POPULATION MONOGRAPH OF BANGLADESH

DISABILITY IN BANGLADESH: PREVALENCE AND PATTERN

Population Monograph: Volume-5

Bangladesh Bureau of Statistics
Statistics and Informatics Division
Ministry of Planning

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POPULATION MONOGRAPH OF BANGLADESH

DISABILITY IN BANGLADESH: Prevalence and Pattern

November 2015

BANGLADESH BUREAU OF STATISTICS (BBS)
STATISTICS AND INFORMATICS DIVISION (SID)
MINISTRY OF PLANNING
GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

ISBN- 978-984-33-9954-0

Formatting:

SOMPADONA, an editing and indexing house
Email- sompadona@gmail.com

Cover design:

Buzzuuka Marketing Communications
House # 398-A, Road # 29, New DOHS
Mohakhali, Dhaka-1206
Email- info@buzzuuka.com

Published by:

Bangladesh Bureau of Statistics (BBS)
Statistics and Informatics Division (SID)
Ministry of Planning
Website: www.bbs.gov.bd

Disclaimer:

This report has been prepared by Bangladesh Bureau of Statistics (BBS) in collaboration with Institute of Statistics Research and Training (ISRT), University of Dhaka.

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Minister
Ministry of Planning
Government of the People's Republic of Bangladesh

Message

I am delighted to know that Population and Housing Census 2011 Project of Bangladesh Bureau of Statistics (BBS), Statistics and Informatics Division (SID) has prepared fourteen Population Monographs using the census data of different years. This is the first time BBS is publishing population monographs with in-depth analysis of the population census data. The present monograph on 'Disability in Bangladesh: Prevalence and Pattern' is one of such monograph series.

Each monograph deals in a particular issue related to population and housing where census data have been used in multidimensional approaches. In addition, cross country comparison and in country comparison have also been made to oversee the representativeness of data with other national sources. It is expected that the monographs will useful in national planning and policy making particularly in the field of population and development.

I would like to thank concerned officials of SID and BBS and also authors of the monographs for their relentless effort in preparing these monographs and publication thereof. Special thanks to European Union (EU) and United Nations Population Fund (UNFPA) for their generous support in conducting 5th decennial census of Bangladesh and preparing the population monographs.

AHM Mustafa Kamal, FCA, MP

Dhaka
November, 2015

State Minister
Ministry of Finance
and
Ministry of Planning
Government of the People's Republic of Bangladesh

Message

I have come to learn that Population and Housing Census 2011 Project of Bangladesh Bureau of Statistics, Statistics and Informatics Division has prepared fourteen Population Monographs using census data of different years. Population is the main ingredient for national planning and policy making. Therefore, Population Monographs are of vital importance in the field of population planning of the country.

Each monograph has been prepared with a particular issue related to population and housing. To prepare these Monographs census data have been used widely in multidimensional way where secondary data from other sources have also been used. The monographs are a new dimension in the wide use of data generated through national censuses of the country.

My sincere thanks and gratitude to the honorable Minister, Ministry of Planning for his dynamic leadership and active guidance in implementing all our activities including census undertaking. I would like to thank Secretary, Statistics and Informatics Division, Director General, BBS for their relentless effort in preparing these monographs and publication thereof. Special thanks to European Union (EU) and United Nations Population Fund (UNFPA) for their generous support in conducting 5th decennial census of Bangladesh and preparing the population monographs.

M.A. Mannan, MP

Dhaka
November, 2015

Secretary
Statistics and Informatics Division (SID)
Ministry of Planning
Government of the People's Republic of Bangladesh

Foreword

Population Census is the single most important statistical undertaking in any country. Bangladesh Bureau of Statistics of the Statistics and Informatics Division has conducted the 5th decennial census of the country during 15-19 March, 2011. In order to supplement the main census a large scale sample survey was conducted in October 2011 which covered detailed information on Population & Housing. The Monograph on 'Disability in Bangladesh: Prevalence and Pattern' is mainly based on the findings of main census and sample census conducted during 2011. Data from other secondary sources have also been used to prepare the Monographs.

It may be mentioned that Bangladesh Bureau of Statistics (BBS) has been publishing a number of Population Monograph series and Population Monograph on 'Disability in Bangladesh: Prevalence and Pattern' is one of the fourteen monographs being published by BBS using Population Census Data. Monographs are the in depth analysis of a particular topic of interest. Disabled population are the neglected segment of our population and they should be brought in the main stream of development.

In light of that, population monograph on 'Disability in Bangladesh: Prevalence and Pattern' will be useful for proper planning for the disable population in Bangladesh. This monograph has covered detailed information on the disabled population of Bangladesh obtained from different censuses and surveys conducted by BBS.

I like to express my sincere thanks to Director General, Deputy Director General of BBS, Project Director of Population and Housings Census 2011 Project and his team for preparing this Monograph. I acknowledge with gratitude the support of European Union (EU) and United Nations Population Fund (UNFPA) for successful completion of the Population and Housing Census 2011 and preparing the Monographs.

Kaniz Fatema ndc

Dhaka
November, 2015

Director General
Bangladesh Bureau of Statistics (BBS)
Statistics and Informatics Division (SID)
Ministry of Planning
Government of the People's Republic of Bangladesh

Preface

The fifth population and housing census of Bangladesh was conducted during 15th March to 19th March, 2011. The main objective of the census was to collect information on the basic characteristics related to housing, households and population for developing a comprehensive database for development planning and human resource development programmes as well as economic management.

Population and Housing Census 2011 were conducted in three phases. In the First Phase, basic data about all households and individual members of the households were collected through ICR formatted questionnaire during 15th March to 19th March, 2011. In the Second Phase, quality and coverage of the main count were verified through a Post Enumeration Check (PEC) survey during 10th April to 14th April, 2011. For the first time in the census history of Bangladesh, PEC was conducted by an independent organization, namely Bangladesh Institute of Development Studies (BIDS). In the Third Phase, detailed socio-economic information was collected by administering a long machine readable questionnaire in a sample survey held during 15th October to 25th October, 2011.

One of the objectives of the Population and Housing Census 2011 Project was in-depth analysis of census data and preparation of Population Monograph series. Monographs are useful to the users to know the detailed information about the related area for taking appropriate policy measures and further research.

The Population Monograph on 'Disability in Bangladesh: Prevalence and Pattern' is one of the 14 monograph series which covered the patterns and prevalence of disability in Bangladseh.

I express my heartfelt gratitude to the Honorable Minister for Planning for his effective guidance and significant cooperation in making the census a success. I express my deepest gratitude to Secretary, Statistics and Informatics Division (SID) for her whole-hearted support and cooperation to the census. Moreover, members of 'Steering Committee', 'Standing Technical Committee', Consultants and the participants of the Seminar-cum-Expert Consultation deserve special thanks for their valuable contributions for finalizing the questionnaire and the census programme. I am thankful to the researchers of the Institute of Statistical Research and Training (ISRT), University of Dhaka for preparing this monograph. Thanks to European Union (EU) and United Nations Population Fund (UNFPA) for their technical and financial support to the Population and Housing Census 2011 Project.

Finally, I like to thank Deputy Director General, BBS, Project Director, Population and Housing Census 2011 Project, members of the Technical Committee and other officers & staff members of BBS for bringing out this monograph.

Mohammad Abdul Wazed

Dhaka
November, 2015

Representative
UNFPA Bangladesh

Message

This report is part of a series of 14 monographs developed by the Bangladesh Bureau of Statistics (BBS) with support from the United Nations Population Fund (UNFPA). UNFPA has supported the BBS since the very first census in 1974, a cooperation that has grown stronger with each census. Through the "Support to 2011 Bangladesh Population and Housing Census" project UNFPA has been working closely with the BBS to ensure that best use is made out of the resources invested in the census. The project has put a major emphasis on in-depth analysis of census data and the production of thematic reports in the form of these monographs. This series will provide its readers a better and clearer understanding of the trends, the current country scenarios and the gaps indicating where targeted interventions are necessary.

The availability of quality, reliable and timely data, as well as a thorough, methodologically sound and user-friendly analysis of data is more important than ever before. The information generated by population and housing census, the numbers of people, their distribution, their living conditions, are all critical for development. Without accurate data, policymakers do not know where to invest in schools, hospitals or roads and the most in need remain invisible. The implementation and monitoring of the Sustainable Development Goals, the guiding framework for the development agenda 2030, will require the production and analysis of a large amount of data, big data, requiring strong and independent National Statistics Offices, which UNFPA will continue to support.

I would like to take this opportunity to congratulate and thank the Statistics and Informatics Division and the Bangladesh Bureau of Statistics' authority and the project team for their efforts to produce this series, as well as the experts who contributed to the development of the monographs. My special gratitude goes to the Delegation of European Union in Bangladesh for their generous support and co-operation in implementing the "Support to Bangladesh Population and Housing Census 2011" project and in the preparation of these monographs.

Dhaka
November, 2015

Argentina Matavel Piccin
Representative
UNFPA Bangladesh

Project Director
Population and Housing Census 2011 Project
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Statistics and Informatics Division
Ministry of Planning

Acknowledgements

It is my great pleasure to acknowledge the contributors who were engaged in preparing the fourteen Population Monographs of Bangladesh under Population and Housing Census 2011 Project of Bangladesh Bureau of Statistics (BBS). This initiative of BBS is a new dimension with regard to the wide use of census data in the country and the abroad.

Monographs have been prepared by the BBS in collaboration with public universities, research organizations and a local consultant of this project. A series of review meetings were organized to finalize the draft monographs.

I would like to express my profound regards and deep sense of gratitude to the Secretary, Statistics and Informatics Division (SID) and Director General, Bangladesh Bureau of Statistics for their valuable suggestions, continuous guidance and all out support in smooth completion of all the activities of this project and bringing out the population monographs.

It is worth mentioning that European Union (EU) has provided generous support in the implementation of the Population and Housing Census 2011 Project. I take the opportunity to express my indebtedness to United Nations Population Fund (UNFPA) for the partnership of this project of BBS.

I am extremely grateful to the institutions and the authors who were engaged in preparing the monographs. My sincere thanks to Mr. Nicholas Jhon Mcturk, Technical Expert on Population Development, Asia and the Pacific Regional Office, Dr. Chrisophe Lefrance, Technical Advisor, Population and Development, UNFPA Regional Office and the local consultant of this project Mr. Md. Shamsul Alam for their whole hearted co-operation in the preparation of monographs.

Thanks are also due to Mr. Iori Kato, Deputy Representative, Dr. Shantana R. Halder, Chief PPR and Mr. Mahboob-E-Alam, NPO, UNFPA for their kind support and help. I am grateful to Mr. Md. Mostafa Ashrafuzzaman, Deputy Director, Mr. Md. Khorshed Alam, Assistant Statistical Officer, Mr. Mohammad Abdullah, Assistant Statistical Officer and all other officials of Population and Housing Census 2011 project of BBS who worked hard to conduct the census and to prepare the monographs.

Md. Mashud Alam

Dhaka
November, 2015

EXECUTIVE SUMMARY

Disability is a vital issue with respect to human rights because a person with disability is often deprived of the benefits of national development. While basic rights of disable people are well established in the most of the welfare countries, government of Bangladesh has recognized the issues of disabled persons' righteous perspectives very seriously and enacted disability law with an aim at quick improvement in the process of social and economic inclusion of people with disability. For planning what extent of State support might be essential or for systematic intervention to address the need of the disabled people, it is essential to explore prevalence, pattern, and differentials of disability.

The current monograph has primarily analyzed disability data (5% of total population) from the Census 2011 and compares results with those from a further analysis of data from Household Income and Expenditure Survey (HIES) 2010 to assess the robustness and consistency of census results. The aim of the monograph is to evaluate the gravity of the "disability problem" in Bangladesh and obtain a comprehensive understanding of the nature, pattern and dynamics of disability prevalence in the country.

The Census 2011 data has put a figure of 1.41% (a total of 101, 585 disables) on the overall disability prevalence in Bangladesh, which is 7.6 percentage points lower than the HIES 2010 estimate of 9.01 % for the overall disability prevalence. This is because both census and survey have different approaches for measuring disability prevalence. However, the prevalence of people with severe or acute disability in survey data is reported to be 1.51%, which is very close to census estimate. The prevalence of disability in both the census and survey is reported to higher among the older people compared to the younger people. Disability is more prevalent in rural area compared to urban area. Physical disability and vision disability appeared as the most common forms of disability in the country. Findings of the study suggest that disability may affect marital status in two ways. It may contribute to higher divorce rates in addition to being an impediment to marriage. There is also marked gender disparity in the effect of disability on marital status: males with disability have much less difficulty in getting married than disabled females, and higher divorced/separated rate among disabled females compared to disable males. Findings of the study also reveal that people with disability have less access to education and income generating activities compared to non-disable people of the same age group. Based on the findings several policy implications have been discussed. In summary, the monograph suggests that it is essential to create positive awareness towards people with disability, special access to education, employment and modern disability aids.

1. INTRODUCTION

1.1 Introduction

The current document intends to present a monograph on prevalence, pattern, and differential of disability using data from Population Census 2011 (Bangladesh Bureau of Statistics 2011) and Household Income and Expenditure Survey (HIES) 2010 (Bangladesh Bureau of Statistics 2010)conducted by Bangladesh Bureau of Statistics (BBS). Disability is a vital issue with respect to human rights and cannot be sidelined while considering national development activities of a country. Persons with disabilities can have positive contribution to the national economy if they are well nurtured and given adequate opportunities to build themselves.Most of the welfare countries across the world have structured plan to implement various special servicesas required for disables and strong disability law to establish socio-economic and political rights of disabled people.Likewise government of Bangladesh has recognized the issues of disabled persons' righteous perspectives very seriously and enacted disability law under "person with disability's rights and protection Act 2013"(Women with Disabilities Development Foundation 2014) with an aim at quick improvement in the process of social and economic inclusion of people with disability.

Disability is a physical or mental impairment of a human being that limits his/her normal functioning of life. It may be described as a complex form of deprivation. Disability involves dysfunctioning at one or more levels of physical function, individual activity or social participation. It could occur at birth or during the course of life. Disability can be categorized into different types, such as hearing disability, visual disability, physical disability, speech disability, mental disability. A person may be affected with a single type of disability or multiple disabilities. It is essential to comprehend disability and types of disabilities before going through this monograph.

1.1.1 Definitions of Disability

According to the Disability Welfare Act of 2001(Ministry of Law Justice and Parliamentary Affairs 2001) which has been initiated by the Ministry of Social Welfare in association with the National Forum of Organizations Working With the Disabled (NFOWD), the definition of disability has been approved as follows:

A person with disability is one who is physically disabled either congenitally or as a result of disease or being a victim of accident, or due to improper or maltreatment or for any other reasons has become physically incapacitated or mentally imbalanced as a result of such disabledness or one to mental impairedness has become incapacitated, either partially or fully and is unable to lead a normal life.

The following definitions were adopted for the different types of disabilities under the legislation of Disability Welfare Act of 2001:

According to the 2001 Disability Welfare Act, these disability types are defined as follows:

- *Persons with **visual impairment** are classified as:* no vision in any single eye, no vision in both eyes, visual acuity not exceeding 6/60 or 20/200 (Snellen) in the better eye even with correcting lenses or limitation of the field of vision subtending an angle of 20 (degrees) or worse
- *Persons with **physical disabilities** are classified as:* Lost either one or both the hands, lost sensation, partly or wholly, of either hand, lost either one or both the feet, lost sensation, partly or wholly, of either or both the feet, physical deformity and abnormality, permanently lost physical equilibrium owing to neuro-disequilibrium
- *Persons with a **hearing impairment** are classified as:* Loss of hearing capacity in the better ear in the conversation range of frequencies at 40 decibels (hearing unit) or more, or damaged or ineffective hearing abilities
- *Persons with a **speech impairment** are classified as:* Loss of one's capacity to utter/pronounce meaningful vocabulary sounds, or damaged, partly or wholly or dysfunctional
- *Persons with a **mental disability** are classified as:* One's mental development is not at par with his chronological age or whose IQ (Intelligent Quotient) is below the normal range, or has lost mental balance or is damaged, partly or wholly
- *Person with **multiple disabilities** are classified as:*is one who suffers from more than one type of the above stated impairments.

Beyond the above characterization of disabilities another form of disability known as ***autistic disability*** has been used in the literature (The National Autistic Society 2015).

1.1.2 Problems with Disability

Disables are handicapped in a society due to physical, social and cultural barriers that prevent them from fully and equally participating in social, economic, political and cultural activities. Many of the disabled are deprived of education due to lack of adequate state facilities. Consequently, they fail to compete in the job market, so that they remain unemployed and often have no involvement in income generating activities. As a result, disabled remain predominantly poor and marginalized in the society. Eventually, they have no participation in the mainstream development process of developing countries like Bangladesh.

1.1.3 Current Situation of Disablity and Disables in Context of Bangladesh

The prevalence of disability in Bangladesh is believed to be high for reasons relating to overpopulation, extreme poverty, illiteracy, lack of awareness, and above all, lack of medical care and services. Although disability is a major social and economic phenomenon in Bangladesh, there is very little reliable data available on this issue, especially in the absence of a comprehensive national survey on persons with disabilities. The government organization Bangladesh Bureau of Statistics (BBS) led national censuses 1981, 1991, and 2001 estimated prevalence rate of disability at 0.82, 0.47, and 0.60 respectively. However, the government of Bangladesh (GOB) Surveys in 1982, 1986 and 1998 estimated a national prevalence rate of disability at 0.64%, 0.5% and 1.60% respectively(Haque 1997, Japan International Cooperation Agency 2002). Action Aid-Bangladesh and Social Assistance and Rehabilitation for the Physically Vulnerable (SARPV) put the disabled population at 8.8% of the total population. Bangladesh Protibandi Kalayan Samiti records 7.8%(Japan International Cooperation Agency 2002). The statistics on prevalence of disability has been a matter of serious debate. Most of the estimates of disability prevalence generally appear to be underrated, sometimes excessively. For instance, in a survey Action Aid Bangladesh (1996) records 14.04% people suffered from a form of impairment.In a study by Unnyan Onneshan(Titumir 2005)overall prevalence of disabilities has been found as 5.6.

1.1.4 Knowledge and Attitude Towards Disables in Bangladeshi Society

With regards to public knowledge about facilities available for disables, the study by the Unnayan Onneshan (Titumir 2005)found that people have little knowledge about the hindrance to employment opportunities for the people with disability. The respondents in the study opined that disables need special training programme, micro credit, and specialised programmes for the women with disability, rehabilitation services, and establishment of quota for the persons with disabilities in government employment. People have knowledge about inclusion of disabled children and adults in education programmes, and establishing special education schools for children with special needs. In health sector, there are some degree of awareness on preventing disability through pre-natal and delivery related health care, polio, leprosy, and epilepsy treatment, removal of vitamin deficiency and iodine deficiency. Some participants also mentioned about programmes related to noise control, pollution control, accident prevention and government provided free and accessible health care as the requirements of persons with disabilities.

With regard to attitude towards disabiles, the same study foundthat about 55% respondents accept disables well, 63% did not think that disables were a burden to the family and about 20% suggested to give extra privilege to them by providing extra security on road, reserved seats in the public transport like bus, train etc., separate hospital, health centre, and schools. Very few are found to behave roughly with the disables. When people were asked whether

social relation with the disable people is permissible, most of the participants replied they would accept friendship with the disabled but never permit to marry. Although people have sympathy and behave well towards disables, they deny marrying a person with disability.

Though some studies found positive attitude towards disables, however, many people in Bangladesh still view disability as a curse and a cause of embarrassment to the family. Women with disabilities are particularly more vulnerable to social discrimination and neglect. The disables are usually excluded from existing governmental and non-governmental development programmes.

1.1.5 Facilities Available for the People with Disability

Article 21 (2) of the Universal Declaration of Human Rights(United Nations 1948), adopted by the UN General Assembly in 1948, states that everyone has the right of equal access to public service in his country. Despite this, disabled people in Bangladesh face severe difficulties in accessing services, facilities and opportunities. There are a number of reasons behind the poor accessibility in Bangladesh. Perhaps, the origin of the problem is lack of awareness of disability and the needs of disabled people. This results in disabled people being marginalised and barred from mainstream society. They are rarely consulted or considered when planning infrastructure or services. Without understanding disability and the needs of disabled people the situation cannot drastically improve - to solve a problem it first needs to be understood.

Accessibility is often seen only in terms of physical infrastructure. It is obvious that many disabled people are not able to enter buildings, cross busy roads, get on or off buses or trains or use public facilities. Thus, one can say that disabled people are denied access to transport and freedom of movement. However, the problem extends beyond that which is immediately apparent. If a disabled person cannot travel to or enter a health complex he or she is also denied healthcare. If the same applies to educational institutions he or she is denied access to an education. If the same applies to a workplace he or she is denied access to a source of income.

Even if a building is designed to enable a disabled person to enter, his or her mobility may still be restricted. Light switches may be out of reach, sinks and mirrors too high, lifts and ramps unavailable or doorways too narrow to pass through.

Additionally, even if a disabled person is educated, healthy and qualified to do a job, the prevailing attitudes to disability will often prevent him or her being considered for that post. They are usually excluded from existing governmental and non-governmental development programs. Despite national policies that protect the rights of persons with disabilities (for example, a 10% job quota for persons with disabilities), in reality they face unfair competition or neglect.

1.1.6 Organizations that Work for Disables

A broad list of organizations working in the filed of disability in Bangladesh has been documented by Japan International Cooperation Agency(Japan International Cooperation Agency 2002). This list covers brief information on the government and non-government organizations, their activities and others. The organizations have been listed on the basis of their type and activities. A few of the prominent organizations who are working for disables could be, for instance, Centre for Disability in Development (CDD), Handicap International (HI), the National Forum of Organizations Working with the Disabled (NFOWD), Action on Disability and Development (ADD) Bangladesh, the Centre for the Rehabilitation of the Paralyzed (CRP), Rehabilitation Institute and Hospital for the Disabled (RIHD), Government Blind and Deaf and Dumb School, Training and Rehabilitation Centre for the Physically Disabled, Action Aid Bangladesh (AAB), Assistance for Blind Children (ABC), Bangladesh Blind Mission (BBM), Bangladesh Drishtihin Foundation (BDF), Bangladesh Organization for Disabled Advancement(BODA) and so on. In addition, a key list of dominant organizations working with persons with disabilities is available in the report prepared by the JICA in 2002(Japan International Cooperation Agency 2002).

1.2 Motivation of Study on Disability

People with disability face barriers to take part in education, employment, social activities, and indeed all aspects of life. Disables can have equal participation in social, cultural, employment opportunities with the appropriate State facilities. While most of the developed countries across the world have already established rights and opportunities for disable people to have equal access to socio-economic and national activities as non-disable people have, the government of Bangladesh have seriously addressed the disability righteous perspectives issues and enacted disability law under disables' right and protection Act 2013. The aim is to include disable people in the national development by providing special aids and facilities as required.Therefore, for planning what extent of State support might be essential or for systematic intervention to address the need of the disabled people, it is essential to explore prevalence of disability in various segments of the concerned groups.

1.3 Objectives

The main objectives of this monograph are:

(a) to obtain the overall prevalence of people with disability

(b) to identify the socio-demographic groups and geographic areas where disability is more prevalent
(c) to identify what type of disability is more prevalent
(d) to identify the percentage of households with disability
(e) to investigate to what extent the disable have access to education, employment, and social activities
(f) to investigate the marital status of the disabled
(g) to make some practical recommendations for national policymakers.

1.4 Justification of the Study

Disability is now one of the major health and social issues because people with disability have limited access to national development. Many government and international development agencies involved in the country have turned their attention to the goal of including disabled people in national development by reducing barriers to their social and economic inclusion. To achieve such goal it is very important to know the prevalence of disability, the type of disability that is more prevalent, the part of the country that is more prevalent to a specific type of disability and the age and socioeconomic groups that are likely to have disability. For example, if the correct distribution of disables by type of disability is identified then it would be easier for national policy makers to design and implement the specific programme aimed at providing services for disables with respective disability. Similarly by identifying the most prevalent socio-demographic groups and geographic areas the government and international agencies can give special attention to those groups and areas for quick improvement in the process of social and economic inclusion of the people with disability. In addition to strengthening the existing disability movement and implementing disability law aimed at establishing socioeconomic and political rights of a person with disability, it is essential to know the extent to which the disabled people have access to the social and economic activities. In general, the findings from this monograph would give some directions to the national and international agencies for taking necessary actions that would enough for universal involvement of disables in the national development.

1.3 Organization of the Study

The rest of the monograph has been organized as follows. Chapter2 presents the literature review on the existing studies across the world on disability based on survey or census reports, Chapter 3 discusses the methodology associated with this study, Chapter 4 presents

results from Census 2011 data and Chapter 5 describe the results on disability basedon Household Income and Expenditure Survey (HIES) 2010. Chapter 6 discusses and interprets major findings and concludes with recommendations and policy implications.

2. Approaches to Measuring Disabililty Prevalence

2.1 Introduction

Estimating prevalence of disability is of major concern to the researchers because accurate information on prevalence may help government and associated disability organizations to design and implement effective programmes for inclusion of disables in the national development. However, there is serious debate in the literature on the method for estimating disability prevalence: different studies provide different estimates for the same population (Mont 2007). The reported disability prevalence rates vary dramatically across the world.This variation is caused by several factors: differing definitions of disability, different methodologies adopted during data collection, and variation in the quality of study design. Therefore, it is not surprising if there are large differences in disability prevalence in the published literature. For example, the prevalence of disability has been reported around 1% in Kenya and Bangladesh while it is around 20% in New Zealand (Bangladesh Bureau of Statistics 1987, Central Bureau of Statistics 1989, Statistics NewZealand 1998). Normally one would expect to see higher prevalence in developing countries. However, it is also crucial to define any disability precisely as it largely depended upon the study objectives.Generating disability prevalence rates that are understandable and internationally comparable is a difficult initiative. This situation is complicated further by the fact that there is no single correct definition of disability, that the nature and severity of disabilities vary greatly, and that how one measures disability differs depending on the purpose for measuring it and the social context (Mont 2007).

2.2 Approaches to Measurement of Disability Prevalence

There is a large variation in the prevalence rate of disability measured through different methods of collecting data. For example, censuses, surveys, and vital registration systems from around the world take very different approaches to measuring disability and therefore have different rates for the same population. Table 2.1 obtained from WHO/ESCAP training manual in disability (WHO/ESCAP 2008, ESCAP 2012) shows a comparative summary on data collection methods on disability statistics. It reveals that estimating disability prevalence rate based on survey data gives a more accurate estimate than census and vital registration data whereas vital registration data gives a very poor estimate. As discussed by Mont (Mont 2007), the results in Table 2.2 reveal that disability estimates across different countries based on survey data are comparatively higher than those based on census data.

This can be explained, in large part, by the types of questions usually asked on censuses compared to the more detailed and more numerous questions posed on surveys. Nevertheless, general prevalence measures for international comparison purposes need to have a census-based approach because in poorer countries, it is often the only source of data collection.

Table 2.1: Data collection methods on disability statistics: a comparative summary

Criterion	Census	Survey	Vital Registration
Periodicity	Poor	Good	Very Good
Geographical Coverage	Very good	Poor	Very Good
Ability to obtain disability information	Poor	Very Good	Very Good
Ability to estimate better disability prevalence	Good	Very Good	Poor
Ability to identify person requiring special prevalence	Poor	Good	Very Good
Ability to capture and link disability and non-disability characteristics	Good	Very Good	Poor

Source: WHO/ESCAP Training manual on disability, 2008

Table 2.2: Prevalence of disability in selected countries by source*s*

Census			Survey		
Country	Year	Disability (%)	Country	Year	Disability (%)
United States	2000	19.40	New Zealand	1996	20.00
Canada	2001	18.50	Australia	2000	20.00
Brazil	2000	14.50	Uruguay	1992	16.00
United Kingdom	1991	12.20	Spain	1986	15.00
Poland	1988	10.00	Austria	1986	14.40
Ethiopia	1984	3.80	Zambia	2006	13.10
Uganda	2001	3.50	Sweden	1988	12.10
Mali	1987	2.70	Ecuador	2005	12.10
Mexico	2000	2.30	Netherlands	1986	11.60
Botswana	1991	2.20	Nicaragua	2003	10.30
Chile	1992	2.20	Germany	1992	8.40
India	2001	2.10	China	1987	5.00
Colombia	1993	1.80	Italy	1994	5.00
Bangladesh	1982	0.80	Egypt	1996	4.40
Kenya	1987	0.7			

Source: United Nations Statistics Division; IBGR (Brazil), INEC (Nicaragua), INEC (Ecuador),INEGI (Mexico), Statistics New Zealand, INE (Spain), Census of India 2001, SINTEF Health Research (Zambia) 2006.

2.2.1 Different Approaches Taken in Generating Different Prevalence Estimates

Self-identification as disabled: the respondent is directly asked if they are disabled. For example,asking the respondents the question *Do you have a disability?* – generates the lowest rates of disability. The positive response rate to this question is typically in the one to three percent range (Table 2.3), even when surveys of the same population using a more functional approach outlined in ICF(World Health Organization 2013) yield estimates in the 10 to 20 percent range.

Diagnosable conditions: The respondent is read a list of conditions, such as polio, epilepsy, paralysis, etc. and asked if he/she has any of them.

Activities of Daily Living (ADL): The respondent is classified as disabled if he/she has difficulty in performing any ADLs, including basic activities such as dressing, bathing, and feeding oneself.

Table 2.3: Country specific census based disability prevalence by type of questionnaire

"Do you have a disability?" Yes/ No	Disability rate	List of conditions	Disability rate	Activity Based	Disability rate
Nigeria	0.5	Colombia	1.8	Poland	10.0
Jordan	1.2	Mexico	1.8	United Kingdom	12.2
Philippines	1.3	Palestine	1.8	Brazil	14.5
Turkey	1.4	Chile	2.2	Canada	18.5
Mauritania	1.5	Uganda	3.5	United States	19.4
Ethiopia	3.8	Hungary	5.7		
Jamaica	6.3				

Source: World bank: measuring disability prevalance

Instrumental Activities of Daily Living (IADL): This approach is similar to the ADLs except that IADLs are higher order tasks. Examples include whether a person has problems managing money, shopping for groceries, or maintaining their households.

Participation: This method asks if the person has some condition which affects a particular social role, such as attending school or being employed. For example, the question in the US Current Population Survey is "Do you/Does anyone in this household have a health problem or disability which prevents (you/them) from working or which limits the kind or amount of work (you/they) can do?"

Similarly, different instruments within the same country often report very different rates of disability. For example, in Canada, the reported rate of disability in 2001 ranged from 13.7% to 31.3% (Table 2.4). In the *Participation and Activity Limitations Survey* disability was defined as having limitations in undertaking various activities. The reported prevalence rate was about 14%. The *Canadian Community Health Survey* (Rietschlin J 2004) reports a much higher rate of disability because it considers any condition that affects one's health, even those that do not necessarily have an impact on the range of activities a person could perform in daily life.

Table 2.4: Adult disability rates for major Canadian surveys, 2001

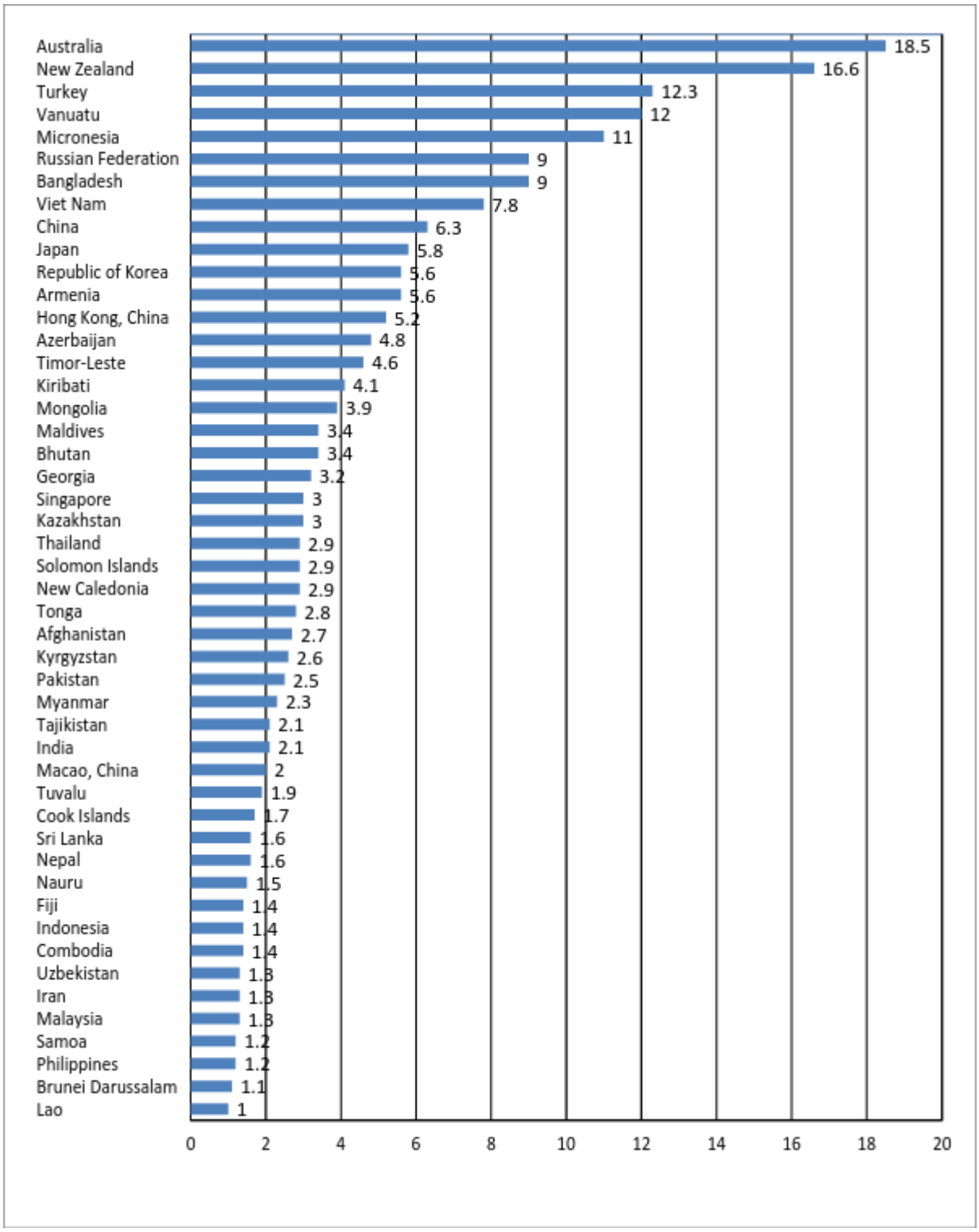
Instrument	Percent
Participation and Activity Limitations Survey – Filters	13.7
Participation and Activity Limitations Survey – All	14.8
Census	18.5
Survey of Labor and Income Dynamics	20.5
Canadian Community Health Survey	31.3

Source: Rietschlin and MacKenzie, 2004

2.3 Prevalence of Disability across the World

As discussed in the literature (ESCAP 2012), there is a wide variation in disability prevalence across countries (Figure 2.1). Generally, the developing countries tend to report lower rates of disability while higher prevalence rates reported in developed countries. The factors associated with higher rates of disability in richer countries are significant percentage of elderly people and higher survival rates for people with disabling conditions while the wide range of factors operating in the opposite direction for the lower rate of poorer countries – for example, poor health care, poor nutrition, and unsafe living conditions.

Figure 2.1: Prevalence of disability in the Asia-pacific countries.



Sources: United Nations ESCAP: Disability at Glance 2012.

2.4 Prevalence of Disability in Bangladesh

As discussed earlier measuring the prevalence of disability based on census and survey data across the world is challenging. The same scenario can be observed when studying disability prevalence in Bangladesh. Disability statistics are usually not included in any routine data collection or surveillance systems in the health sector in Bangladesh. However, it has been included in national censuses, sample surveys, sample vital registration system (SVRS) conducted by the government organizations such as Bangladesh Bureau of Statistics (BBS) and sample surveys conducted by the non-government organizations (NGOs) and international organizations. The national censuses 1981, 1991, 2001, SVRS 2009 and 2010 conducted by BBS reported prevalence rates between 0.47% and 1.18%, except the Household Income and Expenditure Survey (HIES) 2010 where the prevalence of overall disability is reported to be 9.07% (Table 2.5). However, the prevalence rate for severe disability is reported to be around 1.5%, which is very close to census estimates.

Table 2.5: Disability prevalence rate in Bangladesh based on different sources

Census/SVRS based on GOB organization	Prevalence rate (%)	Survey year/Report based on private organization	Prevalence rate (%)
BBS Census 1981	0.82	ESCAP 2012	9.0
BBS Census 1991	0.47	Action aid 1993 in Jamalpur disrtict	8.78
BBS Census 2001	0.60	Action aid baseline survey 1995-1997 in four locations	14.4
BBS disability prevalence survey 1994	1.06	Action aid baseline survey 1995-1997 in five locations	13.34
BBS SVRS 2009	1.00	The Innovators KAP survey 2005	6.0
BBS SVRS 2010	1.18		
BBS HIES 2010	9.07		

Sources : BBS, Action aid Babgladesh, Innovators

Similar scenario can be observed in Ecuador where the disability prevalence rate is 12.1 percent, but the rate of severe disability is about 4 percent (Rietschlin J 2004). As discussed in the earlier section, underreporting of disability prevalence in censuses is very common not only in Banglasdesh but also in all over the world. This is because inadequate questionnaire design, insufficient training of enumerators, and possibly also families 'forgetting' members with disabilities.

2.5 Summary

This chapter reviewed the prevalence of disability in Bangladesh and across the world. In addition, it reviewed the approaches to measure the disability. As discussed in this chapter, it is observed that the prevalence rate of disability for the same population for the same time period varied by the approaches of defining the disability and collecting data. In general, a lower prevalence rate of the disability is usually reported in census while the rate is comparatively higher in the survey. The scenario is true for all countries across the world. Again the prevalence rate varies based on the type of question asked for detecting the person with disability. In addition, definition of disability is another reason for variation in the prevalence rate. Therefore, to report comparable prevalence rate of disability it is better to follow a standard measurement procedure outlined by the International Classification of Functioning, Disability and Health (ICF)(World Health Organization 2013), implemented by the UN's Washington group on Disability Statistics. However, it is important to note that the situation and the threshold at which a functional limitation is considered to be a disability will be different depending on the purpose of measurement. Therefore, when reporting general prevalence it is best to provide some notion of the intensity of disability. The prevalence rate may vary depending on the range. For example, in Ecuador the disability prevalence rate is 12.1 percent while the rate of severe disability is about 4 percent.

Different countries report different prevalence rates and this is expected. For a variety of reasons, a country might want to use a different set of functional domains or would prefer to use a different severity threshold for classifying people as being disabled. However, it is highly recommended that countries use similar types of limitations with a range of categories to allow for a representation of some of the continuum. Furthermore, they should try as much as possible to use actions and terminologies that allow for comparability across cultural contexts. By doing so, the prevalence estimates they report will be more understandable, more useful for benchmarking, and more in line with the social model of disability which is most conducive for building inclusive development policies to better the lives of the entire population.

3. METHODOLOGY

3.1 Introduction

The general methodology of this study is to draw most recent and accurate sources of data on disability in Bangladesh and analyze these data to obtain estimates of disability prevalence and develop a comprehensive understanding of the nature and patterns of disability in the country. The study analyzes data on disability available from two sources: (i) the Population and Housing Census 2011 (ii) the Household and Income Expenditure Survey (HIES) 2010. The primary concern is to analyze data from Census 2011. However, to check consistency and robustness, the Census results will be compared with those from HIES 2010. This chapter provides a description of the data from both census and survey and an account of the analysis to be performed including a description of the variables and the disability indicators/ parameters.

3.2 Sources of data

(i) The Population and Housing Census 2011

The Population and Housing Census is conducted decennially by the Bangladesh Bureau of Statistics (BBS) to enumerate the entire population. Population and Housing Census 2011 is the fifth and most recently concluded census in Bangladesh and was conducted in March 2011(Bangladesh Bureau of Statistics 2011). Its objectives were to collect nationwide information on housing, households and the population in order to develop a comprehensive database that could be used for development planning and human resources development programs as well as economic management. The census was conducted in three phases. In Phase I, a short questionnaire was used to collect basic information about all households and individual members of households. Phase II involved a Post Enumeration Check (PEC) that was conducted to verify quality and coverage of the main count. Phase III was a sample survey conducted to supplement the main census and collect detailed socio-economic information using a long questionnaire. Information on disability in the population was obtained only in Phase I. Therefore, this study uses data from the main census (i.e. Phase I) only.

For the purpose of data collection in the main census, the country was divided into 293,579 enumeration areas (EA). Each EA was identified by a EA number and by the specific village, mauza, union, upazila, district and division to which it belonged. Each EA contained 150

households on an average where a household was defined as one or more persons who ate dinner together from the same kitchen and stayed in the same housing unit during the census night. Any household member who ate dinner outside the house and stayed in the same housing unit during the night was also counted a member of that household. Exceptions were persons engaged in a night duty or in a transient state. Enumeration was performed using an Enumeration Area Map which was constructed by numbering houses in the EA by starting from the north-west corner of the EA and then counting houses to the right in a serpentine way. In this way, each household in an EA was given a unique household serial number.

In the main census, enumerators visited each household and collected limited household level information as well as information on some important variables for each household member by interviewing the household head. Following this procedure, the total number of people living in the country had been enumerated and limited household level data and person-specific information were collected. For each person enumerated, information on the following demographic and social variables was recorded:

- Age (in complete years)
- Sex (Male, female)
- Marital status (Unmarried, Married, Widowed Divorced/Separated)
- Religion (Muslim, Hindu, Christian, Buddhist, Other)
- Type of disability (None, Speech, Vision, Hearing, Physical, Mental, Autistic)
- Currently student (Yes, No)
- Highest class passed (Did not go to school, Class 1, Class 2,…,Class 9, SSC, HSC, Graduation (General), Graduate (Hons), Masters and higher)
- Field of education (General, Vocational/technical, Religious, Not Applicable)
- Can write a letter (Yes, No)
- Activity status (Employed, Looking for job, Household work, Do not work)
- Field of employment (Agriculture, Industry, Service)

In addition, the following household level variables were recorded:

- Floating? (Yes, No)
- Type of household (General, Institutional, Others)
- Type of house (Pucka, Jhupri, Semi-pucka, Kutcha)
- Tenancy of the house (Own, Rented, Rent-free)
- Source of drinking water (Tap, Tubewell, Other)

- Toilet facilities (Sanitary with water seal, Sanitary with no water seal, Non-sanitary, None)
- Electricity connection (Yes, No)
- Household of ethnic population? (Yes, No) and name of ethnic group for ethnic households

With regard to disability, the household head was asked to provide information on the disability status and type of disability of the household members. In other words, an individual was recorded as disabled according to the judgement of the household head and not the interviewer. However, the severity of the disability was not recorded. For the present study on disability prevalence, only 5% of the total population enumerated is selected randomly from each division, district, thana, ward, mauza and union and this representative sample is later used in the subsequent analysis.

(ii) The Household and Income Expenditure Survey (HIES) 2010

The Household and Income and Expenditure Survey (HIES)has been conducted by the (Bangladesh Bureau of Statistics 2010) (BBS) since 1973. Its purpose is to fill in the gaps in information between censuses by collecting data on a wide range of variables including income, expenditure, consumption and poverty situation on a regular basis. In addition, the HIES data series has been used for compilation of national accounts of the household sectors, computation of weights of the consumer price index, preparation of poverty reduction strategy and Five Year Plans, as well as monitoring progress of the Millennium Development Goals (MDG). HIES 2010 is the fifteenth round of the survey. What sets HIES 2010 apart from the previous data series is the inclusion of four new modules, one of which, is a separate module dedicated to disability.

A two-stage stratified random sampling technique was employed to draw a representative sample under the framework of the Integrated Multipurpose Sample Design (IMPS) on the basis of the sampling frame constructed from the Population and Housing Census 2001. The IMPS design consisted of 1000 primary sampling units (PSUs) where each PSU comprised of about 200 households. In the first stage, 612 PSUs were drawn from 16 strata of which 6 were rural, 6 were urban and 4 were SMAs. In the second stage, 20 households were randomly selected from each of the rural PSUs, as well PSUs in municipal areas and SMAs. The survey was conducted over a period of one year in order to capture the seasonal variations in income, expenditure and consumption pattern. The entire year was divided into 18 terms and in each term, data were collected from 680 sample households selected from 34 PSUs. In this way, a total of 12240 households were covered in the HIES 2010. Further details about sampling design as well as information regarding field training and survey

operations may be found in the Report of the Household Income and Expenditure Survey 2010 (BBS 2010).

The Disability Module

The disability module collected information on six types of disabilities. These were:

- Eye sight difficulty (Vision disability)
- Hearing difficulty (Hearing disability)
- Walking and climbing difficulty (Physical disability)
- Remembering and concentrating difficulty
- Self-care difficulty
- Speaking and communicating difficulty (Speech disability)

The disability module recorded the presence of the above six types of disabilities for each household member irrespective of age. However, children below 2-3 years of age were not observed for certain types of disabilities due to the absence of necessary cognigible symptoms. Both the HEIS 2010 and Census 2011 data contain information relating to vision, hearing, physical and speech disability. However, the disability groups 'remembering and concentrating difficulty' in HEIS 2010 and 'mental disability' in Census 2011 may not be the same. Similarly, the groups 'self-care difficulty' in HEIS 2010 and 'autism' in Census 2011 may differ. Unlike the Census 2011 data, the HEIS data on disability records the severity of each type of disability. Following the convention of the Washington Group of the World Bank, HEIS 2010 scales the severity or intensity of disability into the categories 'some difficulty', "severe difficulty" and "fully unable".

(iii) Other Secondary Data for Comparison of the Results

Some secondary data particularly from survey reports will be used for comparison of the results obtained from Census and HIES data. These include the Sample Vital Registration System (SVRS) Project and other surveys on disability conducted by disability organisations and UN organizations. Of these, Sample Vital Registration System (SVRS) Project is a regular surveillance system undertaken by the BBS to determine the annual population change at the national and districts levels during the inter-censal period. Therefore, disability results based on Census and HIES data are expected to be comparable with SVRS.

3.3 Description of Variables

The outcome variables of interest in this study are

(i) Disability status is a binary variable with categories 'Disabled' and 'Not disabled'.

(ii) Disability group/type

It is important to note that some differences are expected in the measurement of disability in the Census 2011 and HEIS 2010 data due to differences that may exist in the criteria for identification. In addition, the disability groups/types and criteria for classification into various groups may vary between the data sources. Nonetheless, the following five types of disabilities are common to the two data sets: vision disability, hearing disability, physical disability, speech disability and mental disability defined in Chapter 1.

An important objective of the study is to examine how the prevalence of the outcome varies with the levels of several other demographic, regional and socio-economic variables or differentials. Table 3.1 gives the description of potential disability differentials from the Census 2011 data.

Table 3.1: Description of potential disability differentials from Census 2011 data

Variable	Category
Demographic	
Age (in complete years)	0-4; 5-9; 10-19; 20-29; 30-39; 40-49; 50-59, 60-69, 70-79, 80+
Sex	Male; female
Marital status	Married; unmarried; widowed; divorced / separated
Religion	Muslim; Hindu; Christian; Buddhist, Other
Geographic	
Division	Barisal, Chittagong, Dhaka, Rajshahi, Rangpur, Sylhet, Khulna
Area of residence	Urban; Rural
District	list of 64 districts in Appendix
Socio-economic	
Type of household	Floating, Not floating
Type of house	Pucka; Semi-pucka, Kutcha; Jhupri
Sources of drinking water	Tap; Tube-well; Others
Toilet facilities	Sanitary (with water); Sanitary (without water); Non-sanitary; None
Has electricity	Yes; No
Household belongs to ethnic group	Yes; No

3.4 Description of Analysis

An attempt is made to measure disability prevalence both at the individual and household level and capture the different dimensions of disability through several indicators/parameters. The following indicators measure disability prevalence and patterns of disability in sub-groups at the individual level:

1. Overall disability prevalence: This is used to measure the burden of disability on a population. Overall disability prevalence ratios are calculated as the percentage of the population with a disability.
2. Disability type prevalence: This is calculated as the percentage of the population with disability of a given type.
3. Overall disability prevalence in a sub-group: This is calculated as the percentage of the population in a sub-group with a disability.
4. Disability type prevalence in a sub-group: This is calculated as the percentage of the population in a sub-group with a given disability type.

From the Census 2011 data, information is extracted for 7,204,659 persons, which accounts for 5% of the total population. Using this data, tables are produced for the prevalence of overall disability as well as the prevalence of a given disability type. Six disability type prevalence measures are calculated:

- Speech disability prevalence
- Vision disability prevalence
- Hearing disability prevalence
- Physical disability prevalence
- Mental disability prevalence
- Autistic disability prevalence

The overall disability prevalence in a sub-group and the disability type prevalence in a sub-group are also calculated where sub-groups are defined according to the categories of the variables listed in Tables 3.1. For example, overall disability prevalence is calculated for subgroups defined by the categories of marital status. Similarly, speech disability prevalence, vision disability prevalence, etc. are computed for sub-groups defined by the categories of marital status. Sub-groups are also defined by cross-classifying individuals according to the categories of two or more variables. For example, overall disability prevalence is computed separately for each of the 14 subgroups defined by the categories of the variables division and gender.

The following indicators measure disability prevalence in sub-groups at the household level:

1. Overall household disability prevalence: This is calculated as the percentage of all households in the data having at least one member with a disability.
2. Overall household disability prevalence in a sub-group: This is calculated as the percentage of all households in a sub-group having at least one member with a disability.

To determine whether households belonging to certain sub-groups are pre-disposed to having disabled persons, the overall household disability prevalence is obtained separately for the sub-groups defined by the categories of the socio-economic and geographic variables given in Table 3.1. For example, the overall household disability prevalence is calculated separately for each Division and for the categories of the variable 'Type of household'.

To investigate the patterns of disability among disabled persons, charts are produced showing how the distribution of different types of disabilities among the disabled persons varies according to the levels of several factors. The factors that are investigated include age, marital status, gender and division. Another important objective of this study is to investigate how disability affects an individual's marital status, access to education and income-generating activities. Since marriage is an important component of society, it is important to see whether disability is a barrier to marriage and hence a barrier to the integration of disabled persons into the society. Similarly, the empowerment of disabled persons is essential if they are to contribute to the society and lead independent and respectable lives. Education leads to empowerment and therefore this study analyzes whether disability affects access to education and highest level of education attained. Gender differentials among the disabled persons in terms of marital status, access to education, highest level of education attained and income generating activities are also analyzed. To carry out these analyses, separate tables are produced that compare the percentages of disabled persons and non-disabled persons in different marital groups, in different income-generating activities and in different categories of highest level of education attained, according to gender.

4. Results Based on Census 2011

4.1 Prevalence of People with Disability

The 2011 National Census provides information on disabilities in the population that may be classified into 'disability types or groups'. Six main disability groups have been identified based on underlying health conditions and impairments as well as activity limitations. These include 'Speech disability', 'Vision impairment', 'Hearing disability', 'Physical disability', 'Mental disability', and 'Autism'. This section provides information on disability prevalence for all disability groups combined, i.e. overall disability, as well as for individual disability groups. Furthermore, existing patterns in disability prevalence are identified by studying the changes in prevalence of overall disability as well as disability groups with respect to demographic characteristics, geographic characteristics and household or socio-economic characteristics of the population.

According to the 2011 census, the number of disabled persons in Bangladesh is 101, 585, which accounts for 1.41% of the total population. Table 4.1 gives the prevalence rates (PR) (in percentage) for different types of disability in Bangladesh according to important demographic characteristics. It is seen that physical disability is the most commonly reported disability in Bangladesh (PR=0.55%) followed by vision impairment (PR=0.27%). The prevalence of different types of disabilities varies across age groups, gender, marital status, whether HH belongs to any ethnic group or not as well as religious groups as described below.

Table 4.1: Prevalence of disability (%) by demographic characteristics

Variable	Overall Disability	Type of disability						Total number of people
		Speech	**Vision**	**Hearing**	**Physical**	**Mental**	**Autistic**	
Age Group								
0-4	0.5	0.1	0.05	0.03	0.23	0.03	0.06	7,52,660
5-9	0.9	0.22	0.1	0.06	0.33	0.1	0.08	9,08,701
10-19	1.1	0.23	0.12	0.07	0.37	0.19	0.1	12,66,784
20-29	0.99	0.19	0.12	0.07	0.35	0.19	0.07	13,39,266
30-39	1.12	0.16	0.18	0.09	0.42	0.19	0.07	10,03,821
40-49	1.56	0.16	0.33	0.15	0.63	0.22	0.07	7,33,156
50-59	2.27	0.17	0.57	0.25	0.97	0.23	0.08	4,52,487
60-69	3.57	0.21	1.02	0.43	1.52	0.26	0.13	3,02,765

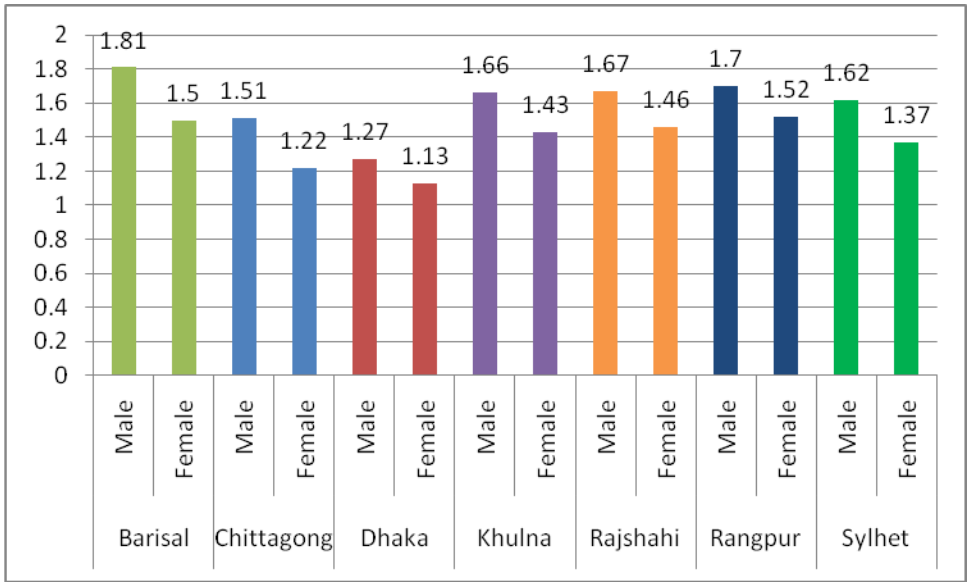
Contd.

Variable	Overall Disability	Type of disability						Total number of people
		Speech	**Vision**	**Hearing**	**Physical**	**Mental**	**Autistic**	
70-79	5.7	0.25	1.78	0.77	2.43	0.28	0.18	1,54,761
80+	3.35	0.27	0.91	0.41	1.37	0.22	0.16	2,90,258
Sex								
Male	1.51	0.21	0.26	0.12	0.63	0.19	0.09	3607174
Female	1.3	0.17	0.29	0.14	0.47	0.16	0.08	3597485
Religion								
Muslim	1.4	0.19	0.27	0.13	0.55	0.18	0.09	6,513,668
Hindu	1.46	0.17	0.30	0.15	0.58	0.18	0.08	614,482
Buddhist	1.61	0.20	0.32	0.18	0.73	0.14	0.04	21,910
Christian	1.64	0.24	0.32	0.18	0.57	0.25	0.09	44,629
Others	1.41	0.19	0.32	0.18	0.51	0.18	0.08	9,970
Eithnicity								
Yes	1.63	0.22	0.34	0.19	0.60	0.20	0.07	79,549
No	1.41	0.19	0.27	0.13	0.55	0.18	0.09	7,125,110
Total	1.41	0.19	0.27	0.19	0.55	0.18	0.09	7,204,659

In all age groups, physical disability is the most prevalent type of disability. Physical disability prevalence increases substantially after 40 years of age becoming as high as 2.43% for individuals in the age group 70-79. Second to physical disability, speech impediments are more common among children aged 15 years and less while in older people (i.e. 40+ years), vision impairment has the highest prevalence. The overall disability prevalence increases beyond 40 years of age becoming as high as 5.7%for individuals in the age group 70-79 years.

Males have higher overall disability prevalence than females. The gender gap in disability prevalence is the highest in the case of physical disability with the prevalence being 0.16 percentage points higher for males than that for females. Figure 4.1 shows the gender gap in disability prevalence in each of the seven Divisions of Bangladesh. Males have higher overall disability prevalence than females, and this gender gap is the highest in Barisal and lowest in Dhaka Division.

Figure 4.1: Prevalence of disability by gender and region



Returning to Table 4.1, it is seen that overall disability prevalence is higher among Christians and Buddhists as compared to Muslims, Hindus and other religious groups. Once again, physical disability prevalence is highest in all religious groups as compared to other types of disabilities. Although the variability in prevalence of different types of disability is not substantial among the religious groups, physical disability prevalence appears to be significantly higher among Buddhists than among people from other religious groups. Finally, the overall disability prevalence varies with ethnicity as reflected by the higher prevalence among individuals belonging to ethnic communities as compared to non-ethnic communities. However, autism appears to be more prevalent among non-ethnic groups relative to ethnic minorities.

Table 4.2: Prevalence of disability (%) by region

Variable	Overall Disability	Type of disability						Total number of people
		Speech	**Vision**	**Hearing**	**Physical**	**Mental**	**Autistic**	
Area								
Rural	1.51	0.2	0.3	0.15	0.59	0.18	0.09	5,524,456
Urban	1.06	0.14	0.20	0.08	0.41	0.16	0.08	1,680,203
Division								
Barisal	1.65	0.22	0.36	0.15	0.67	0.16	0.1	413,113
Chittagong	1.36	0.20	0.25	0.11	0.54	0.17	0.1	1,422,571
Dhaka	1.2	0.17	0.24	0.11	0.45	0.16	0.08	2,375,225
Khulna	1.55	0.19	0.28	0.14	0.65	0.2	0.08	784,807
Rajshahi	1.57	0.18	0.32	0.15	0.62	0.22	0.07	924,436
Rangpur	1.61	0.21	0.31	0.18	0.63	0.19	0.08	788,027
Sylhet	1.49	0.20	0.31	0.14	0.55	0.18	0.11	496,480
Total	1.41	0.19	0.27	0.19	0.55	0.18	0.09	7,204,659

Table 4.2 summarizes the variability in disability prevalence according to area of residence and administrative division. It also shows the prevalence of different types of disability in each category of these two geographic variables. Results in Table 4.2 suggest that 1.51% of the rural population have some form of disability, which is 0.45 percentage points higher than the overall disability prevalence in urban areas (PR= 1.06%). For each type of disability, prevalence is still higher in rural areas than in urban areas with the urban-rural gap in disability prevalence varying between 0.01 and 0.18 percentage points among the different types. As Figure 4.2 reveals,similar scenario is observed when one compares urban and rural disability prevalence separately for each Division. In each Division, rural disability prevalence is found to be higher than urban disability prevalence. The urban-rural gap varies between 0.19 and 0.46 percentage points for the seven Divisions.

Returning to Table 4.2, it is seen that physical disability stands out as the most common form of disability in both urban and rural areas. Analysis by Division reveals that overall disability prevalence is highest in Barisal (PR=1.65%) followed by Rangpur (PR=1.61%) and Rajshahi (PR=1.57%). Speech, vision and physical disability are most prevalent in Barisal Division. Hearing and mental disability are more common in Rangpur and Rajshahi Divisions, respectively, whereas autism is most prevalent in Sylhet Division (PR=0.11%) with Barisal and Chittagong Divisions following closely behind (PR=0.10%).

Figure 4.2: Prevalence of disability by area of residence

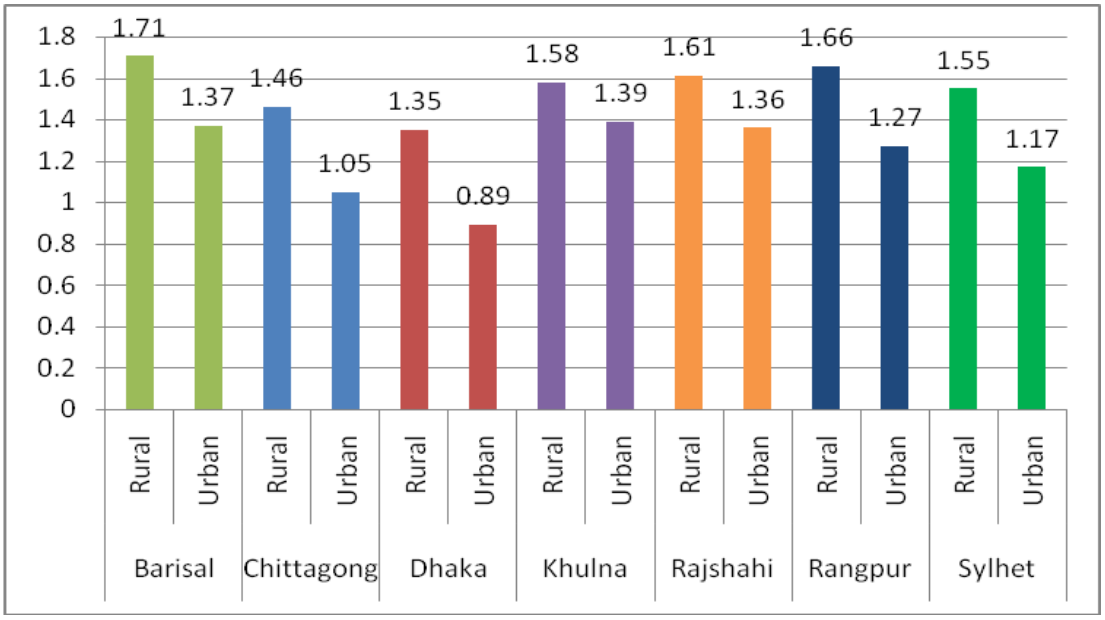


Figure 4.3 and Table 4A in Appendix I summarizes the variations in the overall disability prevalence according to district and lists the prevalence of different disability groups according to district. Overall disability prevalence is highest in Barguna (PR= 2.10%) and

Pirojpur (PR=2.11%). Among all disability types, physical disability appears to be the most common in all districts. The prevalence of speech disability is highest in Jhalokati (PR=0.26%), vision disability prevalence is highest in Barguna (PR=0.48%), hearing disability prevalence is highest in Rangamati (PR=0.22%), physical disability prevalence is highest in Pirojpur (PR=0.89%), mental disability prevalence is highest in Rangamati (PR=0.27%) and autism is the most prevalent in Barguna and Jhalokati (PR= 0.13%).

Figure 4.3: Prevalence of disability by district

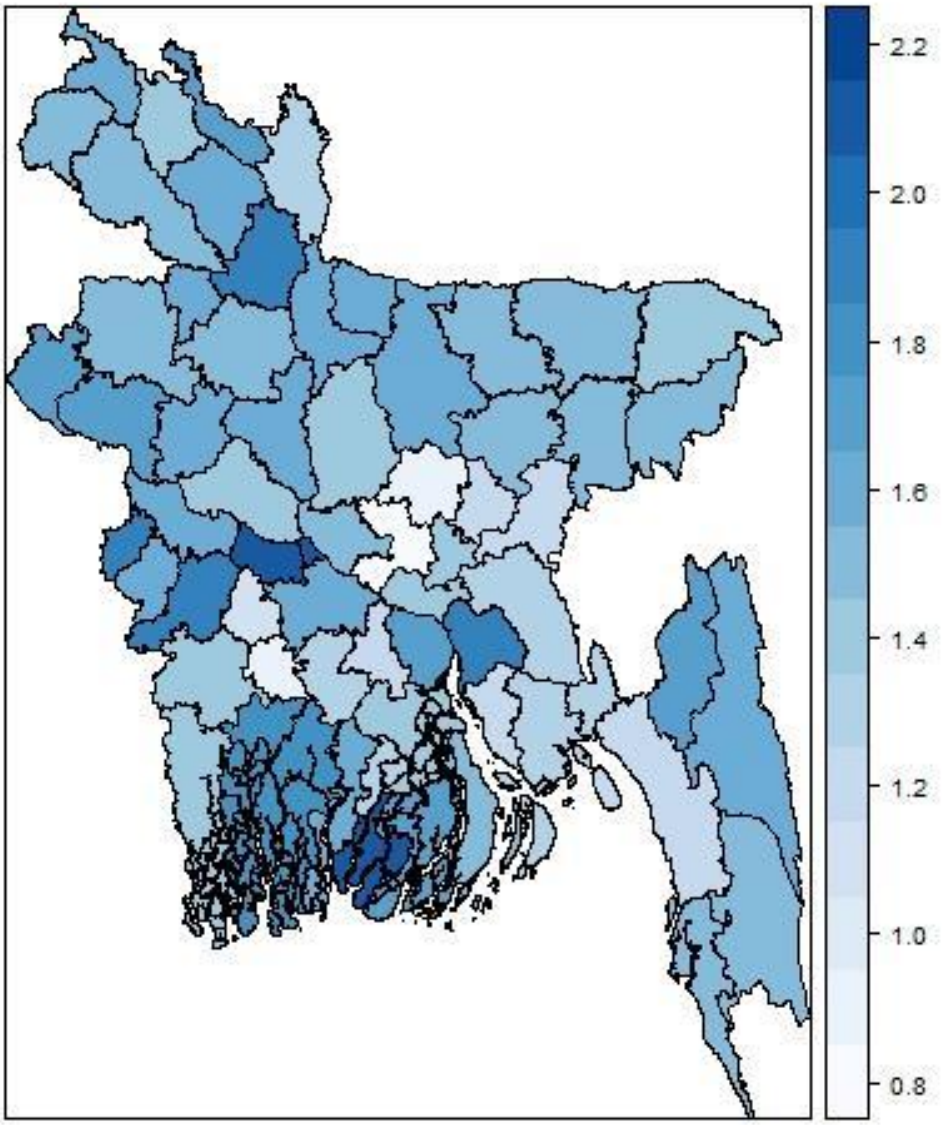


Table 4.3 presents the disability prevalence according to household (HH) characteristics, such as type of household, type of house, source of drinking water, type of toilet facility, access to electricity, which reflect the socio-economic characteristics of the HH. It is seen that overall

disability prevalence is higher for people living in kutcha and jhupri type HHs compared to those living in pucca and semi-pucca HHs. Similar pattern is observed in the case of specific types of disabilities. This suggests that disability prevalence may be negatively associated with socio-economic condition, which is reflected by the type of HH. Source of drinking water is also an indicator of the socio-economic condition as high income HHs are likely to have better access to safe drinking water compared to poor HHs .

Table 4.3: Prevalence of people with disability by household characteristics

Variable	Overall disability	Type of disability						Total number of people
		Speech	**Vision**	**Hearing**	**Physical**	**Mental**	**Autistic**	
Type of House								
Pucca	0.95	0.13	0.17	0.07	0.37	0.14	0.08	902,280
Semi-pucca	1.21	0.16	0.22	0.10	0.48	0.17	0.08	1,432,308
Kutcha	1.53	0.21	0.31	0.15	0.60	0.18	0.09	4,667,814
Jhupri	2.03	0.24	0.4	0.21	0.81	0.24	0.13	193,038
Sources of drinking water								
Tap	0.81	0.11	0.14	0.06	0.3	0.12	0.08	772,384
Tube-well	1.45	0.2	0.28	0.14	0.57	0.18	0.08	6,010,524
Others (pond, river etc)	1.87	0.23	0.38	0.19	0.75	0.21	0.11	412,532
Toilet facility								
Sanitery with water	1.21	0.16	0.22	0.1	0.48	0.16	0.08	1,847,905
Sanitery without water	1.32	0.18	0.25	0.12	0.52	0.17	0.08	2,821,764
Non-sanitary	1.55	0.21	0.31	0.15	0.6	0.18	0.09	2,036,557
None	2.06	0.26	0.42	0.23	0.81	0.23	0.11	489,214
Has electricity								
Yes	1.22	0.17	0.23	0.1	0.49	0.16	0.08	4,164,646
No	1.66	0.22	0.34	0.17	0.64	0.19	0.09	3,030,794
Total	1.41	0.19	0.27	0.19	0.55	0.18	0.09	7,204,659

It is evident from the analysis that disability prevalence is negatively associated with socio-economic condition of an individual since overall disability prevalence is lower among individuals living in HHs possessing tap or tube-wells as compared to individuals residing in HHs receiving water from other sources. Similarly, overall disability prevalence is higher among people residing in HHs with poor sanitary facilities and no electricity as compared to people living in HHs with adequate sanitary facility and electricity. The relationship between socio-economic condition of individuals and prevalence of specific types of disability is similar

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4.2 Prevalence of Households (HHs) with Disability

Table 4.4 presents the prevalence of HHs with at least one disabled member by various HH characteristics. Results show that 5.56 % HHs in general have at least one member with disability. About 11% of floating HHs hasat least one member with disability as opposed to 6% from among the non-floating HHs. The percentages of Kutcha and Jupri HHs that have at least one member with disability are also higher than that of pucca and semi-pucca HHs. About 3% of HHs having tap water and 5.75% of HHs supplied by tube-wells have persons with disability, whereas over 7% of the HHs that depend on other water sources have persons with disability. The table also reveals that disability prevalence of HHs increases with decreasing toilet facilities. These results point to the fact that socio-economic conditions of HHs are related to disability prevalence in HHs and suggest the possibility of a negative correlation.

Table 4.4: Prevalence of households (%) with at least one member with disability by household characteristics

Characteristics	Category	HH with disability (%)	Total no of HH
Floating	Yes	10.73	410
	No	5.56	1608277
Type of HH	Pucca	3.9	187407
	Semi-pucca	4.82	318277
	Kutcha	5.99	1056093
	Jupri	7.46	46500
Source of Drinking Water	Tap	3.17	171929
	Tube-well	5.75	1342869
	Other (pond, river etc)	7.19	93479
Toilet facility	Sanitary with water	4.9	403292
	Sanitary (no water)	5.29	622244
	Non-sanitary	6.07	458555
	None	7.17	124186
Total		5.56	1608687

Figure 4.4 presents the disability prevalence among HHs by Division and area of residence. It is evident that there is higher prevalence of disability among the HHs for rural areas than urban areas. The rural-urban gap is highest in Sylhet Division (2.2 percentage points) and lowest in Rajshahi Division (0.76 points). HH disability prevalence is highest in Sylhet with about 7% of HHs possessing one or more members who suffer from disability.

Figure 4.4: Prevalence of household with disability by region

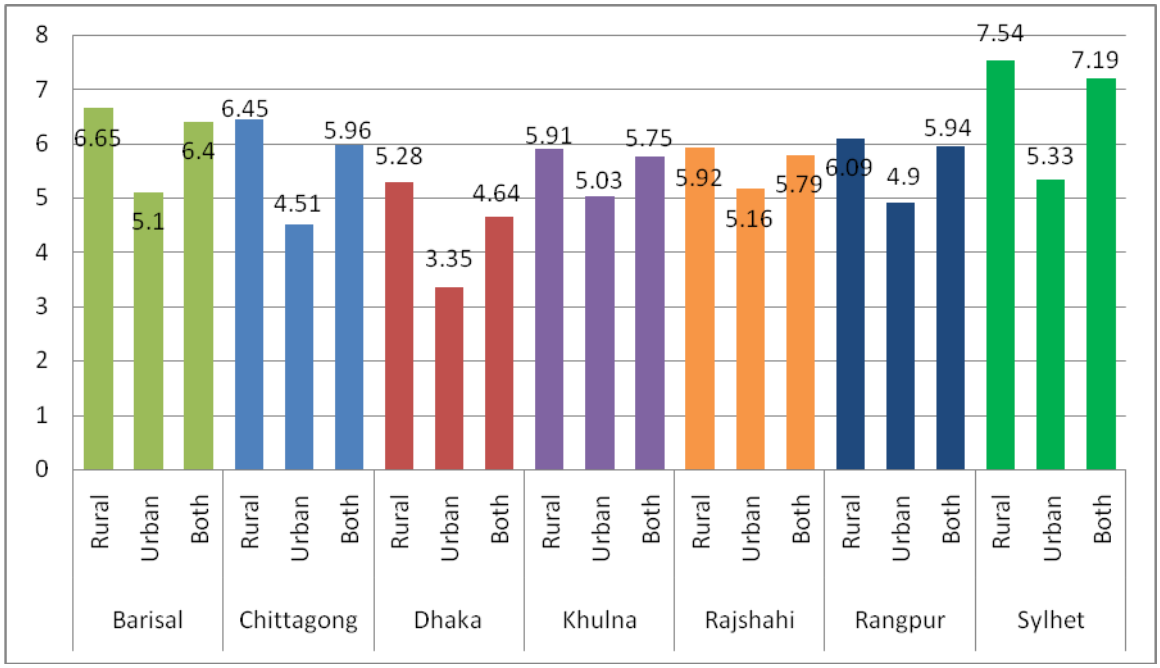


Figure 4.5: Prevalence of households with disability by district

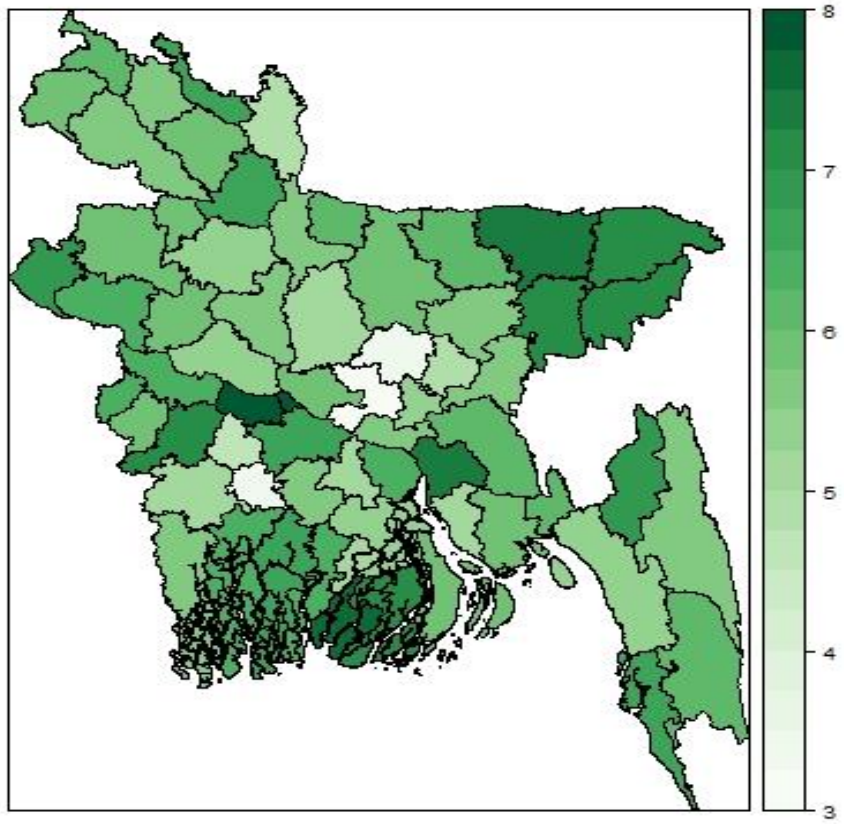


Figure 4.5 and Table 4B in Appendix I summarize the variations in the overall prevalence of HHs with disability according to district. Similar to district-wise individual disability

prevalence, overall prevalence of HH with disability is higher in coastal districts such as Barguna and Pirojpur compared to the other districts.

4.3 Patterns of Disability

Figure 4.6 summarizes the distribution of disabled persons by type of disability. Physical disability is the most common type of disability found among disabled persons (39%) followed by vision impairment (20%). To see whether this observed pattern varies according to age, Figure 4.7 shows the distribution of disabled persons by type of disability and age group. Physical disability stands out as the most common form of disability among the disabled persons in all age groups with the highest proportion being found among children in the age group 0-5 years. The proportion of physically disabled persons is also high in older age groups (40+ years). The proportion of disabled persons suffering from vision impairment increases with age. In fact, it appears to be an important cause of disability for persons 60 years and above. This trend is reversed in the case of speech impairment. Interestingly, speech impairment appears to be a more serious cause of disability for children and teenagers than it is for older people. In contrast, the proportion of mentally disabled persons is larger in the middle age groups. Hearing impairment and autism have reverse trends with age as a comparatively larger proportion of disabled people suffers from hearing problems in older age groups, and a larger proportion of disabled persons suffer from autism in the younger age groups.

Figure 4.6: Distribution of disabled by type of disability

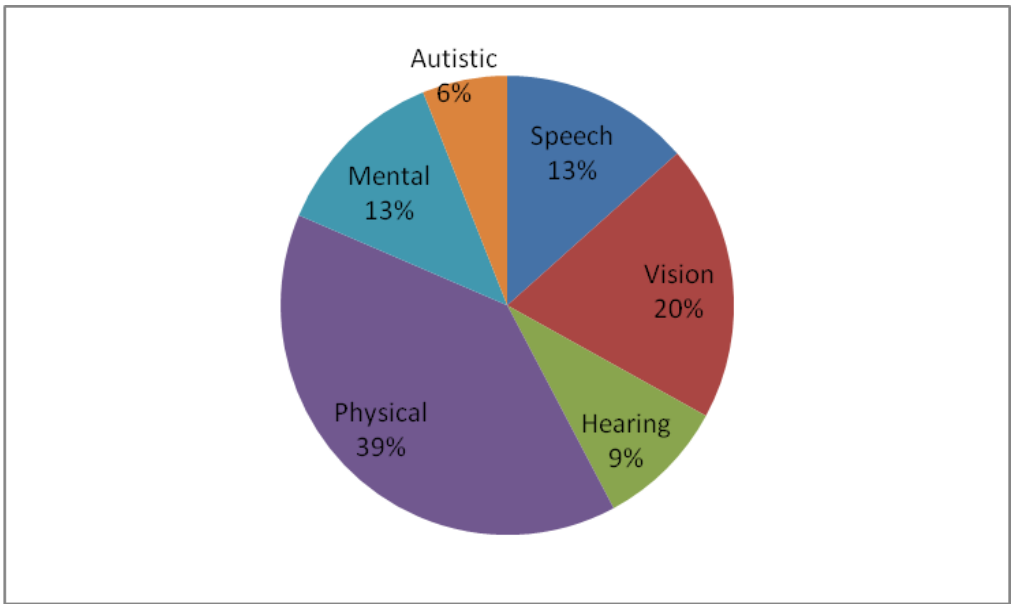


Figure 4.7: Distribution of disabled by type of disability and age group

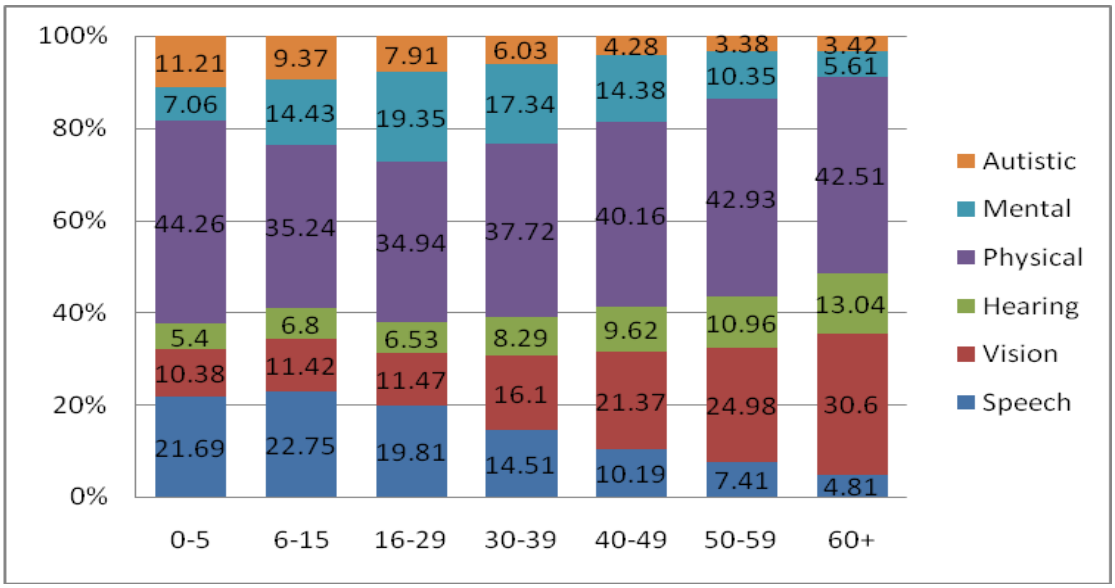


Figure 4.8 reveals that physical disability is the most frequent type of disability among males as well as females who are disabled, followed by vision impairment. Nearly 42% of disabled males suffer from physical disability which is higher than the corresponding percentage for females (36.31%). The proportion of disabled persons with hearing or vision impairment is slightly higher for females than males whereas speech impairment appears to be slightly more common among males who are disabled.

Figure 4.8: Distribution of disabled by type of disability and gender

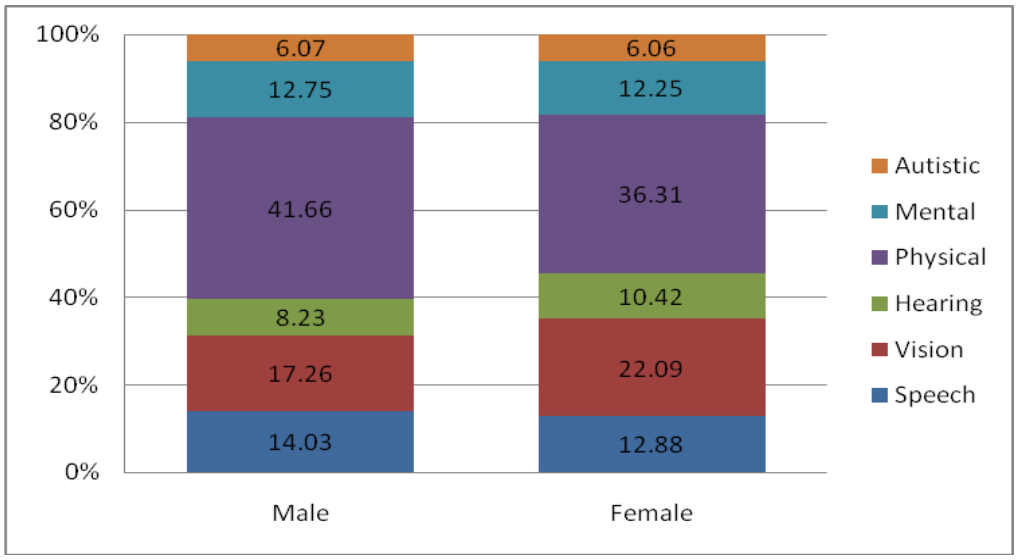


Figure 4.9: Distribution of disabled by type of disability and marital status

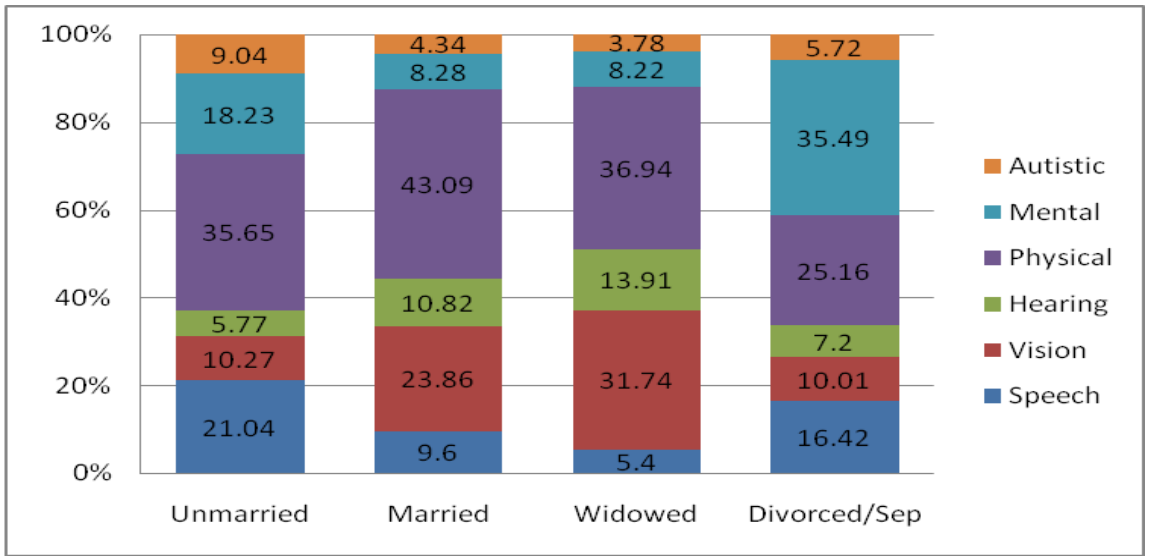
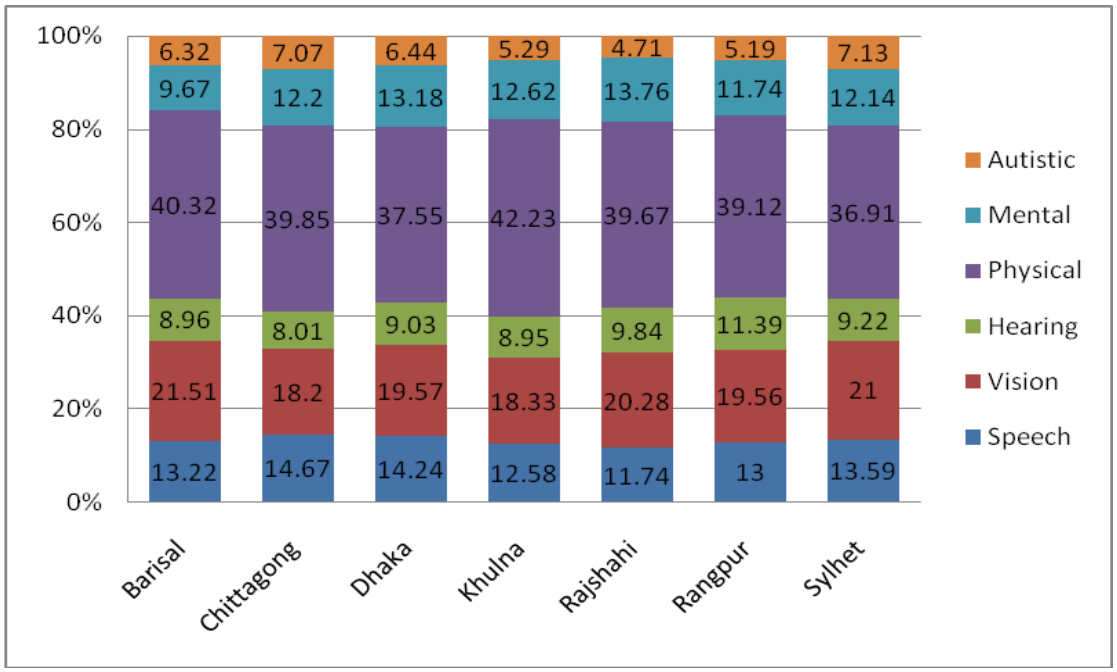


Figure 4.9 summarizes the variation in the proportion of disabled persons in various disability groups according to change in marital status. Physical disability accounts for the largest proportion of all disabilities among single, married and widowed disabled persons who are disabled. However, mental disability seems to predominate among persons who are separated or divorced. Moreover, these appear to be significant differences between the proportion of disabled persons who are mentally ill in the divorced/separated group and that of the other groups. Depending on the time of onset of the disability, the latter findings suggest that mental disability may increase the likelihood of a divorce, or considered the other way around; the psychological and emotional effects of a divorce could be one of the predisposing factors for mental disability. Interestingly, vision impairment appears to be a common disability among disabled persons who are either married or widowed than it is among those who are unmarried or divorced/separated. On the other hand, speech impairment is more prevalent among the disabled persons who are either single or divorced/separated than it is among those who are married or widowed. These findings support the fact that type of disability is intertwined with the marital status of a disabled individual.

Figure 4.10 shows the distribution of disabled persons by type of disability and Division. Once again, physical disability and vision impairment are the most dominant forms of disability in all Divisions. However, there does not appear to be significant differences between the Divisions in terms of the proportions of different types of disabilities among the disabled persons.

Figure 4.10: Distribution of disabled by type of disability and region



4.4 Accessibility of Disabled to Marriage, Education and Income Generating Activities

Table 4.5 lists the nuptiality patterns of disabled and normal persons aged 18+ years with respect to gender. It is observed that the proportion of disabled males who are married (77.49%) is slightly less than the corresponding proportion for normal males (81.03%). Also, the proportion of divorced/separated persons among the disabled males (1.14%) is higher than the corresponding proportion among the normal males (0.14%). For females, only 51.32% of the disabled females are married compared to 83.19% among the normal females. The proportion of disabled females who are divorced/separated is also higher than the corresponding proportion in the case of normal females.

Table 4.5: Nuptiality paterns according to gender and disability status for people aged 18+years

Sex	Disability Status	Marital status				Total number of people
		Unmarried (%)	**Married (%)**	**Widowed (%)**	**Divorced/ Seperated(%)**	
Male	Disabled	18	77.49	3.38	1.14	39,012
	Normal	18.03	81.03	0.79	0.14	20,04,180
Female	Disabled	12.24	51.32	32.48	3.96	35,057
	Normal	5.21	83.19	10.59	1.01	20,85,499
Both	Disabled	15.27	65.1	17.15	2.47	74,069
	Normal	11.43	82.4	5.6	0.56	40,89,679

From this analysis it is evident that disability influences the marital status of an individual since a larger number of disabled males and females experience divorce and a lower number get married compared to their normal counterparts. There is marked gender disparity in the effect of disability on marital status. For instance, 77.49% of disabled males are married compared to only 51.32% in the case of disabled females suggesting that males with disability seem to have less difficulty in becoming married than disabled females. The proportion of disabled females who are divorced/separated (3.96%) is also higher than the corresponding proportion for disabled males (1.14%).

Studies have shown that there is significant association between employment success and educational attainment. Improving educational attainment of disabled individuals is one way of helping disadvantaged people integrate into society as well as become independent. Table 4.6 compares the current access to education for disabled and normal children aged 5-18 years with respect to gender. About 67% of the non-disabled male children currently receive education whereas only 39% receive education among the disabled males. Similarly, normal females have greater access to education compared to disabled females. Thus, disability appears to be an obstacle to receiving education. However, the gender gap in current access to education for persons with disability is only 2% points indicating that disability affects access to education for disabled males and females similarly.

Table 4.6: Current access to education of the disabled aged 5-18 years compared to normal people of the same age group

Sex	Disability Status	Currently student or not		Total number of people
		Student(%)	**Not student (%)**	
Male	Disabled	39.12	60.88	12,253
	Normal	67.55	32.45	10,85,533
Female	Disabled	41.85	58.15	9,252
	Normal	71.96	28.04	9,98,365
Both	Disabled	40.29	59.71	21,505
	Normal	69.66	30.34	20,83,898

To investigate the relationship between disability and highest level of educational attainment for males and females, Table 4.7 compares educational attainment of disabled and non-disabled persons aged 5+ years with respect to gender. More than half of the disabled males have had no formal education. In contrast, only 29% received no education for normal males. The proportion of disabled males who have received primary, secondary or higher education is also lower than that for normal males. Similar results can be seen in the case of females.

Table 4.7: Educational attainment by the disabled aged 5+years compared to normal people of the same age group

Sex	Disability Status	Educational attainment as highest year of schooling				Total number of people
		No education (%)	**1-5 yrs (%)**	**6-10 yrs (%)**	**11+ yrs (%)**	
Male	Disabled	55.96	23.24	16.84	3.97	50,743
	Normal	29.08	33.82	28.2	8.89	29,87,490
Female	Disabled	67.9	19.63	11.19	1.28	43,989
	Normal	34.41	32.34	28.75	4.5	30,05,229
Both	Disabled	61.5	21.56	14.21	2.72	94,732
	Normal	31.75	33.08	28.48	6.69	59,92,719

The gap in educational attainment between disabled and non-disabled males varies from a high of 11.36 percentage points for primary education to a low of 4.92 % points for higher education. In the case of females, the gap in education attainment varies from a high of 17.56 % points for secondary education to a low of 3.22 % points for higher education. From these findings it is apparent that disability is an impediment to receiving education and attaining higher education. Moreover, there appears to be some gender disparity as revealed by the larger proportion of disabled females with no education (67.90 %) as compared to disabled males (55.96 %).

The inclusion of disabled people in the labour market ensures that these people can lead normal and independent lives. Table 4.8 shows the percentage distribution of males and females aged 14 years and above according to disability status and employment status. The percentage of disabled persons who are unemployed is 25.15 percentage points higher than the percentage of normal persons who are unemployed.

Table 4.8: Access to income-generating activities among the disabled aged 14+ years compared to normal people of the same age group

Sex	Disability Status	Income generating activities				Total number of people
		Employed (%)	**Looking for job (%)**	**Household (%)**	**Do not work (%)**	
Male	Disabled	53.61	1.3	1.91	43.18	43,548
	Normal	78.85	1.75	1.52	17.88	23,61,530
Female	Disabled	5.03	0.38	51.89	42.71	38,539
	Normal	8.11	0.5	73.63	17.75	24,14,793
Both	Disabled	30.81	0.87	25.37	42.96	82,087
	Normal	43.09	1.12	37.98	17.81	47,76,323

Conversely, the percentage of disabled persons who are either employed or engaged in household work is 24.89 percentage points less than that of normal individuals. This indicates that disability hinders access to employment and ability to work. Although the percentage of disabled persons who do not work is almost the same for males and females, there are gender differences in the distribution of disabled persons within the categories 'employed', 'looking for job' and 'household'. For instance, over half the number of disabled males is employed and about 2% are engaged in household work. For disabled females, there is a big shift in this distribution from left to right, with only 5% employed and more than half engaged in household work.

4.5 Summary

This monograph examines the prevalence of overall disability and different types of disability in Bangladesh using data from the 2011 National Census. Detailed analysis of the disability data has revealed important disability differentials and patterns. The overall disability prevalence is found to vary with respect to demographic characteristics such as age, gender, marital status as well as religious groups. Overall disability prevalence is found to be higher in (i) the age group 40 years and above, (ii) males, (iii) divorced/separated (iv) Christians and Buddhists and (v) Ethnic groups. The most common type of disability reported for all age groups is physical disability. The prevalence of physical disability increases substantially beyond 40 years of age. The next frequently reported cause of disability in older age groups (40 + years) is vision impairment while in younger age groups (<15 years), speech impairment is common. Although physical disability has the highest prevalence among single, married and widowed persons, it is seen that among divorced/separated persons, mental disability prevalence is the highest.

With respect to geographical characteristics, it has been found that overall disability prevalence is higher in urban areas, in Barisal Division, and in the districts of Pirojpur and Barguna. The prevalence of different types of disabilities is also found to be higher in urban areas relative to rural areas. However within each Division, this situation is reversed with the overall disability prevalence being higher in rural compared to urban areas. The difference in overall disability prevalence between males and females is found to be the highest in Barisal Division and lowest in Dhaka Division. Among all types of disabilities, physical disability is most prevalent in both rural and urban areas. With respect to Division, speech, vision and physical disability are most prevalent in Barisal Division. Hearing and mental disability are common in Rangpur and Rajshahi Divisions, respectively. Autism is most prevalent in Sylhet Division.

Overall disability prevalence is found to be higher for the floating population. Mental disability, autism and speech impairment are among the disabilities that have higher prevalence among the floating population. Disability prevalence is found to be associated with indicators of socio-economic status. Overall disability prevalence was found to be higher in kutcha and jhupri type HHs, HHs without tap or tube-well water, HHs with poor toilet facilities, HHs with no electricity and HHs of ethnic communities.

The analysis of HH disability prevalence data reveals that there is higher prevalence of disability among the HHs of rural areas than urban areas. The rural-urban gap is highest in Sylhet Division and lowest in Rajshahi Division. Moreover, HH disability prevalence is found to be the highest in Sylhet.

Among the disabled persons, physical disability is found to be most common. This is true for all age groups, for both males and females, for single, married and widowed persons and for all Divisions. Disability influences the marital status of an individual since a significantly larger proportion of disabled males and females was found to be divorced compared to non-disabled persons and a lower proportion of disabled persons was married compared to their normal counterparts. The study also found a significant gender disparity in the effect of disability on marital status.

Disability appears to be an obstacle to receiving education since a smaller proportion of disabled persons received education compared to normal persons. In completing primary, secondary or higher education, again it is seen that the proportion of disabled persons completing different levels of education is lower than normal persons. Moreover, there appears to be some gender disparity as revealed by the larger proportion of disabled females with no education as compared to disabled males. Results have shown that disability hinders access to employment. There are gender differences in the proportion of disabled persons within the categories of employment status. A significantly larger number of disabled males are employed than disabled females. However, a large proportion of disabled women are engaged in household work compared to disabled males.

5. RESULTS BASED ON HIES 2010

Disability data extracted from HIES 2010 were analyzed to see if the results from Census 2011 are comparable with HIES 2010, although there are some differences in measuring disability between census and survey. The HIES 2010 questionnaire included a module on disability, which was originally developed by the Washington Group (WG) of the World Bank(World Health Organization 2013). The disability module contained six types of disabilities related to eye sight, hearing, walking and climbing, remembering and concentrating, self care, and speaking and communicating. Each and every type of disability is classified into three categories by its degree of intensity of difficulties, such as "some difficulty", "severe difficulty" and "fully unable". The subsequent section presents and discusses the results.

5.1 Prevalence and Patterns of Disability

Table 5.1 lists the prevalence rates (in percentage) for different types and intensity of difficulty/disability. Irrespective of type of difficulty, overall 7.5% of sample population have some sort of difficulty whereas 1.3% have severe difficulty and only 0.21% are fully unable to do their usual activity. Irrespective of intensity of difficulty, eye sight difficulty is the most prevalent among the sample population (PR:6.19%), which is followed by walking and climbing (PR:2.44%), hearing (PR:2.32%), remembering and concentrating (PR:1.62%) and selfcare (PR:0.95%) whereas speaking and communicating difficulty is the least prevalent among the sample population (PR:0.85%).

Table 5.1. Prevalence of disability/difficulty by type and intensity of difficulty

Type of difficulty	Intensity of difficulty (%)				Total sample (N)
	Some	**Severe**	**Fully unable**	**Overall**	
Eyesight	5.58	0.53	0.08	6.19	55578
Hearing	1.93	0.33	0.06	2.32	55578
Walking and climbing	1.84	0.53	0.07	2.44	55578
Remembering and concentrating	0.94	0.24	0.08	1.62	55578
Self care	0.57	0.30	0.08	0.95	55578
Speaking and communicating	0.52	0.24	0.09	0.85	55578
At least one of the above difficulties	7.5	1.3	0.21	9.01	55578

Figure 5.1 illustrates the pattern of overall disability irrespective of its type and intensity. Of the 9% disables in general, only 7% have only one difficulty and 3% have more than one disability. Remaining, 91 % people have no disability/difficulty at all.

Figure 5.1: Pattern of disability

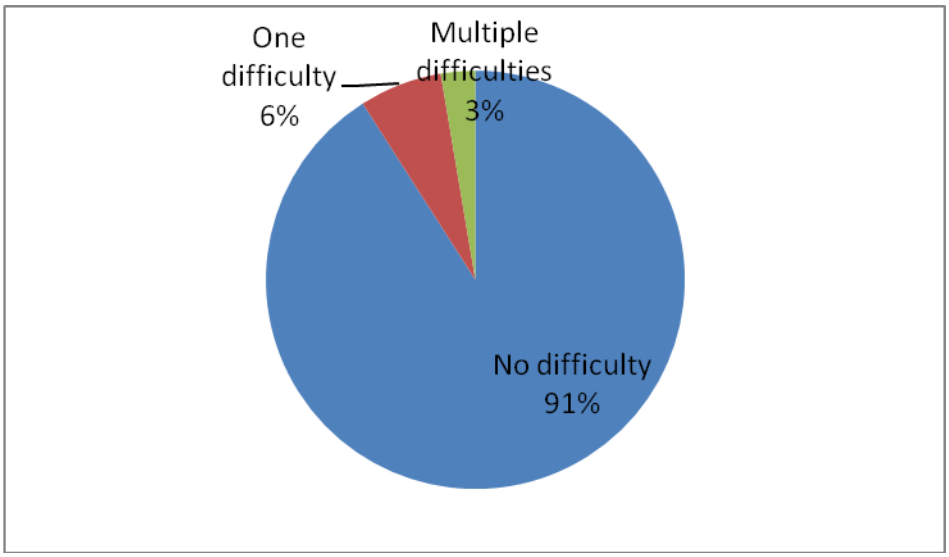


Table 5.2a reports the percentage of people with at-least one difficulty by background variable and intensity of difficulties. In a comparison between males and females, a higher percentage of females(8.35%) have some sort of disability than males (6.41%)whereas a higher percentage of males have severe difficulty than female. Interesting results are seen for age-group wise decomposition in Table 5.2a.

Table 5.2a: Percentage of people with at least one disability by background variable and intensity of disabilities

Variable	Intensity of disabilities (%)			Total Sample (N)
	Some	**Severe**	**Fully unable**	
Sex				
Male	6.41	1.37	0.23	27,533
Female	8.35	1.28	0.20	28,045
Age group				
0-4	0.49	0.3	0.14	5,687
5-9	1.29	0.34	0.16	6,809
10-19	2.04	0.55	0.14	12,109
20-29	2.59	0.47	0.16	9,361

contd.

contd.

Variable	Intensity of disabilities (%)			Total Sample (N)
	Some	**Severe**	**Fully unable**	
30-39	6.72	0.77	0.11	7,484
40-49	13.35	1.21	0.18	6,047
50-59	20.48	2.6	0.23	3,892
60-69	27.7	5.08	0.54	2,422
70-79	39.65	10.1	0.67	1,188
80+	43.52	18.83	2.94	579
Religion				
Muslim	7.35	1.31	0.21	48,733
Hindu	7.49	1.35	0.26	6,245
Buddhist	5.71	2.34	0	385
Christian	15.82	3.06	0	196
Others	15.79	0	0	19
Area of residence				
Urban	7.59	1.35	0.22	40,742
Rural	7.39	1.32	0.21	55,578
Region				
Barisal	5.6	2.44	0.2	4,463
Chittagong	5.05	1.33	0.19	10,942
Dhaka	7.61	0.99	0.15	15,658
Khulna	8.43	1.15	0.38	7,673
Rajshahi	11.08	1.6	0.18	6,607
Rangpur	8.57	1.68	0.22	5,531
Sylhet	5.51	0.83	0.23	4,704
Total	7.39	1.32	0.21	55, 578

For all types of intensities, the prevalence of disability (in percentage) increases as age increase, with a rapid increase after age 40 (Table 5.2a). The prevalence of people with some difficulty increases from 0.49% for age group 0-4 to 43.52% for age group 80+. The same pattern was observed for people with 'severe' and 'fully unable' disability. The disability is most prevalent among Christian, which is followed by Hindu, Muslim and least prevalent among Bhuddist. Very little difference is observed in the prevalence of disability between rural and urban areas**.** At region-wise disaggregated results, the highest prevalence of at least one 'some' type of disability is 11.08 % in Rajshahi Division and the lowest one was in Chittagong Division (5.05 %). Prevalence of people with severe disability is highest in Barisal division (2.44 %) and fully unable type disability is more prevalent in Khulna Division (0.38 %) compared to other divisions.

Table 5.2b presents prevalence of disability by household socio-economic status characterized by household infrastructure such as materials of house, sources of drinking water and toilet facilities. It is evident that disability is more prevalent among the people with worse household infrastructure i.e. among the people from poorer households compared to their counter richer households.

Table 5.2b: Percentage of people with atleast one disability by household charachteristics and intensity of disabilities

Variable	Intensity of disabilities (%)			Total Sample (N)
	Some	**Severe**	**Fully unable**	
Type of house				
Pucca	7.20	1.05	0.23	5333
Semi-pucca	7.24	0.91	0.20	9742
Kacha	7.40	1.41	0.21	36910
Jhupri	7.99	1.92	0.28	3593
Sourcedrinking water				
Tap	6.91	1.00	0.14	4411
Tubewell	7.43	1.34	0.22	49239
Others(pond/river etc)	7.52	1.71	0.26	1928
Toilet facility				
Sanitery	6.28	1.14	0.24	11567
Pucca	7.45	1.31	0.21	18047
Kacha	7.67	1.39	0.20	24036
None	9.96	1.71	0.21	1928
Total	7.39	1.32	0.21	55, 578

Figure 5.2a and Figure5.2b show the distribution of people aged 5+years facing difficulties by age and type and intensity of difficulty. Figure 5.2a shows the distribution of people aged 5+ having some difficulty. Across the age-groups, the percentages of people having mild eyesight difficulty have a normal shape curve- prevalence is higher for middle age group. The reverse scenario is observed for people with speaking and communicating difficulty- prevalence is lower for middle age group. The prevalence of hearing difficulty is higher among younger people compared to older people. However, the prevalence of remembering and concentrating and walking and climbing increase with age.

Figure 5.2b exhibits different results compared to Figure 5.2a. Figure 5.2b shows the distribution of people aged 5+ having 'severe' or 'fully unable' difficulty. The prevalence of all types of difficulties except speaking and communicating increase with age. The speaking and communicating disability is more prevalent among younger people compared to older people.

Figure 5.2a: People of aged 5+ years having milddifficulty by type of difficulties and age group

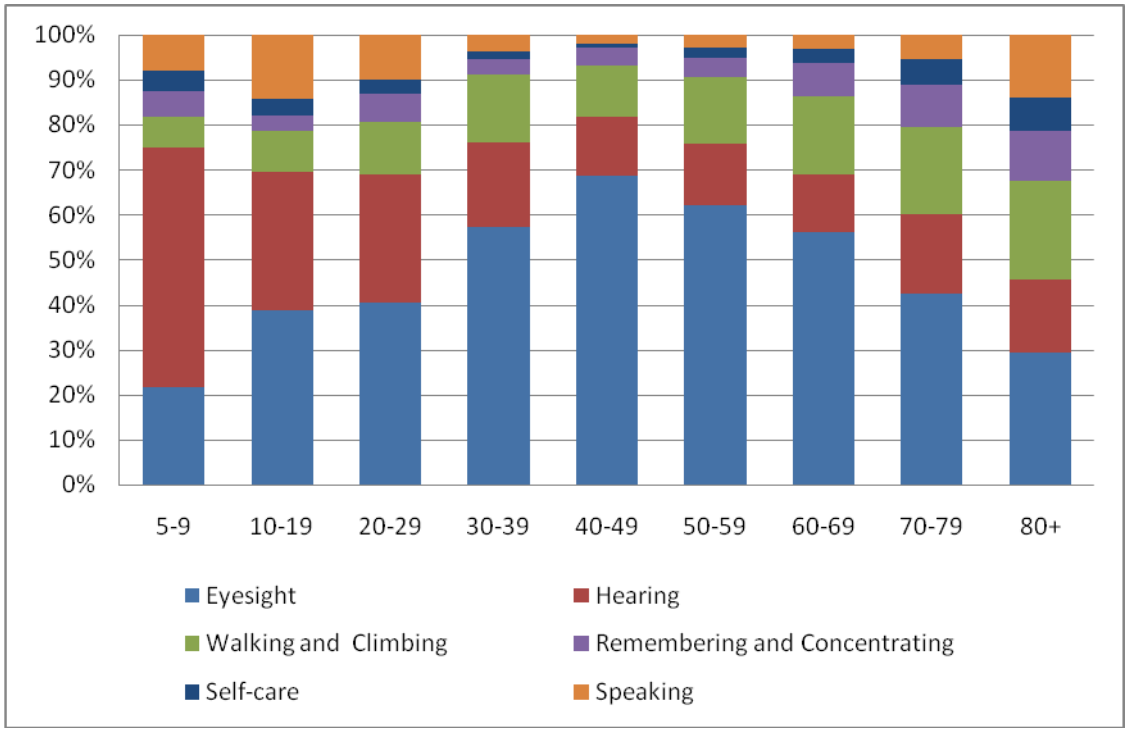


Figure 5.2b: People of aged 5+years having severe or full difficulty by type of difficulty and age group

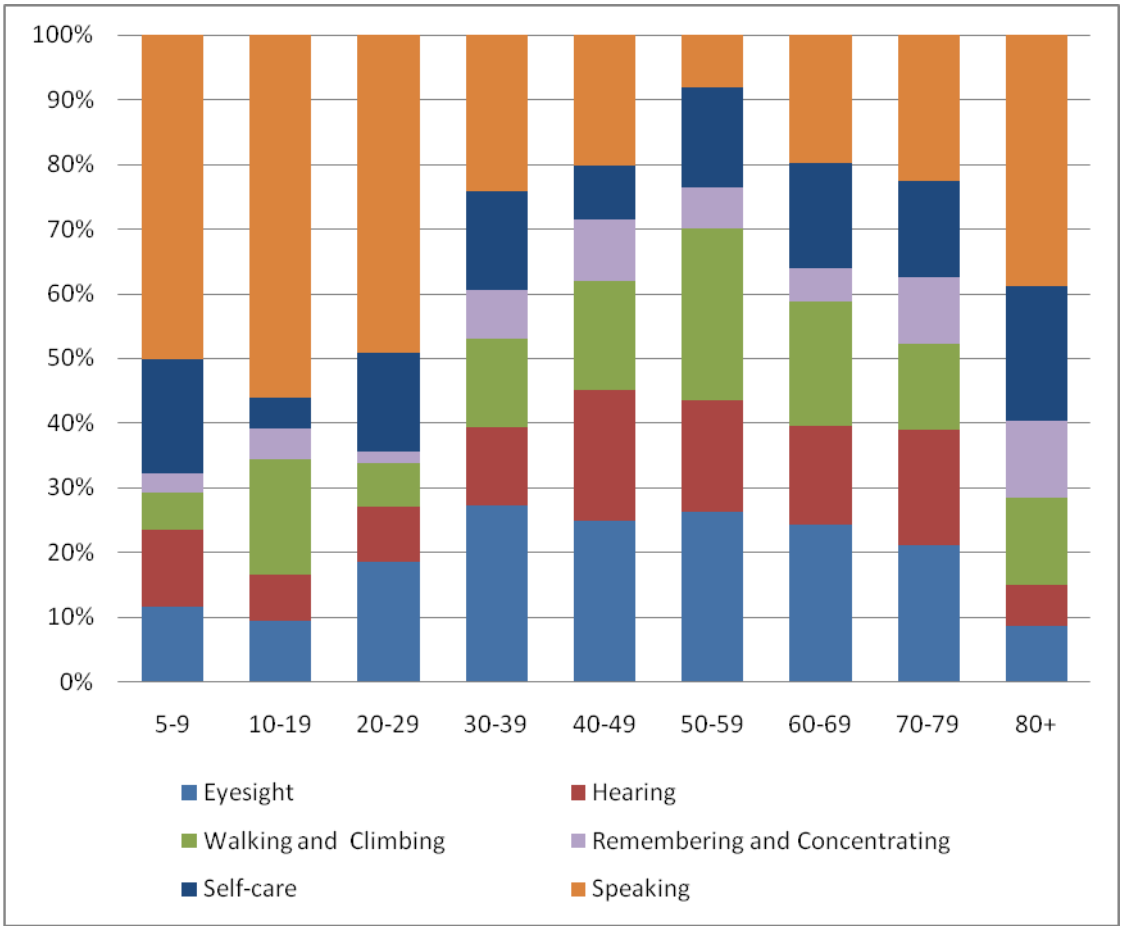


Figure 5.3a and Figure 5.3b show the distribution of people aged 5+ years having mild and severe or fully unable difficulty respectively by type of disability and gender.Except mild eye sight difficulty, all type of difficulties are almost equally prevalent between male and female. Mild eye sight difficulty is more prevalent among female than male.

Figure 5.3a: Distribution of people aged 5+years facing mild (some) difficulty by typeof difficulty and gender

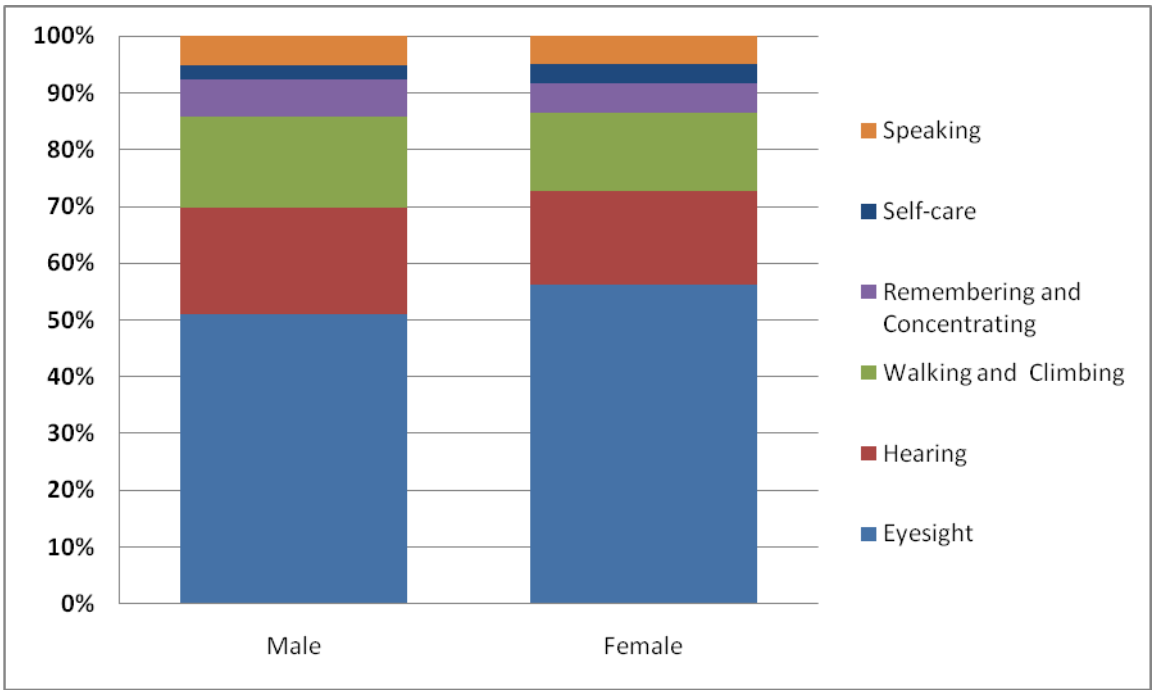


Figure 5.3b: Distribution of people aged 5+ facing severe difficulty or fully unable by type of difficulty and gender

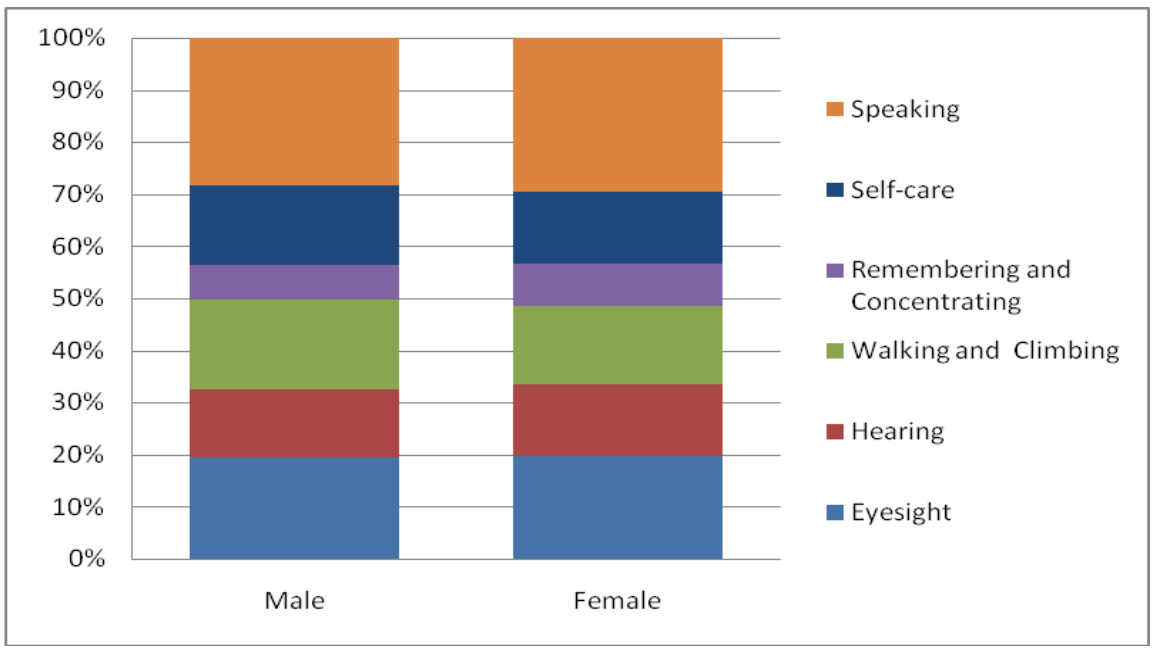


Figure 5.4a: Distribution of people aged 5+ facing mild (some) difficulty by type of difficulty and region

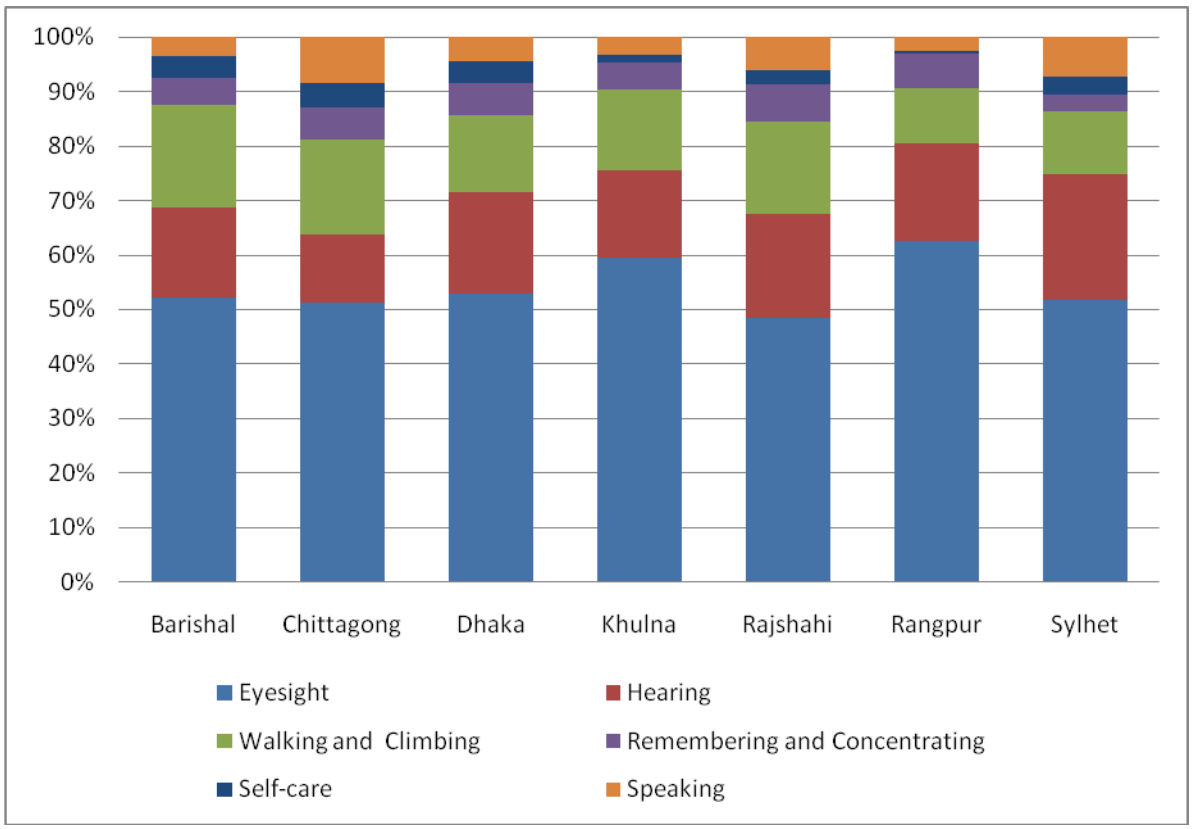
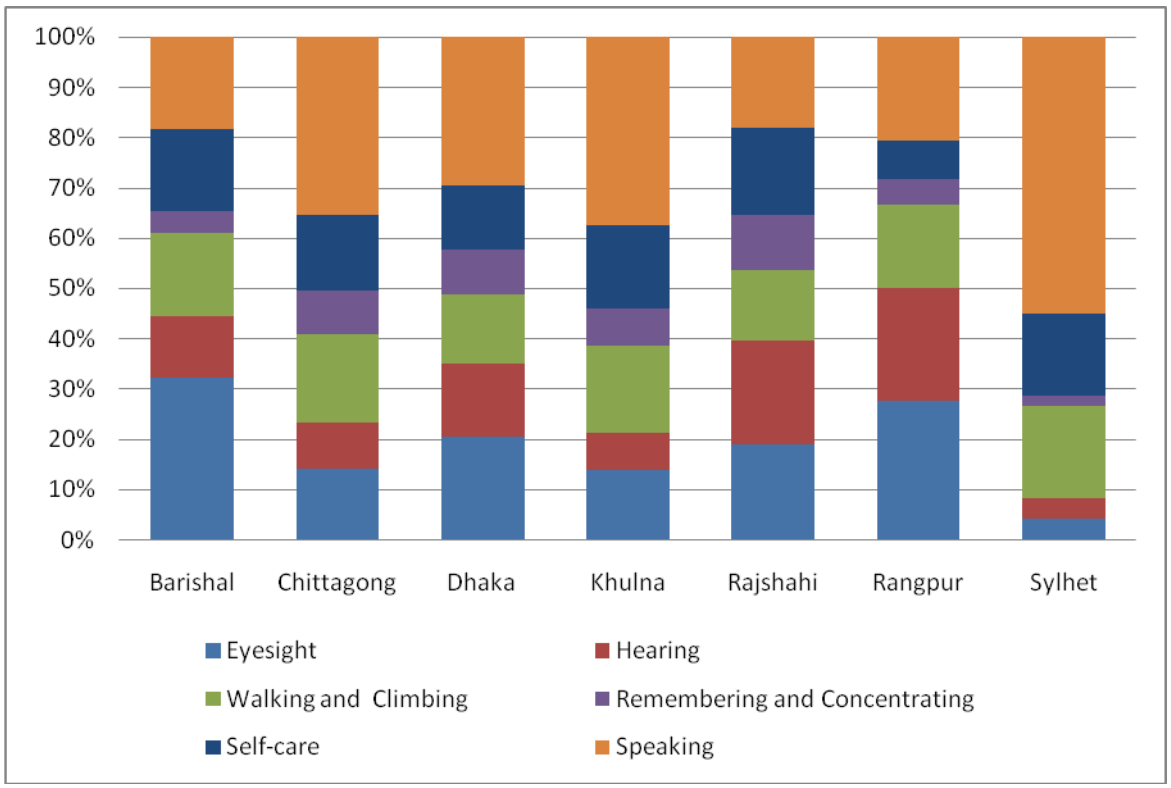


Figure 5.4a show the distribution of peopleaged 5+years facing milddifficulty by region and type of difficulty. Mild eye sight difficulty is the most prevalent in Rangpur Division and the least prevalent in Rajshahi whereas it is almost equally prevalent in the other Divisions. Mild hearing, walking and climbing, and remembering and concentrating difficulties are almost equally prevalent across all Divisions.Mild speaking and communicating and self care difficulties are more prevalent in Chittagong Division compared to the other Divisions. However, there is significant variation in different types of `severely or fully unable' disability across the Divisions (Figure 5.4b). Severely eye sight difficulty is most prevalent in Bariasal and least prevalent in Sylhet. The exact reverse scenario can be observed for severely speaking and communicating difficulty. Severly Walking and climbing difficulty is almost equally prevalent across Divisions. Rangpur Division is more prevalent by severely hearing difficulty whereas Rajshahi is more prevalent by both severely remembering and concentrating and self-care difficulties.

Figure 5.4b: Distribution of people aged 5+ who are severely disabaled or fully disabled by type of disability and region



5.2 Accessibility of Disabled to Marriage, Education, Income Generating Activities and Social Benefit Programme

Table 5.3 compares the nuptiality patterns of disabled (some/severe/fully unable) with normal persons aged 18+ years with respect to gender. From the table it is observed that the proportion of males who are unmarried with some difficulty (4.57%) and those with severe/fully unable difficulty (12.26%) are much more less than the corresponding proportion for normal males (23.14%). In addition, the proportions of divorced/separated persons among the males with some difficulty (4.63%) and with severe/fully unable difficulty (6.81%) are higher than the corresponding proportion among the normal males (0.84%). For females, only 1.86% and 6.76% of females with some difficulty and severe/fully unable difficulty respectively are unmarried compared to 7.07% among the females with no difficulty. The proportion of disabled females who are divorced/separated is also higher than the corresponding proportion for normal females (9.86%, 33.2%, and 49.58% with no, some and severe/fully unable difficulty, respectively).

Table 5.3: Nuptiality among the disabled with age 18+ years compared to normal people of the same age

Sex	Disability Status	Marital status				Total Sample (N)
		Unmarried (%)	**Currently Married (%)**	**Widowed (%)**	**Divorced/ Seperated (%)**	
Male	no difficulties	23.14	75.82	0.84	0.19	13,978
	some	4.57	90.22	4.63	0.57	1,575
	severe/fully unable	12.26	80.11	6.81	0.82	367
Female	no difficulties	7.07	81.21	9.86	1.86	14,712
	some	1.86	63.32	33.2	1.63	2,208
	severe/fully unable	6.76	41.13	49.58	2.54	355
Both	no difficulties	14.9	78.5	5.47	1.05	28,690
	some	2.99	74.52	21.31	1.19	3,783
	severe/fully unable	9.56	60.94	27.84	1.66	722

From this analysis it is evident that any sort of difficulty/disability influences the marital status of an individual since a larger number of disabled males and females experience divorce and a lower number get married compared to their normal counterparts. There is marked gender disparity in the effect of disability on marital status. For instance, 80% of disabled males with severe/fully unable difficulty are married compared to only 41% in the case of females. The proportion of females with severe/fully unable difficulty who are divorced/separated (2.54%) is also more than 3 times higher than the corresponding proportion for males (0.82%) with same type of difficulty.

Table 5.4: Accessibility of disabled with age 5+ years to education compared to normal people of the same age

Sex	Disability Status	Educational attainment by year of schooling				Total sample (N)
		No education	**1-5 years(%)**	**6-10 years (%)**	**11+ years (%)**	
Male	no difficulties	39.16	23.5	27.72	9.63	21,963
	some	49.4	17.31	24.27	9.03	1,739
	severe/fully unable	66.28	13.58	15.46	4.68	427
Female	no difficulties	43.16	22.49	29.19	5.16	22,113
	some	68.09	14.45	14.67	2.8	2,325
	severe/fully unable	80.4	11.06	7.04	1.51	397
Both	no difficulties	41.17	22.99	28.46	7.38	44,076
	some	60.09	15.67	18.77	5.46	4,064
	severe/fully unable	73.09	12.36	11.39	3.15	824

To investigate the relationship between disability and highest level of educational attainment for males and females, Table 5.4 compares educational attainment of disabled and non-disabled persons aged 5+ years with respect to gender. About fifty percent (49.4%) of the males with some disability and two-third of the males (66.28%) with severe/fully unable disability have had no formal education. In contrast, only 39% received no education for normal males. The proportion of disabled males who have received 1-5 years, 6-10 years or 11+ years of schooling are also lower than the corresponding population for normal males. Similar results are seen in the case of females. The gap in educational attainment between disabled (some or severe/fully unable difficulty) and non-disabled (no difficulty) males varies from a high of 27% points for no education to a low of 0.60% points for 11+ years of schooling. In the case of females, the gap in education attainment varies from a high of 37 % points for no education to a low of 2.3% points for 11+ years of schooling. From these results it is apparent that disability is an impediment to receiving education and attaining higher education. Moreover, there appears to be some gender disparity as revealed by the larger proportion of disabled females having severe/fully unable difficulty with no education (73.1%) as compared to disabled males (66.28%).

Table 5.5: Accessibility of disabled with age 14+ years to income generating activities compared to those normal people

Sex	Disability Status	Involvment in income generating activities		Total sample (N)
		Yes (%)	**No (%)**	
Male	no difficulties	80.11	19.89	15,683
	some	72.84	27.16	1,620
	severe/fully unable	44.3	55.7	377
Female	no difficulties	9.54	90.46	16,053
	some	9.37	90.63	2,231
	severe/fully unable	5.12	94.88	371
Both	no difficulties	44.41	55.59	31,736
	some	36.07	63.93	3,851
	severe/fully unable	24.87	75.13	748

Table 5.5 presents results on proportion of disabled involved in income generating activities compared to non-disabled of the same age. For non-disabled males, the proportion of individuals involved in income generating activities is 80.11% which is higher than that for males with some difficulty (72.84%). The proportion of males with severe or fully disability involved in income generating activities is 44.3%. Similar pattern is also observed for the females. In aggregate result the proportions of involvement in income activities for people with some and severe/fully unable disability are 36.07% and 24.87%, respectively, which are lower than the proportion for people with no difficulty (44.41%).

Table5.6 : Accessibility of disabled with age 5+ years to receiving benefit from social safety programme compared to normal people

Sex	Disability Status	Has benifited from social safety programme in the last 12 months		Total Sample (N)
		Yes(%)	**No (%)**	
Male	No difficulties	7.08	92.92	21,963
	some	17.31	82.69	1,739
	severe/fully unable	8.08	91.92	427
Female	no difficulties	5.67	94.33	22,113
	some	10.62	89.38	2,325
	severe/fully unable	14.11	85.89	397
Both	no difficulties	6.38	93.62	44,076
	some	13.48	86.52	4,064
	severe/fully unable	17.96	82.04	824

Table 5.6 gives proportion of people who have benefited from social safety programe in the last 12 months across different disability status. For males with no difficulty this proportion is 7.08% which is lower than the corresponding proportion for males with some difficulty (17.31%) and males with severe/fully unable difficulty (8.08%). Similarly, the proportion of females with severe/fully unable difficulty who have benefited from social safety programme in the last 12 months is 14.11% and for female with some disability it is 10.62%.Both percentages are higher than the percentage for female with no difficulty (5.67%). In general disabled persons in Bangladesh receive more social safety net programe assistance than the non-disabled persons, though the assistance is not at a satisfactory level. The level of receiving such benefits is almost 3 times higher for people with severe/fully unable difficulty as compared to people with no difficulty at all (17.96% vs. 6.38%).

5.3 Summary

HIES 2010 incorporated information on disability and the pattern and intensity of disability is well reflected through this analyses. Mainly six types of disability and three intensity levels are considered. About 7.5% people have at least one of the (out of 6 types) mild difficulties and almost 9% people have some sort of difficulties. There are 1.51% people having at least one severe or full difficulty which is in align with the results found from the 2011 census. It is more likely to report severe cases in huge counting like census. Similar to results from census, the prevalence of disability (in percentage) is positively associated with age, with a rapid increase after age 40. Again, similar finding was observed that the disability is more prevalent among people from poorer household than richer households.

Sex, religion and urban-rural composition of all type and intensity of disabilities/difficulties are documented here. For all type of disability, the prevalence is slightly higher in urban area

as compare to rural area. At region-wise disaggregated results then we see that the highest prevalence of at least one type of disability of difficulty level ‘some’ is in Rajshahi division and the lowest one is in Chittagong division. Mainly eyesight, hearing and walking and climbing are the major mild difficulties across all regions. In Sylhet, Chittagong, Dhaka and Khulna regions speaking difficulty was leading contributor in severe and fully unable type disability whereas in Barisal and Rangpur eyesight difficulty is the leading contributor.

From HEIS 2010 it is evident that any sort of difficulty/disability influences the marital status of an individual since a larger number of disabled males and females experience divorce and a lower number get married compared to their normal counterparts. Males with disability seem to have less difficulty in becoming married than disabled females and proportion of females with severe/fully unable difficulty who are divorced/separated is more than 6 times higher than the corresponding proportion for males with same type of difficulty. Also for the educational attainment case it is seen that proportions of disabled males and females who have received 1-5 years, 6-10 years or 11+ years of schooling are also lower than the corresponding proportion for normal males and females. Some gender disparity is also observed. There is a higher proportion of disabled females having severe/fully unable difficulty with no education as compared to disabled males. So disability poses a social discrimination as well as it has worse impacts on females. Similar scenarios were observed from Census 2011 data.

6. Discussion and Conclusions

Disability is an issue that has a profound effect not only on a family but on the society as a whole. Increasingly, societies all over the world are beginning to realize that disability is an issue can that no longer be ignored and left on the sidelines of public policy. As the number of disabled persons inflicted with varying types and degrees of disabilities is on the rise, societies all over the world have come to a consensus that disabled people have rights, they are an integral part of the society and given the opportunity, they too can contribute to the nation's economy. In a poor country like Bangladesh, where even non-disabled persons are sometimes denied their basic rights, disabled persons are often seen as nothing more than a burden to society. However, this attitude is changing and since the Disability Act was enacted in 1996, disability has become a component in censuses and nation-wide surveys.

This study has re-analyzed data from the Census 2010 and the HEIS 2011 in an attempt to evaluate the gravity of the "disability problem" in Bangladesh and obtain a comprehensive understanding of the nature, pattern and dynamics of disability prevalence in the country. This chapter discusses the key findings of the analysis based on the Census 2011 data and HEIS 2010 data and puts forth recommendations to inform policy.

6.1 Disability Prevalence

The Census 2011 has data put a figure of 1.41% on the overall disability prevalence in Bangladesh, which is 7.6 percentage points lower than the HEIS 2010 estimate of 9.01% for the overall disability prevalence. The marked difference in the two estimates could be attributed to the differences in the criteria for identifying disabled persons and methods of data collection in the two studies. The HEIS 2010 data scales the intensity of different types of disabilities as 'Some', 'Severe' and 'Fully unable'. Thus, persons with minor disabilities are likely to be reported under the category 'Some'. In contrast, the Census 2011 questionnaire only records whether a person is disabled or not and thus it seems more likely that only the persons who are seriously disabled have been reported. Thus, underreporting could be one of the reasons for the lower overall disability prevalence of the census estimate. Interestingly, the prevalence of overall disability of intensity 'severe' and 'fully unable' equals 1.51%, which is close to the census estimate. Previous studies have found that disability estimates based on survey data are, in general, higher than those based on census data across many different countries (Mont 2007). Thus, the observed discrepancy in the survey and census-based disability estimates in Bangladesh is not unusual. According to a

study by ESCAP in 2012, the survey disability estimate of 9% puts Bangladesh among the top 10 countries with the highest disability rates among 48 countries.

6.2 Prevalence of Different Types of Disabilities

Although there are many kinds of disabilities with varying underlying causes, the Disability Act recognizes six major types of disabilities in Bangladesh. Among these types, both the census and survey data identified physical disability and vision disability as the most common forms of disability in the country. This finding agrees with previous studies on disability prevalence conducted by Unnayan Onneshan (2005) in which vision and physical disabilities were found to be the dominating types of disabilities in the population. Since information on possible causes of disability was not elicited using the census/survey instrument, it was not possible to determine exactly why these two types of disabilities were most common. Possible causes could be increased exposure to work-related hazards or road accidents, poor nutritional status and old age.

6.3 Disability and Age

Age appears to increase the likelihood of a disability. Overall disability prevalence increases with age, being highest in the older age groups. Similar relationship been age and disability has been observed in previous studies as well (Unnayan Onneshan, 2005). According to the census data, it was found that persons 60 years and over made up about 10% of the population but they accounted for 29% of all persons with a disability. Physical disability emerged as the most common form of disability in all age-groups in the census data. However, the prevalence of different types of disabilities was not uniform across age-groups. Although the different types of disabilities were in general high among older people (60+ years), both the HEIS and census data revealed speech or communication disability to be more prevalent among young people. Interestingly, the same phenomenon was observed in a previous disability study conducted by Unnayan Onneshan (2005). Why children are more vulnerable to speech disability is a question that needs to be investigated further.

6.4 Disability and Gender

Understanding how gender affects the risk of disability is important in determining specific target groups for interventions. There is some gender disparity in overall disability prevalence. Analysis of the census data reveals that males had slightly higher overall disability prevalence than females. A higher disability estimate for males compared to

females is seen in most developing countries. Some of the explanations that have been forwarded are that severe impairments are male-dominated, female disabilities are underreported and/or that females are less cared for and die sooner. The HEIS data also leads to similar observations, however in the case of mild disabilities; female prevalence of at least one disability was found to be higher than for males. Among the disability types, gender gap was found to be highest in the case of physical disability with males having higher prevalence than females. Although a more detailed investigation would be required to explain this observation, one explanation could be that males are more exposed to the outside environment than females and are often engaged in hazardous or physically demanding work that puts them at a greater risk for road accidents and occupational injuries than females.

6.5 Disability and Marriage

Overall disability prevalence was found to be highest among those who were unmarried or divorced. The higher disability prevalence in the single and divorced groups compared to the married group suggests that disability may affect marital status in two ways. It may contribute to higher divorce rates in addition to being an impediment to marriage. Another finding is that mental disability is the most frequently reported disability among those who are divorced. This could either mean that divorce rates are higher among mentally retarded persons or that divorce results in a kind of social exclusion that affects the mental well-being of a person leading to his/her mental disability. Interestingly, vision impairment was found to be a more common disability among disabled persons who were either married or widowed than among those who were unmarried or divorced/separated. On the other hand, speech impairment was more prevalent among the disabled persons who were either single or divorced/separated than it was among those who were married or widowed. These observations suggest that vision impairment is less of a barrier to marriage than speech disability. In fact, type of disability appears to be intertwined with the marital status of a disabled individual.

There was marked gender disparity in the effect of disability on marital status. The analyses suggested that males with disability had much less difficulty in getting married than disabled females. The proportion of disabled females who became divorced/separated was also higher than the corresponding proportion for disabled males. Thus, disabled females are the most disadvantaged in terms of being vulnerable to social discrimination and neglect. These findings support earlier hypotheses about the relationship between gender and disability. Women are described as doubly disabled by their gender and impairment (The Danish Bilharziasis Laboratory for the World Bank, 2004). A woman with a given impairment is more disabled than a man with the same impairment because she cannot carry out many of

the practical tasks of being a wife. The situation is further aggravated by poverty. Disabled women find it difficult to get married and stay married.

6.6 Disability and Region

On a global level rural disability rates are higher than urban rates (The Danish Bilharziasis Laboratory for the World Bank, 2004). In the census data, the overall disability prevalence was indeed found to be higher in rural areas than in urban areas, but only when Division was taken into account. The aggregate rate, however, was higher in urban areas. This could be due to the greater risks of injury from accidents, the pull factor of services, institutions and medical care, the existence of sedentary jobs and the possibility of begging in urban areas. The survey data indicated no significant rural-urban gap in the prevalence of severe or fully debilitating disabilities. In the case of mild disabilities, however, urban rates were higher. Furthermore, the prevalence of severe disabilities was highest in Barisal Division and in the districts of Barguna and Pirojpur. Among the various types of disabilities, physical disability was most common in all districts according to the census data. Further investigations would be required to determine the reasons for higher disability prevalence in these areas.

6.7 Disability and Socio-economic Status

This study reveals that economically disadvantaged households tend to have higher prevalence of disability. This study found that the overall disability prevalence was higher among houses of kutcha or jhupri type. It was also higher among households with no electricity, sanitary facilities, and source of clean drinking water. The negative relationship between socio-economic condition and disability was also observed for the different types of disabilities as well. The relationship between economic condition and disability appears to work in a cycle. Disabled persons are often an economic burden in the family. Not only are they unable to contribute to the household income, but they often require special medical care that involves additional expenses. Thus disability in a household could lead to a household becoming poorer. Again extreme social and economic deprivation due to poverty could have a negative impact on the physical and mental health of household members leading to different kinds of disabilities. In a nutshell, disability and poverty may reinforce each other.

Recent development studies have directly linked poverty as a major influencing factor on issues of disability. Disability and poverty are intricately interlinked. Disables are under vicious circle of poverty as poverty can cause disability and disability can cause poverty. Poverty causes disability with its associated malnutrition, poor health services and sanitation,

and unsafe living and working conditions. Conversely, the presence of a disability can trap people in a life of poverty because of the barriers disabled people face to taking part in education, employment, social activities, and indeed all aspects of life (Mont 2007).

Negative attitudes and practices reinforced by poverty create barriers that result in exclusion of people with disabilities from mainstream national development activities. One of the major development components where people with disabilities are widely marginalized is in the sector of employment. Employment of people with disabilities in a just and fair environment of equal opportunities and scopes will ensure economic sovereignty and contribute in the reduction of poverty. With poverty being addressed, positive influence will occur in improving the situation of the people with disabilities in the country.

6.8 Disability and Education

Previous studies have shown that there is significant association between employment success and educational attainment (Unnayan Onneshan, 2005). Improving educational attainment of disabled individuals is therefore one way of helping disadvantaged people integrate into society as well as become independent. Analysis of the census and survey data revealed that both normal males and females had greater access to education compared to disabled males or females. Thus, disability appears to be an obstacle to receiving education. The exclusion of disabled individuals from education results in exclusion from opportunities for further personal, social and vocational development. However, the gender gap to current access to education for persons with disability was small in the census data suggesting that disability affected access to education for disabled males and females similarly. However, the HEIS data revealed a significant gender disparity in terms of access to education for a person with ‘some’, ‘severe’ and ‘fully unable’ disabilities. Females with impairments were much less likely to receive any kind of education than disabled males. In completing higher education, the gap in higher educational attainment between disabled and non-disabled was on the average higher in the case of females than males.

6.9 Disability and Employment

The study revealed that the percentage of disabled persons who were unemployed was significantly higher than the percentage of normal persons who were unemployed. Conversely, the percentage of disabled persons who were either employed or engaged in household work was significantly less than in the case of normal individuals indicating that disability hindered access to employment and ability to work. The survey data revealed marked differences in the proportion of males having ‘some’ or ‘severe’ disability in their

access to income-generating activities as compared their female counterparts. Disabled males were much more likely to work as compared to disabled females.

6.10 Policy Implications

The Ministry of Social Welfare has the formal responsibility of developing programs and policies for mitigating the suffering of disabled people in all cross-sections of the society and bringing down the barriers to their integration into the society. This study has identified some of the pathways through which disability affects an individual, his/her family and community and based on the findings, recommendations are provided as to how the Government, the NFOWD, NGOs and other organizations may act to ameliorate the sufferings of disabled people. There are several fronts on which the Government may take action:

1. Old people (60+ years) are most vulnerable to disabilities of various kinds and therefore, special facilities need to be created to help them function as normally as possible. This could be, for example, ensuring better access to quality medical treatment, providing disability benefits or allowances to old aged individuals, and providing special disability equipment such as wheel chairs, crutches, hearing aids, white canes and other disability aids at affordable prices.

2. Physical disability was found to be a very common type of disability across different age groups. To ensure that physically disabled persons can move freely and work independently as much as possible, special facilities need to be created at workplaces, marketplaces, offices, on public transports, and even on the streets or pavements so that the environment is disability-friendly. For example, special ramps could be constructed for wheel chair access. Such types of infrastructural changes could benefit persons with other types of disabilities as well.

3. Since higher disability rates, in particular higher physical disability rates, were observed among males, special measures should be taken to reduce occupational hazards and create safer roads to reduce the risk of male disability. Also, steps need to be taken to determine if female disability is being underreported or whether disabled females are dying prematurely due to lack of proper care.

4. A very important finding of this study was the higher disability prevalence observed among unmarried and divorced persons compared to normal persons, and the lower marriage rates and higher divorce rates that were observed among disabled females compared to disabled males. This finding has very strong policy implications and sends a signal that the government needs to take effective measures to *protect*

disabled persons and prevent their *rejection* by the society. There could be several ways to do this:

- **Creating social awareness**: Misconceptions and superstitions relating to disability need to be dispelled
- **Increasing access to education:** Education must be given to disabled persons *especially* females because education leads to empowerment.
- **Increasing access to employment:** Incentives or special privileges could be given to businesses or offices that employ disabled people or a quota system may be introduced for the disabled.
- **Increasing access to modern disability aids:** Special disability equipment should be provided *especially* to those living in poverty so that they may overcome to some extent the obstacles created by their disability
- **Setting up special community clinics or support groups:** Special community clinics could be set up where disabled females could seek advice on how they could overcome their disability in carrying out the practical roles of being a wife or a mother.

5. Higher disability rates among poorer households imply that the government disability programs need to target poor households on a priority basis. This is especially true if the household head is disabled. Disabled members of poor households need to be given free and accessible health care as well as government support in the form of monetary or other benefits so that they may be less of a burden to the family and the society.

6. Education was found to be less accessible to disabled persons compared to normal persons and much less accessible to females. Disabled persons have a right to education just as much as normal people. In fact certain types of disabilities do not affect intellectual ability and therefore disabled persons must be given the opportunity to seek education and transform themselves into a productive sector of the society. To do this, policies should be formulated that ensure "Education for ALL". Special schools need to be developed for disabled people, or there should be provision for home-based schools. Even normal schools should have educational facilities for children/people with special needs. Training programs need to be designed to produce teachers having special training in mentoring children or persons with disabilities. Furthermore, the government should target parents of disabled children by offering special incentives so as to encourage them to educate their children.

7. The study found that disabled persons are less likely to be employed than non-disabled persons. Access to employment is the single most important factor that could dismiss much of the negative attitude towards the disabled population. Therefore, priority must be given to formulating programs that increase the involvement of disabled persons, particularly those who have mild difficulty, in income-generating activities. Such programs could include, for example, providing skill generating programs where they can have some modern job oriented skill, providing micro-credit to disabled persons, introducing a quota system for disabled persons in government offices, providing wheelchair accessible transport, road and offcceetc. The study found that getting involved in income generating activities was even more difficult for disabled females. The government needs to set up special cells or offices in each community that are committed to the welfare of disabled persons, and disabled women in particular. These community services should identify the needs of disabled persons in the locality as well as assist them in finding employment or engaging in income-generating activities depending on the nature of their disability.

8. A large part of the disability could be reduced through proper treatment or alleviated through rehabilitation. Almost all disabled population, particularly people with severe and acute disablity, has special needs for medical rehabilitation and social integration. In Bangladesh, the health care service does not include medical rehabilitation for persons with disabilities. Persons in need with disabilities depend largely on traditional healers. A minimum level of medical rehabilitation is available through NGOs, which are concentrated in urban areas. Therefore, rural persons with disabilities have no other alternative than traditional, often inappropriate or inadequate treatment. In order to improve services for rural people with disabilities, it is necessary to establish facilities including transportation and also eliminate or subsidize facility usage fees. Fees have often prevented access to facilities. In addition, non-institution based rehabilitation should be implemented and the best efforts possible made, first for the prevention, then rehabilitation, of disabilities.

9. Special attention need to be given at people with severe and acute disability by implementing life long integrated programme as required for leading their life safe and happy. For example, these includes providing free treatment, medical rehabilitation, facilities to have access to road and transport and market, monthly pension scheme etc.

10. The study revealed that young disabled have low access to education. To reduce the burden of uneducated and out of work status of disabled people, it reuires to initiate ‘inclusive education’ programe in all schools by introducing training for

teachers,wheel-chair access infrastructures in both primary and secondary schools so thatschools will embrace children with some degree of disability.

To summarize, the society needs to understand that disabled people do not have to be a burden in society and that they too have rights as citizens that should be respected. Therefore the Government must work to change the prevailing attitude of the public by using the media to disseminate information. For example, special programs could be broadcast on television and radio to bring about changes in attitude towards disabled people and dispel superstitious beliefs as well as to inform them about the proper treatment and care of disabled persons. Also, articles could be published in newspapers, messages posted on billboards, and leaflets distributed discouraging the maltreatment of disabled people.

Disability can be conceptualized as arising from the interaction of a person's functional status with the physical, cultural, and policy environments. If the social environment would incorporate appropriate accommodation and support, then people with functional limitations would not be "disabled" in the sense that they would be able to fully participate in society. Developed countries have amenities to assist disabled in public transports (bus, train, launch), hospitals, educational institutions, market places, tourist sight seeing places, banks and so on. Hence, they can travel around their locality even without any assistance. However, there is no adequate infrastructural development in Bangldesh to support the disables, which is urgently required.

Medical facilities need to be improved tailored to the needs of disabled people, such as, the purchasing of modern medical equipment as well as training doctors, psychologists and medical staff in the treatment and care of different types of disabilities. Lastly, socio-economic conditions need to improve overall and gender biases need to be reduced.

6.11 Pros and Cons of the Study on Disability Using Census 2011 Data

The results on prevalence, pattern and differential of disability reported in this monograph are based on Census 2011 data. To assess the robustness and consistency of the results from census data, disability data from a recent survey namely HIES 2010 werealso analysed and compared. Although both census and survey have different process of measuring disability, most of the cases results were comperable with the corresponding resutts from survey. For example, the overall disability prevalence from census is almost similar to the prevalence of people with severe or full disability from HIES data. Both data shows disability prevalence increase with age and disabled have less access to education, income compared to normal people of the same age group.The main advantage of using Census data is that subgroup (such as district level) disaggregation of disability prevalence is possible, which is not

accurately possible using survey data.The main disadvantages of census data is that there is very limited information on disability. Only one question ondisability and its type was available in census short questionnaire and no question in long questionnaire. There is no information on multiple disabilities, causes of disability, intensity of disability and benefit received by disabled etc. Therefore, we were unable to provide details analysis that might be useful for policy.

Annex- I

Table 4A: Prevalence and pattern of disabilty by district

Code	District Name	Disability	Speech	Vision	Hearing	Physical	Mental	Autistic	Total sample
1	Bagerhat	1.79	0.24	0.33	0.16	0.76	0.22	0.08	73,739
3	Bandarban	1.48	0.16	0.3	0.15	0.59	0.2	0.06	19,593
4	Barguna	2.1	0.24	0.48	0.18	0.89	0.19	0.13	44,519
6	Barisal	1.36	0.18	0.3	0.11	0.51	0.15	0.11	115,391
9	Bhola	1.46	0.21	0.34	0.15	0.54	0.12	0.09	88,912
10	Bogra	1.54	0.18	0.31	0.16	0.61	0.21	0.06	170,510
12	Brahmanbaria	1.18	0.2	0.23	0.11	0.42	0.15	0.07	142,426
13	Chandpur	1.91	0.24	0.38	0.14	0.88	0.17	0.09	120,344
15	Chittagong	1.23	0.15	0.21	0.09	0.49	0.19	0.1	381,686
18	Chuadanga	1.61	0.19	0.3	0.15	0.72	0.18	0.06	56,527
19	Comilla	1.34	0.22	0.25	0.1	0.52	0.15	0.09	269,546
22	Cox's Bazar	1.46	0.2	0.3	0.14	0.54	0.17	0.11	114,264
26	Dhaka	0.82	0.12	0.15	0.06	0.3	0.11	0.08	604,771
27	Dinajpur	1.52	0.21	0.29	0.15	0.59	0.2	0.07	149,305
29	Faridpur	1.63	0.18	0.33	0.17	0.65	0.19	0.11	95,641
30	Feni	1.34	0.2	0.18	0.08	0.6	0.17	0.11	72,087
32	Gaibandha	1.92	0.2	0.46	0.21	0.72	0.21	0.12	119,115
33	Gazipur	0.92	0.15	0.16	0.07	0.35	0.13	0.07	170,413
35	Gopalgonj	1.34	0.19	0.24	0.13	0.57	0.15	0.07	58,583
36	Habiganj	1.54	0.2	0.35	0.14	0.57	0.16	0.12	105,523
38	Joypurhat	1.63	0.2	0.34	0.18	0.63	0.22	0.07	45,819
39	Jamalpur	1.42	0.21	0.3	0.14	0.51	0.19	0.08	114,620
41	Jessore	1.34	0.18	0.21	0.11	0.6	0.17	0.06	138,874
42	Jhalokati	1.94	0.26	0.37	0.15	0.8	0.22	0.13	32,556
44	Jhenaidah	1.59	0.2	0.31	0.13	0.69	0.17	0.09	88,422
46	Khagrachhari	1.7	0.3	0.31	0.2	0.62	0.21	0.06	30,654
47	Khulna	1.76	0.17	0.39	0.16	0.71	0.22	0.1	115,572
48	Kishoregonj	1.55	0.2	0.34	0.16	0.59	0.16	0.09	145,373
49	Kurigram	1.54	0.21	0.29	0.18	0.61	0.2	0.06	103,498
50	Kushtia	1.32	0.2	0.2	0.09	0.55	0.19	0.08	96,980
51	Laksmipur	1.23	0.2	0.21	0.09	0.49	0.12	0.1	86,339
52	Lalmonirhat	1.7	0.22	0.36	0.22	0.61	0.21	0.08	62,692
54	Madaripur	1.24	0.19	0.27	0.09	0.43	0.18	0.08	58,278
55	Magura	1.14	0.16	0.18	0.11	0.45	0.15	0.1	46,021
56	Manikgonj	1.52	0.19	0.35	0.14	0.56	0.2	0.08	69,861
57	Meherpur	1.85	0.21	0.34	0.16	0.8	0.25	0.09	32,545
58	Maulvibazar	1.51	0.2	0.3	0.14	0.56	0.22	0.1	95,771
59	Munshigonj	1.44	0.23	0.25	0.1	0.51	0.23	0.12	72,014
61	Mymensingh	1.36	0.2	0.23	0.13	0.53	0.18	0.08	255,902
64	Naogaon	1.64	0.18	0.36	0.15	0.65	0.22	0.09	129,610

65	Narail	1.51	0.17	0.3	0.16	0.65	0.16	0.07	36,127
67	Narayangonj	0.86	0.12	0.17	0.06	0.32	0.13	0.06	148,185
68	Narsingdi	1.15	0.18	0.23	0.09	0.43	0.15	0.08	111,374
69	Natore	1.64	0.18	0.29	0.15	0.69	0.24	0.09	85,207
70	Chapai Nawabganj	1.65	0.19	0.34	0.17	0.65	0.22	0.07	82,481
72	Netrokona	1.53	0.24	0.33	0.16	0.56	0.15	0.09	111,340
73	Nilphamari	1.45	0.22	0.2	0.16	0.61	0.16	0.09	91,555
75	Noakhali	1.33	0.22	0.24	0.09	0.54	0.14	0.1	155,491
76	Pabna	1.37	0.19	0.23	0.13	0.53	0.22	0.08	126,061
77	Panchagarh	1.58	0.2	0.26	0.2	0.67	0.14	0.1	49,463
78	Patuakhali	1.62	0.22	0.33	0.17	0.67	0.15	0.09	76,496
79	Pirojpur	2.11	0.26	0.44	0.17	0.94	0.19	0.12	55,239
81	Rajshahi	1.57	0.17	0.29	0.15	0.65	0.25	0.06	128,968
82	Rajbari	1.67	0.22	0.36	0.17	0.63	0.23	0.06	52,478
84	Rangamati	1.72	0.28	0.29	0.22	0.56	0.27	0.1	30,141
85	Rangpur	1.63	0.21	0.31	0.18	0.63	0.2	0.09	142,894
86	Shariatpur	1.35	0.17	0.24	0.12	0.56	0.18	0.08	57,863
87	Satkhira	1.67	0.22	0.3	0.17	0.66	0.23	0.08	100,000
88	Sirajgonj	1.58	0.19	0.38	0.16	0.6	0.18	0.08	155,780
89	Sherpur	1.55	0.23	0.33	0.16	0.56	0.21	0.06	68,042
90	Sunamganj	1.5	0.21	0.38	0.15	0.51	0.15	0.09	124,262
91	Sylhet	1.44	0.2	0.25	0.12	0.56	0.19	0.11	170,924
93	Tangail	1.38	0.18	0.28	0.15	0.51	0.2	0.06	180,487
94	Thakurgaon	1.48	0.19	0.32	0.17	0.59	0.14	0.07	69,505
Total		1.41	0.19	0.27	0.13	0.55	0.18	0.09	7,204,659

Table 4B: Prevalence of households with disability by district.

District code	District name	HH with Disability (%)	Total HH
1	Bagerhat	6.51	17,722
3	Bandarban	6.11	4,009
4	Barguna	7.55	10,795
6	Barisal	5.37	25,683
9	Bhola	5.88	18,643
10	Bogra	5.48	43,362
12	Brahmanbaria	5.57	26,953
13	Chandpur	7.4	25,336
15	Chittagong	5.33	76,617
18	Chuadanga	5.82	13,874
19	Comilla	6.04	52,686
22	Cox's Bazar	6.73	20,810
26	Dhaka	3.04	139,355
27	Dinajpur	5.72	35,796

29	Faridpur	6.56	21,019
30	Feni	6.16	13,888
32	Gaibandha	6.58	30,617
33	Gazipur	3.41	41,337
35	Gopalgonj	5.51	12,497
36	Habiganj	7.23	19,672
38	Joypurhat	5.62	12,131
39	Jamalpur	5.19	28,170
41	Jessore	5.04	32,824
42	Jhalokati	7.18	7,548
44	Jhenaidah	5.98	21,118
46	Khagrachhari	6.75	6,692
47	Khulna	6.35	27,372
48	Kishoregonj	6.37	31,370
49	Kurigram	5.66	25,405
50	Kushtia	4.85	23,866
51	Laksmipur	5.19	18,273
52	Lalmonirhat	6.51	14,526
54	Madaripur	5.14	12,612
55	Magura	4.68	10,298
56	Manikgonj	5.84	16,243
57	Meherpur	6.49	8,316
58	Maulvibazar	7.08	18,062
59	Munshigonj	5.62	15,684
61	Mymensingh	5.39	57,777
64	Naogaon	5.86	32,792
65	Narail	5.95	8,133
67	Narayangonj	3.39	33,792
68	Narsingdi	4.95	23,901
69	Natore	5.94	21,198
70	Chapai Nawabganj	6.77	17,900
72	Netrokona	6.19	23,964
73	Nilphamari	5.61	21,080
75	Noakhali	5.96	29,702
76	Pabna	5.27	29,541
77	Panchagarh	6.04	11,431
78	Patuakhali	6.32	17,331
79	Pirojpur	7.92	12,805
81	Rajshahi	5.72	31,692
82	Rajbari	6.33	11,910
84	Rangamati	7.11	6,430
85	Rangpur	5.8	36,014
86	Shariatpur	5.59	12,399
87	Satkhira	6.28	23,496
88	Sirajgonj	6.05	35,754

89	Sherpur	5.51	17,074
90	Sunamganj	7.4	22,024
91	Sylhet	7.08	29,812
93	Tangail	5.12	43,513
94	Thakurgaon	5.77	16,041
Total		5.56	1,608,687

Annex- II

List of Abbreviations

BBS: Bangladesh Bureau of Statistics

HIES: Household Income and Expenditure Survey

WDDF: Women with Disabilities Development Foundation

DWA: Disability Welfare Act

MLJPA: Ministry of Law Justice and Parliamentary Affairs

NFOWD: National Forum of Organizations Working With the Disabled

IQ: Intelligent Quotient

NAS: National Autistic Society

GOB: Government of Bangladesh

JICA: Japan International Cooperation Agency

SARPV: Social Assistance and Rehabilitation for the Physically Vulnerable

AAB: Action Aid-Bangladesh

BPKS: Bangladesh Protibandi Kalayan Samiti

UN: United Nations

UDHR: Universal Declaration of Human Rights

CCD: Centre for Disability in Development

HI: Handicap International

ADD: Action on Disability and Development

CRP: Centre for the Rehabilitation of the Paralyzed

RIHD: Rehabilitation Institute and Hospital for the Disabled

ABC: Assistance for Blind Children

GBDDS: Government Blind and Deaf and Dumb School

TRCPD: Training and Rehabilitation Centre for the Physically Disabled

BBM: Bangladesh Blind Mission

BDF: Bangladesh Drishtihin Foundation

BODA: Bangladesh Organization for Disabled Advancement

CBS: Central Bureau of Statistics

SNZ: Statistics New Zealand

WHO: World Health Organization

ESCAP: Economic and Social Commission for Asia and the Pacific

IBGE: Brazilian Institute of Geography and Statistics

INEC: Instituto Nacional de Estasisticas y Censos ((Nicaragua, and Ecuador)

INEGI: Instituto Nacional de Estadística y Geografía (Mexico)

INE: Instituto Nacional de Estadística (Spain)

ICF: International Classification of Functioning

ADL: Activities of Daily Living

IADL: Instrumental Activities of Daily Living

US: United States

PALS: Participation and Activity Limitations Survey

CCHS: Canadian Community Health Survey

SVRS: Sample Vital Registration System

NGOs: Non Government Organizations

PEC: Post Enumeration Check

EA: Enumeration Areas

MDG: Millennium Development Goals

IMPS: Integrated Multipurpose Sample Design

PSU: Primary Sampling Unit

PR: Prevalence Rates

HH: Household

Annex- III

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Bangladesh Bureau of Statistics
Population and Housing Census-2011 Project
Parishankhyan Bhaban
E-17/A, Agargaon, Dhaka-1207

No: 52.01.0000.401.29.315.15-347 Date: 12-05-2015

Subject: Selection of Expert Panel to Review Population Monographs

The following distinguished persons have been nominated as experts to review the Population Monographs being prepared under Population and housing census-2011 Project of Bangladesh Bureau of Statistics:

Expert Panel for Population Monographs

No	Broad Area	Monographs	Expert Pannel
01	Reproductive Behavior of Population	1. Population Composition: age and sex. 2. Fertility 3.Marriage& Family	Prof.M. Nurul Islam Ex. Professor ,DU Syeda Shahanara Huq, Prof.JNU Dr. Ahmed-Al-Sabbir,USAID Dr.Obidur Rob, Country Director, Population Council, Bangladesh
02	Special Protection Groups	1.Elderly Population 2.Disabled Population 3. Children and Youth 4. Population Density and Vulnerability	Dr.Nazma Ahmed Social Protection Specialist Dr.Sharifa Begum, SRF BIDS Prof. Mahmuda, Khatoon,DU Dr. A.J Faisal Country Representative Engender Health Dr.Eshani Ruwan Pura Programme Specialist UNFPA
03	Household and Housing Characteristics, Education& Literacy	1.Housing Condition 2.Household Facilities 3.Education & Literacy	Prof. Kazi Saleh Ahmed Ex.VC JNU Mr. Abdur Rashid Sikder Former DDG ,BBS Dr. Anwara Begum SRF BIDS
04	Economic and Social Aspects of Population	1.Urbanization 2.Labour Force Participation 3.Characteristics of International Migrant Households 4. Population Distribution and Internal Migration	Mr.Nichole MALPAS, Programme Manager Human and Social Development, Delegation to the European Union to Bangladesh. Prof. Kazi Saleh Ahmed Ex.VC JNU Dr.Sarwar Jahan Prof. Department of URP,BUET Prof. Nurul Islam Najem Dept. of Geography, DU

Terms of Reference:

i) The members of the panel will remain present in the presentation of the monographs and will act as a co-opt member of the Technical Committee;
ii) They will review the draft of the Monographs;
iii) They will provide guidance in improving the draft;
iv) They will get financial benefit as per provision in the AWP of the Population and Housing Census -2011 Project.

12/5/15

Mohammad Abdul Wazed
(Additional Secretary)
Director General

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This report has been published by Bangladesh Bureau of Statistics (BBS) with support from the delegation of the European Union (EU) and United Nations Population Fund (UNFPA) in Bangladesh.

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