

**HEALTHCARE-SEEKING BEHAVIOR AND OUT-
OF-POCKET HEALTH EXPENDITURE AMONG
ILL WOMEN AND CHILDREN UNDER FIVE
YEARS IN BANGLADESH**

SHAHNAZ HAQUE

UNIVERSITI SAINS MALAYSIA

2025

**HEALTHCARE-SEEKING BEHAVIOR AND OUT-
OF-POCKET HEALTH EXPENDITURE AMONG
ILL WOMEN AND CHILDREN UNDER FIVE
YEARS IN BANGLADESH**

by

SHAHNAZ HAQUE

**Thesis submitted in fulfillment of the requirements
for the degree of
Doctor of Philosophy**

May 2025

ACKNOWLEDGEMENT

All glory be to Allah, the Almighty, who created us and made it possible for me to finish this doctoral thesis. Several individuals made crucial contributions to my doctoral research and the preparation of my thesis. I want to start by saying how grateful I am to my renowned supervisor, Prof. Dr. Saidatulakmal Mohd, for supervising me. The beginning and continuation of this study during the Covid-19 pandemic might have been challenging. I owe a great deal of gratitude to my supervisor for her constant advice, kind support, and precious time during my study period. Her intellectual comments and suggestions helped me formulate and organize the research. I believe it was my good luck to have a supervisor like her who responded instantly when I communicated with her for supervision. I owe my supervisor a huge debt of gratitude for allowing me to finish my studies while staying with my family in my native country.

I am highly grateful to the honorable experts for their invaluable comments. My special gratitude goes to the Dean of the School of Social Sciences, USM, and the administration for their remarkable support. Apart from this, I would like to thank Dr. Md. Isahaque Ali, Senior Lecturer at the School of Social Sciences, USM, for his kind cooperation. My special thanks go out to Assistant Prof. Chowdhury Abdullah-Al-Baki, Prof. Dr. Muntaha Rakib, and Prof. Dr. Mohammad Abdul Hannan Pradhan, my colleagues at SUST, Bangladesh, for their technical support. I am especially grateful to my doctoral classmates, Yan Xiao, Du Xuyang, and Mohd Nazir Rabun from the School of Social Sciences, USM, for their unwavering encouragement and support. I am incredibly grateful to my family members for their sacrifices and mental support during the long journey of my studies.

TABLE OF CONTENTS

ACKNOWLEDGEMENT.....	ii
TABLE OF CONTENTS.....	iii
LIST OF TABLES	x
LIST OF FIGURES	xii
LIST OF ABBREVIATIONS	xiii
LIST OF APPENDICES	xiv
ABSTRAK	xv
ABSTRACT	xvii
CHAPTER 1 INTRODUCTION.....	1
1.1 Background of the Study.....	1
1.1.1 Healthcare-seeking behavior	8
1.1.2 Out-of-Pocket (OOP) Health Expenditure	10
1.2 Healthcare Situation in Bangladesh	11
1.2.1 Healthcare Situation of Women in Bangladesh.....	13
1.2.2 Healthcare Situation of Children under five years in Bangladesh.	16
1.3 Healthcare-seeking behavior in Bangladesh	18
1.3.1 Healthcare-seeking behavior among Women in Bangladesh	18
1.3.2 Parents' Healthcare-seeking behavior for Children under five years in Bangladesh	21
1.4 Out-of-Pocket (OOP) Health Expenditure in Bangladesh	23
1.5 Problem Statement	24
1.6 Research Questions	24
1.7 Objectives of the Study	25
1.8 Scope of the Study	26
1.9 Operational Definition	26

1.10	Significance of the Study	27
CHAPTER 2 BACKGROUND OF BANGLADESH.....		29
2.1	Introduction	29
2.2	Social and Economic Situations of Bangladesh.....	29
2.3	The Healthcare Delivery System of Bangladesh and Healthcare Providers Sought by Ill Individuals.....	33
2.4	The Healthcare Finance System and OOP Health Expenditure in Bangladesh	40
CHAPTER 3 LITERATURE REVIEW.....		43
3.1	Introduction	43
3.2	Theory Review	43
3.2.1	Andersen's Behavioral Model of Health Services Use	44
3.2.2	Grossman's Model of Demand for Good Health	45
3.2.3	Theoretical Framework.....	50
3.3	Review of Empirical Studies.....	52
3.3.1	Past Studies on HSB and OOP Health Expenditure among Women in the World	56
3.3.1(a)	Predisposing factors influencing HSB	56
3.3.1(b)	Enabling factors influencing HSB	58
3.3.1(c)	Need factors influencing HSB	59
3.3.1(d)	Individual factors influencing OOP health expenditure	59
3.3.1(e)	Household characteristics influencing OOP health expenditure.....	61
3.3.1(f)	Health/Community characteristics influencing OOP health expenditure	62
3.3.2	Past Studies on HSB and OOP Health Expenditure among Women in Bangladesh	68
3.3.2(a)	Predisposing factors influencing HSB	68
3.3.2(b)	Enabling factors influencing HSB	69

3.3.2(c)	Need factors influencing HSB	70
3.3.2(d)	Individual characteristics influencing OOP health expenditure.....	70
3.3.2(e)	Household characteristics influencing OOP health expenditure.....	71
3.3.2(f)	Health/Community characteristics influencing OOP health expenditure	71
3.3.3	Past Studies on Parents' HSB and OOP Health Expenditure for Children under five in the World.....	76
3.3.3(a)	Predisposing factors influencing HSB	76
3.3.3(b)	Enabling factors influencing HSB	77
3.3.3(c)	Need factors influencing HSB	77
3.3.3(d)	Individual characteristics influencing OOP health expenditure.....	78
3.3.3(e)	Household characteristics influencing OOP health expenditure.....	79
3.3.3(f)	Health/Community characteristics influencing OOP health expenditure	79
3.3.4	Past Studies on Parents' HSB and OOP Health Expenditure for Children under five in Bangladesh	84
3.3.4(a)	Predisposing factors influencing HSB	84
3.3.4(b)	Enabling factors influencing HSB	85
3.3.4(c)	Need factors influencing HSB	85
3.3.4(d)	Individual characteristics influencing OOP health expenditure.....	86
3.3.4(e)	Household characteristics influencing OOP health expenditure.....	86
3.3.4(f)	Health/Community characteristics influencing OOP health expenditure	87
3.4	Research Gaps.....	87
CHAPTER 4 RESEARCH METHODOLOGY		90

4.1	Introduction	90
4.2	Data Source	90
4.3	Methodology	93
4.3.1	Objective 1: To examine the factors (social, economic, demographic, and environmental) that affect healthcare-seeking behavior among ill women (≥ 18 years of age) in Bangladesh. ...	93
4.3.1(a)	Method	93
4.3.1(b)	Conceptual Framework	94
4.3.1(c)	Variables	95
4.3.1(d)	Estimation Technique.....	99
4.3.1(e)	Diagnostic Tests	100
4.3.2	Objective 2: To examine the factors (social, economic, demographic, and environmental) that affect parents' healthcare-seeking behavior for ill children under five years in Bangladesh.	100
4.3.2(a)	Method	101
4.3.2(b)	Conceptual Framework	101
4.3.2(c)	Variables	102
4.3.2(d)	Estimation Technique.....	104
4.3.2(e)	Diagnostic Tests	104
4.3.3	Objective 3: To examine how healthcare-seeking behavior and other socioeconomic factors affect out-of-pocket health expenditure among ill women (≥ 18 years of age) in Bangladesh.	104
4.3.3(a)	Method	104
4.3.3(b)	Conceptual Framework	106
4.3.3(c)	Variables	107
4.3.3(d)	Estimation Technique.....	109
4.3.3(e)	Diagnostic Tests	109

