

# Participation In Communication For The Individuals With Cervical Spinal Cord Injury Patients Living In The Community

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**Abstract:** Lack of communication participation have a great negative impact on the quality of life. Patients with cervical SCI face voice and speech reduced vocal loudness, reduce sound prosody, hard breathlessness, and hard roughness which ultimately affects communication skills. SCI is a life-threatening lifelong disability so the proper monitoring of communication function may help to identify those peoples who could benefit from the intervention during community life. To determine the nature and extent of communication participation for the individual with CSCI living in the community. The study was a cross-sectional prospective survey method among 45 samples who live in Savar area by convenience sampling. The General short form of Communication Participation Item Bank (CPIB) tools used for data collection through face-to-face interviews and phone calls. Descriptive Statistical analysis for data analysis. The researcher found CSCI is more typical in males than females and resulted in overall minimal interferences with communicative participation among patients with CSCI during communicating quickly, having long conversations, having detailed information, and having fast-moving questions. The Individual analysis of participants also showed greater difficulties in communication participation. Individuals with CSCI notice and experience meaningful changes in communication participation after CSCI with impacts on daily living and social participation.

**Keywords:** Communication, Participation, Cervical Spinal Cord Injury, Community.

## 1. Introduction

Spinal cord injury (SCI) has devastating concerns for the physical, social, and vocational well-being of individuals [1]. CSCI has clinical problems and they are motor paralysis, sensory loss, respiratory dysfunction, impaired temperature control, impaired communication, spasticity, bowel and bladder dysfunction, and sexual dysfunction [1]. The problem in the respiratory function causes SCI patients to have lower volumes, which impact on speech [2]. Patients with cervical SCI face voice and speech reduced vocal loudness, reduce sound prosody, hard breathlessness, and hard roughness [3]. According to Cornwell et al. (2014), this speech and voice problem may have a complete effect on life [2]. On the other hand their physical disability, they can face many challenges in their living situation, lifestyle, and relationship during both the recovery period and return to the community [4].

The ability to communicate effectively has been identified as one of the key facilitators for adjustment and community reintegration following an SCI because it makes changes in the health state considered more holistically including the wider impact on daily functioning and life participation [5]. Lack of communication participation have a great negative impact on the quality of life and it is a life-threatening lifelong disability that causes the problem in day-to-day life

along with patients and his/her family [6]. SCI has been defined as a major health problem in Bangladesh because of high mobility and morbidity problem and there are Traffic accidents, fall from height, and violence are the main three causes of traumatic CSCI in Bangladesh [7].

As Speech & Language therapy works for communication problems so the proper monitoring of communication function may help to identify those peoples who could benefit from the intervention during community life. So the researcher aimed to determine the nature and extent of communication participation for the individual with CSCI living in the community with the socio-demographic characteristics, level of communicative participation, and a view of the impact of communication participation in the community.

## 2. Materials and Methods

The study was a cross-sectional prospective survey method among 45 samples who live in Savar area by convenience sampling. The Communication Participation Item Bank (CPIB)– General short form of the questionnaire used that contains 10 items to know the participation of communication for the individual with CSCI living in the community. The data were collected through face-to-face interviews and phone calls. Descriptive Statistical Analysis

and Statistical Package for the Social Sciences, version-22 (SPSS22) used for data analysis. Inclusion criteria were Patients with CSCI who had a lesion in cervical vertebrae level C1-C7 (both acute and chronic phase) living in the community. People with CSCI with a history of any neurological condition (e.g.: Traumatic brain injury, Stroke) and who had speech therapy before were excluded from the study.

### 3. Result & Discussion

A total of 45 CSCI patients most of them were male. The maximum number of participants, 37.8% was the age of 31-40 years. In another investigation, the normal period of CSCI members was 46 years that going from 17 to 76 years [8]. The investigation of Levi and Holtz (2006) and Wyndaele (2006) referred to in Johansson and Kerstin (2013) assessed that CSCI influences youthful to moderately aged people with social and work-related duties [9]. So CSCI rate was found higher among more youthful to middle age individuals.

Among the total participants, more than half 28.9% of participants were fall from height, approximately half 24.4 % of the participants had scarf injuries, and only 22.2% of the participant had road accidents. Bickenbach et al. (2012), there are three primary causes of horrible spinal cord injury in Bangladesh including street car accidents, falls, and brutality [7]. The maximum number of respondents 66.7% found were unemployed and most of them 66.6% came from rural areas.

3.1 Table 1 Demographic Information of the Participants

Variables	Percentage (%)
<b>Gender</b>	
Male	74.5%
Female	21.3%
<b>Age</b>	
10-20 years	4.4%
21-30 years	35.6%
31-40 years.	37.8%
41-50 years	15.8%
51 years and above	6.7%
<b>Causes</b>	
Fall from height	28.9%
Scarf injury	24.4 %
Bullet injury and diving into shallow water	6.7%
Fall heavy object overhead	11.1%
Road accident.	22.2%
<b>Education Level</b>	
Illiterate	40%.
Primary education level	15.5%
Passed SSC	26.7%
Passed HSC level	6.7%
Completed the graduation	2.2%
Post-graduation	8.9%
<b>Occupation</b>	
Unemployment	66.7%
Businessman	22.2%
Government and private job	8.9%
Household worker	2.2%
Other occupation	1.20
<b>Living area</b>	
Rural area	66.6%
Urban area	33.3%

### General short form of the communicative participation item bank

3.2 Table 2: Participant's total mean and standard deviation

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

From Table 2, we can find that among the total of 45 participants, the total mean was 24.18, and the standard deviation was 5.453.

3.3 Table 3: Distribution of participants' responses on items in the communicative participation item bank.

SL	Item	A little (%)	Quite abit (%)	Very much (%)	Total (%)
01	Does your condition interfere with.... <b>talking with people you know?</b>	4.4	2.2	4.4	11
02	Does your condition interfere with... <b>communicating when you need to say something quickly?</b>	42.2	17.8	6.7	66.7
03	Does your condition interfere with... <b>talking with people you do NOT know?</b>	17.8	8.9	2.2	36.1
04	Does your condition interfere with..... <b>communicating when you are out in your community (e.g. errands; appointments)?</b>	3.1	8.9	0	12
05	Does your condition interfere with..... <b>asking questions in a conversation?</b>	33.3	6.7	0	40
06	Does your condition interfere with..... <b>communicating in a small group of people?</b>	37.8	11.1	0	48.9
07	Does your condition interfere with..... <b>having a long conversation with someone you know about a book, movie, show or sports event?</b>	33.3	17.8	2.2	53.3
08	Does your condition interfere with... .. <b>giving someone detailed information?</b>	37.8	15.6	0	53.4
09	Does your condition interfere with..... <b>getting your turn in a fast-moving Conversation?</b>	42.2	15.6	0	57.8
10	Does your condition interfere with..... <b>trying to persuade a friend or family member to see a different point of view?</b>	13.3	11.1	4.4	28.8

In this table we can show that for individual questions 50% or more participants reported that they had a problem communicating quickly, having long conversations, having detailed information, and having fast-moving questions. More than 40% of the individual with SCI also reported difficulty in communicating with a small group of people and asking the question in a conversation. In the study of Ward et al, (2015) we found that 50% sample reported they

face problems in communicating quickly and having long conversations [10].

**3.4 Table 4: Participants and Total Score**

SL	Age (Year)	Sex	Total CPIB 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

From the individual analysis of the total participants, participants no 3, 14, and 16, 28, 27, 39 had a full score which indicates they had no problem in communication according to CPIB short form. On the other hand, participants no 2, 6, 12, 17, 22, 29, 34, 26, 38, 41, and 42 scored low (below 20) in relation to their overall score indicating greater difficulties participating in communication situations. From the individual analysis of another research showed greater difficulties in participating in communication situations [11].

**3.5 Table 5: Interferences of communication participation from General Short form of CPIB**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Minimal interferences	12	26.7	26.7
	No interferences	33	73.3	100.0
	Total	45	100.0	100.0

From Table 5, 26.7 % have minimal impact on communication according to the general short form of CPIB tools which means 26.7% of people scored under 20 of the total. According to the study overall group mean score on the General Short Form of the CPIB was 24.18, Standard Deviation was 5.453. So the study suggested overall minimal interferences with communicative participation in community settings. In another study, Comparable issues were also identified on the CPIB tool with half of the members revealing that their well-being state interferes with communicating quickly and having long conversations [10]. According to Ward et al. (2015), the group mean of the general short form of the CPIB was 25.15, and the standard deviation was 5.79 [10]. This study can find that among a total of 45 participants, the total mean was 24.18, and the standard deviation was 5.453. That suggested overall minimal interferences with communicative participation in the community settings.

#### 4. Conclusion

This was the first primary study on the Communication of Cervical spinal cord injured patients in Bangladesh. The researcher found overall minimal interferences with communicative participation among patients with CSCI who were discharged from CRP in 2015, 2016, and 2017. Therefore, it's concluded that Individuals with cervical spinal cord injury notice and experience meaningful changes in communication participation after CSCI with impacts on daily living and social participation.

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