Violence Against Women and Girls in Relation to Access to Water, Sanitation, and Hygiene Facilities

BY
Pritum Kumar Saha
ID: 221-49-098

This Report Presented in Partial Fulfilment of the Requirements for the Degree of Masters in Development Studies

Supervised By
Md. Fouad Hossain Sarker
Associate Professor and Head
Department of Development Studies
Daffodil International University

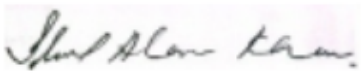
Daffodil International University
DHAKA, BANGLADESH
December 2025

APPROVAL

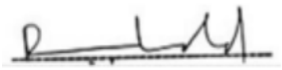
This Project titled **"Violence Against Women and Girls in Relation to Access to Water, Sanitation, and Hygiene Facilities**", submitted by **Pritum Kumar Saha** to the Department of Development Studies, Daffodil International University, has been accepted as satisfactory for the partial fulfilment of the requirements for the degree of Masters in Development Studies and approved as to its style and contents. The presentation has been held on 23 December 2025.

BOARD OF EXAMINERS

Md. Fouad Hossain Sarker
Associate Professor
Department of Development Studies — **Chairman**
Faculty of Humanities and Social Sciences
Daffodil International University



Dr. Md. Iqbal Alam Khan
Visiting Professor
Department of Development Studies — **Member-1**
Daffodil International University, and
Former Director of Research, Proshika, Bangladesh



Mr. Rafi Al Mahmud
Assistant Professor
Department of Development Studies — **Member-2**
Faculty of Humanities and Social Sciences
Daffodil International University

Dr. M. Saiful Islam
Professor
Department of Development Studies — **External Examiner**
Dhaka University

DECLARATION

I hereby declare that this project has been done by us under the supervision of **Md. Fouad Hossain Sarker, Associate Professor and Head, Department of Development Studies.** I also declare that neither this thesis nor any part of this thesis report has been submitted elsewhere for award of any degree or diploma.

Supervised by:

Md. Fouad Hossain Sarker
Associate Professor and Head
Department of Development Studies
Daffodil International University

Submitted by:

Pritum Kumar Saha
ID: 221-49-098
Department of Development Studies
Daffodil International University

ACKNOWLEDGEMENT

I am grateful to and wish my profound indebtedness to Md. Fouad Hossain Sarker, Associate Professor and Head, Department of Development Studies, Daffodil International University, Dhaka. Deep Knowledge & keen interest of my supervisor influenced us to carry out this thesis. His endless patience, scholarly guidance, continual encouragement, constant and energetic supervision, constructive criticism, valuable advice, reading many inferior drafts and correcting them at all stages have made it possible to complete this project.

I would like to express our heartiest gratitude to all the course teachers, Department of Development Studies, for their kind help to finish our report and staff of the Development Studies department.

Finally, I must acknowledge with due respect the constant support of my partner.

LIST OF ABBREVIATIONS

VAWG	: Violence Against Women and Girls
WASH	: Water, Sanitation & Hygiene
WHO	: World Health Organization
IRC	: International Rescue Committee
WSP	: Water & Sanitation Programme
GBV	: Gender Based Violence
NGO	: Non-government Organization
UN	: United Nation
MOWCA	: Ministry of Women and Children Affairs
MDG	: Millenium Development Goal (2000-2015)
DHS	: Demographic Health Survey (Kenya)
UNFPA	: United Nations Population Fund
UNICEF	: United Nation's Children Fund
FSV	: Family & Sexual Violence
NPSV	: Non-Partner Sexual Violence
NPV	: Non-Partner Violence
FGD	: Focus Group Discussion
NFHS	: National Family & Health Survey (India)
VAW	: Violence Against Women
IPV	: Intimate-Partner Violence
WEDC	: Water, Engineering and Development Centre
WSSCC	: Water Supply and Sanitation Collaborative Council
GWA	: Gender & Water Alliance
UNCDF	: United Nations Capital Development Fund
UMN	: Undocumented Myanmar National
UNHABITAT	: United Nations Human Settlements Programme
UNESCO	: United Nations Educational, Scientific and Cultural Organization

ABSTRACT

This study investigates the critical nexus between violence against women and girls (VAWG) and access to water, sanitation, and hygiene (WASH) facilities in urban low-income communities, with a specific focus on Dhaka, Bangladesh. Globally, over 2.2 billion people lack access to safely managed drinking water, disproportionately affecting marginalized urban populations. Women and girls in these settings face heightened risks of gender-based violence due to inadequate WASH infrastructure, such as distant water sources and unsafe sanitation facilities. In Bangladesh, rapid urbanization has exacerbated these challenges, with studies indicating that 85% of women in urban slums experience some form of VAWG, often linked to WASH access. This research addresses the intersection of WASH deficiencies and VAWG, highlighting the role of gender inequalities and socio-economic marginalization in perpetuating vulnerability.

The primary objective of this research is to elucidate the relationship between poor access to WASH facilities and the prevalence of VAWG in urban low-income communities in Bangladesh. It seeks to examine how the accessibility and usability of WASH infrastructure contribute to gender-based violence, aiming to provide evidence-based insights for targeted interventions and policy recommendations. By synthesizing global literature and localized empirical data, the study endeavours to advance understanding of this intersection and promote gender equality, public health, and sustainable urban development.

The study employs a mixed-methods approach, integrating a comprehensive secondary literature review with primary quantitative data collection. The literature review synthesizes findings from academic journals, NGO reports, and international organizations to contextualize the global discourse on WASH and VAWG. Primary data were collected through structured surveys administered in a selected Dhaka slum, capturing quantitative information on VAWG prevalence and WASH facility accessibility. Statistical analyses, including regression and correlation techniques, were used to identify relationships between variables. This dual approach ensures a robust empirical foundation, combining global perspectives with localized evidence.

Preliminary findings reveal a significant correlation between inadequate WASH access and increased VAWG in Dhaka's urban slums. Women and girls face heightened risks of verbal, physical, and sexual violence while accessing distant water sources, communal toilets, or bathing facilities, particularly at night. The study confirms that poor lighting, lack of privacy, and long distances to WASH facilities exacerbate vulnerability. Additionally, socio-cultural norms and economic constraints limit women's ability to access safer alternatives, perpetuating cycles of violence and insecurity. These findings align with global evidence, underscoring the need for integrated WASH and VAWG interventions.

The study's implications are far-reaching, offering actionable insights for policymakers, practitioners, and urban planners to design gender-sensitive WASH infrastructure and violence prevention strategies. By highlighting the interplay of WASH access and VAWG, it advocates for holistic

approaches that empower women and address structural inequalities. Future research should explore longitudinal impacts of WASH interventions on VAWG reduction, incorporate qualitative narratives to capture lived experiences, and extend the scope to rural and peri-urban contexts in Bangladesh. Comparative studies across South Asia could further enrich understanding, fostering regional strategies for safer, more inclusive urban environments.

TABLE OF CONTENTS

Chapter 1: Introduction

1.1. Background

In urban low-income communities, the significance of water, sanitation, and hygiene (WASH) cannot be overstated, particularly in safeguarding public health. According to a report by the World Health Organization (WHO), inadequate access to safe drinking water and sanitation contributes to the spread of diseases such as diarrheal infections, cholera, and typhoid fever, disproportionately affecting marginalized populations in urban areas. In a study conducted by UNICEF, it was found that around 2.2 billion people globally lack access to safely managed drinking water services, with a significant portion residing in urban slums.

Women and girls in these communities are especially vulnerable to gender-based violence due to factors such as limited access to safe sanitation facilities and poor lighting in public spaces. A case study in Nairobi's informal settlements found that over 70% of women experienced some form of gender-based violence, often while accessing water and sanitation facilities.

A survey by the International Rescue Committee (IRC) revealed that in female urban dwellers who lives in the slums are at a risk of violence due to their sexual identify; and the risk grew with longer distance of water sources and toilet from their rooms, especially during nighttime hours.

Understanding the underlying causes of gender-based violence is imperative for effective intervention. Research published in the Lancet Global Health journal underscores the role of entrenched gender inequalities and unequal power dynamics in perpetuating violence against women in urban low-income communities. By addressing these structural issues and promoting gender equality, communities can create safer environments for women and girls.

Experts emphasize the interconnection between access to WASH facilities and gender-based violence. A study published in the Journal of Water, Sanitation, and Hygiene for Development highlights that improved access to clean water and sanitation services can reduce the vulnerability of women to violence by minimizing their exposure to risky situations, such as having to collect water from distant or unsafe sources. Moreover, the Water and Sanitation Program (WSP) reports that investments in WASH infrastructure have a positive impact on women's empowerment, leading to increased participation in income-generating activities and enhanced economic productivity.

In the context of Bangladesh, where rapid urbanization has led to overcrowded slums and inadequate WASH infrastructure, addressing gender-based violence is crucial. A study conducted by BRAC University revealed that a staggering 85% of women living in urban slums in Bangladesh experienced some form of gender-based violence, with access to water and sanitation facilities being identified as key determinants of their vulnerability. Efforts to improve

WASH conditions in these communities must be coupled with measures to combat gender-based violence, thereby promoting the economic empowerment of women.

Ultimately, investing in WASH infrastructure and addressing gender-based violence are not only moral imperatives but also integral to achieving sustainable development goals and fostering inclusive economic growth in urban low-income communities.

1.2. Statement of the Problem

In urban low-income communities, the intersecting challenges of inadequate water, sanitation, and hygiene (WASH) facilities and gender-based violence (GBV) present a pressing and multifaceted problem. Globally, over 2.2 billion people lack access to safely managed drinking water services, with a disproportionate number residing in urban slums (UNICEF). In these marginalized communities, women and girls bear a disproportionate burden of the consequences, facing heightened risks of violence due to factors such as limited access to safe sanitation facilities and poor lighting in public spaces.

Studies conducted in various urban slums, including Nairobi's informal settlements and Dhaka's densely populated areas, reveal alarming statistics regarding the prevalence of GBV. For instance, in Nairobi, over 70% of women reported experiencing some form of GBV, often while accessing water and sanitation facilities (IRC). Similarly, in a survey conducted in a Dhaka slum, a staggering 85% of women reported being victims of GBV, with access to WASH facilities identified as a significant determinant of vulnerability (BRAC University).

The nexus between poor access to WASH facilities and GBV is further underscored by global research findings. According to the World Health Organization (WHO), inadequate access to safe drinking water and sanitation contributes to the spread of diseases, disproportionately affecting marginalized populations in urban areas. Moreover, studies published in the Lancet Global Health journal highlight the role of entrenched gender inequalities and unequal power dynamics in perpetuating violence against women in urban low-income communities.

To address this complex issue effectively, it is imperative to understand the underlying causes of GBV and its relationship with access to WASH facilities. While extensive secondary literature provides valuable insights into the global context, primary research conducted through surveys, such as the one conducted in Dhaka, Bangladesh, offers localized data essential for developing targeted interventions and policy recommendations.

Therefore, this thesis aims to investigate the hypothesis that poor or unimproved access to water, sanitation, and hygiene facilities increases the likelihood of violence against women and girls. By synthesizing secondary literature and empirical data from a survey conducted in a Dhaka slum, this study seeks to contribute to a deeper understanding of

the intersection between WASH facilities and GBV in urban low-income communities. Through rigorous analysis and evidence-based conclusions, this research endeavours to inform policy and advocacy efforts aimed at promoting gender equality, improving access to WASH facilities, and ultimately reducing violence against women and girls.

1.3. Illustration of the Problem

Illustrating the problem outlined in the problem statement requires a depiction of the lived experiences and challenges faced by women and girls in urban low-income communities regarding access to water, sanitation, and hygiene (WASH) facilities, and the consequent risk of gender-based violence (GBV). Let's delve deeper into this depiction:

Imagine a bustling urban slum in Dhaka, Bangladesh, where narrow alleyways are lined with makeshift shelters, and families crowd around communal water sources, often contaminated with waste and pollutants. Within this environment, women and girls wake up before dawn to queue for access to these limited water points, navigating through dimly lit paths fraught with safety concerns. As they make their way to the water source, they constantly glance over their shoulders, wary of potential predators lurking in the shadows.

Upon reaching the water source, women and girls face long queues and jostling crowds, heightening their vulnerability to harassment and assault. Amidst the chaos, disputes often erupt over access to water, exacerbating tensions and increasing the risk of violence. For many, the daily struggle to secure water is fraught with fear and uncertainty, overshadowed by the looming threat of gender-based violence.

Meanwhile, sanitation facilities in the slum are scarce and inadequate, consisting of poorly constructed latrines shared by dozens of families. These facilities lack privacy and hygiene, forcing women and girls to wait until nightfall to relieve themselves in the cover of darkness, further exposing them to the risk of assault. In the absence of safe and accessible toilets, women resort to defecating in open spaces, where they are vulnerable to harassment and sexual violence.

