



Department of Development Studies
Bangladesh University of Professionals

A Thesis Paper on
**Exploring the Gender dynamics of Urban Water: Gender, Urban water, health and
sanitation inequality in three slums of Dhaka**

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Declaration by Student

I, Samiha Kamal, hereby declare that this thesis has been composed solely by myself and that it has not been submitted, in whole or in part, in any previous application for a degree. Any literature data or work done by others and cited within this thesis has been given due acknowledgment and listed in the reference section.

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Supervisor's Declaration

Certified that the thesis entitled “Exploring the Gender dynamics of Urban Water: Gender, Urban water, health and sanitation inequality in three slums of Dhaka” submitted by Samiha Kamal towards partial fulfillment for the bachelor's degree in Development Studies (Honors degree) is based on the investigation carried out under my guidance. The thesis part, therefore, has not been submitted for the academic award of any other university or institution.

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Abstract

The urban poor living in the slums of Dhaka is one of the worst sufferers of inadequate water facilities which is further increasing due to rapid urbanization, climate change, and population growth which further contributes to gender inequality. A rich body of scholarships addresses the gender-water relation in the rural setting, but the multi-layers of gendered urban water inequality have not been given enough attention. This research paper aims to contribute to the emerging urban gender-water dynamics of water access, control, and management decisions focusing on the everyday water experiences, concerns, impacts, and coping mechanisms of urban poor women in Dhaka slums. This paper also aims to seek the reasons behind the unequal gendered power dynamics in urban slums. The findings of this research are based on three slums of Dhaka that show how being the primary users of water, women have to suffer critical consequences of urban inequality and they have individual and household coping strategies to minimize the impacts. The study has employed a mixed-method approach to collect data from 72 urban poor women of those slums. Lastly, this study provides research gaps for future researchers which will contribute to policy formulation of urban water policy that is genuinely inclusive of all experiences.

Keywords: Gender Inequality, Gender-water, Urban water inequality, Gender mainstreaming, Urban slum, Gendered division of labor, Health, Sanitation.

LIST OF ABBREVIATIONS

BBS	Bangladesh Bureau of Statistics
COVID-19	Coronavirus disease
DNCC	Dhaka North City Corporation
DSCC	Dhaka South City Corporation
DWASA	Dhaka Water Supply and Sewerage Authority
GAD	Gender and Development
Icddr,b	International Centre for Diarrhoeal Disease Research, Bangladesh
JMP	Joint Monitoring Program
MHM	Menstrual Hygiene Management
NGO	Non-Governmental Organization
PSU	Public Sector Undertaking
SDG	Sustainable Development Goal
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
WAD	Women and Development
WHO	World Health Organization
WID	Women in Development

LIST OF TABLES

Table 4.1: Profile of the Respondents	40
Table 4.2. Common modes of water supply, cooking and sanitation space options	43
Table 4.3: Respondent's response about the quality of water	43
Table 4.4: Time spent on unpaid care work daily on average	46
Table 4.5: Prioritizing others: reasoning	51

LIST OF FIGURES

Figure 2.1: The key actors involved in water provision in Dhaka.....	26
Figure 2.2: Theoretical Framework	33
Figure 3.1: Count of the Respondents.....	35
Figure 4.1: Shared water fetching responsibility of the male members	44
Figure 4.2: Responses of Female Headed Households	48
Figure 4.3: Time spent in waiting on average daily.....	49
Figure 4.4: Time spent on unpaid care works on average daily during lockdown	55
Figure 4.5: Comparison between time spent on average and during lockdown	56

Table of Contents

CHAPTER ONE	12
INTRODUCTION AND BACKGROUND.....	12
1.1 Introduction.....	12
1.2 Background of the Study	15
1.3 Objectives of the Study.....	17
1.4 Justification of the study	17
1.5 The layout of the Chapters.....	18
CHAPTER TWO	19
LITERATURE STUDY AND THEORETICAL FRAMEWORK	19
2.1 Introduction.....	19
2.2 Literature Design.....	19
2.2.1 Water Inequality	19
2.2.2. Gender Inequality.....	19
2.2.3 Gender- Water Relation	20
2.2.4 Demography, water and sanitation situation in developing countries.....	22
2.2.5 Gender- water Relation in Urban Slums: Gender Dynamics	24
2.2.5.1 Water as the element of social power	24
2.2.5.2 Vulnerabilities of women and girls	25
2.2.5.3 Gender in urban water governance	26
2.2.5.4 Women, Sanitation and Hygiene in Urban slums	27
2.2.5.5 Significance and urgency of women's participation in water decision making	28
2.3 Theoretical Framework	29
CHAPTER THREE.....	31
METHODOLOGY.....	31
3.1 Study Design.....	31
3.2 Study Area	31
3.3 Sampling and Selection	31

3.3.1 Sampling Method.....	31
3.3.2 Sample Size	32
3.3.3 Data Collection.....	32
3.3.3.1 Interview	32
3.3.3.2 Focus Group Discussions	33
3.3.3.3 Qualitative Observations	33
3.4 Data Analysis.....	33
3.5 Ethical Consideration	34
3.6 Limitation of the Study.....	34
CHAPTER FOUR	36
FINDINGS OF THE STUDY	36
4.1 Introduction.....	36
4.2 Profile of the Respondents	36
4.3 Slum geographies, conditions of water facility and sanitation spaces	38
4.4 Dynamics of Gender-water Relation	40
4.4.1 Workload.....	40
4.4.1.1 Gendered Division of labor.....	40
4.4.1.2 Workload on girls.....	42
4.4.1.3 Workload of taking care of the elderly, children and sick members.....	42
4.4.1.4 Workload on women with no male members.....	43
4.4.2 Extra working hours and loss of opportunities	44
4.4.2.1 Working hours on water-related activities	44
4.4.2.3 Loss of life opportunities and leisure.....	45
4.4.3 Physical and mental health.....	46
4.4.4 Setting priority: Placing others first	46
4.4.5 Conflicts and Quarrels.....	47
4.4.6 Menstrual Hygiene and lack of personal space	48
4.4.7 Additional vulnerability during accidents and individual strategies during water scarcity..	49
4.5 Concern of the urban poor women	50
CHAPTER FIVE	52
DISCUSSION AND CONCLUSION	52
5.1 Introduction.....	52

<i>5.2 Underlying reasons behind gender inequality in urban slums</i>	52
<i>5.2.1 Individual level</i>	52
<i>5.2.2 Interactive social level</i>	53
<i>5.2.3 Macro-level</i>	54
<i>5.3 Coping mechanisms of urban poor women in response to the vulnerabilities</i>	54
<i>5.4 Recommendations</i>	56
<i>5.5 Conclusion</i>	57
<i>References</i>	59
<i>APPENDIX A</i>	64
<i>QUESTIONNAIRE</i>	64

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1 Introduction

Water is required for life in a variety of ways as SDG 6 Synthesis Report 2018 states, "Water resources are embedded in all forms of development (e.g., food security, health promotion, and poverty reduction), in sustaining economic growth in agriculture, industry, and energy generation, and in preserving healthy ecosystems," (United Nations, 2018). A recent JMP report noted that 35% of the world's least developed countries lacked basic infrastructure and fundamental water sources of pure drinking water. Also, 65% lacked access to basic sanitation (i.e., a toilet or a sink) (WHO and UNICEF, 2019). These startling figures indicate a significant human resource shortage, particularly for the underprivileged and vulnerable populations. Recognizing the value of having access to water, SDG 6 (targets 6.1 and 6.2) focuses on "clean water and sanitation" for maintaining long-term sustainability and equity emphasizing the fact that everyone should have access to water. These SDG objectives, in general, are concerned with ensuring universal access to safe drinking water and basic sanitation to address the issues in water, sanitation, and hygiene in developing countries (Pouramin, Nagabhatla, & Miletto, 2020).

Scientists, practitioners, and activists took a long time to realize and address that men and women have distinct needs, and their priorities must be addressed in various ways. Before the 1970s, women were portrayed as "mothers" and "wives" in the development models and thus their distinct gender needs were swept under the rug. But gender has been mainstreamed into the literature on resources and development, as well as international agencies' policy texts, since the mid-1980s (Pouramin, Nagabhatla, & Miletto, 2020). Since then scholarships in various sectors of development such as agriculture, water, health and sanitation, education, etc. have addressed and discussed the impacts of gender inequality and the urgency of gender mainstreaming in developing countries (Bhattarai et al., 2021). But the gender-water relation has been mostly addressed by the scholars in terms of acute water scarcity, and lack of access to water (Sultana, 2009). In addition, A rich body of scholarships addresses the climate-induced vulnerability of rural women in terms of water fetching, fuel and wood collection, agriculture, etc. (Yadav & Lal, 2017) in the rural area of developing countries. But the multi-layers of urban water management

in the slums and how the women living there bear the burden of the gendered division of labor and gender stereotypes have not been given enough attention.

However, It is gradually being acknowledged by the existing scholarship and policies on water that women are the most vulnerable because of the patriarchal social structure, lack of access to their rights, and their additional responsibility of water allocation and management in the urban households too (Sulley, 2018). It is a major concern of the researchers that the way women have to put effort and time into water-related activities and the extent they have to suffer, they do not get to participate in water management decisions on that same scale at all. As a result, those decisions do not reflect their needs, concerns, and priorities (Bhattarai et al., 2021) which may result in ever-increasing gender inequality in the water sector (Sultana, 2009).

Being a highly populated country, the population of Bangladesh is projected to rise from 158 million in 2014 to about 185 million by 2030, according to UN estimates, raising the urban population from approximately 50 million in 2014 to almost 83 million by 2030. Bangladesh is likewise expected to grow at a faster rate than the rest of the world and by the middle of the century, Bangladesh will be more urban than rural. (Icddrb, 2016).

Due to several pro-poor national policies and schemes taken by the Bangladesh government after independence in 1971, the official poverty line of the country has been decreasing since the 1990s. But the poor living in urban areas has been increasing steadily at an annual rate of 1.6% (Arias-Granada, Haque, Joseph, & Yanez-Pagans, 2018). Among other cities, Dhaka represents the most crucial scenario of urban poverty in Bangladesh as it is undoubtedly one of the fastest-growing megacities of the world. Since the 2000s, the annual population growth of Dhaka is 3.5% on average and if this growth rate continues, the total population can reach up to 31.2 million in 2035 (Thuy-An, 2021).

In the context of Dhaka city, the situation is about to get worse because of rapid urbanization, rural to urban migration which results in more people living in the informal settlements with higher gender inequality. Urbanization is the inevitable process of development as when a country starts to develop, a large number of rural people migrate to the cities to generate income, in search of shelter for upward mobility in the society. But the rate of rural to urban migration in Dhaka is extremely high which puts tremendous pressure on socio-economic

conditions, housing, public infrastructure, and other required facilities for a living (Arias-Granada, Haque, Joseph, & Yanez-Pagans, 2018).

The effects of climate change are further exacerbating urbanization and issues not addressed in this study such as global warming, pollution, energy requirements, and water shortages in the global north and south will further exacerbate the situation (Cantos, 2013).

Approximately 300,000 to 400,000 new migrants arrive in Dhaka every year and it is increasing with time (Arias-Granada, Haque, Joseph, & Yanez-Pagans, 2018). These new migrants have no other option than to continue adding burden to the informal settlements of the city as they cannot afford higher house rents of the megacity. The housing cost of these slums is also difficult to afford as the slum dwellers are engaged in informal income-generating activities with little income comparatively than the formal sector (Hasam, Arafin, Naznin, Mushahid, & Hossain, 2017). According to the Census of Slum Areas and Floating Population 2014, There are a total of 13,938 slums in all city corporations, municipalities, Upazila headquarters, and other urban regions of Bangladesh in 2014. Among all other cities, Dhaka has the highest amount of slums, a total of 6489 (BBS, 2015).

This tremendous population pressure of Dhaka drives poorer residents into slums and squatter settlements. It was already the biggest challenge for the city to provide hygienic clean water to the growing residents which resulted in frequent water cut-off and unsanitary water. It is reported that slum dwellers in Dhaka have access to both water and sanitation services of DWASA-the primary authority of providing and maintaining water supply service, sewerage services, and stormwater drainage service in Dhaka city. Researches show that in many slums, water has a funny smell, color, taste, or odor. The frequency of water cutoffs is also higher in the slums and squatter settlements. The shared sanitation service results in too much pressure on toilets, bathing, and personal space for hygiene. 16.2 households have to share a toilet on average in Dhaka slums. In addition, because of the irregularity of clean water, there are existing informal markets for water and sanitation services in many of the Dhaka slums. These informal markets are managed by local maastans who maintain a personal connection with local leaders and landlords. Thus, the involvement of these middlemen maastans increases the vulnerability of slum dwellers in getting access and control to water and sanitation services (Arias-Granada, Haque, Joseph, & Yanez-Pagans, 2018).

Women and girls have to suffer additional consequences of water scarcity and unavailability because the gendered division of labor put them in the position of dealing with water-related activities such as cooking, taking care of the elderly and children of the families, and doing household chores (Cantos, 2013). The researcher has found a significant research gap in this urban gender-water dynamics of Dhaka slums. This research paper aims to contribute to the emerging urban gender-water dynamics of water access, control, and management decisions focusing on the everyday water experiences, concerns, impacts, and coping mechanisms of urban poor women in Dhaka slums. This paper also aims to seek the reasons behind the unequal gendered power dynamics. The findings of this research on three slums of DSCC named Modinabag Khalpar Bosti, Modinabag Khazar Building Bosti, and Maniknagar Cumilla Potti show how everyday urban water inequality is formed through complex, multi-layered dynamics and how women cope with it in their everyday lives. On a whole, this study will explain why and how gender inequality creates and is created by patriarchal gender roles and women's relation with water.

1.2 Background of the Study

With time, rapid climate change and urbanization are responsible for worsening the existing water scarcity and degrading the quality of clean water worldwide (Bhattarai et al., 2021). Alarming, in this already vulnerable scenario of the slum dwellers with water insecurity, women and girls are doubly vulnerable in the slums as they are the primary users of the water. With growing water unavailability, it is assumed and labeled as women and girls' responsibility to fetch or collect water from alternative sources, be it in the urban area or the rural area (Cantos, 2013). According to UNICEF, women and girls spend 200 million hours every day collecting water worldwide. To quote UNICEF's global head of water, sanitation, and hygiene Sanjay Wijesekera, "It would be as if a woman started with her empty bucket in the Stone Age and didn't arrive home with water until 2016. Think how much the world has advanced in that time. Think how much women could have achieved in that time." (Unicef: Collecting water, 2016).

Not only this colossal waste of their valuable time, increasing water insecurity and scarcity also impacts negatively on women and girls' physical and mental well-being, increases workload and makes them more vulnerable to sexual harassment and physical attack, lowers

their standard of living, threatens their livelihood by lowering possibilities in water-related income-generating activities and many more profound impacts (Yadav & Lal, 2017).

Besides, Scholarships on gender and sanitation focus on the lack of inadequate sanitation facilities for both men and women in the urban slums. These researches highlight the risk of physical violence and psychosocial stress women and girls have to face due to inadequate toilet and sanitation facilities (Kulkarni, O'Reilly, & Bhat, 2017). In addition to that, during and after disasters such as storms, floods, etc. which are increased and more frequent due to climate change, women and girls have to take the additional workload and responsibility of collecting water, cleaning, and maintaining the houses after the disaster. In drought-prone and other rural as well as urban areas, they suffer from physical attacks and sexual harassment when they go for water fetching (Tanny & Rahman, 2016). It is well documented by several scholars that girls spend a significant amount of their time fetching water and doing household chores. Brody, Demetriades & Esplen (2008) identified that the female dropout rate is higher during and after a disaster.

Gender mainstreaming is the process of evaluating the implications for women and men of any proposed action, including legislation, laws, policies, or programs, in all sectors and levels. It is a gender equity strategy for addressing women's problems and experiences as well as the men's. It views aspects of every policy and program development, implementation, monitoring, and evaluation process through a gender lens, to ensure that women and men benefit equally and that inequity is avoided. (WSP, 2010). At the Fourth World Conference on Women in 1999, gender mainstreaming was created as a key strategy for promoting gender equality and women's empowerment. Gender mainstreaming has been used as a strategy in all industries since 1995, with mixed success. Several tools have also been created to aid in the implementation of the approach. Nonetheless, there are ongoing obstacles, particularly in terms of monitoring and analyzing the impact of gender mainstreaming on women's and men's health. Some of these issues stem from the lack of relevant and context-specific indicators for measuring the efficacy of programs aimed at promoting gender equality and women's empowerment. In order to accelerate the pace of gender mainstreaming, other obstacles include the lack of approaches that aid replicability of successful initiatives (United Nations, 2006).

Globally, governments have taken great steps to include women in national, provincial, and municipal development initiatives during the last decade. These policies normally fall under the category of participatory development, which strives to incorporate all stakeholders, including women, in water access and control decisions. However, critics argue that the participatory method is inadequate to enhance gender equity in water access and management. While the government prioritizes including women and vulnerable groups in water management, the practical impact has been restricted owing to institutional patriarchy deep-rooted in society (Sulley, 2018; Bhattarai et al., 2021).

1.3 Objectives of the Study

- To explore various forms of gender inequality that urban poor women have to face every day regarding water and sanitation facilities in the slums
- To portrait daily water experiences, concerns, and coping mechanisms of the women and girls living in Dhaka slums
- To highlight the impacts of gender inequality of water allocation and usage on urban poor women
- To find out the reasons behind unequal gendered power dynamics in water allocation and usage in the slums
- To highlight the importance and urgency of gender mainstreaming in urban water governance.

1.4 Justification of the study

There are growing numbers of scholarships on the impacts of water scarcity and climate change on rural women as it posits from the gender-environment relationship of Ecofeminism¹. It is equally true for the urban poor women. But their concerns are not widely recognized like their rural counterparts because- (a) overshadowed by the rural issues, and (b) assuming the ‘urban advantage’ of living in cities where people have access to water. (Kuate-Defo 1996; Lalou & Legrand, 1997; Cantos, 2013). But in reality, the urban gender-water dynamics need much

¹ Eco-feminism is considered as a political and social movement which states that oppression of women and the environment has been ‘twin subordinations’ where men have a hierarchical relationship with both nature and women in which their actions try to dominate them (Salman, 2007).

attention because of mainly three reasons. Firstly, a life-sustaining substance like water is highly privatized in urban areas which creates a greater scope of peoples' access and control over it. Secondly, rapid urbanization and climate change only exacerbate future further challenges and population growth in urban settlements. Last but not the least, the rural-urban linkage of gender-water relation cannot be ignored due to rural to urban migration and the politics of citizenship and representation (Cantos, 2013). Hence, this paper will explore the present gender-water scenario in the urban slums of Dhaka.

Further, this study is also significant at the policy level. It will signify the urgency of gender mainstreaming in urban water governance as women need their active participation in water governance being the most and primary users of water. Without their active participation in water management decisions and governance level, the policies and initiatives also do not prioritize their specific needs such as sanitation and menstrual health, additional workhour and workload, and much more.

This study will also provide pieces of evidence on behalf of urban poor womens' vulnerability due to water mismanagement and cutoffs. Indeed, their unique experiences and coping strategies can be used for future research purposes. Overall, this study aims to stimulate further research on the urban gender-water inequality so that the sufferings of urban poor women can be reduced, their contributions can get recognition in society and their concerns can be heard at the policy level.

1.5 The layout of the Chapters

This research paper contains Five Chapters as follows: This first chapter titled 'Introduction and Background' presents an introduction to the research topic, objectives, and justification of the study. The following chapter provides detailed clarification and dimensions of the research topic, as well as a conceptual framework to show the interlinkages between gender and water. Chapter three covers the methodology, data analysis procedure, and sample selection method of the study. Then Chapter four depicts the findings extracted through In-depth interviews and Focused Group Discussions. Chapter five elaborates cross-evidence-based analysis of the results, some recommendations based on the findings of the previous chapter, and conclusion.

CHAPTER TWO

LITERATURE STUDY AND THEORETICAL FRAMEWORK

2.1 Introduction

The present chapter of tentative research titled “Exploring the Gender dynamics of Urban Water: Gender, Urban water, health and sanitation inequality in three slums of Dhaka ” analyzes the *existing* reviewed literature, the operational definitions of different important terms that are used in this research, basic demography of the urban slums of Bangladesh, water and sanitation situation in developing countries, etc. These concepts are, therefore, significant to capture the further findings and discussions on the gender-water dynamic of urban water inequality.

2.2 Literature Design

2.2.1 Water Inequality

Water inequality is mostly studied in the urban areas by governments and foreign aid agencies as city-scale distributional inequality (Hofmann, 2017). Here Hofmann is scrutinizing the fact that the context of the urban slums not getting equal access and the same quality of water as the comparatively well-off portion of the cities is considered as water inequality, but everyday gendered water practices, experiences and how they (re)produce social norms and inequalities in access and control of water from the gender lens is absent largely in the policy context.

2.2.2. Gender Inequality

Gender is a concept that refers to the socially created roles, behaviors, activities, and characteristics that society assigns to men and women (WSP, 2010). It is widely acknowledged as a social construct, rather than a biological construct. Gender is a key indicator of social and economic inequality, as well as exclusion. There are systematic gender inequalities in material well-being, regardless of socioeconomic level, albeit the degree of disparity varies among societies and throughout time. As a result, most cultures have gender disparity, with males generally holding higher positions in social, economic, and political hierarchies. The objective of decreasing gender inequality has occupied a prominent position in international organizations and national strategy announcements for more than two decades. (UNDP, 2015). But scholars

argue that gender inequality is not just sustained by unequal access to and control of material resources. Gender stereotypes and norms also promote gendered identities and confine women and men's behavior in ways that contribute to inequity in societies (Ridgeway, 2011).

2.2.3 Gender- Water Relation

During the 1970s and 1980s, three broad frameworks, namely WID², WAD³, and GAD were developed to include the gender dynamic of social, economic, and political processes into development theories. Although the third version, Gender and Development has become the dominant framework, still research and policy materials on women and development contain all three versions. The way women's roles in development are perceived dictates why water access is vital and how it should be sought which makes this discussion relevant to this study.

GAD emerged in global development policy and discourse with a new focus on the socially constructed differences between men and women, and saw gender roles and relations as embedded relations of power, as a result of critiques of WID, the first attempt to specifically integrate women into the development agenda (Sulley, 2018). Ray (2007) noted that women and men have interests outside of their gendered interests, such as ethnic or social class identities. Rather than assuming that women are innately resourceful, GAD investigates why women have created these historic relationships using a critical lens.

Sulley (2018) emphasized that as a result, gendered water roles, as well as uneven control over and access of rural and urban women to water sources in everyday water activities, are exposed. Eventually, water governance policies began to place women at the center of analysis. Women were the subject of interventions aimed at addressing insufficient and unequal access to water as GAD emphasized how they are the primary users of the water sources.

Men and women have different roles and responsibilities in the use and management of water in most societies. Women and girls are the Primary users, providers, and managers of water in their homes, as well as the custodian of domestic hygiene.

² Women in Development (WID) emerged from a liberal feminist framework in the early 1970s, its central position was to include women, who had previously been seen as passive recipients of any advancement, in the economic development.

³ Woman and Development (WAD) perspective states that women have always participated and contributed towards economic development, regardless of the public or private spheres.

A more nuanced understanding of water inequality and gender-water relations is noted by (Sulley, 2018) in three key sites of analysis:

1. **Gendered Knowledge:** Because of their multiple roles, women develop knowledge and skills to tackle the complexity of household, community, water management, and access. According to Moser, while women are stereotyped as 'homemakers,' this is merely one of three roles they perform. Moser argues that in most low-income developing nations, it is only one of the three roles that women perform. Women's work is therefore threefold, according to feminist theorists, as shown below in an urban setting from a gender-water relation perspective:
 - I. Reproductive Work: The childbearing and rearing responsibilities necessary to ensure labor force maintenance and reproduction.
 - II. Productive Work: Women's role both as primary and secondary income earners. Moser argues that in urban settings women are mostly employed in 'informal sector enterprises in the home or the neighborhood' (Moser, 1993, p.27).
 - III. Community Managing Work: In the local community in both rural and urban contexts, women have roles of managing and supporting items and tasks of collective consumption for the community. Women's role in community management involves caring and unpaid labor and the provision of shared resources like water and healthcare. But in most countries, low-income women perform all three roles, while males perform productive and community political activities that pay, status, or power within the national political framework. According to Moser, this reflects a further sexual division of labor that men have a community leadership role whereas women do not (Moser, 1993).
2. **Gendered Rights and Responsibilities:** Sulley highlighted the gendered power inequalities in water access, control, and conservation which interlinkage women with water. Consequently, Men's and women's water access/control is generally split between public and private spaces in society.
3. **Gendered Politics and Grassroots Activism:** Politics and activism may (re)define gender, identity, and environmental issues. Water management, scarcity, and water disputes or injustices are usually the subjects of activism on a wider scale. The gender-

water relation can be practically understood from the case study examples, reviewed works of literature, and research findings of this study.

2.2.4 Demography, water, and sanitation situation in developing countries

UN Human Settlements Programme (UN-Habitat) has provided a clear definition of a slum household which is widely acknowledged in the development works of literature. According to UN-Habitat, “A slum household is defined as a group of individuals that live under the same roof that lack one or more of the following conditions; access to improved water, access to improved sanitation, sufficient living space, the durability of housing and secure tenure” (UN Habitat,2003).

The urban poor and slum dwellers are heterogeneous communities with varying levels of deprivation and vulnerability. Around 59% of the urban population in Sub-Saharan Africa, 28% in Asia and the Pacific, 21% in Latin America and the Caribbean, and at least % in several countries in the Middle East and North Africa live in slums. Urban inequalities in living conditions and access to services are large in middle- and high-income nations. Millions of urban poor become systematically excluded due to the presumed urban advantage even though cities offer many resources like clean water, sanitation, and waste disposal. To provide basic services—and related health outcomes—to residents in urban slums requires efficient urban government, which is becoming increasingly important as urbanization accelerates (Goddard & Sommer, 2020).

The UN projected in 2010 that over 4 million people reside in over 5000 small and major slums, accounting for 27.2 percent of Dhaka's total population (Thuy-An, 2021). According to the Census of Slum Areas and Floating Population 2014, there are a total of 13,938 slums in all city corporations, municipalities, Upazila headquarters, and other urban regions of Bangladesh in 2014. Among all other cities, Dhaka has the highest amount of slums, a total of 6489. Moreover, 5,92,998 slum households an average size of 3.75 people were counted in the 2014 census in all urban areas countrywide which indicates a 77% increase in the number of slum households since the 1997 census. In Dhaka, the number of slum households is 292780. The census argues that this increase from the 1997 census is mostly due to the eviction of inhabitants from large slums in Dhaka, Chittagong, Khulna, and Rajshahi. After the eviction, they formed small slums, and eventually, more people began to live in those slums (BBS, 2015).

A baseline Population and Socioeconomic Census on seven major slums of DNCC, DSCC, and Gazipur City Corporation projects that the majority of households (95%) had access to piped water, followed by tube well water (5.1%). On average, 91.9% of the households shared water sources varied from slum to slum. Approximately 30% of households had a sanitary toilet flush to sewerage/tank, 60.9 percent had a sanitary latrine flush to anywhere else, and 6.4 percent had a pit latrine without a slab or a hanging/open latrine. Approximately 90% of households shared latrines, which varied from slum to slum. Last but not the least, Gas was utilized by nearly 50% of houses, followed by wood (34.9%), and gas-cylinders (1.4%), kerosene (2.4%), and electricity (1.4%) were also used (3.8%) for cooking purpose. Roughly 60% of households shared a kitchen on average (Icddrb, 2016).

Because of the significant population growth, there is a widening imbalance between demand and the capacity of DWASA's public water service. Due to a lack of tenure validity, many new settlements do not meet with legal conditions for access to urban utilities (including water, electricity, and sewage), resulting in a shortage of DWASA services in the expanding perimeter. Furthermore, insecure land and housing tenure, as well as the threat of eviction, discourage people from investing in water supply improvements, resulting in poor service, insufficiency, and inconsistency for many households. In addition, the tyranny of informal markets of water creates additional problems in many slums (Sully, 2018). Sully further has shown the key actors involved in urban water provision of Dhaka in a study on slums of Mohammadpur, Mirpur, Demra, and Badda as follows:

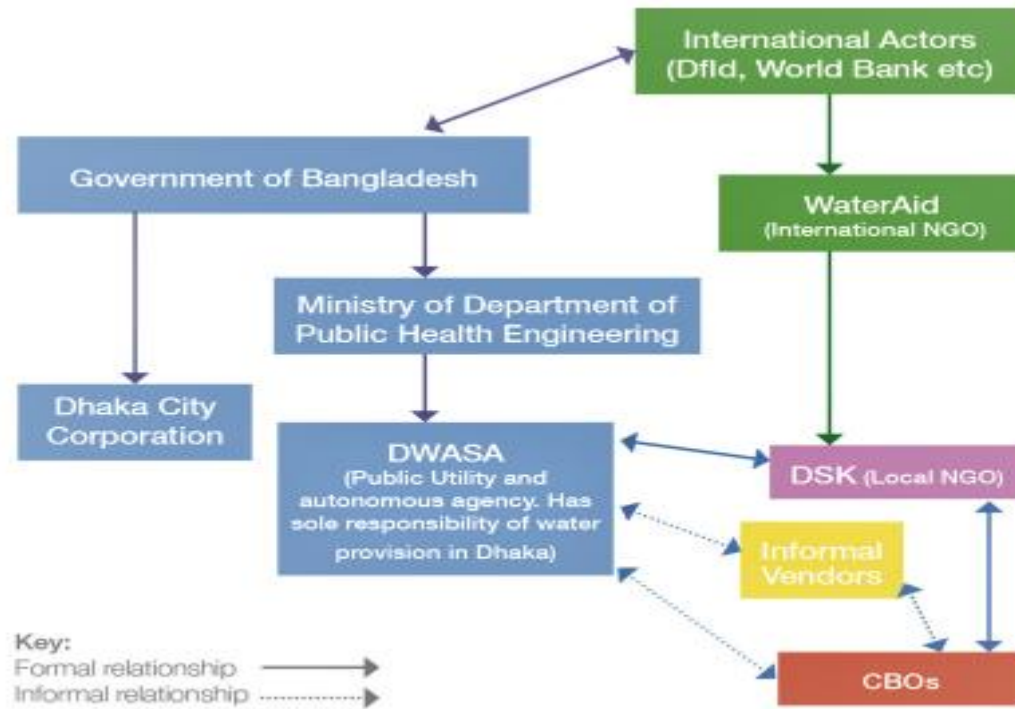


Figure 2.1: The key actors involved in water provision in Dhaka

2.2.5 Gender- water Relation in Urban Slums: Gender Dynamics

2.2.5.1 Water as the element of social power

Cantos (2013) highlighted the issue of water privatization and commoditization in the urban setting which raises the issue of water allocation, i.e., who gets how much water and entails complicated distributional decisions that are essentially political (Ahlers & Zwarteveen, 2009). Several researchers argue that because privatization occurs in an urban setting, and because patriarchy defines gendered labor divisions and socially appropriate uses of water, women and girls living in slums and informal settlements are disproportionately impacted. Inequality of gender is certainly part of the power dynamic driving water allocation.

Water, Swyngedouw (2004) believes, allows wider socio-economic, political, and gendered norms to play out, as illustrated by the emergence of sex-specific private/closed bathrooms in urban areas. Because water is a key element of social power (Cantos, 2013), water-related activities helped consolidate new class and gender inequalities in the urban fabric.

While a private firm's water infrastructure may physically reach the slum, women may not have the resources to purchase it. Also, women frequently spend the most on water. The transition to privatized water has the indirect effect of making water scarcity an individual problem (Ahlers & Zwarteveen, 2009) concerning the idea that a water “title” may give women more social security.

Sultana (2011) demonstrated that the emotional geographies of water access, usage, control, and disputes mediate how water affects daily life in regions where water is scarce. The pleasures and relief of having clean drinking water coexist with pain, fear, despair, conflicts, and other negative emotions. Additionally, the dimension of conflicts and disputes is profound too. While fetching water, women often engage in heated verbal disputes and yelling, although their emotions frequently decrease afterward. For some, it is a case of temporary friction or conflict that must be ignored in the great scale of things. Not all disputes, however, are resolved or overlooked, and underlying tensions and hostility emerge. Continuation may be implemented in two ways. One is that pre-existing conflicts, hostility, or feuds over other matters manifest themselves near the water sources, further deepening them. Secondly, the battle for water generates new disputes, tensions, and hostility that may go unsolved, resulting in the deterioration of relationships between individuals and families.

Sufferings for water, in which emotions abound daily produces a variety of feelings and experiences throughout the day at each water source. Sultana argues that as a result, 'broader social relations of power and gendered subjectivities are re/negotiated and re/produced' (Sultana, 2011, p. 171) which puts water in a position that it is no longer a necessary subsistence for living, rather an element of social power.

2.2.5.2 Vulnerabilities of women and girls

Now women's water struggles in the urban setting will be reviewed. In the patriarchal society, where women and girls live, their gendered responsibilities and gendered division of labor are domestic, such as cooking, cleaning, washing clothing, and caring for children and the elderly, all of which require clean and drinkable water. Their water responsibilities have ensured that they are disproportionately affected by water scarcity, assaulted, or kidnapped while fetching water, causing them physical and emotional distress (Cantos, 2013; Yadav & Lal, 2017). Yadav & Lal (2017) further extended that water scarcity is a recurrent problem in South Asia, and climate change is making it much harder to get clean water for drinking and other needs. Nearly

two-thirds of all households have a woman collecting water for drinking, cooking, and sanitation, and other vital activities. They are more prone to spine damage, pregnancy difficulties, including miscarriage, and maternal death for carrying heavy loads long distances.

Additionally, Chipeta (2009) explored the experiences of urban households in the low-income housing area of Mbayani and Ntopwa in Malawi. The study found that as women have to play the role of caregivers for sick children, and the elderly, lack of access to safe drinking water adds to their workload. Because mothers and daughters share the same responsibilities of water fetching and other multiple roles, this prevents women from engaging in productive activities and girls from attending school. The right of women to enjoy the city and care for their families is compromised if water is inaccessible. Female dropout rates are greater during and after disasters, according to Brody, Demetriades, & Esplen (2008) because girl participates in domestic households and water fetching. Among schoolchildren, girls face the domestic responsibility of cleaning, scrubbing, dishwashing, clothes washing, and meal preparation, in addition to collecting water, shows a study in Metropolitan Ghana. In the case of married couples, the situation may alter depending on their socioeconomic standing. For instance, in an educated couple, the woman has some autonomy and participates in family choices. Husbands with a higher level of education are more inclined to help their spouses with household chores (Buor, 2003).

In this way, Girls and children in arid regions of South Asia and Africa walk about 6 kilometers per day to fetch water, and it is estimated that 40 billion working hours are spent collecting water in Sub-Saharan Africa each year, and 150 million work days are spent fetching and carrying water in India each year (Yadav & Lal, 2017) severely limiting their opportunities to engage in other productive activities such as education, income generation, politics, leisure, and recreation (Cantos, 2013).

2.2.5.3 Gender in urban water governance

Moreover, (Bhattarai et al, 2021) examined gender dynamics in urban water governance in two cities of Nepal, questioning the premise that urbanization may significantly increase gender-based inequalities that originated predominantly in rural social situations. The results show that male government personnel was unaware of the ongoing water scarcity that women face in the city. Concerns about gender equity have begun to appear in public conversations due

to a female deputy mayor in one city questioning the mindsets of male employees who are unaware of the issue of water scarcity in the city. In addition, The findings show the urgent need to raise “critical awareness among men and women” to alter androcentric water management practices. But “critical awareness” is still a new notion in development, and particularly in water research and development. Researchers concluded that increasing women's participation in decision-making bodies for natural resource management requires raising crucial knowledge among women and men, as well as support organizations such as the national government.

About the coping mechanisms of urban women, the impact of women fetching water, and the quality of water during periods of water scarcity on women's health in the Kumasi metropolitan region, Ghana is examined in a study. The findings show that women would prioritize their husbands in the case of water scarcity. They would make sure their spouses' and other members' water requirements were satisfied before attending to their own. As a result, women are more likely to be affected especially their health, income, and education (Buor, 2003).

2.2.5.4 Women, Sanitation and Hygiene in Urban slums

According to a study aimed at measuring sanitation-related stress conducted in Odhisa, India, it was noted that sanitation includes bringing water, washing, bathing, menstruation management, and changing clothing. The researchers argued that rural women face three sorts of stress during these activities: environmental, social, and sexual (Sahoo et al, 2015). The crisis is equally true for women living in urban slums around the world. Menstruation and the issues around MHM make women and teenage girls vulnerable in urban slum situations. This involves access to safe water, private spaces for washing, bathing, and changing menstruation materials, and sanitary disposal mechanisms (Goddard & Sommer, 2020). The researchers further addressed that there is a limited but growing amount of research on menstruation and its management in urban settings, but those are not focused on urban slum contexts. In sum, They concluded that there is a considerable vacuum in the research on the convergence of water and sanitation systems with menstrual management in resource-poor urban slums. The existing research on MHM ignores the needs of marginalized people living near but not within formal urban structures.

Further, Physical ability/mobility, distance, route location and condition, facility design, and an insufficient number of toilet stalls are all barriers to women's access to safe toilets which are usually viewed as the solution in communities where individuals lack individual household latrines in urban slums. Kulkarni, O'Reilly, & Bhat (2017) researched Pune and Jaipur of India to capture the experiences and vulnerabilities of urban poor women due to inadequate sanitation. The findings depict women dealing with sanitation-related psychological stress amid multifaceted inequities such as gender, class, caste/ethnic/religious, and economic inequality, all of which contribute to social and political disadvantages. What's more, women's experiences of violence and abuse connected to poor sanitation are influenced by intra-household and intra-slum interactions of gender, caste, and marital status. Skin infections, diarrhea, urinary and reproductive system infections, nausea, vomiting, and other diseases affected the ladies. As well as the more visible and immediate hazards to physical health, mental and emotional health is impacted. In both Jaipur and Pune, women complained about harassment such as men's were watching during open defecating as public toilets were broken, they pass comments and such forms of teasing. The researchers believed because of social taboo, cases of sexual harassment and rape are underreported but they do exist in the urban slums due to unsafe sanitation places.

Stress, trauma, shame, worry, embarrassment all psychological stresses were described by women as they reported many of them to try to avoid going to the toilets of the slums in the fear of teasing and staring by men who group there day and night. They try to use the toilets of their household owners where they work or other places as much as they can to avoid risks of harassment. Researchers show a striking aspect of women's coping mechanisms. They try to keep bodily functions under control so that urination and defecation are as few and as safe as possible. When they find no one to accompany them to the public toilets or defecation sites, they eat less at night, avoid too much food and drink spicy foods, and even stop bowel function as necessary using anti-diarrhoeal medications (Kulkarni, O'Reilly, & Bhat, 2017).

2.2.5.5 Significance and urgency of women's participation in water decision making

Water decisions are inherently gendered and generally controlled by strong males in society, according to water and gender scholars. Even when participatory development aims to increase inclusiveness, this dynamic has resulted in what Agarwal (2001) calls "participatory

exclusion.” Androcentric norms and traditions often restrict women's engagement, turning it into "tokenistic participation" or "paper participation"(Udas & Zwarteveen, 2005; Mandara et al., 2017; Satyal et al., 2019; Bhattarai et al., 2021).

Scholars argue that gender equality is also impacted by power relations and politics (Agarwal, 2010; Nightingale, 2011; Sultana, 2017; Adams et al., 2018; Bhattarai et al., 2021). Aside from being connected with elite homes or serving as spouses of local leaders, women active in decision-making processes are associated with elite households (Bhattarai et al., 2021). The 15 case studies in a UN handbook illustrate best practices for ensuring communities' long-term access to clean drinking water and sanitation by involving men and women as critical stakeholders. Case studies from 14 nations in Africa, Asia, South Asia, Latin America, and the Middle East are included. They demonstrate, from a gender viewpoint, what occurs when communities get interested and actively engaged in tackling challenges linked to clean water and sanitation. It shows practical examples of gender mainstreaming that prioritizes the concerns of women who have primary responsibility for water and here they are not only acknowledged but also become a part of the solution. (UN, 2006). Therefore, a key issue in international development policy and practice is how women from lower socio-economic backgrounds can successfully influence decisions as indeed they are the primary users of water-related activities and it should be highly implemented in water management decisions (Cantos, 2009; Yadav & Lal, 2017; Bhattarai et al., 2021).

2.3 Theoretical Framework

The theoretical framework shows how the gender-water relationship is shaped and rearticulated due to the lack of ACD in water (here ACD stands for Access, control, and decision making). It shows the impacts on women are reproduced in multi-layers. From a first glance at the matter, Spine damage, body ache, urinary Infection, pregnancy difficulties, rape, verbal and physical attack, Poor MHM these issues are identified within the gender-water relation. But the Psychosocial Stress, additional workload, extra working hour, prioritizing others ‘water needs are also part of the urban gender-water dynamic. Last but not the least, from a critical view, feminists and researchers identified Individual coping mechanisms (Body discipline, minimizing water usage, tolerance for violence), Girl’s dropout, Reduced Participation (in leisure and productive activities) as part of women’s struggle and day to day lives.

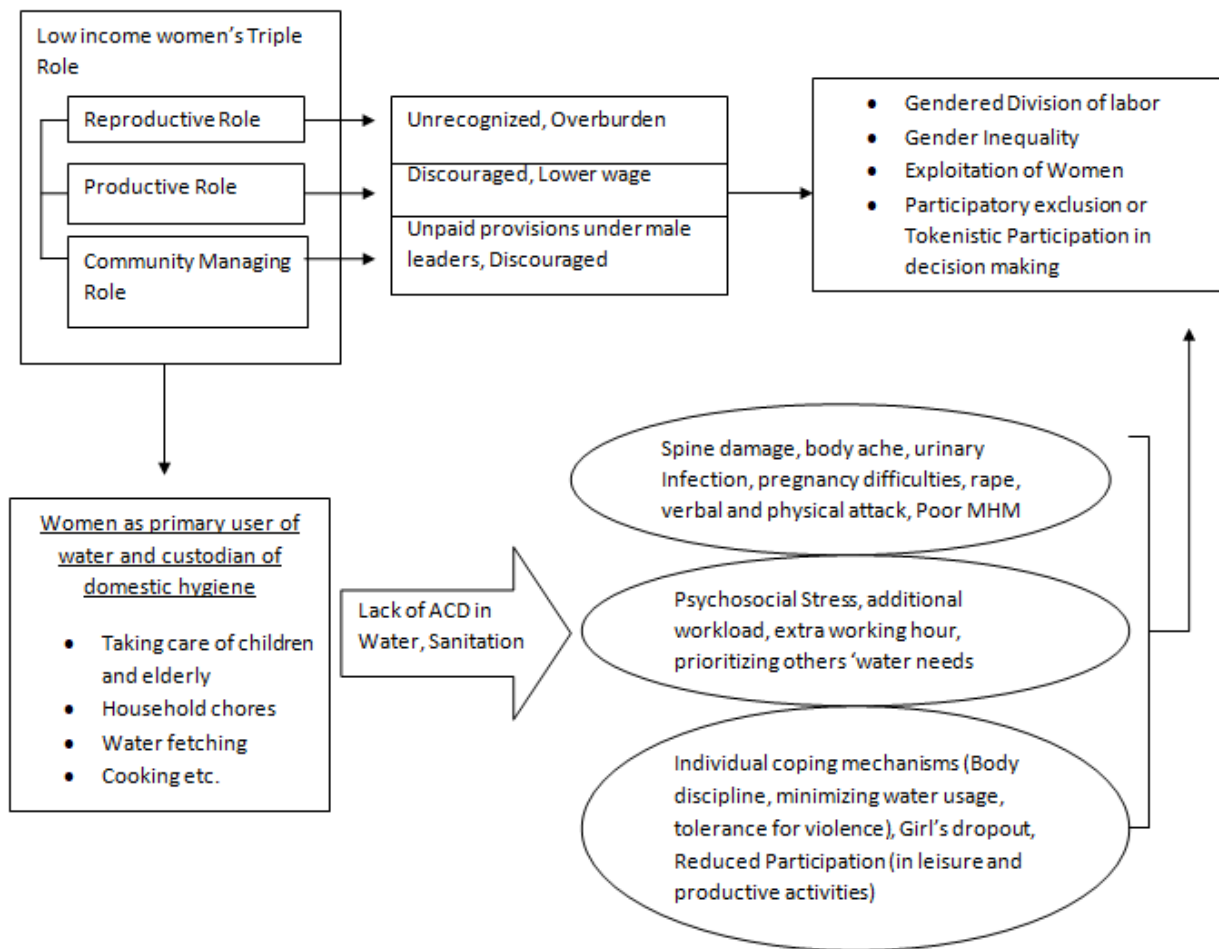


Figure 2.2: Theoretical framework

CHAPTER THREE

METHODOLOGY

3.1 Study Design

Due to the complex and multi-layered nature of urban water inequality in Bangladesh (Sulley, 2018), this study has employed a mixed-method approach, which combines qualitative and quantitative methodologies in a single investigation that is efficient in capturing the circumstantial understanding of the research problems. This approach aids in the qualitative understanding of the complicated phenomena and explains those using numerical data, data visualization, and basic statistical analysis (Afrin & Islam, 2021). Primary data was collected in December 2021. Data for this study were collected through a semi-structured questionnaire survey, three focus group discussions, and qualitative observations.

3.2 Study Area

To explore the gender-water dynamics of the urban poor women in Bangladesh, this study considers the case of Dhaka city as among all other cities of the country, Dhaka has the highest amount of slums (BBS, 2015). The three locations of this study are Modinabag Khalpar Bosti, Modinabag Khazar Building Bosti, and Maniknagar Cumilla Potti of DSCC.

3.3 Sampling and Selection

3.3.1 Sampling Method

This study has employed purposive sampling which is defined as “*A nonrandom sample in which the researcher uses a wide range of methods to locate all possible cases of a highly specific and difficult-to-reach population*”, and used in exploratory research or field research of qualitative method (Neuman, 2006). Moreover, the researcher aimed at exploring particular types of cases for an in-depth investigation to gain a deeper understanding of the gender-water relation in the slums. Hence, it is not the purpose of the study to cover a wide range of populations, rather the purpose is to reach out to the highly specific target group- urban poor women. Therefore, This study has selected participants purposively selected based on their availability and willingness to be interviewed during the data collection period.

3.3.2 Sample Size

A total of 72 urban poor women of different age groups were selected from the study areas based on the participant's availability and their willingness to participate in the interview and FGDs. 31 of the participants were from Modinabag Khalpar Bosti, 25 from Modinabag Khazar Building Bosti, and 16 from Maniknagar Cumilla Potti. In addition, Three FGDs were conducted in each of the slums. Below the chart shows the count of Participants from the study areas.

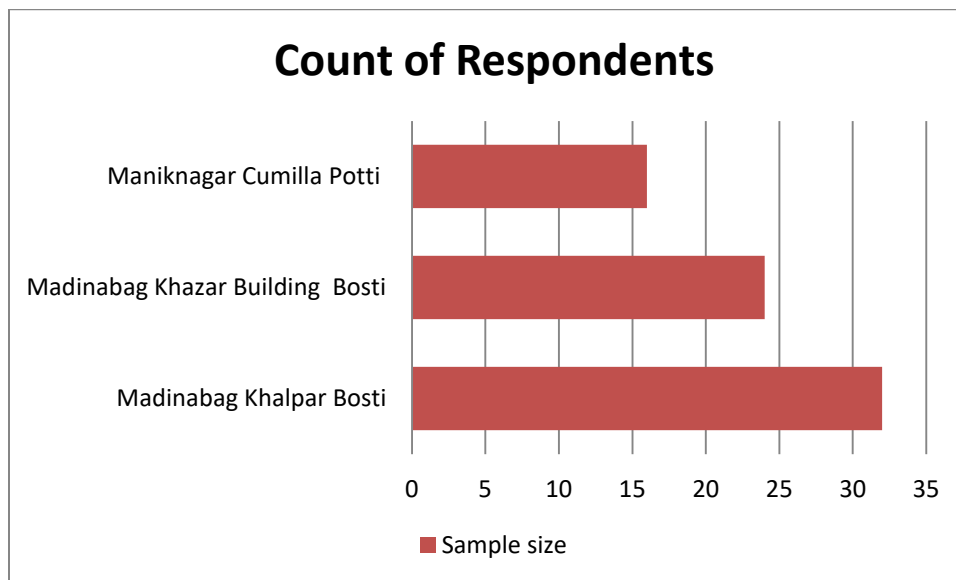


Figure 3.1: Count of Respondents from the study areas

3.3.3 Data Collection

Data for this study were collected through a semi-structured questionnaire survey (N= 72), three focus group discussions, and qualitative observations as follows:

3.3.3.1 Interview

The study was conducted through a semi-structured questionnaire survey among the participants face to face. They gave the participants freedom, flexibility, and range to express their views, and hence it was possible to extract more information from them. Semi-structured interviews allow for more flexibility for people as they can respond to questions on their terms rather than on the parameters of a structured interview (Langford & May, 1994). The interviewer had to interact intensely with the participants to explain complex parts of the questions to them

and also, to prepare them for sensitive questions. Hence, the researcher chose a semi-structured questionnaire.

3.3.3.2 Focus Group Discussions

Three focus group discussions were held at each of the study areas. There were 8 participants in each of the first two FGDs and 5 in the last one. Focus group Discussions are the type of research technique in which participants are interviewed informally in a group discussion context (Neuman, 2006). He further stressed that FGDs feel people empowered particularly in explorative action-oriented research initiatives. In addition, Survey researchers have a different outlook on how individuals discuss survey issues. The slums are temporary settlements as the threat of eviction was common in all of them. Hence, the three slums do not have particular specific demographic information about household sizes, total households, etc. FGDs were highly influential to get these basic pieces of information as participants queried one another and confirm the actual information which facilitated the research process.

3.3.3.3 Qualitative Observations

Qualitative observations are when a researcher collects field notes on people's behaviors, activities, interactions, dialogues, and discussions during the study, as well as the physical settings at the study site. (Afrin & Islam, 2021). Neuman (2006) emphasized that these observation notes are influential to incorporate all facts and intricacies of what the researcher heard or observed in a field site, and are written in such a way that numerous interpretations are possible through brainstorming and analysis of them later.

Hence, this method was utilized by the researcher to gain in-depth knowledge about unique water experiences, specific events of the participants' lives as well as to learn details of their hygiene practices and concerns through their dialogues and behaviors.

3.4 Data Analysis

Thematic analysis and descriptive statistics were used to analyze quantitative and qualitative data. The conclusions from both data sources were combined and expanded, and the data from diverse sources was triangulated and validated. Thematic analysis and descriptive statistics were developed by using data extracted from the questionnaire survey. The information

gathered during focus group discussions and qualitative observations was utilized to enhance the thematic analysis (Afrin & Islam, 2021).

3.5 Ethical Consideration

Strict ethical standards and confidentiality have been maintained by the researcher throughout the study. Voluntary participation was ensured by informing the participants about the researcher and her affiliations, the study description, and the research objectives. While conducting the survey, the participants were not provided with any monetary benefit. They have been assured that no harm or benefit may happen to them. A proper referencing system has been used while quoting and citing acknowledging them. Plagiarism was prohibited during the study. The statistical data and website data that were utilized in the study process are provided with a source citation and needed website link.

3.6 Limitation of the Study

Being one of the largest and fastest-growing megacities of the world, Dhaka has been changing its multidimensional pattern of urban poverty and slums, therefore, gender inequalities rapidly. Through studying three slums of the city, this study seeks to make generalizations about the urban slums of Dhaka. Although there are some common patterns of womens' relation with water in other urban cities and contexts, still there are some basic differences in political, social, and cultural settings.

Also, water sources, arrangements of formal and informal water supply mechanisms, duration of water cutoffs, womens' demographic features are generalized to some extent in order to conclude. Undeniably, a comparative analysis among Dhaka slums on a broader scale could be beneficial to capture a wider scenario, but it is beyond the scope of this thesis.

Furthermore, as this study has taken 72 individual urban poor women living in the slums as the sample, an obvious question may arise which is how representative the sample is where millions of women live in thousands of slums in Dhaka. Well, there were some obvious constraints, namely, time and resources available for the thesis. The sample is very small, but being an undergraduate student, the researcher had few resources for the study. In addition, The target group does not stay at home for most of the day as most of them work outside. And those who stay at home, most of them do not have adequate information about the basic demography

of the slums. Being illiterate and being generally suspicious about the research purpose, they were hesitant to open up to the researchers. Hence, the collected data was again and again verified to be sure of the authenticity.

Further, the quality of the data collected is influenced by the interviewer's experience, abilities, and dedication (Kumar, 2003). There's also the possibility of researcher bias. What's more, obtaining trustworthy data on the study issue might be challenging if there are a limited number of participants, as opposed to the quantitative technique, which includes a larger number of participants and therefore, in certain cases, can produce more far-reaching and reliable data findings.

CHAPTER FOUR

FINDINGS OF THE STUDY

4.1 Introduction

This chapter will gather the findings from the field study collected through primary data, focus group discussions, and subsequent data analysis. First of all, the Socio-demographic characteristics of 72 respondents are shown. Slum geographies, conditions of water facility, and sanitation spaces are depicted afterward, followed by the exploration of the gender-water dynamics in the daily lives of the respondents. By analyzing the data and qualitative observations, the finding section of this study is divided into seven themes. The seven themes identified by the extensive thematic analysis are:

- a) Workload
- b) Extra working hours and loss of life opportunities
- c) Physical and mental health
- d) Setting priority: Placing others first
- e) Conflicts and Quarrels
- f) Menstrual hygiene and lack of personal space
- g) Additional vulnerability during accidents and individual strategies during water scarcity.

4.2 Profile of the Respondents

Table 4.1 represents the background characteristics of the respondents. The sample manifests a higher proportion of females in the age group 15-30 as compared to other age groups. There were 7 respondents below 15 and only 4 respondents were above 60.

Profile	Frequency	Percentage
Age (years)		
<15	7	9
15-30	44	61
30-60	17	24
>60	4	6
Educational Attainment		
No schooling	46	64
Below Class V	17	24
Class V - VIII	7	9
Class IX to X	2	3
Marital Status		
Married	50	70
Unmarried	9	12
Abandoned	4	6
Widowed	7	9
Divorced	2	3
Occupation		
Day Laborer	11	15
Domestic Helper	33	45
Hawker	4	6
Housewife	11	15
Saleswomen	2	3
Student	7	9
Shopkeeper	4	6
Household Head		
Male Headed	57	79
Female-Headed	15	21
N = 72		

Table 4.1: Profile of the respondents. Source: Authors' calculation based on fieldwork.

From the findings, it is projected that 64% of the respondents were illiterate and 24% had primary education. Further, 70% of the women were married, 12% unmarried, 9% were widowed. 6% of the sample were abandoned by their husbands and 3% were divorced. There was a variety of occupations of the respondents. The majority of them (45%) were domestic helpers. Last but not the least, 79% of respondents were from MHHs and only 21% were from FHHs.

4.3 Slum geographies, conditions of water facility and sanitation spaces

All three of the slums were built on privately-owned land where water, electricity, cooking, and sanitation facilities were provided by the landowners. There are multiple landowners in each slum who have built small and big houses on their private lands where the residents of the slums live as tenants. Now the basic geographies of the study areas are discussed:

The Modinabag khalpar bosti is built on the Manda canal. The landlords have used bamboos, woods, and tins to create separate houses on the bosti. There are a total of 4 big houses of different sizes with the capacity of 60 households living there. But during the research, 44 households lived there as one of the big houses had given sudden notice to vacate the room. The landlord is going to break the house and give it to a real estate agency. There are narrow passages made of bamboo to move inside the bosti which are indeed risky as right under this fragile settlement is the canal.

The Modinabag Khazar Building Bosti is of the same pattern. But here most of the houses are made of papers and polythenes, comparatively the rents of these 'jhupris' are low. There were 83 shanties and about 66 households living in those when the researcher counted.

Maniknagar Comilla Potti was a big slum with nearly 500 households living in similarly patterned shanties. But there was a fire accident in February 2021 which resulted in almost destruction of the slum as over 220 shanties were gutted in a fire (Shanties burnt down in fire, 2021). After the accident, the landlords are giving the lands to real estate agencies which threaten the families living there. During the study, there were only 34 families still living in some of the old remaining shanties.

There was different kind of facilities for different houses in all of the slums. For example, some landlords had installed one hand-pumped tubewell, built two toilets for men and women, and provided two gas ovens for the tenants. Depending on the size of the house and the number of tenants living there, congestion occurs daily. But for the smaller houses, with the same facilities provided by the landlord, there is less congestion and competition over these facilities. Tenants have to pay the rent of the accommodation. Other service facility bills (water, electricity, in some houses- gas bills) are paid by the landlords. DWASA covers all the study areas through a water pump at Cumilla Potti and formal-informal line extensions of DWASA water points are utilized by landlords. Common modes of the water supply, cooking, and sanitation space options available to dwellers of the study areas are shown in chart 4.2 below:

Name of the Slum	Common modes of (domestic) water supply	Common modes of cooking facility	Common modes of toilets
Modinabag khalpar bosti	Hand operated tube wells by landlords, DWASA pipelines	Gas ovens and a few clay ovens	Separated shared toilets and bathing space for men and women
Modinabag Khazar Building Bosti	Hand operated tube wells by landlords	Clay ovens and a few gas ovens	
Maniknagar Comilla Potti	DWASA water pump, Hand operated tube wells, informal extension of DWASA lines	Gas ovens and a few clay ovens	

Table 4.2: Common modes of the water supply, cooking, and sanitation space options available to dwellers of the study areas. Source: Fieldwork information.

The researcher found that the overall condition of water and sanitation of the study areas are comparatively better than many other slums of Dhaka. All of the respondents confirmed that water cut-offs or unavailability of water does not happen daily, but cut-offs occur from time to time. During cut-offs, they go to other houses in the slums to collect water or to use toilet

facilities. In addition, Slum dwellers of Comilla Potti can also collect water from nearby DWASA water pumps during the water crisis, standing in a queue.

Complaint about water	Frequency	Percentage
Iron	18	25
No Complaints	54	75
N=72		

Table 4.3: Respondent's responses about the quality of the water

When they were asked about what they do about the presence of iron in water, the women said they try to boil the water as this is their only option available. 13 of the respondents confirmed they do not boil water to save woods in clay ovens. One respondent from Modinabag Khazar Building bosti said:

There is a rusty yellow color in the water sometimes, not always. I used to boil water for a long time when I had gas in my previous house. Now I cannot afford to boil water using woods.

4.4 Dynamics of Gender-water Relation

4.4.1 Workload

4.4.1.1 Gendered Division of labor

This study's findings show that urban poor women are the primary users and managers of water-related activities including cooking, fetching water from the common water source, doing household chores. All of the respondents expressed that the wife, mother, and daughters are in charge of water fetching and other household chores daily. This study asked them if the male members of the family help them in water fetching and their responses are shown in chart 4.4:

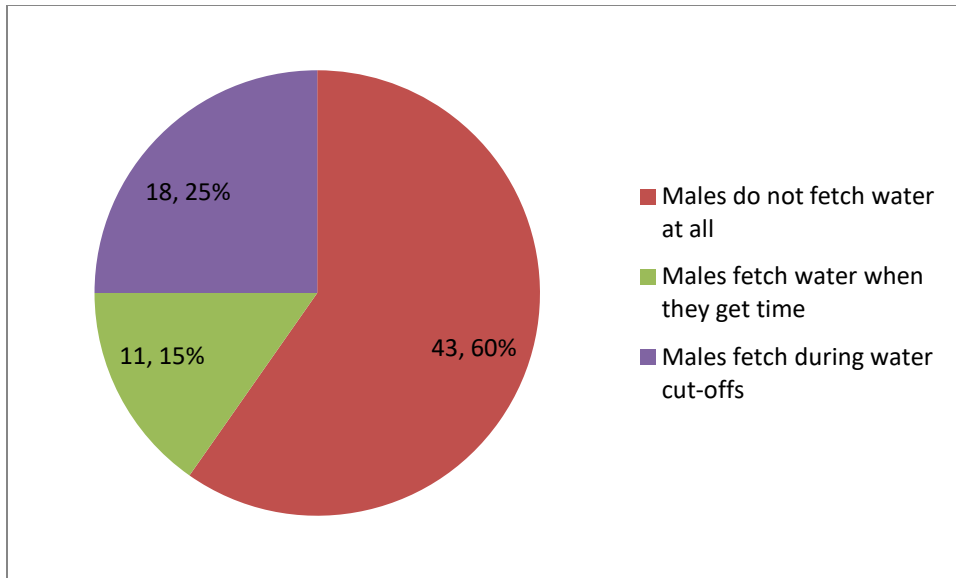


Figure 4.1: Shared water fetching responsibility of male members

Among 72 respondents, 60% of women denied any affiliation with men in fetching water in any case. 15% of them responded that the male members fetch water whenever they get time. 25% of the women acknowledged the male members assist in fetching water during water cut-offs. This is because the narrow bamboo passages (in Madinabag Khalpar bosti) and distances between houses make it difficult for women to carry water. As one respondent from Madinabag Khalpar bosti states:

If water is cut, I request my husband to fetch water from others' houses. He sometimes listens, sometimes not. Also, he does not reside in the home during the daytime. It is difficult for us to carry buckets of water through these bamboo passages.

When they were asked the reasons behind water fetching and household chores being women's sole responsibility of the family, women projected many reasons such as men work outside, they do not have time, they are unwilling to help, or think that this is 'woman's work' etc., indicating towards the gendered division of labor in the patriarchal society.

A compelling factor has been revealed as respondents informed that other dwellers do not often welcome men's involvement in these related works either. One housewife and pregnant respondent from Madinabag khazar building bosti said:

My husband used to stand in line for water, cooked, and helped me in household chores. I never go to other houses to fetch water. But people began to call him names for helping his wife which irritated him. Now I am pregnant and it's getting tough to stand in lines for water in the morning. Because of their mockery and taunts, he pours buckets of water at night which I use in the daytime.

4.4.1.2 Workload on girls

All of the mothers with girls agreed that girls and daughters-in-law help in household chores and fetching water. However, when asked if the boys help in these domestic works, only 13 mothers replied positively. One respondent from Maniknagar Comilla Potti expressed:

My boys help me with all the works. Being a widow, It was not easy to raise them singlehandedly and now they are married, but still, they carry water and do other works too whenever they are free.

Another respondent from the same slum echoes majority of the mothers:

What will the girls do if they do not learn to manage the family? The boys earn, but even if my girl works outside and earns money, still she will have to take care of the family.

Among 72 respondents, there were 7 who were below 15 and still studying. Based on their responses the study found that girls have to do household chores more or less always because it is expected in the family. One 13-year-old respondent from Madinabag khalpar bosti regretted saying:

My mother became paralyzed a few years ago. Since then I have been managing the family. It's getting tougher to continue studying with so much work to do every day.

Another respondent who is 16 years old and is married, shared her sufferings:

My mother-in-law forces me to cook daily. Nearly 30 families are sharing only two ovens. When I go to cook, senior women often tell me to come later. I try to negotiate, sometimes we quarrel. But then they complain to my in-laws and they scold me for being 'jhograitta' (quarrelsome).

4.4.1.3 Workload of taking care of the elderly, children and sick members

Time spent on Unpaid		
care work daily	frequency	Percentage
>3 hours	15	21
4 hours or more	16	22
5 hours or more	23	32
6 hours or more	11	15
7 hours or more	7	10
N=72		

Table 4.4: Time spent on unpaid care work daily on average

It is overwhelming that 32% of the respondents spend 5 hours or more of their day doing all the household chores including cooking, washing dishes, cleaning the house, washing clothes, taking care of the elderly and children, fetching water etc. 22% spent 4 hours or more and there were 10% who had to spend more than 7 hours on average on these works.

This study found that Waterborne diseases, especially diarrhea, and typhoids are the most common in the slums. Both respondents and their families suffer from these two diseases frequently as reported by them. Besides, Dengue and Malaria are also life-threatening diseases due to waterlogging and an unhygienic environment. One female student from Madinabag khalpar bosti highlighted this issue by saying:

Last year, our whole family suffered from Dengue and my grandmother died. I try to keep people reminded that we live directly over a canal. We have to clean it regularly, otherwise, mosquitoes won't decrease.

4.4.1.4 Workload on women with no male members

Last but not the least, there were some questions directed towards respondents who were heads of the family and who addressed that they live in a FHH. There were 15 FHHs (21%) in this study and their responses reveal that single mothers and women with no male member had to perform the role of primary earner along with unpaid domestic works and management of the household, adding extra burden on them. Their additional concerns are projected in the chart below:

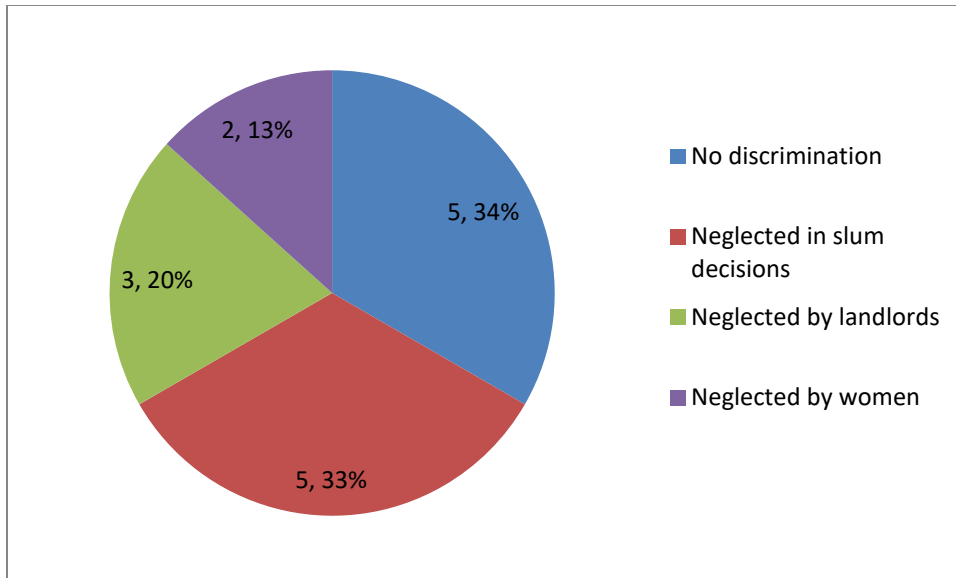


Figure 4.2: Responses of FHHs

5 among 15 respondents expressed that they felt no discrimination for being a part of FHH. 5 of them opposed saying they were neglected in several slum decisions taken by the dwellers. 3 of them informed that often landlords pay little attention to them compared to other MHHs with a male head. In addition, 2 of them highlighted the issue of being neglected by other females in accessing the facilities and in terms of decision making.

4.4.2 Extra working hours and loss of opportunities

4.4.2.1 Working hours on water-related activities

This study's findings show that urban poor women have to spend a larger share of their day waiting for their turn to cook, bath, or fetch water. One woman who is living in the Madinabag Khalpar bosti for over 8 years said:

Thanks to Allah we don't have frequent water cut-offs. It would have been 'morar upor kharar gha' (to pour water on a drowned mouse)! I have to wait for 30 minutes daily to fetch water. We are 38 families in this house and there is only one tube well.

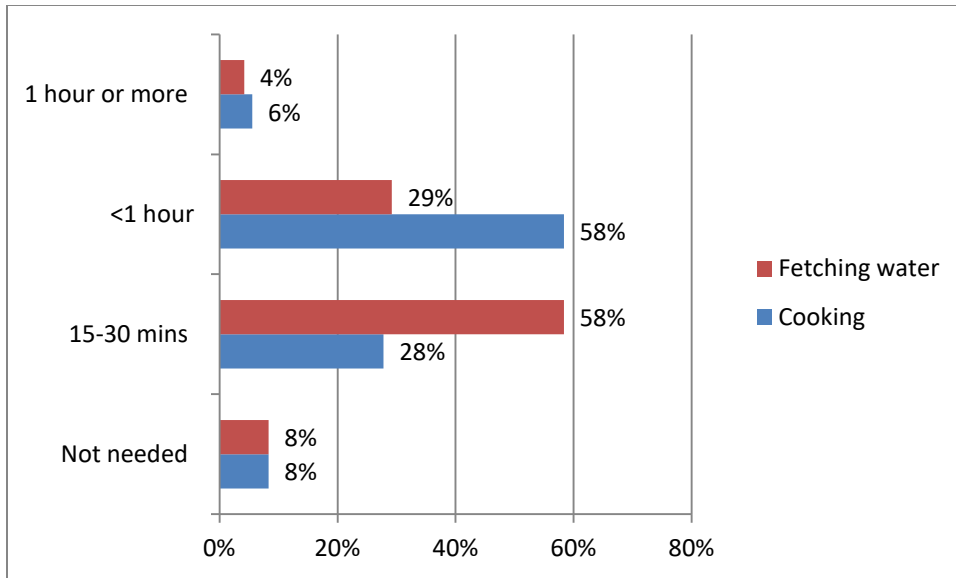


Figure 4.3: Time spent in waiting on average daily

Because several households share a cooking space or water source, daily the women have to wait for their turn in lines. Though it depends on the time and varies from day to day, according to this study, the majority of the respondents (58%) have to wait for 1 hour or more on average to cook daily meals. Besides, 58% of them spend 15 to 30 minutes daily to fetch water. The respondents have shared their unique strategies to lessen this waiting period. They apply strategies such as: keeping an eye on the tube well or cooking space all the time to find it unoccupied, avoiding the facilities in peak hours, arranging their schedules after the afternoon, cooking at night, etc..

4.4.2.3 *Loss of life opportunities and leisure*

According to a respondent who is a hawker from Madinabag khalpar bosti:

It's like there is a clock in my head that is telling me to do everything on schedule. Sometimes I wish to sleep early after all day's hard work. But I have to cook meals at night every day.

The respondents also revealed that, other than losing their opportunity of leisure and taking rest, they could utilize this lost time in other productive activities as the researcher asked a hypothetical question, what they would do if this time could be saved daily. Some common responses were: to work more, to learn to recite Quran, to learn to sew dresses, to make

homemade pickles, to teach children, and many more wishful thoughts. One respondent from Madinabag khazar building bosti said:

I would take my son to his Madrasha with this time. It is far from here and I worry every day.

These kinds of responses highlight women's vulnerability from an emotional aspect.

4.4.3 Physical and mental health

Needless to say, the findings show how the women suffer due to long working hours inside and outside the home. They expressed body ache, back pain, and knee injury for working restlessly. In addition, Standing in lines, doing everything in schedule day after day results in profound physical and mental stress. One respondent oaged 63 from khalpar bosti shared an incident:

The landlords have a thousand excuses to delay repairing these passages as these are common facilities. Each of them wants the other to fix it and we poor people have to suffer. On that day, my toilet was broken too. As I was coming to another house for using the toilet, I lost balance and broke my leg.

Turns out, these types of accidental incidents are not uncommon at all. The children are mostly victims of these types of accidents such as falling in slippery toilets, breaking legs etc. But the study finds that the urban women were the second sufferers of these accidents. 73% of the respondents acknowledged they have these types of accidents at least once.

4.4.4 Setting priority: Placing others first

The researcher had a question about women's prioritization in accessing and using the bathing, toilet, and other facilities. All 72 of them acknowledged that they prioritize the needs of other family members over themselves. Their reasoning is shown in table 4.5.

Prioritizing others: reasoning	frequency	Percentage
Sick aged members need the facility urgently	13	18
They are men, they are Short-tempered, they get irritated	16	22
Because men work outside, we stay at home	15	21
Children go to schools, we stay at home	9	13
This is how it works	19	26
	N=72	

Table 4.5: Prioritizing others: reasoning

19 of the respondents (26%) thought this is how it works. Their exact phrases were ‘emoni to dekhe ashchi choto theke’ (this is how I have seen from my childhood), ‘etai to niyom’ (this is the rule), ‘chelera meyeder agei thake shobkichute’ (men always gets priority over women). 16 of the 72 respondents (22%) raised the issue of men being accustomed to getting priorities and if they do not, they get irritated and angry. To quote a day laborer woman from khazar building bosti:

They are men, they are short-tempered naturally. You have to organize everything in front of them, be it the lunch or other facilities. Otherwise, my husband starts to swear at me. I work outside all day, I am tired too, but no one gets it.

15 of the women (21%) think men work harder than them, men work outside and they deserve to be prioritized first. 11 of these 15 respondents are housewives. Here the tendency of housewives undermining their contribution can be traced.

4.4.5 Conflicts and Quarrels

‘Who got first in the line’ is a common issue for quarreling. There were several emotional divergences observed from their responses, as goes some of their quotes:

‘Mukh Kalakali’ (a little conflict) is a common thing when women wait for their turn to cook. But we do not take these into the heart. Women forget these easily and co-operate with one

another. I live in a smaller house with 5 other families. Hence, it is easy for me to finish works early. (Respondent from Khazar building bosti).

Respondents informed that the landlords delay in repairing toilets, tube wells, pipelines, and other facilities which further burdens women. They have to go to others' houses to collect water or use sanitation facilities.

Naturally, some of the people will not like others coming and making traffic in their spaces. Already so many people, hence, when one toilet breaks; we all have to go to other houses. We go to different houses as much as possible to avoid congestion in one place. (Respondent from Khazar building bosti).

Maniknagar Comilla Potti's women can fetch water from the nearby DWASA pump. But here the respondents asserted that the comparatively rich share of the population breaks the line and it upsets them. Sometimes, severe quarrels took place regarding this water fetching.

Another dimension of conflict over water is favoritism and special treatment. 59% of the respondents stressed that there are some families and male members who are affiliated with local political leaders. They get special facilities from the landlords regarding water and other facilities. Also, relatives and acquaintances of the landlords get some facilities. One respondent from Khalpar bosti said:

A woman is using the open space for planting vegetables. We used to use that space for cooking in the open air when we are in crisis. But she is landlady's cousin, what can we say.

4.4.6 Menstrual Hygiene and lack of personal space

This study discovers that the majority of the respondents (68%) felt uncomfortable going to a shared water source and sanitation facility. In most of the houses, common toilets are situated side by side, one for males and one for females. Women provided common reasons follows by:

- a. Some men stare when women go to the toilet which makes women uncomfortable.
- b. Sometimes men pass comments and try to act 'too friendly'. Most of these men were noted to be guests/outsideers.

- c. The shared space of bathing for males and female makes women feel insecure about their privacy. Sometimes their privacy is breached. One of the respondents of khalpar bosti shared a bitter experience of hers:

One time a teenage boy who was a guest in another family got on the top of a bucket to watch me bathing. I saw and I shout out loud. Women's bathing space is just next to the tube well and hence, he took advantage of the situation.

Another respondent from Khazar building bosti expressed a similar story:

I discovered one day there is an eye on a hole made by someone I don't know. It shook me so much I could not speak at that time and that man left. Whenever I enter the toilet, still I feel traumatized.

- d. 78% of the respondents use washable pieces of cloth for menstrual management. They agreed it is highly uncomfortable and difficult to wash and dry those because menstruation is kept taboo in the eyes of the people. One respondent from Khazar building bosti argues:

We have to come outside from the toilet keeping the menstrual cloth in hand, there are other people on the premises, it does not feel good.

- e. It is difficult to maintain personal hygiene in a shared bathing space. Respondents said they often choose to bath either very early to get more time for hygiene management.

4.4.7 Additional vulnerability during accidents and individual strategies during water scarcity

The study findings show that women perceived fire accidents as their most common accidents. Two of the study areas, Maniknagar Comilla Potti (in 2021) and Madinabag khalpar bosti (in 2016) had to experience devastating fire accidents. The respondents informed that these accidents and crises make them vulnerable to water suffering, water scarcity, and standing in a long queue. One respondent from Maniknagar Comilla Potti grieved:

When the slum caught fire it was daytime and we were all working outside. We could not save a single straw. The water pipeline was burnt in fire and it was not repaired for 2 months.

We poor people had to sleep on the road for almost 3 months and stand in the water pump line for about 2/3 hours daily.

In addition, it was observed by the researcher that women had some individual strategies to fetch and save water during water scarcity due to accidents. Some common options noted by them are (a) Collecting empty drums, gallons, and bottles from local shops (b) Holding a place in the queue by placing buckets (c) Giving the role of water fetching to the children (d) Sharing food items provided by NGOs with other in exchange of drinking water (e) Minimizing water usage as much as possible.

4.5 Concern of the urban poor women

The key concern of urban poor women is the possibility of further lockdown. The study finds that, 35% of respondents had to spend more than 7 hours daily on domestic chores and unpaid care work during the lockdown of COVID-19 in 2020. 24% said this time was more than 6 hours for them as shown in chart 4.

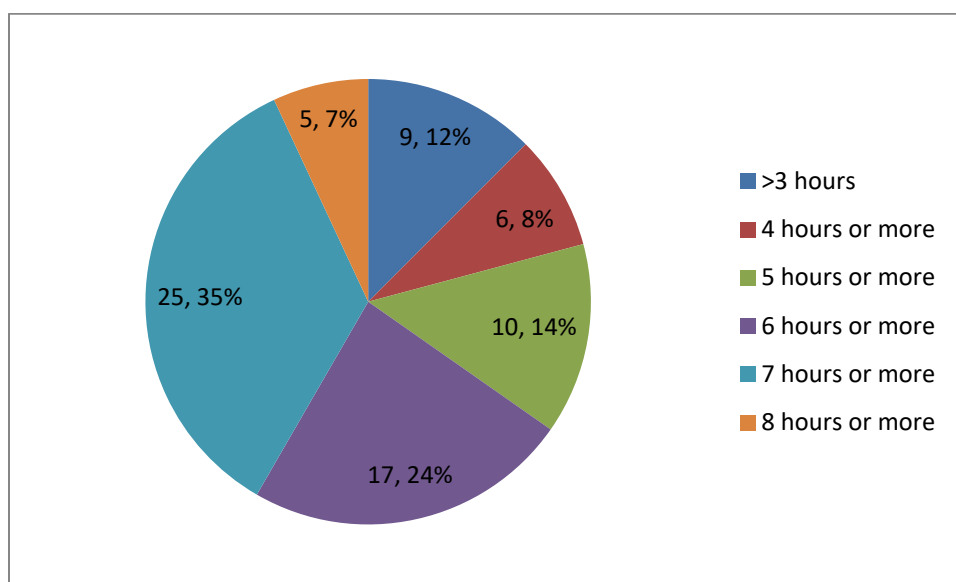


Figure 4.4: Time spent on unpaid care work daily during lockdown

If we compare this data with the previous data of their time spent daily on average days (see Table 4.4), it shows women's workload increases during lockdown for nearly 2 to 3 hours on average as shown in figure 4.5

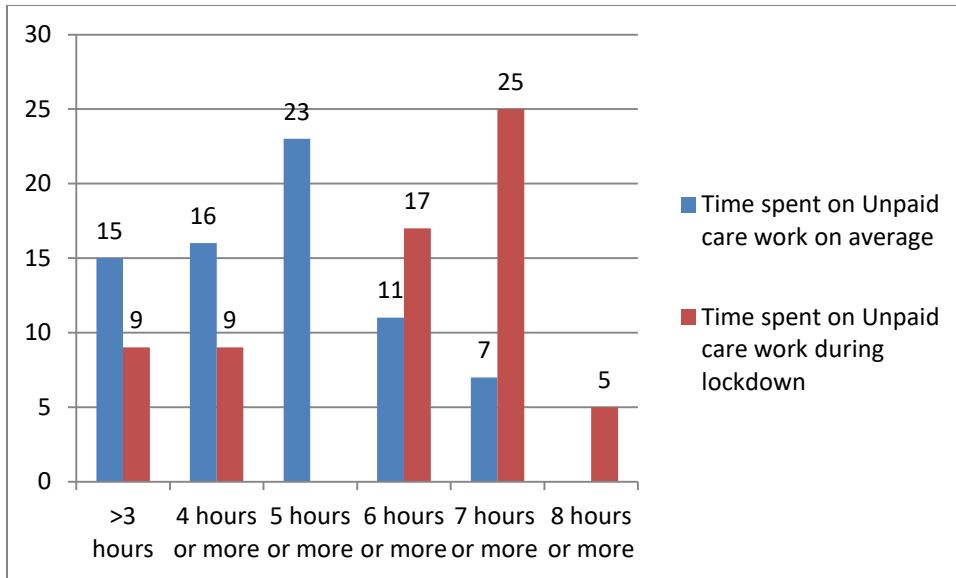


Figure 4.5: Comparison between time spent on unpaid care work on average and time spent on unpaid care work during lockdown

Both the housewives and working women expressed that, in addition to the financial crisis due to lockdown, their daily workload was increased. A shopkeeper spoke her concern:

On average days people do not stay in the daytime. But during the lockdown, it felt so suffocating inside the house, with no money in the pocket. If the government declares lockdown once again, I don't know how we poor people can survive!

Closures of schools during the lockdown aggravate the hardship of unpaid care duties on women, who bear the brunt of the extra work associated with child care. Also, with more dwellers staying home in lockdown, water, sanitation, and other facilities were highly engaged which increased women's working hours.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

5.1 Introduction

This study aims to explore urban gender-water dynamics of water access, control, and management decisions focusing on the everyday water experiences, concerns, vulnerabilities, and coping mechanisms of urban poor women in Dhaka slums. According to the study findings, gender inequality is created by women's relation with water every day and it impacts other aspects of their lives noted from the findings of the study as (a) Workload, (b) Extra working hours, and loss of life opportunities, (c) Physical and mental health. (d) Setting priority: Placing others first, (e) Conflicts and Quarrels, (f) Menstrual hygiene and lack of personal space, and (g) Additional vulnerability during accidents. This chapter presents a cross-evidence-based analysis of the results and policy recommendations based on this background.

5.2 Underlying reasons behind gender inequality in urban slums

Gender Inequality is a multi-layered complex phenomenon that is formed and re/articulated in various environmental, social, and political contexts (Sultana, 2009). Hence, it is impossible to analyze the key factors reinforcing gender inequality from a single level. When a female child is born in a family, she is not only a part of the family, rather she actively is exposed and integrated with the broader society. Since then, several factors rearticulate gendered aspects in her life from different levels. These levels are interactive and intertwined as a change in one dimension has repercussions in other dimensions, affecting the gender structure as a whole. The findings from this study are critically intersected to find out the underlying reasons for gender inequality in urban slums.

5.2.1 Individual level

Individuals' gendered identities and worldviews are established in their mindsets through the socialization of cultural norms, beliefs, and practices. Urban poor women were born and brought up in a patriarchal society where they have seen the gendered division of labor from their birth. When women were asked why men do not participate in domestic chores, the majority of them replied 'this is how it works and many others said this is what they have been seeing from their childhood. This shapes their mindset in a way that they accept that men and

women have different roles to perform in the household and that men have somewhat ‘greater competence’ and superior roles to perform. Here, the notion of men’s hierarchy is re-validated both by men and women on an individual level. This works in both ways and a male child’s perceptions and beliefs are also shaped in a similar way resulting in normalization and revalidation of the gendered division of labor and triumph of patriarchy.

As women accept their roles as primary caregivers and managers of the households, they also conform to the submissive and undermined notion of their competence and contribution. As their gendered role in the household is ‘invisible’ and largely unrecognized in society, they also believe it to be easier and less significant. This researcher observed women, in general, have a positive attitude towards the facilities and living conditions. Most of them do not question the struggles they do every day regarding water, cooking, etc. rather they expressed ‘ki korar ache’ (what is there to do) as if this is the part of being a woman. Lack of education, information, and access to the wider society reinforce these stereotypes and gendered divisions in the households.

5.2.2 Interactive social level

- **Stereotypes and Expectations**

Based on their personal belief and socially accepted gendered behaviors, norms and practices, men and women act accordingly. As they interact within the narrowed social structure with people of their mentality, they altogether resist changes. Examples from the findings show how men and women both unwelcomed men’s involvement in domestic chores. Also, they pass their belief as part of the process to the next generation. Expectations are shaped where girls and women are expected to perform gendered roles and those who do not are seen to be ‘out of place’ (Sultana,) which burdens women.

- **Hierarchal household structure**

In the hierarchal household structure, women prioritize men and other members over themselves as it is expected and normalized. Within the home, power relations often indicate that the patriarch (eldest brother or father) has by far the most say in decision-making and control over activities and actions of other family members. The senior woman (matriarch), who might be the mother, big sister, or grandmother has power over specific tasks, such as assigning the

difficult duty of collecting drinking water or cooking to younger daughters-in-law and daughters. The study finds that girls and daughters-in-law have weak negotiating power in the household. Here, the researcher posits that gender is further discriminated against among women based on their power in the household structure (Sultana, 2009).

- **Social power relation**

Single mothers and women with no male members, comparatively poorer women, younger women, and girls are doubly discriminated as the study finds. They reported being discriminated against by landlords, other male and female members of the slums due to their weak position in the patriarchal social hierarchy. While the comparatively wealthier or better-positioned women are discriminated against in their household structure, they exercise power and discriminate against others in society. In addition, relatives and acquaintances of the landlords also exercise power over others.

5.2.3 Macro-level

Gender inequality further exists within the national and socio-political framework because individuals and societies altogether form the nation. Material bureaucratic systems that disadvantage women, such as mobility structures and limited access to resources, or cultural processes that emerge in organizational ideologies and differing work expectations for men and women, may all contribute to inequality. Widespread cultural beliefs also influence gender-biased policies that further discriminate against women in their workplaces and legal aspects (Scarborough & Risman, 2018). However, this broader scale is partially beyond the discussion of this study. But one aspect of the socio-political conflicts and gender-based violence is found in the study. Women are physically and mentally abused by the males and other females regarding their management of household chores in their families. They are further at threat of verbal abuse, and sexual harassment in society due to their perceived lower position in the societal hierarchy.

5.3 Coping mechanisms of urban poor women in response to the vulnerabilities

The findings from this study do not posit women as victims of vulnerability, rather they are rational, intelligent, and calculative within their limited access, control, and management decisions. The unity and communal participation among slum dwellers is a positive aspect of

their lives. They co-operate and synchronize with one another to reduce working hours, stand in lines, and access water when needed. Women schedule timetables so that they can minimize the pressure on the resources and thus, everyone's time can be saved to an extent. Unique strategies to lessen this waiting period are: keeping an eye on the tube well or cooking space all the time to find it unoccupied, avoiding the facilities in peak hours, arranging their schedules after the afternoon, cooking at night etc.

During crises and accidents in the slums, it was observed by the researcher that women had some individual strategies to fetch and save water during water scarcity due to accidents. Some common options noted by them are: Collecting empty drums, gallons, and bottles from local shops, holding a place in the queue by placing buckets, giving the role of water fetching to the children, sharing food items provided by NGOs with others in exchange of drinking water, minimizing water usage as much as possible.

Women of a house go to different other houses to avoid congestion, they forget experiences of quarrels over water most of the time because they know how interdependent the women of the slums are. Women tend to avoid houses where they feel unwelcomed if they go to fetch water or houses with threats of male gazing and teasing. In addition, they remain cautious of their privacy in the toilet and bathing space as much as possible.

Menstruation is seen as humiliating and taboo in a culture of silence. Women and teenage girls are encouraged to conceal their menstruation and management as a result of such views and practices, which are considerably harder in dense slum settings (Goddard & Sommer, 2020). Within their limit, they try to hide the menstrual clothes from people's eyes. Some women reported dumping menstrual cloths and undergarments at daytime and drying those at night. This practice is certainly harmful to their physical health, but it indicates how subtly they have to deal with gendered aspects in their everyday lives.

Another dimension of coping strategy is the collective household strategy. Some men try to help the women as much as possible, due to public shaming and mockery, some men help wives in times with fewer people's attention. During cut-offs and financial crises, they altogether try to minimize food intake, and water consumption within the household level. But as this study finds out, women have posited they prioritize males and other members over their interests in

using resources. This is also an individual coping strategy, which raises the issue of patriarchy and gender subjectivities again. The reasons behind this self-sacrificing or prioritizing others tendency has its deep-seated roots in the gendered beliefs and wider cultural practices of the society. In sum, these are all women's individual and household level coping mechanisms found from this study which indicates how much these poor women try to bring out the best possible solutions with their individual and household strategies.

5.4 Recommendations

It is high time women actively participated in the decision-making of slum contexts, and urban bureaucracy because they are the primary users of water and the burden of water woes falls the most on them, therefore, their participation should be highly reflected in water management decisions. Women's leadership position and their voice in water provision decisions (in general slum committees, and local municipality and water corporations) are, therefore, urgently needed to be implemented to reduce poor women's vulnerability.

The problem of land and housing tenure, eviction as well as the complexity of urbanization, were explicitly recognized at the national level with the publication of the National Strategy for Water Supply and Sanitation in 2014. Strategy 8 of the strategy paper briefly recognized the significance of gender mainstreaming in water governance and plans for it. Though no significant result has been reflected yet, these strategies have some prospects to reduce gender inequality in water. These strategies are: “(a) Involving women in planning, implementing and operation and maintenance of WASH services, (b) project interventions with equal participation of women and men, (c) increase women representation in CBOs, Water and Sanitation (WATSAN) Committees and other committees involved in the sector, (d) promoting technological options suitable for women of various socio-economic groups and their special needs such as MHM, (e) adopting a gender-sensitive approach in the promotional campaign, and (f) coordinating with related ministries, especially with the Ministry of Women and Children Affairs (MoW&CA), for mainstreaming gender (PSU, 2014).

Likewise, women's invisible and unpaid care works need to be recognized at the national policy level. 43.3 million full-time housewives work an average of 16 hours per day throughout the country. Full-time housewives in Bangladesh work a total of 692.8 million hours every day. Employed women contribute an additional 78.4 million hours per day, working on average 8

hours a day on domestic work, for a total of 771.2 million hours. Governments often undervalue the value of women's unpaid labor, excluding the majority of women's work from GDP and other national wealth measures. As a consequence, women seem to be a net economic drain rather than a valuable addition to other economic activities. By donating their domestic duties for free in the households, women might be perceived as subsidizing incomes throughout the workforce (Efroymson, Biswas, & Ruma, 2007). If the government recognizes women's unpaid work and gives it an economic value there will be three direct benefits. First of all, women and men will recognize women's contribution which will boost women's self-esteem and empowerment. Secondly, gender-based violence and inequality will be reduced to a large extent. Moreover, the study shows COVID-19 lockdowns increase vulnerabilities of the urban poor, especially women, which should be taken into account by the government.

5.5 Conclusion

This study intended to stimulate further research on the urban gender-water inequality in Dhaka slums so that the sufferings of urban poor women can be addressed, their contributions can get recognition in society and their concerns can be heard at the policy level for formulation and implementation of gender-sensitive policies where women's gender needs get the highest priority. Some significant research gaps exist in this emerging gender-water dynamic of urban slums. Urban poor are already vulnerable in the urban settings whereas the gendered dimension of water, sanitation, and health, makes the women living there doubly vulnerable.

Though critical feminist scholars and international development practitioners are shedding light on the urban context, there were very limited scholarships and primary researches on this particular section in Bangladesh. In addition, Some future research agendas were, therefore, identified by this study related to gender-water inequality which is significant to the related policy text and water governance. First of all, this study tried to allude to the urban social power dimension tied to inequality, but it is not explored in detail. Third-party water vendors, squatters, and other settlements' power dimensions and other factors can be explored in detail through primary researches. Secondly, the structure of water governance and the condition of women's representation at the local and national policy level in urban Bangladesh can be explored in detail. Undoubtedly, future research in this sector could set critical awareness, and

the findings can be turned into urban water policy and provision management that is genuinely inclusive of all experiences.

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APPENDIX

QUESTIONNAIRE

(This study explores various forms of gender inequality that urban poor women have to face every day regarding water and sanitation facilities in the slums of Dhaka City, Bangladesh. It also focuses on daily water experiences, concerns, and coping mechanisms of the women and girls living in Dhaka slums. Except as required by law, the information provided in the interview will be kept confidential, and the people questioned will remain anonymous. The data will be used solely for the objectives of this study, the results of which will be included in an undergrad thesis and papers published in journals.

You are welcome to take part in the study. Participation is completely voluntary, and participants can opt-out at any moment.)

A. Identification

QA.1.Name:.....

QA.2. Location:

- ☐ (1) Modinabag Khalpar Bosti
- ☐ (2) Modinabag Khazar Building Bosti
- ☐ (3) Maniknagar Cumilla Potti

B. Socio-Demographic Characteristics

QB1. Age:yrs

QB2. Sex: Female

QB3.Marital status:

- ☐ (1) unmarried ☐ (2) married ☐ (3) widow ☐ (4) divorced ☐ (5) abandoned

QB4. Educational level:

- ☐ (1) no schooling (2) class i-v ☐ (3) class vi-ix ☐ (4) S.S.C ☐ (5) H.S.C ☐ (6)

Bachelor and above

QB5.Occupation:.....

QB6. Years Staying in this slum:yrs

QB7. Living arrangement:

- ☐ (1) household type ☐ (2) non-household type (Skip QB10-QB11)

QB8. Household head type: ☐ (1) male-headed ☐ (2) female-headed

QB9. Household size:.....

C. Questions on overall condition about slum

QC1.Source of Water:

☐ Hand operated tubewells by landlords ☐ DWASA water pump ☐ Informal extension of DWASA lines ☐ DWASA pipeline by landlords ☐ Informal vending

QC2.Who installed and manages the drinking water source?

☐ DWASA ☐ NGO ☐ Landlords ☐ Local Maastans/ Informal Third Party

QC3. Water cut-offs?

☐ Frequent:hours a day/week

☐ Not frequent

QC4.How many families use a water source?

QC5.Who installed and manages the toilets and bathing space?

☐ DWASA ☐ NGO ☐ Landlords ☐ Local Maastans/ Informal Third Party

QC6. How many families use a toilet?

QC7.How many families use a bathing space?

QC8. Cooking arrangement:

☐ (1) having a cooking room (If Yes Answer QC9)

☐ (2) using living room

☐ (3) using open space

QC9.How many families use a Kitchen?

QC10.How is the water quality? What complaints do you have about the water?

QC11.How much do you suffer from Cholera, Diarroheoa, and other waterborne diseases in the slums?

QC12.When someone in the family gets sick, who takes primary care of the patient?

D. Questions on individual practice, allocation of water, and other usages

QD1. Who collects water daily from the water source?

☐ You/other female member ☐ Husband/Male member

QD2. Who collects water during water cutoffs?

☐ You/other female member ☐ Husband/Male member

QD3. When water is cut off, from where do you collect water?

☐ Nearest DWASA Water Pump

☐ Other houses on slums which have water connection

☐ Informal Vendors (Third Party)

QD4. In daily water usage, do you need to stand in a queue/ wait to use the facility?

☐ Not needed ☐ 15-30 mins ☐ Less than one hour ☐ 1 hour or more ☐ up to 3 hours

QD5. During water cutoffs, how long does it take to collect water from the queue?

☐ Not needed ☐ 15-30 mins ☐ Less than one hour ☐ 1 hour or more ☐ up to 3 hours

QD6. In daily cooking, do you need to stand in a queue/ wait to use the facility?

☐ No needed ☐ 15-30 mins ☐ Less than one hour ☐ 1 hour or more ☐ up to 3 hours

QD7. In daily Toilet usage, do you need to stand in a queue/ wait to use the facility?

☐ No needed ☐ 15-30 mins ☐ Less than one hour ☐ 1 hour or more ☐ up to 3 hours

QD8. In daily bathing, do you need to stand in a queue/ wait to use the facility?

☐ No needed ☐ 15-30 mins ☐ Less than one hour ☐ 1 hour or more ☐ up to 3 hours

QD9. If you have children in your family, do they help in fetching water or in cooking? If yes, Who helps generally, the girl child or the boy child?

QD10. Do you think you could do other works with the time you spend waiting for your turn in the queue? If yes, what would you do with that time?

QD11. Do you think the males understand your struggles with the water? Do they help sometimes? If not, what do you think is the reason?

QD12.During water cut-offs, how do you tackle the situation? How do you save or use water at that period in your family?

QD13.During water cut-offs or water crises, does the whole family minimize water usage?

QD14.Do you prioritize men in using the toilet, bathing facilities? If yes, why?

QD15. How is your menstrual hygiene management? Do you face problems for not having personal toilet space? If yes, what are those? And what do you do to minimize those problems?

QD15.How frequent do you have to face accidents relating toilet, bathing and water facilities? Who are the most victims?

E. Questions on Conflicts and emotions

QE1.How is your relationship with the landlords?

QE2.Are you satisfied with their service in repairing water pipes, toilets, and other facilities?

QE3.When you go to other water sources for fetching water/ to use other toilets if yours is unavailable or broken, do you suffer from any kind of verbal or physical harassment from men?

QE4.Do some houses/families have special water services such as Water pipelines? If yes, do they allow you to use their facilities in your need?

QE5.Is there any family who gets special treatment regarding facilities from the landlords? If yes, Why?

QE6.Do you face quarrels or conflicts among yourselves regarding collecting water or using shared space for cooking, toilet, and bathing? If yes, what happens afterwards?

QE7. Do you feel uncomfortable using shared toilet space? If yes, what are the reasons?

QE8. How do you feel about going to other's houses for water during cut-offs?

Thank you for taking the time to participate in the interview.

Date of interview:.....