PARTICIPATION OF COMMUNICATION FOR INDIVIDUAL WITH CERVVAL SPINAL CORD INJURY PATIENT LIVING IN THE COMMUNITY

By

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Session: 2014-2015

Bachelor of Science in Speech & Language Therapy

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(The academic institute of CRP)

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Declaration

I am Tazmina Islam Tithi, declare that the work presented here is my own. All sources used have been cited correctly. Any mistakes or inaccuracies are my own. I also want to make sure that any single discussion of the study will not be harmful to participants.

Signature: *Date:*

Declaration

To my beloved parents .....

Tazmina Islam Tithi

4th year student of Bachelor of

Science in Speech and Language Therapy (B. Sc. in SLT)

Session: 2014-2015

BHPI, CRP, Savar, Dhaka-1343

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List of Acronyms

Abbreviation	Elaboration
BHPI	Bangladesh Health Professions Institute
CPIB	Communicative participation item bank
CRP	Centre for the Rehabilitation of the Paralyzed
CSCI	Cervical Spinal Cord Injury
SCI	SCI Spinal Cord Injury
SLP	SLP Speech & Language Pathologist
SLT	SLT Speech & Language therapy
SPSS	SPSS Statistical Package for the Social Sciences
WHO	WHO World Health Organization

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EXECUTIVE SUMMERY

SCI is a noteworthy reason for inability and bleakness all through the world and Asia. The relationship among CSCI and communication participation deficits is clinically all around perceived. So this investigation was intended to decide the communication participation limitation following CSCI. This examination was directed by utilizing cross-sectional planned overview strategy at SCI unit of CRP. Members were chosen by utilizing purposive examining. Information was gathered by utilizing general short from of CPIB tool. The outcome states from the exploration that CSCI is more typical in male than female, almost 50% or more of individual may have minimal interference of communication participation in their communicative participation to some degree in relation to communicating quickly, having long conversation , having detailed information and fast moving questions . Among members the most extreme members 26.7% (12) evaluated their problem in communicative participation according to CPIB from. From the overall group mean score on the General Short From of the CPIB was 24.18, Standard Deviation was 5.453. That suggested overall minimal interferences with communicative participation in the community settings. The study also showed that total score of the participants are strongly associated with all demographic information of the participants.

Keywords: Communication, Participation, deficits, Cervical Spinal Cord Injury.

Chapter 1 Introduction

1.1 Introduction

The spinal cord is a piece of a framework called Central Nervous System. The Central nervous system is comprised of two primary structures the brain and the spinal cord. The spinal cord is fragile tissue ensured by the spinal bones which are called vertebrate cervical spinal rope damage (National institute of neurological disorder, 2018). Continuing spinal cord damage is a life changing occasion that outcomes in fluctuating level of loss of engine and tactile capacity. Because of the neurological harm to the spinal line, the working of numerous physiological frameworks might be upset including the neuromuscular, cardiovascular, and metabolic and respiratory framework (miko et al. 2009). Speech and language therapists work for CSCI patients. They play roles together and active role on an inpatient rehabilitation spinal cord injury (SCI) unit. Providing assessment and treatment in the areas of swallowing, motor speech, voice, and cognitive communication functioning are also vital role for SLT. Patients with cervical SCI may require dysphagia management secondary to known effects from cervical surgery. From this voice disorders may be present after endotracheal intubation or from effects of cervical surgery, while artificial airways and mechanical ventilation may impact swallowing and voicing (Brougham et al. 2011).World Health Organization (WHO) report (2011), per million 20 to 40 people cause spinal cord injury through the world and in the United States (US), each year there are about 11,000 new cases of SCI and there are currently about 250,000 persons alive with SCI, because of lack of improvements in medical care and survival. The prevalence of people living with SCI has increased and it is predicted that there will be greater number of older patients with SCI (Spinal cord injury: facts and figures at a glance, 2006). According to Robert, DiMarco, Hoit, & Garshick (2006), currently the average age of injury is 37.6 years, and about 80% of those affected are male. The racial distribution appears to be changing between 1973 and 1979, 76.9% were white and 14.2% were African American. Since 200062.9% of those injured have been white and 22% have been African American. There is no study conducted about the prevalence of SCI patient in Bangladesh but in India, 236 people per million of the population has developed traumatic SCI every year (Furlan, Krassioukov, Miller, & Trenaman, 2014). From the last annual report of

Center for the Rehabilitation of the Paralyzed (CRP) showed that from 2013-2014 there got admitted 388 patients with SCI of whom 88.4% were male and 11.6% were female (Annual Report of Center for the Rehabilitation of the Paralyzed, 2013-2014).

Spinal cord injury (SCI) is a devastating condition often affecting young and healthy individuals around the world. This debilitating condition not only creates enormous physical and emotional cost to individuals but also is a significant financial burden to society at large (Charles & Krassioukov, 2004). Spinal Cord Injury (SCI) is a low incidence, high cost disability. It brings tremendous changes in an individual's lifestyle. Each year there are 10,000 new cases of Spinal Cord injury in USA. CSCI has clinical problems and they are motor paralysis , Sensory loss, respiratory dysfunction, impaired temperature control, spasticity, bowel and bladder dysfunction, sexual dysfunction. Communication makes everyone to build and maintain relationships by sharing experiences, expressing emotions and communicating ones needs. Communication is very important need for CSCI for returning in the community and many researchers working from past with the impact of communication among SCI patients as it causes impairment in the respiratory function. This problem in the respiratory function causes SCI patients having lower volumes, impact on speech (Cornwell et al. 2014, MacBean et al. 2011).Many times patients with cervical SCI faces voice and speech, reduced vocal loudness, reduce sound prosody, hard breathiness and hard roughness may also present (Hoit et al.1990, Tamplin et al. 2011,2014). According to cornwell et al. (2014), this speech and voice problem may have completely effect on life. On the other hand for their physical disability they can face many challenges in their living situation, life style and relationship during both recovery period and returning to the community (Chartifue and Gerhart 2004).The ability to communicate effectively has been identified as one of the key facilitators for adjustment and community reintegration following a SCI (Boschen et al. 2003). This changed in health state considered as more holistically including the wider impact on daily functioning, life participation during providing evaluation and intervention services.

Every cervical spinal cord injured patient when they back in their community faces problem as their level functioning get limited. Especially as some of them haves greatly

voice problem and communication deficit which creates impact in their daily functional life. Respiratory muscle impairment following cervical spinal cord injury (CSCI) may lead to reduced voice function, although the individual variation is large. For CSCI patients it is totally hard to find out specific voice impairment and functional voice impairment most times patients with CSCI (Johansson et al. 2018). CSCI patients great negative broadly impact on the quality of life of a person with SCI. It is actually life threating lifelong disability which cause problem in day to day life along with patients and his/her family.(Razzak, Helal, & Nuri, 2011). SCI has been defined as a major health problem in Bangladesh because of high mobility and morbility problem in bangladesh (Hoque, Grangeon, & Reed, 1999). According to Bickenbach et al. (2012), Traffic accidents, fall from height, violence are main three causes of traumatic CSCI in Bangladesh.

Maximum times to cure voice problems, speech task and breathing task are done. If any patient does early intervention it may help in his life. All these problems may create level of impact on their activity limitation, participation restriction and distress and so on for many individual on return to living in the community. Reduced communication function may have dangerous effect on person's life. It may affect a person's ability to reconnect with family and friends, at work places and social events. Though speech and language therapist services gradually in communication area they need to support and intervention those following patient.

1.2 significance of the study

Communication is the main point to express one's feelings and thinking and communicative participation is most important for completing a person's day to day life activities (Chawla 1993). The ability to communicate effectively has been identified as one of the key facilitators for adjustment and community reintegration following a SCI. (Boschen et al. 2003). This is the study about participation of communication of cervical spinal cord injury patient who lives in the community. Through this study, researcher found out the participation limitations and restrictions of SCI patients. This is necessary to help them to communicate effectively. It is an important issue to be addressed because according to Johansson and Kerstin (2013), CSCI can result in long-standing changes in voice function and secondary to the respiratory impairment which might create restrictions in communicative participation or life threatening. But still now there is no study explaining the impacts on communication after CSCI and also there is not any practice of voice therapy and communication problems for CSCI patient in Bangladesh. So after completing the study the CSCI patient with communication disorder will be benefited because they will be aware about SLT services and know that they can get help from SLT. The study will also provide a clear reflection of impacts on communication after CSCI to the SLT professionals and create a new working scope for them. It will assist them to make concern about SCI patient's communication difficulties.

To sum up, this study might create a new working scope for SLT so it may form a future prospect of SLT profession in Bangladesh. This study will also provide data to the other professionals working with SCI patients (e.g. Physiotherapists, Occupational Therapists). It will help to establish a collaborative treatment approach for CSCI patients with communication difficulties and help other professionals to improve the referral system to SLT services in Bangladesh.

1.3 Research question

Participation of communication for individual with Cervical Spinal Cord injury patient living in the community

1.4 General and specific objectives of the Study

To determine the nature and extent of participation of communication for individual with CSCI living in the community

1.4.1 General objective:

- To determine the nature and extent of communication participation for individual with CSCI living in the community.

1.4.2 Specific objectives:

- To determine the socio-demographic characteristics of the study population.
- To identify the level of communicative participation situations including speech conditions and any other health conditions
- To determine the association between general short from of CPIB and demographic informations
- To obtain a view of impact of communication difficulties on participation on daily life

1.5 Literature review

Communication enables people to manufacture and keep up connections by sharing encounters, communicating one's feelings and imparting needs (Chawla,1993).The capacity to convey information effectively has been identified as one of the key facilitators for modification and network reintegration following a Spinal cord injury patients (Boschen et al. 2003). Spinal string damage (SCI) is a restoratively perplexing and life-upsetting condition. SCI is a standout amongst the most extreme wounds which bring sudden and significant life changes that have worldwide impacts (Somers, 1992). According to National spinal cord injury statistical center, (2016) among 314 million individuals in the United States, the yearly rate of spinal string damage (SCI) is around 54 cases for every million populace. It implies around 17,000 new SCI cases appear to be every year. The quantity of individuals in the U.S. who are alive in 2016 who have SCI has been assessed to be roughly 282,000 people, with a range from 243,000 to 347,000 people. Macciocchi et al, (2017) found that 60% of study patients with horrendous SCI continued a TBI, the vast majority of which were named gentle. Contingent upon the degree of the TBI, regions, for example, memory, new learning, critical thinking, and wellbeing judgment might be influenced and may affect the patient's recovery procedure and release designs. As a major aspect of multidisciplinary treatment groups, speech and language therapist treat patients with psychological correspondence issue and give suggestions to supervision levels, come back to work, and school (Boschen et al. 2003). Speech and language therapists ensure that the patients always have an appropriate means of communication like using communication board, soft touch call light etc and Provide assessment and intervention for verbal communication and safe swallowing then educate patients on the importance of using communication to direct their care.Due to carrying heavy objects lots of people causes spinal cord injury in Bangladesh and it falls a great impact in to their day to day life. Hoque, Hasan, Razzak and Helal, (2011) completed an observational investigation on Cervical spinal cord injury due to fall while carrying heavy load on head: a problem in Bangladesh. Their subjects were met to note down applicable individual data like how the mishap happened. Age of the considered subjects ran between10 to 50 years. From all male there were 95% male who were rancher and 72% percent of the subjects were conveying 60– 80kg load on their head when fall happened, 57% subjects had finish neurological sore. Fall while conveying overwhelming burden on

head is a typical reason for CSCI in Bangladesh. The unfortunate casualties are generally youthful ranchers or untalented day workers who were not habituated to convey substantial load on head.Speech and Language Pathologist is a counsel benefit that was utilized for 40% of patients with awful SCI treated on particular SCI units. The most widely recognized administrations gave were analysis and treatment of swallowing and cognitive communication issue, which address regular zones of dysfunction coming about because of the utilization of artificial airways and feeding approaches approaches, just as brain injury.Patients with high tetraplegia invested about 32% of SLP energy in gulping and 27% on cognitive– correspondence treatment, while patients with low tetraplegia, paraplegia, and AIS D spent roughly 40% of their SLP time on cognitive correspondence work. The substantial measure of changeability seen in SLP treatment time, which isn't clarified well by patient and damage qualities, sets the phase for future investigations to connect medicines with results (Johansson et al. 2018).From a case report in emergency medicine (2015), "In cervical spinal cord patients Communication is a difficult issue for patients with ventilator-subordinate tetraplegia. A 73-year-elderly person was introduced at the crisis room in cardiopulmonary capture in the wake of tumbling from a stature of 2 m. After effective revival, breaks of the cervical spine and cervical spinal rope damage were found. Because of loss of motion of the respiratory muscles, a mechanical ventilator with a tracheostomy tube was required. Initial, a handcuffed tracheostomy tube and a talking tracheostomy tube were embedded, and humidified oxygen was presented through the suction line. Utilizing these cylinders, the patient could deliver discourse sounds, however use was constrained to 10 min because of uneasiness. Second, a mouthstick stylus, settled on a mouthpiece that fits over the maxillary teeth, was utilized. The patient utilized both a correspondence board and a touch screen gadget with this mouthstick stylus. The talking tracheostomy tube and mouthstick stylus extraordinarily enhanced his capacity to convey." (Mitate, et al. 2015)