4.3.4	Objective 4: To examine how healthcare-seeking behavior and other socioeconomic factors affect parents' out-of-pocket health expenditure for ill children under five years in Bangladesh.....	109
4.3.4(a)	Method	109
4.3.4(b)	Conceptual Framework	110
4.3.4(c)	Variables	111
4.3.4(d)	Estimation Technique.....	113
4.3.4(e)	Diagnostic Tests	113
CHAPTER 5 RESULTS AND DISCUSSION		115
5.1	Introduction	115
5.2	Results of the Study	115
5.2.1	Results of Objective 1: To examine the factors (social, economic, demographic, and environmental) that affect healthcare-seeking behavior among ill women (≥ 18 years of age) in Bangladesh. ..	115
5.2.1(a)	Descriptive Analysis	116
5.2.1(b)	Interpretation of the Coefficients, RRR, and AME of the MNL Regression.	120
5.2.1(c)	Diagnostic Tests for the MNL Model	129
5.2.1(d)	Discussion of the Results	130
5.2.2	Results of Objective 2: To examine the factors (social, economic, demographic, and environmental) that affect parents' healthcare-seeking behavior for ill children under five years in Bangladesh.	134
5.2.2(a)	Descriptive Analysis	135
5.2.2(b)	Interpretation of the Coefficients, RRR, and AME of the MNL Regression	140
5.2.2(c)	Diagnostic Tests for the MNL Model	150
5.2.2(d)	Discussion of the Results	151
5.2.3	Results of Objective 3: To examine how healthcare-seeking behavior and socioeconomic factors affect out-of-pocket health expenditure among ill women (≥ 18 years of age) in Bangladesh.	155

5.2.3(a)	Descriptive Analysis	155
5.2.3(b)	Interpretation of the Coefficients derived from the OLS Regression	160
5.2.3(c)	Diagnostic Tests for the OLS Model	164
5.2.3(d)	Discussion of the Results	165
5.2.4	Results of Objective 4: To examine how healthcare-seeking behavior and socioeconomic factors affect parents' out-of-pocket health expenditure for ill children under five years in Bangladesh.	171
5.2.4(a)	Descriptive Analysis	171
5.2.4(b)	Interpretation of the Coefficients derived from the OLS Regression	175
5.2.4(c)	Diagnostic Tests for the OLS Model	179
5.2.4(d)	Discussion of the Results	179
CHAPTER 6 CONCLUSION AND FUTURE RECOMMENDATIONS.....		185
6.1	Introduction	185
6.2	Key Findings of the Study	185
6.2.1(a)	Key Findings of Objective 1: To examine the factors (social, economic, demographic, and environmental) that affect healthcare-seeking behavior among ill women (≥ 18 years of age)	185
6.2.1(b)	Key Findings of Objective 2: To examine the factors (social, economic, demographic, and environmental) that affect parents' healthcare-seeking behavior for ill children under five years in Bangladesh	186
6.2.1(c)	Key Findings of Objective 3: To examine how healthcare-seeking behavior and socioeconomic factors affect out-of-pocket health expenditure among ill women (≥ 18 years of age).....	186
6.2.1(d)	Key Findings of Objective 4: To examine how healthcare-seeking behavior and socioeconomic factors affect parents' out-of-pocket health expenditure for ill children under five years in Bangladesh	187
6.3	Policy Implications of the Study	187

6.4	Limitations of the Study.....	190
6.5	Suggestions for Future Research.....	191
6.6	Conclusion	191

REFERENCES	193
-------------------------	------------

APPENDICES

LIST OF PUBLICATIONS

LIST OF TABLES

	Page
Table 2.1 Macroeconomic Indicators of Bangladesh	30
Table 2.2 Poverty Rate (headcount rate of incidence of poverty)	31
Table 2.3 Social and Demographic Indicators of Bangladesh.....	31
Table 3.1 Past Studies on HSB and OOP Health Expenditure among Women in the World	53
Table 3.2 Past Studies on HSB and OOP Health Expenditure among Women in Bangladesh	64
Table 3.3 Past Studies on Parents'HSB and OOP Health Expenditure for Children under five in the World.....	73
Table 3.4 Past Studies on Parents'HSB and OOP Health Expenditure for Children under five in Bangladesh	81
Table 4.1 Dependent and Independent Variables for HSB among Women ($\geq$ 18 years of age).....	97
Table 4.2 Dependent and Independent Variables for Parents' HSB for Children under five	103
Table 4.3 Dependent and Independent Variables for OOP Health Expenditure among Women.....	107
Table 4.4 Dependent and Independent Variables for Parents' OOP Health Expenditure for Children under five.....	111
Table 4.5 Summary of the Methodology based on research questions and research objectives	113
Table 5.1 Associations between Socioeconomic factors and Healthcare- seeking behavior among Women	116
Table 5.2 Results of Multinomial logistic regression for HSB among Women	121
Table 5.3 Associations between Socioeconomic factors and Parents' Healthcare-seeking behavior for Children under five	135
Table 5.4 Results of Multinomial logistic regression for Parents' HSB for Children under five	142

Table 5.5	Descriptive Statistics of Variables for OOP Health Expenditure among Women.....	157
Table 5.6	Distribution of OOP Health Expenditure for Women.....	160
Table 5.7	Results of the OLS Regression for OOP Health Expenditure among Women.....	161
Table 5.8	Descriptive Statistics of Variables for Children under five	172
Table 5.9	Distribution of OOP Health Expenditure	175
Table 5.10	Results of the OLS Regression for Parents' OOP Health Expenditure for Children under five.....	176

LIST OF FIGURES

		Page
Figure 1.1	Percentage of ill Women suffering from various types of illnesses	13
Figure 1.2	Trends in the prevalence of hypertension among Women (aged 35 years and older)	14
Figure 1.3	Trends in the prevalence of diabetes among Women (aged 35 years and older).....	15
Figure 1.4	Percentage of ill Children under five suffering from various types of illnesses	17
Figure 1.5	Healthcare-seeking behavior among Women (≥ 18 years of age) in Bangladesh.....	19
Figure 1.6	Parents' Healthcare-seeking behavior for Children under five years in Bangladesh	22
Figure 2.1	Bangladesh Healthcare Delivery Management System and Healthcare Providers Sought by Individuals	34
Figure 2.2	OOP Health Expenditure (% of current health expenditure) in Bangladesh.....	42
Figure 3.1	Andersen's Behavioral Model of Health Services Use	44
Figure 4.1	Conceptual Framework for HSB among Women (≥ 18 years of age)	95
Figure 4.2	Conceptual Framework for Parents' HSB for Children under five	102
Figure 4.3	Conceptual Framework for OOP Health Expenditure among Women.....	106
Figure 4.4	Conceptual Framework for Parents' OOP Health Expenditure for Children under five	110

LIST OF ABBREVIATIONS

ANC	Antenatal Care
ARI	Acute Respiratory Infection
BBS	Bangladesh Bureau of Statistics
BDHS	Bangladesh Demographic and Health Survey
CC	Community Clinic
CVD	Cardiovascular Diseases
CHE	Catastrophic Health Expenditure
DGFP	Directorate General of Family Planning
DGHS	Directorate General of Health Services
EPI	Expanded Program on Immunization
GDP	Gross Domestic Product
HIES	Household Income and Expenditure Survey
HSB	Healthcare-Seeking Behavior
LMIC	Lower-Middle Income Country
MCH	Maternal and Child Health
MCWC	Maternal, and Child Welfare Centers
MICS	Multiple Indicator Cluster Survey
MOHFW	Ministry of Health and Family Welfare
NCD	Non-Communicable Diseases
NGO	Non-Governmental Organization
OOP	Out-Of-Pocket
RMG	Ready-Made Garment
SDG	Sustainable Development Goal
UHC	Universal Health Coverage
UNICEF	United Nations International Children's Emergency Fund
WHO	World Health Organization

LIST OF APPENDICES

Appendix A	The Kernel density curve for the residual term
Appendix B	The Kernel density curve for the residual term

**TINGKAH LAKU PENJAGAAN KESIHATAN DAN PERBELANJAAN
KESIHATAN LUAR POKET DALAM KALANGAN PESAKIT WANITA
DAN KANAK-KANAK BAWAH UMUR LIMA TAHUN DI BANGLADESH**

