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Pattern of Physical Disability and its Associated Factors among the Persons with Physical Disability in Selected Areas of Bangladesh

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Received: July 07, 2016; **Published:** July 14, 2016

Abstract

Bangladesh is a large populated country. About 160 million people live in Bangladesh. According to department of social service near about 2% of total population are disabled in Bangladesh. Among all the disabled people's physically disabled persons are more than other disabled persons which is near about 20% of all the disabled persons. The main objective of the study was to assess pattern of physical disability and its associated factors in the selected areas of Sirajganj district as it is disaster prone area and two more important highways have been passing through Sirajganj district. That is why number of physically disabled persons are little bit more in Sirajganj district than other districts. In this study cross sectional analytical study design has been followed. Total 102 respondents were selected through simple random sampling technique. Data collection was done by face to face interview with semi-structured questionnaire. Mean age of the respondent was 52.7 years with standard deviation 0.635. Male was three times more physically disabled than female. Most respondents (46%) had severe level physical disability. Most of the respondent's characteristic of physical disability were hemiplegic (53%). Major causes of the physical disability were illness (70%). Age, education, occupation, monthly family income as well as housing condition of the physically disabled persons had statistically significant association with the level of physical disability ($p < 0.05$). Therefore, it is very important to increase educational status, occupation, family income and better housing of the physically disabled persons as they might be seeking for better treatment to minimize their physical disability. More treatment facilities should be ensured for elderly persons with physical disability.

Keywords: *Physical disability; Associated factors; Bangladesh*

Introduction

Disability means deviation from normal functional ability or activity which may lead to handicap or socially disadvantage [1]. There are various types of disability in Bangladesh. physical disability is more common and visible to all [2]. Physical disability may occur from various physical impairment by which individual normal activity may permanently or temporarily hamper or disturb [3]. Sirajganj district is the disaster prone area which is situated at the bank of the greatest Jamuna River in Bangladesh. Sirajganj is also the entry door of north-west Bengal this is why many vehicles are regularly passing to north-west Bengal through Sirajganj district. Road traffic accident is common incident for Sirajganj district which is the major cause of physical disability in Sirajganj district. As a disaster prone area many disasters like flood, cyclone and others frequently occur in Sirajganj district which is also responsible for causing physical disability. Near about 35000 people are suffering from various disabilities in Sirajganj district. Among all the disabilities approximately 20% PWD's are suffering from physical disability [4]. That is why it is very important to know about the level of physical disability so that we can minimize the level of physical disability. This study was conducted to assess pattern of physical disability and factors associated with it.

Methodology

This study was cross sectional analytical study. Study was carried out at selected areas of the Sirajganj district namely Sirajganj sadar, Shahjadpur, Belkuchi, Kamarkhanda, Kazipur, Tarash, Raiganj, Ullapara upazilla. This study was conducted among the physically disabled

person of the selected areas of Sirajganj district. Above 20 years of the aged persons with physical disability and those persons with physical disability willingly agreed to interview were included in the study. Un-reliable person who cannot communicate by self and the persons with physical disability but did not give consent were excluded. Total 102 persons with physical disability had been selected for collection of data. Simple random sampling technique followed in this study to collect data. From 3000 registered physically disabled persons at PSOSK-Sirajganj 102 persons were selected by lottery method. Semi-structured questionnaire was used and face to face interview was executed for data collection. Respondent willingly answered all the questions to researcher. All the collected data properly organized and processed with SPSS (Version 17). Then frequency analysis for all the variables had done properly. Chi-square had done with cross tabulation for socio-demographic and level of physical disability. Level of significance was considered at 5% or 0.05. Level of physical disability was determined by practical observation of the disabled persons by registered physician/physiotherapist. According to disability welfare act, 2013 there are three levels of physical disability. They are mild, moderate and severe.

Characteristics	Mild	Moderate	Severe
Amputation (Upper limb)	Finger to wrist amputation	Above elbow amputation	Complete upper limb amputation
Amputation (Lower limb)	Finger to ankle amputation	Above knee amputation	Complete lower limb amputation
Hemiplegia, Paraplegia and other paralysis	Poor walking balance/ poor hand function	Walking with support/ moderate problem in hand function	No walking ability/ no hand function in affected side
Kyphosis/ Lordosis/ Scoliosis	Mildly bending forward/ backward/ lateral side	Moderately bending forward/ backward/ lateral side	Severely bending forward/ backward/ lateral side
Poliomyelitis/Muscular dystrophy/ congenital deformity/Others	Joint stiffness/ poor walking ability/Muscle wasting/poor hand function	Little function of the limb/ Walking with support	No walking ability/ functionally dependent

Results

Among all the respondents most of the respondents were age ranges 60 to 69 and above 70 years of age. Here mean age of the respondent was 52.7 years and standard deviation was 0.635. Most of the respondents were male (74.5%) and 25.5% were female. About 80% respondents were unemployed or having no work, 2.9% were in private job or honorable govt. job or large business and others were day labor and small business men. Almost half of the respondents (49%) monthly family income was < 3000/- taka as well as 3% respondent's monthly family income was over 20000/- taka. And the rest of the respondent's monthly family income was 3000 to 10000 taka and 10000 to 20000 taka.

Age (Years)	Frequency	Percentage
20-29	13	12.7
30-39	11	10.8
40-49	10	9.8
50-59	20	19.6
60-69	24	23.6
70+	24	23.6
Mean ± SD	52.7 ± 0.635	
Sex		
Male	76	74.5
Female	26	25.5
Occupation		

Un Employed/ No work	82	80.4
Day Labor/Small business	17	16.7
Large Business/ Private job/ Govt. Job	3	2.9
Monthly family income		
<3000	50	49
3000-10000	37	36
10000-20000	12	12
>20000	3	3
Mean ± SD	7900 ± 0.798	

Table 1: *Sociodemographic status of the respondents (n = 102).*

Most of the respondent's characteristic of physical disability were hemiplegic (53%) followed by 10% paraplegic, 9% congenital deformity and amputation 6%.

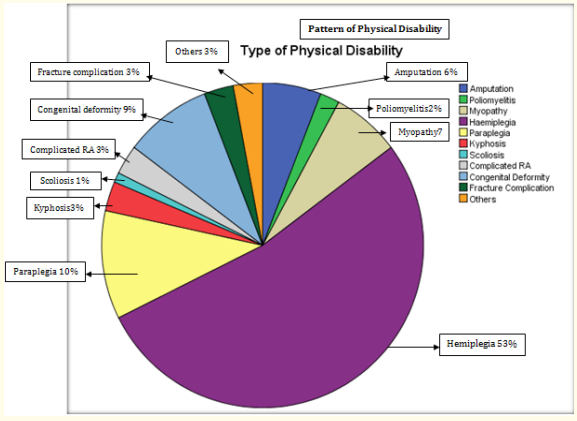

Figure 1: *Distribution of the respondents according to pattern of physical disability.*

Major causes of the physical disability were illness (70%), 9% accident, 10% from birth and 7% heredity.

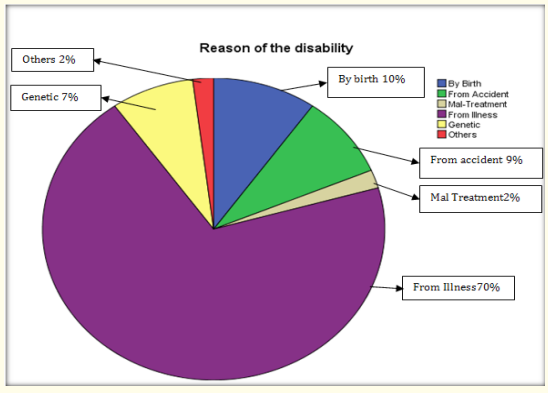

Figure 2: *Distribution of the respondents according to cause of the physical disability.*

Severe, moderate and mild physical disability were 46%, 36% and 18%.

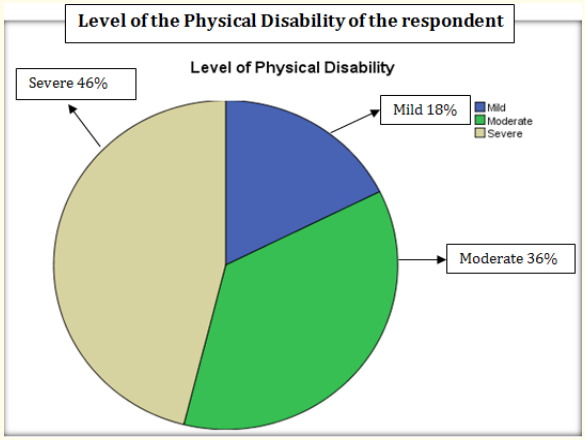

Figure 3: *Distribution of the respondents according to level of physical disability.*

Age of the respondent positively associated with level of physical disability that means if age increase level of physical disability also increases. Education of the respondent negatively associated with level of physical disability that means if education increases then level of physical disability reduces. Occupation of the respondent negatively associated with level of physical disability that means if occupational level increase then level of physical disability also reduces. Family income of the respondent negatively associated with level of physical disability that means if family income increase then level of physical disability also reduces. Housing of the respondent negatively associated with level of physical disability that means better housing reduces level of physical disability.

Age	Level of physical disability			Chi-square value	p value
	Mild	Moderate	Severe		
20 - 45	11	12	10		
46 - 70	7	22	28		
70+	0	3	9		
Total	18	37	47	0.332	0.001
Education					
Illiterate	3	19	34		
Primary to S.S.C	9	17	12		
H.S.C to Graduate	6	1	1		
Total	18	37	47	0.461	0.001
Occupation					
Un employed	9	28	45		
Day Labor/ Small business	6	9	2		
Honorable job/ Large Business	3	0	0	0.450	0.001
Total	18	37	47		
Family income					
< 3000	2	16	31		
3000 - 10000	10	14	14		
> 10000	6	7	2	0.420	0.001
Total	18	37	47		

Housing condition				0.430	0.001
Built of Hay/mud	2	13	31		
Tin shed	9	19	12		
Built of brick	7	5	4		
Total	18	37	47		

Table 2: *Association between sociodemographic status and physical disability.*

Discussion

In this study most of the respondents were male. Ratio between male and female was almost 3:1. It is evidence based that male is predominantly risky for physical disability than female [5]. Therefore, we can say male are in riskier position for being physically disabled. Near about 47% respondents chronological age was above 60 years as well as age have the positive association with the level of physical disability according to this study. In the study "Physical Disability among the Elderly in Tamil Nadu: Patterns, Differentials and Determinants" also described that elderly or aged people mostly suffered from physical disability than others and their level of physical disability is also high or severe than younger's [6]. According to this study level of physical disability also increased with the age increased of the PWD's. For a large number of aged persons, old age is the synonymous with the disability especially with physical disability. In this study among the entire respondent almost 55% respondents have no educational qualification that means they are illiterate. That is why most of the respondent was unemployed which is about 80%. It also affected their family income most of the respondent family income was below 3000/- taka. Therefore, both education and occupation negatively associated with level of physical disability. Illiterate and unemployed persons with disability have less seeking behavior to rehabilitation than educated and employed persons with disability. That is why level of physical disability increased with decrease of the educational and occupational level according to this study. Family income also negatively associated with the level of physical disability that means if income level increased persons seeking to rehabilitation and their level of physical disability reduced. It is found that family income had negative association with the level of physical disability [7]. The individual with sufficient family income is more aware about health consequences than others. They are more seeking to get better treatment as they have no scarcity of money. For this early diagnosis and better treatment may reduce risk of disability among the people who earn more. Education, occupation and income are inter-related to each other. If education level increase, then occupation level simultaneously increases which in turn increases monthly income. That is why all three variables have negative association with the level of physical disability. House type is also important for level of physical disability. In this study house type is also leveling by three orders. In first level it was built of hay or mud, in second level it was tin shed and in third level it was built of brick. According to this study house type have the negative association with the level of physical disability. Better education or high family income improves individual residence or housing condition. That is why their treatment seeking behavior also improve which is very important for minimize level of physical disability. Better housing condition also important for prevent physical disability as domestic injury prevalence is less according to various study. Respondent with poor housing has more severity than respondent with better housing in case of physical disability according to this study. All the factors like education, occupation, family income and housing condition has negative association with level of physical disability. If the level of those factors is increased, then level of physical disability is decreased according to this study.

Conclusion

Male are predominately risky for being physically disabled near about three times more than female in Sirajganj district. Elderly also causes various types of physical disability like hemiplegia, paraplegia, kyphosis etc. Education, family income, social status is also very important factors for level of physical disability. Better housing condition also has some effect on level of physical disability. It significantly reduces level of physical disability. We can prevent and minimize physical disability if necessary steps taken immediately. Therefore, it is very important for us to take proper and appropriate action about rehabilitation for physically disabled persons. If we can minimize the level of physical disability among the persons with physical disability they will take part in growth of our national economy.

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Volume 3 Issue 4 July 2016