1.6 Conceptual framework (operational definition)

Key Words: Participation, communication, Cervical Spinal Cord Injury

1.6.1 Communication

Communication is the way of conveying one's meaningful feelings and thoughts to others. Communication connects each other in society by sharing feelings and thoughts (Business Dictionary, 2018). Limitation in communication participation are experienced by individuals who have inabilities that influence hearing, talking, perusing, composing, as well as understanding, and who utilize distinctive approaches to convey than individuals who don't have these handicaps. (Centers for disease control and prevention, 2018). In this study researcher used the word communication as a whole way of conveying social information to others.

1.6.2 Participation

A disable person will have limited participation on every sphere of his life. Almost everybody faces hardships and troubles at some time. Be that as it may, for individuals with handicaps, boundaries can be progressively visited and have more prominent effect. The World Health Organization (WHO) describes barriers as being more than just physical obstacles. WHO defined of barriers as, "Factors in an individual's situation that, through their nonappearance or nearness, limit working and make incapacity, These incorporate viewpoints, for example, a physical situation that isn't accessible, lack of pertinent assistive innovation , negative frames of mind of individuals towards disability, administrations, frameworks and strategies that are either nonexistent or that impede the association surprisingly with a wellbeing condition in all everyday issues. (Centers for disease control and prevention, 2018) Participation means without and barrier adding in all context of the society. Here in this study investigator address participation restrictions in communication of CSI patients who lives in a society and participations was address to mention social barriers.

1.6.3 Cervical Spinal Cord injury

SCI refers to impairment or loss of motor and/or sensory function in the cervical, thoracic, lumbar or sacral segments of the spinal cord secondary to damage of neural elements within the spinal canal (Marino, n.d. cited in Sorensen et al., 2006). The investigator was used cervical spinal cord injury as the cervical region of the spine contains 7 cervical vertebrae and trauma in this area defined as CSCI.

Chapter 2 Methodology

In this study, the investigator wanted to find out the participation of communication for individual with cervical spinal cord injury living in the community.

2.1 Study design

The methodology is the best approach to gather a bit of research. The point of the investigation was to discover the participation of communication for individual with CSI living in the community. It was a quantitive report on the grounds that as per Bailey (1997), quantitative research is utilized to set up certainties. The examination was cross-sectional as cross-sectional examinations take a gander at a wonder about one point of time (DePoy, 1998) and the investigator considered the models inside around 3 months. In this study, survey method was used to collect data from people with CSCI by face to face interview and in phone calls. Since Stein and Cutler (2000) and Frankel and Wallen, (2000) said that the principle capacity of the review inquire about is to acquire exact target depictions from a particular universe of individuals or substances by face to face meet about a specific subject or issue. It was imminent investigations on the grounds that here data was gathered specifically from the general population examined (Hicks, 2000).And it was suggested that survey method was the most applicable method to conduct the study, so the investigator was used cross-sectional prospective survey method.

2.2 Study setting

The study was conducted at patient's home who lives near Savar area and by phone call at investigator's home.

2.3 Study Population

All CSCI people who were admitted in SCI unit at Centre for the Rehabilitation of the Paralyzed (CRP), their phone number and address were collected from CRP office for the study.

2.4 Sample

2.4.1 Sample size

A sample is a group of subjects that will be selected from the population, who will be used in pieces of research (Hicks, 1999, p. 287). Though a larger sample is more likely to be representative of the population in a survey study, but in many situations, it is not possible for the researcher both for practical and financial reasons (Hicks, 2000). So the investigator was used a sampling equation to determine the sample size. The equation is according to sample size-

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

$$= \frac{(1.96)^2 \times 0.5(1-0.5)}{(0.05)^2}$$

$$= 384.16$$

Where, n = required sample size,

Z = confidence level at 95% (standard value of 1.96)

p = estimated prevalence of subject = 0.5 r = margin of error at 5% (standard value of 0.05)

But it was unrealistic to study on 384 samples within 3 months and would be costly and also unavailable due to time-consuming in the study setting. So, 80 samples were selected within the short period.

2.4.2 Sampling procedure

Finding the appropriate number and type of people take part in the study is called sampling (Hicks, 1999, p. 24). In this study the investigator used convenience sampling to select sample, because by this technique participants are selected by their availability and willingness (Forzano & Gravetter, 2010), (Salkind, 2010). By this sampling the investigator can easily collect the data within limited time and less cost and travelling (Salkind, 2010), (Forzano et al. 2010) & (William & Anderson 2009). Forzano et al. (2010) said that, this sampling system is used more often than other sampling techniques. CSCI patients who now leading their life in community are already in trouble and the investigator had very limited time frame.so that it was very difficult for the investigator to select random sampling. For this investigator found this method appropriate for the study.

2.5 Inclusion & exclusion criteria

2.5.1 Inclusion criteria

- Patients with CSCI who had a lesion in cervical vertebrae level C1-C7 (both acute and chronic phase)
- Individual CSCI patient who lives in the community

2.5.2 Exclusion criteria

- People with CSCI with a history of any neurological condition (e.g.: Traumatic brain injury, stroke).
- People with CSCI who had speech therapy before.

2.6 Pilot study

According to Hicks (1999) pilot study is necessary because it helps the investigator to ensure whether the total procedures of the project are in right track or not. So before conducting the final data collection, investigator will conduct pilot study on 5 children from 5 to 7 years group, who will not present in final study sample group. If Investigator will find there any categories of words which will not appropriate in Bangladeshi perspectives for children such as places, animals etc. So in final study investigator will omit those categories in data collection tool.

2.7 Data collection

2.7.1 Data collection procedure

Investigator will collect data by face to face interview and phone calls. At first the investigator will take permission from SLT department of Bangladesh Health Professions Institute than the Authority of Head of medical wings, Center for the rehabilitation of the paralysed (CRP). After that investigator will approve the consent from and will collect data. Participant will mark their problem according to the box of Questionnaire. And through phone call collected data will be consented by investigator with the permission participants. All data will be recorded for further investigation.

2.7.2 Data collection materials

Investigator will use The Communication Participation Item Bank – General short from instrument to know the participation of communication for individual with CSCI living in the community. According to Ward et al. (2015) sited in The General Short Form of the CPIB is a self-announced result estimation instrument that assesses informative cooperation in life jobs and circumstances specifically in a network setting (Baylor et al. 2013). The General Short Form of the CPIB contains10 items where respondents must mark how much their health status affects their participation in a certain situation on a four-level ordinal scale, from not at all equating to 3 points to very much equating to 0 points (Baylor et al. 2013).Total score can range between 0 to 30.High scores on the CPIB indicate less interference of the wellbeing state on informative cooperation (Baylor et al. 2013). The CPIB exhibits solid psychometric properties with proof of unidimensionality and a wide compelling scope of estimation (Baylor et al. 2013). The General Short Form of the CPIB was used not with standing the voice polls all together to obtain a global view of the impact of communication difficulties on cooperation in day by day life. The English questionnaires will be converted to Bangla to as the participant during data collection. Investigator will use Bangla version as Bangla version of Question will be easier for participants to understand. This is very accepted and helpful questionnaire for health professionals. Investigator will take permission before working with them.

2.7.3 Inform consent

The investigator used a consent form both in English and Bengali to take the participant's consent English and Bengali. The investigator had informed the participant about the study by the consent form. The consent form contained the consent of the participant that he/she was participating in the study and giving permission to the investigator to start the data collection sessions.

2.7.4 Field test

The investigator had accomplished the field test with two participants before starting the collection of data. The investigator had informed the participant about the aim and objectives of the study during the interview session. It was important to carry out a field test before collecting the final data because it helped the investigator to refine the data collection plan.

2.8 Data analysis

Descriptive statistics is described, organize and summarize data (Bailey, 1997) and are commonly used for describing the survey data (Hicks, 2000). So investigator was used descriptive analysis to analyze the findings of this study as it was a survey. A computer program-"Statistical Package for the Social Sciences, version-22 (SPSS22)" was used as a data analysis tool. In another study of Johansson and Kerstin (2013), here all statistical analysis was performed in Excel and in SPSS. The variables were labeled in a list and the investigator established a computer-based data definition record file that consists of a list of variables of order. The investigator put the name of the variables in the variable view of SPSS and defined the types, values, decimal, label alignment and measurement level of data. The next step was cleaning new data files to check the inputted data set to ensure that all data had been accurately transcribed from the questionnaire sheet to the SPSS data view. Then the raw data was ready for analysis in SPSS. Data was analyzed by descriptive statistics and calculated as percentages and presented by using a table, bar graph, and pie charts. At last, the result of this survey consisted of quantitative data.

2.9 Ethical consideration

Voluntary participation from the participant's was considered. Participants were provided with a written consent form. The Investigator was collect written permission to conduct the research from the participants. Participators were informed verbally about the aims and objectives of the study and investigators role as well. Participants also assured that the study would have no harm to the participants physically or mentally because it was a survey study and was not involve any experiments. Confidentiality was maintained by the investigator by keeping the name, address and personal information of the client confidential and as data was not shared with others except the supervisor of the investigator. Participants were also being informed that they had full rights to withdraw themselves or refuse to answer any question any time during the study.

2.10 Rigor

This study was conducted in a systematic way. All the steps of research were followed by the investigator sequentially. During data collection and analysis the investigator avoided the whole process by own perspectives, values, and biases. The investigator never influenced the participants by her owns perspective during data collection. A trustful relationship with participants was always maintained and the documents were kept confidential and there were no biases during data analysis.

Chapter 3 Results

The main objective of the study was to determine the nature and extent of communication participation for individual with CSCI living in the community. The convenience sampling system was done to select samples. Total 10 questions were collected from all samples through phone calls and interviewing system. Descriptive statistics were used to analyze the data and all data were calculate as percentages and presented by pie charts, bar graphs and tables.

3.1 Demographic Information of the participants

3.1.1 Gender of the participants

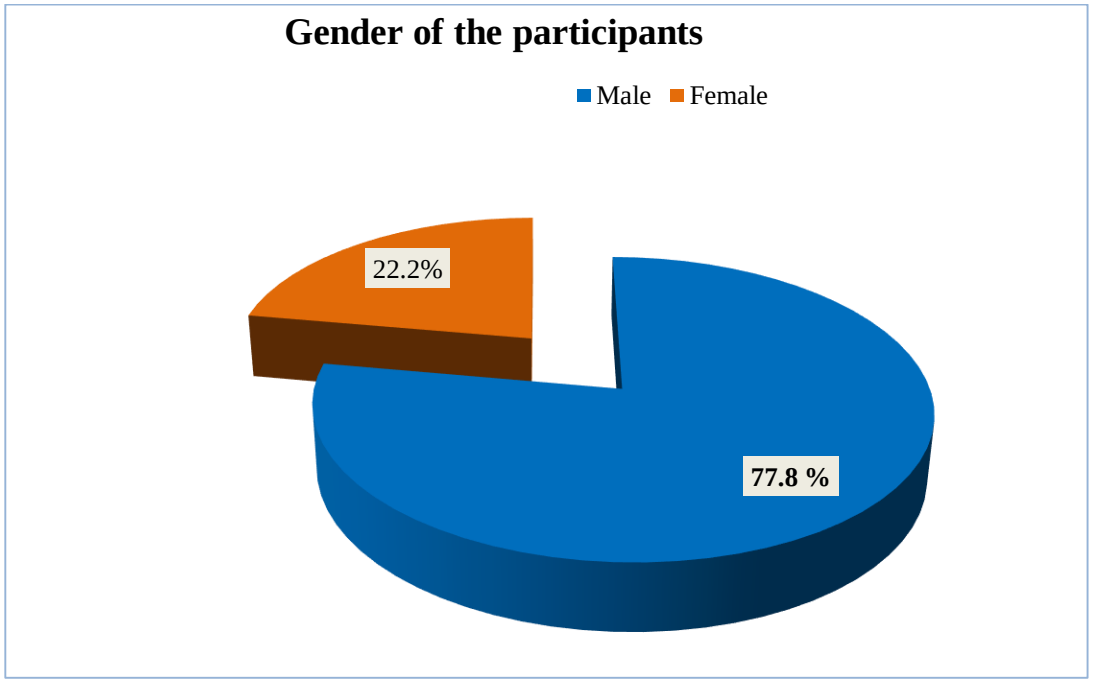

Figure3.1.1: Gender of the participants

A total of 45 CSCI patients most of them were male, in number 35 and only 10 were female. That means the percentage of male and female are 74.5% and 21.3%.

3.1.2 Age of the participants

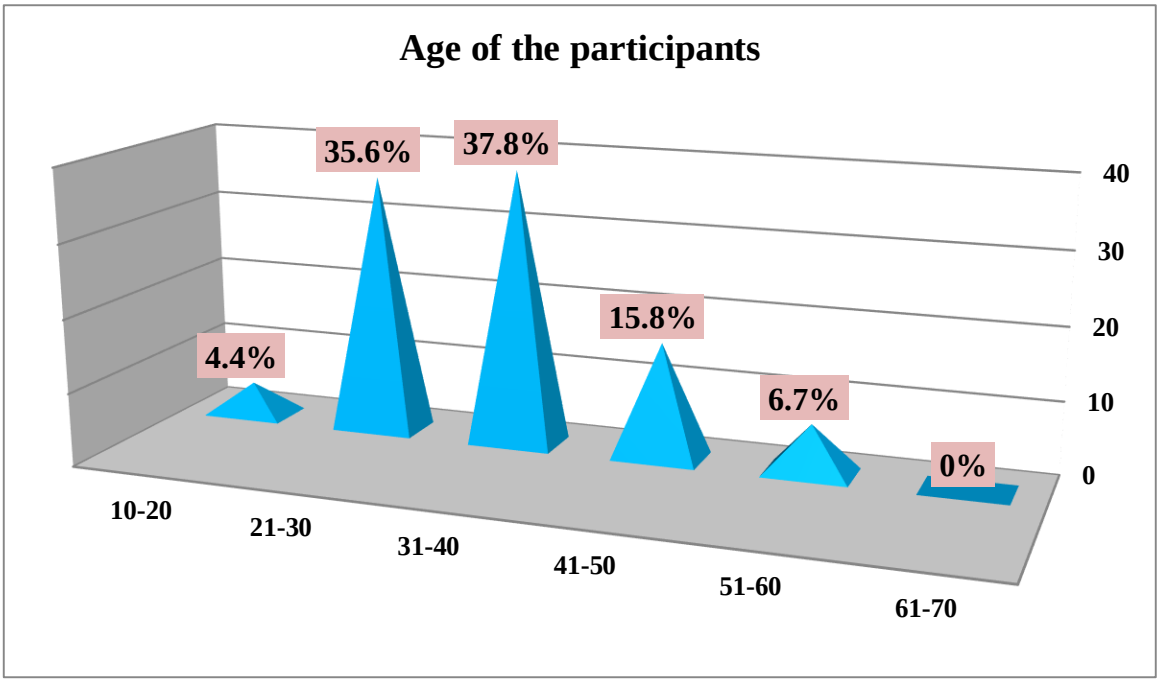

Figure3.1.2: Age of the participants

In this graph, the maximum number participants, 37.8% (17) were in the age of 31-40 years. It was found that 4.4% (02) participants those were in the age between 10-20 years. Also, 35.6% (16) participants found were in the age between 21-30 years and 15.8% (07) participants found were in the age between 41-50 years. Limited parentages of participants 4.4% (02) were in the age between (10-20) years and 6.7% (03) participants were in the age range equal or greater than of 51 years and above.

3.1.3 Causes of the participants

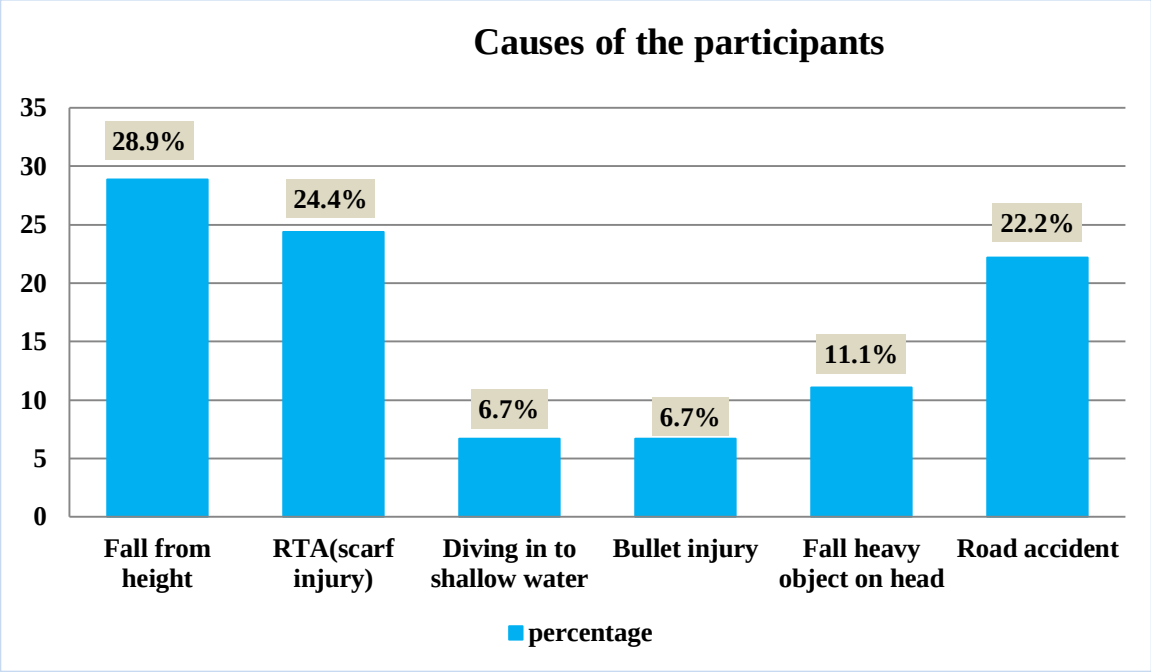

Figure3.1.3: Causes of the participants

From the bar graph among total participants, more than half 28.9% (13) participants were fall from height, approximately half 24.4%(11) participants had scarf injury., 6.7% (3) had bullet injury and dived in to shallow water,11.1% (5) had fall heavy object overhead and only 22.2% (10) participant had road accident.

3.1.4 Education of the participants

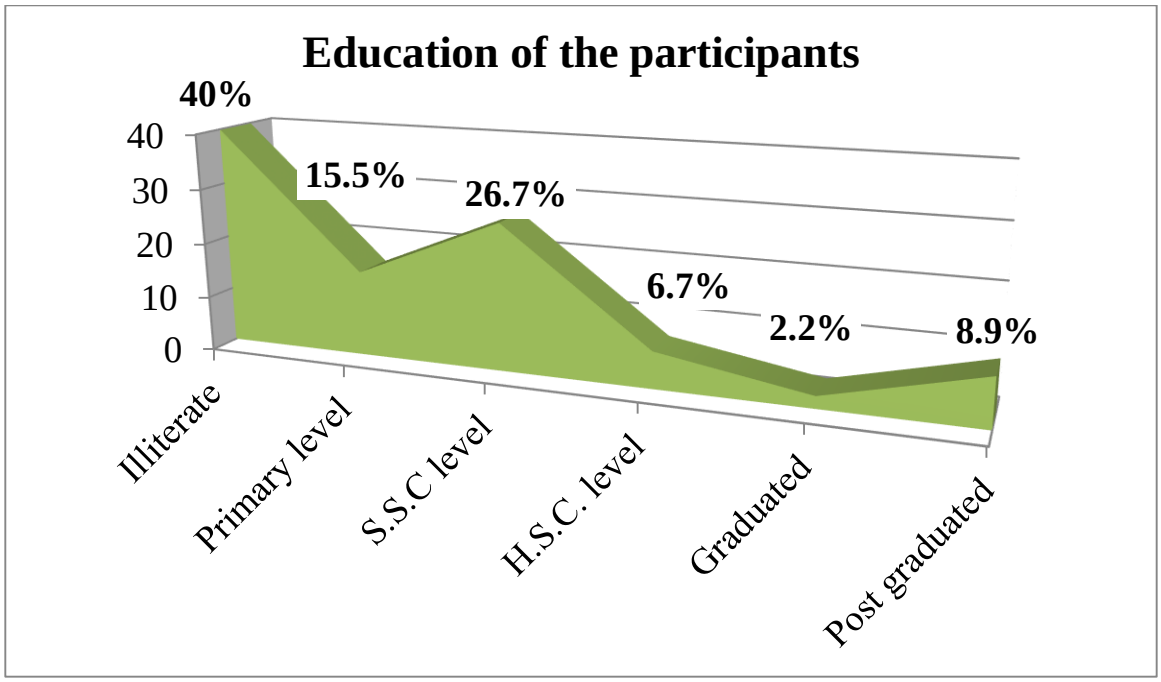

Figure3.1.4: Education of the participants

The bar graph shows that the majority numbers of participants 40% (18) were illiterate. Among the participants 15.5% (14) participants were at the primary education level, 26.7% (12) passed SSC, and also 6.7% (03) were passed HSC level. However, 2.2% (1) were found completed the graduation and a minimum number of participants 8.9% (4) were post-graduation only.

3.1.5 Occupational status of the participants

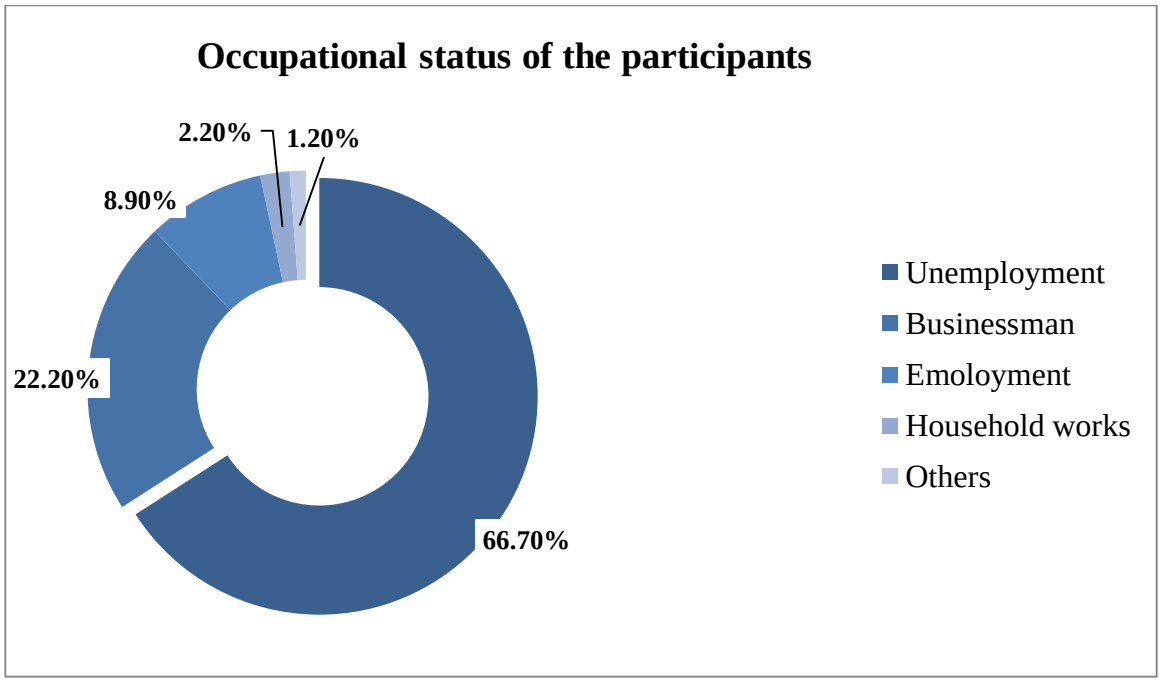

Figure3.1.5: Occupational status of the participants

The bar graph shows that among the participants, the maximum number of respondents 66.7% (30) found were unemployment. It was found 22.2% (10) participants were businessman, 8.9% (4) were employment (government and private job), 2.2% (1) were household worker and 1.20 was in other occupation.

3.1.6 Living area of the participants

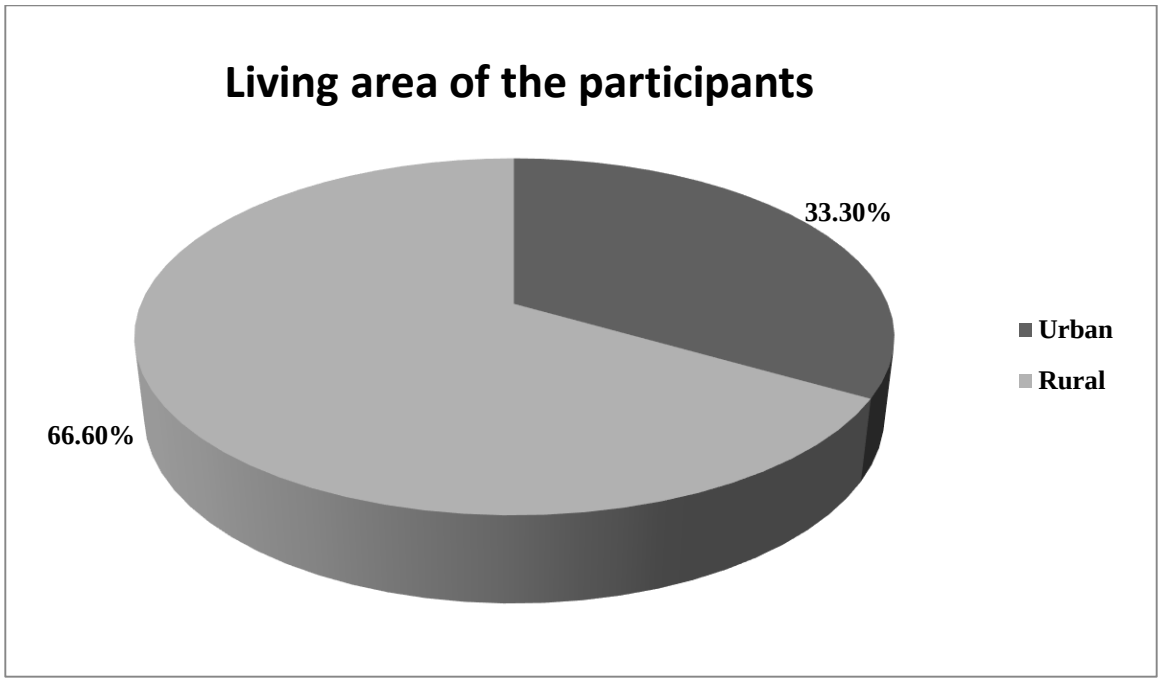

Figure3.1.6: Living area of the participants

The bar graph shows that among the participants, the maximum number of respondents 66.6% (30) found were in rural area. It was found 33.3% (15) participants were from urban areas so most of the SCI patients were from rural areas.

3.2 Communicative participation item bank

3.2.1 Problem in talking with known people

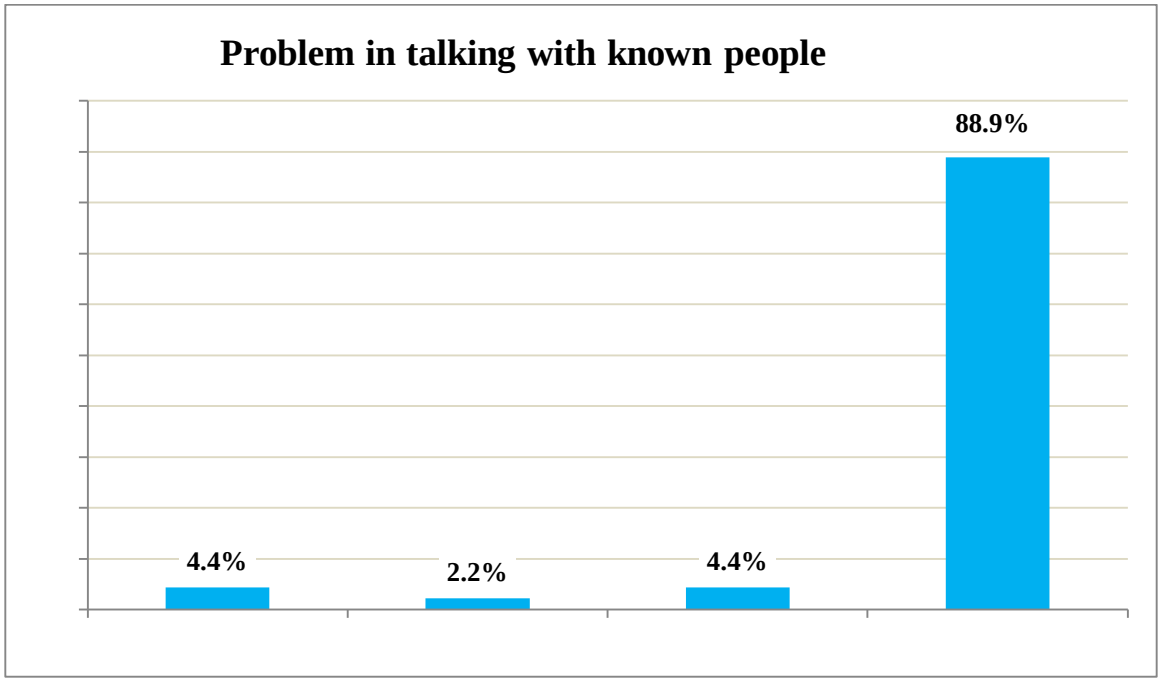

Figure 3.3.1: Problem in talking with known people

Among the 45 participants, it was found that most of the participants 88.9% (40) rated not at all in participation of communication with known people. The bar graph shows that only 4.4% (2) of participants said very much of their problem in talking with known people. 2.2% (1) people rated quite a bit at problem in talking with known people. 4.4% (2) said they had very much problem in talking with known people.

3.2.2 Problem in communicating quickly

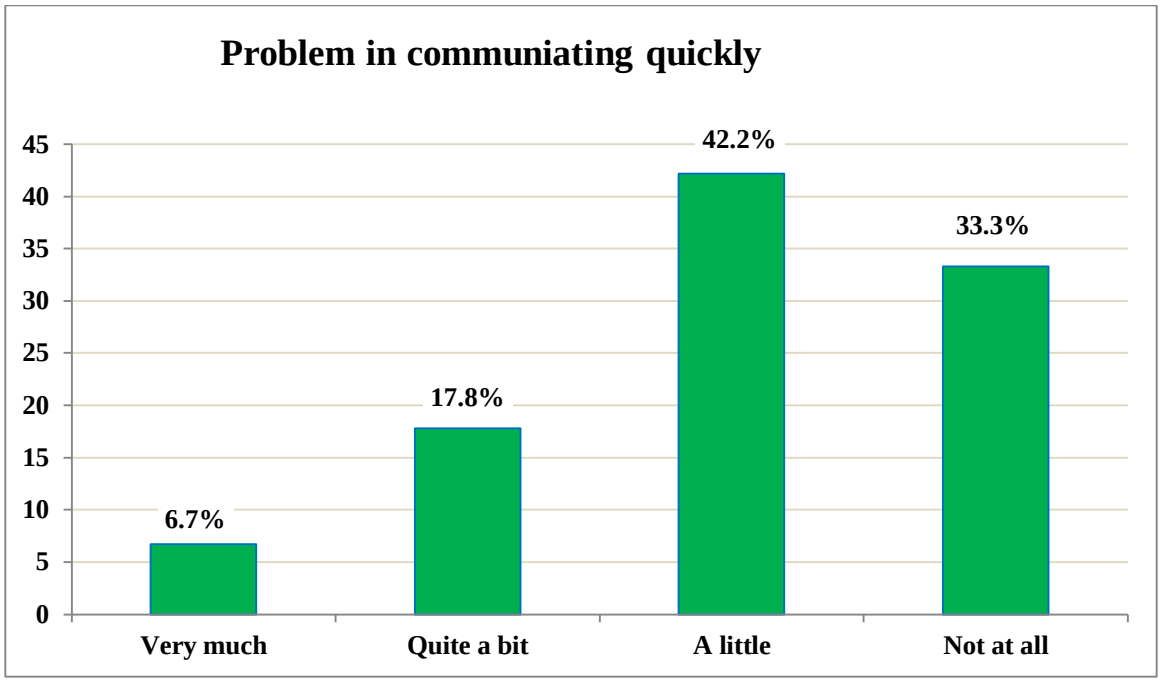

Figure 3.3.2: Problem in talking quickly

Among the 45 participants, it was found that most of the participants 33.3% (15) rated not at all problem in communicating quickly. The bar graph shows that only 42.2 %(19) of participants said a little of their problem in talking quickly. 17.8% (8) people rated quite a bit at problem in talking quickly. 6.7% (3) said they had very much problem in talking quickly.

3.2.3 Problem in talking with people you don't know

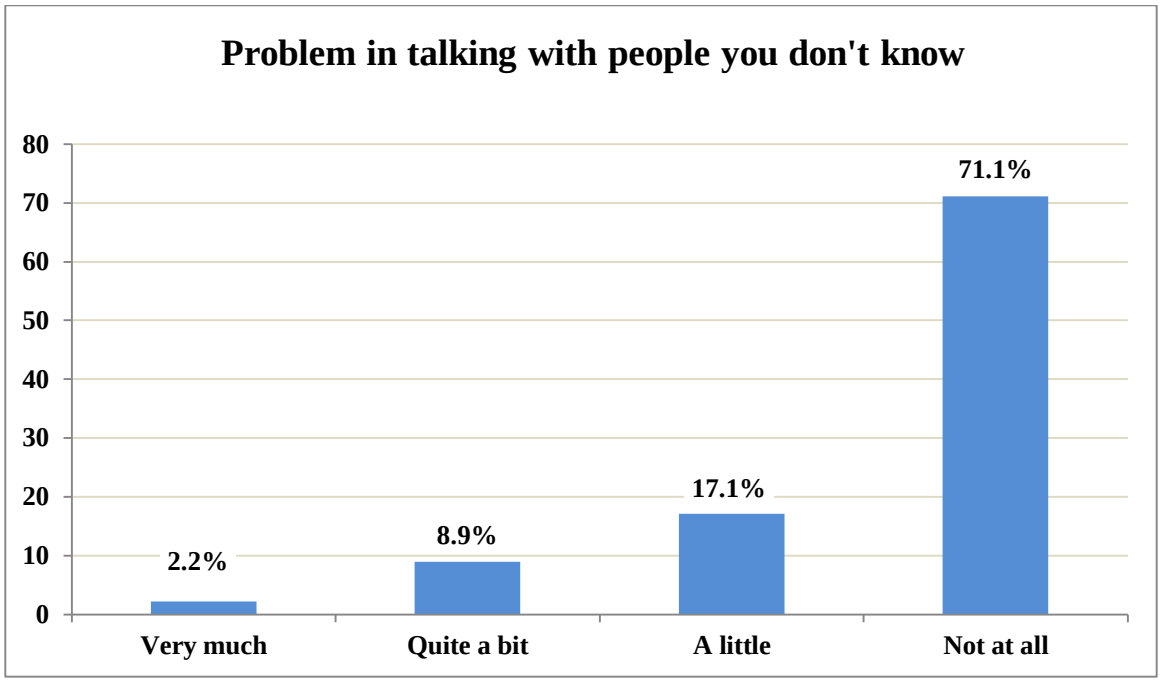

Figure 3.3.3: Problem in talking with people you don't know

Among the 45 participants, the majority of the participants 71.1% (32) rated not at all in the case of people had difficulty in talking with people you don't know. Few participants 17.1% (8) rated a little difficulty in talking with people you don't know. About 8.9% (4) participants rated quite a bit and 2.2% (1) participants rated very much difficulty in communicating with people you don't know.

3.2.4 Problem when out of community

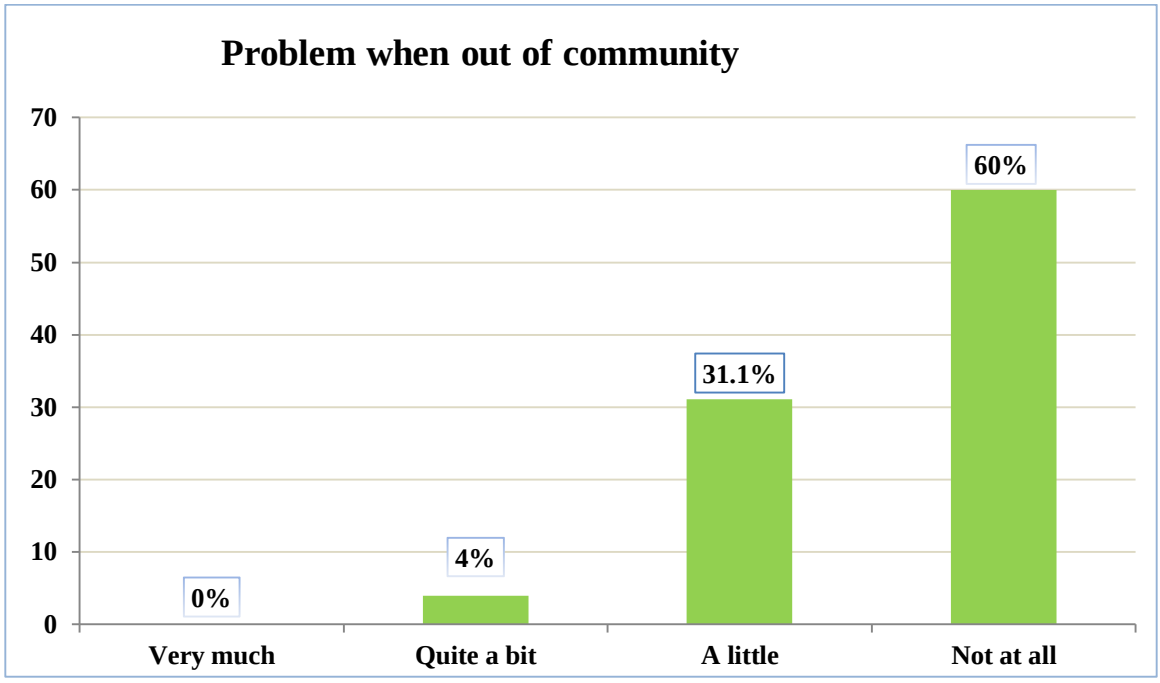

Figure 3.3.4: Problem when out of community

Among the 45 participants, the majority of the participants 60% (27) rated not at all problem in talking when out of community. Few participants 31.1% (14) rated a little difficulty in talking with people when out of community. About 8.9% (4) participants rated quite a bit and 0.0%% (0) participants rated very much difficulty in communicating with people when out of community

3.2.5 Problem in asking question in a conversation

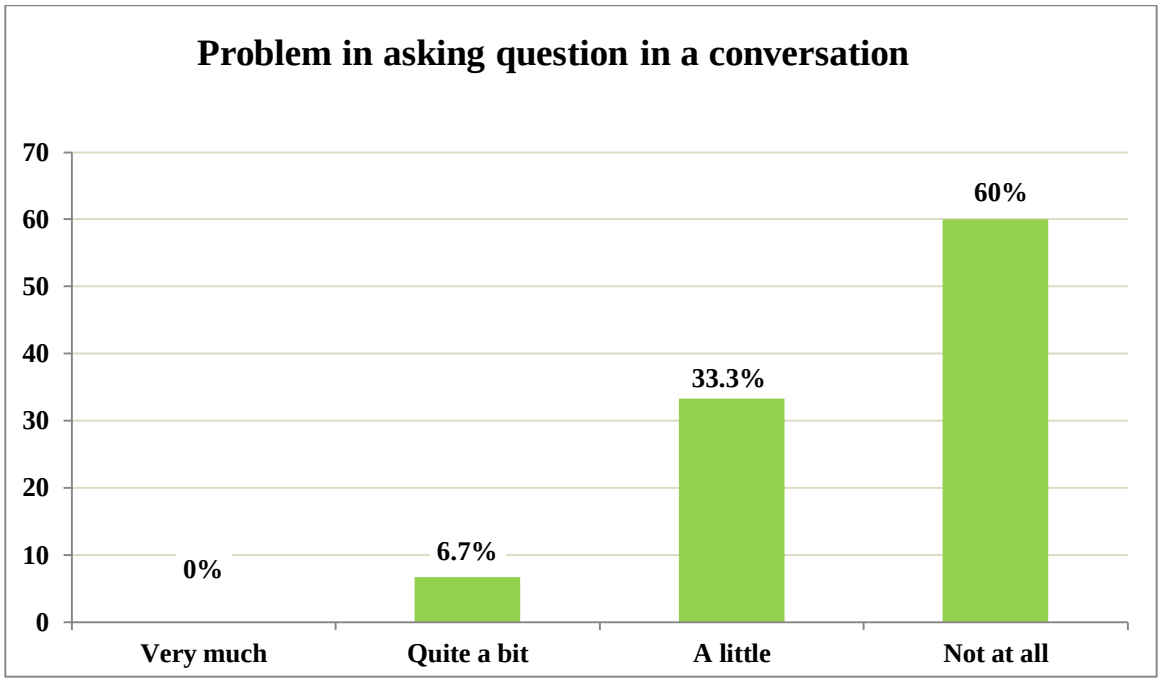

Figure 3.3.5: Problem in asking question in a conversation

Among the 45 participants, the majority of the participants 60% (27) rated not at all problem in asking question in a conversation. Few participants 33.3% (15) rated a little difficulty in asking question in a conversation. About 6.7% (3) participants rated quite a bit and 0.0 %(0) participants rated very much difficulty in asking question in a conversation.

3.2.6 Problem in talking with a small group of people

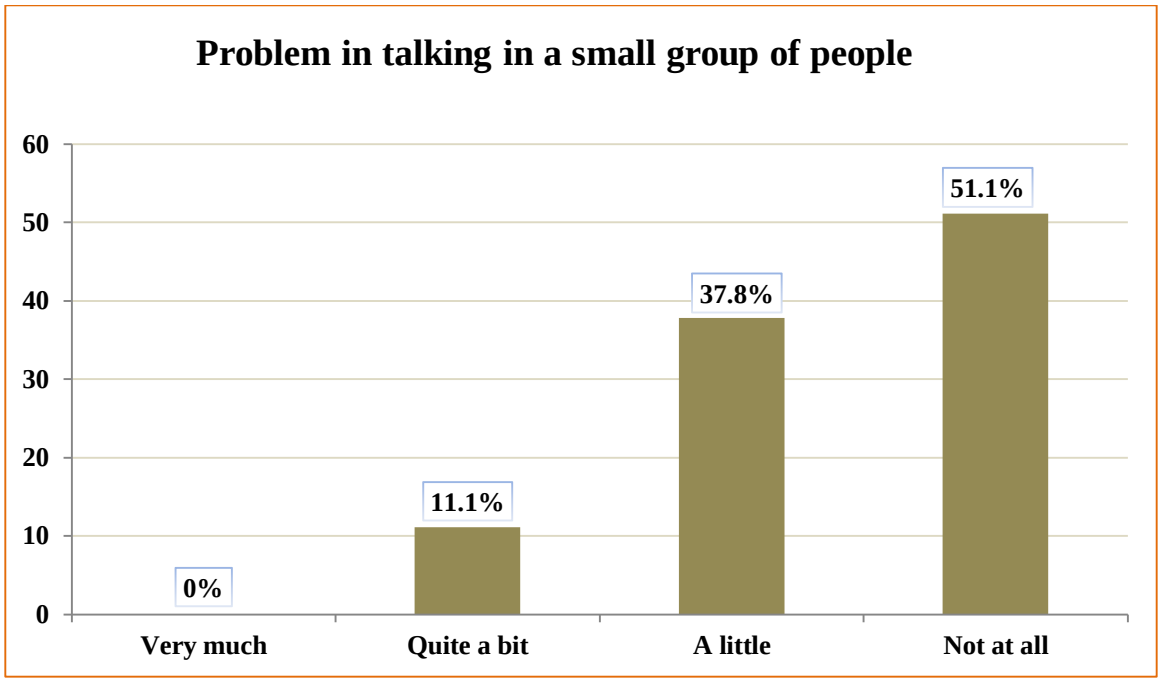

Figure 3.3.6: Problem in talking with a small group of people

Among the 45 participants, the majority of the participants 51.1% (23) rated not at all problem with talking to a small group of people. Few participants 37.8% (17) rated a little difficulty in talking in a small group of people. About 1.1% (5) participants rated quite a bit and 0.0% (0) participants rated very much difficulty in talking in a small group.

3.2.7 Problem in talking about a known topic or book

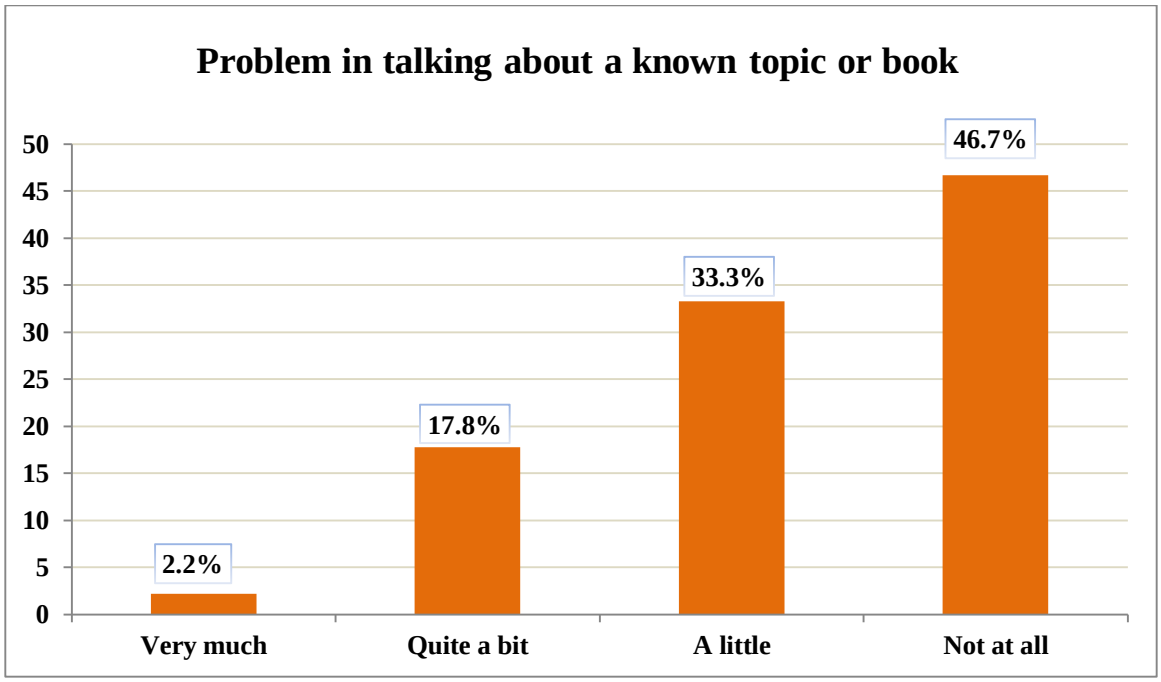

Figure 3.3.7: Problem in talking about a known topic or book

Among the 45 participants, the majority of the participants 46.7% (21) rated not at all problem with talking about a known topic or book. Few participants 33.3% (15) rated a little difficulty in talking about a known topic or book. About 17.8% (8) participants rated quite a bit and 2.2% (1) participants rated very much difficulty in talking about a known topic or book.

3.2.8 Problem in giving some detailed information

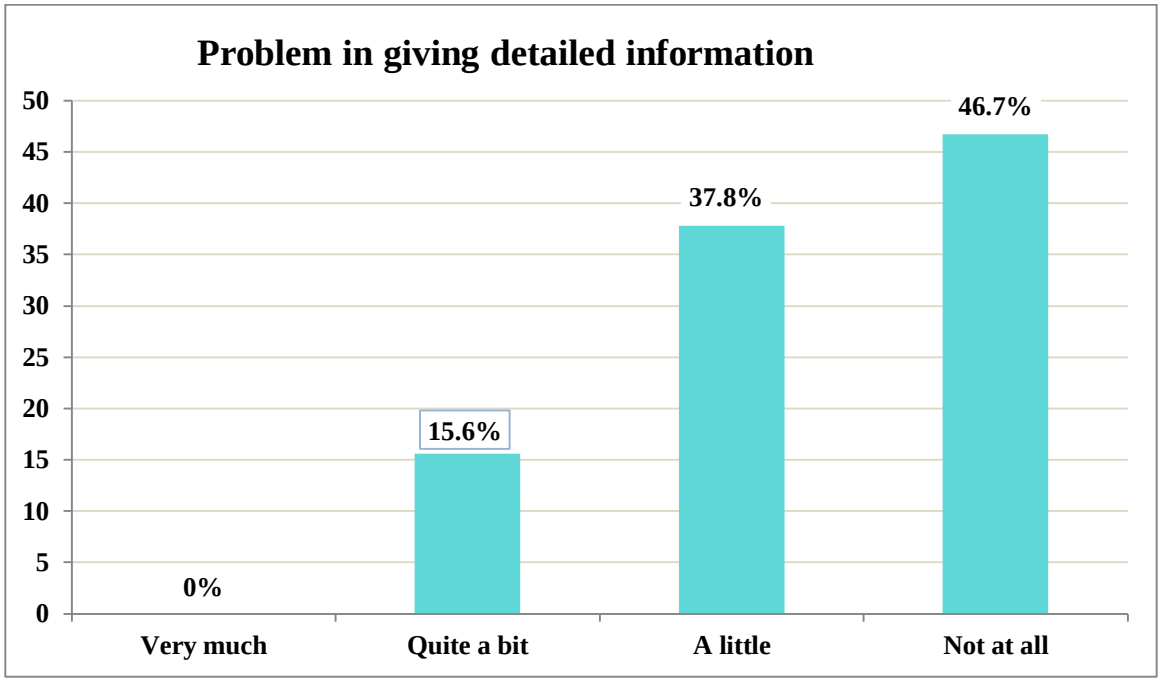

Figure 3.3.8: Problem in giving some detailed information

Among the 45 participants, the majority of the participants 42.2% (21) rated not at all problem in giving detailed information. Also another participant 37.8% (17) rated a little difficulty in conveying detailed information. About 15.6% (7) participants rated quite a bit and 0.0% (0) participants rated very much difficulty in giving detailed information.

3.2.9 Problem in joining any fast moving question

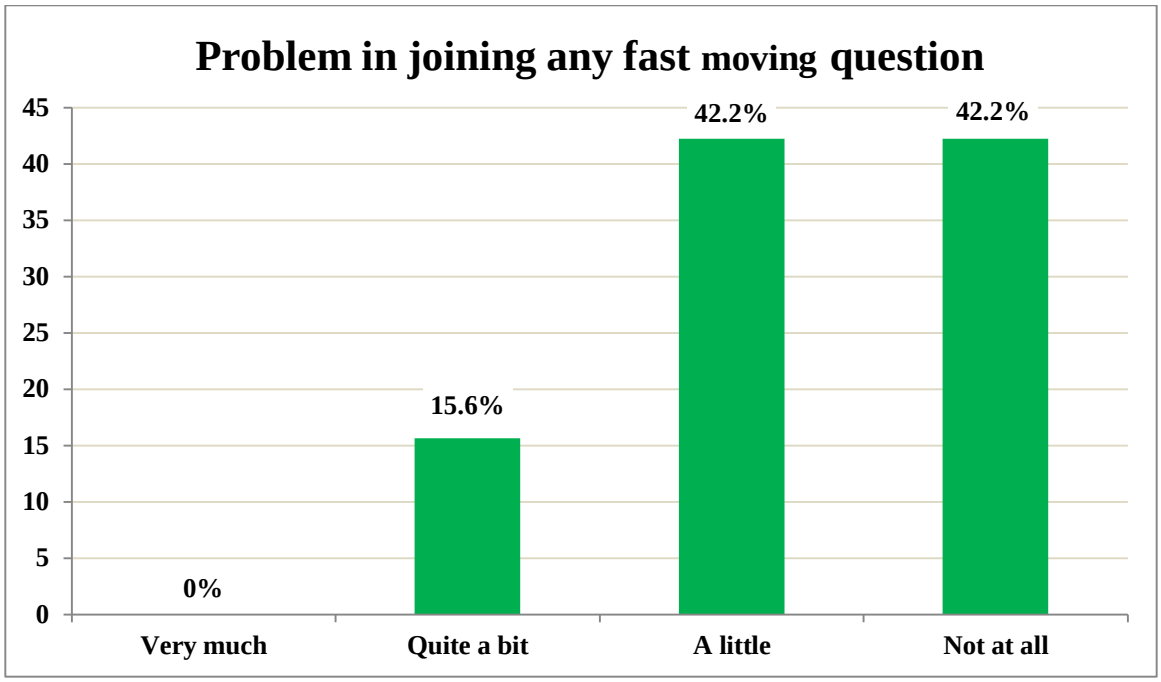

Figure 3.3.9: Problem in joining any fast moving question

Among the 45 participants, the majority of the participants 42.2% (19) rated not at all and also 42.2 %(19) rated a little problem in joining in any fast moving question. 15.6% (7) rated quite a bit problem in joining in any fast moving question. There were no participant with very much problem in moving In to fast moving question.

3.2.10 Problem with family members and friends

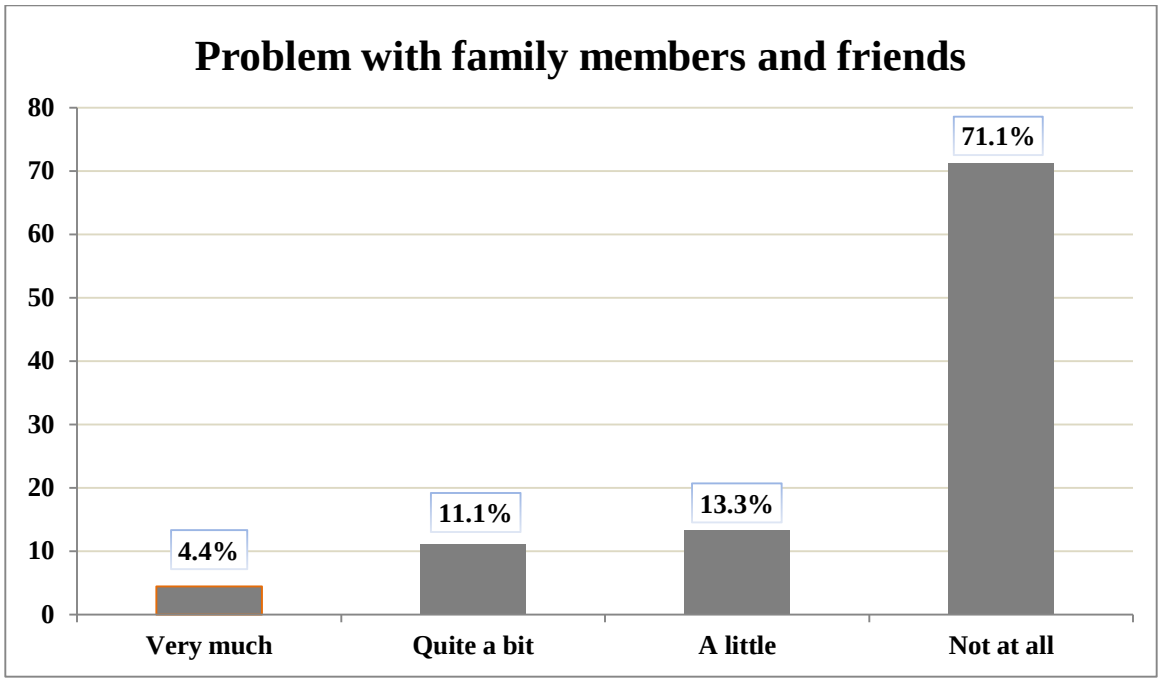

Figure3.3.10: Problem with family members and friends

Among the 45 participants, the majority of the participants 71.1% (32) rated not at all problem with family members and friends. Also another participant 13.3% (06) rated a little difficulty with family members and friends. About 11.1% (05) participants rated quite a bit and 4.4% (02) participants rated very much difficulty with their family members and friends.

3.3 Association between general short from of CPIB score and participant's demographic information

Patient's Age * Total score interference

		Total score impacted		
		minimal interference	no interference	Total
Patient's Age	10-20	1	1	2
	21-30	0	16	16
	31-40	9	8	17
	41-50	2	5	7
	51-60	0	3	3
Total		12	33	45

(x^2= 13.480, df =4, p=.009)

Table no 3.3.1: Association between CPIB score and participant's age

From the table, among the total (45) participants, the maximum percentage of participants 26.7 %(12) had minimal interference and 73.3 %(33) had no interferences. The large number of participants had no interference. In addition to age limits maximum participants had age of 31-40 age that means total 17 in number and among them 9 had minimal interference and 8 had no interference. From age 10-20 there were total 2 in number and individual 1 had interference and another had no interference.in 21-30 age limit there were 16 who had no interference of communication.7 were in age of 41-50 from them 2 had minimal interference and 3 were from 51 to 60 age range from them no one had interference.

From the table it is found that p=.009<.05, that show highly significance between participants total CPIB score and age. So there is association between patient's age and CPIB score.

Gender * Total score interference

		Total score impacted		
		minimal interference	no interference	Total
Gender	Male	9	26	35
	Female	3	7	10
Total		12	33	45

(x^2= .073, df=1, p=.78)

Table no 3.3.2: Association between CPIB score and participant's gender

Among all the participants (45) there were 35 male from male participants 9 had minimal interference and 26 had no interference. In total 10 female there were 3 female who had minimal interference and 7 had no interference.

From the table it is found that p=.78<.05, that means there is no significance between participants total CPIB score and gender. So there is no association between patient's gender and CPIB score.

Education level * Total score interference

		Total score impacted		
		minimal interference	no interference	Total
Education level	Illiterate	6	12	18
	Primary level	2	5	7
	S.S.C	1	11	12
	H.S.C	1	2	3
	Graduated	1	0	1
	Post Graduated	1	3	4
	Total	12	33	45

(x^2= 5.308, df=5, p=.379)

Table no 3.3.3: Association between CPIB score and participant's Education

Among total participant large number of people were illiterate (18), from them 6 had interference in communication. Under SSC there were 12 and 7 from primary level among them 3 had interference. From HSC participants (3), 1 had interference, 1 from graduated participants among 4.

From the table it is found that p=.379>.05, so that it indicate no significance between participants total CPIB score and age. So there is no association between patient's Education and CPIB score.

Causes * Total score interference

		Total score impacted		
		minimal interference	no interference	Total
Causes	Fall from height	3	10	13
	RTA (Scarf Injury)	4	7	11
	Diving into shallow water	0	3	3
	Bullet Injury	0	3	3
	Fall of Heavy object over head	2	3	5
	Road accident	3	7	10
	Total	12	33	45

(x^2= 3.308, df=5, p=.635)

Table no 3.3.4: Association between CPIB score and participant's causes

Among all the participants most of the SCI was happed through fall from height (13), among them 3 had minimal interference and 10 had no interference. Total 11 participant had scarf injury, among them 4 had minimal interference and 7 had no interference. 3 participants had CSCI as diving in to shallow water and 3 had bullet injury from them no one found with interference. Total 10 participants had road accident and among them 3 had minimal interferences.

From the table it is found that p=.638>.05, that show no significance between participants total CPIB score and age. So there is no association between patient's causes and CPIB score.

Occupation * Total score interference

		Total score impacted		
		minimal interference	no interference	Total
Occupation	Unemployment	6	24	30
	Business man	4	6	10
	Employment	2	2	4
	House Hold Works	0	1	1
Total		12	33	45

(x^2= 3.306, df=3, p=.381)

Table no 3.3.5: Association between CPIB score and participant's occupation

Among all the participants large number of participants were unemployed (30) from them 6 participant had minimal interference and 24 had no interference in communicative participation. 4 participants were businessman and 2 were employed among who had CSCI.

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From the table it is found that p=.381>.05, that show no significance between participants total CPIB score and age. So there is no association between patient's occupations and CPIB score.

Living area * Total score interference

		Total score interference		
		minimal interference	no interference	Total
Living area	Urban	2	13	15
	village area	10	20	30
Total		12	33	45

(x^2= 2.05, df=1, p=.153)

3.3.6 Association between CPIB score and participant's living area

Among all the participants large number of people almost 30 who were from rural area . From rural area 10 had minimal interference and 20 had no interference. From urban (15), 2 had minimal interference and 13 had no interference.

From the table it is found that p=.153<.05, that means no significance between participants total CPIB score and age. So there is no association between patient's living area and CPIB score.

Association statistics among demographic information and general short from of CPIB score

	Patient's age	Gender	Causes	Education level	Occupation	Living area
Chi-Square	13.489	.073	3.308	5.308	3.306	2.05
df	4	1	5	5	3	1
Asymp. sig	.009	.78	.379	.379	.381	.153

Table no 3.3.7: Association statistics among demographic information and general short from of CPIB score

This table shows that $p<.05$ for only patient's age, and $p>.05$ for gender, education, causes, occupation and living areas.

3.4 General short from of the communicative participation item bank

3.4.1 Participant's total mean and standard deviation.

Number of the Participant (N)	Total Mean	Standard deviation
45	24.18	5.453

Table no3.4.1: Participant's total mean and standard deviation

From the table we can find that among total 45 participants total mean was 24.18 and standard deviation was 5.453.

3.4.2 Distribution of participants' response on items in communicative participation item bank.

Item number	Item	A little (%)	Quite a bit (%)	Very much (%)	Total (%)
01	Does your condition interfere with... …talking with people you know?	4.4	2.2	4.4	11
02	Does your condition interfere with... …communicating when you need to say something quickly?	42.2	17.8	6.7	66.7
03	Does your condition interfere with... …talking with people you do NOT know?	17.8	8.9	2.2	36.1
04	Does your condition interfere with... …communicating when you are out in your community (e.g. errands; appointments)?	3.1	8.9	0	12
05	Does your condition interfere with... …asking questions in a conversation?	33.3	6.7	0	40
06	Does your condition interfere with... …communicating in a small group of people?	37.8	11.1	0	48.9
07	Does your condition interfere with... …having a long conversation with someone you know about a book, movie, show or sports event?	33.3	17.8	2.2	53.3
08	Does your condition interfere with... … giving someone detailed information?	37.8	15.6	0	53.4

09	Does your condition interfere with... …getting your turn in a fast-moving conversation?	42.2	15.6	0	57.8
10	Does your condition interfere with... …trying to persuade a friend or family member to see a different point of view?	13.3	11.1	4.4	28.8

Table no: 3.4.2 Distribution of participants' response on items in communicative participation item bank.

In this table we can show that for individual questions 50% or more participants reported that they had problem in communicating quickly, having long conversation, having detailed information and fast moving questions. More than 40% of the individual with SCI also reported difficulty in communicating with small group of people and asking question in a conversation.

3.3.3 Participants and Total score

Participants	Age	Sex	CPIB Total Score
1	35	Male	27
2	68	Male	18< 20
3	10	Male	30
4	40	Male	28
5	13	Female	18
6	30	Female	17<20
7	16	Female	22
8	19	Male	23
9	70	Male	24
10	21	Male	27
11	14	Female	25
12	30	Male	18<20
13	55	Male	29
14	34	Male	30
15	32	Female	21
16	32	Male	30
17	60	Male	10<20
18	48	Male	24
19	28	Male	29
20	18	Male	25
21	47	Male	26
22	28	Male	19<20
23	50	Male	26
24	30	Female	22

25	26	Female	30
26	47	Male	23
27	26	Male	30
28	18	Male	30
29	72	Male	11<20
30	34	Male	23
31	45	Male	20
32	41	Male	29
33	25	Female	20
34	21	Male	13<20
35	20	Male	20=20
36	19	Male	19<20
37	49	Female	27
38	32	Female	18<20
39	48	Male	30
40	40	Male	28
41	45	Male	18<20
42	37	Male	17<20
43	36	Male	22
44	35	Male	23
45	55	Male	24

Table no: 3.4.3 Participants and Total score

From this table we can see total score of the participants and from all participants, participant no 3, 14, 16,28,27,39 had full score which indicate they had no problem in communication according to CPIB short from. On the other hand participant no 2, 6,12,17,22,29,34,26,38,41,42 Scored low (below 20) in relation to overall score indicating greater difficulties participating in communication situation.

3.4.4 Interferences of communication participation from General Short from of CPIB

Total score interfered

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	minimal interferences	12	26.7	26.7	26.7
	no interferences	33	73.3	73.3	100.0
	Total	45	100.0	100.0	

Table no: 3.4.4 Interferences of communication participation from General Short from of CPIB

From the table 26.7 % have minimal impact on communication according to general short from of CPIB tools. 26.7% people scored under 20 of total. According to the table no 3.4.1 overall group mean score on the General Short From of the CPIB was 24.18, Standard Deviation was 5.453. That suggested overall minimal interferences with communicative participation in the community settings (Baylor et al., 2013). From the table 3.4.2, For the general short from of the CPIB, 50% or more of the sample reported that their health state impacted on their communicative participation to some degree in relation to communicating quickly, having long conversation , having detailed information and fast moving questions. From the individual analysis of the participants, participant no 2, 6,12,17,22,29,34,26,38,41,42 Scored low (below 20) in relation to overall score indicating greater difficulties participating in communication situations (Baylor et al, 2013). More than 40% of the individual with SCI also reported difficulty in communicating with small group of people and asking question in a conversation (Table 3.4.2).

Chapter 4 Discussion

The aim of the study was to examine the nature and extend of communication participation for individual with cervical spinal cord injury patient living in the community. Investigator used General Short from of the communicative participation item bank to find out communication deficits for individual with cervical spinal cord injury living in the community. In a study ward, jarman,cornwell and amsters (2015), used this tool for obtain the communication deficits for individual with cervical spinal cord injury living in the community.

In this study, 45 participants were selected who had CSCI where the majority of participants 77.8% (34) were male and others participants 22.2% (10) were female. Hoque et al. (1995) likewise uncovered in an examination that most extreme members (218) were guys and others (29) were females out of 247 members at CRP, Bangladesh. So CSCI is more typical in male than female.

That study showed that, the maximum number participants, 37.8% (17) were in the age of 31-45 years. In an investigation of Subahan, (2012) she shouted that Age of the most extreme members 28.7 % (23) were of 31-40 years. Moreover, most pervasive 23.80% (19) in the age scope of 21-30 years that was gone from 10 equivalent or more noteworthy than 61 years. In another investigation the normal period of CSCI members were 46 years that going from 17 to 76 (Morpeth and Williams, 2009). The investigation of Levi and Holtz (2006) and Wyndaele (2006) refered to in Johansson and Kerstin (2013) assessed that CSCI influence youthful to moderately aged people with social and word related duties. So CSCI rate found higher among more youthful to middle age individuals.

Education is an important issue for socio-demographic characteristics. From subahan, (2012) among 80 participants less than half 31 were illiterate and 15 were under SSC. In this study from 45 respondents a major group of respondents 40% (18) were founded were illiterate and remaining 26.7% (12) were in under SSC. So the incidence of CSCI is higher among those who are less educated.

In this finding among complete members, the greatest number of respondents 66.7% (30) found were unemployment,22.2% (10) members were businessman, 8.9% (4) were business (government and private employment), 2.2% (1) were house working and 1.20 were in other occupation. Then again, among all out members, the greater part 28.9% (13) members were tumble from tallness, roughly half 24.4%(11) members had scarf injury, 6.7% (3) had shot damage and jumped into shallow water,11.1% (5) had fall overwhelming article overhead and just 22.2% (10) member had road accident. As per Bickenbach et al. (2012), there are three primary driver of horrible spinal cord injury in Bangladesh including street car accidents, falls, and brutality. So it is accepted that agriculturist, day by day work, businessperson and administration holders are the most powerless for CSCI in light of the fact that in these occupation individuals need to head outside, convey overwhelming burdens to greatest tallness as opposed to other occupation.

This study also found that among the participants, the maximum number of respondents 66.6% (30) found was in rural area. It was found 33.3% (15) participants were from urban areas. So , most of the SCI patients were from rural areas.

Association between all demographic information and score of general short from of CPIB were found. From them association between age and total score were significant. For age p=.009, (<.05), for gender P=.78, (>.05), for education p=.379, (>.05), for causes P=.653, (>.05), for occupation P=.381, (>.05), for living area P=.153, (>.05). So there is very strongly significance between general short from of CPIB and all demographic areas.

According to ward et al. (2015) 29% face problem during communicating with known people , from them 50 % faces problem during communicating quickly, 36% have problem in communicating with unknown people, 36% faces problem when they are in out of community ,21% have problem in asking questions, 29% have problem in talking with a small group of people, 50% faces problem in long conversations, 35% faces problem in giving detail information , 36% faces problem in fast moving questions ,43% faces problem with family members and friends. In relation to in this study, from CPIB question bank found that among the entire participants total 11% face problem during communicating with known people , from them 66.7 % faces problem during communicating quickly, 36.1% have problem in communicating with unknown people, 12% faces problem when

they are in out of community ,40 % have problem in asking questions, 48.9% have problem in talking with a small group of people, 53.3% faces problem in long conversations, 53.4% faces problem in giving detail information , 57.8% faces problem in fast moving questions ,28.8% faces problem with family members and friends.

According to ward et al. (2015), group mean of the general short from of the CPIB was 25.15 and standard deviation was 5.79 and in this study can found that among total 45 participants total mean was 24.18 and standard deviation was 5.453. That suggested overall minimal interferences with communicative participation in the community settings (Baylor et al., 2013).

From the table 3.4.2, For the general short from of the CPIB, 50% or more of the sample reported that their health state impacted on their communicative participation to some degree in relation to communicating quickly, having long conversation , having detailed information and fast moving questions. From the individual analysis of the participants, participant no 2, 6,12,17,22,29,34,26,38,41,42 that means 26.7 % of total participants Scored low (below 20) in relation to overall score indicating greater difficulties participating in communication situations .More than 40% of the individual with SCI also reported difficulty in communicating with small group of people and asking question in a conversation (Table 3.4.2). In the study of ward et al, (2015) we found that 50% sample reported they face problem in communicating quickly and having long conversation. From individual analysis showed that 6, 7, 10 had scored low that means below 20 which indicate greater difficulties participating in communication situations (Baylor et al. 2013)

The associate additionally demonstrated constrained effect on informative cooperation on the CPIB device. (Tamplin et al. 2011, 2014). The current bigger gathering information would subsequently seem to help these prior investigations and propose that the minimal changes to voice and speech experienced by most of members make little impedance on open interest in life jobs and circumstances in a network setting (Baylor et al. 2013). MacBean et al. (2013) additionally noted negligible effect on movement, investment, and misery levels for one of the two members on the Dysphonia segment of the Therapy Outcome Measurement Scale over a year time period post injury. Comparable issues were also identified on the CPIB tool with half of the members revealing that their wellbeing

state interferes with communicating quickly and having long conversations.(ward et al. 2015)

Chapter 5 Limitations

Even though of investigator's best effort of research, it was not completely free from limitations exactly. There were some situational barriers while considering the best result of the research.

- ✓ Investigator collected data from CRP. So investigator collected data through phone call. So there was a big limitation in collecting data through phone call. Data collection was performed by investigator though most of the sample was not feel free to communicate in phone call. And it was very costly to collect the data through phone calls.
- ✓ Most of the sample didn't understand all questions so investigator think there it would be better if the data were collected through interviewing or other face to face ways.
- ✓ As data were collected through phone calls there may be differ in results. However in most cases participants avoided negative answers but there were actually problem in there voice quality and communication areas.
- ✓ In some cases, it was difficult to make them understood about speech problems and communication problems some people still don't know about speech and language therapy.
- ✓ Time and resources were limited. For inadequate time and resource the knowledge and area of the study could be limited
- ✓ Normally in study the sample size was very large but the study has done within a very small group so the way incorrect rating may occur.
- ✓ Sampling procedure were not randomized
- ✓ There were very limited literature found on CSCI and SLT communication. Information was collected through books; website and journal so as relevant topic were rare. It was hard to find collection tool for study. This tool was collected from an article, so it may not entirely standard.

Chapter 6 Recommendations

This was the first primary study on Communication of Cervical spinal cord injured patient in Bangladesh. There are some recommendations:

- Investigator found minimal impact in communication among patient with CSCI who were discharged from CRP in 2015, 2016, 2017. Further study can be done is clinical CSCI patient with the same objects.
- The study was done within a short period of time and only 45 participants were selected to conduct the whole study. It was a small number of participants to conduct a survey to find out impacts on communication participation on CSCI due to lack of a number of the participants. So the external validity of the study decreased and further study can be conducted with a wide range and large participant size.
- Communication is a broad area. Investigator only did and study on participation of communication of CSCI patient. So other areas of communication need to find out for CSCI patient and further study can be done.
- Further study may done on role of SLT on CSCI patient, CSCI patient's perception and attitude towards SLT, Speech and voice criteria of CSCI patients, dysarthria and dysphagia among CSCI patient and cognition and so on.

Chapter 7 Conclusion

The study covers that despite the fact that discourse and communication participation deficits exist following cervical SCI, these are typically mild and will have minimal impact on activity limitation, support Limitations, and pain for some individual turn to living in the community. However, variety between members was available, with a couple of people announcing more prominent difficulties identifying with correspondence movement and interest. It should be perceived that a few people will encounter more noteworthy effects to correspondence capacity and this thus may impact on their reintegration within the community. Decreased correspondence capacity may influence an individual's capacity to reconnect with family and companions, return to work, and participate in social events. A service display which includes the checking of people on return to the community could be valuable to help identify the subset of people who could benefit from additional support and intervention relating to communication change following SCI. As a huge extent of people post-SCI are youthful, released into the network sooner than before (New et al. 2011), and liable to live for an extensive stretch of time, this clinical gathering may benefit from intermittent audit and access to transitional and network recovery administrations to help advance and keep up their working inside the network (Cox et al. 2001, Kendall et al. 2003).

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Annexures

Annexures-1(A) (Bangla questionnaire)

The Communicative Participation Item Bank – General Short Form

Demographic information

নামঃ **লিঙ্গঃ**

ঠিকানাঃ **পেশাঃ**

শিক্ষাঃ **কারনঃ**

মোবাইলঃ **সার্জারি সময়ঃ**

	একেবারেই না (৩)	অল্প (২)	প্রায়ই (১)	খুব বেশি (০)
১। আপনার এই অবস্থার জন্য, আপনি কি আপনার পরিচিত মানুষের সাথে কথা বলতে কোনো সমস্যাবোধ করেন ?				
২। আপনার এই অবস্থার জন্য, আপনি কি দ্রুত কথা বলতে সমস্যাবোধ করেন?				
৩। আপনার এই অবস্থার জন্য, আপনি কি আপনার অপরিচিত মানুষের সাথে কথা বলতে কোনো সমস্যাবোধ করেন ?				
৪। আপনার এই অবস্থার জন্য, আপনি কি আপনার কমিউনিটির বাহিরে থাকলে কোনো সমস্যাবোধ করেন? যেমন ঃ বাজারে অথবা অন্যকোথাও				
৫। আপনার এই অবস্থার জন্য, আপনি কি যেকোনো ধরনের কথোপকথন এ প্রশ্ন করতে সমস্যাবোধ করেন ?				
৬। আপনার এই সমস্যার জন্য আপনি কি অল্প কিছু মানুষের সাথে একত্রে কথা বলতে সমস্যাবোধ করেন?				

৭।আপনার এই অবস্থার জন্য, আপনি কি দীর্ঘ সময়ের কথোপকথনে যেমন কোনো বই, খেলা,খবর ইত্যাদি বিষয়ে সমস্যাবোধ করেন?				
৮।আপনার এই অবস্থার জন্য, আপনি কি কাউকে কোনো বিস্তারিত তথ্যাদি দিতে সমস্যাবোধ করেন?				
৯। আপনার এই অবস্থার জন্য, দ্রুত কোনো কথোপকথনে যুক্ত হতে সমস্যাবোধ করেন?				
১০। আপনার এই অবস্থার জন্য আপনার কোনো বন্ধু বা পরিবারের সদস্য আপনাকে কি অন্য ভাবে দেখে?				

Annexures-1(B) (English questionnaire)

The Communicative Participation Item Bank – General Short Form

Demographic information

Name: _____ Age:_____Sex:M/F

Adress_____ Job:_____

Education:_____ Cause_____

Mobile no:_____Surgery/Date:_____

	Not at all (3)	A little (2)	Quite a bit (1)	Very much (0)
1. Does your condition interfere with... …talking with people you know?				
2. Does your condition interfere with... …communicating when you need to say something quickly?				
3. Does your condition interfere with... …talking with people you do NOT know?				
4. Does your condition interfere with... …communicating when you are out in your community (e.g. errands; appointments)?				
5. Does your condition interfere with... …asking questions in a conversation?				
6. Does your condition interfere with... …communicating in a small group of people?				
7. Does your condition interfere with... …having a long conversation with someone you know about a book, movie, show or sports event?				

8. Does your condition interfere with... … giving someone DETAILED information?				
9. Does your condition interfere with... …getting your turn in a fast-moving conversation?				
10. Does your condition interfere with... …trying to persuade a friend or family member to see a different point of view?				

Annexures-2 (A)

Permission letter from BHPI

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 ঃ ১৪.১০.২০১৮

প্রতি
হেড অব মেডিকেল সার্ভিসেস উইং
সিআরপি, সাভার, ঢাকা।

বিষয় ঃ রিসার্চ প্রজেক্ট এর জন্য আপনার প্রতিষ্ঠান সফর ও তথ্য সংগ্রহ প্রসঙ্গে।

জনাব,

বিএইচপিআই'র বিএসসি ইন স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপি কোর্সের ৪র্থ বর্ষের ছাত্রী তাজমিনা ইসলাম তিথি তার রিসার্চ সংক্রান্ত কাজে তথ্য সংগ্রহের জন্য আগামী ১৫.১০.২০১৮ তারিখ থেকে ৩১.১২.২০১৮ তারিখ পর্যন্ত সময়ে আপনার নিকট প্রেরন করা হলো।

তার রিসার্চের বিষয় হলো- " Participation of communication for individual with cervical spinal cord injury patient living in the community ."

তাই তাকে সার্বিক সহযোগীতা প্রদানের জন্য অনুরোধ করছি।

ধন্যবাদান্তে

মোঃ সাজ্জাদ হোসেন
বিভাগীয় প্রধান
এসএলটি, বিএইচপিআই।

Bangladesh Health Professions Institute
CRP, Chapain, Savar, Dhaka-1343

Annexure-3 (A)

Consent from Bangla

সম্মতি পত্র

এই গবেষণা স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপি বিভাগের অধ্যয়নের একটি অংশ এবং গবেষকের নাম তাজমিনা ইসলাম তিথি। তিনি বাংলাদেশ হেলথ প্রফেশনস ইন্সটিটিউটের বি এস সি ইন স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপি বিভাগের ৪র্থ বর্ষের অধ্যয়নরত একজন ছাত্রী এবং তার গবেষণার বিষয় **"সার্ভিকাল মেরুরজ্জে আঘাতপ্রাপ্ত রোগীদের সমাজে যোগাযোগে অংশগ্রহন "।**

এই গবেষণার আমি ---------- একজন অংশগ্রহণকারী এবং আমি এই গবেষণার উদ্দেশ্য পরিষ্কার ভাবে জানতে পেরেছি। আমি যে কোন সময় এবং গবেষণার যে কোন পর্যায়ে আমার অংশ গ্রহণ প্রত্যাহার করতে পারি। এই জন্য আমি কারো কাছে জবাব দিহি করতে বাধ্য থাকব না। আমি অবগত হয়েছি যে, এই গবেষণায় অংশ গ্রহণ করার ফলে বর্তমান ও ভবিষ্যতে তা আমার ও অংশ গ্রহণ কারীদের কোন প্রকার প্রভাব ফেলবে না।

এই গবেষনার সাক্ষাতকারের সকল তথ্য যেগুলো গবেষণার কাজে ব্যবহৃত হবে,সেগুলো সম্পুর্ণভাবে গোপনীয় থাকবে। শুধুমাত্র গবেষক এ তথ্য সমূহের প্রবেশাধিকার পাবে। গবেষকের নাম, পরিচয় ছাপা হবে না।

আমি গবেষণার পদ্ধতি এবং জটিলতা অথবা সুফলের ব্যপারে বা গবেষণা সংক্রান্ত যেকোনো প্রশ্নের উত্তর দানের জন্য এ গবেষনার তত্ত্বাবধায়কের সহিত আলোচনা করতে পারব।

আমি উপরোক্ত সকল তথ্য গুলো সম্পর্কে জানি এবং আমি এই গবেষণায় অংশ গ্রহণে সম্মতি জ্ঞাপন করছি।

অংশগ্রহণকারীর স্বাক্ষর/ টিপসই:	তারিখ:
গবেষকের স্বাক্ষর:	তারিখ:
স্বাক্ষ্যপ্রদানকারীর স্বাক্ষর/টিপসই:	তারিখ:

Annexure-3 (B)

Consent from English

Consent form

This research is part of Speech & Language Therapy course and the name of the researcher is Tazmina Islam Tithi. She is a 3rd year student of B. Sc in Speech & Language Therapy in Bangladesh Health Professions Institute (BHPI). The study will entitle as **"Participation of communication for individual with Cervical Spinal cord injury patient living in the community".**

In this study I …….....a participant and I have been clearly informed about the purpose of the study. I am willingly participating in this study. I will have the right to withdraw from this study at any stage and I will not be bounded to answer to anybody. I understand that there will be no impact receiving treatment at present or in the future by participating in this study.

I am also informed that, all the information will collect from the interview that use in the study will be kept safe and maintain confidentiality. Only the researcher will be eligible to access in the information for his publication of the research result. My name and address will not published anywhere in this study. I can consult with the researcher and the research supervisor about the research process or get answers to any questions regarding the research project. I have been informed about the above-mentioned information and I am willing to participate in the study with consent.

Signature of the study Participate:	Date:
Signature of the Researcher:	Date:
Signature of the witness	Date: