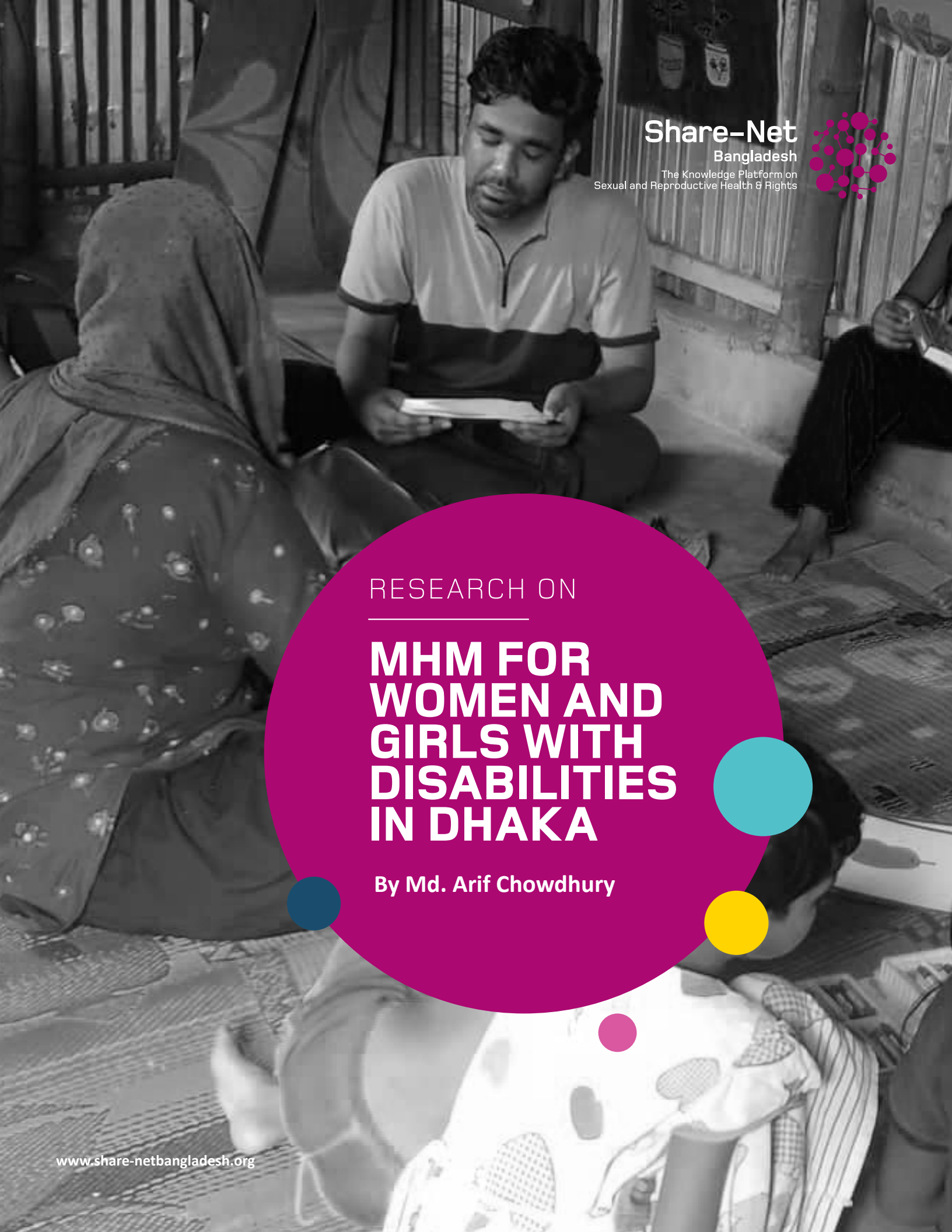

Share-Net
Bangladesh
The Knowledge Platform on
Sexual and Reproductive Health & Rights

RESEARCH ON

MHM FOR WOMEN AND GIRLS WITH DISABILITIES IN DHAKA

By Md. Arif Chowdhury

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CONTENTS

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ABBREVIATIONS

BBS	Bureau of Statistics
BDT	Bangladeshi Taka
BRAC	Bangladesh Rural Advancement Committee
CNG	Compressed Natural Gas
CRC	Convention on the Rights of the Child
CRP	Centre for the Rehabilitation of the Paralysed
CRPD	Convention on the Rights of Persons with Disabilities
DMA	Dhaka Metropolitan Area
DSK	DushthaShasthya Kendra
DWASA	Dhaka Water Supply and Sewerage Authority
FGD	Focus Group Discussions
GO	Government Organization
GoB	Government of Bangladesh
IDI	In-depth Interviews
KII	Key Informant Interview
MDG	Millennium Development Goal
MHM	Menstrual Hygiene Management
NGO	Non-government Organization
SDG	Sustainable Development Goal
sq. km	Square kilometer
STD	Sexually Transmitted Diseases
SWOT	Strength, Weakness, Opportunity, and Threats
UPPR	Urban Partnerships for Poverty Reduction
WASH	Water, Sanitation, and Hygiene
WHO	World Health Organization

EXECUTIVE SUMMARY

Slum areas in Dhaka city is a cluster of dense settlements where the number of people is gradually increasing very unsystematically and haphazardly in an unhealthy manner. Water, sanitation, and hygiene (WASH) facilities are important indicators to evaluate the living condition in the slum. Improper arrangement of WASH facilities at slums can make the environment of city surroundings unfavorable and vulnerable posing a great threat to public health. Thereby, the study targets to identify SWOT (strength, weakness, opportunities, and threats) of slums aiming to improve proper urban planning.

According to our research studied at Korail and Kallyanpur slums, (a) inconsistent/infrequent and inequitable supply of water; (b) insufficient/inadequate number of lavatories with disputes in maintaining hygiene of sanitation system; (c) expensive sanitary pads; (d) poor road communication; (e) drainage congestion; and (f) irregular waste/garbage handling leading towards unhealthy surroundings are most common WASH-related issues that affect females in general in slum areas. Menstrual Hygiene Management (MHM) through the use of available MHM products gets low priority because sanitary pads demand money. Only school going girls and employed young women are found to use sanitary napkins. Extra expenditures for their toiletries are also willingly financed by family.

In the case of female living with different types of disabilities (i.e., mental and physical) mostly reported issues are (a) existing disabled-friendly toilet facilities are few in number; (b) rest of the toilets are far-reaching, (c) most facilities are located at high grounds, hence, frequent slipping accidents are common; (d) no pipe-line source inside the lavatories, hence, carrying heavy water pots is a must; (e) dependency is enforced on family members, by nature, on mothers; and (f) free medicine and medical facilities are not satisfactory, thereby, most of the health-related expenditures are born privately by families. Apart from the issues mentioned above, adolescent girls with mental/learning disabilities are completely unaware of the menstrual hygiene management. Only cloths are used to absorb menstrual blood because it is believed to keep the stigma surrounding menstrual management silence. Besides, during menstruation, girls with disabilities experience physical pain associated with stomach aches and depression. No evidence was found of visiting doctors during such menstrual crises.

In general, strengths of the WASH and MHM facilities that are observed include (a) available family support to take care; (b) monthly allowance that family receives for each member with disabilities; (c) willingness of people to gain new knowledge related to disabled handling through training; (d) helpful neighbors and (e) considerable landlords. On the contrary, the major weakness is the absence of disabled-friendly schools that can handle adolescent girls. Other weaknesses include (a) lack of space for disabled centers, playgrounds, communication pathways; (b) insufficient free medicine support or medical services; (c) insufficient financial support from government as monthly allowance; (d) lack of disabled-friendly structures in water collection point and lavatories; (e) absence of pipe water supply inside the toilets; and (f) taboo regarding MHM management.

Promising opportunities that are found in slum areas include (a) increasing literacy rate that can give female the confidence and space to voice their need for improved menstrual hygiene; (b) GO/NGO activities related to capacity building, awareness creation, income generation; (c) changing societal views on MHM issues through TV by advertisements, awareness programs, gender education for adolescents; (d) easy access and availability of MHM products; and (e) involvement of the male members of the family. However, threats coming from (a) increasing population demand management; (b) the risk of extreme climatic events causing uncontrollable hazards and damages; (c) the unhygienic management of menstrual pad disposals increasing the risk of diseases may become a huge challenge for Dhaka to deal with.

OPERATIONAL DEFINITIONS

PERSON WITH DISABILITY

According to the Disability Welfare Act of 2001"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" (WDDF 2013).

WASH

WASH is the collective form of Water, Sanitation, and Hygiene (Mahon and Fernandes 2010; Ngure et al. 2014).

WATER ACCESS

Water access is defined as "having a source of safe water within 1 kilometer of the dwelling" (Geere 2016).

SANITATION

According to WHO (2018), "Sanitation refers to the provision of facilities and services for the safe management of human excreta from the toilet to containment and storage and treatment onsite or conveyance, treatment, and eventual safe end-use or disposal".

HYGIENE

Hygiene is defined as "the science of preventive medicine and the preservation of health. Also commonly used as a euphemism for cleanliness and proper sanitation(William 2018).

MENSTRUATION

Menstruation can be defined as "the process in a woman of discharging (through the vagina) blood and other materials from the lining of the uterus at about one monthly interval from puberty until menopause (ceasing of regular menstrual cycles), except during pregnancy. This discharging process lasts about 3-5 days". This is also termed as the period or bleeding (Davis 2019).

SWOT

SWOT defines Strength, Weakness, Opportunities, and Threats (Hay and Castilla 2006)

FEMALE

In this research, girls (age more than 12) and women are considered as female.

SLUM AREA

According to UN-HABITAT, "A group of individuals living under the same roof in an urban area who lack one or more of the following: (1) Durable housing of a permanent nature that protects against extreme climate conditions, (2) Sufficient living space which means no more than three people sharing the same room, (3) Easy access to safe water in sufficient amounts at an affordable price, (4) Access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of people, (5) Security of tenure that prevents forced evictions" (UN-Habitat 2008).

RECONNAISSANCE SURVEY

Reconnaissance survey is defined as "Reconnaissance is preliminary research or a preliminary survey such as checking out the lay-of-the-land before taking military action."(Your Dictionary 2019)

INTRODUCTION

In the last 20 years, Bangladesh has gained prominent development on various health parameters including MDG-4 (Reduce Child Mortality) before the defined timeline target despite having different forms of constraints (Islam 2014). Government of Bangladesh (GoB) and Non-Government Organizations (NGOs) have been working to improve health care services for people from all levels(Levay et al. 2013; Angeles et al. 2019). Here, WASH (Water, Sanitation and Hygiene) is considered a requisite to ensure a healthy life for females from both biological and cultural aspects including gender equality, social and economic development (WaterAid 2015). In particular, following the importance of WASH regarding gender groups, SDG 6 described that the support of local communities is essential in enhancing WASH management addressing the requirement of gender groups in vulnerable conditions (UN 2015). Among the health care services receivers in the health care center, most commonly, females; pregnant women; children; adolescent girls; persons with disabilities; and aged persons demand safe WASH management and practice in the community (El Arifeen et al. 2013).

However, different types of risk factors, such as, inadequate knowledge; a social and financial condition that include less availability of resources, patriarchy society, and child marriage are making female or gender groups, such as, pregnant women, adolescent girls, children, people with disability, aged person. These are the most vulnerable with respect to health issues in Bangladesh (Parveen 2007; Ahmed et al. 2012; Joseph et al. 2019). Less interest and capacity of staff, less coordination among different stakeholders, insufficient knowledge of service providers and receivers are identified as challenges to reach the targets (Teague et al. 2014). Thereby, it is highly needed to identify the SWOT (an acronym standing for Strengths, Weaknesses, Opportunities, and Threats) of the slums in Dhaka city so that sustainable WASH practices for females with disabilities in urban areas can be ensured. SWOT study can also assist the policymakers in finding a suitable solution by providing practical information on challenges and opportunities. Consequently, solution-driven holistic approaches that are based on the assessment of specific needs of the female with a disability can be applied to the community program for a successful implication of WASH ensuring the participation of different stakeholders (e.g., donor, GoB, NGOs) (Teague et al. 2014).

In the world, persons with disabilities constitute about 15% of the entire population where more than 80% of them are living in less developed and developing countries. The Bureau of Statistics

(BBS), Government of Bangladesh stated that according to national censuses 1981, 1991, and 2001, the assessed prevalence rate of disability at 0.82, 0.47, and 0.60, respectively. In addition, the government of Bangladesh (GOB) Surveys in 1982, 1986 and 1998 presented a national prevalence rate of disability at 0.64%, 0.5%, and 1.60%, respectively (Haque and Begum 1997; JICA 2002; BBS 2015a)

It is essential to address the needs of the female with a disability regarding safe hygiene including sustainable service of water and sanitation (Apolot et al. 2019). Focusing on the vulnerability and special needs of that group, Sustainable Development Goal 10 indicates the indicators to reduce inequalities and it is pre-requisite to confirm gender-inclusive WASH facilities with special highlights to females with disabilities(UN 2015; Apolot et al. 2019). Furthermore, stated that Bangladesh has no comprehensive health policy to improve the total health system which is also a constraint to establish an inclusive WASH practice for females with disabilities (Islam 2014).

Menstruation is a natural physiological process and a vital sign of the healthy reproductive cycle of females over 9 years old. In order to ensure the reproductive health and education service, it is necessary to address the MHM (Menstrual Hygiene Management) in the WASH (water, sanitation, and hygiene) (Ten 2007; ICCDR 2014). But the groups (adolescent girls/women) starting to menstruate or have already begun their menstruation in Bangladesh, are ignored regarding their special needs which in turn directly affect the health issue. Very few use disposable sanitary pads and most use reusable new or old cloth pieces, and face difficulties in cleaning, washing, drying and storing them during and after their menstruation period (Muhit and Chowdhury 2013; ICCDR 2014). Moreover, menstrual sanitary materials (sanitary napkins and other hygiene protection alternatives) are not accessible, available, affordable; and sometimes not acceptable culturally in an appropriate manner for all the communities in general due to several points from various backgrounds i.e. socio-economic, cultural, religious, financial, educational perspectives (Ten 2007; Mondal et al. 2017).

CHAPTER 1

BACKGROUND

1.1 GEOGRAPHY OF BANGLADESH

Bangladesh is a country of South-central Asia, located between 20°34′ to 26°38′ north latitude and 88°01′ to 92°42′ east longitude in the delta of Ganges-Brahmaputra Rivers in the northeastern part of the Indian subcontinent (Khan et al. 2004; FAO 2012; MoEF 2012a). It is a riverine country having many large and small 300 rivers with a total land area of 147570 sq. km. It is surrounded by the Indian states to the west, east, north, and northeast, and shares a boundary with Myanmar to the southeast. The southern part opens into the Bay of Bengal (MoEF 2012b; Tinker 2019).

1.2 DEMOGRAPHY OF BANGLADESH

Bangladesh had a large population of around 160 million with a density of 1186.9 persons per sq. km in 2018. The demographic trends in 2010 show that the birth rate dropped and infant mortality dropped dramatically since the late 20th century though it is still high. Bangladesh had a large promising young group of around 28% with the age range of 15-29 years in 2017 and the life expectancy was 74 years. It had an urban and rural population percentage of 36.6 and 63.4, respectively. Industrial development around the cities triggers population migration to the cities and the urban population is rising day by day (Tinker 2019). Slums are growing at an increasing rate in all of the major cities like Dhaka, Khulna, Chittagong, and Rajshahi, where about 3,420,521 slum dwellers are living in Dhaka metropolitan city alone (Islam et al. 2006; Latif et al. 2016).

1.3 THE SOCIAL SITUATION IN DHAKA CITY SLUM

The major portion of the growing population of Dhaka city is contributed by the migrated urban poor from rural areas for better social opportunities due to various environmental reasons such as land scarcity, river erosion, and climatic disaster and more. Slum-dwellers in DMA (Dhaka Metropolitan Area) generally have limited access to basic residential facilities and services e.g. land, housing, health, education, safe water, sanitation and hygiene, sewerage system, transportation, electricity, and gas to lead a quality life. Among the total slum area, about 80% of the slums established on privately owned land, where only 9% and 27% of the slum dwellers have sewage lines and piped water supply(Ahmed et al. 2010; icddrb 2016).

According to the report by icddrb (2016), around 74% of males are engaged in income generation in comparison to around 40% of females. In addition, male slum dwellers in slum used to work as rickshaw pullers and another mode of transport like Van, Thelagari, CNG auto rickshaw dominantly. On the other hand, poor female slum dwellers are working as housekeepers or garment workers (Baker 2007).

1.3.1 Illegalized slum land

This poor group lives in the urban slum area (built both on government and private land) with significantly low living standards i.e. environmental, social, cultural, and all types of civic participation (Ahmed et al. 2010; Sinthia 2013; icddrb 2016). Most of the cases, they have no legal authority or ownership on the land that they become unstable through in- and out-migration in the slum due to frequent threat of eviction (Ahmed et al. 2010).

1.3.2 Poor housing settlement

Notably, almost half of the urban settlement as a slum is categorized by poor construction and built environments with a very irregular pattern and improper construction. The residents can be categorized into pucca, semi-pucca and earthen/ Katcha where the construction materials used for dwelling are wood, bamboo, tin, brick, and cement varied with housing categories. The urban poor groups live in awful conditions occupying single-room houses of 14-18.5 sq. meters for each 5-8 family members (Sinthia 2013; icddrb 2016; Degert et al. 2016).

1.3.3 Malnourishment and insufficient health care

According to Fakir & Khan (2015), it is estimated that report that malnourishment is expectedly much higher in the studied slum area with the severely undernourished majority (51.1%). Various child health inputs such as food intake, household sanitation and quality of medical care received are dependent on household income, maternal education and health knowledge; most of the cases, which are absent among slum inhabitants in general. The slum dwellers suffer from an insufficient number of medical centers and lack of proper health care services. Some NGOs deliver primary health care to the poor slum dwellers but with insignificant coverage (icddrb 2016; Ahmed 2016).

1.3.4 Inadequate education service

The service of public education for the slum residents is not satisfactory i.e. most have no schooling regardless the age, whereas various NGOs provide these by running the number of schools in the urban slums which is not at the satisfactory level (Ahmed et al. 2010; icddrb 2016).

1.3.5 Bad transportation system

More often, the residents of low-lying and narrower slum sites suffer from waterlogging and flooding. It causes difficulties in communication and transportation of slum people which affect their daily life as well as their livelihood (Rashid 2009; Ahmed 2014, 2016).

1.3.6 Unavailability of electricity and gas service

Most slum dwellers use different types of fuels like papers, polythene, garbage, wood, and kerosene. Depending on their affordability. A study shows that 33% of the urban poor are yet to get access to electricity and only 22% of them get gas facilities as fuel for cooking, where the available electricity and gas services are not adequate and continuous (Sinthia 2013).

1.3.7 Hazardous living environment

They endure air pollution as the density of airborne particulate matter is >20 times the recommended level in Dhaka city. Most of the cases, garbage is kept in open space outside the house, at home and sometimes in a bin outside the home varied across slums. Moreover, they face the problem of living in hazardous environment due to ineffective management of solid wastes (food waste, paper, rubbish, ashes, residues, and street sweeping, roadside litter and abandoned vehicles), and lack of adequate waste disposing system and infrastructure (Biplob et al. 2011; icddrb 2016; Degert et al. 2016).

Thus the inhabitants of the slum area are bound to occupy the living standard of poverty and create a continuous load on resources like land, infrastructure, ecology, biodiversity and overall environment of Dhaka city.

1.4 ECONOMIC SITUATION

The urban poor has a little access to formal employment because of the high competition of urban environment and lack of their relevant capability. They are employed in urban informal sectors and they are occupied mostly in a multitude of livelihood activities like garments sector, driver of various types of vehicles like taxi, CNG auto-rickshaw, private car, office car, wheelbarrow or van pushers, masons, day laborers, office peon, carpenters, boatmen, low-grade employee in private, government or semi-government organizations. They have a very low monthly income (BDT 3000-8000), and the major part of their income is spent on food and accommodation purposes (Biplob et al. 2011; Sinthia 2013; Degert et al. 2016).

1.5 INDICATORS FOR THE DEVELOPMENT OF SLUMS IN BANGLADESH

According to the slum census 2014 (BBS 2015b), a total of 2,232,114 slum dwellers are living in a slum which is about 6.33% of the total urban population of the country. Also, about 62.45% and 26.43% of the slum dwellers are living in Tin/Katcha and semi-pucca houses, respectively. In the case of availability of drinking water, 52.48% of the slum dwellers collect water from the tube well and 45.12% of the dwellers get water from tap water. Access to electricity is one of the indicators for the development of slum, where about 89.65% and 9.70% of the slum dwellers use electricity and kerosene as fuel for the source of light, respectively. In addition, 42.19% and 26.25% of the slum dwellers use pit and sanitary latrine in a slum which indicates the good hygienic status. Nowadays, 84.19% of the slum dwellers are using mobile phones which shows the accessibility to modern appliances of slum dwellers. On the other hand, according to Farhad (2016) described that social norms and values depict the collective development of social characteristics and psychology of society.

1.6 POLITICAL AND ADMINISTRATIVE STRUCTURE AND THEIR POSITION

Most of the cases, slums are neglected by the government and they have their own leadership and gangs to guard their shelter, sometimes under

the political influence. There are self-declared and self-appointed persons who formed committees and maintain communication and link with national-level political leaders, government and non-government officials, and law implementation organizations (Baker 2007).

The problems of slum dwellers remain unsolved due to the lack of coordination between government and private sector developers as well as the policy level (Banks 2008). Also, extreme poverty, poor housing condition, unhealthy living condition and less political commitment regarding poverty eradication also facilitate the unstable political condition in slum areas (Ahmed 2016; Chowdhury and Sultana Zakia Rahman 2018).

1.7 GOVERNMENT POLICY ON PEOPLE WITH DISABILITY

Bangladesh is the first country to ratify and apply the CRC (Convention on the Rights of the Child) (1990) and CRPD (Convention on the Rights of Persons with Disabilities) (2007), the two most significant global treaties in protecting the rights of children with disabilities (UNICEF 2014). There is an initiative for disabled in policy level taken by the government i.e. “Persons with Disabilities’ Rights and the Protection Act 2013” (WDDF 2013). This law on disability was activated after the revoking of the “Disabled Welfare Act 2001”. The constitution of Bangladesh also addresses the equal rights to enjoying dignity, fundamental human rights and social equality of persons with disabilities. The government has another legislation of “National Women Development Policy 2011” for establishing rights of women, and their empowerment (GoB 2011).

1.8 WASH: CONCEPT AND IMPORTANCE

“Access to safe water and sanitation to all” is one of the pre-requisite to ensure healthy life all over the world and identified as one of the goals of Sustainable Development Goals (SDGs) (CDP 2019; Institute 2019). Water, Sanitation, and Hygiene (WASH) are important factors to understand health-related issues, where inadequate WASH factors are considered as important risk aspects for low-income countries (Bain et al. 2014). WASH is related mostly with different types of water-borne diseases, where Prüss-Ustün et al., (2014) stated that about 23% of the reduction regarding diarrheal diseases can be done with proper hand-washing practice. Besides ensuring sufficient water and proper sanitation, hygiene interventions included hygiene and educational curriculum related to health and development of personal attitudes like handwashing (Fewtrell et al. 2005). In addition, Prüss et al., (2002); and S. R. Huttly, S. S. Morris, (1997) that proper washing consequences to the reduction in water-borne diseases like diarrhea. Urbanization and an increasing rate of people derived the importance of ensuring proper WASH in every sphere of society. More migration to cities is happening due to different types of pulling factors e.g. better livelihood; secure land, less disaster, and better road communication facilities. Because of this, pressure on water and sanitation facilities in cities is increasing, where poor people are less privileged and suffering due to scarcity of availability of water and sufficient sanitation facilities(Nations 2018). Following these issues, different types of stakeholders including sociologists, economists, planners, and policymakers were trying to improve the scenarios because the socio-economic conditions of the slum dwellers are worst and scenarios are getting worse day by day.

1.9 STATUS OF WASH

According to WHO/UNICEF, (2004) described that 1.1 billion people in the world are living without developed water sources, where about 2.6 billion people in the developing world are staying with less access to water and sanitation. The status of WASH depicts that in the low and middle-income countries about 31% of the households used to drink water after treatment, where 19% of the people practice handwashing after the toilet (Prüss-Ustün et al. 2014). Moreover, safe WASH is a pre-requisite to ensure the safety of life. A research conducted by Prüss-Ustün et al., (2014) showed that in 2012, 50,2000 diarrhea deaths were observed due to inadequate drinking water and 28,0000 deaths by inappropriate sanitation. It was also estimated that 29,7000 deaths due to inappropriate hygiene.

In addition, WHO (2011) described that about 45% of the entire population in the world used a safe sanitation service, where 31% of the population used personal sanitation facilities. Following the importance of safe water, sanitation and hygiene, Mara, (2003) stated that it is highly important to ensure water and sanitation for the poor people in developing countries. It is also estimated that to fulfill the target regarding water and sanitation for everyone by the end of 2025, 2.9 billion and 4.2 billion people need to get developed water and sanitation, respectively. Also, according to Bangladesh National Hygiene Baseline Survey (2014), Only 40% of the household had water and soap supply, where 13% of children three to five years of age and 57% of the mothers and other caregivers used to wash hands with soap. Besides, 35% of the schools in Bangladesh had both available water and soap, where 28% of the students washed both hands with soap (MoLGRDC 2014).

1.10 STATUS OF WASH REGARDING FEMALE WITH DISABILITIES

The term 'disability' is demarcated in different ways reflecting differences in theoretical perspective, e.g. hearing or visual impairment or impairment of mental functions(WHO 2011). According to the World Disability Report, among the entire population, 15% of the world's population is disabled (Retief and Letšosa 2018). From the perspective of accessing available WASH facilities, disabled people are being victimized due to an increased risk of insufficient support in the community (White et al. 2016). Mostly disabled in slum areas are suffering due to immense poverty, where both disability and WASH access are related to poverty (Snel 2019). Also, "Disability and Development Report 2018" also stated that about 80% of disabled people live in the developing countries, wherein the poorest quintiles of low-income-nation populations as many as 1 in 5 individuals are disabled (UN 2018). The social model of disability described disabled people as a disadvantaged group of people who have "disability imposed on them" by society through different scopes to participate (White et al. 2016). Disabled people are always identified as disadvantaged both physically and socially and they are from that group those facing the highest rate of inequalities in WASH access. In addition, physical limitation, pain and inability to communicate regarding WASH need also make them most vulnerable, where it is important to understand their barriers to ensure equitable access to WASH (White et al. 2016).

CHAPTER 2

PROBLEM STATEMENT, JUSTIFICATION, OBJECTIVES, AND METHODOLOGY

2.1 PROBLEM STATEMENT AND JUSTIFICATION OF THE STUDY

This study will be conducted to understand primarily the challenges and opportunities of WASH practices in slums of Dhaka city with respect to the sensitiveness of female (here, female includes girls aged more than 12 and women) with disabilities with a vision to find out sustainable solutions. Korail slum and Kallyanpur slum (which is locally known as PoraBasti) from Dhaka north city corporation are taken as the study area where female is most sufferers due to scarcity of safe water and other vulnerability factors, e.g., social, economic, environmental, and disasters. (Ahmed et al. 2012; Irin and Ferdaus 2016; Rahaman and Ahmed 2016; Razzaque et al. 2019; Apolot et al. 2019). From literature reviews and a reconnaissance survey, it is explicit that the majority of the slum dwellers are facing extreme vulnerability due to the absence of WASH practice where a female with disabilities are facing an extreme level of problem to maintain hygiene in slum areas of Dhaka city. Thereby, gender-segregated data on detail assessment of SWOT (Strength, Weakness, Opportunity, Threats) in the implementation of WASH in slum areas of the Dhaka city will ultimately help in providing a sustainable gender-inclusive plan in the future policy framework. So far several studies were done on slums regarding water and sanitation in Bangladesh and in some cases all of these researches also highlighted the women, girls, and children (Ahmed et al. 2012; icddrb 2016; Irin and Ferdaus 2016; Rahaman and Ahmed 2016; Degert et al. 2016; Angeles et al. 2019; Raju et al. 2019; Razzaque et al. 2019; Sehreen et al. 2019; Farah et al. 2019; Haque 2019; Raju Ahmed and Rahman 2019; Apolot et al. 2019) but no study has been done on WASH aspects for a slum in the perspective of female with disability. In addition, this research covered the menstruation issues of the female through conducting a comparison between females without disabilities and females with disabilities. Understanding the field level reality may guide different stakeholders, i.e., GO, NGOs, health care service providers and receivers in (re)taking up necessary steps to meet up SDG 3 (good health and well-being), 5 (gender equality), 6 (clean water and sanitation), and 10 (reduced inequalities) at local level and scaling up the same concept at national level.

2.2 RESEARCH QUESTION

What is the present status of the WASH facilities and menstruation-related aspects for girls and women with disabilities in slum areas of Dhaka city in Bangladesh?

2.3 OBJECTIVES

2.3.1 General Objectives

This study was conducted to understand different issues related to Water, Sanitation, and Hygiene (WASH) as well as menstruation regarding a female with disabilities in slum areas of Dhaka

2.3.2 Specific Objective

1. To find out the present condition of WASH and menstruation-related issues regarding a female with disabilities in Korail and Kallyanpur slums of Dhaka city
2. To conduct SWOT analysis regarding WASH and menstruation issue for female without disabilities, and female with disabilities in Korail and Kallyanpur slums of Dhaka city
3. To understand a comparison status of WASH and menstruation-related aspects between female without disabilities, and female with disabilities in Korail and Kallyanpur slums of Dhaka city
4. To recommend probable solutions regarding disabled-friendly WASH and menstruation period in slum areas of the city

2.4 HYPOTHESIS

There is a scarcity of resources and facilities for slum dwellers in Dhaka city where the shortage of space, water supply, and sanitation is extreme. Women, girls, aged persons, children are basically facing different forms of obstacles regarding WASH and menstruation-related issues where girls and women with disabilities are the worst sufferers.

2.5 METHODOLOGY

To fulfill the research objectives, a mixed-method approach e.g. both quantitative and qualitative approaches were applied to complete data collection in the study areas. An intensive literature review was also done on available secondary publications to understand the scenario of slums regarding various issues like socio-economic conditions, water and sanitation, menstruation, disabilities, and hygiene.

2.5.1 Study area

This research was conducted in Korail and Kallyanpur slum in Dhaka city (Figure 1). Kallyanpur slum is known as “PoraBasti” because of a fire incident held in 1989 where nine people died. There are about a total of 59,516 population in Korail Slum in the 100 acres area (BRAC 2017). On the other hand, the number of households and population numbers in Kallyanpur slum is 2,184 and 8,129, respectively (Irin and Ferdaus 2016).

2.5.2 Data Collection

This research was conducted in a mixed method approach i.e. quantitative and qualitative methodology. In this regard, a reconnaissance survey was conducted to identify the issues regarding gender and disability sensitiveness in WASH including menstruation for slums in Dhaka city. Total 12 Focus Group Discussions (FGDs) were done (6 for each slum). FGDs were conducted with the female with disabilities, family members of the female with disabilities and other members of the slum. Each of the FGD, 10-12 respondents participated.

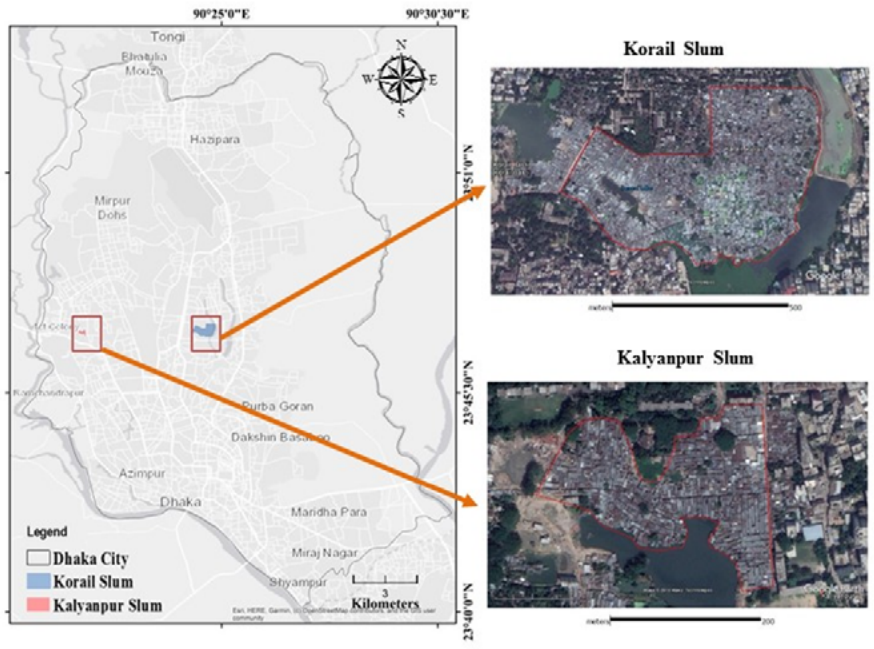


Figure 1: Korail slum and Kallyanpur slum in Dhaka city (Study area)

Furthermore, a total of 22 KIIs were conducted with different types of stakeholders from slums, government and non-government sectors that are related to water, sanitation, and hygiene including menstruation aspects of females in slums. Also, 30 In-Depth Interviews (IDI) were also done with the female with disabilities, and females who have no disabilities in both of the slums. During data collection through conducting FGD, KII, and IDI, separate semi-structured questionnaires were used (Annex 1 to Annex 4).

2.5.3 Data Analysis

2.5.3.1 SWOT analysis

The full form of SWOT stands for "Strengths", "Weakness", "Opportunities" and "Threats". SWOT analysis is a tool used for systematic planning and management which is a strong tool to understand the available resource of an organization or community (Gürel and Tat 2017). In this study, we have done a SWOT analysis based on the findings from FGD, IDI, and KII to fulfill the objectives of the research. According to Gürel and Tat, (2017) and van Wijngaarden et al., (2012) there are two dimensions of SWOT analysis e.g. internal and external, where internal dimensions include strengths and weaknesses, and external dimensions consist opportunities and threats.

2.5.3.2 Statistical analysis

In Korail, about 280 persons with disabilities are reported to exist in 2016 but currently, it decreased to around fifty (Source; FGD). Among them about 25 persons are female. On the other hand, in Kallyanpur slum, there are about 60 persons who have disabilities among whom 15 are females. Thereby, out of a total, 40 females with a disability, sample size for questionnaire survey should be around 35 (at 90% confidence interval, 5% margin of error, 50% population proportion). However, a total of 30 IDI were conducted where 15 were female with disabilities and 15 were female with no disability. Statistical analysis was done with the data collected by IDI where a semi-structured questionnaire was used. In the case of this type of analysis, separate findings were analyzed for a female with disabilities and without disabilities (e.g. mental, physical).

2.6 ETHICAL CONSIDERATION

As a part of social science research, all ethical issues were carefully maintained while conducting the research. The ethical issues were:

a. In the case of individual surveys, the female age with age more than 18 was considered. But in the case of a female with disabilities those are below 18, survey or interview was done with their family members as legal guardian.

   The voluntary participation of respondents was encouraged in the process of data collection. Coercion was always avoided collecting data from the respondent,

b. The researcher did not put participants in a situation where they might be at risk of harm because of their participation. No data were used or published which may physically; socially or psychologically harm the participants,

c. The researcher protected the privacy of research participants. The principle of confidentiality maintained strictly in the study,

d. Biasness was avoided to collect, edit and process relevant data and its analysis. The ethical issue of objectivity to the research was ensured,

e. No deception took place to conduct the study. Written informed consent was taken from each respondent before the interview (Annex 3.1). In the case of a female with autism or mental disability, consent was taken from their legal guardian.

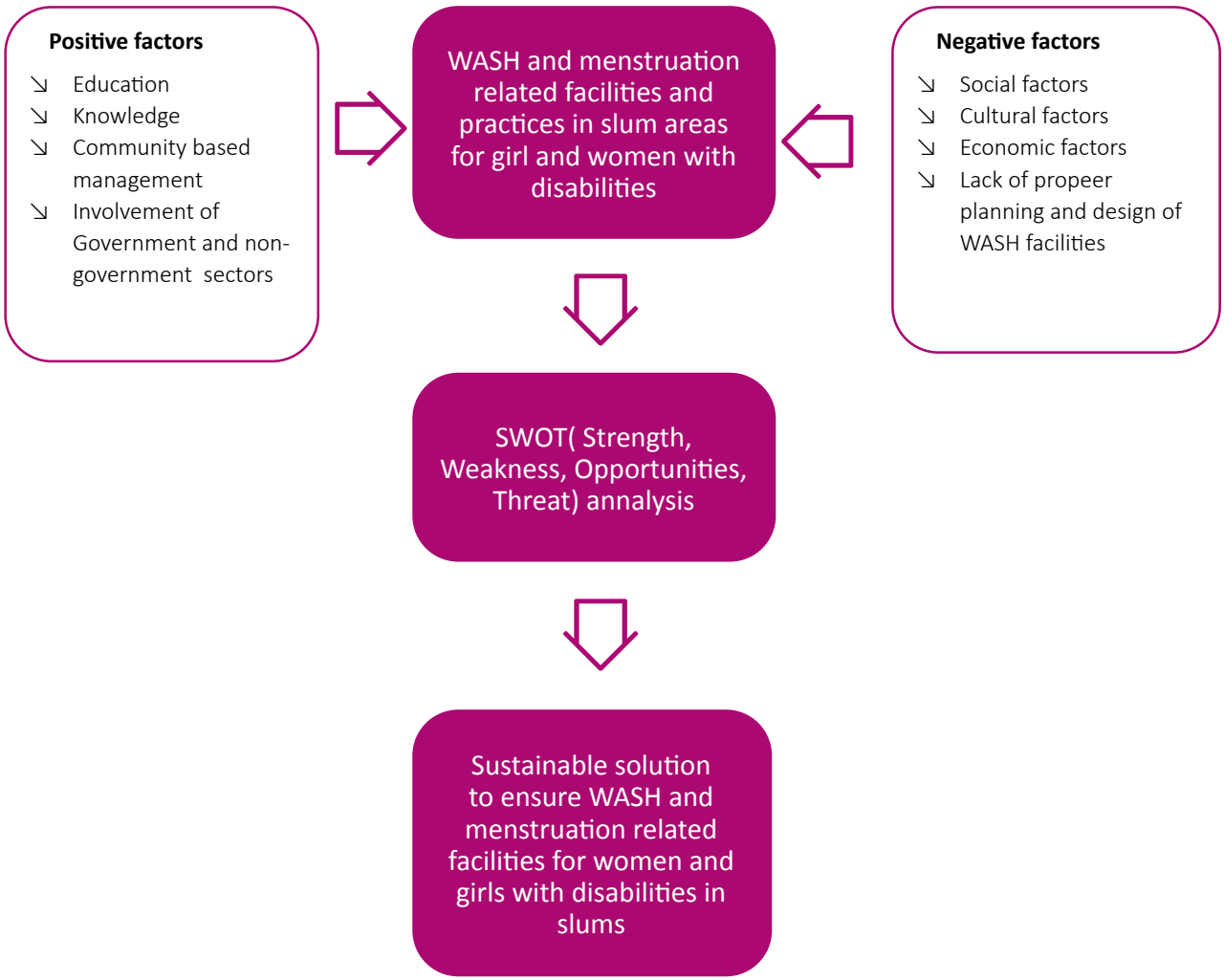
2.7 CONCEPTUAL FRAMEWORK

Different forms of positive aspects like education, knowledge, community-based management or measures, and involvement of different types of stakeholders e.g. government and non-government sectors are acting as a positive catalyst to improve the WASH and menstruation-related facilities in slums. On the other hand, negative factors like social, economic and cultural barriers hinder the development of WASH and menstruation-related aspects in slums where girls and women with disabilities are most vulnerable. Following that, the conduct of SWOT may provide a sustainable solution to ensure WASH facilities for women and girls with disabilities in slums (Figure 2).

2.8 FINDINGS DISSEMINATION

To disseminate the findings of this research, two meetings were conducted in Korail and Kallyanpur slum with slum dwellers (Annex 9). A findings dissemination program will be held in Institute of Water and Flood Management (IWFM), Bangladesh University of Engineering and Technology (BUET)to disseminate findings of this research with representatives from slum dwellers, academicians, and government and non-government organizations.

Figure 2: Conceptual framework of the study



CHAPTER 3

FINDINGS

3.1 GENERAL PROBLEMS OF SLUM DWELLERS

Inhabitants of slums live with different types of problems e.g. mobility constraint due to narrow spaces in between houses, unhygienic surroundings, weak financial condition, less social security, risk of eviction, fire, poor road communication, population density, infrequent water supply, water scarcity during prolonged dry season, water logging during heavy rainfall events, lack of formal educational institution, costly medication, and child rape incidents (Source: FGD and KII). Among these infrequent supply of water and poor road-communication are identified as the main problems for the slum dwellers. Additionally, the risk of eviction from the land and fewer income opportunities are the major hinders solving any problem for the slums.

Inequitable water distribution problem is found as one of the biggest problems for people living in Korail slum (Annex 5). Not every person enjoys a frequent supply of water and those who receive water continuously are not of good quality. Especially, people who live closer to the water source points drag more water away that people living at the end of the water lines do not get a sufficient amount of water. In some cases, people living closer to water source points are found selling water to other slum dwellers (outside of legal supply line connection) in exchange for money. At early years DWASA (Dhaka Water Supply and Sewerage Authority) used to provide water from nearby lakes or local vendors used to sell water to slum dwellers. As a result, each and every family had at least one member suffering from water-borne diseases, hence, most of the income used to waste in medical services. People were so desperate for safe water that there were many illegal pipeline connections beyond government statistics. On this issue Mst. Selina Akhter, a resident from Korailslum stated that,

> *"A few years ago, we suffered a lot due to the lack of good drinking and domestic water. We used to buy water from some people where they supplied the nearest lake water through using a pipe. That water was not useable and we found human excreta in water but we had no other choice. We suffered from water-borne diseases very frequently. Right now, this scenario has changed and at least we are getting WASA supplied water."*

On the other hand, in the case of Kallyanpur slum, people receiving supply water from DWASA is more or less ok. But during noontime, the odor problem is severe compare to supply water that comes at other times. Hence, females prefer to reserve water that comes at night and dawn for drinking purposes. Leakage in pipelines is considered to be the main reason behind such odor problems. It is because domestic uses, such as washing, bathing, and cleaning get high at noon time which is transmitted through leakages of distribution pipelines causing such odor problems (Annex 6).

There is no more open defecation in Korail slum except for some unhygienic toilets which are still situated by lakes over temporary structures. Due to the risk of shattering structures located near the lake by the government, the owner of those hanging toilets nearby the bank is not improving their facilities. Otherwise, people living in landsides mostly have community toilets where they have separate facilities for males and females. Very few

numbers of inhabitants have personal toilets. Local girls do not have any insecurity feelings related to the use of community toilets in either of the slums under study. However, available lavatories are about five to ten minutes away on average for most of the disabled living in Kallyanpur slum.

3.2 SOCIO-ECONOMIC BACKGROUND OF THE RESPONDENTS: REGARDING FEMALE WITH DISABILITY AND FEMALE WITHOUT DISABILITY

3.2.1 Social background of the respondents

Among the respondents who were female without disabilities, the majority were from age 30+, whereas 25% of them were from the age of 18 to 23 years old (Table 1). Also, 68% of the respondents without disabilities were married. In the case of education background, a majority (43.8%) of the female without disabilities were from no schooling background.

On the other hand, in the case of the female with disabilities, 33.3% of the respondents were from 12 to 17 years old, where some percentage of the respondents were from 18 to 23 years old. In the case of marital status, 86.7% of the respondents were unmarried and 6.7% of the respondents were married. Also, 86.7% of the respondents have had no education background, where 13.3% of the respondents had a primary level education background.

Females are living with different types of disabilities, i.e. mental (e.g., neurological disorders, Developmental Delay, autism or retardation) and physical (e.g., Deafness, orthopedic impairment) in both Korail and Kallyanpur slums. There were about 280 disabled persons in Korail slum during 2016 but it has reduced to around fifty-five in recent years. The rest of them went away to the villages mostly due to either lack of caregiver or the high cost of living. Among current slum dwellers with disabilities, approximately thirty are female. Some of the females are by-born disabled

Table 1: Social information of the respondents: Female with disabilities and without disabilities

SI No	Aspect	Female without disability (%)	Female with disability (%)
1	**Age of the respondents**		
	Less than 12	-	6.7
	12 to 17	12.5	33.3
	18 to 23	25	33.3
	24 to 29	25	13.3
	30 and more	31.3	13.3
2	**Marital status of the respondents**		
	Unmarried	25	86.7
	Married	68.8	6.7
	Widow	-	6.7

SI No	Aspect	Female without disability (%)	Female with disability (%)
3	**The education level of the respondents**		
	No Schooling	43.8	86.7
	Primary	-	13.3
	Secondary	18.8	-
	Higher Secondary	25	-
	Graduation and Above	6.3	-
4	**Father's education level**		
	No Schooling	50	100
	Primary	31.3	-
	Secondary	12.5	-
5	**Mother's education level**		
	No Schooling	56.3	100
	Primary	25	-
	Secondary	12.5	-
6	**Family size**		
	3 or less	43.8	20
	4 to 6	37.5	53.3
	7 to 9	12.5	26.7
7	**Size of the house (sq. feet)**		
	Less than 100	12.5	26.7
	100-150	31.3	73.3
	150-200	50	-
8	**Number of rooms**		
	1	68.8	73.3
	2	25	26.7
9	**Materials of house**		
	Tin	75	93.3
	Bamboo	6.3	6.7
	Tin and Brick	12.5	-

where some become disabled due to different diseases like Typhoid and Polio or accidents (Source: IDI). They are dependent on families where mothers are mostly caregivers. Out of superstitions, some families are found to believe those female members became disabled due to curse or bad wind (which is called by them as "Batash laga" meaning blow of bad wind) (Source: FGD). Following the issue, father of one female with disability in Korail slum said that,

> *"My daughter is a victim of 'bad wind' we realized her abnormality from 2 years age of her. From that time, we visited 'Kabiraj (who can recover diseases of the person with herbal medicine or magic stone)', doctor and quack doctor. A neighbor says that something invisible is living with her and that's why she can't maintain her control of body movement".*

3.2.2 Economic background of the respondents

Also, in the case of the personal income of the female without disabilities, 43.8% of the respondents had the income range from BDT 6,000 to 11,999 (Figure 3). In addition, in the case of the personal income of females with disabilities, 86.7% of the respondents had no income, where 13.3% of the income was below BDT 3,000. Also, 86.7% of the respondents had personal expenditure from BDT 3,000 to 5,999 per month.

3.2.3 Family background of the respondents: regarding income generation in the family

Regarding the income generation in the family (Table 2), 74.9% of the female without disabilities have no monthly income of their father where only 12.5% have an income of less than BDT 3,000 and in between BDT 3,000-5,999 each per month. A large portion (56.3%) of the female without disability has a range of monthly income of BDT 10,000-14,999 and has 2-3 family members as the income-generating person in each family.

In contrary, each 26.7% of the female with disabilities has found to have no income and more than and equal to BDT 12,000 of their fathers whereas most of 40% have no monthly income by their mothers. Besides, the majority of 46.7% have a family income of BDT 10,000-14,999 with only one member to earn per month in the family.

Figure 3: Economic background of the respondents regarding personal income and personal expenditure

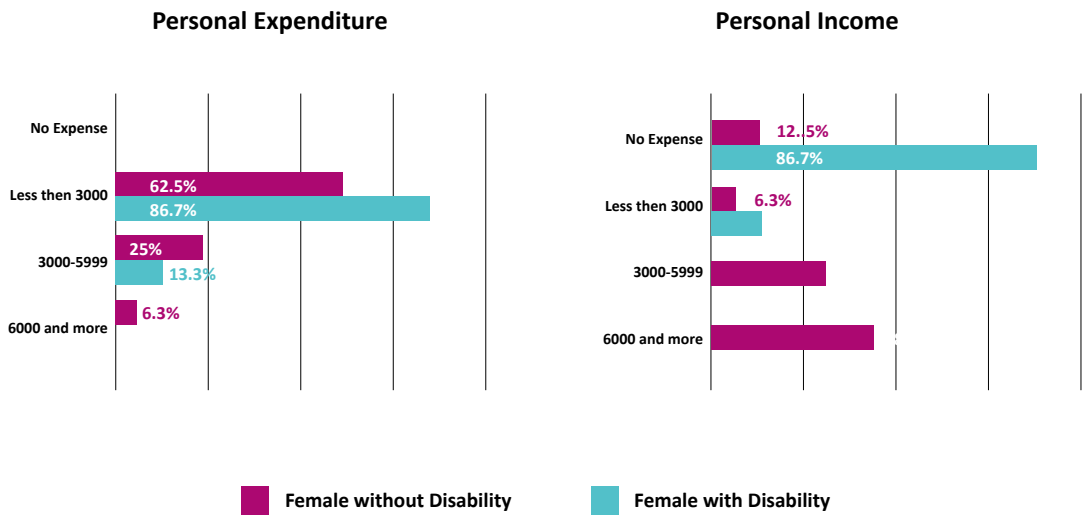


Table 2: Family background of the respondents: regarding income generation in the family

SI No	Aspect	Female without disability (%)	Female with disability (%)
1	Fathers income (BDT/ month)		
	No income	74.9	26.7
	Less than 3000	-	6.7
	3000-5999	6.3	20
	6000- 8999	-	26.6
	9000-11999	18.8	20
	12000 and more	-	26.7
2	Mother's income (BDT/ month)		
	No Income	-	40
	Less than 3000	12.5	26.7
	3000-5999	12.5	26.7
	9000-11999	-	6.7
3	Family income (BDT/ month)		
	Less than 7000	-	13.3
	7000-9999	6.3	13.3
	10000-14999	56.3	46.7
	15000 and more	31.3	26.7
4	Number of income-generating person in the family		
	1	25	46.7
	2 to 3	56.3	26.7
	4 to 5	12.5	26.7

3.3 PERSONAL CHARACTERISTICS OF THE RESPONDENTS: FEMALE WITH DISABILITIES AND WITHOUT DISABILITIES

3.3.1 Frequency of different types of sickness regarding a female with disabilities and without disabilities

In the case of personal characteristics of the respondents, among the female without disabilities, 56.3% of the respondents said that they did not face frequent diseases or sickness in the last one year. Also, 18.8% of the respondents replied that they fell in fever in the last one year (Figure 4). Also, 33.3% of the respondents had a fever as frequent diseases or sickness, whereas the same percentage of the respondents had body pain as frequent diseases. Also, 26.7% of the respondents had skin diseases.

On the other hand, among the female with disabilities, 80% of the respondents had a mental disability, where 20% of the respondents had mobility-related disabilities.

3.3.2 Economic dependency and monthly average medical cost of the female with disabilities and without disabilities

Among the total respondents from females without disabilities, 18.8% of the respondents had medical costs less than BDT 500 per month, where 68.8% of the respondents said that they had no economic dependency (Table 3).

On the other hand, in the case of monthly average medical costs of the female with disabilities, 53.3% of the respondents had monthly average medical costs less than BDT 2,000 per month, where 40% of the respondents had monthly average medical costs from BDT 2,000 to 3,999 per month. In addition, 93.3% of the respondents had an economic dependency, whereas 6.7% of the respondents had no economic dependency.

Families of the female with disabilities require money to maintain medical expenses up to BDT 6,000 per month. Different organizations, e.g. Palliative caregiving organization are reported to support autistic girls with medicine (mostly sleeping pills) once in a month in Kallyanpur slum. However, caregivers find them insufficient as those provided pills work only for 15 days. For the rest of the month, mothers have to bear the cost of the pills. In some cases, people have no idea about their specific monthly expenditure

Figure 4: Frequency of different types of sickness regarding a female with disabilities and without disabilities

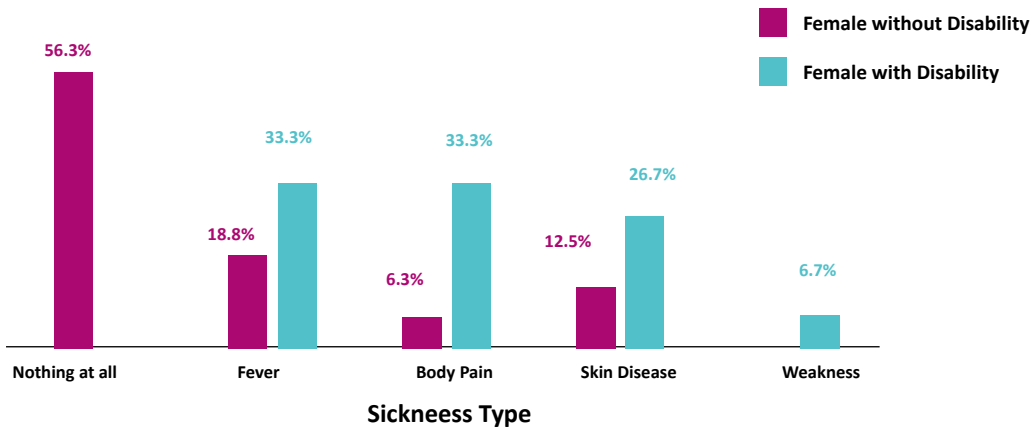


Table 3: Economic dependency and monthly average medical cost of the female with disabilities and without disabilities

SI No	Aspect	Female without disability (%)	Female with disability (%)
1	Economic dependency of the respondent		
	Yes	31.2	93.3
	No	68.8	6.7
2	Monthly average medical cost (BDT/ Month)		
	Less Than 2000	25.1	53.3
	2000-3999	0	40
	4000 and more	0	6.7

regarding the disabled person. In general, they are dependent economically on family members, e.g. father, mother, and husband for their daily living expenses (Source: IDI). In addition, families with dependent disabled show eagerness to maintain regular treatment of disabled persons but they find difficulty in ensuring medical treatments due to their unstable financial situation. For example, treatment from CRP (Centre for the Rehabilitation of the Paralyzed) requires BDT 300 per course which is not affordable for slum dwellers in addition to the burden of transportation cost (Source: FGDs). According to the mother of one female with disability in Kallyanpur slum,

> *"My daughter is physically disabled and doctor prescribed to maintain regular treatment with physiotherapy and it requires BDT 300 per course in CRP. Besides this fee, the transportation cost is also a barrier to us to carry her regularly to CRP which is located in Savar."*

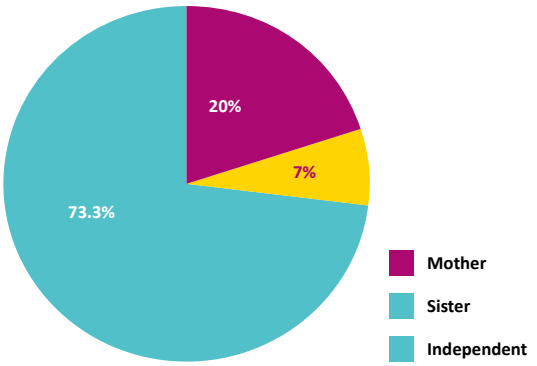
3.3.3 Caregiver issue of the female with disabilities

The figure illustrates the care-giver issue of the females with disabilities where a large portion of 73.3% get care from their mothers and only 20% take care of themselves independently (Figure 5).

For taking care of the female with disabilities, the family has a loss of monthly income by the person which is shown in the Table. It shows that most of the families of 33.3% have a loss of less than BDT 500 per month where 20% estimates the loss as BDT 3,000 and more in a month (Table 4)

Furthermore, the presence of any female member for 24 hours is necessary to ensure taking care of the girls with disabilities, for which income of the mother or sister is hampered. The housing

Figure 5: Caregiver issue of the female with disabilities



condition and surrounding area are not very healthy due to narrow space with congestion of environmental pollution. To be specific, Kallyanpur slum does not find any open space for the entertainment of kids with disabilities. In addition, decreasing income opportunities also imposes a burden to the family members of the female with disabilities (Source: FGDs).

Table 4: Loss of income for a family person for taking care of the female with disabilities

SI No	Aspect	Female without disability (%)
1	Loss of income for a family person for taking care of the female with disabilities per month (BDT/ Month)	
	No	6.7
	Less than 500	33.3
	500-1499	13.3
	1500-2999	6.7
	3000 and more	20

3.4 WASH-RELATED INFORMATION: FEMALE WITH DISABILITIES AND WITHOUT DISABILITIES

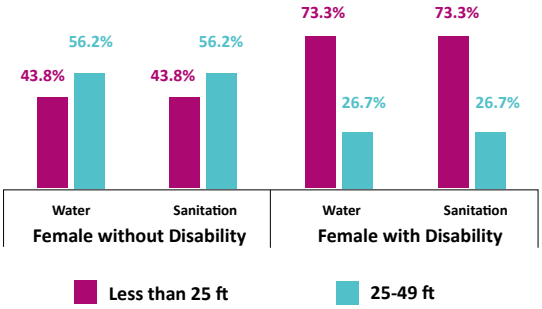
3.4.1 Distance from water source and toilet

The figure shows that each 56.2% of females with disabilities have to cross the distance of 25-49 ft to get access to water and toilet facilities where each 73.3% of females without disabilities have the distance of fewer than 25 ft from their house for water and toilet use (Figure 6).

Water sources and toilets are close to the house of the female with disabilities in Korail slum but in Kallyanpur slum it is opposite (Source: IDI) (Annex 6). In Korail slum, supply water comes from DWASA with a metering system for every 10-20 families, on average sharing one water reservoir for their daily purposes. In both slums, people share common water source and toilet facilities (Source: FGDs and KII).

Specifically, only one unit (i.e., in between block 8 to 9) in Kallyanpur slum enjoys disabled-friendly toilet facilities. But most of the disabled people living in other parts of the slum cannot use those due to remoteness with poor road communication (Annex 7). Families with member(s) having disabilities are found to move toward houses that have a toilet nearby. However, some landlords are found to be considerate in asking less rent for tenants that have girls with a disability and spontaneous help from neighbors is also common.

Figure 6: Distance from water source and toilet from the house of the female with disabilities and without disabilities



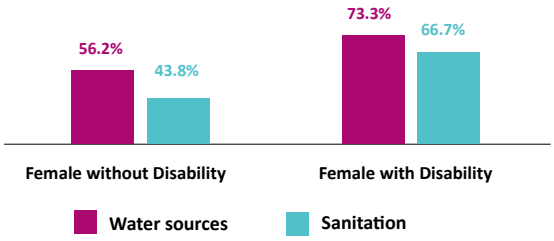
3.4.2The obstacle to getting access to water

The figure illustrates that 56.2% of females without disabilities face obstacles to get access to water sources where 73.3% of the female with disabilities get obstacles (Figure 7). Again, females with disabilities (66.7%) face more problems to get access to sanitation facilities in comparison to femaleswithout disabilities (43.8%).

Regarding various types of obstacles to get access to water sources and sanitation in the slum, 46.7% of females with disability face eve-teasing, whereas 25% of females without disability have to tolerate huge lines and crowd (Table 5). Also, 13.3% of the female with disabilities faced obstacles regarding tough to use tube well, where none of the females with disabilities faced this problem.

On the other hand, 53.3% of females with disabilities have obstacles to get access to water

Figure 7: Obstacle to get access to water sources and sanitation in slum regarding females with a disability and without disability



sources due to their physical limitations where only 18.8% of females without a disability have obstacles to get access to sanitation due to poor road communication. In addition, 12.5% of the female with disabilities felt obstacles due to long queues in the rush hour e.g. morning, where 6.7% of the female with disabilities faced obstacles regarding poor road communication in the slum.

In the case of water, most of the female with physical disabilities cannot collect water from the water sources in slums due to their physical limitations. The physically challenged female who is able to collect water, face difficulties due to their limitations in climbing high platform of the water collection point. A similar reason is applicable to using washrooms and toilets.

Table 5: Different types of obstacles to get access to water sources and sanitation in slum regarding females with disabilities and without disability

SI No	Aspect	Female without disability (%)	Female with disability (%)
1	Types of obstacles to get access to the water source		
	Eve teasing	12.5	46.7
	Tough to use tube well	-	13.3
	Poor road communication	12.5	6.7
	Huge line and crowd	25	6.7
2	Types of obstacles regarding Sanitation		
	Poor road communication	18.8	6.7
	Huge line in the morning	12.5	-
	Distance	6.3	-
	No light during the night	6.3	-
	Tough to use the toilet	-	6.7
	Physical limitation	-	53.3

Females with mental disabilities are totally dependent on their family members starting from the collection of water to using toilet and hygiene maintenance during menstruation. They are dependent on their caregivers and also do not have proper knowledge due to their learning disability (Source: KII). Some blame females with disabilities taking more time for using water/ cleaning if caregivers do not pay attention. Neighbors sharing the same water source do not take such wasting water issues easily (Source: IDI).

However, due to regular flooding slum-dwellers find toilets to be hygienic if constructed at the high platform for better maintenance. Hence, existing infrastructures are not disabled-friendly, to be specific, the height of the lavatory platform is higher for easy access. Furthermore, in the case of the latrine, the lavatories are, in general, located far from the house of girls with disabilities. At least 10 families (of an average 40 persons) use one-chamber/pit hole of toilet/bathroom. The distance of the toilet from home on an average is 25 to 200

feet. In some cases, the female with a disability can use the toilet for common with the help of family members. In most cases, girls with mental disabilities do the toilet in their room and other family members especially mothers clean them up. In addition, there are several obstacles to access to the toilet for female with physical disability, e.g. poor (sometimes muddy) road communication, distance, height of the lavatory platform, floating sludge during severe rain, risk of harassment in between home and school/work, waiting/wasting time in a(toilet) serial and overflowing/overloaded toilet. On the other hand, the handicapped female requires more time to use the lavatory in general but not all people have the patience to understand this special need (Source: FGD and KII). Based on these issues, Mrs. Fatima Khatunin Kallyanpur slum stated that,

> *"Female with physical and mental limitations needs more time to complete to ensure proper cleanliness after using the toilet. People are not always ready to accept this and for this, people without disabilities are not preferring females with disabilities to use the same toilet and the water source."*

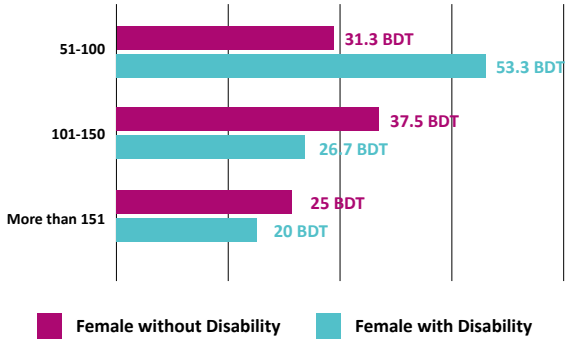
During the prolonged dry period, regular water supply stops working. Women, girls and little boys are engaged in the collection of water from a distant place waiting in a long queue. Physically challenged females find difficulties standing for long in a crowded water collection point, especially in the morning. Also, the infrastructure of the water collection point is not disabled-friendly (Source: FGDs and KIIs).

3.4.3 Cost of water in slums

The figure represents the monthly cost spent on water use by each family in slums. Here, females with disabilities (53.3%) spend BDT 51-100 per month where females without a disability have to spend more than general i.e. 37.5% and 25% spend BDT 101-150 and more than BDT 151, respectively (Figure 8).

3.5 MENSTRUATION RELATED INFORMATION: FEMALE WITH DISABILITIES AND WITHOUT DISABILITIES

Figure 8: Cost of water per month in slums for females with disability and female without disability



3.5.1 Managing aspects of females during the menstruation period

In the case of the ability to manage different measures during menstruation, 68.8% of females without disability replied that they can manage by themselves, where only 20.0% of the female with a disability can do that by themselves (Table 6). In addition, those are not able to ensure proper management of self during the menstruation period, among them, 18.8% of the female without a disability take the help of the mother, where 60% of the females with disabilities depend on mother.

Female with mental disabilities, most girls find it hard to maintain hygiene during menstruation and require their mother or sister helping them to manage. General practice is to bathe them once in a day, preferably at night time and change the

Table 6: Managing aspect of females with disabilities and without disability during the menstruation period

Are women able to manage themselves during the menstruation period?			
		Female Without Disability (%)	**Female With Disability (%)**
Yes		68.8	20.0
No	With the help of mother	18.8	60.0
	With the help of sister	6.3	20.0

menstrual cloths twice. Sanitary pads were not preferred as the caregiver thinks of autistic girls might end up showing-off to neighbors.

3.5.2 The attitude of family and society to female with disabilities and without disability during the menstruation period

According to 50% of the females without disability replied the family is very helpful during the menstruation period, where 43.8% of them stated that society is helpful (Table 7). On the other hand, 80% of the female with disability identified family is very helpful and 80% and 13.3% of them described that society is helpful and problematic, respectively.

3.5.3 Physical Problems during Menstruation

The majority of the female without disability (43.8%) feel pain during menstruation, where most of the females with disabilities (53.3%) show disturbed behavior as they are unable how to express their difficulties (Table 8). In addition, 40% of the female with disability feel pain too during the menstruation period. On the other hand, only 18.8% of the female without disabilities visit the doctor while feeling any physical problem, where none of the females with disabilities visit a doctor due to menstruation-related physical problems.

During menstruation, girls are facing abdominal pain associated with depression but do not visit

Table 7: Attitude of family and society to females with disabilities and without disabilities during the menstruation period

SI No	**Aspect**	**Female without disability (%)**		**Female with disability (%)**	
1	Attitude	Family	Society	Family	Society
	Very problematic	-	-	-	-
	Problematic	-	6.3	-	13.3
	Neither not helpful nor problematic	18.8	31.3	6.7	6.7
	Helpful	25	43.8	13.3	80
	Very helpful	50	12.5	80	-

Table 8: Physical Problems of females with disabilities and without disability during Menstruation

SI No	Aspect	Female without disability (%)	Female with disability (%)
1	What types of physical problems do a girl and women face during the menstruation period?		
	Disturbed behavior	31.3	53.3
	Pain	43.8	40
	Weakness	18.8	6.7
2	If they face any physical problem during menstruation, do they visit the doctor?		
	Yes	18.8	-
	No	75	100

the medical center to get medical service. Also, autistic girls with a learning disability are not aware of hygiene-related diseases and, thereby, are handled with most mothers during the menstruation period. Following the issue, the mother of a girl with a disability said that,

> *"My daughter is not able to express her pain during the menstruation period but I have to understand this. I try to take care of her with special care as she doesn't know how to manage hygiene during menstruation."*

In Korail slum, a BRAC operated school handles girls with disabilities. But as per slum-dwellers, adolescent girls with mental disability are not allowed in any disabled-friendly centers due to lack of trained caretakers to handle such big sized autistics. BRAC school authority also reported that disabled students are found attending classes irregularly. The school has not taken any measures related to educating students on menstruation. In addition, teachers are not willing to disclose menstrual issues in front of every student, particularly boys and even are not very aware of handling adolescent girls with disabilities (Source: IDI and FGD).

3.5.4 Aspects regarding usage of sanitary pad and cloth during menstruation period

Among the female without disability, 56.2% of the respondents use cloth during the menstruation period, where 43.8% of them use a sanitary pad (Table 9). On the other hand, 53.3% of the female with a disability use sanitary pad during the menstruation period, where 46.7% of them use cloth.

Those are using a sanitary pad, the majority of the female (18.8%) without a disability can manage sanitary pad, where the majority of the female with disability (40%) are depending on female members to get a sanitary pad.

Moreover, most of the respondents from the female with a disability and without disability groups stated that they don't have enough space to change the pad or cloth during menstruation. Besides, 31.3% of the female without disability used to change a sanitary pad or cloth inside the room, where 60% of the female with disabilities change their pad or cloth inside the room. Also, 68.8% of the female without a disability have enough knowledge to use a sanitary pad or cloth during the menstruation period, where 93.3% of the female with disabilities don't have enough knowledge on that.

Table 9: Aspects regarding usage of sanitary pad and cloth during menstruation period

SI No	Aspect	Female without disability (%)	Female with disability (%)
1	**Do they use any sanitary pad or cloth?**		
	Sanitary pad	43.8	53.3
	Cloth	56.2	46.7
2	**If they use a sanitary pad, how they manage/ buy this?**		
	By themselves	18.8	6.7
	Male members bought for the girl	12.5	6.7
	Female members bought for the girl	12.5	40
3	**Is there any enough space in the toilet to change the pad or sanitary cloth?**		
	Yes	12.5	-
	No	81.3	100
4	**If no, where they used to change these?**		
	Inside Home	31.3	60
	Where it is possible	31.3	13.4
	Inside the toilet	18.8	26.7
5	**Are disabled have enough knowledge to use the sanitary pad or cloth?**		
	Yes	68.8	6.7
	No	31.2	93.3

Due to NGO activities, all women are aware of the use of sanitary pads. However, a weak financial position for spending money on menstruation is considered to be the main issue over hygiene to poor inhabitants of the slum. However, all school-going girls and young working women without disabilities are the users of sanitary pads due to the long-lasting absorbent nature of napkins. Mothers are found to save money for sanitary napkins towards the well-being of their school-going girls and earning young women of the family. Used pads are thrown to dustbins after wrapping that with the plastic bad. However, housewives and middle-aged women without a disability are still using cloths and are claiming to maintain them well from hygiene perspectives (Source: KII). Notably, no woman was found to have fungal, urogenital, urinary or any other kind of infection. However, the taboo behind disclosing such infectious diseases may be a reason for such findings.

The female with physical disabilities mostly uses cloth instead of the sanitary pad during their menstruation period. Similar to the reasons mentioned above, slum dwellers cannot afford to buy a pad for a dependent disabled member of the family. Notably, the monthly cost for a

packet of sanitary napkins is BDT 80-100. During menstruation time, in general, for outgoing girls as well as for outgoing women, frequent changing of sanitary pads is troublesome. Females always find public toilets unclean even for regular use let alone changing menstrual pad. Mentally disabled autistic girls cannot change their pad or clothes themselves and in most cases, they keep wearing a piece of cloth or pad for the whole day unless their sister or mother changes that. In addition, those used washed-up clothes are hanged in a corner most place or behind the doors where other male members cannot see (Source: IDI and FGDs). Following this aspect, Ms. Popy, a female without disability said that,

"We feel several problems to change our pad when it is necessary as we are living in a small one or two-room house in the slum. We have to wait for a suitable time to change our used sanitary pad or clothes. We are females without disability facing several types of problems due to lack of enough space, where females with disabilities are mostly sufferer too as they can't express their need."

3.6 NGO/GO ACTIVITIES

In Korail slum, there were some programs or projects or actions run by NGOs such as Palliative care service; medicine supply (on a monthly basis); regular check-up and treatment; (occasional) food and cloth supply. In addition, different NGOs viz., BRAC, DSK (Dushtha Shasthya Kendra), GO projects, e.g. UPPR (Urban Partnerships for Poverty Reduction)conducted a different menstruation awareness program for 1-3 days in slum area but on a small scale (Source: FGD, KII, and IDI).On the other hand, BRAC, WaterAid, and DSK were found to work in Kallyanpur slum. All of the activities were related to water and sanitation but nothing was done on menstruation regarding females with disabilities. The government has been also working to develop the situation of girls with disabilities in Korail slum but still, some of the girls with disabilities are deprived of government support. Notably, some girls are found to receive a regular stipend of BDT 700 per month from the government (Source: FGD and IDI). Based on the government and nongovernment activities regarding WASH and disability, Mrs. Sapna from Kallyanpur slum highlighted that,

"In Kallyanpur slum, several programs on fire safety, WASH held but none of the NGO or GO worked here with the female with disability. At another part of the Kallyanpur slum, there is a disable complex where some females and males with a disability can take a bath and use the toilet. But all of the people with disability can't use that due to distance and bad road communication."

3.7 SOCIO-CULTURAL ISSUES

There are different forms of socio-cultural issues exit in slums. For example, shyness to share about menstruation, lack of awareness about disabled needs resulted in lack of friendly WASH facilities, poverty leading to unhygienic use of menstrual cloth, lack of education for adolescents, religious and social taboo regarding open discussion on female issues are hindering the management of menstruation period for female in general as well as for female with disabilities (Source: FGD and IDI).

In some families, there are some beliefs that female are disable due to some curse or other misfortune. There is a family in Kallaynpur slum, where they burn the bone of cow every day and

draw a mark on the forehead of the girl (Annex 8). It is their belief this helps the girl to become recover from disability and they will get relief from different kinds of physical pain.

3.8 SWOT ANALYSIS

3.8.1 SWOT Analysis: In the Perspective of WASH

3.8.1.1 SWOT Analysis: In the Perspective of WASH Issues for Female without Disabilities

From the perspective of WASH for females without disabilities in the slum, a number of strengths have been found. They have access to water sources and toilets to use (Table 10). The community has taken initiatives to maintain water and toilet facilities, as well as measures for regular hygiene and cleanliness in the toilet where female participation is ensured. Other strengths include the increasing literacy rate among slum girls which helps to be aware of female needs. The most effective strength found in the willingness of the community to pay for safe water and enthusiasm in gaining new knowledge.

There are many weaknesses found related to WASH facilities for females without disabilities in slums. Insufficiency and irregularity of water supply have been found as the first WASH weakness for females as they are engaged in collecting water for daily household chores most of their time. Narrow and poor road communications hinder their safety and also waste their time. They have a frequent interruption in water supply resulted in waiting in a long queue and facing crowds for water collection from the nearby water pump. Another point is that there is an insufficient number of toilets in the slum to use. For example, more than 10 families with 4 members each (on average) use one toilet regularly. There is no separate toilet facility for male and female all over the slum area. Besides, pipe water supply inside the toilet is not common. Poor structure with poor boundaries, i.e. made of jute or cloth, makes females feel unsafe. Taboo or lack of knowledge on how to maintain hygiene and risk associated with easily transmitted diseases due to unsafe menstruation management is not uncommon. There is no disabled school that can handle adolescent girls with mental disabilities. As a result, working mothers or guardians are forced to send girls with disabilities when becoming teen back to the village. Moreover, the political power play in implementing relevant initiatives in the slum is also common.

Regarding opportunities related to WASH facilities, the most important is the recognition from the government related to getting legal support for the ownership of land. Again, the willingness of people especially female to manage water sources and to maintain proper sanitation is also inspiring. People's support in separating out water points and toilets for males and females can be effective. There exists scope for ensuring environment-friendly toilet technology with the help of NGO initiatives. Furthermore, increasing income opportunities through the improvement of knowledge and awareness of female groups can change the social perspectives of slum dwellers.

There are some threats regarding WASH facilities for females without disabilities in the slum. Increasing population density makes slum life more competitive in association with social conflict. Risk of water-borne diseases and skin diseases from unsafe poor water quality or risk of water crisis can deteriorate the living standard of slum dwellers. Crime and drug business are general threats in the slum which can affect family lives including females. Movement constraint due to waterlogged conditions, poor road communication is still a problem for the slum during rain.

3.8.1.2 SWOT Analysis: In the Perspective of WASH Issues for Female with Disabilities

Family support in collecting water, using the toilet, maintenance of hygiene is the main strength (Table 11). Strength includes the willingness to gain WASH-related knowledge that is beneficial for sound health. The monthly allowance that disabled females receive is added to a family's income.

Neighbors are helpful and sometimes landowners are considerable towards asking less rent from tenants that have girls with.

The absence of disabled-friendly structures in the water collection point and toilet is the most reported weak point in the slum for a female with disabilities. On top of that, poor road communication is a hindrance to their

Table 10: SWOT analysis regarding WASH: Female without Disabilities

Strength	Weakness
1. Access to water sources 2. Access to toilet 3. Community initiatives to maintain water facilities 4. Willingness to pay for safe water 5. Willingness to achieve WASH and MHM relevant knowledge 6. Increasing literacy rate 7. Community measures to regulate and maintain hygiene and cleanliness in the toilet	1. Insufficient supply of water 2. Irregular supply of water 3. No separate water and toilet facilities for male and female 4. Long queue and crowd during water collection from the water pump 5. Narrow and poor road communication 6. Insufficient space to construct the individual toilet 7. Insufficient number of toilet 8. Poor toilet structure, e.g. jute or cloth in place of walls 9. Lack of affordability of medical cost 10. The risk associated with easily transmitted diseases 11. Risk of evacuation and fire 12. Political disturbances to implement relevant initiatives
Opportunities	**Threats**
1. The willingness of people especially female to manage water sources 2. Separate water points for male and female (in some cases) 3. To get ownership of land 4. People willingness to maintain proper sanitation 5. Separate toilet(in some cases) 6. Increasing income 7. Environment-friendly toilet technology (in some cases) 8. Improvement of Knowledge and awareness 9. GO/NGO initiatives	1. Increasing population density 2. Increasing water-borne diseases like skin diseases 3. Crime and drug Business 4. Social conflict 5. Waterlogged during rain 6. Risk of Fire

free movement. Moreover, they have a lack of entertainment space, education facilities, disabled centers, free medicine support, and financial support.

As a part of opportunities, females with disabilities are found to be enthusiastic in developing skills to contribute to the family income. This can reduce the dependency ratio by increasing manpower. More GO/NGO initiatives will be helpful in this regard. Separate toilet complex for male and female with the application of modern technology-based facilities (like a wheelchair) would provide confidence to females with disabilities to be independent rather than being burdens to families. Community initiatives, as well as support and increasing aspects of education and WASH awareness, can make females capable of availing the income-generating services.

Similar to threats mentioned in Section 3.8.1.1, increasing population density can make female, especially who have physical limitation more vulnerable to getting regular facilities. Lack of space or high value of land may end up in zero number separate toilets or water collection points with priority-based accessibility to disable females. Hence, such a disadvantaged group may suffer from increasing waterborne and vector-borne diseases with the risk of spreading infectious diseases or STD (Sexually Transmitted Diseases) which will cause a threat to their reproductive health.

3.8.2. SWOT Analysis: In the Perspective of Menstruation Related Issues

3.8.2.1. SWOT analysis regarding menstruation: Female without disabilities

Table 11: SWOT analysis regarding WASH: Female with disabilities

Strength	Weakness
1. Family support to collect water 2. Family support to use the toilet 3. Family support to maintain hygiene 4. Willingness to achieve knowledge 5. Disabled friendly toilet and bathing place (in one place)	1. Absence of disabled-friendly structure in the water collection point 2. Absence of disabled-friendly toilet 3. Poor road communication 4. Lack of knowledge 5. Lack of facilities 6. Poverty 7. Lack of education
Opportunities	**Threats**
1. Increasing manpower 2. Community support and initiatives 3. The increasing aspect of education and awareness 4. Separate toilet complex for male and female (In some cases) 5. Application of modern technology-based facilities like wheelchair 6. Skill development 7. GO/NGO initiatives	1. Increasing population density 2. Increasing waterborne and vector-borne diseases 3. Physical limitation 4. No priority-based access to toilet and water collection point 5. Insufficient space for toilet 6. Risk of spreading infectious diseases 7. Risk of Sexually Transmitted Diseases (STD) 8. A huge challenge in waste handling

Firstly, most girls and employed women in the slum try to maintain hygiene during menstruation with the facility of available MHM products like sanitary pad and cloth (in some cases). Family awareness and monetary support is the main strength in this regard (Table 12). Most of them have the knowledge on how to use/dispose of sanitary pad and cleaning of used cloth during their menstruation period which is mostly achieved by transmission of knowledge from elder female members of their family. Moreover, all-female show their willingness to gain more relevant knowledge relevant to these issues through different programs or NGO activities.

However, slum female is not free from superstitions related to open discussion on menstruation with the opposite gender, have experienced negative social vibes on sharing their girly matters related to MHM. Durability and affordability of products come first in place of safety or hygiene priorities. As a matter of fact, dependent or middle-aged women do not consider the importance of MHM for themselves although support young girls and employed women using sanitary napkins. It is mainly because females in slums consider sanitary products as a luxury product comparing to their low income. Not all females can manage sanitary pad (costing 80-100 taka per month) and other facilities during menstruation because of their financial limitations. Females in slum never complain about space constraints in the toilet to change menstrual cloths or sanitary pads, or about proper arrangement related to the disposal of used sanitary pad. However, women find an irregularity in garbage cleaning. Females who use cloths for menstruation do not have any separate space at home to clean, dry or store the menstrual cloths. This

Table 12: SWOT analysis regarding menstruation: Female without disabilities

Strength	Weakness
1. Female can maintain hygiene during menstruation 2. Willingness to achieve knowledge 3. Availability of MHM products like sanitary pad and cloth (in some cases) 4. Knowledge on how to use sanitary pad and cloth 5. Family support	1. Negative social views 2. Superstition 3. Lack of affordability to manage sanitary pad and other facilities during menstruation 4. Scarcity of space in the toilet to change clothes and sanitary pad 5. Less space in slum and home to clean, dry and store of menstrual cloths 6. Disposal of the used pad 7. Inaccessibility to proper knowledge 8. Unaware of the standard and importance of MHM
Opportunities	**Threats**
1. Increasing education rate 2. Awareness is rising among all 3. Technical learning 4. Availability of MHM product in some cases 5. Changing views in family and society level 6. NGO initiatives	1. Unhygienic management of menstruation may cause infectious diseases 2. Misconduct of knowledge on how to use pad or cloths 3. Lack of family knowledge

can be unhygienic, hence considered as a threat component. The illiteracy rate beyond primary school hinders such existing threats.

Changing current perspectives of MHM at family and society levels is the most effective opportunity for females without disabilities in slums. TV advertisements, awareness programs, and gender education for adolescents can be helpful in transmitting knowledge about female rights. Regular capacity building, awareness programs by various GO/NGO activities can create scopes not only for females but also for people in general. Moreover, the availability of MHM products all over the slum area can be considered as an excellent opportunity.

However, unhygienic management of menstruation or prolonged contact with sanitary pads may cause infectious diseases of an adolescent female. Again, most families lack proper knowledge related to the dampness of menstruation cloths, and misconduct of knowledge on how to handle pads can cause yeast or other bacteria growth in the vaginal area resulting in skin reactions or rashes. Synthetic plastic wrappers on sanitary pads trap dampness and can restrict airflow linking to skin diseases. Secondly, irregular waste handling, if continues, used sanitary pads in the disposal can have adverse effects on the surrounding environment. The hazardous impact of non-biodegradable sanitary pads will become questionable. Again, if all females switch to sanitary pads, treating menstrual waste will become a huge challenge. Unmanaged disposal can make their way into drainage systems, landfills and water bodies in Dhaka posing severe environmental and health risks.

3.8.2.2. SWOT Analysis: regarding menstruation: Female with disabilities

For the female with disabilities in the slum, the most documented strength is family support and community help towards them especially, during their menstrual period (Table 13). The availability of MHM products, in some cases, at low cost by donors is another strength found in the slum.

There are many weaknesses witnessed in the case of a female with disabilities regarding their menstruation in slum areas. The first weak point is the physical or mental limitation of the females with disabilities to use cloth/pad during their menstrual period. Secondly, poverty and low financial affordability to maintain regular medical treatment are affecting in retaining with MHM related products. Low income also obstructs in availing basic regular services to females with disabilities. Moreover, the knowledge gap of family members or caregivers and negative social attitudes are other weakening sides for menstruating slum females with disabilities.

Interest in increasing literacy rates among slum dwellers has been found as the most promising opportunity to improve the condition of females with disabilities. On top of that, empowerment opportunity provisions to disabled groups through extending financial loans can be useful. Different organizations are trying to make the MHM products available, accessible and affordable to all the females with disabilities in slum areas. This will open a new door in protecting their reproductive health, hence, it will add value to their social status. Many NGO initiatives, e.g. awareness programs, training, skill development can be beneficial for the vulnerable group to overcome their limitations.

The most threatening issue regarding menstruation of females with disabilities in the slum is the societal superstition associated with the MHM knowledge gap in family members. In addition, the lack of education for adolescents and misconduct of knowledge among slum people on how to use pad or cloths are other threats. Furthermore, females with disabilities are found to be more exposed to the risk of spreading infection and Sexually Transmitted Diseases (STD).

3.9 COMPARATIVE ANALYSES BETWEEN FEMALES WITH DISABILITIES AND FEMALES WITHOUT DISABILITIES REGARDING DIFFERENT ISSUES ON MENSTRUATION

From the perspective of differences in the maintenance capacity of MHM between females with disabilities and females without disabilities, there are several issues of concern (Table 14). The relevant issues on menstruation are considered with three different capacity ranks, e.g., high, medium, and no capacity of two groups of females, i.e. with and without disabilities. Here, it is found that females without disabilities have high capacity whereas females with disabilities have no capacity overall. Regarding the management of sanitary pad or menstrual cloth by themselves, females with disabilities have no capacity in relation to the high capacity of females without disabilities. Again, both of the female groups have a high capacity to manage sanitary pad or cloth by family members. It is seen that females without disabilities have the medium capacity of financial availability to buy

Table 13: SWOT analysis regarding menstruation: Female with disabilities

Strength	Weakness
1. Family support 2. Community support 3. Availability of MHM products in the market	1. Knowledge gap of family members 2. Physical or mental limitation to use cloth/pad 3. Negative social attitude 4. Less financial affordability to maintain MHM related products 5. Inaccessibility to proper knowledge and product related to MHM 6. Poverty 7. Weak financial condition to maintain regular treatment
Opportunities	**Threats**
1. The increasing rate of education among people in the slum 2. Availability of MHM product in some cases 3. Empower female with disability financially 4. NGO initiatives	1. Misconduct of knowledge on how to use pad or cloths 2. Lack of family member's knowledge on MHM 3. Superstition in society 4. Risk of spreading of Sexually Transmitted Diseases (STD) 5. Risk of spreading infectious diseases 6. Lack of education

sanitary pad by themselves but the other group cannot do this. Moreover, females with disabilities are not capable of managing themselves during their menstrual pain, whereas females without disabilities are highly capable of managing that. Besides these, females without disabilities can change the sanitary pad or cloths independently but the female with disabilities have to depend on others like their caretakers. However, females without disabilities can manage hygiene by themselves with high capacity where females with disabilities have no capacity to do so. Furthermore, females with disabilities do not have proper knowledge on how to change pad when necessary in comparison to females without disabilities who have the related knowledge and understanding with high capacity.

3.10 NEEDS THAT STATED BY THE RESPONDENTS

Following recommendations or probable solutions were raised from the respondents of slums regarding WASH and menstruation issues of the female with disabilities:

- Center for Disabled should be established
- The more medical center should be established near to slum
- Education facilities for disabling should be promoted
- Stereotypes related to menstruation should be changed in society
- Women and girls should be more active to discuss menstruation
- Create empowerment opportunities
- More awareness of WASH regarding should be done in slum areas
- Disabled Friendly washroom should be established

Table 14: Differences between female without disabilities, and female with disabilities in the perspective of different issues on menstruation

Issues	Female without disabilities	Female with disabilities
Manage the sanitary pad or cloth by self	●	●
Manage sanitary pad or cloth by family members	●	●
Financial availability to buy sanitary pad	●	●
Manage self during pain	●	●
Change the pad or clothes by self	●	●
Can manage hygiene by self	●	●
Have proper knowledge on how to change pad when necessary	●	●

● = High capacity ● = Medium capacity ● = No capacity

CHAPTER 4

DISCUSSION

4.1. KEY FINDINGS

The respondent from females without a disability is the highest from the age group of more than 30 years (31.3%) and in case of females with disabilities, each 33.3% of the respondents are maximum from 12-17 years and 18-23 years of age groups, respectively. Also, females with disabilities are more deprived to get education facilities due to a lack of a disable friendly institution and environment. Around 87% of females with a disability do not have access to schooling, in this case. There is a BRAC school situated in Korail slum for special children e.g. physically and mentally challenged boys and girls, but the number of girls with a disability is decreased or students are not regular at all. Girls with physical disabilities are not regular at their school due to their mobility limitation and some of the enrolled students went to the village for marriage or other places with their families. This happens in the case of girls with an age range of 15-25 years. On the other hand, in Kallyanpur slum, there is no educational institution for the person with disabilities. Also, there is a BRAC school situated there but this is not for special children who are physically and mentally disable, rather than unprivileged boys and girls in slum.

Furthermore, in both slums, the number of the person with a disability as well as females with a disability is decreasing e.g. the percentage of the persons with disability has reduced to around 37% in the Korail slum during last three years which is an estimated percent from the 2016 inventory. The females with disabilities are moving from the slums to any suitable place, where they can earn money. From the Kallyanpur slum, the majority of the female with disabilities moved to Diabari area as the scopes of earning money as a beggar is mostly available there. In addition, from both of the slums, females with disabilities moved to their villages with full family due to lack of facilities regarding road communication, access to water and sanitation and financial crisis.

Moreover, females with disabilities are mostly dependent on families where mothers are caregivers in 73.3% of cases. Also, the maximum of the respondents from the female with disabilities has no income source (86.7%) which hinders them to get access to different types of improved facilities. As the majority of the female with disabilities are not able to earn due to their physical and mental limitations, lack of capital, and training and capacity. Besides, due to less access to earning opportunities and higher financial crises, they are deprived of better lifestyles e.g. disable friendly toilets, availability of sanitary pad and medical facilities.

The frequency of diseases or sickness tends to higher in the case of female with disability in relation to female without disability e.g. each 33.3% have fever and body pain, around 27% have skin diseases, which leads higher associated medical costs e.g. 53.3% and 40% have monthly average medical cost of less than BDT 2,000 and BDT 2,000-3,999, accordingly. Lack of hospital in the near distance leads to the medical vulnerability of the female with disabilities. Also, limitations regarding mobility, weak economic condition, less facility in the hospital and lake of awareness among the caregiver influence the frequency of the diseases. In addition, there is a medical service providing center namely “Momotamoyee Korail” in the Korail slum. This has a Palliative Care Service Center which mainly provides service through a group of Palliative Care Assistants to the physically and mentally challenged boys and girls under 12

years, in general. They also provide necessary medicines per month. On the contrary, there is no such center in Kallyanpur slum that poor people have to go to nearby govt. or private hospitals for medical support.

Most of the families face difficulties with loss of monthly income by who takes care of the females with disabilities. In this regard, 33.3% have a loss of less than BDT 500 and 20% estimates the loss as BDT 3,000 and more per month. Taking care of a person with disability especially the girls and women required more time and money. If the family had to bring a caregiver it cost extra money. On the other hand, the mother is the prime caregiver in most of the family which ultimately consequence to loss of income of that mother as most of the women in slums used to work as housekeepers or garment workers.

On the other hand, most of the females with disabilities face obstacles to get access to the water source (73.3%) and sanitation facilities (66.7%). As they require more time to use the lavatory, in general, they are often harassed by others. There is a "Disable complex" for water and toilet facilities in Kallyanpur slum but no such infrastructure is found in Korail slum rather than common water source and toilet within each cluster. Besides, though there are no separate facilities for a female with disabilities, they have to use shared facilities. So the intra-user conflict is common. However, different types of obstacles like bad roads, absence of light, and less disabled-friendly facilities accelerate the situation more badly. In addition to the obstacles, family members are concerned about their girls with disabilities regarding safety issues. Especially, this disabled group is more vulnerable and at risk because of their limitations and sometimes age range.

Moreover, females with disabilities consume or utilize less water because of their dependency. The disabled group is bound to use less water because of their limitations which may be mentioned as lack of accessibility, as well as the inefficient management of water resources that females without disabilities, as well as slum dwellers, consume more water than needs by storing water.

Most of the females with disabilities are not able to maintain MHM independently e.g. 80% need help from their family members, among which, 60% manage themselves by the of the help of their mother and rest 20% take help from their sisters during their menstruation period, Which consequently increases their frequency of diseases. Sanitary pads are not preferred as the caregiver thinks of autistic girls might end up showing-off to neighbors and they also prefer to help them to change the cloth/pad inside the home. In addition to this health aspect, during the menstruation period, disabled girls are restricted to go out or to visit their neighbors which affects them in their social relationships.

Furthermore, mentally disabled girls cannot change their pad or clothes by themselves and in most cases, they keep wearing a piece of cloth or pad for the whole day unless their sister or mother changes that. In the case of the attitude of society and family, society and family (in 80% cases) are found very helpful to the female with disabilities regarding MHM compare to the female without disabilities. In some cases female with disabilities get attention with sympathy about MHM related issues. Although some people are not very positive regarding these issues but allover they are not facing any serious social obligation regarding MHM.

In addition, mothers generally favor buying sanitary pads to provide their daughters rather than they due to the high price and insufficient space for dumping and even change i.e. 100% of respondents have found the lack of enough space in the toilet to change the pad or sanitary cloth.

Focusing on the institutional activities in the slum, numbers of NGOs are working in both of the slums but none of them are disable focused especially no program cover females with disabilities. From the research, it was found that NGOs are conducting various activities rather than government across the Korail and Kallyanpur slums but enlisted disabled get monthly allowance provided by the government, which is appreciable but not sufficient in number.

4.2. STUDY CHALLENGES

- There is a lack of records of previous research on the person with disabilities, especially in the slum context. Although an inventory was done in 2016 at Korail, it did not satisfy the perspective of people with disabilities. Gender segregated data along with other vital information like age, location, disability type, and much other information are absence here.

- One of the most critical challenges in this research was to deal with the MHM related query which is a sensitive topic (i.e. MHM) among the stakeholders to discuss. It took time to make the respondent able to speak freely. But this was solved with the help of one of the female members in the team.

- The negative social view of respondents regarding MHM also a constraint to the inventory. The researcher had to eliminate the invalid response conflicting to the observation.

- Limitation of Time frame also an important challenge to conduct this study. To explore more in-depth required annual observation of several years. But the researcher tried to conduct this research with extensive fieldwork and timely action.

CHAPTER 4

CONCLUSION AND RECOMMENDATIONS

5.1. CONCLUSION

Slum-dwellers in Dhaka city are living with a lot of social, cultural, and financial problems. Among them, females are most vulnerable compared to male members in society. On top of that, females with disabilities are highly deprived of all sorts of facilities and standard living conditions due to their physical or mental limitations. Some of them are born with disabilities and some become disabled due to accidents or different diseases like typhoid or epilepsy. Most of the females with disabilities are dependents on family members and sometimes treated like burdens regarding expense and daily activities. In addition, the majority of slum dwellers are facing extreme vulnerability due to the absence of proper WASH practice. Females with disabilities are facing even more difficulties to maintain hygiene in the slum areas. Thereby, gender-segregated data on detail assessment of SWOT in implementation of WASH in slum areas of Korail and Kallyanpur were collected to help in providing sustainable gender-inclusive steps to meet up SDG 3 (good health and well-being), 5 (gender equality), 6 (clean water and sanitation), and 10 (reduced inequalities).

This study primarily targets to understanding important challenges and opportunities of WASH practices and MHM (Menstrual Hygiene Management) in slums with respect to the sensitiveness of females with disabilities with a vision to find out sustainable solutions. In both slums understudy, some awareness programs or projects on WASH, and fire safety are found to be organized by NGOs. The government is also helpful towards girls with disabilities and some of the girls are getting a monthly allowance. However, the number of projects or programs are not many. The number of disability-friendly WASH infrastructures is few in slums. As a result, long queues, the crowd in water collection points and toilets are hindering the situation even more. Girls and women with disabilities are totally dependent on other family members for hygiene during their menstruation periods, such as for changing clothes and proper cleaning. Only school going girls and working young women were found to be familiar with the use of sanitary pads wherein the rest of the women use cloths. Slum-dwellers and experts from different sectors suggest establishing enough schools and health care centers in the slum, where a female with disabilities will get the priority. Proper awareness and education should be ensured in slum areas regarding the menstruation of girls and women, especially for girls and women with disabilities.

5.2. RECOMMENDATION

Policy	↘ Introduce policy for slum dwellers to ensure better living conditions including water, sanitation, and hygiene. ↘ Schools for adolescent girls with disabilities should be established where education and knowledge on water, sanitation, and hygiene including menstruation issues can be ensured. Proper education e.g. vocational training and developing knowledge, along with quota systems in the job sector for a female with a disability can be started. ↘ Govt. can provide accommodation or care center for females with disabilities through co-funding or GO-NGO partnership. ↘ The government can provide cards for services in the urban settings for slum dwellers to provide social protection with ensuring basic needs. ↘ Youth advocacy groups can be formed in the slum to negotiate with Govt. service providers. ↘ Separating supply lines for drinking and other domestic uses as a solution to reduce the problems related to water scarcity in the slum. ↘ Legal land set up with relevant investment/infrastructure/charity through legal advocacy is required here.
Intervention	↘ Income opportunities should be encouraged for females with disabilities to ensure livelihood and empowerment. An increase in income will help to improve economic conditions which ultimately will assist families or females with disabilities in ensuring living standards. ↘ Implementation of existing disability-friendly guidelines should be done to protect their rights and provide basic services. ↘ Disability-friendly washroom facilities within the premises will decrease the dependency problem for females with disabilities. ↘ Health care centers should be established in and around slums where a female with disabilities will get extra care regarding WASH and menstruation. ↘ Disability friendly lavatory facilities, such as secure and safe separate toilets with electric light, ramp, handle on walls, piped water system, wide accessible entrance, and elevated toilet structure should be included. ↘ Disability focused GO and NGO related initiatives and programs need to be enhanced. ↘ Separate in-house water supply to be constructed with easy access to water sources to females with disabilities.
Research	↘ Skill development programs for slum dwellers can be introduced i.e. group/collective business plan for entrepreneurship development. ↘ Research on change in social view and behavior can contribute to knowledge gathering and increasing awareness to improve the situation for a female with disabilities regarding MHM. ↘ Identify scope to rehabilitate the slum dwellers in Dhaka. ↘ Research and address the scope to combined management e.g. Govt., slum dwellers, and 3rd party for coordination that can help to create ownership.

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ANNEX 1

FGD QUESTIONNAIRE

Personal information

Sl. No.	Name	Gender	Education	Profession	Contact Info.

Common problems

1. What kind of problems do you face in the slum? (Identify 5 issues)

1.1. After identifying 5 important issues, please do rank based on priority.

2. What kind of daily problem do you face? (Identify 5 issues)

2.1 After identifying 5 important issues, please do rank based on priority.

Water and Sanitation related Issues

Water

1. What kinds of water-related infrastructure are available in or near to slum?
2. From which sources people in slum collect water? Any government supply, illegal line or buy? (have to understand the details both on drinking and domestic use issues)
3. What is the most common way to get water?
4. What is the distance of water sources for your home?
5. Is the female with a disability able to use that water-related infrastructure?
6. Can they collect water for their family or own purpose?
7. If yes, do they face any obstacle to collect water?
8. On average how much time is needed to get water from water sources?
9. If yes, what types of problems (e.g. Road structure, distance, height, availability of water supply, road communication condition during normal time and disasters e.g. flooding, heavy rain, sexual harassment, time)? (These are suggestions and try to find the response from them)
10. What is the amount of water do you need for your family? (Both drinking and domestic purpose). Among the total amount of water, how much water do you need for a disabled person?

Sanitation

11. Is there standard sanitation facilities available for a female with a disability? If yes, what are those facilities?
12. Are the female with a disability can use the toilet for common?
13. What is the distance of the toilet from your home?
14. Obstacles to getting access to the toilet. (e.g. road structure, distance, height, sitting structure, availability of water supply, road communication condition during normal time and disasters e.g. flooding, heavy rain, sexual harassment, time) (These are suggestions and try to find the response from them)
15. Do people maintain regular cleaning of the toilet and bath place?
16. If yes, who is responsible for maintaining sanitation cleaning, product, etc.?

Hygiene

17. Is the female with a disability aware of the management of hygiene regularly? (after using the toilet and before taking food)
18. Is the female with disabilities aware of the management of hygiene during menstruation period? If yes, what measures do they take during this time? If no, why?
19. Have the female with a disability had an available facility like soap, tissue paper, sanitary napkin, towel, etc. during the menstruation period?
20. If yes, are females with disabilities able to manage all of these materials by yourself? Or family members like father, husband, and mother bring for them?
21. Does female with disabilities face any types of problems in your family during the menstruation period? If yes, what types of problems?
22. Does female with disabilities face any types of problems in your society during menstruation period? If yes, what types of problems?
23. Can females with disabilities share their problems on the menstruation period with others or ask freely for any assistance?
24. When a female with disabilities are not able to share their menstruation time-related issues to others, who is basically take the responsibility to care for them?
25. Is the female with disability get medical service during menstruation time when needed?
26. Does female with disabilities face any hygiene-related diseases basically during menstruation period?

Other assistance

27. Is there any NGO/ GO activities regarding WASH and disabilities? If yes, what types of programs or projects or actions are running here?
28. If yes, any assistance or help from the NGO/ GO sector? If yes, what types of help or support?
29. Is the disabled person can participate in any development program in the slum? (Overall related to any program like fire safety, flood management, etc.). If yes, what types of the program?
30. Did they participate in any development program in the slum regarding water, sanitation, hygiene, etc.? If yes, what types of the program?

Other issues

Socio-cultural

31. Do the female with disabilities face any social barriers on wash, sanitation-related issues? If yes, what types of problems?
32. Do the disable female face any social barrier during menstruation time? If yes, what types of problems?
33. Is there any community group/ summit in the slum who works for community development? If yes, what types of work are used to do that?
34. Is there any community group related to washing facilities and menstruation issues? If yes, how they work in the slum?
35. What is the status of social relationships with neighbors?

Economic

36. Is the female with disability earning for their family? If yes, what is the way of earning?
37. What are the average monthly expenses for a female with a disability?
38. Are the families of a female with the disability have the capacity to maintain the hygiene of that disable person?
39. Any other forms of barriers or issues on hygiene and wash?

Recommendation

40. Overall recommendation or probable solutions to ensure female with disability-friendly WASH practice in the slum area.

ANNEX 2

KII QUESTIONNAIRE

Personal information

Name	
Age	
Gender	
Profession/ Affiliation	
Address	
Place of conducting KII	
Date and Time	

1. What are the common problems in the slum?
2. After identifying 5 important issues, please do rank based on priority

Water

3. Females with disabilities in the slum are facing problems regarding the proper supply of water. What types of problems are thinking that hindering the proper water access of that group?
4. What are the reasons behind these scenarios?
5. What are your suggestions to ensure the safe supply and availability of water for a female with a disability?

Toilet

6. Females with disabilities in the slum are facing problems from the perspective of toilet facilities. What types of problems are thinking that hindering the proper sanitation of that group?
7. What are the reasons behind these scenarios?
8. What are your suggestions to ensure the safe supply and availability of water for a female with a disability?

Hygiene

9. Females with disabilities in the slum are facing problems from the perspective of hygiene. What is your opinion on that?
10. What are the reasons behind this hygiene problem?
11. What are your suggestions to ensure the safe supply and availability of water for a female with a disability?

Menstruation

12. What is the scenario of a female with a disability during the menstruation period in the slum?

13. What is the family role and behavior on this menstruation issue of a female with a disability in the slum?

14. What is the social role and behavior on this menstruation issue of a female with a disability in the slum?

15. What are the main issues to concern to ensure safe menstruation for a female with a disability in the slum?

16. Is the female with a disability face any health diseases or problems due to mismanagement during the menstruation period? If yes, what are the main health-related problem they used to face?

17. Any government initiatives on the WASH, menstruation for slum areas in Bangladesh?

18. Any government initiatives on the WASH, menstruation regarding the disabled person or especially for a female with a disability for slum areas in Bangladesh?

19. Any non-government initiatives on the WASH, menstruation for slum areas in Bangladesh?

20. Any non-government initiatives on the WASH, menstruation regarding the disabled person or especially for a female with a disability for slum areas in Bangladesh?

21. Overall recommendation or probable solutions to disability-friendly WASH practice in the slum area

22. Additional anything

ANNEX 3

IDI QUESTIONNAIRE

Background information

1. Age:
2. Gender:
3. Education:
4. Personal income:
5. Personal expenditure:
6. Fathers income:
7. Fathers education level:
8. Mother income:
9. Mother education level:
10. Family income:
11. Family size:
12. The number of the income-generating person in the family:
13. Who is/ are the income-generating person/s in the family:
14. Size of the house/ number of rooms/ materials of the house:

Personal characteristics

1. Types of disability (mental/ sight/ mobility/ hearing)
2. Frequent diseases/sickness type in the last one year?
3. Monthly average medical cost?
4. Economic dependency of the respondent?
5. Is there any caretaker for a disabled person in the family?
6. Who is the responsible person in the family for taking care of the person with a disability?
7. Loss of income for the family person for taking care of the person a disability?

WASH

1. Distance from the water sources (drinking/ domestic)
2. Obstacles to getting access to water sources?
3. Cost to collect water (frequency to collect, availability of supply)
4. Distance from the toilet
5. Obstacles to getting access to the toilet

Menstruation

6. How a disabled female manage hygiene during their menstruation period?
7. Are they able to manage themselves during the menstruation period? If yes, from where or how they learned to do that? If no, who helps them to manage or how they maintain that situation?
8. Is there availability of soap, tissue paper, sanitary napkin, towel, etc. (during menstruation period)?
9. What is the attitude of the family during the menstruation period?
10. What is the attitude of society during the menstruation period?
11. Is she going to school, what is the way to manage the period during school time? Are teachers friendly to deal with this or teach this in school?
12. What types of physical problems do a female with a disability face during the menstruation period?

13. If they face any physical problem during menstruation, do they visit the doctor? If yes, what types of cooperation do they get from the doctor?

14. Do they use any sanitary pad or cloth? How they manage this?

15. Is there any enough space in the toilet to change the pad or sanitary cloth? If no, where they used to change these?

16. Do disabled have enough knowledge to use a sanitary pad or cloth? If no, who helps them to manage themselves during the menstruation period?

Assistance

1. Is there any NGO/ GO activities regarding WASH and disabilities? If yes, what types of programs or projects or actions are running here?

2. If yes, have you got any assistance or help from the NGO/ GO sector? If yes, what types of help or support?

Awareness

1. Do you think that disabled female is vulnerable to unsafe WASH issue in slum areas?

2. Are you aware of WASH issues for a female with a disability in slum areas? If yes, from where you got this awareness? Have you got any WASH-related training or joined any program?

Recommendation

Overall recommendation or probable solutions to ensure female with a disability friendly WASH practice in the slum area

ANNEX 3.1

CONSENT FORM

Dear Sir/ Mada

Thank you very much for making time for this interview. This interview is part of the research project on "WASH Practices in Slum Areas of Dhaka city: Challenges and Opportunities for Girls and Women with Disabilities" funded by Share-Net Bangladesh as a grant for Young Researcher Fellowship. The aim of this project is to analyze the SWOT (Strength, Weakness, Opportunity, Threats) in implementing inclusive WASH facilities for girls and women with disabilities in slum areas of Dhaka city in Bangladesh.

The purpose of this assessment is to understand the present status of the WASH facilities for girls and women with disabilities in slum areas of Dhaka city in Bangladesh highlighting the menstruation aspects of them. The result of this study can be used by policymakers and stakeholders to clarify guidelines and directives, address barriers to ensure the safety hygiene of girls and women with disabilities in slum areas of Bangladesh.

This questionnaire includes close-ended questions as well as questions that are open-ended. If you feel there is anything relevant but not included, please suggest adding as the response in the study. We anticipate the questionnaire will take about 30 minutes.

Please be assured that all your responses will be held in strict confidence; findings will be presented in aggregate, and no statements used in the report will be attributed directly to you. Your participation is voluntary, and you may decline to answer any question or end the interview at any point. Do you agree to continue?

--------- Yes ---------- No ---------- Signature

ANNEX 4

FGD WITH SLUM COMMUNITIES

Figure: FGD in Korail slum

Figure: Community map in Korail slum

Figure: FGD in Kallyanpur slum

Figure: Community map in Kallyanpur slum

ANNEX 5

WATER COLLECTION POINT, TUBEWELL, AND TOILET IN KORAIL SLUM

Figure: A water collection point and water pipeline in Korail slum

Figure: a water source point in Korail slum

Figure: A water collection point and toilet in Korail slum

ANNEX 6

WATER COLLECTION POINT, TUBEWELL, AND TOILET IN KALLYANPUR SLUM

Figure: Nearby a toilet that is used by a girl with a disability

Figure: temporary houses in the lake located in Kallyanpur slum

Figure: temporary houses in the lake located in Kallyanpur slum

Figure: Water collection point and toilet in Kallyanpur slum

ANNEX 7

DISABLED FRIENDLY TOILET AND WATER COLLECTION POINT IN KALLYANPUR SLUM

Figure: Disabled friendly toilet in Kallyanpur slum

Figure: Disabled friendly toilet structure in Kallyanpur slum

Figure: Disabled friendly water collection point and bathing place in Kallyanpur slum

Figure: Poor road communication between the disabled-friendly toilet and mainland of the Kallyanpur slum

ANNEX 8

BURNT BONE OF COW (SYMBOL OF SOCIAL BELIEF)

Figure: Brunt bone of cow is hanging in front of the door

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