ABSTRAK

Walaupun kerajaan Bangladesh telah memberi keutamaan kepada kesihatan ibu dan anak, wanita masih sering mengalami pelbagai masalah kesihatan lain (penyakit berjangkit dan tidak berjangkit, isu kesihatan mental) selain daripada isu kesihatan ibu yang boleh membawa kepada kemerosotan tahap kesihatan mereka. Dalam dekad yang lalu, tahap pendidikan dan penyertaan wanita Bangladesh dalam sektor pekerjaan telah meningkat, yang menyumbang kepada kadar penyertaan tenaga buruh wanita yang lebih tinggi serta pembangunan sosioekonomi. Namun begitu, beban kerja berganda memberi kesan kepada kesihatan wanita dan anak-anak mereka. Walaupun kanak-kanak telah menerima imunisasi asas, diskriminasi antara kawasan luar bandar dan bandar dalam akses kepada penjagaan kesihatan masih wujud. Tingkah laku penjagaan kesihatan (HSB) adalah salah satu petunjuk utama kepada kesihatan yang baik. Bangladesh mempunyai sistem penyampaian penjagaan kesihatan yang terstruktur, meliputi peringkat nasional hingga ke kampung atau kawasan setempat. Namun begitu, sebahagian besar pesakit wanita dan kanak-kanak di bawah umur lima tahun mendapatkan rawatan daripada penyedia yang tidak bertauliah, farmasi, perubatan tradisional, atau rawatan sendiri. Tambahan pula, sebilangan besar pesakit tidak mendapatkan sebarang bentuk rawatan disebabkan kos penjagaan kesihatan yang tinggi. Sebahagian besar daripada kos ini dibayar secara langsung daripada poket (OOP), dan jumlahnya terus meningkat walaupun strategi untuk mengatasinya telah dilaksanakan. Tujuan kajian ini adalah untuk meneliti

faktor sosioekonomi yang mempengaruhi tingkah laku penjagaan kesihatan (HSB) dan perbelanjaan kesihatan luar poket (OOP) dalam kalangan pesakit wanita dan kanak-kanak bawah umur lima tahun, dengan menggunakan data terkini daripada Kajian Pendapatan dan Perbelanjaan Isi Rumah Bangladesh (HIES) 2016/17. Model regresi logistik multinomial telah digunakan untuk meneliti faktor yang mempengaruhi HSB, berdasarkan pembolehubah bersandar kategori serta untuk mengesahkan andaian kebebasan alternatif yang tidak relevan (IIA). Manakala kaedah regresi kuasa dua terkecil lazim (OLS) telah digunakan untuk megkaji faktor yang mempengaruhi perbelanjaan kesihatan (OOP) berdasarkan ciri-ciri pemboleh ubah bersandar (perbelanjaan OOP). Hasil utama kajian menunjukkan bahawa pesakit wanita dan kanak-kanak yang tinggal di kawasan bandar dan yang tergolong dalam isi rumah dengan status sosioekonomi lebih tinggi, cenderung mendapatkan rawatan daripada penyedia penjagaan kesihatan bertauliah. Wanita yang mempunyai pendapatan lebih cenderung untuk mendapatkan rawatan daripada farmasi/rawatan tradisional/penjagaan diri. Di samping itu, perbelanjaan secara langsung dari poket (OOP) oleh ibu bapa adalah lebih tinggi untuk kanak-kanak lelaki berbanding kanak-kanak perempuan. Campur tangan dasar adalah penting untuk memoderasikan pemikiran sosial, mengurangkan ketidaksamaan antara kanak-kanak lelaki dan perempuan melalui penganjuran bengkel atau seminar, pengawalan harga ubat, penambahbaikan kemudahan kesihatan di luar bandar, dan perlindungan insurans kesihatan. Kajian masa depan boleh dilakukan ke atas tingkah laku penjagaan kesihatan (HSB) wanita bekerja di kawasan bandar dan luar bandar.

HEALTHCARE-SEEKING BEHAVIOR AND OUT-OF-POCKET HEALTH EXPENDITURE AMONG ILL WOMEN AND CHILDREN UNDER FIVE YEARS IN BANGLADESH

ABSTRACT

Although Bangladesh's government has given priority to maternal and child healthcare, women frequently suffer from other illnesses (communicable and non-communicable diseases, mental health issues) as well as maternal health issues, which can have a deleterious effect on overall health. In addition, over the past decade, Bangladeshi women's levels of education and employment in different sectors have improved, resulting in a rise in the female labor force participation rate and contributing to socioeconomic development. However, dual jobs increase women's workload, which affects their health as well as their children's health. Although children are immunized with basic vaccinations, rural-urban discrimination remains in accessing healthcare. Healthcare-seeking behavior is one of the indicators of good health. Bangladesh has a structured healthcare delivery system covering national to village or ward levels, but still, a significant portion of ill women and children under five seek treatment from non-qualified providers and from pharmacies/traditional/self-care. Furthermore, a considerable portion of patients forego any form of treatment due to the high cost of healthcare, and a large percentage of such healthcare costs is paid by out-of-pocket (OOP) payment, which continues to rise despite implemented strategies. This study aims to examine the socioeconomic factors that affect healthcare-seeking behavior (HSB) and out-of-pocket (OOP) health expenditure among ill women and children under five, using the latest published data from the Bangladesh Household Income and Expenditure

Survey (HIES) 2016/17. A multinomial logistic regression model is applied to examine factors affecting HSB due to the categorical dependent variable and the validation of the assumption of independence of irrelevant alternatives (IIA), while an ordinary least squares (OLS) regression is used to examine factors affecting OOP health expenditure due to the characteristics of the dependent variable (OOP expenditures). The key findings reveal that ill women and children residing in urban areas and belonging to households with better socioeconomic status are more likely to seek qualified healthcare providers. Women with incomes are more likely to seek treatment from a pharmacy/traditional/self-care. Additionally, parents incur higher OOP health expenditure for their male children compared to their female counterparts. Policy interventions are imperative to moderate social mindsets, reduce inequality between male and female children through organizing workshops or seminars, regulate medicine prices, improve rural healthcare facilities, and implement health insurance coverage. Future research can be done on working women's HSB in both urban and rural areas.

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Non-communicable diseases (NCDs) account for over 41 million deaths annually, or 74% of all fatalities worldwide, with low- and middle-income countries accounting for 77% of all NCD deaths (WHO, 2021). Throughout their lives, women are affected by NCDs, which pose a particular risk to adolescent, reproductive, and maternal health, as well as being a significant contributor to ill health in older women. The Sustainable Development Goals (SDGs) also include the goal of promoting mental health and well-being while, through treatment and prevention, reducing the premature death rate from noncommunicable diseases by one-third (United Nations, 2015).

Women often have a triple burden of reproductive and maternal health problems, communicable diseases, and non-communicable diseases, which altogether cause poor health and affect the health of women throughout their lives, especially as a major cause of ill health for older women. The average life expectancy for women is 73.9 years worldwide in 2021 (World Data, 2021). Even while women are living longer, they suffer from illness and incapacity for a significant portion of their old age, which lowers their quality of life, increases the cost of caregivers, and reduces their ability to contribute to society (Martinez et al., 2021).

Moreover, the health of women significantly impacts the well-being of their family members, particularly their children. The health of children is closely linked to the traits of their parents or adult caregivers. Mothers, on the other hand, are the primary caregivers for their children in the societal and cultural contexts of

developing countries. The illness or death of a woman has a significant impact on the health of children.

Women/mothers manage the health of their families for the betterment of their children (Goodwin et al., 2005). Diabetes in women negatively affects children's health (Moeineslam et al., 2019). There is a connection between a woman's health and the vulnerability and well-being of her offspring. A baby born to a mother with non-communicable diseases has a higher chance of undernutrition, low birth weight, and greater susceptibility to non-communicable diseases (NCDs) such as obesity, hypertension, or heart disease as an adult. For the sake of future generations' health, women's health is therefore vital (Kapur & Hod, 2020).

According to the United Nations (UN) Convention on the Rights of the Child (UNCRC), a child is defined as an individual less than 18 years old. However, about 5.2 million children under five died in 2019, and this number was 500,000 for children 5 to 9 years old and 869,000 for children 5 to 14 years old (WHO, 2022). Around the world, the risk of death in children under five years of age is higher than at any age from 5 to 24 years (UNICEF, 2021a). Children under five are distinct from other age groups, such as older children, young adults, or the elderly, in various ways. Children's health at this age is crucial. Without proper care, their lives are at risk. Children's health requirements differ greatly from those of young adults or the elderly. Children are unable to express their preferences or understanding and make healthcare decisions. Parents and adult caregivers are responsible for representing their interests and ensuring that their demands are addressed. This study considers children from 0 (newborn to less than 1 year) to 5 years.

Over the past three decades, there have been tremendous improvements in child survival, with 1 in 27 children dying before the age of five in 2020 as opposed

to 1 in 11 in 1990. However, in 2020, 5.0 million children under five lost their lives (WHO, 2022). Between 1990 and 2020, the global children under five mortality rate decreased by 60%, from 93 deaths per 1,000 live births in 1990 to 37 in 2020 (WHO, 2022). In addition, infectious diseases, including pneumonia, diarrhea, and malaria, continue to be a major factor in the deaths of 13,800 children under five worldwide every day in 2021 (UNICEF, 2023). According to the report provided by the United Nations Inter-Agency for Child Mortality Estimation (UN IGME) in 2021 (UNICEF, 2021b), more than 48 million children under five will perish before 2030, with half of them being newborns, according to current forecasts. Twenty-eight million of these deaths, or 57% of them, will take place in Sub-Saharan Africa, with the remaining 25% occurring in Southern Asia (12 million). One of the SDGs' goals for children's health is to eliminate preventable infant and child mortality by 2030, with all nations aiming to lower neonatal mortality to at least 12 per 1,000 live births and children under five mortality to at least 25 per 1,000 live births (United Nations, 2015).

Among the South Asian countries, Bangladesh has made an impressive record of growth and expansion and is categorized as a nation with lower middle income (LMIC) by the World Bank (World Bank, 2023a). Its economy has grown at one of the quickest rates in the world over the past ten years, thanks to a demographic dividend, strong exports of ready-made garments (RMG), remittances, and stable macroeconomic factors. The maternal death rate dropped from 434 per 100,000 live births in 2000 to 173 per 100,000 in Bangladesh in 2017 (World Bank, 2019). In terms of children's health, the under-five death rate fell from 86.10% in 2000 to 27.30% in 2021, while the infant death rate decreased to 24.10 per 1,000 live

births (World Bank, 2023e), both of which are still high in comparison to the SDG targets.

This study attempts to focus on the healthcare of ill women and children in Bangladesh. Women contribute significantly to economic development, and good child health is critical for developing Bangladesh's future human capital. One of the main causes of serious illness is the delay in getting appropriate medical attention. It is vital to provide proper healthcare at a reasonable cost to improve the health of women and children. However, women are traditionally supposed to do all the household chores as well as care for their children and family members in Bangladesh. Additionally, most people in Bangladesh are rural, where older women are treated poorly as citizens (Hamiduzzaman et al., 2018). According to a qualitative study, older women from rural areas feel that juggling their traditional roles as daughters, wives, mothers, and grandmothers is difficult (Hamiduzzaman et al., 2021).

However, over the last decade, women have become more educated and employed in different sectors, and they hold important positions in the administrative services in both the public and private sectors. According to the Bangladesh Bureau of Educational Information and Statistics (BANBEIS), the percentage of female students in college was 47.44% in 2011, which increased to 50.37% in 2021. In the case of professional education (medical colleges, dental colleges, textile colleges, agricultural colleges, etc.), 62.72% of all students were girls, and among university students (both in public and private universities), 36.30% were girls in 2021 (BANBEIS, 2022). The proportion of girls not only as students but also as teachers has increased over the past decade.

The percentage of female teachers in colleges (Intermediate, Degree, Honors, Master's college) was 22.31% in 2011 and increased to 25.91% in 2021, and in universities, 29.33% were female teachers in Bangladesh (BANBEIS, 2022). In the field of administrative officers, 22.64% were female in 2021. The percentage of women as house helpers decreased from 50.13% in 2013 to 28.4% in 2016-17, and the percentage of women as own-account workers (self-employed jobs) increased from 12.3% in 2013 to 39.3% in 2016-17 due to the creation of job opportunities (BBS, 2021). According to the Bangladesh Labor Force Survey 2016/17, the total female labor force was 20.0 million, or 36.3 percent, and about 92% of women were employed in the informal sector (BBS, 2018b).

Bangladesh is a growing economy, and one credit goes to the expansion of garment industries, where 80% of the workers are women. In Bangladesh, this industry accounts for over 80% of total export revenue, and for the 2020–21 fiscal year, Bangladesh received USD 31.45 billion from the export of RMG (Islam, 2021). Over the past 15 years, the participation of women in agriculture and the rural economy in Bangladesh has increased significantly. Rural women contribute significantly to a variety of agriculturally based revenue-generating enterprises (Anam, 2021). In addition, the female labor force participation rate has gradually increased from 28.13% in 2000 to 37.10% in 2021 (World Bank, 2023e). Women have now started moving forward and contributing to socioeconomic development.

More women are now working outside the home; however, this does not necessarily lessen their traditional household responsibilities. Such dual jobs increase women's workload. Nearly all caregiving and home duties fall under the purview of women, and they suffer greatly from a lack of time due to their enormous workload

(Arora, 2015). Many women are compelled to work longer hours, facing time poverty while juggling work and domestic responsibilities (Sarker, 2021).

The heavy dual burdens of caring for family members and working at the same time put women at risk for negative health outcomes. There are two ways in which this double burden can affect women's health: it can limit their physical activity and increase their psychological stress, which can lead to worse health conditions, like an increased risk of chronic conditions, an increased chance of being overweight or underweight, and a decrease in self-reported health (Chen et al., 2020). It is evident from research done by the Work and Opportunities for Women (WOW) program in Bangladesh that women experience health issues and exhaustion as a result of performing dual jobs, and women claim that missing work damages their professional reputation, increases their chances of job loss, and prevents them from being promoted to better jobs (WOW, 2020).

In addition, most of the women in Bangladesh are engaged in the informal sector, where no child daycare facilities are available, and women have to leave their children at home under the care of older children or relatives, which can also affect their children's health. Women working in the informal sector affect the health of children (Chowdhury et al., 2021; Manimekalai et al., 2019). Although good health is vital for all human beings, this study focuses on women's and children's health in Bangladesh due to the increasing responsibilities and workload of women, which affect their health as well as children's health.

However, health status will be improved if proper healthcare can be provided. Better health outcomes are unlikely to result from increasing access to subpar treatment (Kruk et al., 2018). Delays in seeking medical attention in contemporary facilities are a leading cause of infant mortality worldwide, particularly in sub-

Saharan Africa (Noordam et al., 2015). One of the determinants that influence healthcare service utilization is an individual's healthcare-seeking behavior. Through the analysis of healthcare-seeking behavior (HSB), it becomes possible to discern the various factors that influence HSB. This understanding is instrumental in making informed decisions regarding the most appropriate avenues for intervention in order to enhance HSB. It is important to note that seeking treatment from unqualified healthcare providers carries the potential to jeopardize the well-being of ill women as well as patients.

It was estimated that 63% of antibiotic prescriptions in Bangladesh are from unqualified providers, and antibiotics are prescribed in nearly half (44%) of all consultations in primary health care (SIAPS, 2015). Often, prescribers diagnose a microbial infection based on signs and symptoms and select antimicrobials empirically rather than following standard treatment guidelines (Faiz & Basher, 2011). This causes misconceptions and misinformation about illness and disease, leading to irrational and inappropriate prescriptions of antibiotics across different categories of patients and individuals (Nahar et al., 2020; Pulla, 2016).

Although the above explanation is true for all individuals, women in Bangladesh are more affected by such HSB, especially in rural areas, as they neglect their proper healthcare and are more likely to rely on unqualified and traditional healthcare providers (Hamiduzzaman et al., 2021). Such healthcare does not adequately address the specific needs of women, thereby exacerbating their vulnerability and health-related challenges (Hasnain et al., 2014). Besides other illnesses, in the case of maternal health issues, unqualified and traditional healthcare providers increase the chances of delivery complications, which can also cause infant deaths (Kafi et al., 2019).

1.1.1 Healthcare-seeking behavior

Healthcare-seeking behavior (HSB) is a complex concept and cannot be explained in a single way. HSB reflects the current circumstances, which interact synergistically to form a pattern of care-seeking that is fluid and thus changeable (Olenja, 2004). From the sick individual's point of view, HSB may be a response to the discomforts he or she feels. Sometimes, unfavorable health outcomes have been created due to delayed medical treatment (Prentice & Pizer, 2007; Kenagy et al., 1999).

HSB, as a multidimensional notion, includes time and utilization of types of healthcare services (Poortaghi et al., 2015). Individuals' decisions about diseases and illnesses are referred to as HSB (Slobbe et al., 2017). In other words, HSB is a common practice among people who are concerned about their health, consisting of inattentiveness to illness, treatment action (visiting a healthcare provider), and self-medication (Musoke et al., 2015).

HSB among women and children varies in different countries. In Eastern Ethiopia, 74.3% of women sought antenatal healthcare from a healthcare facility, while only 22.6% of them sought postnatal healthcare (Kifle et al., 2017). In Zambia, about 60% of patients sought treatment from healthcare providers, 30% used self-treatment, and 10% did not seek any type of treatment (Masiye & Kaonga, 2016). Not only did women suffer from other illnesses during maternal healthcare in pregnancy, but they also did not seek proper healthcare. In China, only 25.97% of women suffering from female diseases (such as menopausal symptoms) sought healthcare (Du et al., 2020). In Egypt, 89.2% did not seek medical treatment for urinary incontinence (Ahmed & Zaky, 2016). Only 14.2% of women who suffered from cervical cancer sought healthcare in Ethiopia (Habtu et al., 2018).

In Nepal, about 50% of women suffering from any illness sought first treatment from traditional healers (Shrestha et al., 2017). Reddy et al. (2020) explored that only 34% of rural women sought medical treatment after experiencing the symptoms of illness in Telangana, India. In sub-Saharan African countries, although 74% of the children received the measles vaccine, only one-fifth of the children sought medical treatment for fever or cough (16%) and diarrhea (10%) (Adedokun & Yaya, 2020). The HSB among children under five was poor, with only 31.4% seeking appropriate treatment in Nigeria (Abdulkadir & Abdulkadir, 2017). About 25% of sick children have not sought any healthcare in Zambia (Apuleni et al., 2021). About 50% of sick children sought proper healthcare for common childhood illnesses in Ethiopia (Simienh et al., 2019).

In Bangladesh, healthcare-seeking behavior among women is poor (Hamiduzzaman et al., 2021; Khan et al., 2018; Yaya et al., 2017). According to the Bangladesh Household Income and Expenditure Survey (HIES 2016/17), 32% of unwell females went to a pharmacy, dispensary, or compounder for care, followed by 21.35% who went to non-qualified doctors and 15.82% who went to qualified doctors.

However, in the case of children under five, there exists rural-urban discrimination in seeking healthcare. Among a total of 4,733 ill children under five residing in rural areas, 1,599, or about 35%, were taken to qualified healthcare providers, while among a total of 1,937 ill children under five residing in urban areas, 870, or about 45%, were taken to qualified healthcare providers, according to the Bangladesh HIES 2016/17 data. It has been explored that in Bangladesh, only 25.6% of children under five suffering from fever or cough sought treatment from formal healthcare facilities; that amount was 33.7% in urban areas and 23.5% in rural

areas (Ahmed & Yunus, 2020). In another study, 37% of children under five suffering from fever/cough sought medical treatment in Bangladesh (Khanam & Hasan, 2020).

Following the final report on HIES 2016/17 (BBS, 2019) in Bangladesh, at the aggregate level, among sick individuals (both males and females) who did not seek any type of treatment, about 57.77% thought the nature of the illness was not so serious, and 16.73% did so due to the high cost of treatment. Among urban females who did not seek any type of treatment, about 11% cited the cost as too high, while among rural females, this figure is about 21%. The cost of illness was a barrier (Sauerborn et al., 1996), and for poor people, the cost of healthcare remains a barrier (Tahsina, 2017) in Bangladesh.

Due to the government's limited or nonexistent funding, older rural women's needs were neglected, and they refused to devote their meager financial resources to taking care of their health (Hamiduzzaman et al., 2021). In most low- and middle-income countries, out-of-pocket (OOP) payment is the principal source of healthcare finance. Through the analysis of OOP health expenditure, it becomes possible to identify the factors that are responsible for increasing OOP health expenditure. This understanding will assist policymakers in determining whether adjustments to their strategies are necessary to mitigate out-of-pocket health expenditure or establish a financial protection mechanism. It will effectively alleviate the burden on individuals, particularly those women who are economically disadvantaged, consequently reducing their negligence toward healthcare.

1.1.2 Out-of-Pocket (OOP) Health Expenditure

Out-of-pocket (OOP) healthcare expenditures are payments made by patients or households to cover direct medical expenses. The World Bank (Metadata

Glossary), drawing from the World Health Organization National Account database (World Bank, 2023b), defines OOP expenditures as any direct household expenses, encompassing gratuities and in-kind payments, made to medical professionals and suppliers of medications, medical equipment, and various other products and services, with the primary objective of enhancing or restoring the health of an individual or a population. These expenditures are classified under the category of personal health expenses.

In most low- and middle-income countries, OOP as a percentage of health expenditure is high, such as in Nigeria (70.52%), Nepal (57.91%), Ethiopia (37.88%), Egypt (62.75%), and Pakistan (53.81%), compared to India (54.78%) and China (35.23%) (World Bank, 2022b). In sub-Saharan African countries, seeking healthcare from public healthcare facilities expands catastrophic health expenditure (CHE) due to increased OOP health expenditure, which means the type of healthcare provider affects healthcare expenditure (Njagi et al., 2018). In Bangladesh, OOP expenditure was about 67% of the total healthcare expenditure by households in 2015 (Bangladesh National Health Accounts, 2017) and reached 68.5 percent in 2020 (The Daily Star, 2021). According to the World Bank (World Bank, 2023c), it became 74% of the current health expenditure in 2020.

1.2 Healthcare Situation in Bangladesh

The health system reflects the prioritization of the government of any country to some extent. The availability and accessibility of services—that is, their usability and acceptance by the public—determines a health system's efficacy. According to the Bangladesh Health Facility Survey 2017 (NIPORT & ICF, 2019), the Bangladesh healthcare delivery system has four important actors who define the system's structure and operation, making up Bangladesh's pluralistic healthcare system. The

main actors are (i) the government, (ii) the private sector, (iii) nongovernmental organizations (NGOs), and (iv) international donor agencies.

Maternal and Child Health (MCH) services are given top priority by Bangladesh's health system. The decentralized system encompasses all districts, sub-districts, rural areas, and wards or villages throughout the nation. In addition, the Bangladesh healthcare delivery system is described in detail, referring to Section 2.3 in Chapter 2. Improvement of the health sector is related to the common practices of households in daily life, their healthcare-seeking behavior, access to healthcare facilities, the burden of healthcare expenditure, etc.

The four parties involved in Bangladesh's healthcare finance system are the government, the people who use the services, international development aid, and non-governmental organizations (NGOs). The majority of funding for healthcare is provided by out-of-pocket (OOP) expenditures made by service users; this accounts for 67% of all healthcare spending, with the government funding the remaining 23% through tax revenue and development outlays, 8% coming from international development assistance, and 2% from NGOs (NIPORT & ICF, 2019). Bangladesh's health system financing (HSF) is characterized by high OOP health expenditure by the users (Islam et al., 2015; Molla & Chi, 2017).

Financial difficulties occasionally compel people to take on debt or sell properties to bear the treatment cost, which in turn makes them poorer and may also affect the schooling of children. This means the household standard of living is affected by the heavy dependency on OOP payment in Bangladesh (Molla & Chi, 2017). Moreover, in Bangladesh, the share of the total budget in the health sector increased from 4.72% in FY2020 to 5.15% in FY2021. Bangladesh's current health expenditure as a share of GDP was only 2.48% in 2018 (World Bank, 2022a).

1.2.1 Healthcare Situation of Women in Bangladesh

Women suffered from various illnesses along with maternal health problems, as shown in the following Figure 1.1.

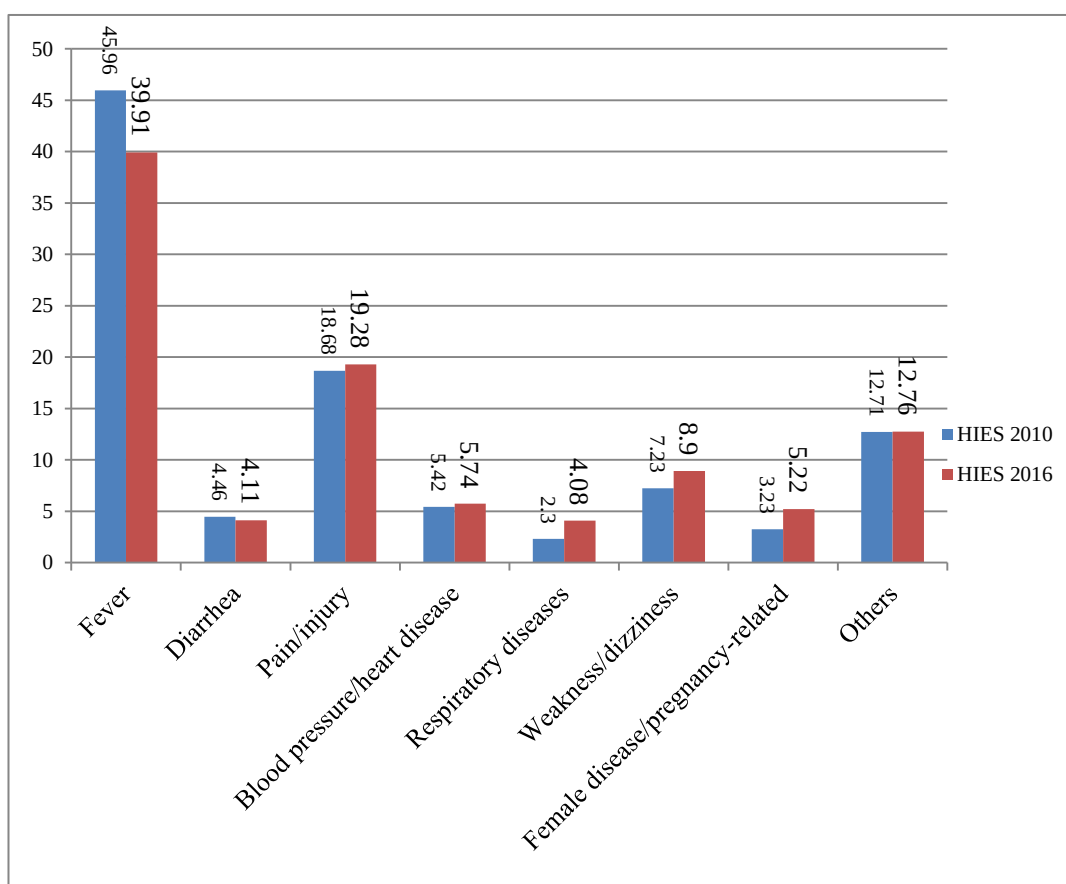


Figure 1.1 Percentage of ill Women suffering from various types of illnesses

Source: Bangladesh Household Income and Expenditure Survey (HIES) 2010, 2016

From Figure 1.1, it is possible to compare the illnesses women suffered from during the 30 days of the surveys conducted in 2010 and 2016 in Bangladesh. A slight difference was found between these two surveys, as the percentage of women suffering from fever decreased to 39.91% in 2016 from 45.96% in 2010, whereas the percentage of women suffering from respiratory diseases, such as cough or breathing problems, increased to 4.08% in 2016 from 2.3% in 2010. A considerable rise in the

proportion of women who suffered from female diseases or pregnancy-related diseases was found in 2016 (5.22%) in comparison to 2010 (3.23%). Cancer, kidney disease, eye problems, tuberculosis, malaria, pneumonia, mental health issues, etc., are included in the “others” category, and the percentage of women who suffered from others was almost the same in 2010 and 2016.

Non-communicable diseases (NCDs):

Women's health is impacted by non-communicable diseases (NCDs) throughout their entire lives, such as diabetes, kidney issues, high blood pressure, and hypertension, etc. The Sustainable Development Goals (SDG) also include the reduction of premature mortality from non-communicable diseases by one-third (United Nations, 2015). The Bangladeshi government has taken action to prioritize the growth of NCD services in order to address this concern. The current sector-wide program in Bangladesh, the 4th Health, Population, and Nutrition Sector Program (HPNSP) 2017–2022, features a section devoted to the prevention, control, and management of NCDs (Al-Mamun et al., 2017). Women experience higher rates of diabetes and high blood pressure (or hypertension) among non-communicable diseases (NCDs).

Blood pressure or hypertension:

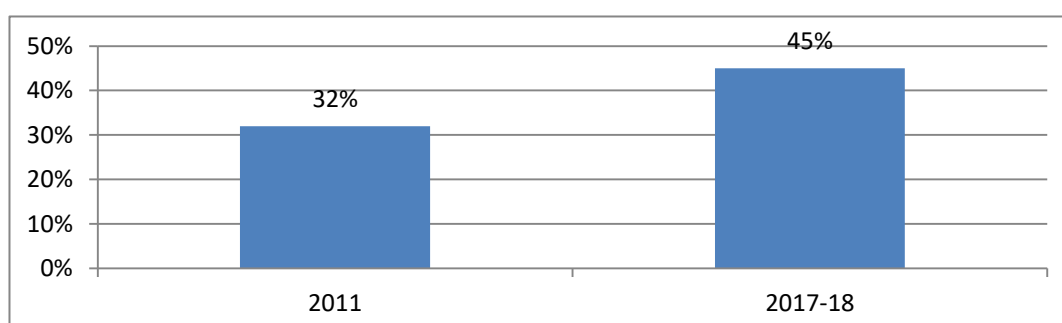


Figure 1.2 Trends in the prevalence of hypertension among Women (aged 35 years and older)

Source: Bangladesh Demographic and Health Survey 2017-18 (NIPORT & ICF, 2020)

According to the Bangladesh Demographic and Health Survey 2017-2018 (NIPORT & ICF, 2020), between 2011 and 2017–18, the prevalence of hypertension among women increased from 32% to 45%, as shown in Figure 1.2.

Diabetes:

Not only high blood pressure, but diabetes is another health problem women suffer from. Figure 1.3 demonstrates that between 2011 and 2017-18, the prevalence of diabetes in women aged 35 years and older grew marginally from 12% to 14%.

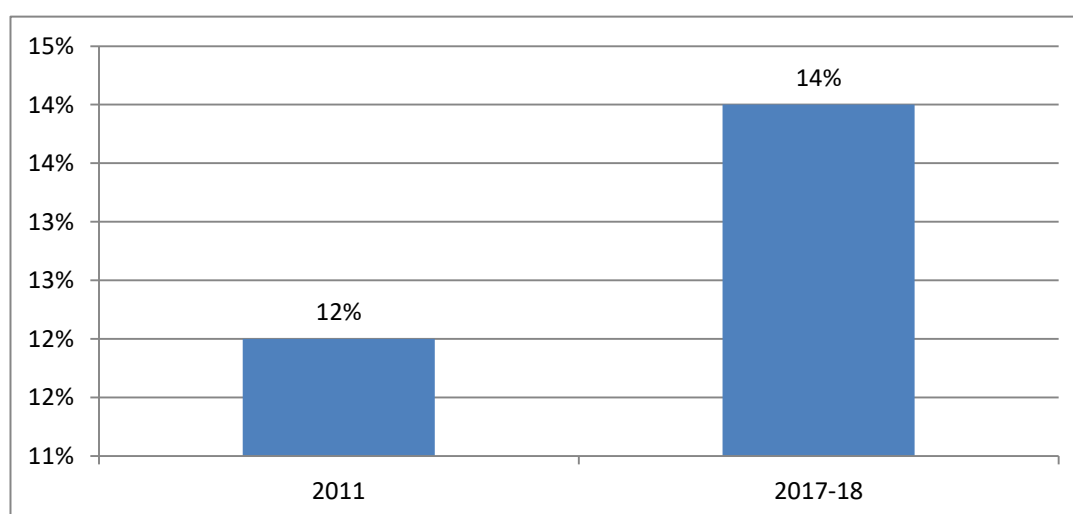


Figure 1.3 Trends in the prevalence of diabetes among Women (aged 35 years and older)

Source: Bangladesh Demographic and Health Survey 2017-18 (NIPORT & ICF, 2020)

Diabetes may cause many life-threatening complications, such as stroke, heart attack, eye problems, and chronic kidney disease if not treated properly or if medication is not taken (Islam, 2016). According to the Bangladesh Demographic and Health Survey 2017-18 report (NIPORT & ICF, 2020), about 59% of women aged 18 years and above were not aware of diabetes, whereas 25% of them were aware, treated, but not controlled, and only 13% of them were aware of diabetes, treated, and also controlled.

1.2.2 Healthcare Situation of Children under five years in Bangladesh

In 2020, about 5 million children under five died, about half of whom were newborn babies (in the first 28 days of life) (WHO, 2022), mostly due to preventable and treatable causes. The universal immunization of children against serious diseases that can be prevented by vaccines is widely acknowledged as one of the most economical ways to lower infant and child morbidity and mortality. A top priority program of the Bangladeshi government is the Expanded Program on Immunisation (EPI) against six preventable diseases. It adheres to the global recommendations made by the World Health Organization (WHO).

The proportion of children aged 12-23 months who received all recommended basic vaccinations increased from 46% in the 1993-1994 period to 86% in 2017-2018. There is no significant difference between girls and boys in terms of basic vaccination coverage. Over the same period, the proportion of children who did not receive any shots fell from 21% to 0% (NIPORT & ICF, 2020). Basic vaccination coverage among children has almost been achieved in Bangladesh, but communicable and non-communicable diseases, along with a lack of proper postnatal care, are the major reasons behind the high mortality rate among children under five years in Bangladesh, which can be addressed through proper health treatment over time.

In a survey, the Bangladesh Demographic and Health Survey (BDHS) 2017-2018, diarrhea was the second most prevalent cause of death (14%) among children aged 29 days to 11 months. In the two weeks before the survey, 5% of children under five had diarrhea, while 33% of children under five had a fever, and 3% had symptoms of acute respiratory infection (NIPORT & ICF, 2020).

It has been evident in a study that the risk of childhood death caused by diarrhea and ARI could be reduced by 30% if proper treatment was sought immediately (Sreeramareddy et al., 2012). Children also suffer from other illnesses such as pain/injury, pneumonia, etc., increasing the risk of childhood deaths. The following Figure 1.4 presents the trend of illnesses that children under five suffer from.

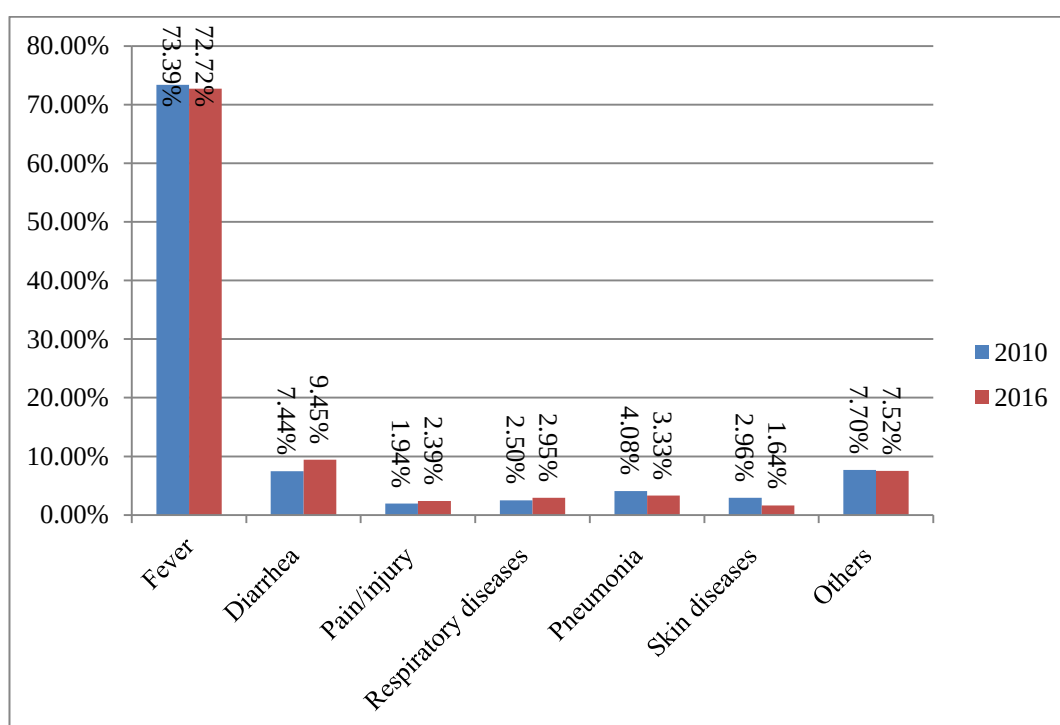


Figure 1.4 Percentage of ill Children under five suffering from various types of illnesses

Source: Bangladesh Household Income and Expenditure Survey (HIES) 2010, 2016

In Figure 1.4, it has been found that the percentage of children suffering from diarrhea increased from 7.44% in 2010 to 9.45% in 2016, along with a slight increase in pain/injury and respiratory diseases. The status of other illnesses suffered by children under five remains almost the same between the two national surveys. Typhoid, dysentery, heart disease, kidney disease, eye problems, tuberculosis, malaria, mental health issues, etc., are included in the other categories.

1.3 Healthcare-seeking behavior in Bangladesh

According to the healthcare delivery system of Bangladesh, there are various types of healthcare providers from whom sick individuals seek treatment. Referring to the Bangladesh Household Income and Expenditure Survey 2016/17 (BBS, 2019) provided by the government organization Bangladesh Bureau of Statistics (BBS), individuals seeking treatment from government health facilities are treated in government district hospitals, government medical college hospitals, or government specialized hospitals at the national or district level, Upazila health complexes, Union Health and Family Welfare Centers, and Maternal and Child Welfare Centers (MCWC) at the Upazila or union level, as well as government health workers, government satellite clinics, and community clinics at the village or ward level. Individuals also seek treatment from healthcare facilities provided by various NGOs through NGO health workers, clinics, or hospitals operating in different cities or villages. There are also private clinics or hospitals and qualified and non-qualified doctors' chambers, pharmacies/dispensaries, or traditional/spiritual providers.

A detailed explanation of these healthcare providers is provided in Section 2.3 of Chapter 2. Other private healthcare providers include traditional healthcare providers such as Ayurvedic (old healing practitioners using herbs, spirits, religious medical practices, etc.), Homeopathic, Unani (scientific use of pharmaceutical methods), and folk medicine in Bangladesh (Haque et al., 2018). Such traditional healthcare providers are very popular in rural areas of Bangladesh.

1.3.1 Healthcare-seeking behavior among Women in Bangladesh

Women's health is considered an important factor, particularly during pregnancy in Bangladesh. However, the rural-urban difference is evident in past studies that found 47.3% of rural women did not seek any medical check-ups during

pregnancy, whereas 68.4% sought a traditional birth attendant (TBA), and 73.69% gave birth at home; the corresponding figures for urban areas are 20.0%, 33.69%, and 38.94%, respectively (Hossain, 2020). Besides pregnancy-related issues, women suffered from various types of illnesses and sought treatment from different types of healthcare providers.

In the following Figure 1.5, the data show the type of healthcare provider sought by women (≥ 18 years of age) in Bangladesh who suffered from any type of illness during the Household Income and Expenditure Survey (HIES) conducted in 2010 and 2016.

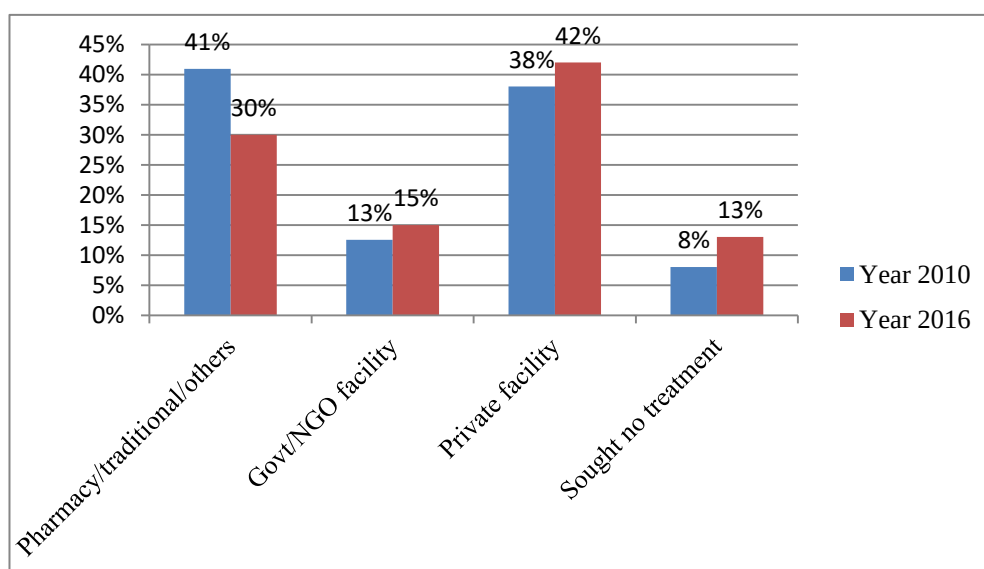


Figure 1.5 Healthcare-seeking behavior among Women (≥ 18 years of age) in Bangladesh

Source: Bangladesh Household Income and Expenditure Survey (HIES) 2010, 2016

According to Figure 1.5, in HIES 2010, the highest proportion (41%) of ill women sought treatment from a pharmacy/traditional/others, indicating self-treatment. Almost 38% of them sought treatment from private facilities, including both qualified and non-qualified healthcare providers, and only 13% of ill women sought treatment from government/NGO healthcare facilities. About 8% of women

did not seek any type of treatment, although they were ill. On the other hand, in 2016 (HIES), these amounts were 30%, 15%, 42%, and 13%, respectively. In comparison to 2010, the percentage of women seeking treatment from the pharmacy reduced from 41% to 30% in HIES 2016. There is no significant change in the case of seeking treatment from government/NGO healthcare facilities (13% in 2010 and 15% in 2016). Women now seek more treatment from private healthcare facilities (38% in 2010 and 42% in 2016); however, in 2016, most ill women sought treatment from non-qualified healthcare providers under the category of private healthcare facilities. Another noticeable piece of data in Figure 1.5 is that the proportion of ill women who did not seek any type of treatment increased from 8% in 2010 to 13% in 2016.

Most of the studies were done on women's demand for reproductive healthcare in Bangladesh (Yaya et al., 2017); however, few of them address women suffering from common illnesses (Mahmud et al., 2018; Heijden et al., 2019). Still, the research done on women's healthcare is limited to a specific rural region (Hamiduzzaman et al., 2021), a specific industry such as the garment sector (Mahmud et al., 2018), or a specific urban area such as slums (Heijden et al., 2019). This is one of the motivations for the study regarding healthcare-seeking behavior among women on a large scale using the latest nationally representative household data in Bangladesh. However, this study is concerned with the healthcare-seeking behavior among women (≥ 18 years of age) who are suffering from any illness and seeking any type of treatment in response to their illness.

1.3.2 Parents' Healthcare-seeking behavior for Children under five years in Bangladesh

In the case of children under five, since they are unable to express their preferences or realization of the type of illness, parents make healthcare decisions. Parents are responsible for whether children seek treatment or not. Most of the studies used the term healthcare-seeking behavior among/for children (Rehman et al., 2014; Ahmed & Yunus, 2020; Srivastava et al., 2009), and in some studies, it is termed parents' healthcare-seeking behavior for their children (Abdulkadir & Abdulkadir, 2017; Chandwani & Pandor, 2015; Haque et al., 2019) or mothers'/caregivers' healthcare-seeking behavior towards childhood illness (Abegaz et al., 2019; Awoke, 2013). Whatever the term, the questions related to children under five were answered by the respective household head or parents in past studies or surveys.

This study is concerned with children under five who are suffering from any illness and seeking any type of treatment in response to their illness by their parents. A study (Ahmed & Yunus, 2020) in Bangladesh has explored that only 25.6% of children under five suffering from fever or cough sought treatment from healthcare facilities; that amount was 33.7% in urban areas and 23.5% in rural areas. On the other hand, only 28% of children suffering from diarrhea sought treatment from healthcare facilities, with urban areas accounting for 34.0% of that total, while rural areas accounted for 26.2%.

In the following Figure 1.6, the data show the type of healthcare provider sought by parents for their children under five in Bangladesh who suffered from any type of illness during the Household Income and Expenditure Survey (HIES), conducted in 2010 and 2016 in Bangladesh. According to the data in Figure 1.6, in HIES 2010, about 5% of children under five did not seek any type of treatment,

although they were ill. Among them, the highest proportion (45%) of ill children sought treatment from a pharmacy/traditional/others. Almost 37% of them sought treatment from private facilities, including both qualified and non-qualified healthcare providers, and only 13% of ill children sought treatment from government/NGO healthcare facilities. On the other hand, in 2016 (HIES), these amounts were 8%, 35%, 43%, and 14%, respectively.

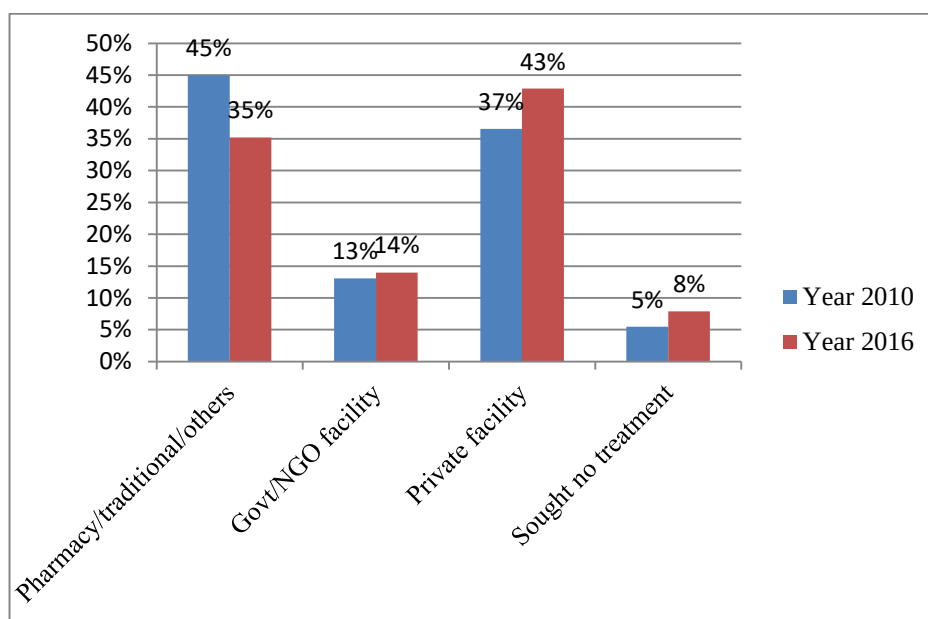


Figure 1.6 Parents' Healthcare-seeking behavior for Children under five years in Bangladesh

Source: Bangladesh Household Income and Expenditure Survey (HIES) 2010, 2016

In comparison to 2010, the percentage of children seeking treatment from the pharmacy reduced from 45% to 35% in HIES 2016, but it is still high. There is a slight increase in the case of seeking treatment from government/NGO healthcare facilities in 2016 (13% in 2010 and 14% in 2016). Although seeking care from private facilities has increased, most ill children seek treatment from non-qualified private healthcare facilities. Another observation from Figure 1.6 is that the

proportion of ill children who did not seek any type of treatment has increased from 5% in 2010 to 8% in 2016.

1.4 Out-of-Pocket (OOP) Health Expenditure in Bangladesh

Over one-third of the income of the most impoverished households goes toward paying for medical bills. In Bangladesh, spending on pharmaceuticals accounts for almost two-thirds of the overall expenditure (Mannan, 2013; Tahsina et al., 2017). Considering the importance of financial burden in seeking healthcare, the Bangladeshi government has implemented the Healthcare Financing Strategy 2012–2032 with the goal of achieving Universal Health Coverage (UHC). The details are provided in subsection 2.4 of Chapter 2. The most significant goal of the funding strategy is to reduce health expenses paid out of pocket at the time of service to 32 percent by 2032 (Government of Bangladesh, 2012).

However, according to the Bangladesh National Health Accounts, OOP (out-of-pocket charge incurred directly by a patient when neither public nor private insurance covers the full cost of a health good or service) expenditure was about 67% of the total healthcare expenditure by households in 2015 (Bangladesh National Health Accounts, 2017). In addition, it has been observed that the trend of OOP health expenditure is increasing and has continued to rise from 61.82% in 2000 to 74% in 2020, according to the World Bank (World Bank, 2023c), which is referenced in Figure 2.2 of Chapter 2.

A recent report from the health ministry states that the out-of-pocket (OOP) healthcare expenditure in Bangladesh has been steadily rising, leaving a large segment of the population with unaffordable medical expenses. (The Daily Star, 2021).

1.5 Problem Statement

Although Bangladesh has a structured healthcare delivery system covering the national level to the community level, a larger portion of women and children with various ailments seek treatment from pharmacies/traditional/self-treatment and non-qualified healthcare practitioners. However, rural-urban discrimination exists in seeking healthcare. Moreover, women have increasingly begun to advance and contribute to socioeconomic development. Nevertheless, women often encounter health issues and fatigue as a result of undertaking dual roles, as they are expected to manage household responsibilities regardless of their employment status outside the home. This dual burden adversely affects not only women's health but also the health of their children. In addition, a considerable percentage of sick individuals avoid seeking any type of treatment due to the high cost of healthcare. Bangladesh's health system financing (HSF) is dominated by OOP health expenditure by the users, which is relatively high. Despite the implementation of a national policy to minimize out-of-pocket healthcare costs, they continue to rise.

So, are there any barriers to accessing healthcare facilities or other socioeconomic or demographic factors that affect such healthcare-seeking behavior, or whether such healthcare-seeking behavior, in combination with other socioeconomic factors, affects out-of-pocket (OOP) health spending among ill women (≥ 18 years of age) and children under five years in Bangladesh?

1.6 Research Questions

The research questions are in line with the study's background and problem statement: