

‘Quality of Life’ of Persons with Disability: An Assessment in Selected Flood Prone Areas of Bangladesh

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Abstract

The present study is on “Quality of Life” of person with disabilities living in flood prone areas of Bangladesh. In this aspect the specific objectives have been designed to determine the effects of disaster on physical and psychological health and social relationship between disabilities and community. The study has also assessed the adaptive capacity of persons with disabilities during and post-disaster period and find out the challenges faced by the persons with disabilities during disaster and post disaster that undermining their quality of life. In the determination of quality of life of PWDs in the selected flood prone area in Bangladesh a mixed method incorporating both qualitative and quantitative research approaches was used to conduct this study by using the tools of observation, case study, and face to face semi structured interview, with PWDs in Northern district of Gaibandha. The study shows that out of 110 respondent, nearly 63 per cent required assistance, while over 38 per cent respondent are required partial assistance, and 20 percent are required supervision. The study reveals that more than 9 per cent of the respondents maintains very poor quality of life while 20 per cent are maintaining poor quality of life, nearly 34 per cent respondents are identified their life neither poor or nor good in selected area.

Keywords: Quality of Life, Person with Disabilities, Bangladesh.

1. Introduction

Bangladesh is a country with 164.7 million people and is listed as the 7th most populated and one of the poorest countries in the region. In addition, a structural change is changes in rural Bangladesh have encouraged rapid economic migration with the related complexities of rising urban poverty. The population is working in high risk urban areas for their livelihood (Das, 2011). The frequency and magnitude of disasters in Bangladesh have increased over the last decades. Between 1991 and 2000 about 93 major disasters were recorded in Bangladesh (World Bank, 2010). Geographical location, terrain, dense river networks, and monsoon climate

expose the country to a high level of physical disaster risk and socioeconomic conditions have created a high vulnerability of communities to natural disasters (MoFDM, 2006). Floods, river bank erosion, cyclones, tornadoes, cold waves, arsenic contamination in ground water, water logging, and salinity intrusion have frequently occurred. For these disasters, climate change has been identified as one of the main causes. But the nature, timing, severity, and extent of hazards are not the same in all cases (Nasreen, 2010 & Azad et al., 2013). Because of frequent floods, Bangladesh is projected as the sixth most flood-prone country in the world (UNDP, 2004). It is also evident from several studies (Nasreen, 1998, DMB, 2008; Kumbetoglu & User, 2010 & Azad et al., 2013) that floods are the most significant natural hazard causing immense suffering to a large number of people and damage to properties in Bangladesh.

2. Background of the Research

Bangladesh is one of the most disaster-prone countries in the world due to unique features such as seismic position, vast network of rivers and channels, an enormous discharge of water heavily laden with sediment, a large number of Islands in between the channels, a shallow northern Bay of Bengal and funneling to the coastal area of Bangladesh and strong tidal and wind action which make the country more vulnerable to natural disasters. In the recent decades, the county has already experienced with devastating hazards including flooding, earthquakes, river bank erosion, cold wave, tornados, tidal surges and cyclones (SOD, 2010). Like natural factors, human induced hazards has got a clear concentration in disaster studies due to increasing frequent caused by deforestation, environmental degradation, exploitation of natural resources, frequent out breaks of fires which have further affected the socio-economic conditions. These catastrophic events affect all aspects spectrum in our society and result in a societal crisis. The whole entity of the society like individuals, families, communities, and institutions become disabled. There are limited in their ability to perform normal daily activities, restricted by environmental barriers, prohibited from participating in usual social roles, threatened by personal and financial losses, and subject to a variety of psychological reactions, including fear, helplessness, and loss of confidence (Scaffa, 2003). The diverse group of people like children, women, elderly and people with disabilities has suffered more rather than others. Sullivan and Häkkinen (2006) mentioned that the special needs people are at more risk due to their physical conditions and they are more vulnerable to disasters. The Convention on the Right of the Person with Disabilities (2006) notes that persons with disabilities include those who have physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others. Disability affects physical health, social relationship of people, life in the realms of family, friends, and neighbors, psychological state, and level of independence. However, the people with disabilities require special attention due to their different limitations such as physical, cognition, social and environmental. According to World Report on Disability (2011) 15% of the world’s population have disabilities. Persons with disabilities are more likely to be among the poorest of the poor (Groce et al., 2011). Disability and Extreme Poverty: Recommendations from Practitioners in Bangladesh (2015) show that surveys from Bangladesh range between 1 and 16% of the population having a disability. The Household Income and Expenditure Survey of 2010 shows that 9.1% of the population is disabled. Poor people are more likely to have one or more disabilities and women are 37% more likely than men to have a disability (Tareque et al., 2014).

3. Research Objectives

- To find out the quality of life of Person with Disabilities (PWDs) in the selected flood prone area in Bangladesh.

- To determine the effects of disaster on physical and psychological health of persons with disabilities.
- To identify the effects of disaster on social relationship between disabilities and community.
- To assess the adaptive capacity of persons with disabilities during and post-disaster period.
- To find out the challenges faced by the persons with disabilities during disaster and post disaster that undermines their quality of life.

4. Research Methodology

4.1 Research Design

A mixed method incorporation both qualitative and quantitative research design have been followed for conducting the study, as a combined method is a “legitimate inquiry approach” which provides the sound ideas and knowledge about the population, subject matter and research questions of a study. The triangular method also helps researchers explain how one variable affect another for studying the researcher problem (Creswell, 2008). This methodology was chosen to fulfill the aim of the study as an effective way to collect data. According to Jick (1979) argues that a mixed methods approach of research with the combination of semi structured interview and survey provide a rich and comprehensive result of a research. The purpose of the research is to find out the quality of life of person with disabilities in the selected flood prone area in Bangladesh.

4.2 Sample

The study was conducted at Gaibandha district in Bangladesh. The researchers selected Gaibandha district of Saghatta, Kanchipara, kachua and Gazaria unions. For quantitative study 110 PWDs were interviewed following sample survey tool while for qualitative study 5 case studies and 5 Key Informant Interviews were carried out to explore the nature of vulnerabilities and living standard of the PWDs by using purposive sampling.

4.3 Data Collection

A developed structured and semi structure questionnaire was used after reviewing literature for asking to the respondents. Observation for verifying person with disabilities report on disaster conditions was done by researchers using observation checklist and it was recorded elaborately. The observation notes were completed over long period of time according to the disaster complexity of challenges and presence of potential risk and vulnerabilities for person with disabilities in the selected area. Semi-structured and Key Informant Interview (KII) was used for this study. The researchers also used qualitative methodology and asked pre-set, open-ended questions addressing a variety of issues in relation to adjustment with disaster. It is useful because this technique ensures that the researcher obtained all information required, while at the same time gives the respondents freedom to respond and illustrate concepts.

5. Data Analysis

Data was analyzed case study descriptive, KII descriptive format and with the software named IBM Statistical Package for Social Science (SPSS) Statistics version 20.0. The variables were labeled in a list and a researcher was establishing a computer based data record file. And after calculation; data was presented by using bar graph, pie chart and table by using Microsoft Office Excel 2010.

5.1 Socio-Demographic Characteristics of the Respondents

5.1.1 Age Group

The study shows that major numbers of PWDs are young. Disasters are not only effect on any specific groups all people are also victim to disasters. The pie chart 07 shows, out of 110 respondents a significant number of PWDs 51 per cent were in the young adult group ranging from 19 to 35 years while 37 per cent respondents

were in the group of adult and their age range was 36 to 50 year. While 12 per cent of the respondents were more than 50 years old. This study points out that large number of adult are living with disabilities. Young adult are more vulnerable for any types of disability.

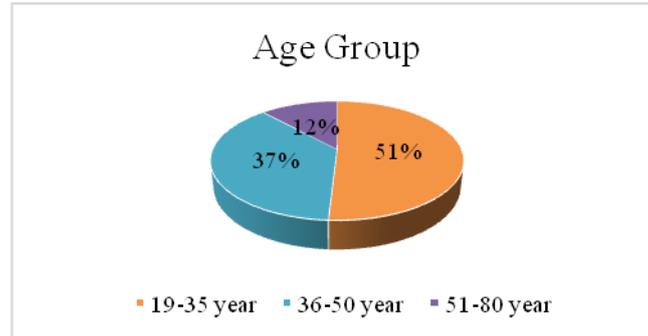


Figure: Age of the respondents

5.1.2 Sex of the Respondents

The study has counted both males and females according to subject matter of study. The figure shows that out of 110 respondents 63 per cent are males and 37 per cent are females. The numbers of males’ respondents are higher than females. It is observed those females are getting less facilities and opportunity in our Bangladeshi socio-cultural aspect.

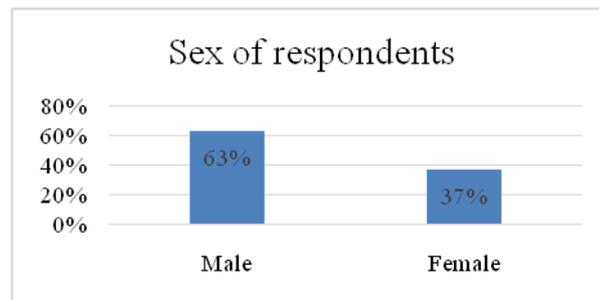


Figure: Sex of the respondents

5.1.3 Level of Education of the Respondents

Education is an important component for improving the respondents the quality of life standard. Education may have impacted on all aspect of human life. The table shows, higher rate of PWDs (more than 36 per cent) have only primary education. But this study mention that significant number of respondent near 42 per cent were illiterate while small number of respondents (more than 5 per cent) have high school level of education.

Table: Level of education of the respondents

	Frequency	Per cent
Illiterate	46	41.8
Primary school	40	36.4
High school	06	5.5
SSC	08	7.3

HSC	08	7.3
Graduation	02	1.8

5.1.4 Types of Disability of the Respondents

Disability depends on physical, cognitive and social development of individual person. Disability can affect all aspect human life. Person with disability (PWDs) vulnerability depends on the during disaster period. The table-4 indicates the peak number of respondents have only physical disability more than 47 per cent while more than 16 per cent have disability in hearing and speech. Moreover, 12 per cent have mental disability, approximately 11 per cent with visual disability and more than 17 per cent have intellectual disability. Multiple types of disability may affect the capacity of PWDs. It is evident that different types of disability make them more vulnerable.

Table: Types of disability of the respondents

Type of disability	Frequency (n=110)	Per cent (%)
Physical disability	52	47.3
Mental disability	09	8.2
Hearing and speech disability	18	16.4
Visual disability	12	10.9
Intellectual disability	19	17.3

5.1.5 Seeking Helps for Transportation and Changing Position During Disaster Period

Transportation is an important issue for functional independence. PWDs have different limitation due to their physical disability. The table indicates that the person with disabilities require necessities help for transportation and require assistance for changing the position during disaster period. The highest number of respondent nearly 63 per cent required assistance out of 110 respondents while over 37 per cent respondents don't seek any assistance during disaster period. PWDs are requiring different types of assistance during disaster and post disaster period.

Table: Percentage of PWDs seeking help for transportation and changing position

Assistance Required	Frequency	Per cent
Yes	69	62.7
No	41	37.3

The figure shows that out of 110 over 38 per cent respondents are required partial assistance while around 11 per cent are not sure to require assistance, 20 percent require supervision and 13.6 per cent are fully dependent on the assistance of family, carer and community. Beside this, more than 17 per cent people with disabilities are fully independent for transportation and changing the position during disaster period.

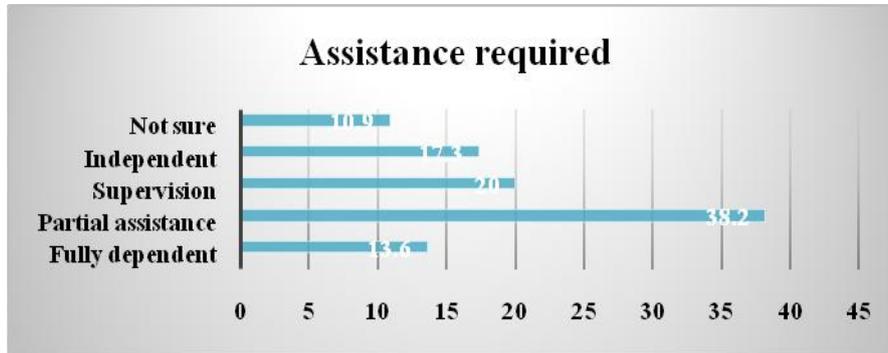


Figure: Nature assistances required by PWDs

5.1.6 Income of the Respondents

The table shows about monthly income of PWDs. It is evident from this study that the male PWDs have more income capacity rather than female PWDs. It is found that PWDs have difference range of financial capacity. Fifty four (54) per cent female PWDs can able to earn only BDT 3000 while 46 per cent male PWDs has monthly income only BDT 3000. This table also shows that approximately 68 per cent male and more than 32 percent female PWDs have monthly income from BDT 3001 to 6000, whereas approximately 79 per cent male and over 22 per cent of female PWDs have monthly income BDT 6001 to 9000. The data indicate that out of 11 male respondent have BDT 9001-12000 beside this only 01 male respondent have BDT 12000-15000 monthly income. The female have less scope for involving income generating activities in rural area rather than urban area female.

Table: Monthly income of PWDs

Income (BDT)	Sex	
	Male (%)	Female (%)
0-3,000	46 (23)	54 (27)
3,001-6,000	67.6 (23)	32 (11)
6,001-9,000	78.6 (11)	21.4 (03)
9,001-12,000	100 (11)	0 (0)
12,000-15,000	100 (01)	0 (0)
Total	62.7	37.3

5.2 Overall Rate of Quality of Life (QOL)

QOL depends on the different aspects of physical, psychological, social and environmental. PWDs are living with different poor QOL due to their physical and cognitive limitation. The following table identified that respondents indicate more than 9 per cent have very poor quality of life while the quality of life 20 per cent are poor. Nearly 34 per cent respondents identified neither poor or nor good QOL during in the selected flood prone area.

Table: Overall QOL of PWDs

	Frequency	Per cent
Very poor	10	9.1

Poor	22	20.0
Neither poor nor good	37	33.6
Good	38	34.5
Very good	03	2.7

5.3 Satisfaction about Health

Satisfaction depends on the service getting opportunity and scope of health services. PWDs have limited scope health due the different environment barrier, negative attitude and physical problem. The following table reveals that most of respondent out of 110 more than 37 per cent neither poor nor good satisfaction about health services. There are 20 per cent respondent have poor satisfaction about health. On the other hand, approximately 6 per cent have very poor satisfaction without health. There are significant number (approximately 35 per cent) have good satisfaction about their health. Only approximately 3 per cent respondent are satisfied with their present health condition. It is seen that health wellbeing is very essential component for adjustment with the catastrophic situations.

Table: Satisfaction rating about health of PWDs

	Frequency	Per cent
Very poor	06	5.5
Poor	22	20
Neither poor nor good	41	37.3
Good	38	34.5
Very good	03	2.7

5.3.1 Access to Community and Health Services

The following table reveals that the access to community and health services is very important to ensure quality of life. It is evident from the study the large numbers of respondents (approximately 78 per cent) have access to health services and community while around 23 per cent of the respondents do not get any types of community and health services during disaster and post disaster situation.

Table: Access of PWDs to community and health services

	Frequency	Percent
Yes	85	77.3
No	25	22.7
Total	110	100

5.3.2 Available Services for PWDs in the Community

The study shows that PWDs have limited scope of health service in the community area. They are facing lots of challenges due to their physical problems and environmental barriers. The PWDs were getting different services from their community. The graph indicates that 34 per cent of PWDs are getting general health service. Twenty seven (27) per cent of PWDs are taking medical services while about 6 per cent are seeking cardiac service and 3 per cent are for rehabilitation. The nature is that person with disability also seek other services like maternity, community meetings and election opportunity. It is evident that there is major number of respondent did not have any opportunity from the community during disaster and post disaster situation. They are deprived from the health services due to negative attitudes of the community people and lack of opportunity of health services during catastrophic situation.

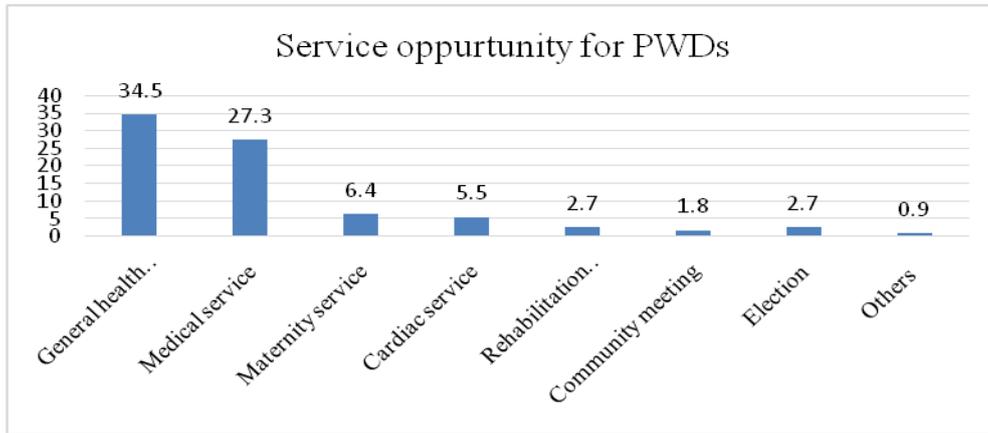


Figure: Service opportunity for PWDs

5.4 Seeking Health Supports During Disaster and Post Disaster Period

The table shows that PWDs have require health support approximately 75 per cent (n=82) during disaster and post disaster situation. There is significant number of respondent do not require nearly 26 per cent (n=28) any health support during disaster and post disaster situation.

Table: Health support at working place

	Frequency	Percent
Yes	82	74.5
No	28	25.5

5.5 Extended of Capabilities of Health Support During Disaster and Post Disaster Situation

Capabilities depend on different source of capacity and resources. Health capacity is an essential issue to minimize the health hazard and vulnerabilities. The following table express that the PWDs require extended of capabilities of health support. According to opinions poles out of 69 male respondents, the health support of over 17 per cent is neither poor nor good while in accordance with about 36 per cent of female’s health support situation is the same. Female are also maintain poor health supporting situation conditions. Accordance with over 27 per cent of male and more than more than 35 per cent of female, their health support capabilities are poor while nearly 8 per cent of male and approximately 10 per cent of females are facing very poor extend of capabilities to health supporting condition respectively. Besides these natures, in terms of age the elderly people are living with very poor healthy supporting conditions. Thus, it is evident that elderly PWDs have not enough facilities and access to health capabilities to recover from the disaster situation. And they are suffering a lot compare to other age cohort and general people.

Table: Capabilities of health support during disaster and post disaster situation

	Very poor	Poor	Neither poor nor good	Good	Very good
Sex					
Male	7.8% (04)	27.5%(14)	17.6% (09)	33.3%(17)	13.7% (07)
Female	9.7% (03)	35.5%(11)	35.5% (11)	16.1%(05)	3.2% (01)
Age range					
19-35	4.7% (02)	34.9%(15)	20.9% (09)	27.9%(12)	11.6% (05)

36-50	9.7% (03)	22.6%(07)	35.5% (11)	25.8%(08)	6.5% (02)
51-80	25% (02)	37.5%(03)	0.0% (00)	25%(02)	12.5% (01)

5.5.1 Impacts of Disaster on Social Relation

Disaster has different impacts on all aspect of human life. There is no exception on human life. The table elucidates that according to about 80 per cent of the respondents out of 69, disasters have impacted their social life whereas out of 41 females’ respondents approximately 81 per cent notify that social life and relationship within community have been greatly affected by disasters over the decades. The rest of the respondents note that disaster had no impact upon them.

Table: Impact of disaster on social relationship

	Yes	No	Total
Male	79.7%	20.3%	100%
Female	80.5%	19.5%	100%

5.5.2 Interaction of PWDs with Community Member

Interaction is essential part to know the disaster warning information. Male respondent are more interaction with the community rather than female respondent during disaster. The table 27 shows that nearly 77 per cent (n=53) male PWDs have interaction with community member. On the other hand, more than 23 per cent (n=16) have not any interaction with the community member. The table also identified that approximately 76 (n=31) per cent female have some interaction. Beside this more than 24 per cent (n=10) female has not any interaction with the community member. Female PWDs are step behind in our society.

Table: Interaction of PWDs with community member

	Yes	No
Male	76.8%	23.2%
Female	75.6%	24.4%

5.5.3 Methods Followed To Interact With Each Other

PWDs are using different types of methods during disaster and post disaster situation. The following table notes that PWDs are using different types of interaction methods during disaster and post disaster situation. Male respondent are using more than 62 per cent verbal communication, 17 per cent non-verbal communication, 13 per cent sign language and approximately 6 per cent others methods of communication. Beside this female respondent are using more than 61 per cent verbal communication, more than 16 per cent non-verbal communication, more than 16 per cent sign language and nearly 7 per cent others methods of communication.

Table: Methods of interaction

	Verbal	Non-verbal	Sign language	Others
Male	64.2% (34)	17% (09)	13.2% (07)	5.7% (03)
Female	61.3% (19)	16.1% (05)	16.1% (05)	6.5% (02)

5.5.4 Required Supports from the Community

PWDs have different shorts of limitations. They require essential services from the community area. The bar graph (figure-11) indicates that 92.8 per cent male PWDs were requiring support and more than 7 per cent were not requiring support from the community. They are also mentioned that 97.6 per cent female respondent

require support from the community people and more than 2 per cent female did not required any support. The study identifies that female required more assistance rather than male PWDs.

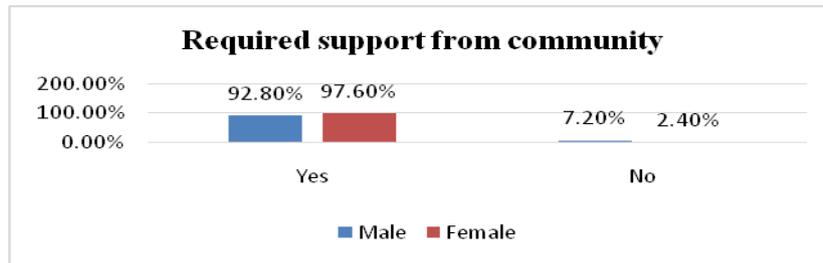


Figure: Required support from community

5.5.5 Types of assistances required by PWDs during disaster

The table-30 predicts that the person with disabilities are seeking different types of assistances which include social, transportation, vehicle, economic and mental support. It is observed that nearly 35 per cent of male PWDs received social services while females are slightly high which is around 43 per cent out of 41. Besides this, it is found that the PWDs have more attention to economic supports. Around 29 per cent of males out of 69 and 35 percent of females out of 41 seek more economic assistance respectively in comparison with transportation, mental and vehicle like, nearly 8 per cent of male respondents and 5 per cent females give less importance on mental support. Thus, it is evident that social and economic needs are always essential to survive in the society and community supports are always being gotten more concern.

Table: Types of assistances

	Social	Transportation	Vehicle	Economic	Mental
Male	34.8% (23)	19.7% (13)	9.1% (06)	28.8% (19)	7.6% (05)
Female	42.5% (17)	7.5% (03)	10% (04)	35% (14)	5% (02)

5.6 Friends/Family Members of Pwds Cooperating In Case of Emergencies

Human is a social being. Human can't live alone. Friendly cooperation is vital for PWDs during catastrophic situation. The table shows that approximately 96 per cent male PWDs have cooperative relation with friends. On the other hand more than 4 per cent have not any cooperation with friends. The table also identified that nearly 81 per cent female have cooperation with friends and approximately 20 per cent female has not any cooperation with friends. If we can ensure the friendly helping hand for PWDs that will increase the capacity of vulnerable group.

Table: Friends/family members of PWDs cooperating in case of emergencies

	Yes	No	Total
Male	95.7%	4.3%	100%
Female	80.5%	19.5%	100%

5.6.1 Facing challenges to enjoy freedom in family

People with disabilities are facing challenges due to mobility problem and inaccessible environment. They are fronting lot of challenges due to transportation problem. The following table points out that person with disabilities (PWDs) are facing different dimensional challenges to enjoy freedom in their life. It is evident that female are facing lot of challenges rather than male respondents. Female respondents point out which is nearly

Mir Hasan Shakil Mahmud & Md. Abul Kalam Azad

5 per cent very poor to face challenges to enjoy freedom in family while over 10 per cent male respondents are facing same situation. On the other, it is evident that nearly 19 per cent males are poor where over 24 per cent are same situational condition. According to the age group, elderly respondents are living with better situation rather than other age group. 51 to 80 years old which is over 23 per cent very good while 36 to 50 years old which is approximately 10 per cent PWDs have good situation to recovery from challenges to enjoy freedom in family. Elderly PWDs have better situation to enjoy freedom in family. We need to strengthen family support and assistance to minimize challenges to enjoy freedom to recovery from the catastrophic situation.

Table: Facing challenges to enjoy freedom in family

	Very poor	Poor	Neither poor nor good	Good	Very good
Sex					
Male	10.1%(07)	18.8%(13)	40.6%(28)	15.9%(11)	14.5%(10)
Female	4.9%(02)	24.4%(10)	26.8%(11)	24.4%(10)	19.5%(08)
Age range					
19-35	8.9%(05)	19.6%(11)	33.9%(19)	17.9%(10)	19.6%(11)
36-50	9.8%(04)	24.4%(10)	36.6%(15)	19.5%(08)	9.8%(04)
51-80	0 % (0)	15.4% (20)	38.5% (05)	23.1%(03)	23.1%(03)

5.6.2 Association between Different Domains According To Visual Analog Scale on Their Age

The following table indicates that visual analog scale is identify [0= very poor, 1(1-3) = Poor, 2 (4-6) =Good and 3 (7-10) =Very good]. Table means scores were organized the items into facets representing domains covered by the questionnaire (physical health, psychological and emotional wellbeing, social relationship, independence, control over life and freedom, leisure and activities, and financial circumstances). This has presented that overall situation according to the age range.

Table shows that the association between different domain and VAS scale presented in table. There is a significant association ($P < 0.093$) between physical health QOL and age range for person with disabilities and

χ^2 value is 7.95. In addition psychological and emotional wellbeing ($P < 0.124$) ($\chi^2 = 7.22$) and social

relationship ($P < 0.146$) ($\chi^2 = 6.81$) are not associated with the overall QOL. This may be because; these domain factors have not a greater impact on the persons QOL.

Table: Association between overall visual analog scale and age range

According to Visual Analog Scale (0 – 10)						
Domain	0	1	2	3	Chi-square (χ^2)	P-Value
Physical health						
19-35	00	05	40	11	7.95	0.093
36-50	00	03	30	08		
51-80	00	04	09	00		
Total	00	12	79	19		

‘Quality of Life’ of Persons with Disability: An Assessment in Selected Flood Prone Areas of Bangladesh

Mir Hasan Shakil Mahmud & Md. Abul Kalam Azad

Psychological and emotional wellbeing						
19-35	00	09	40	07	7.22	0.124
36-50	00	08	30	03		
51-80	00	06	07	00		
Total	00	23	77	10		
Social relationship						
19-35	00	10	37	09	6.81	0.146
36-50	00	06	33	02		
51-80	00	04	09	0		
Total	00	20	79	11		
Independence, control over life, freedom						
19-35	00	11	38	07	0.77	0.942
36-50	00	09	29	03		
51-80	00	02	09	02		
Total	00	22	76	12		
Leisure and activities						
19-35	00	49	6	00	1.41	0.493
36-50	00	37	4	00		
51-80	00	12	02	00		
Total	00	98	12	00		
Financial circumstances						
19-35	00	23	31	2	1.37	0.848
36-50	00	18	21	2		
51-80	00	6	7	0		
Total	00	47	59	4		

Note:

Score	Indicator	Explanation
0	Very poor	The respondents indicate that they have very poor QOL in their daily life style during disaster and post disaster situation.
1-3	Poor	The respondents indicate that they have poor QOL in their daily life style. They can improve their situation through some adaptation and capacity improvement.
4-6	Good	The respondents have better QOL during disaster and post disaster situation.
7-10	Very good	The respondents indicate that they have more than better QOL during disaster and post disaster situation.

On the other hand, there is no association overall leisure and activities and age range ($P < 0.493$) and χ^2 value is 1.41. The study also shows that there have no any association between age range and financial circumstance ($P < 0.848$ and χ^2 value 1.37).

‘Quality of Life’ of Persons with Disability: An Assessment in Selected Flood Prone Areas of Bangladesh

Mir Hasan Shakil Mahmud & Md. Abul Kalam Azad

The association of QOL with demographic factors such as age, sex, education level, types of disability and source of income

The association between overall QOL and demographic factors is presented in table-66. There is a significant association ($P > 0.000$) between QOL and education for person with disabilities and χ^2 value is 99.884. In addition types of disability ($P > 0.000$, $\chi^2 = 41.561$) and source of income ($P > 0.021$, $\chi^2 = 79.620$) are highly associated with the overall QOL. This may be because; these demographic factors have a greater impact on the persons QOL.

Table: Association between overall QOL and demographic factor

Overall QOL							
Demographic Variables	Very poor (%)	Poor (%)	Neither poor nor good (%)	Good (%)	Very good (%)	Chi-square (χ^2)	P-Value
Age							
19-35	6	12	18	18	2	8.253	0.409
36-50	2	5	15	18	1		
51-80	2	5	4	2	0		
Total	10	22	37	38	3		
Gender							
Male	9	15	18	24	3	8.384	0.078
Female	1	7	19	14	0		
Total	10	22	37	38	3		
Education							
Illiterate	6	10	18	12	0	99.884	0.000
Primary school	4	10	16	10	0		
High school	0	1	1	3	1		
SSC	0	1	1	6	0		
HSC	0	0	1	7	0		
Graduation	0	0	0	0	2		
Total	10	22	37	38	3		
Types of disability							
Physical disability	2	2	17	28	3	41.561	0.000
Mental disability	2	3	2	2	0		
Hearing and speech disability	0	8	7	3	0		
Visual disability	2	5	2	3	0		
Intellectual disability	4	4	9	2	0		
Total	10	22	37	38	3		
Source of income							

Mir Hasan Shakil Mahmud & Md. Abul Kalam Azad

Agriculture	0	1	11	8	0	79.620	0.021
Livelihood	0	2	0	3	1		
Begging	3	1	1	1	0		
Day labour	0	3	9	3	0		
Nothing	5	11	7	5	0		
Teaching	0	0	1	2	0		
Fishing	2	2	0	3	0		
Shop	0	0	1	2	0		
Wood Work	0	1	1	2	0		
Business	0	1	0	6	1		
Rickshaw	0	0	1	0	0		
Cloth Selling	0	0	1	0	0		
Swing	0	0	1	0	0		
Servant	0	0	1	0	0		
Service Holder	0	0	2	3	1		
Total	10	22	37	38	3		

On the other hand, there is nearly association overall QOL and gender ($P < 0.078$) and χ^2 value is 8.384. But

there have no any association between age range and QOL ($P < 0.409$) and χ^2 value is 8.253 and services.

5.7 Socio-Demographic Characteristics of Pwds During Disaster

According to the The Disaster Risk Reduction Process: A Gender Perspective (2009) Gender issues arise from a complex mix of forceful factors that include differentiated roles and responsibilities, skills and capabilities, vulnerabilities, power relations, institutional structures, and long-standing traditions and attitudes in society. The specificities of gender relations may vary depending on the socio-cultural values of a society. In the disaster situation the gender equality plays a vital role for the affected community. However, it is observed that the fundamental gender-based divisions of roles, responsibilities and identities largely remain same in the study area.

In case of education, it is found that a significant numbers of respondents (41.8%) are illiterate while more than 36 per cent of the PWDs have only primary education and 7.3 per cent respondent’s complete high school. The rest of the respondents have over SSC education. Based on education the study finds a variation in occupation as well. However, educational qualifications have great impact to reduce vulnerability. It is evident that educational qualifications may improving capacity and reduce the risk of PWDs. An imbalanced gender relationship prevents women from enjoying equal-rights and equal-partners status.

The results further, shows unemployment is identified as a major problem. The present study is distinguished that disaster situation may affect all aspects of PWDs life. This situation is increasing their vulnerability. Pre-disaster, disaster and post-disaster situation is particularly critical to meeting the mental health needs of people with disabilities children, women, and survivors in developing countries. The family context is central to understanding and meeting those needs (Fran et al., 2002).

PWDs are depriving from employment opportunity due to their physical capabilities, stigma, prejudice and discrimination. It is found that a large number of people have to migrate in other places in search of jobs.

Mir Hasan Shakil Mahmud & Md. Abul Kalam Azad

However, they cannot earn adequately for their lack of skills and capacity. The community people and PWDs are being suffered by the natural disasters and poverty on one side of their life. They are deprived from their basic social rights on the other side. This study point out that PWDs have not significant role capacity building, poverty eradication, women empowerment, gender equality and human rights important for disaster risk reduction. Community people need to work in integrated development approach and the most priority based activities in disaster situation.

Multiple types of disability may affect the capacity of PWDs. It is evident that different types of disability make them more vulnerable. In this report, Brady et al. (2006) noted that people with physical disabilities were listed as the most common disability, people with cognitive disabilities and people with sensory and behavioral/psychiatric disabilities of the respondents respectively identifying these issues as both a primary or secondary limitation and challenges facing during disaster period. We need to ensure integrated livelihood training and program for PWDs in the disaster prone area.

PWDs are requiring different types of assistance during disaster and post disaster period. Brady et al. (2006) identified that the respondents reported difficulty moving in their own homes after the disaster. This was due to a number of factors including home damage, loss of power needed to recharge wheelchair batteries, loss of home lighting. Only few respondents in this survey reported that they were able to use stairs. In homes with damaged stairs, this created obvious in-home mobility restrictions. Also, some of the sample required elevators to access their homes, although the proportion of homes with elevators varied widely across the participating counties. This study respondent is facing lot of challenges due to inaccessible environment, uneven surface, latest technology and poor socio-economic condition. In Bangladeshi, PWDs are facing lot barrier due to their lack of resources and accessible environment. Gerber et al. (2010) get top six specific suggestions respondents made to other families of PWDs were to bring medications or prescriptions, stockpile food and water, plan ahead, plan where to go and make sure the location will accommodate your needs, make sure that you arrange for help or assistance if it is needed, and finally keep money, or better cash, available in case of emergency. Government of Bangladesh and local government need to aware about the basic needs of PWDs during disaster period.

5.8 Association between Age and Quality of Life

The PWDs age, there was not any association between age range and their overall qualities of life. The younger adult (19 to 35 years) PWDs have a significant change. The finding can be interrelate to the view of Tsai et al. (2007) mention that the survivors’ age and quality of life have significant association where the younger aged quality of life is poorer than older survivors. However, the study shows that the survivors’ age range represents in between 16-32 years, the association could be significant if the age range represents all aged survivors. Either the survivors are too younger or older the quality of life does not vary with them. For example, there have no any association between age range and QOL ($P < 0.409$) and χ^2 value is 8.253 and services. Gerteis et al. (1993) suggested that high quality care and positive client outcomes result from the interaction of appropriate access to care, the delivery of appropriate clinical, social and vocational services, and the coordination.

5.9 Association between Gender and QOL

In association, it is found that there is no association overall QOL and gender. It means that there were some variations in QOL between male or female PWDs during disaster and post disaster situation. Ceyhan and Aykut (2007) and Nuhu et al. (2013) have identified that the male survivors have poor quality of life than females. In Asian context the males are the main income personnel for family members. It may effects on their QOL,

especially in physical domain. According to result, QOL has not any association depend upon sex. Bangladesh is male dominant country and male take responsibilities for family than female but finding say that QOL could be better or poor for both male and female. Adjacent to this study identify that the respondents, who have not enough enjoyment, identify it is very poor for males which is 29 per cent while nearly 15 per cent for females. It is evident that approximately 44 per cent female respondents have poor situation where 19 per cent of male for enjoying opportunity their life. For example, there is nearly association overall QOL and gender ($P < 0.078$) and χ^2 value is 8.384.

5.10 Association between education and QOL

The present study represented that there is significant association between education and QOL for PWDs. PWD QOL depends upon their educational qualification. Tsai et al. (2007) has revealed that there is a close association between level of mental health and educational qualification. The present study illustrations that higher rate of PWDs (more than 36 per cent) have only primary education. However this study mention that significant number of respondent near 42 per cent were illiterate while small number of respondents (more than 5 per cent) have high school level education. For example, There is a significant association ($P > 0.000$) between QOL and education for person with disabilities and χ^2 value is 99.884.

5.11 Association between types of disability and QOL

There is a highly positive significant association between type of disabilities and their QOL, which means the QOL, is quiet better with temporally PWDs where it is very poor with permanent type of disabilities. In this case the long term PWDs survivors have very poor quality of life but three PWDs have very good quality of life. Centre for Policy Dialogue (2013) has argued that PWDs survivor seem to have lost their earning ability by working in the industrial sector. A number of these survivors now face unemployment due to their disability. This is the only barrier they face leading a quality of life. This study indicates the peak number of respondents have only physical disability more than 47 per cent while more than 16 per cent have disability in hearing and speech. Moreover, 12 per cent have mental disability, approximately 11 per cent with visual disability and more than 17 per cent have intellectual disability. Multiple types of disability may affect the capacity of PWDs.

5.12 Association between Source of Income and QOL

There is also a significant association with source of income and their QOL. Tsai et al. (2007) stated that they did not get any association between earthquake survivors with building collapse and their occupations. If anyone might be good QOL besides, any PWDs who have not any job and source of income. They have a poor QOL. As a result, it could not say that the employed PWDs have better quality of life than unemployed PWDs. The study shows, among all respondents' 110 that significant numbers of respondents are unemployed. Nearly 16 per cent of the respondents were unemployed. Employment depends on the physical capabilities and level of education. The rest of respondents 10 per cent were farmer while nearly 15 per cent were day labor. Moreover, more than 18 per cent were housewife, approximately 6 per cent were carpenter, more than 6 per cent were fisherman, and 10 per cent were service holder.

The association of the quality of life with physical health, psychological and emotional wellbeing, social relationship, independence, control over life and freedom, home and neighborhood, leisure and activities, and financial circumstances

The results of this study show that physical health (2.93+1.152), psychological and emotional wellbeing (2.62+1.142), social relationship (1.99 +0.761), independence, control over life and freedom (2.78+1.153), home and neighborhood (3.03+1.949), leisure and activities (2.87; SD +1.114), and financial circumstances (2.34+1.063). Results on quality of life across the different domains (physical health, psychological and emotional wellbeing, social relationship, independence, control over life and freedom, home and neighborhood, leisure and activities and financial circumstances domain) among respondents in this study were much lower than those among people with other types of diseases and healthy controls. In a study conducted in the UK by Skevington and McCrate (2012): Physical (76.49 ± 16.19), Psychological (67.82± 15.56), Social Relationship (70.52 ± 20.67), and Environment (68.20 ± 13.8). Nevertheless, findings in this study are quite similar to results of carers of elderly people in the Skevington and McCrate (2012) study: Physical (61.53 ± 20.87), Psychological (65.78 ± 14.56), Social relationship (61.68 ± 20.34), and Environment (68.95 ± 14.67). Furthermore, results of this study are not different to findings from research conducted by Cruz et al. (2011) on QoL in a general population sample in Brazil: Physical (58.9 ± 10.5), Psychological (65.9 ± 10.8), Social relationship (76.2 ± 18.8), and Environment (59.9 ± 14.9). QOL depends on all aspects of human domain. PWDs are not an exception from it. It is evident that all domains are playing a vital role for maintaining standard quality of life.

5.13 Overall Rate of QOL

In this study indicates that respondents indicate more than 9 per cent have very poor QOL while the QOL 20 per cent are poor. Nearly 34 per cent respondents identified neither poor nor good QOL during in the selected flood prone area. Nuhu et al. (2013) has said that one-third of the respondents had poor overall QOL at palliative care survivors with cancer. The QOL for the person of traumatized disability has improved day by day with reducing anxiety and depression. According to Municipality officials, about significant number of the populations are poor, lacking the capacity to cope with the crisis without immediate post-disaster assistance (Bangladesh Bureau of Statistics, 2008). According to the Ferrans (1996) conceptual statement that general health is reflecting the subjective aggregate grading of all health indicators. The final component is overall quality of health that is described by subjective wellbeing and happiness. QOL is depending on the different aspects of human life domain. We need to ensure different essential issues of all domains in the daily life.

5.13.1 Satisfaction about Health

The respondents identify nearly 6 per cent have very poor satisfaction on health, 20 per cent have poor satisfaction on health. There are also indicates more than 37 per cent have neither poor nor good satisfaction, nearly 35 per cent have good health satisfaction and nearly 3 per cent have very good satisfaction about their health. There is a significant positive association with the survivors' type of support and their level of health satisfaction, those survivors, who have got money, maximum of them are satisfied with their health status but very few numbers of survivors are dissatisfied with their health status after receiving supports like- money, shelter and others. Therefore, the amount of money helped the survivors to expand their treatment cost for better quality of life. It has only ensured their health satisfaction, not the quality of life. After getting a huge amount of money, the survivors get mental satisfaction and they demand more money for fulfilling their family needs (Monitoring the Rana Plaza Follow-ups, 2013). PWDs are not an exception from this perspective. They have physical and cognitive limitations for surviving in the catastrophic situation. We have to ensure different health related services for changing PWDs quality of life.

5.13.2 Access Situation of Community and Health Services

The result in this study shows that respondents were able to access some shorts of community and health services. The large number of respondent approximately 78 per cent can able to some access of health services and community. Nearly 23 per cent number of respondents did not get any types of community and health services during disaster and post disaster situation. Marks (2008) mentioned that Bangladesh has a very strong network of strong facilities at national and sub-regional levels for stock piling food, clothing, and medicines, which is required for post- relief rehabilitation operations. Although it was felt by the study respondents that Government of Bangladesh assistance compared to the extent of manage or the needs of the affected households. According to Benjami (2013), physical access to health-care services is a vexing problem for many persons with physical disabilities because they must overcome numerous obstacles even before they can receive care in a physician's office, such as parking, entering the building, going to an examination room, and using the restroom. This led to almost one third of practices making changes related to parking areas, ramps, doors, restrooms, signage, equipment, and accessibility to the equipment. Persons with disabilities can benefit from preventive and acute-care services in ways similar to persons without disabilities, yet they experience significant barriers to this care and health disparities when compared with persons who do not have disabilities. Prevention of disabilities has been the focus of public health, and prevention remains its primary focus, but as disability is acknowledged as part of the normal human experience, a secondary focus of public health has become the promotion of the health of persons with disabilities by identifying and closing reducible gaps between the health of persons with and without disabilities.

5.13.3 Association between Different Domains According To Visual Analog Scale on Their Age

This study indicate that visual analog scale is identify [0= very poor, 1(1-3) = Poor, 2 (4-6) =Good and 3 (7-10) =Very good]. The means scores were organised the items into facets representing the 06 domains covered by the questionnaire (physical health, psychological and emotional wellbeing, social relationship, independence, control over life and freedom, leisure and activities, and financial circumstances). This is showed that overall situation according to the age range. Rana Plaza disaster the exposure that means the survivors level of health satisfaction has analyzed, Along all of survivors about 33.7 per cent of respondents are neither satisfied nor dissatisfied with their health satisfaction where 27.2 per cent are satisfied with their health status and about 23.9 per cent of respondents are dissatisfied with their health status but only a few are very satisfied with their health status (Alve, 2014).Result of this study shows that the association between different domain and VAS scale. There is a significant association between physical health QOL and age range. In addition psychological and emotional wellbeing and social relationship are not associated with the overall QOL. This may be because; these domain factors have not a greater impact on the persons QOL. On the other hand, there is no association overall leisure and activities and age range. In this study researcher did not find any association between age range and financial circumstance.According to WHOQOL questionnaire, there are four domains of quality of life and those are physical, psychological, social relationship and environmental. In case of physical health, maximum respondents have ensured good quality of life where one third has poor and another one third has fair type of quality of life. In case of psychological aspect most of the respondents have led life with good quality, where only some has fair and one third has poor psychological quality of life. In case of social relationship, about half of the respondents have poor quality of life and in environmental aspect, two third of the respondents have fair quality of life where about 9 per cent has poor environmental quality of life. Nuhu et al. (2013) revealed that about 21 percent had poor score on the physical domain while 19 per cent had poor psychological domain QOL.

In summary, the overall QOL and the physical, psychological, social and environmental domain QOL were fair in palliative care centre.

6. Conclusion

The disaster is associated with extreme and widespread damage to property, ongoing financial problems for the stricken community, violence. It's resulted from human intent and a high prevalence of trauma in the form of

injuries, threat to life, and loss of life. People with disabilities are facing lots of suffering during disaster. Individuals will react differently to stress from a disaster. QOL depends on the different aspect domain. The domains are physical, psychosocial, social and environmental domain. The finding of the study identify that there is a significant association between QOL and education. It is also indicate that types of disability and source of income are highly associated with the overall QOL. It is recommended that we have to develop livelihood program, vocational training, social, health and educational services etc. for PWDs. If we can ensuring those perspective for the betterment QOL in the catastrophic situation.

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‘Quality of Life’ of Persons with Disability: An Assessment in Selected Flood Prone Areas of Bangladesh

Mir Hasan Shakil Mahmud & Md. Abul Kalam Azad

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