public health problem in Bangladesh. And now, every aspect of public health needs careful concern. The key health indicator is life expectancy (Osman, 2010).

A recent study found that for a very long time there has been a low life expectancy among persons with spinal cord injury. The study found that the life expectancy of persons with SCI is 10 to 12 times lower than the life expectancy of the general population. A major cause of death in Bangladesh according to the same study is the inadequate acute management of SCI patients. Poor QoL for caregivers/family members is the result of negative social acceptance & lack of proper re-integration in the community following the patient's discharge from hospital (Razzak et al., 2011).

In recent literature it has been found that spouses of persons with SCI may suffer higher levels of stress than the other family members in taking up the care-giving role where three main factors are identified as strongly associated with adjustment outcomes and these are coping strategies, locus of control, and social support though, these are all Western-based studies where people from different cultures may have different sources of stress and corresponding coping patterns and traditionally, Chinese are considered to be group-oriented, or more specifically, family-oriented and socially dependent people and where each party of the relationship is expected to perform their role according to the norms and failure to achieve these role dualities will lead to discrimination by the others (Chan, 2000).

3.1 Study design

A cross-sectional descriptive study was performed with structured questionnaires and interviews were conducted with primary caregivers of persons with Tetraplegic spinal cord injury (SCI).

3.2 Settings

CRP is the biggest hospital and renowned rehabilitation centre for Spinal Cord Injury (SCI) among South Asia. Almost 100 Spinal Cord Injured patients are admitted at CRP in same time. For this reason the researcher had to collect data within short time to maintain the contrasts of course module time. Spinal Cord Unit of CRP was chosen as the venue to collecting the data. So CRP is the best setting for study & it reflected the entire population.

3.3 Study population

All caregivers of Tetraplegic patients' who are admitted at CRP for receiving treatment service at SCI unit.

3.4 Sample size

In this project study, the researcher selected 48 caregivers of Tetraplegic spinal cord injury patient from the spinal cord injury unit of CRP through convenience sampling technique where the population was 48 and through sample size calculation it became 43. The investigator aimed to focus his study by 384 samples following the calculation regarding SCI patients. But as the study was done as a part of fourth professional academic research project and there were some limitations, the researcher had to limit with 48 caregivers as sample.

3.5 Sampling technique

Sampling refers to the process of selecting the subjects or individual. The researcher was selected convenience sampling technique due to small size of population.

3.6 Inclusion criteria

- Tetraplegic SCI patient's carers.
- Primary caregivers
- Both male and female

3.7 Exclusion Criteria

- Paraplegic patient's caregiver
- Secondary caregivers
- Carers with cognitive problems
- Irregular caregivers (less than 4 weeks)

3.8 Data collection tools

Data collection tools are Questionnaire, Pen, Paper, File, Pencil, and Calculator.

3.9.1 Method of data collection

The questions will be asked in face to face interviews. It is useful because this technique ensures that the researcher will obtain all the information required, while at the same time it gives the participants freedom to respond and illustrated concepts.

3.9.2 Questionnaire

- For data collection, the researcher will use a close-ended structured questionnaire.
- The HRQoL was assessed by the Short Form-36 (SF-36) health survey questionnaire.
- For data collection, a Bengali questionnaire was used so that the carers will understand the questionnaire in the easiest way.

3.9.3 Duration of data collection

Data was collected carefully and confidentiality and maintained all ethical considerations. The researcher gave each participant a particular time to collect the data. Each questionnaire took approximately 20-25 minutes to complete.

3.9.4 Procedure of data collection

Data was collected by the researcher himself. The questionnaire was completed or filled up in front of the researcher.

3.9.5 Data analysis procedure

Data will be analyzed in Microsoft office Excel 2010 using a SPSS 20 version software program.

3.10 Ethical consideration

- Researcher will follow the Bangladesh medical research council (BMRC) guide line & WHO research guide line.
- 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 and head of the Department of Physiotherapy, CRP before data collection.
- Permission was taken from the In-Charge of SCI Unit, CRP for data collection from the patients.
- Researcher will maintain the confidentiality of the collected data from the individuals.
- All the participants and the authority were informed about the purpose of the study.
- Researcher ensures the confidentiality of participants and share the information only with research supervisor.

3.11 Informed consent

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.

3.11.2 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 is checked and rechecked by the research supervisor.

For this study 48 caregivers were taken as a sample from Center for Rehabilitation of Paralyzed (CRP) Spinal Cord Injury Unit area of Savar were taken to explore the health related quality of life of the caregivers of Tetraplegic type of SCI patient.

In this study the results which were found have been showed in different bar diagrams, pie charts and tables.

Level of injury

The patients (n=48) had different level of injury according to ASIA scale. 66% (n=32) are complete **A**, 13% (n=6) are incomplete **B**, 17% (n=8) are complete **C**, 4% (n=2) are incomplete **D**.

	Frequency	%
Complete A	32	66.7
In complete B	6	12.5
In complete C	8	16.7
In complete D	2	4.2
Total	48	100.0

Table no. 4.1: Level of injury

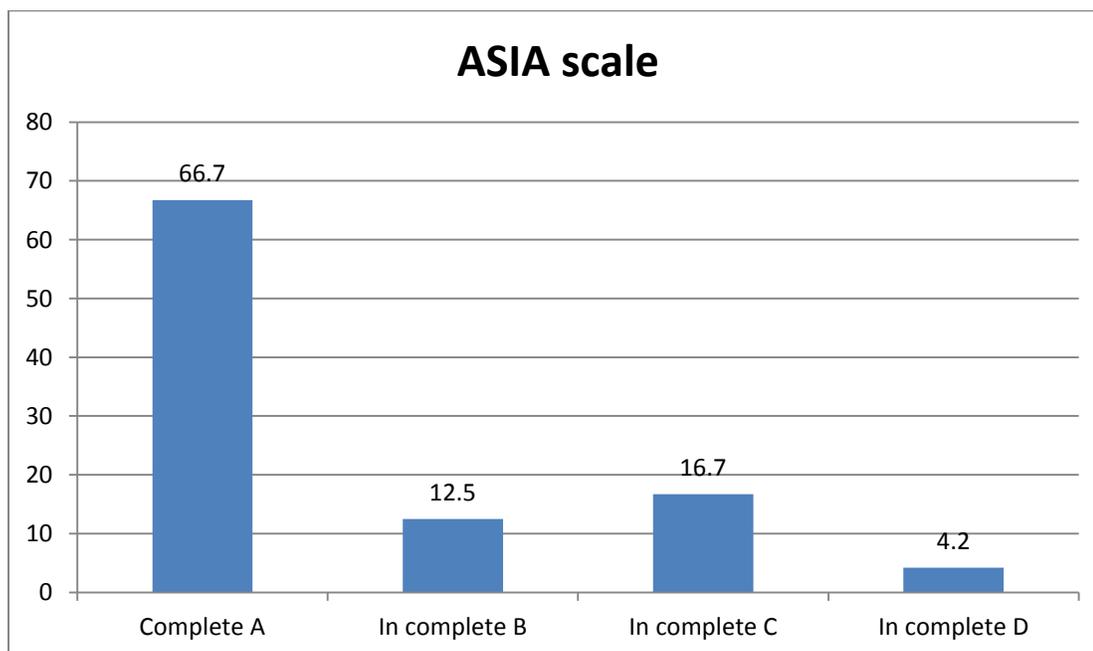


Figure 4.1: Level of injury according to ASIA scale

Age Groups

Among the respondents, the lowest age was 15 years and highest age was 65 years. According to table, the investigator could say that the frequency of the caregivers were highest in between 30-44 years. Among the participants the numbers of the participants in 15 - 29 years were 15 (31%) and in between 45-59 years, there were 8 (17%) participants and above 60 were 5 (10%) participants.

Age range	Frequency	Percentage
15-29 years	15	31%
30-44 years	20	42%
45-59 years	8	17%
60<years	5	10%
Total	48	100%

Table no. 4.2: Age of the participants

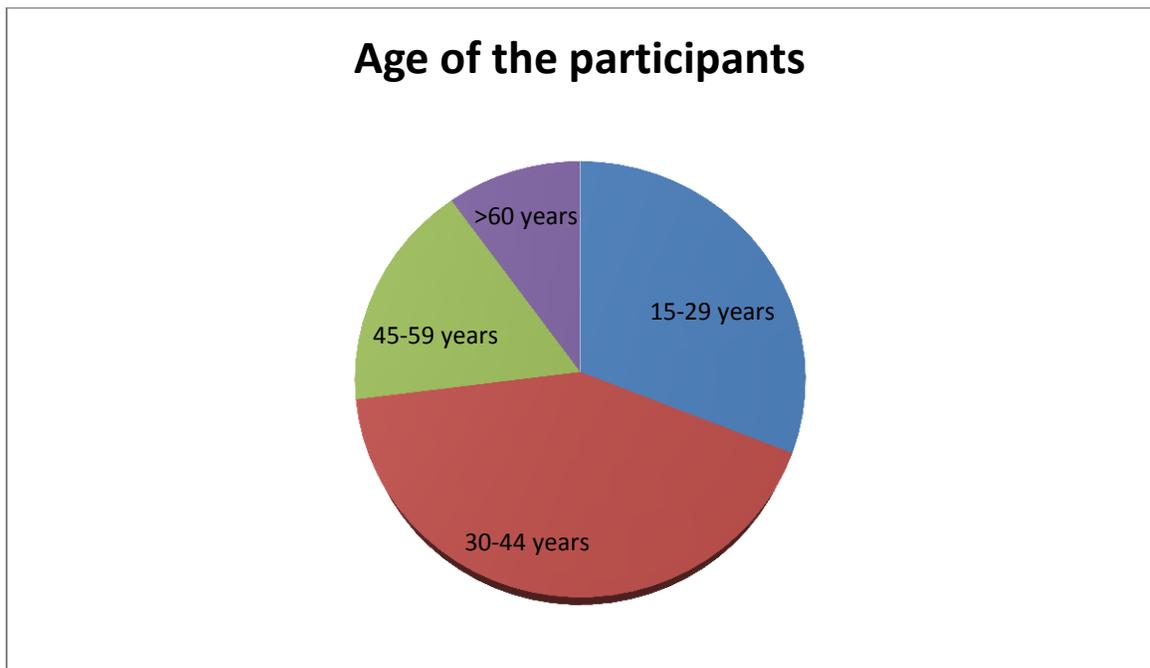


Figure 4.2: Age of the participants

Male & Female ratio

Among the 48 participants 19% (9) were male and 81% (39) were female.

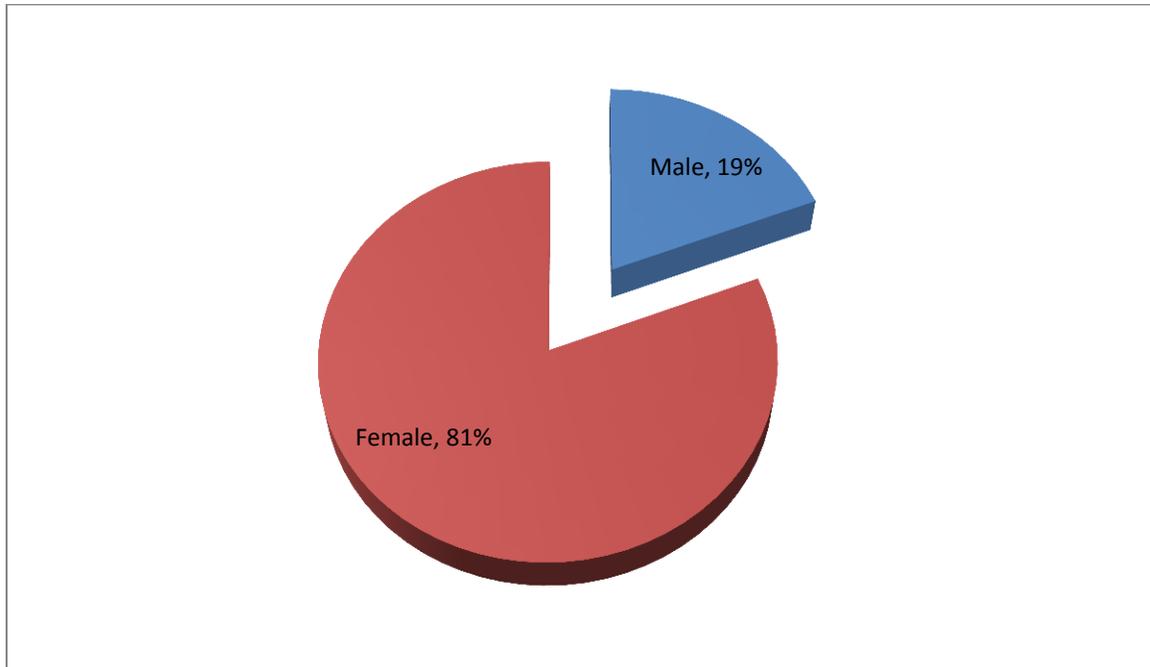


Figure 4.3: Male female ratio of the participants

Educational level of the Participants

Among the participants, about 38% (n= 18) caregivers were never attended at school whereas 46% (n= 22) caregivers completed primary education, 10 %(n=5) of the caregivers completed secondary education and very few in numbers about 6.2% (n=3) were graduated.

	Frequency	%
Illiterate	18	37.5
Primary level	22	45.8
Secondary level	5	10.4
Graduation & more	3	6.2
Total	48	100.0

Table no. 4.3: Educational level of the participants

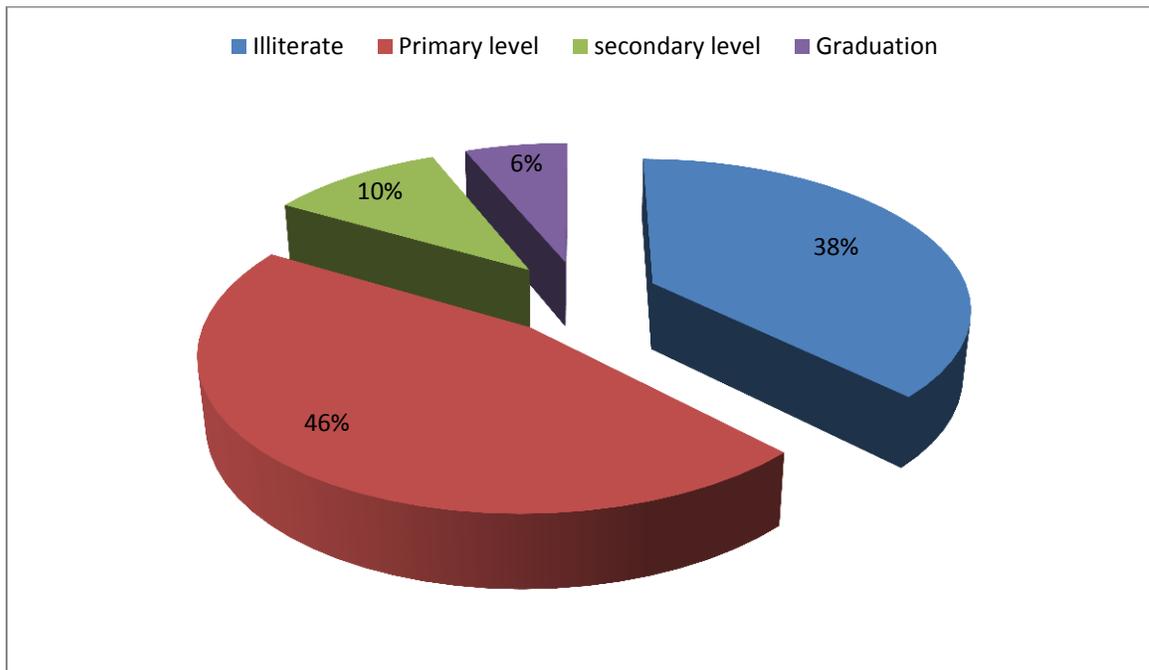


Figure 4.4: Educational level of the participants

Duration of caregiving to the patient

Different caregivers have different time duration of caregiving and the caregivers were highest in numbers between 1-4 months where the participants were 38 (79.2%) and above 6 months, the participants were lowest in number (2.1%). But, within 5-6 months duration of caring, the number of participants were 9(18.8%).

	Frequency	%
1-2 months	19	39.6
3-4 months	19	39.6
5-6 months	9	18.8
>6 months	1	2.1
Total	48	100.0

Table no. 4.4: Duration of caregiving among the affected group

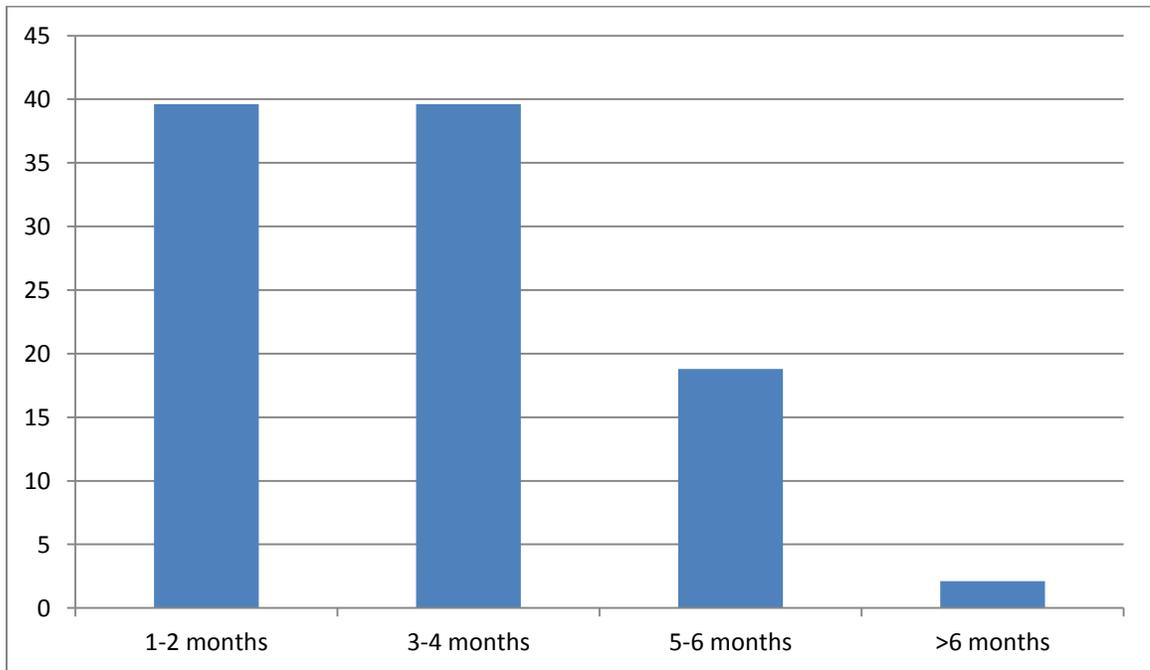


Figure 4.5: Duration of caregiving among the affected group

Physical functioning

In this study, total participants were 48 and among them 12.5% (n=6) scored <50 at an average out of 100 and rest of the 42 people scored more than 50 at an average out of 100 which denotes good quality of life (QoL) in the SF dimensions.

As a result, role limitations of the participants due to physical health were poor for 33.3% (n=16) who scored <50 at an average out of 100, fair QoL for 54.2% (n=26) who scored more than 50 at an average out of 100 and 12.5% (n=6) scored more than 75 at an average out of 100 that denotes healthy quality of life (QoL)(fig 4.6 & 4.7).

Table no. 4.5: Physical functioning of the caregiver

	Frequency	%
score <50	6	12.5
score <100	42	87.5
Total	48	100.0

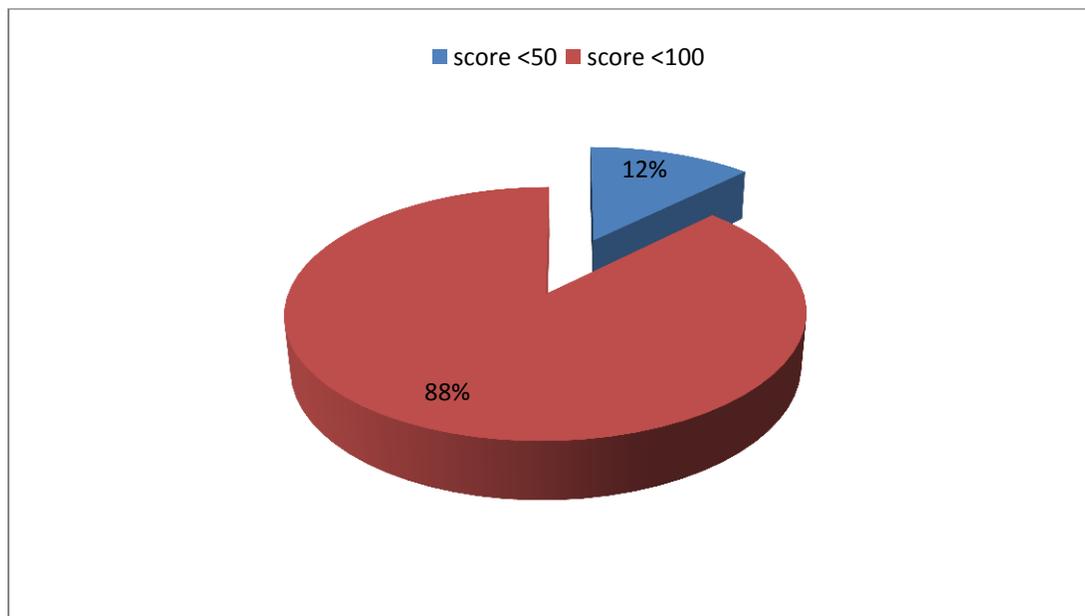


Figure 4.6: Physical functioning of the caregiver

Table no. 4.6: Role limitations due to physical health of the caregiver

	Frequency	%
score <50	16	33.3
score <75	26	54.2
score <100	6	12.5
Total	48	100.0

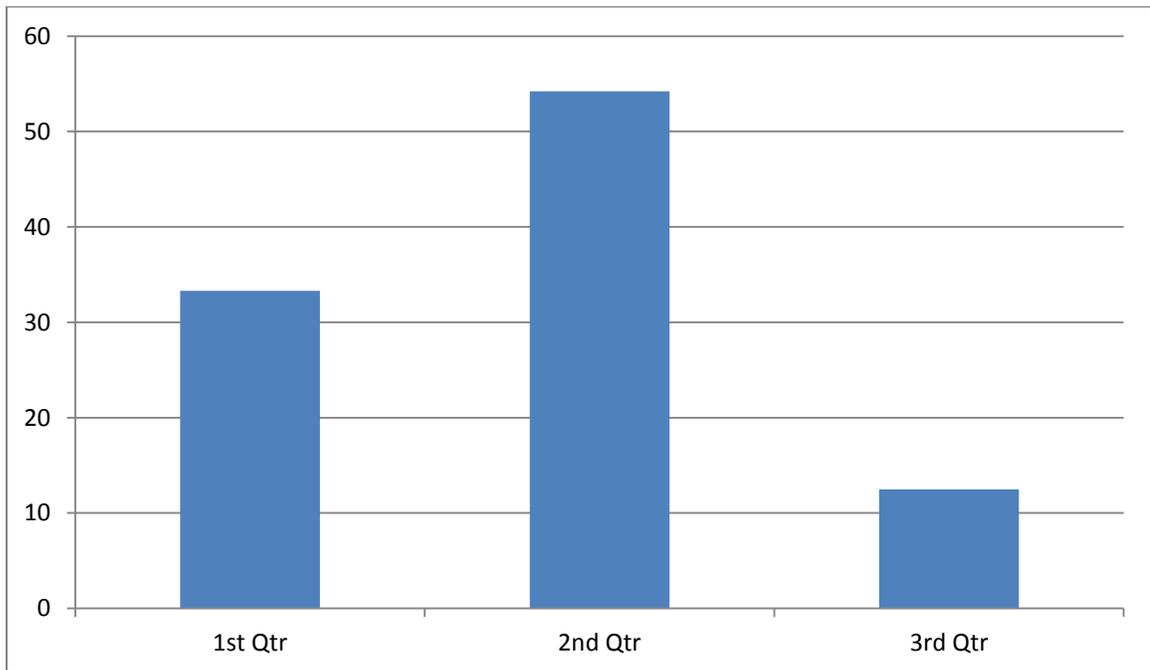


Figure 4.7: Role limitations due to physical health of the caregiver

Role limitations due to emotional problem

Among the participants (n=48), 4.2% (n=2) had poor QoL where 56.2% (n=27) had fair and 39.6% (n=19) had good quality of life (QoL) in this short form-36 dimension.

Table no. 4.7: Role limitations due to emotional problems

	Frequency	%
score <50	2	4.2
score <75	27	56.2
score <100	19	39.6
Total	48	100.0

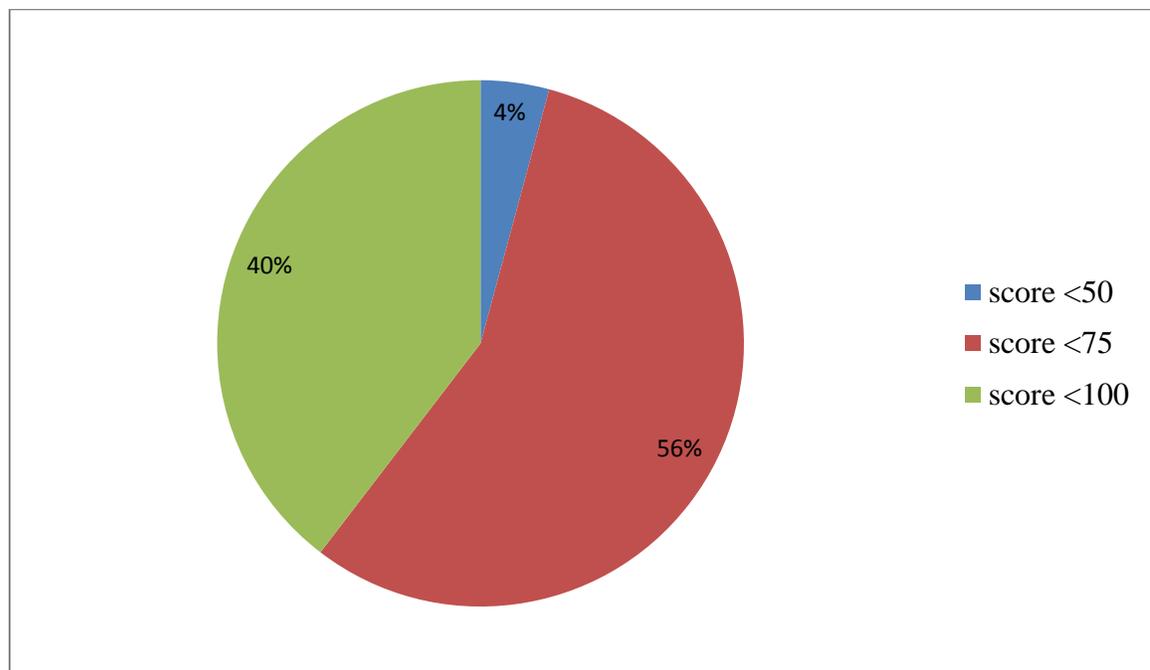


Figure 4.8: Role limitations due to emotional problem

Vitality

Among the participants (n=48), about 83.3% (n=40) scored less than 50 at an average out of 100 which were most frequent in numbers and denotes a fair level of quality of life (QoL).

Table no. 4.8: Energy/ Fatigue of the caregiver

	Frequency	%
score <25	2	4.2
score <50	40	83.3
score <75	4	8.3
score <100	2	4.2
Total	48	100.0

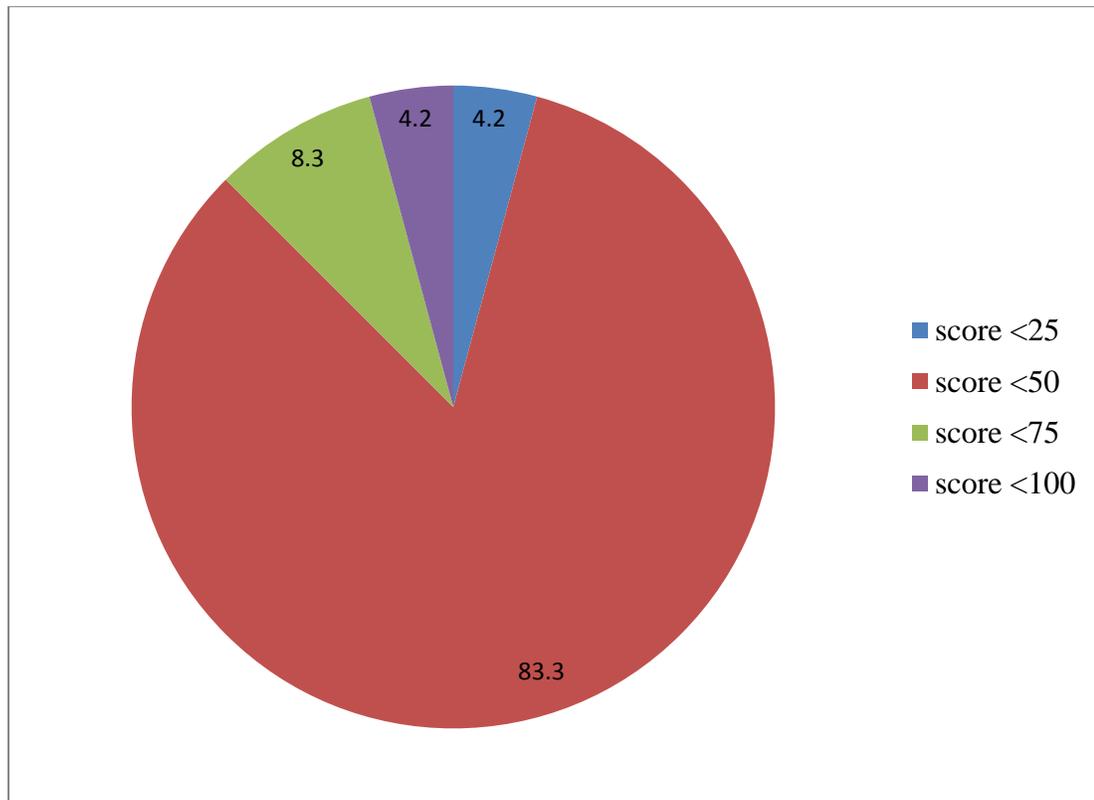


Figure 4.9: Energy/ Fatigue of the caregiver

Bodily pain

Among the participants (n=48), 8.3% (n=4) scored <25 at an average out of 100, 39.6% (n=19) scored less than 50 at an average out of 100 , 33.3% (n=16) scored more than 50 at an average out of 100 and 18.8%(n=9) scored more than 75 at an average out of 100 through the short form-36 scoring system.

	Frequency	%
score <25	4	8.3
score <50	19	39.6
score <75	16	33.3
score <100	9	18.8
Total	48	100.0

Table no. 4.9: Pain of the caregiver

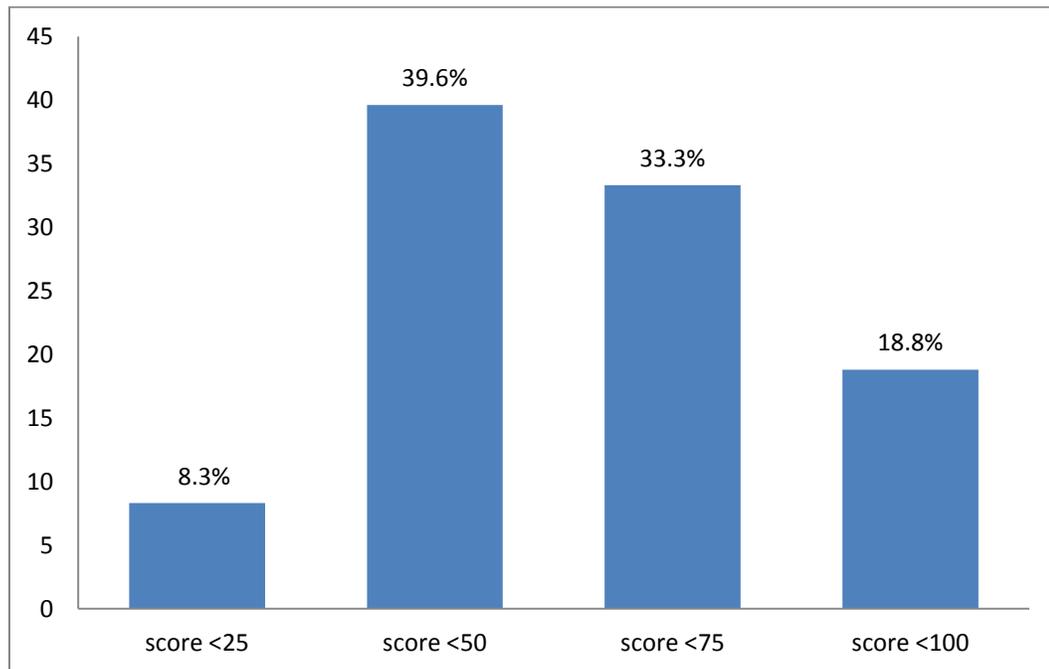


Figure 4.10: Pain of the caregiver

General health

Among the participants (n=48), 89.6% (n=43) scored less than 50 at an average out of 100 which denotes poor HRQoL, 8.3% (n=4) scored more than 50 at an average out of 100 which denotes fair HRQoL and 2.1%(n=1) scored more than 75 at an average out of 100 which claims good HRQoL through the short form-36 scoring system.

	Frequency	%
score <50	43	89.6
score <75	4	8.3
score <100	1	2.1
Total	48	100.0

Table no. 4.10: General health of the caregiver

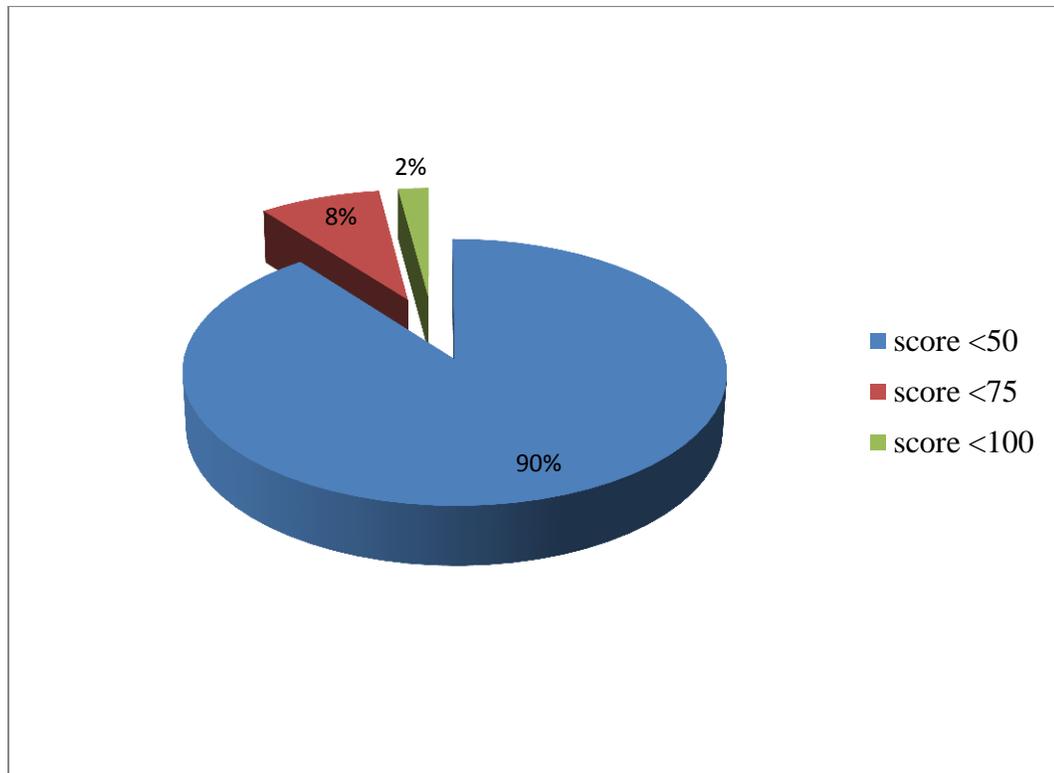


Figure 4.11: General health of the caregiver

Association between caregiving duration and General health of the caregiver

In relation with the duration of caregiving, about 18 participants were estimated to poor health related quality of life, 2 participants had fair quality of life and 1 participant had good quality of life within first two months.

Table no. 4.11: Relation between caregiving duration (months) & General health

		General health of the caregiver			Total
		score <50	score <75	score <100	
Caregiving duration (months)	1-2 months	15	2	1	18
	3-4 months	19	1	0	20
	5-6 months	8	1	0	9
	>6 months	1	0	0	1
Total		43	4	1	48

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.423 ^a	6	.877

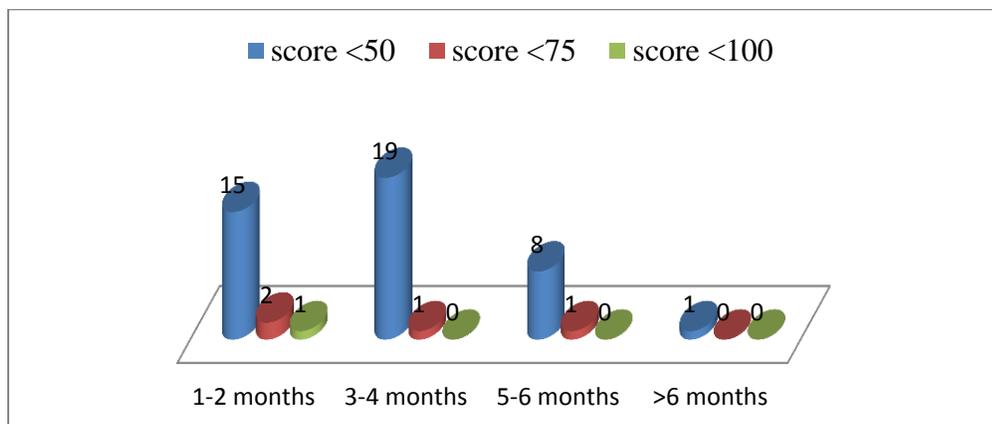


Figure 4.12: Relation between caregiving duration (months) & General health

Association between caregiving duration and Physical role limitations

In relation with the duration of caregiving, those who were persisting less duration with the patient had good quality of life.

Table no. 4.12: Relation between Caregiving duration (months) & Physical role limitations

		Role limitations due to physical health of the caregiver			Total
		score <50	score <75	score <100	
Caregiving duration to the patient (months)	1-2 months	7	7	4	18
	3-4 months	7	12	1	20
	5-6 months	2	6	1	9
	>6 months	0	1	0	1
Total		16	26	6	48

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.799 ^a	6	.570

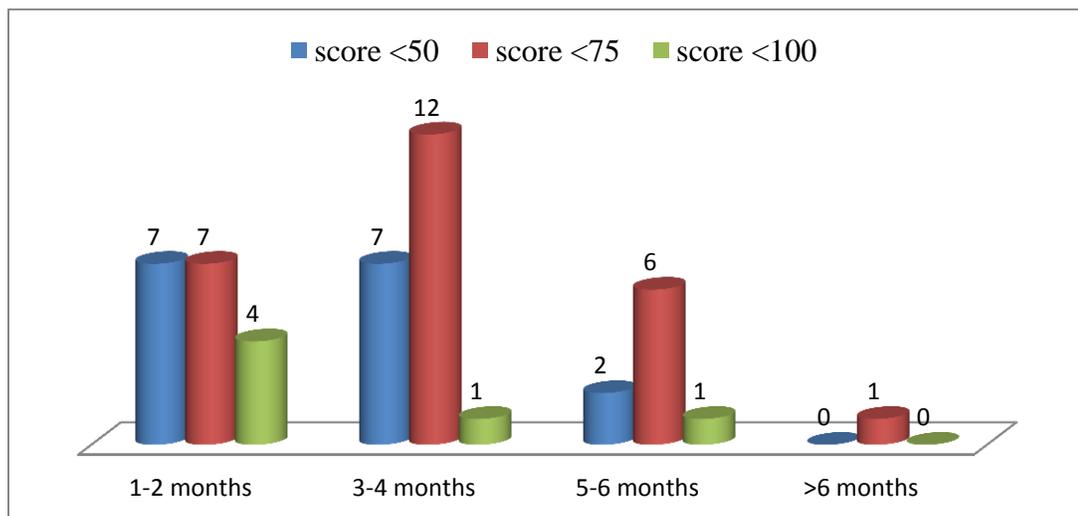


Figure 4.13: Relation between Caregiving duration (months) & Physical role limitations

Neurological level according to ASIA scale * Caregiving time (hours) Cross tabulation					
		Caregiving time (hours)			Total
		7-12 hrs	13-18 hrs	>18 hrs	
Neurological level according to ASIA scale	Complete A	9	21	2	32
	In complete B	1	5	0	6
	In complete C	5	3	0	8
	In complete D	1	1	0	2
Total		16	30	2	48

Table no. 4.13

It has been found that SCI patient with neurological level with ASIA-A 66.6%(n=32) who requires more caregiving hours than the others.

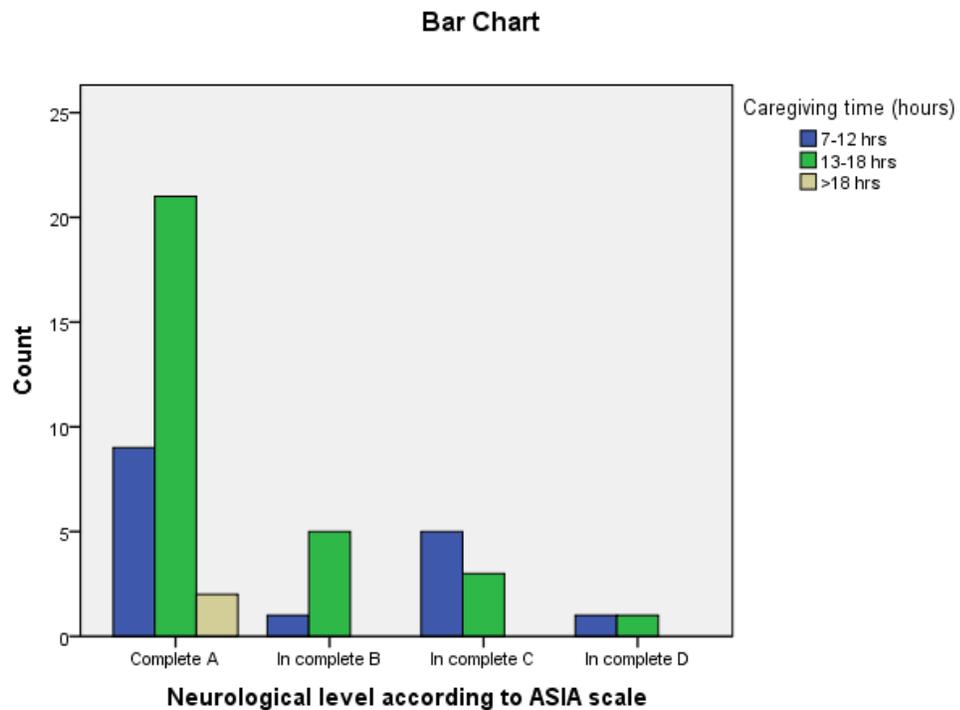


Figure: 4.14

Physical and mental component summary score of modified SF- 36 QOL dimension

In this study, for the eight subscales, total scores may range from 0 to 100. Each scales ranging from 0 (presence of all problems) to 100 (no problems at all) within the dimension. The Physical component summary scores where mean Physical functioning (57.3), Role physical (53.8), Bodily pain (52.6), general health (36.1), and mental component summary score is vitality (37.2), social functioning (29.7), role emotional (74.1) and mental health (33.5). The score was lowest for the social functioning subscale and highest for the role emotional subscale. The three most strongly affected subscales were social functioning (29.7), mental health (33.5) and general health (36.1), the score was highest for the role emotional (74.1) subscale. The impact score for the eight subscales are represented.

Test Statistics								
	Physical functioning of the carer	Role limitations due to physical health of the carer	Role limitations due to emotional problems	Energy/fatigue of the carer	Emotional well-being of the carer	Social functioning of the carer	Pain of the carer	General health of the carer
Mann-Whitney U	148.50	71.50	68.00	120.50	150.00	152.00	72.50	125.00
Grouping Variable: Sex of the caregiver								

Table no: 4.14

Test Statistics								
	Physical functioning of the carer	Role limitations due to physical health of the carer	Role limitations due to emotional problems	Energy / fatigue of the carer	Emotional well-being of the carer	Social functioning of the carer	Pain of the caregiver	General health of the care r
Mann-Whitney U	122.50	134.50	115.50	108.50	140.00	143.50	116.00	126.00
Grouping Variable: Residence of the caregiver								

Table no: 4.15

Test Statistics								
	Physical functioning of the caregiver	Role limitations due to physical health of the caregiver	Role limitations due to emotional problems	Energy/fatigue of the caregiver	Emotional well-being of the caregiver	Social functioning of the caregiver	Pain of the caregiver	General health of the caregiver
Mann-Whitney U	136.00	56.00	67.00	128.00	135.00	160.00	46.50	130.50
Grouping Variable: Marital status of the caregiver								

Table no: 4.16

A cross sectional study was used to assess the health related quality of life among the caregivers. The result of this study showed that lower scores on emotional well being and social functioning than the other dimensions of SF-36. Among the participants, 81% were female; 19% were male. Most of the time, the caregivers were female usually the wife or daughter, aged between 22 and 60 years, who were providing care for periods ranging from months to years and generally lives with the patient. In this study, it was found that the caregiver spends an average of 14.3 hour per day caring for the person with SCI, which reflects an almost complete dedication, and is also responsible for housekeeping tasks and the care of other dependent family members. Even most of the primary caregivers (72.9%) were housewives, with no job-related activity outside their residences. In this way, a person may work sporadically to maintain a minimum income and at the same time, have a flexible schedule that allows her to care for the disabled person. Caregivers tend to develop more psychopathology than physical illness, make more visits to physicians and report worse health than the general population (Belasco and Sesso, 2002). About 90% of the subjects in this study were sole caregivers, taking upon themselves the full responsibility not only of caring for the individuals with tetraplegia but also of housekeeping tasks without any help from a secondary caregiver. Now-a-days the quality of life has become a major topic of research in the area of health and the findings contribute to the definition and approval of treatments and evaluation of cost benefits of the care given.

The HRQoL of caregivers of patient with SCI was measured by the SF-36 and results showed a greater impact on the physical component than the mental component. The most influenced individual dimensions were social functioning (29.7) and mental health (33.5) which showed the lowest value in a scale ranging from 0 to 100. Considering the individual need of the Tetraplegic patients, special adaptations are required.

As this was a cross-sectional study, we consider this research as a preliminary study that can yield valuable information that may clarify many important questions related to caregivers of persons with tetraplegia. The obtained results may lead to the elaboration of

strategies to reduce the impact caused by the diseased in the life and health of caregivers of persons with tetraplegia and consequently the caregivers.

Caregiving activities that seem to correlate with low mental quality of life were adapting own activities to be there just in case, together with regular contact to prevent problems, i.e. supervising and anticipatory care. Perhaps these early dimensions of caregiving mean striking a difficult balance in several ways. Apart from protecting the person cared for, it may be a strain that other members of the family may not recognize these activities as care. These early dimensions of caregiving may be more straining also because they mark a transition period for the caregiver as well as for the person cared for. It may well be that it is in the transitory phase that the environmental demands exceed the personal resources and that the balance will improve along with the adaptive process. Altogether these aspects may explain why these dimensions of caregiving turned out negatively in terms of quality of life for the caregivers in this study. As the two caregiving activities, which affected quality of life the most, were the ones early in the process, there are reasons to recognize these early phases of caregiving and the people involved because of the transitory character. Nurses can support adaptation by exploring the problems, listening and helping out with practical problems as well as by providing knowledge about caregiving (Ekwall et al., 2004).

Caregiving burden and patients' and caregivers' anxiety levels decreased with time, despite no significant changes in patients' dependence or support levels, suggesting a response shift toward normalization with time. At 1 year, caregiver depression and lack of family support became additional determinants of the caregiving burden. Institutionalization was determined by caregiver age, patient disability and level of social services support available. Caregivers had a better QOL compared with patients, but unlike patients, their QOL did not improve over 1 year. Caregiver HRQoL had a significant inverse co-relationship with caregiver burden and correlated with the same patient and caregiver variables as caregiver burden. In addition, caregiver HRQoL was adversely influenced by patient disability and caregivers' age, male gender, and physical health. Social services support had little effect on caregiver burden or HRQoL but reduced the need for institutional care (McCullagh et al., 2005).

Caregiving is a complex and multidimensional activity, the nature and determinants of which evolve over time. The study showed that despite a significant interaction of caregiver HRQoL. Another possible explanation is the transition in caregiver experience as caregivers adapt to their new role and factors such as advancing age, level of disability, depression, and family support become important. Studies have shown that the awareness of a relative/loved one in ill health, changing roles, obligations, decreasing support, and changed life perspectives are associated with feelings of inadequacy and depression, which have adverse effects on HRQoL (Rae-Seebach, 2009).

The study was conducted on 48 participants of caregivers of tetraplegic SCI patient. Out of the participant the mean age of the participants was 41.52 (± 12.268) years. The range is 48 with minimum age 15 years and maximum 70 years. Among the participants the higher numbers of the participants were 31-40 years and the numbers were 33%. The numbers of 41-50 years were 26% and 20-30 year was 21% and 51-60 year was 14% and 61-70 were 5%. According to Unalan et al. (2001) SCI survivors distress the family members and especially the primary caregivers who are always with the persons.

The participant's age group and majority of the participant were female and the numbers were 69% where male were 31%. It was also found that, the level of assistance providing in daily living activities for assisting the persons with SCI were strongly correlated with depression in caregivers and the wives report a lots of complain (Unalan et al., 2001).

In this study among the 48 participants, about 38% (n= 18) caregivers were never attended at school whereas 46% (n= 22) caregivers completed primary education, 10 % (n=5) of the caregivers completed secondary education and very few in numbers about 6.2% (n=3) were graduated. One study showed that among the participants about 75% had primary education and 25% were graduated (Altug et al., 2013).

In this study, for the eight subscales, total scores may range from 0 to 100. Each scales ranging from 0 (presence of all problems) to 100 (no problems at all) within the dimension (Roux et al., 2004).

5.1 Limitations

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

The samples were collected only from the CRP at Savar and the sample size was too small, so the result of the study could not be generalized to the whole population of caregivers in Bangladesh.

This study has provided for the first time data on the health related quality of life (HRQoL) among the caregivers in Bangladesh. No research has been done before on this topic. So there was little evidence to support the result of this project in the context to Bangladesh.

A convenience sampling was used that was not reflecting the wider population under study.

The research project was done by an undergraduate student and it was first research project for him. 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 honourable teacher.

CHAPTER -VI CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

Caregivers work in close contact with patients often involves both heavy loads and unfavourable body positions. It also often includes elements such as "save the patient" situations, for example, those in which the patient it's need transferring from bed to wheelchair.

The primary caregivers' of spinal cord-injured persons reported low scores on all of the SF-36 dimensions, social functioning and mental health being the SF- 36 dimensions that received the lowest scores and indicates poor quality of life . These findings indicate that rehabilitation services should not be oriented only toward the needs of the person with disability but also to the needs of the caregivers.

6.2 Recommendations

The aim of the study was to assess the health related quality of life of the caregivers. 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 relatively short, so in future wider time would be taken for conducting the study.
- Investigator use 48 participants as the sample of this study, in future the sample size would be more.
- The ratio of complete and incomplete patients caregivers 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 caregivers only from the only one selected hospital of Savar as a sample for the study. So for further study investigator strongly recommended to include the caregivers from all over the Bangladesh to ensure the generalize ability of this study.

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Appendix

সম্মতিপত্র

আসসালামু আলাইকুম / নমস্কার, আমি মো: নাজমুল হাসান, ৪র্থ বর্ষ ঢাকা বিশ্ববিদ্যালয়ের মেডিসিন অনুষদের অধীনে বাংলাদেশ হেলথ প্রফেশন ইনস্টিটিউট (বিএইচপিআই) এর বি.এস.সি. ফিজিওথেরাপি বিভাগ এর একজন শিক্ষার্থী। অধ্যয়নের অংশ হিসেবে আমাকে একটি গবেষণা সম্পাদন করতে হবে এবং এটা আমার প্রাতিষ্ঠানিক কাজের একটা অংশ। নিম্নোক্ত তথ্যাদি পাঠ করার পর অংশগ্রহণকারীদের গবেষণায় অংশগ্রহণের জন্য অনুরোধ করা হলো:

আমার গবেষণার শিরোনাম " **মেরুরক্ষুতে আঘাতপ্রাপ্ত চার হাত পা প্যাঁরালাইসিস রোগীদের পরিচর্যা কারীদের স্বাস্থ্য সংক্রান্ত জীবন মান** "। এই গবেষণার মাধ্যমে আমি চার হাত পা প্যাঁরালাইসিস রোগীদের প্রাথমিক পরিচর্যাকারীদের স্বাস্থ্য সংক্রান্ত জীবন মান খুঁজে বের করার চেষ্টা করবো। যদি আমার গবেষণাটি সফলভাবে সম্পূর্ণ করতে পারি তবে পরিচর্যাকারীদের স্বাস্থ্য সংক্রান্ত জীবন মান উল্লেখিত হবে এবং এটি হবে একটি পরীক্ষামূলক প্রমাণ।

আমার গবেষণা প্রকল্প বাস্তবায়ন করার জন্য, রোগীর পরিচর্যাকারীদের কাছ থেকে তথ্য সংগ্রহ করা প্রয়োজন। আমার গবেষণায় অংশগ্রহণে আপনার কোন ক্ষতি বা বিপদ হবে না। আপনি যে কোনো সময় নিজেকে এ গবেষণা থেকে প্রত্যাহার করতে পারেন। এই গবেষণার প্রাপ্ত তথ্য সম্পূর্ণভাবে গোপনীয় থাকবে এবং অংশগ্রহণকারীর ব্যক্তিগত তথ্য আপনার অনুমতি ব্যতিরেকে অন্য কোথাও প্রকাশ করা হবে না।

এই গবেষণা সম্পর্কে যদি আপনার কোনো জিজ্ঞাসা থাকে তবে আপনি অনুগ্রহপূর্বক যোগাযোগ করতে পারেন আমার অথবা এহসানুর রহমান, প্রভাষক, ফিজিওথেরাপি বিভাগ, বিএইচপিআই, সিআরপি, সাতার, ঢাকা- ১৩৪৩ এ।

শুরু করার আগে আপনার কোন প্রশ্ন আছে কি?

আমি কি শুরু করতে পারি ?

হ্যা

না

অংশগ্রহণকারী) স্বাক্ষর ও তারিখ (.....

গবেষক) স্বাক্ষর ও তারিখ (.....

সাক্ষী) স্বাক্ষর ও তারিখ(.....

Verbal Consent Form

Assalamuaalaikum\ Namashker,

I am Md Nazmul Hassan, the 4th year B.Sc. (Hon's) in Physiotherapy student of Bangladesh Health Professions Institute (BHPI) under Medicine faculty of University of Dhaka. To obtain my Bachelor degree, I shall have to conduct a research and it is a part of my study. The participants are requested to participate in the study after reading the following.

My research title is “**Health related quality of life of primary caregivers of persons with tetraplegia attending at a specialized rehabilitation centre**”. Through this study I will find the HRQoL of primary caregivers of persons with tetraplegia .If I can complete the study successfully, the HRQoL of caregivers may be explored. To implement my research project, I need to collect data from the caregivers of persons with tetraplegia. Therefore, you could be one of my valuable subjects for the study.

I am committed that the study will not pose any harm or risk to you. You have the absolute right to withdraw or discontinue at any time without any hesitation or risk. I will keep all the information confidential which I obtained from you and personal identification of the participant would not be published anywhere.

If you have any query about the study, you may contact with me and/or Ehsanur Rahman, Lecturer of Physiotherapy department , Bangladesh Health Professions Institute (BHPI), Savar, Dhaka. Do you have any questions before I start?

So, may I have your consent to proceed with the interview? Yes....., No.....

Signature of the participant & Date.....

Signature of the researcher & Date.....

Signature of the witness & Date.....

QUESTIONNAIRE

Patient's information:

- :Name
- :Age
- :Sex
- :Ward no
- :Bed no
- **Date of interview:** (dd/mm/yy)
- **Type of injury:**
 1. Traumatic
 2. Non traumatic
- **Skeletal level of injury:**
 1. Cervical |__|__|
 2. Thoracic |__|_|
- **Initial Neurological condition according to ASIA Scale :**
 1. Complete A
 2. Incomplete B
 3. Incomplete C
 4. Incomplete D

s Caregiver's socio-demographic Information:

- **Name :**
- **Age:**
- **Sex:**
 1. Male
 2. Female
- **Address:**
 - Village/house no:
 - Post office:
 - Thana:
 - District:

- **Marital status:**
 1. Married
 2. Single
 3. Other

- **Religion:**
 1. Muslim
 2. Hindu
 3. Christian
 4. Buddho
 5. Others (specify)

- **Occupation**
 1. House wife
 2. Service holder
 3. Business
 4. Others (specify)

- **Educational level:**
 1. Never attended school
 2. Completed primary education
 3. Completed secondary education
 4. Higher secondary
 5. Bachelor or above
 6. Other (Specify)

- **Relation with patient:**
 1. /Husbandwife
 2. Father/mother
 3. Brother/sister
 4. Other

- **Number of persons in the household**
 1. 3-1
 2. 6-4
 3. 9-7
 4. Others

- **(Daily caregiving time (hrs**
 1. 6-
 2. 12-7
 3. 18-13
 4. Others

- **(Length of time as a caregiver (years**

অনুগ্রহপূৰ্বক নিম্নলিখিত স্বাস্থ্য জৰিপ সৰ্ম্পকিত প্ৰশ্নাবলীৰ যথাযথ উত্তৰ প্ৰদান কৰিবেন

ৰোগীৰ অবস্থার বিবরণ

নাম:

• বয়স:

• লিঙ্গ:

১। পুৰুষ

২। মহিলা

• ওয়ার্ড নং:

• বিছানা নং:

• সাক্ষাৎকাৰেৰ তাৰিখ:) দিন/মাস/বছর(

• আঘাতেৰ প্ৰকাৰভেদ:

১। ট্ৰমাটিক

২। নন ট্ৰমাটিক

• আঘাতেৰ স্কেলিটাল লেভেল:

১। সারভাইকাল

২। থোৰাসিক

• ASIA স্কেল অনুযায়ী নিউৰলজিকাল লেভেল:

১। কমপ্লিট A

২। ইন কমপ্লিট B

৩। ইন কমপ্লিট C

৪। ইন কমপ্লিট D

পৰিচৰ্মাকারীৰ তথ্য:

• নাম:

• বয়স:

• লিঙ্গ:

১। পুৰুষ

২। মহিলা

• **ঠিকানা:**

গ্রাম/বাড়ি নং -

পোস্ট অফিস -

থানা/উপজেলা -

জেলা -

• **বৈবাহিক অবস্থা:**

১।বিবাহিত

২।অবিবাহিত

৩।অন্যান্য

• **পেশা:**

১।গৃহিণী

২।চাকরিজীবী

৩।ব্যবসায়ী

৪।অন্যান্য) নির্দিষ্ট করে (

• **শিক্ষাগত যোগ্যতা:**

১।কখনো স্কুলে যাইনি

২।প্রাথমিক শিক্ষা সমাপ্ত করেছি

৩।মাধ্যমিক শিক্ষা সমাপ্ত করেছি

৪। উচ্চ মাধ্যমিক শিক্ষা সমাপ্ত করেছি

৫।স্নাতক /স্নাতকোত্তর

৬।অন্যান্য) নির্দিষ্ট করে(

• **রোগীর সাথে সম্পর্ক:**

১। স্বামী / স্ত্রী

২। বাবা / মা

৩।ভাই/বোন

৪।অন্যান্য

• **পরিবারের সদস্য সংখ্যা:**

১। ১ - ৩

২। ৪ - ৬

৩। ৭-৯

৪।অন্যান্য

• **দৈনিক যন্ত্র নেওয়ার সময় (ঘন্টা):**

১। ১ - ৬

২। ৭ - ১২

৩। ১৩-১৮

৪।অন্যান্য

• **পরিচর্যা করছেন)সময়):(**

দ্বিতীয় অংশ: জীবনযাত্রার মান নির্ণয় স্কেল (এস-এফ-৩৬ স্বাস্থ্য জরীপ)

নিচের প্রশ্নগুলিতে আপনার স্বাস্থ্য সম্বন্ধে আপনার মতামত জানতে চাওয়া হয়েছে। এই তথ্যগুলি আপনি কি রকম বোধ করেন এবংকতটা ভালভাবে আপনার দৈনন্দিন কর্ম সম্পাদনে সক্ষম সে ব্যাপারে নিজের রাখতে সাহায্য করবে।

০১। সাধারণভাবে বলতে গেলে আপনার মতে আপনার স্বাস্থ্য সম্পর্কিত জীবন প্রকৃতির মান হল:

১ চমৎকার

২ খুব ভাল

৩ ভাল

৪ মোটামুটি

৫ খারাপ

০২। সাধারণ ভাবে গত এক বছর আগের তুলনায় আপনার স্বাস্থ্য বর্তমানে কেমন ?

১ গত এক বছরে আগের তুলনায় এখন অনেক ভাল

২ গত এক বছরে আগের তুলনায় এখন খানিকটা ভাল

৩ প্রায় গত বছরের মতই

৪ গত এক বছরে আগের তুলনায় এখন কিছুটা খারাপ

৫ গত এক বছরে আগের তুলনায় এখন অনেক বেশি খারাপ

০৩। নিম্নলিখিত প্রশ্নগুলি আপনি সাধারণ একটি দিনে যে কাজকর্মগুলি করে থাকতে পারেন সেই সম্পর্কিত। আপনার স্বাস্থ্য কি এখন আপনার এই সমস্ত কর্মসম্পাদনের অন্তরায় হয়ে দাঁড়িয়েছে? যদি হয় তবে কতখানি ?

ক. অতিমাত্রায় পরিশ্রম সাধ্য কার্যাবলী, যেমন দৌড়ানো, ভারী জিনিস তোলা, কষ্টসাধ্য খেলাধুলায় অংশ গ্রহন করা

১ হ্যাঁ, অনেকখানি অন্তরায় হয়ে দাঁড়িয়েছে

২ হ্যাঁ, অল্পস্বল্প অন্তরায় হয়ে দাঁড়িয়েছে

৩ না, একেবারেই অন্তরায় হয় নি

খ. অপেক্ষাকৃত কম পরিশ্রমসাধ্য কার্যাবলী, যেমন টেবিল সরানো, ঘর ঝাড়ু দেওয়া, বাগানে কাজ করা, অথবা সাইকেল চালানো

১ হ্যাঁ, অনেকখানি অন্তরায় হয়ে দাঁড়িয়েছে

২ হ্যাঁ, অল্পস্বল্প অন্তরায় হয়ে দাঁড়িয়েছে

৩ না, একেবারেই অন্তরায় হয় নি

গ. চাল ডাল ইত্যাদি শঁকনো বাজারের জিনিসপত্র বহন করা

১ হ্যাঁ , অনেকখানি অন্তরায় হয়ে দাঁড়িয়েছে

২ হ্যাঁ , অল্পস্বল্প অন্তরায় হয়ে দাঁড়িয়েছে

৩ না ,একেবারেই অন্তরায় হয় নি

ঘ. কয়েক তলা সিঁড়ি বেয়ে ওঠা

১ হ্যাঁ , অনেকখানি অন্তরায় হয়ে দাঁড়িয়েছে

২ হ্যাঁ , অল্পস্বল্প অন্তরায় হয়ে দাঁড়িয়েছে

৩ না ,একেবারেই অন্তরায় হয় নি

ঙ. এক তলা সিঁড়ি বেয়ে ওঠা

১ হ্যাঁ , অনেকখানি অন্তরায় হয়ে দাঁড়িয়েছে

২ হ্যাঁ , অল্পস্বল্প অন্তরায় হয়ে দাঁড়িয়েছে

৩ না ,একেবারেই অন্তরায় হয় নি

চ. সম্মুখে ব্লুকা, হাঁটু গেড়ে বসা, নিচু হওয়া

১ হ্যাঁ , অনেকখানি অন্তরায় হয়ে দাঁড়িয়েছে

২ হ্যাঁ , অল্পস্বল্প অন্তরায় হয়ে দাঁড়িয়েছে

৩ না ,একেবারেই অন্তরায় হয় নি

ছ. এক কিলোমিটারের বেশি হাঁটা

১ হ্যাঁ , অনেকখানি অন্তরায় হয়ে দাঁড়িয়েছে

২ হ্যাঁ , অল্পস্বল্প অন্তরায় হয়ে দাঁড়িয়েছে

৩ না ,একেবারেই অন্তরায় হয় নি

জ. কয়েকশো মিটার হাঁটা

১ হ্যাঁ , অনেকখানি অন্তরায় হয়ে দাঁড়িয়েছে

২ হ্যাঁ , অল্পস্বল্প অন্তরায় হয়ে দাঁড়িয়েছে

৩ না ,একেবারেই অন্তরায় হয় নি

ঝ. একশো মিটার হাঁটা

১ হ্যাঁ , অনেকখানি অন্তরায় হয়ে দাঁড়িয়েছে

২ হ্যাঁ , অল্পস্বল্প অন্তরায় হয়ে দাঁড়িয়েছে

৩ না ,একেবারেই অন্তরায় হয় নি

৩. নিজে নিজে গ্লান বা জামাকাপড় পরা

১ হ্যাঁ , অনেকখানি অন্তরায় হয়ে দাঁড়িয়েছে

২ হ্যাঁ , অল্পস্বল্প অন্তরায় হয়ে দাঁড়িয়েছে

৩ না ,একেবারেই অন্তরায় হয় নি

০৪। গত চার সপ্তাহে আপনার শারীরিক অবস্থার কারণে, কতবার আপনার দৈনন্দিন কর্মক্ষেত্রে, নিম্নলিখিত সমস্যা গুলির মধ্যে কোনটি দেখা দিয়েছিল ?

ক. আপনার কর্মক্ষেত্রে এবং অন্যান্য কাজে আগের থেকে কম সময় দিতে পেরেছেন

১ সবসময়

২ বেশির ভাগ সময়

৩ মাঝে মধ্যে

৪ খুবই কম সময়

৫ কখনই না

খ. আপনি যতটা চেয়েছিলেন তার চাইতে কম কর্ম সম্পাদন করতে পেরেছেন

১ সবসময়

২ বেশির ভাগ সময়

৩ মাঝে মধ্যে

৪ খুবই কম সময়

৫ কখনই না

গ. আপনার কৃত কর্মকাণ্ডের মধ্যে আপনার কাজের গুণী সীমাবদ্ধ ছিল

১ সবসময়

২ বেশির ভাগ সময়

৩ মাঝে মধ্যে

৪ খুবই কম সময়

৫ কখনই না

ঘ. আপনার কর্মক্ষেত্রে বা অন্যান্য কাজ করতে গিয়ে অসুবিধা বোধ হয়েছে (যেমন আপনাকে বাড়তি প্রচেষ্টা করতে হয়েছিল)

১ সবসময়

২ বেশির ভাগ সময়

৩ মাঝে মধ্যে

৪ খুবই কম সময়

৫ কখনই না

০৫। গত চার সপ্তাহে মানসিক অবস্থা কারণে, কতবার আপনার দৈনন্দিন কর্মক্ষেত্রে ,নিম্নলিখিত সমস্যা গুলির মধ্যে কোনটি দেখা দিয়েছিল (যেমন মানসিক অবসাদ বা দুশ্চিন্তাগ্রস্ত হওয়া)

ক. আপনার কর্মক্ষেত্রে এবং অন্যান্য কাজে আগের থেকে কম সময় দিতে পেরেছেন

১ সবসময়

২ বেশির ভাগ সময়

৩ মাঝে মধ্যে

৪ খুবই কম সময়

৫ কখনই না

খ. আপনি যতটা চেয়েছিলেন তার চাইতে কম কর্ম সম্পাদন করতে পেয়েছেন

- | | | |
|---|---|---------------------------------------|
| <input type="checkbox"/> ১ সবসময় | <input type="checkbox"/> ২ বেশির ভাগ সময় | <input type="checkbox"/> ৩ মাঝে মধ্যে |
| <input type="checkbox"/> ৪ খুবই কম সময় | <input type="checkbox"/> ৫ কখনই না | |

গ. সাধারণের থেকে কাজ কর্ম অনেক কম খেয়াল করতে পেয়েছেন

- | | | |
|---|---|---------------------------------------|
| <input type="checkbox"/> ১ সবসময় | <input type="checkbox"/> ২ বেশির ভাগ সময় | <input type="checkbox"/> ৩ মাঝে মধ্যে |
| <input type="checkbox"/> ৪ খুবই কম সময় | <input type="checkbox"/> ৫ কখনই না | |

০৬। গত চার সপ্তাহে আপনার পরিবার, বন্ধুবান্ধব, প্রতিবেশী বা গোষ্ঠী সমুদয়ের সঙ্গে সামাজিক ক্রিয়াকর্মে, আপনার শারীরিক অবস্থা বা মানসিক সমস্যাগুলি, কতখানি বাধা সৃষ্টি করেছে ?

- | | | |
|---|---|---|
| <input type="checkbox"/> ১ একেবারে না | <input type="checkbox"/> ২ সামান্য রকম | <input type="checkbox"/> ৩ মাঝামাঝি রকম |
| <input type="checkbox"/> ৪ বেশ অনেকখানি | <input type="checkbox"/> ৫ অত্যন্ত বেশি রকম | |

০৭। গত চার সপ্তাহে আপনি কতখানি শারীরিক যত্ন ভোগ করেছেন?

- | | | |
|---|---|---|
| <input type="checkbox"/> ১ একটুও না | <input type="checkbox"/> ২ খুবই সামান্য | <input type="checkbox"/> ৩ সামান্য |
| <input type="checkbox"/> ৪ মাঝামাঝি রকম | <input type="checkbox"/> ৫ বেশি রকম | <input type="checkbox"/> ৬ খুব বেশি রকম |

৮। গত চার সপ্তাহে আপনার শারীরিক ব্যথাবেদনা আপনার (ঘরে ও বাইরে) কাজকর্মে কতখানি বাধা সৃষ্টি করেছে?

- | | | |
|---|---|---|
| <input type="checkbox"/> ১ একেবারে না | <input type="checkbox"/> ২ সামান্য রকম | <input type="checkbox"/> ৩ মাঝামাঝি রকম |
| <input type="checkbox"/> ৪ বেশ অনেকখানি | <input type="checkbox"/> ৫ অত্যন্ত বেশি রকম | |

৯। নিম্নলিখিত প্রশ্নগুলি গত চার সপ্তাহে আপনার শারীরিক অবস্থা কিরকম কেটেছে সেই সম্পর্কিত। প্রতিটি প্রশ্নের ক্ষেত্রে আপনি যেরকম বোধ করেন সেই অনুযায়ী সবচাইতে প্রযোজ্য উত্তরটি দিন।

ক. আপনি কি খুব প্রানবন্ত বোধ করছিলেন?

- | | | |
|---|---|---------------------------------------|
| <input type="checkbox"/> ১ সবসময় | <input type="checkbox"/> ২ বেশির ভাগ সময় | <input type="checkbox"/> ৩ মাঝে মধ্যে |
| <input type="checkbox"/> ৪ খুবই কম সময় | <input type="checkbox"/> ৫ কখনই না | |

খ. আপনি কি খুব স্নায়বিক ভাবে দুর্বল হয়ে পড়েছিলেন ?

১ সবসময়

২ বেশির ভাগ সময়

৩ মাঝে মাঝে

৪ খুবই কম সময়

৫ কখনই না

গ. আপনি কি এমনই মানসিক অবসাদ গ্রস্ত হয়ে পড়েছিলেন যে কোনো কিছুই আপনাকে প্রফুল্ল করতে পারছিল না?

১ সবসময়

২ বেশির ভাগ সময়

৩ মাঝে মাঝে

৪ খুবই কম সময়

৫ কখনই না

ঘ. আপনি কি খুব স্নিগ্ধ ও শান্ত ছিলেন?

১ সবসময়

২ বেশির ভাগ সময়

৩ মাঝে মাঝে

৪ খুবই কম সময়

৫ কখনই না

ঙ. আপনার কি প্রচুর প্রাণ শক্তি ছিল?

১ সবসময়

২ বেশির ভাগ সময়

৩ মাঝে মাঝে

৪ খুবই কম সময়

৫ কখনই না

চ. আপনি কি মানসিক ভাবে হতাশ ও অবসাদগ্রস্ত হয়ে পড়েছিলেন ?

১ সবসময়

২ বেশির ভাগ সময়

৩ মাঝে মাঝে

৪ খুবই কম সময়

৫ কখনই না

ছ. আপনি কি বিদ্বস্ত বোধ করেছিলেন ?

১ সবসময়

২ বেশির ভাগ সময়

৩ মাঝে মাঝে

৪ খুবই কম সময়

৫ কখনই না

জ. আপনি কি আনন্দে ছিলেন ?

১ সবসময়

২ বেশির ভাগ সময়

৩ মাঝে মাঝে

৪ খুবই কম সময়

৫ কখনই না

ঝ. আপনি কি ক্লান্ত ছিলেন?

১ সবসময়

২ বেশির ভাগ সময়

৩ মাঝে মাঝে

৪ খুবই কম সময়

৫ কখনই না

১০। গত চার সপ্তাহে কতবার আপনার শারীরিক অবস্থা ও মানসিক সমস্যা গুলি আপনার সামাজিক ক্রিয়াকর্মের ক্ষেত্রে বাধা সৃষ্টি করেছে? (যেমন বন্ধুবান্ধব বা আত্মীয়স্বজনদের সঙ্গে দেখা করতে যাওয়া ইত্যাদি)

- | | | |
|---|---|--------------------------------------|
| <input type="checkbox"/> ১ সবসময় | <input type="checkbox"/> ২ বেশির ভাগ সময় | <input type="checkbox"/> ৩ মাঝে মাঝে |
| <input type="checkbox"/> ৪ খুবই কম সময় | | <input type="checkbox"/> ৫ কখনই না |

১১। নিম্নলিখিত বিবৃতি গুলির প্রত্যেকটি আপনার ক্ষেত্রে কতদূর সত্য বা মিথ্যা?

ক. আমার মনে হয় আমি যেন অন্যদের থেকে একটু বেশি সহজেই অসুস্থ হয়ে পড়ি

- | | | |
|--|--|--|
| <input type="checkbox"/> ১ অবশ্যই সত্য | <input type="checkbox"/> ২ বেশির ভাগই সত্য | <input type="checkbox"/> ৩ জানি না |
| <input type="checkbox"/> ৪ বেশির ভাগই মিথ্যা | | <input type="checkbox"/> ৫ অবশ্যই মিথ্যা |

খ. আমি আমার জানাশোনা যেকোন লোকের মতই স্বাস্থ্যবান

- | | | |
|--|--|--|
| <input type="checkbox"/> ১ অবশ্যই সত্য | <input type="checkbox"/> ২ বেশির ভাগই সত্য | <input type="checkbox"/> ৩ জানি না |
| <input type="checkbox"/> ৪ বেশির ভাগই মিথ্যা | | <input type="checkbox"/> ৫ অবশ্যই মিথ্যা |

গ. আমার স্বাস্থ্য খারাপ হবার আশঙ্কা করি

- | | | |
|--|--|--|
| <input type="checkbox"/> ১ অবশ্যই সত্য | <input type="checkbox"/> ২ বেশির ভাগই সত্য | <input type="checkbox"/> ৩ জানি না |
| <input type="checkbox"/> ৪ বেশির ভাগই মিথ্যা | | <input type="checkbox"/> ৫ অবশ্যই মিথ্যা |

ঘ. আমার স্বাস্থ্য খুবই ভাল

- | | | |
|--|--|--|
| <input type="checkbox"/> ১ অবশ্যই সত্য | <input type="checkbox"/> ২ বেশির ভাগই সত্য | <input type="checkbox"/> ৩ জানি না |
| <input type="checkbox"/> ৪ বেশির ভাগই মিথ্যা | | <input type="checkbox"/> ৫ অবশ্যই মিথ্যা |

প্রশ্নগুলির উত্তর সম্পূর্ণ করার জন্য আপনাকে ধন্যবাদ!

Part 2: Quality Of Life Scale (SF-36 V2 Health Survey)

This survey asks for your views about your health. This information will help keep track of how you feel and how well you are able to do your usual activities.

1. In general, would you say about your health related quality of life?

- | | | |
|--------------|--------------|---------|
| 1. Excellent | 2. Very good | 3. Good |
| 4. Fair | 5. Poor | |

2. Compared to one year ago, how would you rate your health in general now?

1. Much better now than a year ago
2. Somewhat better now than a year ago
3. About the same as one year ago
4. Somewhat worse now than one year ago
5. Much worse now than one year ago

3. The following items are about activities you might to do during a typical day.

Does your health now limit you in these activities? If so, how much?

a. Vigorous activities, such as running, lifting heavy object, participating in strenuous sports.

1. Yes, limited a lot
2. Yes, limited a little
3. No, not limited at all

b. Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf?

1. Yes, limited a lot
2. Yes, limited a little
3. No, not limited at all

c. Lifting or carrying groceries

1. Yes, limited a lot
2. Yes, limited a little
3. No, not limited at all

d. Climbing several flights of stairs

1. Yes, limited a lot
2. Yes, limited a little
3. No, not limited at all

e. Climbing one flight of stairs.

1. Yes, limited a lot
2. Yes, limited a little
3. No, not limited at all

f. Forward bending, kneeling or stooping

1. Yes, limited a lot
2. Yes, limited a little
3. No, not limited at all

g. Walking more than a mile

1. Yes, limited a lot
2. Yes, limited a little
3. No, not limited at all

h. Walking several hundred yards

1. Yes, limited a lot
2. Yes, limited a little
3. No, not limited at all

i. Walking one hundred yards

1. Yes, limited a lot
2. Yes, limited a little
3. No, not limited at all

j. Bathing or dressing yourself

1. Yes, limited a lot
2. Yes, limited a little
3. No, not limited at all

4. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of a physical health?

a. Cut down on the amount of time you spent on work or other activities

- | | | |
|-------------------------|---------------------|---------------------|
| 1. All of the time | 2. Most of the time | 3. Some of the time |
| 4. A little of the time | 5. None of the time | |

b. Accomplished less than you would like?

- | | | |
|-------------------------|---------------------|---------------------|
| 1. All of the time | 2. Most of the time | 3. Some of the time |
| 4. A little of the time | 5. None of the time | |

c. Were limited in the kind of work or other activities?

- | | | |
|-------------------------|---------------------|---------------------|
| 1. All of the time | 2. Most of the time | 3. Some of the time |
| 4. A little of the time | 5. None of the time | |

d. Had difficulty performing the work or other activities (for example, it took extra time)

- | | | |
|-------------------------|---------------------|---------------------|
| 1. All of the time | 2. Most of the time | 3. Some of the time |
| 4. A little of the time | 5. None of the time | |

5. Have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depression or anxious)?

a. Cut down the amount of time you spent on work or other activities?

- | | | |
|-------------------------|---------------------|---------------------|
| 1. All of the time | 2. Most of the time | 3. Some of the time |
| 4. A little of the time | 5. None of the time | |

b. Accomplished less than you would like?

- | | | |
|-------------------------|---------------------|---------------------|
| 1. All of the time | 2. Most of the time | 3. Some of the time |
| 4. A little of the time | 5. None of the time | |

c. Didn't do work or other activities as carefully as usual

- | | | |
|-------------------------|---------------------|---------------------|
| 1. All of the time | 2. Most of the time | 3. Some of the time |
| 4. A little of the time | 5. None of the time | |

6. What extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors or groups?

- | | | |
|----------------|--------------|---------------|
| 1. Not at all | 2. Slightly | 3. Moderately |
| 4. Quite a bit | 5. Extremely | |

7. How much bodily pain have you had during the past 4 week?

- | | | |
|----------------|--------------|---------------|
| 1. Not at all | 2. Slightly | 3. Moderately |
| 4. Quite a bit | 5. Extremely | |

8. How much pain interferes with your normal work (including both work outside the home and housework?)

- | | | |
|----------------|--------------|---------------|
| 1. Not at all | 2. Slightly | 3. Moderately |
| 4. Quite a bit | 5. Extremely | |

9. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks.

a. Did you fell full of pep?

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time

b. Have you been a very nervous person?

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time

c. Have you felts so down in the dumps nothing could cheer you up?

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time

d. Have you felt calm and peaceful?

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time

e. Did you have a lot of energy?

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time

f. Have you felt downhearted and blue?

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time

g. Did you feel worn out?

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time

h. Have you been a happy person?

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time

i. Did you feel tired?

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time

10. How much of the time physical or emotional problems interfere your social activities (like visiting friends, relative neighbors etc.)?

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time

11. How true or false is each of the following statements for you?

a. I seem to get sick a little easier than other people

- | | | |
|--------------------|---------------------|----------------|
| 1. Definitely true | 2. Mostly true | 3. Don't known |
| 4. Mostly false | 5. Definitely false | |

b. I am as healthy as anybody I know

- | | | |
|--------------------|---------------------|----------------|
| 1. Definitely true | 2. Mostly true | 3. Don't known |
| 4. Mostly false | 5. Definitely false | |

c. I expect my health to get worse

- | | | |
|--------------------|---------------------|----------------|
| 1. Definitely true | 2. Mostly true | 3. Don't known |
| 4. Mostly false | 5. Definitely false | |

d. My health is excellent

- | | | |
|--------------------|---------------------|----------------|
| 1. Definitely true | 2. Mostly true | 3. Don't known |
| 4. Mostly false | 5. Definitely false | |

11th February, 2015

Head

Department of Physiotherapy

Centre for the Rehabilitation of the Paralyzed (CRP)

CRP-Chapain, Savar, Dhaka-1343

Through: Head, Department of Physiotherapy, BHPI

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

Sir,

With due respect and humble submission to state that I am Md. Nazmul Hassan, student of 4th year B.Sc. in Physiotherapy at Bangladesh Health Professions Institute (BHPI). The Ethical Committee has approved my research title on "Health related quality of life of primary caregivers of persons with tetraplegia attending at a specialized rehabilitation centre" under the supervision of Ehsanur Rahman, Lecturer in Physiotherapy department, BHPI. Conducting this research project is partial fulfillment of the requirement for the degree of B.Sc. in Physiotherapy. I want to collect research data for my research project at SCI unit, CRP. So, I need a permission for data collection from SCI unit. I would like to assure that anything of my study will not be harmful for the participants.

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

Yours faithfully

Md. Nazmul Hassan
11-2-15

Md. Nazmul Hassan
4th year B.Sc. in Physiotherapy

Session: 2009-2010

Bangladesh Health Professions Institute (BHPI)

(An academic Institution of CRP)

CRP-Chapain, Savar, Dhaka- 1343.

E. Rahman
7.03.15

Forwarded for approval.
9/12/15

Allowed
Atten
08/3/15

giving permission for data collection.
from PT-dept. SCI Unit, please contact with
Mr. M. Morsain, Incharge @ SCI PT
SCI Unit, CRP as a counter part.
08/3/15



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Approved Purpose: Health related quality of life of primary caregivers of persons with tetraplegia attending at a specialized rehabilitation center

Study Type: Non-commercial academic research and/or thesis – Unfunded Student
Data Collection Method: Paper

Therapeutic Area: Wellness & Lifestyle

Royalty Fee: None, because this License is granted in support of the non-commercial Approved Purpose

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OptumInsight Life Sciences, Inc.

Md Nazmul Hassan

Signature: _____
Name: _____
Title: _____
Date: _____

Signature: Hassan
Name: Md. Nazmul Hassan
Title: HRQoL of Primary caregivers of persons with tetraplegia
Date: 16-05-2015



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Approved Purpose: Health related quality of life of primary caregivers of persons with tetraplegia attending at a specialized rehabilitation center

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Name: EHSANUR RAHMAN

Title: HRQDL of Primary Care givers of persons

Date: 16-05-2015

with Tetraplegia attending
at specialized Rehabilitation
Centre.