The frequency of violence that is driven by gender identity in urban slums is alarming, with studies indicating that a vast majority of female dwellers have experienced different form of violence within these environments. On or after, verbal harassment to physical assault, women and girls navigate a landscape fraught with danger, where their fundamental rights to safety and dignity are routinely violated.

In this context, the nexus between poor access to WASH facilities and gender-based violence becomes glaringly apparent. The inadequate provision of clean water and sanitation not only jeopardizes public health but also perpetuates cycles of poverty and gender inequality. Without urgent intervention, women and girls in urban low-income

communities will continue to bear the brunt of this systemic injustice, trapped in a cycle of vulnerability and violence.

This illustration underscores the urgent need for comprehensive solutions that address the root causes of gender-based violence and improve access to WASH facilities in urban slums. Only through concerted efforts to promote gender equality, enhance infrastructure, and empower marginalized communities can we hope to create a safer and more equitable future for all.

1.4. Content Analysis

The content analysis conducted within this thesis serves as a comprehensive exploration of the intricate relationship between violence against women and girls (VAWG) and access to water, sanitation, and hygiene (WASH) facilities. By extensively reviewing secondary literature, the analysis delves into the global discourse surrounding VAWG and WASH, synthesizing insights from a diverse array of sources. This includes reports and studies from reputable international organizations such as the World Health Organization (WHO), UNICEF, and the International Rescue Committee (IRC), as well as scholarly articles published in peer-reviewed journals.

Through this rigorous review process, the content analysis illuminates key themes and patterns emerging from the existing body of research. It identifies common challenges faced by women and girls in urban low-income communities, such as limited access to clean water sources, inadequate sanitation facilities, and heightened vulnerability to various forms of gender-based violence. Additionally, the analysis highlights the underlying structural factors perpetuating these disparities, including systemic inequalities, socio-economic marginalization, and entrenched patriarchal norms.

In parallel, the content analysis incorporates primary data collected through quantitative methods in a specific slum area of Dhaka, Bangladesh. This empirical component of the research involves the administration of structured surveys designed to capture quantitative data on the prevalence of VAWG, as well as the accessibility and quality of WASH facilities within the community. By employing standardized measurement tools and statistical techniques, the analysis derives actionable insights from the primary data, complementing and enriching the findings obtained through the secondary literature review.

Through the integration of both secondary and primary sources, the content analysis facilitates a nuanced understanding of the hypothesized relationship between poor WASH access and VAWG. It allows for the identification of context-specific factors shaping the experiences of women and girls in the studied community, while also situating these findings within the broader global discourse on gender-based violence and public health. Ultimately, the content analysis serves as a cornerstone of the thesis, providing a solid empirical foundation for the formulation of conclusions and

recommendations aimed at addressing VAWG and promoting equitable access to WASH facilities in urban low-income settings.

1.5. Scope of the Research

The scope of this research encompasses a comprehensive examination of the intersecting dynamics of violence against women and girls (VAWG) in relation to access to water, sanitation, and hygiene (WASH) facilities within urban low-income communities in Bangladesh. While previous studies have addressed VAWG and WASH separately, this research aims to fill a critical gap in the existing literature by offering a holistic analysis of their interconnectedness within the Bangladeshi context.

Given the scarcity of research specifically exploring the nexus between VAWG and WASH in Bangladesh, this study seeks to contribute novel insights and empirical evidence to the field. By adopting a multidisciplinary approach that integrates perspectives from gender studies, public health, and development, the research endeavours to shed light on the complex socio-cultural, economic, and environmental factors shaping the experiences of women and girls in urban slum settings.

The scope of inquiry includes both secondary literature review and primary data collection. Through an extensive review of existing scholarship, including global studies and localized reports, the research will establish a foundational understanding of the broader context and theoretical frameworks informing the study. This will involve synthesizing insights from diverse sources to identify key themes, gaps, and research gaps.

In parallel, the research will undertake primary data collection through quantitative methods in a selected urban slum area of Bangladesh, focusing on Dhaka as a primary site of investigation. Structured surveys will be administered to collect quantitative data on the prevalence of VAWG, as well as the accessibility, quality, and utilization of WASH facilities within the community. Statistical analysis will be conducted to derive meaningful conclusions and identify correlations between variables of interest.

The scope of research extends beyond mere documentation of challenges to encompass the identification of actionable recommendations and policy implications. By engaging with stakeholders, including local communities, non-governmental organizations (NGOs), and government agencies, the research aims to foster dialogue and catalyse meaningful change in policy and practice. Ultimately, the research seeks to impact to the evolution of gender equality, public health, and sustained development in Bangladesh, with implications for similar contexts globally.

1.1. Objective of the Research

The overarching objective of this research is to elucidate the complex relationship between violence against women and girls (VAWG) and access to water, sanitation, and hygiene (WASH) facilities in urban low-income communities in Bangladesh, with the aim

of informing evidence-based interventions and policy recommendations to mitigate gender-based violence and improve WASH infrastructure.

1.6. Research Question

What is the nature and extent of the relationship between access to water, sanitation, and hygiene facilities and violence against women and girls?

How does the accessibility and usability of the water, sanitation, and hygiene facilities in the low-income areas contribute to the occurrence of violence against women and girls in Bangladesh?

1.7. Significance of the Research

This research holds significant implications for academia, practitioners in the fields of water, sanitation, and hygiene (WASH) and violence against women and girls (VAWG), as well as stakeholders engaged in urban development initiatives. By elucidating the intricate relationship between WASH facilities and VAWG in urban low-income communities in Bangladesh, the research offers valuable insights that can inform evidence-based interventions, policies, and practices aimed at addressing gender-based violence and improving living conditions in marginalized urban settings.

For academia, the outputs from this research contribute to the advancement of knowledge and understanding in multiple disciplines, including gender studies, public health, development studies, and urban planning. By providing empirical evidence and nuanced analysis, the research enhances theoretical frameworks and methodologies for studying the intersecting dynamics of WASH and VAWG, paving the way for further scholarly inquiry and interdisciplinary collaboration.

For practitioners working in the WASH sector, the research findings offer practical guidance for designing and implementing interventions that prioritize gender-sensitive approaches and talks about the specific needs of females living in urban informal settlements. By identifying the factors contributing to vulnerability and risk of violence, practitioners can tailor interventions to improve access to safe and dignified WASH facilities, enhance community awareness and engagement, and strengthen institutional capacities for addressing gender-based violence.

Similarly, practitioners working in the VAWG sector can benefit from the research outputs by gaining a deeper understanding of the contextual factors influencing the prevalence and dynamics of violence in urban low-income communities. By integrating insights from the WASH sector, practitioners can develop comprehensive strategies that address the root causes of violence, empower survivors, and promote gender equality and social justice.

Furthermore, stakeholders involved in urban development agendas stand to gain from the research findings, as they provide evidence-based recommendations for inclusive and sustainable urban planning and governance. By recognizing the critical importance of

WASH infrastructure in ensuring the safety, health, and well-being of urban residents, policymakers and urban planners can prioritize investments in infrastructure, services, and policies that address the needs of marginalized populations and promote equitable access to resources and opportunities.

Overall, the outputs from this research have the potential to catalyse positive change at multiple levels, from academic to policy formulation and grassroots activism, ultimately contributing to the realization of more inclusive, resilient, and gender-just urban communities in Bangladesh and beyond.

1.8. Conceptual Framework

The conceptual framework for this thesis draws upon research conducted by non-governmental organizations (NGOs) and academia, focusing on the intersecting fields of water, sanitation, and hygiene (WASH) and violence against women and girls (VAWG). The framework identifies key thematic areas and conceptual linkages, highlighting the need for further interventions to address the complex dynamics at the intersection of WASH and VAWG in urban low-income communities.

1.8.1. WASH Sector Research

- Existing research conducted by NGOs and academic institutions in the WASH sector provides insights into the availability, accessibility, and quality of water and sanitation facilities in urban low-income communities.
- This research identifies disparities in WASH infrastructure, highlighting challenges such as inadequate access to clean water sources, poor sanitation facilities, and hygiene-related practices.
- Key themes include the impact of WASH-related deficiencies on public health outcomes, livelihood opportunities, and overall quality of life in marginalized urban settings.

1.8.2. VAWG Sector Research

- Research in the VAWG sector examines the frequency, patterns, and determining factors of violence against females in the urban contexts.
- Studies conducted by NGOs and academia document various forms of gender-based violence, including physical, sexual, and psychological abuse, and explore the underlying socio-cultural, economic, and institutional factors contributing to vulnerability and risk.
- This research underscores the need for comprehensive strategies to address gender inequalities, empower survivors, and promote gender-responsive approaches to violence prevention and response.

1.8.3. Intersectionality of WASH and VAWG

- The conceptual framework highlights the interconnectedness of WASH and VAWG, emphasizing how deficiencies in water and sanitation infrastructure exacerbate vulnerability to violence among women and girls in urban low-income communities.
- Research findings suggest that inadequate access to clean water sources and sanitation facilities increases the burden of domestic chores on women and girls, exposing them to heightened risks of harassment, assault, and exploitation.

- Moreover, the lack of safe and private sanitation facilities contributes to feelings of insecurity and shame, further perpetuating cycles of violence and discrimination.

1.8.4. Need for Further Interventions

- Building upon existing research, the conceptual framework emphasizes the need for targeted interventions that address the root causes of gender-based violence while simultaneously improving access to WASH facilities in urban low-income communities.
- Integrated approaches that combine WASH programming with gender-sensitive interventions are essential for promoting women's empowerment, enhancing community resilience, and advancing sustainable development goals.
- Stakeholders, including policymakers, practitioners, civil society organizations, and community members, must collaborate to develop holistic solutions that prioritize the rights and needs of women and girls, foster gender equality, and create safe and inclusive urban environments for all residents.

Overall, the conceptual framework provides a theoretical lens through which to analyze the intersecting dynamics of WASH and VAWG, guiding the research towards a deeper understanding of the complex relationships and the imperative for comprehensive interventions in urban low-income communities.

1.9. Overview of Methodology

The methodology employed in this research adopts a mixed-methods approach, combining both qualitative and quantitative techniques to comprehensively explore the intersection of violence against women and girls (VAWG) with access to water, sanitation, and hygiene (WASH) facilities in urban low-income communities in Bangladesh. This section provides an overview of the methods utilized in data collection, analysis, and interpretation, highlighting the strengths of each approach and their complementary nature in addressing the research objectives.

1.9.1. Secondary Literature Review

- The research begins with an extensive review of secondary literature, encompassing scholarly articles, reports, and publications from academic journals, NGOs, and international organizations.
- The literature review serves to contextualize the research within existing theoretical frameworks, identify key concepts, themes, knowledge gap etc. and inform the research question development and hypotheses.
- Through systematic search strategies and critical analysis, the literature review synthesizes relevant findings and insights from diverse sources to establish a comprehensive understanding of the intersectionality of WASH and VAWG in urban low-income settings.

1.9.2. Primary Data Collection

- The research undertakes primary data collection through quantitative methods, focusing on a selected urban slum area in Dhaka, Bangladesh, as the primary site of investigation.

- Structured surveys are administered to collect quantitative data on the prevalence of VAWG, as well as the availability, accessibility, and quality of WASH facilities within the community.
- The survey instrument is designed based on validated measurement tools and adapted to the local context through piloting and pre-testing, ensuring reliability and validity of data collection.

1.9.3. Statistical Analysis

- Quantitative data collected through surveys are analysed using statistical software to derive descriptive and inferential statistics.
- Statistical techniques such as regression analysis, correlation analysis, and chi-square tests are employed to examine relationships between variables, identify patterns, and assess the significance of findings.
- The statistical analysis provides quantitative insights into the nature and extent of the relationship between WASH facilities and VAWG, enabling empirical conclusions to be drawn and research hypotheses to be tested.

1.9.4. Incorporation and Explanation

- The quantitative and qualitative findings are incorporated and explained to develop a complete understanding of the research.
- The triangulation method enhance the legitimacy and consistency of the findings, providing a nuanced and holistic perspective on the complex relationships between WASH facilities and VAWG.
- The interpretation of findings is guided by theoretical frameworks, research questions, and the broader context of gender inequality, urban development, and public health in Bangladesh.

Overall, the methodology employed in this research is designed to generate robust empirical evidence, inform evidence-based interventions and policy recommendations, and contribute to advancing knowledge and practice in the fields of WASH, VAWG, and urban development.

1.10. Organization of the Thesis

Chapter 1 of this thesis is structured into several chapters to systematically explore the intersection of violence against women and girls (VAWG) with access to water, sanitation, and hygiene (WASH) facilities in urban low-income communities in Bangladesh. The initial chapter provides a summary of the research topic, objectives, implication, and methodology, laying the foundation for the subsequent chapters.

Chapter 2 presents a comprehensive review of relevant literature, synthesizing existing scholarship from academic sources, reports, and publications by non-governmental organizations (NGOs) and international agencies. This chapter examines key concepts, theoretical frameworks, and empirical findings related to WASH, VAWG, and their intersection in urban settings, identifying gaps and informing the research questions.

Chapter 3 details the methodology employed in the research, including the design of the study, data collection methods, sampling strategies, and analytical approaches. This chapter discusses the rationale behind the chosen methods and the steps taken to ensure the validity, reliability, and ethical integrity of the research process.

Chapter 4 presents the findings of the study, integrating quantitative and qualitative data analyses to explore the nature and extent of the relationship between WASH facilities and VAWG in urban low-income communities. This chapter examines key findings, identifies patterns, and highlights implications for policy, practice, and future research.

Chapter 5 discusses the implications of the research findings, drawing upon theoretical insights and empirical evidence to propose recommendations for interventions, policies, and advocacy efforts aimed at addressing WASH-related vulnerabilities and preventing gender-based violence in urban settings.

The concluding chapter synthesizes key insights from the study, reflects on the limitations of the research, and outlines avenues for further inquiry. This chapter underscores the importance of holistic approaches to promoting gender equality, improving WASH infrastructure, and creating safe and inclusive urban environments for all residents.

Through its structured organization, this thesis aims to contribute to academic scholarship, inform evidence-based interventions, and advance dialogue and action on the intersection of WASH and VAWG in urban development agendas.

Chapter 2: Literature review

2.1. Relevant definitions

Gender Based Violence (GBV) indicates to certain types of violences which commits due to the victim's gender identity. The term gender-based violence has been defined as- acts or threats of acts intended to hurt or make women suffer physically, sexually, or psychologically, and which affect women because they are women or affect women disproportionally (Richters, 1994). Gender-based violence encompasses a range of harmful actions targeted at women and girls solely due to their gender. These actions include spousal abuse, sexual assault, dowry-related homicide, marital rape, deliberate undernourishment of female children, coerced prostitution, female genital mutilation, and the sexual abuse of young girls. In essence, violence against women comprises any act involving verbal or physical aggression, manipulation, or circumstances that endanger the life and well-being of an individual woman or girl. Gender based violence is widely categorised under two types- intimate partner violence, and sexual coercion & abuse (Heise, Gottmoeller, & Ellsberg, A global overview of gender-based violence, 2002).

Intimate partner violence refers to women as the victims and their male partners as the offenders. A review of 50 population-based studies carried out in 36 countries indicates that between 10 and 60% of women who have ever been married or partnered have

experienced at least one incident of physical violence from a current or former intimate partner. Although, women can be the offenders in some same-sex relationships but in most of the cases partner abuse is perpetrated by men against their female partners (Heise, Ellsberg, & Gottemoeller, Population reports: Ending violence against women, 1999). Sexual coercion and abuse also emerge as defining features of the female experience for many women and girls. Forced sexual contact can take place at any time in a woman's life and includes a range of behaviours, from forcible rape to nonphysical forms of pressure that compel girls and women to engage in sex against their will.

The touchstone of coercion is that a woman lacks choice and faces severe physical or social consequences if she resists sexual advances (Heise, Gottmoeller, & Ellsberg, A global overview of gender-based violence, 2002). Studies indicate that most of the nonconsensual sex takes place among individuals known to each other—spouses, family members, courtship partners, or acquaintances (Heise, Moore, & Toubia, Sexual Coercion and Reproductive Health, 1995), (WHO, 1997). Ironically, much nonconsensual sex takes place within consensual unions. For example, in a 15-country qualitative study of women's HIV risk, women related profoundly troubling experiences of forced sex within marriage. Respondents frequently mentioned being physically forced to have sex and or to engage in types of sexual activity that they found degrading and humiliating. Regrettably, much sexual coercion takes place against children or adolescents in both industrial and developing countries. Between one-third and two-thirds of known sexual assault victims are age 15 or younger, according to information from justice systems statistics and rape crisis centres in Chile, Peru, Malaysia, Mexico, Panama, Papua New Guinea, and the United States (Heise, Pitanguy , & Germain, Violence against women: the hidden health burden, 1994). GBV is an umbrella term that refers to any physical, sexual, or other emotional violence perpetrated based on socially ascribed gender differences.

Violence against trans persons is often perpetrated based on stigmatization of gender nonconformity, gender expression or identity, and perceived sexual orientation. Given these contexts, targeted violence against trans populations, including stigma and discrimination, is inherently gender based (Wirtz, Poteat, Malik, & Glass, 2018). There are problems with the term GBV, both and in the way it is used by the international development community. As Leach and Humphreys point out, it implies that there are some types of violence that are not rooted in gendered power relations, whereas they argue that all violence is, in fact, gendered. They go so far as to call for a reconsideration of the 'female victim/male villain' dichotomy (Oxfam GB, 2007). Other objections to the term GBV are that it means little to non-gender specialists and that it is a dry, technical term for a phenomenon that violates basic human rights, causing vast pain, suffering, and humiliation.

The discussion reveals that a case of gender-based violence is must to happen based on the "gender identify" both victim and the perpetuator. While identifying a violence as GBV, the victims are mostly women

or girls whereas the perpetuators are their male counterparts. Gender-based violences are categorised in two types- the first kind conducted by intimate partners; the second one is by anyone but the intimate partners. In case of the first kind, female perpetrators are rarely but found mostly in same-sex relationship. Only male is identified as perpetuators under the second kind. Here, comes the gender dynamics into play, a violence is only identified as a gender-based violence if the perpetuator gets an "gendered advantage" thus, males are not considered as victims of gender-based violence. However, member of the trans communities and LGBTQ communities can be a victim of gender-based violence due to their gendered identify in the society. This indicates how gender-based violence pointed out to violences those are taking place due to the victims' "vulnerable social identify" due to their gender identity. On the same, point gender-based violence as a jargon has called out with lack of depth to express the depth of violence due to its versatility.

Gender is an umbrella term (Wirtz, Poteat, Malik, & Glass, 2018) and any individual or group can be gendered due to their geo-political and or socio-economic positioning (WHO, 2023). Hence, selective literature suggested all type of violences as gendered. Following the same argument, gender-based violence is identified as a term that might be unable to express the incident to people with no specialisation in gender. Under this circumstance, the term, "violence against women" is adopted to express violence against girls and women. The term specifies the violence that takes place against women and girls and created an opportunity for the experts to explore more of such violence and relevant dynamics.

The UN Declaration on the Elimination of VAW defines violence against women as, "any act of gender-based violence that results in, or is likely to result in physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion, or arbitrary deprivation of liberty, whether occurring in public or in private life" (Krantz & Garcia-Moreno, 2005). Seven types of violence against women are identified by the UN Women (UN Women, 2023) which includes- (i) domestic violence, (ii) femicide, (iii) sexual violence, (iv) human trafficking, (v) female genital mutilation, (vi) child marriage, and (vii) online or digital violence.

Among these types, many have sub-types such as domestic violence can be committed in form of- economic violence, psychological violence, emotional violence, physical violence, and sexual violence. Sexual violence includes- sexual harassment, rape, corrective rape, and rape culture. Online or digital violence includes- cyberbullying, non-consensual sexting, and doxing.

2.2. National policies and strategies

National Strategy for Water Supply and Sanitation 2014 has been identified as one of the most relevant and significant documents under this segment. The strategy has structured on 13 guiding principles. "Adopt a participatory, demand driven and inclusive approach

in all stages of WASH service delivery programs" AND "Recognize importance of gender in all WASH activities" are two of theme (Government of the People's Republic of Bangladesh, 2014). These two points are clearly expressing its alignment with the inclusiveness of WASH services and facilities. These points have highlighted "gender" specifically in all WASH related activities, also emphasized on participatory decision-making process where everyone's participation is desired.

The same document has expressed importance to adapt 17 sub-strategies to achieve its goal which is, "Safe and sustainable water supply, sanitation and hygiene services for all, leading to better health and well-being." Among those sub-strategies, number 8 says, "The success of poverty reduction and development interventions in water supply and sanitation sector is generally high when women and men are fully involved. In this sector, women are generally the managers of water and sanitation in families and are also the guardians of hygiene enforcement, thus their involvement needs to be built in the sector activities." The strategy has asked to put women on the centre of decision making related to water & sanitation, as she [women] culturally manages these resources.

The strategy as a part of implementation plan has asked to prepare "Gender guidelines for planning, implementing and monitoring WASH interventions" as well as suggested to coordinate with "Ministry of Women and Children Affairs (MoW&CA)" for promotion of gender issue through water and sanitation.

The strategy has acknowledged the importance of women's involvement when planning over any WASH services and or facilities which is for an independent household or for a community. The strategy also explains how women's participation can make the usability of the WASH resources more effective and efficient. The link between a woman's easy access to a WASH structure and its dependency with the whole family's WASH behaviour and access to resources has been established in the document. While establishing the link the document has focused on the role of a woman as the WASH manager of the family or women as the WASH managers of a certain community. The document has successfully created an idealistic realm where women are entitled to take part in the decision-making process related to the access to and control over WASH resources both at community and household level. The document significantly outlined women's cultural roles and responsibilities related to the management of WASH resources for her family. Highlighted on this managerial role of women from centuries the strategy has asked to incorporate women from the beginning to have a greater impact. The document also linked women's participation in WASH related decision-making process beyond households and communities. It has asked to engage the local department under MoW&CA in the large-scale WASH interventions to make sure that the women's accessibility to and control over the WASH resources has been established. The entire discussion on this paper can be summarized in two points- (i) the document has made an avenue for the women to join the WASH related decision-making process inside home and community and (ii) created some references to support the

first point by acknowledging the cultural role of women as the manager of WASH resources both at household and community level, since centuries.

National Water Policy 1999 has 6 objectives. The second objective of the policy states "To ensure the availability of water to all elements of the society including the poor and the underprivileged, and to take into account the particular needs of women and children". Whereas the fifth objective states, "To bring institutional changes that will help decentralise the management of water resources and enhance the role of women in water management" (Ministry of Water Resources, 1999).

The same document also recognized the role of women and their knowledge as traditional manager of water for their households and emphasizes on their involvement in decision making. The policy says, "Enabling environment will be created for women to play a key role in local community organisations for management of water resources". This point made it evident that the participation of women in the decision-making process related to water has been guided by the policy.

The policy also guided the water related projects saying, "Interests of low-income water users, and that of women, are adequately protected in water resource management".

The policy has been approved in 1999 by the government, before the United Nation adapts the MDGs. The document firmly expressed its understandings on women's need of water and its uniqueness from the need of men. The policy has triggered the issue of decentralizing the management of water resources at local level. This is quite departmental but on the same line women empowerment and engagement in the process has been highlighted as an objective to this decentralization. The said engagement could be many types- engaging more women officials or increasing the role of elected [women] representatives or simply engaging women from the communities. Nonetheless, the process of bringing women forward in the decentralization process will help to incorporate women's perception in the management process related to water resources. The same document has created remarks on women's participation understanding than social and cultural practices. The document asked to create enabling environment for women so that women can take part in the decision-making process related to water resources. The policy also asked about the responsible national departments who are intended for the development and management of the water resources and relevant projects to consider the need of women at first place while allocating resources for management or further development. The entire discussion can be summarized into two points- (i) the policy has encouraged women to be in the frontline in the water related decision making from all backgrounds and (ii) create provision by understanding of the existing socio-cultural barrier challenging women's access.

National Women Development Policy 2011 has extended its interest on water from women's development perspective. While shading lights on women's health and nutrition the policy says that one of its goals

is “to give particular importance to the need of women concerning safe drinking water and sewerage system” (Ministry of Women and Children Affairs, 2011). The same document also emphasizes on the implementation of Domestic Violence (Prevention and Protection) Act, 2010 which has been created to prevent all sort of violence against women and girls. National-Action-Plan-to-Prevent-Violence-Against-Women-and-Children-2013-25 has not talked specifically on WASH related to violence but provided guidelines on prevention. One specific points among indicates, “inclusion of women in different committee for taking decision making” which is also applicable to committees dealing with WASH related resources in communities.

Both the policies and action plan discussed, are developed to address women empowerment and violence against woman and girl issue at macro level. The policies have been shaped to create provisions for women to ensure their development and empowerment. One of the policies goals which is to look particularly into women’s need of safe drinking water and sewerage. This clearly states that the policies comprehend that it is important for women to have access to safe water and sanitation if the development is required to be claimed. In other words, relevant policies and strategies acknowledge that access to safe water and sanitation is a must for appropriate human development, though announced as basic human rights. The second action plan which is dedicated to stop the discrimination and violence against women [including girls] and children. The action plan emphasizes on women’s participation in different committees to engage with decision making process to achieve empowerment. The process has been described as a tool to prevent violence in this document. The term “committee” in the action plan refers to any committee where there is a stake of women, whereas women’s role as water and sanitation manager has been identified by many other documents earlier. Nonetheless, it can be said that the action plan has encouraged women to take part in the decision-making process related to WASH resources as well, as a tool against gender-based discrimination as well as to easy their life as WASH managers. The entire discussion can be briefed into two points- (i) the policies in the discussions have acknowledged that the development of women and girls will not happen until her fundamental right to safe water and sanitation has been secured, (ii) the action plan suggests women to take part in committees determining the fate of WASH resources both in household and community levels.

2.3. VAWG & WASH; Africa Context

In the slums of **Nairobi**, Kenya, many women livings in informal settlements, poverty is both a consequence and a cause of violence. Violence impairs their productivity, and poverty made it difficult to escape from an abusive relationship, which is mostly reasoned behind their silence against violence. Kenya’s rate of urbanization[1] (28%) is considered one of the highest in Africa and the driving force behind migration to urban areas for

[1] https://www.statista.com/statistics/455860/urbanization-in-kenya/

women as well as men is the search for economic opportunity. A 2006 study commissioned by the World Bank concluded that a slum household is more likely to be poor, the larger it's household and the more the number of women in it (Gulyani, & Talukdar, , 2006). The same study shows that, up to 68% of settlement residents relied on shared toilet/latrine facilities, and that up to 6% of all slum and settlement residents in Nairobi did not have any toilet facilities at all. The violence is inextricably linked to their daily lives and routines. Inadequate access to essential services, particularly the lack of access to sanitation and public security, significantly increases women's vulnerability to violence. 1 out of 4 married women experienced emotional abuse at the hands of their current or most recent husband; 40% had experienced physical violence, and 16% had experienced sexual violence (2/3 of the sexual abuse is by their husband or close relatives) and the perpetrators of violence were mostly unemployed (mainly male) youth and men who are criminals individually or as part of groups or gangs (Amnesty International, 2010). Though the reasons behind that violence are many which includes access to and control over water and sanitation resources. Most women must walk more than 300 metres from their homes to use the available latrines. Access to the latrines is especially unsafe for women and particularly at night. The common use of "flying toilets" (human waste disposed of in plastic bags thrown into the open) in settlements is a result of the inaccessibility of toilet facilities (Amnesty International, 2010). Bathing is another reason that women feel uncomfortable as in most of the cases women living in the slum must take bath inside a part of their house which have no separation from the living part. As a result, the women must take bath mostly in presence of their kids which often drives them to the communal facilities which is at a distance and crossing the distance often make women more prone to risk of violence. The women interviewed by the Amnesty International said that high number of women and girls who have experienced rape and other forms of violence directly because of their attempt to find or walk to a toilet or latrine some distance away from their houses. They do not find any support either from family or from local law-enforcement officials. In other words, the lack of toilets/latrines and bathroom facilities in the immediate household vicinity puts women at great risk particularly of sexual and other forms of gender-based violence. Due to the accessibility pattern of the slums in Nairobi the sanitation facilities are hard to reach with emptying services, which made the sanitation facilities unusable within shorter period. Hence the new sanitation facilities are built to distance which include the community facilities managed by caretakers but also costs money which mostly unaffordable for the women living in the slums (Amnesty International, 2010). Under Kenyan law[2] the primary responsibility to ensure adequate access to sanitation at a household level rests with the private individuals and companies that own the houses and structures inhabited by most people living in the settlements. This was partly because the settlements fall outside

[2] http://kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/LocalGovernmentAct.pdf

areas covered by urban plans and as a result, proper sanitation infrastructures, including settlement connection to public sewer lines were not ensured.

Kenya's capital, Nairobi, has more than 40 areas defined as slums and approximately 60% of Nairobi's population, of 4.4 million people, live-in low-income settlements3. The reason behind this agglomeration is basically the urban migration which is pushed by unemployment and poverty. In the Nairobi slums the dwellers mostly struggles with 3 WASH associated key challenges which includes- access to safe drinking water, access to bathing/washing and access to sanitation. To meet the sanitation related demand the dwellers either choose the free facilities away from home or paid facilities equipped with needful security. Most of the dwellers choose the free option as they are poor, but this made them vulnerable to sexual violence, more specifically rape. To avoid the circumstance many [women] use flying toilets. The women also feel insecure to use communal bathing facilities as they are often far from residence. The woman in the community believes that the silence of the law-enforcement agencies is the major cause behind these crimes, whereas the socio-cultural side of such violence is hardly treated with importance by the community. The entire discussion can be summarized in three points- (i) poor access to WASH facilities and services is causing violence against girls & women and or pushing them to choose unhygienic options like flying toilets, (ii) poverty is refraining the women to use comparatively secured sanitation facilities and or pushing them to take bath in a corner of their home which have no privacy and (ii) the inactiveness of the law enforcement agencies are encouraging the happening of such violence.

A 2015 research has used 3 regression model to test access to toilet's influence on VAWG using the Demographic Health Survey data (2008-09) of Kenya. The study founds that the women involved with open defecation has experienced non-partner violence 40% time more than the women who were using a toilet (Winter & Barchi, 2015).

Around 70% of the population in Kenya lives in rural part whereas the rest in the urban parts. The last literature produced a regression model has used household survey data from Kenya which includes people from all socio-economic course of life living in both urban and rural areas. The study shows that the women use to defecate in open are more exposed to non-partner sexual and or physical violence. Whereas the study from urban slums shows how the fear of violence on their way to public toilet forces them to use unhygienic means [flying toilets] of sanitation.

A study has been conducted in **Akwa Ibom State** in Southern Nigeria, where 3.9 million people lives in a 7,081 km2 land and among them 80% lives in the rural parts (Okoji, 2000). The study has found natural water sources as the primary dependency of water of the people living in that area while commercial water vending was not found during the study. Three major category of sanitation arrangements were found which includes- open

[3] https://theconversation.com/kenyas-slums-are-a-haven-for-viruses-heres-what-we-know-134566

defecation (27.8%), using a pit latrine (66.7%) and using a flush latrine (5.5%) (Akpabio, 2012). The paper has highlighted on many challenges regarding sanitation but none of them lead to gender-based violence or violence against women, which can be due to the less distance of the toilets from the living squatters or due to the socio-cultural belief of the studied population. On a contrary, according to one UNFPA Nigeria report[4] government must call for a state of emergency to stop violence against women and girls. In Nigeria, child marriage and or force marriage is a popular form of violence the girls and women are often face[5]. In 2012, WaterAid has conducted a survey among 500 women living in the slums in the urban areas of Nigeria to understand the insecurities related to sanitation. According to the survey, informal toilets or toilets outside of home facility are found as the popular choice among the surveyed communities. Poverty is one of the reasons behind this choice. 77% of the women use community toilets said they feel unsafe when they use the facilities whereas 19% of the women who use toilet inside their house said they feel unsafe during the use of toilets. Despite not feeling secure when using public facilities, fewer than 10% women report incidents of actual harassment and abuse. In cases where harassment is reported, the majority consists of verbal abusive statements. Non-physical abuse is the second most common form of harassment which includes incidents of having their privacy violated by men. 8% reported physical abuse (WaterAid, 2012). The verbal form of harassment includes using dirty words and making the one who is using public facility feel ashamed, the non-physical violence includes men-watching when women seek privacy, physical assault includes rape and unwanted physical contact, and other sort of violence includes threats of physical assault or sexual harassment (WaterAid, 2012).

The Nigerian experience shows that the link to violence with water and sanitation in Nigeria and it depends mostly on geographical setup and socio-cultural believes. In Akwa Ibom State, no significant insecurity of women has been discovered linked to the use of water and sanitation facilities, but the women are found treated very respectfully. Unlike the Akwa Ibom State, the urban part of Nigeria women feels unsafe even while using the toilet facilities owned by the household as these facilities failed to offer privacy due to the congestive nature of the slums. Even the women using public toilet facilities are also reported incidents include physical and sexual violence.

2.4. VAWG & WASH; Pacific Island Context

Honiara, capital of Solomon Islands home to 64,600 people. One out of three people in Honiara lives in urban slums. In 2011 Amnesty International interviewed several women who must walk 1 to 1.5km twice daily to collect water from the broken pipe, women carry the responsibility to collect water. Violence against women in Solomon Islands is widespread. A 2009 survey conducted by the Secretariat of the Pacific Community and

[4] https://nigeria.unfpa.org/en/events/gender-based-violence-gbv-sub-sector-nigeria-mid-year-report-january-%E2%80%93-june-2020

[5] https://nigeria.unfpa.org/en/node/6123

the government revealed that 64% of women and girls between the ages of 15 and 49 had experienced physical and/or sexual violence from their partners and other family members (Secretariat of the Pacific Community, 2009). The most of women living in the slums in Honiara experience violence on their way to fetch water from nearby resources. For them, clean water is a luxury obtained at great risk. Slums have few sources of clean water nearby. So, residents, mainly women and girls, must walk long distances – often 1km or more – to the nearest pipe or stream, returning with heavy loads. It is during that journey that many are harassed, attacked and raped. Faced with long and possibly dangerous journeys to get water, inhabitants often end up washing their clothes, dishes and themselves in dirty, contaminated water, exposing themselves to disease. Several families have to share what few toilets there are invariably grim. Deprived of their rights to water and sanitation, these communities are subjected to a myriad of indignities. They are communities denied a choice (Amnesty International, 2011).

The slums in Honiara are overcrowded and still taking migrant from outside but the water supply sources there are very unreliable. On one occasion, the community pipes in Adiliwa, Green Valley and Border Line ran dry due to a water shortage, depriving approximately 3,000 residents of their only local source of clean water. Most of the residents Amnesty International interviewed said that since the settlements began, there had been no regular water supply and sanitation conditions were poor. In Kobito 4 settlement, the community must use the local stream for bathing as well as for cooking and washing. A small dam was built a few years ago by community members with funding from the Honiara Town Council and the UN Children's Fund (UNICEF). While it has provided several thousand people with access to water for washing and bathing, the water is contaminated with domestic waste. This, however, does not deter people from using this water for drinking as the alternative water source is almost 1.5km away, which means that they would have to walk 6km daily to get water for morning and evening use (Amnesty International, 2011).

Women in Honiara's slums face particularly high risks of physical and sexual violence, especially when they are collecting water in the early evening, bathing, or using toilets at night. As described above, they often walk long distances, usually through the bush to get to a water source or to use the toilet. Because there is no electricity, settlements are generally poorly lit at night, with many dark spots which are dangerous for women. An 18-year-old woman from Kobito 4 settlement told Amnesty International about her experience of sexual violence: "I dropped out of school five years ago because we couldn't afford to pay the fees, uniform and my bus fare to school every day. Since then, I have stayed at home and helped my mother and father with the house chores. We are very poor, and my father sells betel nut at the market up the road. Every day I walk to the broken water pipe in Kobiloko to collect water. I walk in the morning for the water to be used in the day and then walk in the afternoon for our evening drinking and cooking water. About a year ago, while walking to collect water in the afternoon, I was gang-raped

by six boys from the nearby settlement. They always drink kwaso [local alcohol] by the roadside and when I walked past them, they started calling me to go and say hello to them. I did not say anything and kept on walking. I was also worried that it was going to get dark soon and I still had a long way to walk to the pipe. On my way back with the water, I met the same boys up the hill. It had gotten dark, and they began to harass me. One of them said that they could carry the water for me. When I said no, he got angry and said that I had insulted him. He demanded that the only way to compensate for that was to have sex with him. I refused and he punched me in the stomach. The others then grabbed me and carried me to the bush where I was raped. They each raped me and then left me there after threatening to kill me and my family. I had a black eye and was sore" (Amnesty International, 2011). While gender-based violence is endemic in Solomon Islands, women in settlements also face a great deal of indignity in collecting water, going to the toilet, bathing in the river or streams and changing in front of men who are often playing in adjacent fields. In Kobito 2 settlement, for instance, women and children bathed publicly in the same stream where they washed their clothes and cooking and eating utensils. Women also told to Amnesty International that it was sometimes difficult for them to wash themselves properly in the open streams, particularly when they are menstruating, because of the lack of privacy. Such conditions violate women's right to privacy (Amnesty International, 2011).

Solomon Island has one of the highest rates of family and sexual violence (FSV) in the world (Ming, et al., 2016). A 2009 study revealing high rates of FSV in the Solomon Islands concluded that a multi-factorial approach to tackling attitudes toward gender-based violence was necessary, involving politics, public health, communities, and healthcare policies. Nevertheless, in 2011, the World Health Organization reported that 73% of men and women still believed gender-based violence was acceptable (Rasanathan & Bhushan , 2011). In the slums of Honiara women live a worst life, deprived from rights to safe water and safe sanitation. As said, safe water is a luxury and sometime fetching safe water causes degree of physical and sexual violence to the women alongside the physical stress she took to make a round trip of 2-3 kms. The violence took place with young girls and women irrespective of their age and social status. Apart from fetching water women in the island are also insecure while taking a bath to natural water bodies, there are cases when women get raped quick after completed her bath and starts journey towards home. The slums have toilets but in most of the cases the toilets remain non-functional due to shortage of water which causes the people to defecate in the open. Amnesty International also found evidence of rape and sexual assaults in their [women] back from defecation. In Solomon Island a strong link between WASH and VAW has been found which has been cherished by the socio-cultural system and encouraged by the silence of the law enforcement agencies. But it the water sources could have been bought nearby and the women could have the chance to take decision regarding the establishment of their water sources or bathing points or sanitation points; there will be a smaller number of NPSV.

2.5. VAWG & WASH; India Context

Financially vulnerable women living in the urban centres of India are found more prone to physical and sexual violence (Srinivasan, 2015) and a part of those violences are found taking place in the poorly maintained public toilets (Sommer, Ferron, Cavill, & House, 2014).Many researchers identified lack of lighting, lack of surveillance etc. as the key reasons behind such public toilet based crime against women, whereas research focusing on specific urban planning components are yet to be done (Amnesty International, 2010; Lennon, 2011).

The complex socio-economic dynamics of the rapidly growing slums including land tenure, shared utilities etc. are identified as issues often challenging the operation and maintenance of the public toilets which often bring additional insecurity to those facilities (Belur, Parikh, Daruwalla, Joshi, & Fernandes, 2016).

Four of every ten person living in Mumbai, India is a slum dweller, use communal services including toilet and bathroom. A fifth of the women of these slums face eve teasing while standing in the communal toilet or bathroom queue, whereas another fifth faced crime inside those toilets which includes- assault, robbery, indecent exposure etc. Eve teasing often includes verbal, physical and sexual harassment though incident of rape (or similar attempt) is documented. However, location of the slum and tenant's conjugal status were found relevant to these incidents as eve-teasing incidents in the slums of Dharavi are found lower compared to the Nehru Nagar slums. Similarly, single men living with no family in the same neighbourhood mostly hang in small groups are found responsible for eve teasing mostly. Setting women's cubical beside the ones made for men, often increases the chance of eve teasing as drunk men often access to women's cubical during night and create indecent incidents; whereas setting the women cubical far increases the risk of assaults thus women often seek companion to guard them, especially during nighttime. On the other hand, the incidents were found lower where the male cubicles are on the ground floor and ones made for women are on the first floor (Daruwalla, Levy, & Osrin, 2016), (Belur, Parikh, Daruwalla, Joshi, & Fernandes, 2016).

The entire discussion can be briefed into three parts- (i) women feel unsafe to use public sanitation facilities as they either experience violence throughout the process or heard stories of other women facing violence during the process, (ii) women seek companionship, during the off-peak hours of the say as the public toilets remain mostly empty that time, which make the women more prone to violence and (iii) the overall design process of the toilets are not women-centric or not created considering the privacy of women, which as a result creating a fear among the women when using this facilities.

Delhi, the capital of India and home to a 16.75 million dwellers (2011). WaterAid has set a research to understand the how is a lack of access to water and sanitation linked to sexual violence against women? Focus Group Discussion has been selected as the research method and articulated the opinion of 42 women living in 3 slums (Bhalswa, Sunder Nagri and New Seemapuri) of Delhi. Fear is the first thing expressed by the women took part in the FGDs. Their main fear is of sexual violence, both to themselves and to female relatives. Women are fearful of sexual violence when using public toilets, when defecating in the open and in public spaces in general. In all localities women felt that going out during both the day and night was dangerous. Many incidents of rape are said to have happened in all localities. In Bhalswa a woman said it is common to be physically assaulted and raped. Women in Bhalswa and Sunder Nagri both reported specific incidents of girls under ten being raped while on their way to use a public toilet. The toilets themselves were associated with fear in Sunder Nagri and New Seemapuri. In both slums, boys are found to loiter around the toilets at night. In Sunder Nagri there were cases of boys hiding in the cubicles at night waiting to rape those who entered. Women were also scared of drug addicts who were said to hide in the toilets at night. When women in New Seemapuri went to defecate in the open at night they reported boys shamelessly staring at them, making threats, throwing bricks and stabbing them. In Bhalswa women and girls faced lewd remarks, physical gestures and rape when they relieved themselves in the bushes. Some women in Sunder Nagri had attempted to build toilets in their homes due to such fears. Fear of not obtaining sufficient clean water is another daily problem, followed by fear of having to negotiate the squalor of their streets and toilets. Furthermore, when women from all slums went to collect water, they feared there would not be any water or enough of it to go around. (Lennon, 2011).

The women interviewed throughout the process are angry as they do not have control over the WASH resources and securities. Another significant point from the interview has captured which is a group of women once tried to structure a toilet near to their house, which is from the believe that if the toilet is inside the compound, they will be safe from the fear of violence they regularly face when using those toilets. Cases including physical assaults are also reported, took place when a girl or women went to use sanitation facility. The perpetrators are not even caring about the children as 10-year-old or younger children are also reported to be raped while using toilets. The entire discussion can be wrapped up in three major points- (i) women from the slums of Delhi using sanitation facilities paying a very high price which is constant threat and psychological pressure of getting verbally or physically assaulted, (ii) women believe that improvement in this situation is only possible when the women or group of women have substantial control over the sanitation facilities, as the men who are in control do not understand the "vulnerability of women" and (iii) the violence are taking place mostly during nights both with ones defecating in open space and using public toilets, which the interviewed women believe can be stopped only if the law-enforcement agency can be active over such cases.

To understand the overall **India's** scenario of VAW in relation to WASH, a group of researchers has used the 2005–06 Indian National Family Health Survey- III (NFHS) data to establish link between the household's toilet facilities and female members' risk of facing non-partner sexual violence. The final analytic sample consists of 75,619 women, sampled from 6 different parts of India. The women are communicated and asked questions about their sanitation facilities and their exposure and experience towards domestic violence. Based on the datasets the group of researchers generated three regression models where the exposure of violence has been considered as the independent variable and the other demographic factors are considered as dependent variables. In the first model only the toilet data has been incorporated to under the direct link whereas in the next two models other demographic data are used to understand the other dependency factors (Jadhav, Weitzman, & Greenaway, 2016).

Only 53 % (95 % CI 0 · 52-0 · 53) of respondents in that sample have access to sanitation facilities in the household; 8 % (95 % CI 0 · 08-0 · 08) use pits/latrines; and 39 % (95 % CI 0 · 38-0 · 39) use open defecation (univariate analysis not shown). The logistic regression model results shown for Model 1 confirm a significant association between household sanitary facilities and NPSV. Compared to women who have access to a toilet in their household, Indian women who must open defecate have 2.14 times the risk of NPSV ($p < .01$). The results for Model 2 – which includes the demographic, geographic, and socioeconomic factors – confirm the association is robust, though the strength of the association is slighted attenuated ($p < .05$). The results for Model 3 – which adds in measures of household assets and infrastructure – also support the significant association between open defecation and NPSV. Analysis including interaction terms with demographic and socioeconomic correlates was not significant (Jadhav, Weitzman, & Greenaway, 2016).

The separate issues of household sanitation and women's risk of sexual violence in India have received substantial attention from both scholars and policymakers in recent years (Sahoo, et al., 2015; Doron & Jeffrey, 2014). However, little research has asked whether the two issues are linked. Reliable statistics on NPSV are likely to be downward biased due to underreporting, particularly in the South Asian context, however, a systematic review found that 3.3 % of women in India and Bangladesh reported this type of violence – distinct from IPSV (Abrahams, et al., 2014). Non-profits dedicated to improving sanitation and water projects around the world have begun to include gender and violence components in their agenda (Sahoo, et al., 2015). Though this suggests an increasing awareness of the link between NPSV and household sanitation, much more empirical research is needed on this topic. Additionally, improving a household's sanitary conditions is not necessarily the solution to minimizing NPSV. Studies have shown that about 50 % of toilets built by Indian governmental programs are not used for their intended purpose, and at least one study suggests that in North India, many people prefer open defecation to toilet use (Jadhav, Weitzman, & Greenaway, 2016). For toilets to

protect women against NPSV, they must be used in place of open defecation. Improving the social acceptability of toilet use is thus imperative, and our study provides concrete evidence of immediate incentives for behavioural change. Our study is the first to quantify the relationship between sanitation facilities and NPSV in India and confirms the relevance of household sanitation facilities for women's safety as well as children's health.

The first two records under Indian segment are from urban areas or specifically from urban slums, whereas the third one is structured taking sample from all over India, which includes rural parts where the sanitation landscape are different. The literature has tested three different perspectives in relation to violence against women- defecation pattern [use of facilities for defecation], financial situation and socio-cultural position of the women. The paper has significantly found the inter-relation between OD and VAW. The causes behind have been found the vulnerability of women during open defecation, nonetheless the women who are using toilets are also found prone to violence. The rate is higher for the women who do open defecation. The research made another thing clear that the women who belongs to a socially weak community is more prone to sexual violence when using sanitation facilities [includes open defecation] compared to the women who are in the stronger quartile of the society. The entire discussion can be briefed into two points- (i) women who defecates in open space are more prone to violence, among them who are socio-economically weak face the worst and (ii) there are places where women do not use toilets even after having a risk of NPSV as they are not oriented/accustomed with the use of such facilities, or the facilities are not built keep the women's accessibility in mind.

In the **rural parts of India**, the situation is more diverse and there are different perspectives. The toilet goers identified inaccessible water for washing, limited lighting, long queue, and unclean floor of the toilets as major constrains. Among these the challenges related to water and cleanliness are also pinned by the women involved in open defecation, though unsafe feelings and distance of defecation site were also in their list. The list of things reasoned behind unsafe feelings by the women involved in open defecation includes- road accidents, different injuries, snake (and other venomous insect) bite, and animal attacks. However, one of twenty women also feared of mental or sexual violence. While describing a good toilet, women marked availability of water and hygiene as important features. (Hirve, et al., 2015).

The situation even changes depending on few variances, such as using sanitation facilities in workplace/nearby, using sanitation facilities in school/nearby or using sanitation facilities in public place/in marketplace. Under such circumstance, the level of mental stress is ten times higher among the women involved with open defecation compared to the toilet users. On the other hand, one out of five women reported that the toilet in their workplace is dirty and unhygienic; whereas three out of the ten said their workplace do not provide any toilet. The

women using the open space for defecation attached to their workplace, face the similar challenges like the women doing it while at home. (Hirve, et al., 2015).

When it comes to offering toilet, schools done significantly better compared to workplace as only 6% of the girls said they need to defecate in open while in school, the rest have toilets. Though the one out of five girls found unsatisfied with the cleanliness of the toilet and one out of ten with the availability of water. In the co-ed facilities, girls reported embracement as an issue as their toilets are often very close to the ones used by the boys. (Hirve, et al., 2015).

It is agreed by almost every respondent that public toilets lack cleanliness and amenities, mostly due to poor management and users behaviour, whereas places like markets and transport depots are identified as places with almost no functional toilet for female users. (Hirve, et al., 2015)

Apart from women's vulnerability to gender-based violence while defecating in open there are other risks identified which includes snake bite, scorpion bite, cuts by sharp metal or glass objects. Women are also more prone than men to these risks as well, because women generally go for defecation either before the sun rises or after the sun sets, to ensure nobody is watching them; the darkness they use to maintain their privacy made them more vulnerable to all these insecurities alongside with gender-based violence. There are times when women from the rural parts of India cannot use toilets in their workplace and go for defecate in the open and this mostly happens due to lack of gender-separated toilets. The entire discussion can be wrapped into four points- (i) the women who are defecating in the open space are always vulnerable to losing their privacy to outsider and a part of them are vulnerable to gender-based violence and or sexual harassment, (ii) women are more prone to other health risks associated with open defecation such as snake bites as women generally goes for defecation when it is dark, (iii) when travelling, women needs to take more physiological stress as in many part of India there are lack of gender friendly toilets [or toilets] which often made women to defecate in open, whereas the women use toilet when at home, (iv) During the period of the study the concept of women's privacy [during defecation] are not well established who were not in a position to ask for privacy or toilet nearby their home.

2.6. VAWG & WASH; Nepal Context

Ray (2007) identified women as typical water manager in her household which also comes with additional stress (Aihara, 2016) (Brewis, Choudhary, & Wutich, 2019) and exposure to assaults and physical trauma, especially when the water is required to fetch from longer distance (Geere, Cortobius, Geere, Hammer , & Hunter, 2018). The research also explains how women in Nepal carry physical, emotional, health and economic impact due to difficulty in accessing water, which often enhance intimate partner violence for those women.

Research has been set recently to understand the relation of IPV [and associated violence] with availability of water at household level. The research found that intermittent water access enhances women's risk of partner-based violence; mostly emotional, which means women of the households with sub-optimal water access are more prone to IPV. More than 67% of the women who suffers from intimate partner violence in Nepal either have no water supply or do have one but intermittent. The same group of women are found ten times more exposed to physical and emotional violence compared to the women with optimal supply of water, though water supply is not the only determinant as reasons also includes- age, level of education, place of living, status of employment etc. (Choudhary, 2020).

2.7. VAWG in Bangladesh; overall context

In 2015, a nation-wide survey in Bangladesh captured women's experience with five types of violence; more than 70% women, ever married said they experienced one of those violences at least once in their marriage whereas more than 50% said the last of those events took place within last 12 months. The frequency and intensity of these violence changes with geographical context, wealth status, women's education status etc. However, one of the most important takeaways of the survey was, three out of the four women suffered from these violences never submitted a formal complaint. The socio-religious practices and exiting gender norms of the society often refrain women from mobilising a formal complaint. However, the examples of getting smooth verdict against similar complaints is also rare in the country, which can be a discouraging factor also. On contrary less than 30% women (and girls) experienced non-partner violence in their lifetime, though the rate is higher among adolescent girls if compared with women. The same survey also found women & girls getting exposed to non-partner violence, especially when they belong to a poor family and depends on shared utilities and aggregating resources from informal sources (Bangladesh Bureau of Statistics, 2016).

Chapter 3: Methodology

3.1. Introduction

The methodology chapter outlines the research design, procedures, and analytical methods employed in this study to investigate the relationship between Water, Sanitation, and Hygiene (WASH) conditions and experiences of Violence Against Women and Girls (VAWG). This chapter provides a detailed description of the study area, population, sampling techniques, data collection instruments, and ethical considerations. It also explains the data analysis methods used to interpret the collected data.

Given the complex and sensitive nature of the topics under investigation, a quantitative approach is adopted to systematically collect and analyse data from a significant number of participants. This approach ensures that the findings are robust, reliable, and generalizable to the wider population within the study area. The use of structured questionnaires allows for the collection of standardized data, facilitating the comparison and statistical analysis of various factors related to WASH and VAWG.

The choice of a cross-sectional survey design is informed by the need to capture a snapshot of the current conditions and experiences of women and girls in relation to WASH and VAWG. This design enables the identification of potential correlations and patterns that may exist between inadequate WASH facilities and the incidence of violence. Furthermore, the stratified random sampling technique ensures that the sample is representative of the diverse segments of the population, thereby enhancing the validity of the study's conclusions.

Ethical considerations are of paramount importance in this research, given the vulnerable nature of the study population and the sensitivity of the subject matter. The study adheres to strict ethical guidelines to protect participants' rights and well-being, including obtaining informed consent and ensuring confidentiality.

Overall, this chapter provides a comprehensive framework for understanding the methodological approach taken in this study, ensuring transparency and replicability. The subsequent sections will delve into the specifics of the study design, data collection, and analysis procedures, providing a clear roadmap for the research process.

3.2. Research Methodology

This study employs a quantitative, cross-sectional survey design to investigate the relationship between Water, Sanitation, and Hygiene (WASH) conditions and the experiences of Violence Against Women and Girls (VAWG) in the study area. A cross-sectional survey design is particularly suitable for this research as it allows for the collection of data at a single point in time, providing a snapshot of the current situation and enabling the analysis of associations between variables.

The study is conducted in the Sattala Slum, located in the Mohakhali area of Dhaka city, Bangladesh. Sattala Slum is one of the largest and oldest slums in Dhaka, home to more than 5,000 households. This slum, like many others in Dhaka, has grown rapidly due to urban migration driven by economic opportunities in the city. The slum's population is diverse, comprising individuals and families from various parts of Bangladesh who have settled here in search of better livelihoods.

The target population for this study includes women and girls residing in Sattala Slum. This age range is selected to provide a comprehensive view of the experiences and conditions affecting both adult women and adolescent girls. Participants are approached directly within the community to ensure a representative and inclusive sample.

Sattala Slum has witnessed substantial development activities over the past three decades, particularly in the areas of Water, Sanitation, and Hygiene (WASH). Despite these efforts, significant gaps remain, impacting the daily lives of the residents. The slum's infrastructure is characterized by overcrowded housing, limited access to clean water, inadequate toilets, and intermittent solid waste management. These conditions pose severe health risks and exacerbate the vulnerabilities of the residents, especially women and girls.

Most of the inhabitants of Sattala Slum are involved in informal economic activities. A significant portion of the women and young women work as domestic helpers in nearby residential areas or as labourers in small and medium-sized industries. These jobs are often low-paying, insecure, and expose women to various forms of exploitation and abuse. Additionally, the lack of proper WASH facilities within their living and working environments further increases their susceptibility to health issues and violence.

The broader context of slums in Dhaka city highlights similar challenges. Dhaka, one of the fastest-growing megacities in the world, has numerous slums that accommodate a large portion of its population. These slums are characterized by high population density, inadequate infrastructure, and limited access to basic services. The residents, particularly women and girls, face significant socio-economic hardships, making them vulnerable to violence and exploitation.

By focusing on Sattala Slum, this study aims to provide a detailed understanding of the local context and the specific challenges faced by women and girls concerning WASH conditions and experiences of Violence Against Women and Girls (VAWG). The insights gained from this research will contribute to the development of targeted and effective interventions to improve both WASH conditions and the safety and well-being of women and girls in the community. This study underscores the need for comprehensive strategies that address the intersection of environmental conditions and social vulnerabilities to foster a safer and healthier living environment in urban slums.

3.3. Sampling

The slum is a home to approximately 5,000 households, and this has been considered as the population size of the study. The population of the slum holds almost the same socio-economic status which includes- the family size & pattern, their professional dynamics, their access to finance & services, access to basic facilities, access to education, knowledge-attitude-practice regarding public health and environment etc. Moreover, the significant part of the population has come to Dhaka to obtain a minimum earning to survive with their family in the city and back in the village (or peri urban area) they came from. Thus, the population can be identified as a homogeneous group with strong sense of representation. Nonetheless, while determining sample size 0.07 (±7% precision) is considered as level of precision/confidence interval. In other words, the results produced using this sample size can be deviated 7% from the actual scenario.

However, random sampling has been adapted as the sampling strategy whereas it has determined that only the women and girls (16 years or older) can be the respondents as the study sets to investigate the relation of WASH with Violence Against Women and Girls (VAWG). The formula adapted is as following-

$$\boldsymbol{n = z^2 * \frac{p\,(1-p)}{c^2}}$$

The following parameters specific to the survey requirements have been set up: n: required sample size, z: z-value for 95% confidence interval = 1.96, p: expected proportion or prevalence = 0.50 (50%, assuming the proportion requiring the highest sample size), c: level of precision/confidence interval = 0.05 (±5% precision). Hence, the investigation has visited 195 random households from the different part of the slum and interviewed the available woman or girl (above 15 years).

An hour after the survey each day has been kept revisiting the households which was visited earlier but no female respondents were available to answer, which enable the investigation to acquire response from the 100% of the households randomly visited.

3.4. Data collection technique

The overall data collection can be segmented into three different parts. One, selection of the enumerators and providing them training on the questionnaire. Two, data collection from the community using the developed questionnaire. Three, data triangulation using sample-based home visit.

Six young women are engaged with the data collection process, who works as a volunteer for a local non-government organization and have experience of working in different slums of Dhaka. However, while recruiting the young women as enumerators, it has been ensured that none of them have worked closely in the study area before or they do not have a relative or friend living in that study area. This has done to avoid any bias while they are collecting data. The next step was to conduct a day long training on the questionnaire and making sure that the enumerators are sharing a common understanding on the questions and options. As a part of the day-long training the enumerators have used the questionnaire to collect dummy data from a nearby slum. The overall training and piloting of data collection ensures that the enumerators understood the questionnaire appropriately and none of the questions are creating any challenge or showing any flaw.

The next segment was data collection, where each enumerator was designated to cover a certain part of the slum to make sure, even though the sampling is random, but the intension was to cover all different parts of the slum. Four ground rules were maintained while the enumerators were collecting data. One, each enumerator will cover her own area only. Two, one household cannot have two respondents. Three, if the visited household do not have a suitable respondent the closest household on the left will be

approached. Four, if the visited household have suitable respondent but busy or out of home during the survey she will be followed up until next 3 days, if could not track the third ground rule will be applied.

Once the data collection by the enumerators are over, the researcher by himself has randomly picked 20 survey sheets, which is approximately 10% of the total response. The researcher visited those random households and meet the respondents to cross-check either the information collected by the enumerators are rightly covering their response or not. Nonetheless, during the cross-check, none of the respondents were asked all the questions of the survey again, rather some of the responses were cross-checked and verified. Such approach has taken to make sure all the data is collected directly from the respondents and the information were rightly documented.

3.5. Data analysis plan

The data collection phase is complete, and a treasure trove of information awaits. Now comes the exciting part – transforming this raw data into a compelling story. This is where data analysis steps in, acting as the bridge between information and insight.

Step 1: Taking the Pulse of the Population – Frequency Analysis: Imagine a giant spreadsheet – our data's home. The first analysis, frequency analysis, delves into this sheet, meticulously counting occurrences. This helps us understand the current situation of the population we're studying. We can paint a picture of their socio-economic background, assess the overall WASH (Water, Sanitation, and Hygiene) conditions, gauge the prevalence of Violence Against Women and Girls (VAWG), and even measure knowledge, attitudes, and practices related to WASH and VAWG.

Step 2: Unveiling Interconnections – Cross-Tabulation Analysis: Data doesn't exist in isolation. Cross-tabulation analysis allows us to explore the fascinating relationships between different data points. Imagine a matrix – rows and columns intersecting to reveal hidden patterns. We can use this technique to see how, for example, access to clean water might change based on income levels. Perhaps education levels might influence attitudes towards VAWG. Cross-tabulation helps us identify these connections, providing a deeper understanding of the factors influencing the issues we're studying.

Step3: Mapping the Co-dependency – Correlation Analysis (WASH & VAWG Focus): Finally, we zoom in on the WASH and VAWG data specifically. Correlation analysis helps us explore whether these two issues influence each other, and if so, how. This analysis unveils positive correlations – situations where one factor increases as the other does (e.g., better WASH facilities might be linked to lower VAWG incidents). We can also identify negative correlations, where an increase in one factor leads to a decrease in the other. Additionally, it helps us pinpoint areas with no correlation, highlighting factors that might require independent strategies.

By combining these three analysis techniques, we can transform raw data into a rich narrative. Frequency analysis sets the stage, cross-tabulation reveals the plot twists, and correlation analysis explores the cause-and-effect relationships. This comprehensive approach allows us to not only understand the current situation but also identify potential solutions to improve the lives of the population we're studying.

3.6. Secondary data from literature review analysis

A secondary data analysis was conducted to leverage existing knowledge, complementing the valuable first-hand information gathered through primary data collection. This project delved into the outputs of a completed secondary literature review, focusing on themes related to water, sanitation, hygiene (WASH), privacy, safety, security, and violence against women and girls (VAWG).

The Constant Comparison Method: The analysis was guided by the constant comparison method. Imagine a mountain of research papers having been sifted through – each a piece of a puzzle. This method involved meticulous reading and rereading of these papers, with concepts, arguments, and evidence being constantly compared across them. As the analysis progressed, emerging themes and patterns related to WASH, privacy, safety, security, and VAWG, particularly their impact on women and girls, were actively sought.

Extracting Gems: Our focus keywords – water, sanitation, hygiene, privacy, safety, security, violence, women, and girls – acted as a compass, guiding researchers towards relevant data points. The analysis aimed to identify- (i) Did limited access to sanitation facilities result in an increased risk of violence against women and girls? (ii) How did a lack of privacy in sanitation facilities or feelings of insecurity while fetching water impact women and girls? (iii) What interventions had been proven successful in addressing these issues?

A Comprehensive Picture Emerged: Through constant comparison, a comprehensive picture was gradually built based on the existing literature. This analysis contributed to the ongoing conversation around WASH, privacy, safety, security, and VAWG issues faced by women and girls by identifying knowledge gaps, potential areas for further research, and most importantly. The final output could be a structured report, a thematic analysis highlighting key findings, or even a framework for designing future interventions based on the insights gleaned from existing research.

By employing the constant comparison method on the rich data gleaned from the completed secondary literature review, existing knowledge was transformed into actionable insights that can inform policy, program development, and ultimately create a safer and more equitable environment for women and girls.

3.7. Ethical Considerations

The study prioritizes ethical research practices by adhering to two key principles: ethical approval and informed consent.

Ethical Approval: Before commencing data collection, the study received approval from the relevant department within the university. This process ensures that the research adheres to ethical guidelines, protects participants' rights, and minimizes potential risks. Ethical committees typically review research proposals to assess factors such as participant safety, data privacy, and the overall scientific merit of the study.

Informed Consent: Upholding the principle of informed consent, the study secured consent from all participants prior to data collection. This ensures that participants understand the nature and purpose of the research, are aware of their rights and options, and participate voluntarily. The informed consent process typically involves providing participants with clear and concise information about: (i) The study's objectives and procedures, (ii) The potential risks and benefits of participation, (iii) The right to withdraw from the study at any point without penalty, and (iv) Measures taken to ensure participant privacy and confidentiality (e.g., anonymization of data).

By obtaining ethical approval and informed consent, the study demonstrates its commitment to responsible research practices. This transparency fosters trust with participants and safeguards their well-being throughout the research process.

3.8. Limitations

While the study offers valuable insights, it acknowledges several potential limitations that should be considered when interpreting the findings.

Self-Reporting Bias: The study may be susceptible to self-reporting bias, where participants may have provided inaccurate or socially desirable information. This could influence the reported prevalence of issues or skew perceptions towards socially acceptable responses.

Limited Generalizability: The study's findings might not be generalizable to a broader population due to its focus on a specific geographic area. This means the results may not accurately reflect the experiences of individuals in other locations with potentially different cultural contexts or social norms.

Challenges in Reaching Certain Populations: Difficulties in reaching certain segments of the population during data collection could limit the study's representativeness. For example, marginalized groups or those residing in remote locations might be underrepresented in the final sample, potentially leading to an incomplete picture of the situation.

By acknowledging these limitations, the study demonstrates transparency and allows for a more nuanced interpretation of the results. It highlights the need for further research that addresses these challenges and provides a more comprehensive understanding of the issues at hand. Future studies could explore methodologies that mitigate self-reporting bias, employ strategies for reaching diverse populations, or incorporate data from a wider range of geographic locations.

Chapter 4: Analysis & Findings

4.1. Demography

Only women and girls are considered as the respondents for the survey of the study thus the gender of 100% of the respondents is female, there is no male respondents interviewed in the process. Among the respondents, 12% are yet to reach 18 years of age, thus they can be identified as young women or girls however, the youngest respondents among them are aged 12 years. 53% of the respondents are aged between 18 to 30 years. Which means more than half of the respondents must be considered as "young". 28% of the respondents of the survey are aged between 31 to 45 years. The smallest segment of the respondents is aged more than 45 years as they made 6% of the respondents. The age group of the respondents also reveals a very critical dimension of the slum population and that is most of the people living in the slum is of a productive age. The average age of the respondents which is approximately 29 years also supports the earlier statement. As cities are expensive to live in, the families prefer the elderly people to stay in their village homes, sometimes with the kids.

The academic educational status of the respondents is very diverse rather than skewed to a certain qualification. 12% of the respondents never made it to formal schooling or similar institutions; though it is not clear that either they receive any informal education or not. 26% of the respondents made it to primary school (or similar institutions) but couldn't manage to complete. Which means they have attended primary school but couldn't manage to pass grade 5. Among the respondents, 27% completed primary education and managed to reach secondary school (or similar institutions) but failed to earn Secondary School Certificate (or similar status). However, 24% of the total respondents successfully earning Secondary School Certificate (or similar status) and 11% of the total respondents successfully earned Higher Secondary Certificate (or similar status). The respondents who never made it to school or formal education institutes are mostly older than the other respondents as the average age group of the respondents falls under this category is 40 years. Whereas the earners of the highest educational qualification among the respondents falls under the most younger age group where the average age group is 23 years. The group who couldn't manage to complete their primary school have an average age of 32 years. The group of women who competed primary education and the group of women who completed their secondary education both have an average age group of 26 years. This shows that by the time progressing women and girls living in the slums are engaging more with the formal education, the younger the women are, the more chances of them being educated with a higher degree.

Talking about productivity, only 32% of the respondents are found engaged with income generating activities, among them 10% are day labours, 8% are domestic workers, and 6% are engaged with different services and other 6% is engaged with different businesses. 48% of the respondents are housewives thus earning for the family is not their primary concern, hence they invest most of their time in un-paid care giving of their family

members. 21% of the respondents are active students and the average age of them are approximately 18 years, which means most of them are either studying in the college or pursuing higher education. On a contrary, the average age of the housewives is around 30 years old and among them 16 is the youngest, which means the woman is a “child bride”.

66% of the respondents are currently married and 26% of the respondents are not married yet, there are 9% of the respondents who are either separated or divorced or widowed. Among the married women only one is aged less than 18 years, the legal age for marriage in Bangladesh, thus it can be said that she is a victim of child marriage. However, among the married women 45% are married for 15 years and the rest is less than 15 years. To know further about the child marriage, the age of the respondents’ marriage and their current age is taken under consideration and found that among the married women 70% are victim of child marriage in the slum and the average age of getting married was around 14 years for these women. Which means 7 out of 10 married women living in the slum is exposed to a form of VAWG which is child marriage. There are women who identified themselves getting married around the age of 8 years which is very exceptional in the Bangladesh context but not impossible.

The household size of the respondents does not show any strong diversity, but more than 70% of the respondents said that their family consists of 3 to 5 members, whereas more than 20% said they have a large family with more than 5 members and the rest have less than 3 members. Living with the in-laws is a common practice in the slums which sometimes contribute to the household size as well. Among the respondents 57% said the head of their household is their husbands, whereas 25% said that their father-in-law is the head of their household. 11% of the respondents are heading their households but among all the households 15% are led by female household leads. The percentage is significantly higher than the per cent of separated-divorced-widowed women which means there are approximately 6% households where the respondents live with their husband/in-laws but head the household by themselves, which is an important dynamic.

While talking about the ownership of the house the respondents are living in, 10% of the respondents said that they are the owner of their living space whereas the rest are either tenants or lease of their living space. The community is significantly old, and the slum is in its location from quite a longer period, which is an important dynamic. More than 50% of the respondents said that their family is living in the slum for more than 15 years whereas among the rest 18% of the respondents’ families are living in the slum for more than 10 years but less than 15 years. Which means only 27% of the respondents’ families are living in the slum for less than 10 years. However, among the families some (6%) are as new as less than 3 years in the slum. On an average the respondents are living in the slum for 20 years which is enough time to make a stronger and well-connected community. Among the rooms of the respondents 76% are made of mud & brick or CI

Sheet-wood whereas the rest is made with brick & cement.

4.2. Access to water, sanitation & hygiene facilities

While investigating about the respondents' access to water facility/service it was found that 65% of the respondents and their families are dependent on shared water sources which means a designated numbers of households have access to the water source they are replying on. 27% of the respondents and their families are dependent on water sources which are communal, which means anyone living in a certain community can access to those water points. There are slums in Dhaka city which are not very large in size and the dwellers live in those slums are identified as a single community, but slums like the one the survey is conducted are significantly large and have number of communities. However, 5% of the respondents said that their families are dependent on water sources which are open to public, means anyone can use those sources for water. Only 4% of the respondents said that they use their private sources to collect water.

47% of the respondents said that it took 5-10 minutes to fetch water for their families, where the time includes both travelling to the water sources as well as waiting in a que where applicable. 30% of the respondents said that the overall time is less than 5 minutes for them and the 14% said the time is in between 11-20 minutes for them, on an average. 9% families claimed that it took more than 20 minutes to fetch water once. While analysing the time allocation pattern, it is found that the families spent slightly higher than 9 minutes to collect water, on an average; whereas the median value is 5 minutes, which means the difference of collection time is very high among the users. However, a further deep drive shows that respondents use shared and communal sources respectively spent 8.4 minutes and 8.5 minutes per trip on an average to collect water, whereas the time is as low as 4.3 minutes for the respondents who have private water sources. Again, the average time of water collection for the respondents with public water sources is as high as 26 minutes. This clearly shows how more control over the water sources can save more time, each time the user is out to collect water. It is also evident that in urban set-up (especially in the slums) the more time women and girls spent outside to access to basic services, the more opportunity the predators get to conduct violence against women & girls. Though this statement is also highly contextual and very much dependent on the socio-economic context of the set-up.

In 98% of the families, women members are typically responsible for water collection, which means all the relevant challenges related to water collection, transportation, and management is faced by women and girls of the families living in the working slum.

84% of the respondents said they have functional electric light at their water point as well as on the path they usually use to reach to the water point. 9% of the respondents said they do neither have functional light at their water point nor on the streets towards their water points. The rest either have light on their path or in the facility or unreliable provision of light. Among the facilities with no functional lights which is 14% of the total

facilities used by the respondents, 85% are shared facilities, 11% are communal facilities. It is also notable that a higher precent (65%) of the respondents use shared facilities but the share of the non-functional lights among the shared facilities are significantly higher (85%). However, the situation is opposite when it comes to communal facilities, as compared to the user ratio among the respondents (27%) the non-functional lights ratio (11%) is significantly lower. This indicate towards a possibility that the management of communal facilities are better compared to the shared facilities, at least in case of water facilities.

Likewise, the water facilities, most of the respondents use shared sanitation facilities or toilets (65%) however, no respondent said that they or their family members use public toilets whereas 32% of the respondents said they are dependent on communal toilets and the rest (4%) have their own private toilets. One chamber toilet is quite popular in the study area as 75% of the respondents said that the toilet they use have only one chamber, 24% of the respondents said that the toilet they use have two chambers and the rest (1%) said the toilets they use have three chambers. During the analysis, it is observed that there is no co-relation between the type of the toilet they respondents use and their ownership over the living space (or house/room) or their duration of stay in this neighbourhood. Neither occupation nor education status of the respondents had any linage with their toilet type.

Respondents who use toilets with multiple chambers were asked about gender segregation of the chambers, 28% of the respondents who use toilets with 2 chambers said they have gender segregated chambers in their toilet complex, whereas the number is 50% for the users who use toilets with 3 chambers. While talking about users per toilet chamber, the number is found high. 27% of the respondents said, they share their toilet chamber with 11-15 other users, 24% said the number for their toilet chamber is between 16-20 users/chamber. Only 1% respondents said the toilet chamber they use is used by less than 5 people, 18% said the number of users is between 5 to 10, and 11% said that the number is between 21 to 25 people. 19% of the respondents said that the toilet chamber they use is also used by more than 25 other users. On an average 19 people use one chamber in the study area and the median is 17 which means most of the toilets are used by people around the average numbers. However, the average (6 users/chamber) is much lower for the private facilities, whereas the same number is 18 for the shared facilities and 22 for the communal facilities. This brings us to a decision that the user ratio in the shared facilities are communal facilities are not significantly different.

While talking about the distance of the toilets from their living rooms, 74% respondents said that their toilet is within 30 feet from their living room, 17% of the respondents said the distance is between 30 to 50 feet for them, 8% had to travel 51 to 100 feet to access to their toilets from their living room and 1% had to travel more than 100 feet. The distance between the toilet and the respondents living room is hardly related to the category of the toilet they use, as

more than 85% of the private and communal users said that the toilet they use is within 30 feet from their living room, for the shared facility users the number is 65%. On the other hand, no private and communal toilet users travel more than 50 feet to access to their toilets, whereas 15% of the shared toilet users travel more than 50 feet to use toilets. For the private toilet users, it is normal to have their toilets closer to their living rooms, but as the same statistics is also true for the communal toilet users, this can be reasoned with two conclusions. Either the communal toilet users use the communal toilets just because the facilities are close to their living rooms, or they do not choose to shift to a shared facility due to having functional community toilets at their doorstep.

While talking about the users perspective about their toilets, 83% of the respondents said they feel that the wall, roof and door of their toilet can provide them privacy, whereas 11% said they do not think so, 5% answered with "not always" and the rest (1%) said they don't know. Among the private facility users none said "no" to the same question, whereas among the shared facility users, 13% they do not feel their privacy is ensured with the toilet, the percent is 10% for the communal facility users. 7% of the shared facility users and 2% of the communal facility users said they think their toilet cannot provide them enough privacy always. Hence, it can be said that 20% of the users of the shared facilities and 12% of the users of the communal facilities do not think their privacy is always protected while they were using their toilet, which is a potential act/risk of VAWG. Nonetheless, it can be also said that the user of the shared/communal toilets are more vulnerable to the VAWG (in this case) compared to the users of the private facilities.

Among the total respondents, 16% said they do not feel their privacy is always protected when using their toilets. Among the people who use toilet complex with more than one chambers, 21% said the same, which means the users remain under potential threat of invasion of their privacy when using a toilet complex with more than one chambers. Among the toilet complex with multiple chambers, some practice gender segregation whereas the others either do not practice this at all or can hardly maintain the separation. The users of the multiple chambers toilets with gender segregation didn't complain about the potential privacy breach they felt while using their toilets, whereas 29% of the users who use multiple chamber toilets complex with no gender segregation felt that there is a risk of their privacy breach when using their toilets. This means, alongside the type of the facility gender segregation is also method that can reduce women and girls possibility of being exposed to VAWG while using shared/communal toilets.

Among the total respondents 70% uses shared bathing facilities which means they share the facility with families living in the same compound, 26% of the respondents uses communal facilities which means they need to share the facility with families who don't share compound with them. 4% of the respondents said they have private bathing facilities whereas no one has said about using a bathing facility which is public. Among the respondents only 9% said that the bathing facility they use have gender segregated chambers whereas among the rest

90% said they do not have gender segregation in their facility and 1% said they do have such segregation but that is hardly maintained. The ratio of gender segregated bathing facilities in shared and communal facilities are almost same, as only 8% of the communal facilities offer gender segregated facilities (n = 51) and 10% of the shared facilities offers the same (n = 136).

Talking about privacy, 79% of the respondents said they think that the wall, door, roof etc. of the bathing facility they use can ensure their privacy, whereas the rest either said no (9%) or said not always (11%) or don't know (1%). While looking into the same statistics after segregating the type of facilities, the insight doesn't change much. 76% of the users of the communal facilities said they feel ensured about their privacy when using the bathing facility (n = 51), whereas the per cent is 79% for the shared facility users (n = 136) which is the same when it comes to all the respondents' response. For private facilities, 100% of the respondents said they fell that their privacy is ensured when using their bathing facilities (n = 8). The issue of privacy is ensured when the respondents is not sharing their facility with no one outside of their own family members, as we can see respondents with access to both shared and communal facilities have responded the same when it comes to protection of their privacy.

Though the number is limited but the users with access to gender segregated facilities said that they all feel that their privacy is protected when using the bathing facilities (n = 17). 50% of the respondents who said that their bathing facilities do have gender segregation but hardly maintained felt ensured about their privacy whereas the rest 50% said they felt that their privacy is protected but not always (n = 2). On a contrary, 76% of respondents with access to bathing facilities with no gender segregation said they feel that their privacy is protected while using their bathing Facilities, which is lower than the average (79%) response. Gender segregation plays a vital role in ensuring the privacy of the users, as all the users irrespective of their facility type (shared or communal).

4.3. Basic knowhow of violence against women & girls

While asking about the term VAWG, 68% of the respondents said they have heard of the term before, whereas 26% said they never heard the term before; the rest (6%) said they don't know either they have heard of the term before or not.

While looking to the same fact from the educational qualification of the respondents, 55% of the respondents who said "no" as the answer to the question are either never been to school or been to school but couldn't complete their primary school. In other words, these respondents (55%) have either no or very limited exposure to formal education. On the other hand, the respondents who said "yes" to the same question 27% of them have similar education background, which is half of the earlier group.

While looking to the same group using their professional engagement lens, it has found that both the group answered with a yes and answered with a no have around half of the respondents who are housewives or engaged with non-paid care works; thus, it can be

said that the professional dynamics do not show any significant different when they were asked about hearing about VAWG. Similar findings are applied when investigated the same issue using marital status lens; around 60% of the respondents from both groups are married, the rest are either unmarried or separated/divorced/widowed. However, when looking at the same statistics using the age lens, it has found that the group with an "yes" as answer are younger on an average (26.87 years) compared to the group with an "no" as their answer where the average age is 32.47 years. Thus, it can be said that the respondents with knowledge of the term VAWG is significantly younger compared to their counter response group.

Among the participants who poses minimum knowledge on VAWG (n = 133), 34% said that they heard about the term violence against women and girls for the very first time in their school, 29% said they heard the term for the very first time in a awareness raising session, 17% said they have heard the word for the very first time from their peers; the rest mentioned different sources such as- from behaviour change communication materials, from training programmes, from social media etc.

Now, while seeing this using a age lens, it can be seen that the respondents who said that they have heard the term first time in their school have an average age of around 23 years, whereas the respondents who said that they have learnt this from awareness sessions have an average age of around 26 years; and the third group learnt from peers have an average age of around 34 years. This can lead towards two assumptions, one, lately the schools are adapting VAWG as a topic to discuss formally; two, even the comparatively older women (average 34 years) talk about VAWG among themselves. However, while seeing more closely to the age class of the respondents answer with "learnt from school" two of the respondents are found who are aged more than 40; thus, it can be said that either they have learnt this from their school during their younger days or they have learnt during their informal schooling days (could be schooling for the aged people). Thus, it is hard to solidify that the group mentioning about school is only talking about the mainstream formal education system.

The respondents were asked about seven different types of violence against women & girls: to further know their understanding. 87% of the respondents were able to mention minimum one example about "verbal violence" whereas the rest (13%) cannot. While talking about "physical violence" 93% of the respondents were able to give an example, whereas the rest couldn't. 54% of the respondents were able to identify "sexual violence" as a different category by giving an appropriate example, whereas only 45% were able to identify "sexual harassment" (previously called eve teasing) as a different category of VAWG by giving an appropriate example. While talking about "child marriage" 70% of the respondents gave an appropriate example. "Honor Killing" and "Femicide" were found the least know to the respondents as 27% and 26% respectively can give an appropriate example of these types of violence only. Though, there are enough reason to believe that this is not about "knowledge" only

but also about attitude. Unlike Honor Killing and Femicide, sexual harassment or sexual violence or child marriage are not a very unpopular "issue" in the society, yet a significant number of the respondents couldn't give an appropriate example of those types of violence. This could be due to their attitude of not acknowledging those acts as "violences" alongside their knowledge gap. Thus, attitude of the respondents must be considered when answering the research questions and drawing relevant conclusions.

4.4. Partner based violence & WASH

Before moving on to non-partner violence and its relation to WASH, few questions were asked to the respondents understand the relation between WASH and domestic violence. The respondents (n = 195) were asking as if they were ever teased by any of their family members for any issue that is related to water, sanitation or hygiene. 68% of the respondents has answered "never" whereas 1% said always, 16% said seldom, 3% said often and 12% said quite a while ago. Though such teasing is hard to categorise as violence against women and girls (VAWG) as reasons behind such teasing might not be always gender centric. But this data shows that more than 30% of the respondents were teased by their family members over the issue of WASH. Again, among the respondents a significant percentage is unmarried who said that they experienced verbal violence from their family members over the issue of WASH.

Similarly, the respondents (n = 195) were asked about either they have ever beaten by any of their family members over the issue of water, sanitation or hygiene or not. 94% of the respondents said they have never experienced such act whereas 5% said seldom, 1% said a while ago, and 15 said they are not comfortable to talk about this. Again, it is not possible to determine all these incidents as VAWG incidents, but it proves that women and girls even got beaten in their family over the issue of water, sanitation, and hygiene, though the number is approximately 5%. Again, among the respondents a significant percentage is unmarried who said that they experienced physical violence from their family members over the issue of WASH.

The married respondents (n = 128) were asked either they ever sexually abused by your husband for water, sanitation or hygiene related issues or not. 94% answered with "never", among the rest more than 4% (n = 6) talked about different frequencies whereas almost 2% (n = 2) said they are not comfortable to talk on this issue. These cases of violences are much more likely to be categorised as violence against women and girls, as they are sexually abused by their husbands over the issue of WASH and the sexual violence is always a form of "VAWG".

4.5. VAWG in relation to access to water facilities

14% of the respondents (n = 27) said that they have experienced violence/teasing when travelling to fetch water from the current water source, whereas the rest said no. To understand the co-relation of the answer with other demographic factors, few more analysis has run. It has found that the average age of the victims of the teasing is 28.37

years, whereas the respondents who said “no” as the answer, their average age is 28.65 years, which proves age is not a contributing factor in this case. The respondents who said they have experienced violence/teasing when travelling to fetch water from the current water source, 37% of them are unmarried (overall 26% of the respondents are unmarried) whereas 24% of the respondents who said no as the answer to the same question are unmarried. Thus, marital status can be identified as a contributory factor in this specific case. The respondents who said they never experienced violence/teasing while fetching water, on an average they are living in this area for 19.23 years, whereas the ones who said yes to the same question are living in this area for more than 23 years on an average. Thus, the duration can be considered as a factor in this regard. Again, 51% of the respondents who never experienced violence/teasing while fetching water are living as tenants in this neighbourhood, whereas among the people who said yes to the same question, only 37% of them are living as tenants in this neighbourhood, which means the owners of the houses in the areas have experienced more teasing compared to the tenants.

The respondents who experienced violence/teasing while travelling to fetch water from the current water source spent more than 10 minutes on an average to collect water once which includes travel time and collection time, whereas the women who never experienced such incidents spent around 8 minutes on an average to collect water once. The collection time is higher in the case of the victims but as the time also included the time for queuing in front of the water point it cannot be related with the distance from the house to water source.

Among the respondents who experienced teasing/violence while travelling to fetch water from their current water sources 11% of their households are head by women, whereas the respondents who never experienced teasing while travelling to collect water 17% of their households are head by women. Figuratively women headed households are less vulnerable to such incidents, or the empowered women and their family members are less prone to such teasing.

Similarly, 67% of the women who never experienced teasing/violence while travelling to fetch water from their current water sources are not engaged with any sort of income generating activities, whereas the rate is 78% when it comes to the group of respondents who answered “yes” against the same question. In other words, the respondents who are engaged with income generating, 10% among them experienced teasing/violence while travelling to fetch water from their current water sources, whereas the percentage is 16% among the respondents who are not engaged with any income generating activities. Hence, it can be said that the women who are engaged with income generating activities are less vulnerable to this kind of teasing/violence.

While asking about the incidents of teasing/violence 26% of the respondents (n = 7) said that it was last week when she faced such incident last time, 22% of the respondents (n

= 6) said that the last time such incident happened to her was not older than a month, 7% of the respondents (n = 2) said it was within the last six months when such incident happened to her last time. However, 44% of the respondents (n = 12) said it was more than six months ago when such incident happened to her for the last time. The pattern tells that almost 50% of the cases took place (last time) within last one month whereas the rest took place (last time) more than 6 months ago.

30% of the teasing or violence took place during the morning (n = 8), 26% during the afternoon (n = 7), 22% of the incidents took place during evening (n = 6) and the rest 22% took place during the night (n = 6). The time distribution of the incidents indicates that the incidents were not related to the hours of the day, as more than half of the incidents took place during the day light whereas the rest (almost half) of the incidents took place when there is no day light.

93% of the incidents were related to verbal violence (n = 25) whereas the rest (n = 2) were related to physical violence. 85% of the respondents thinks that such violence could happen again whereas the rest (15%) thinks that such violence might not happen again. Among the respondents who think that such incidents can happen again (n = 23) faced the last incident more than six months ago (n = 10; thus 43%). This signifies the trauma the respondents are suffering with due to such incident as they still think that such thing can happen again, and this fear always sits in their mind.

6% of the respondents (n = 11) said that they have experienced violence/teasing when fetching water from the current water source, whereas more than 90% said no and 1 respondent preferred not to answer the question. The average age of the respondents who answered with an “yes” is 26.64 years whereas the average age of the respondents who answered with a “no” is 28.72 years. Through there is an age difference between both the groups but the gap is significantly not enough to make any assumption in this regard.

64% of the victims of this kind of violence are married whereas 27% are unmarried and 9% are either widowed/divorced/separated. Interestingly the ratio of marital status among the victims are almost the same as the actual ration of marital status among all the respondents. Thus, marital status cannot be treated as a contributing factor in these specific cases. The respondents who have experienced violence/teasing when fetching water from the current water source are living in this area for an average of 17 years, whereas the respondents who never experienced such incidents are living in this area for an average of 20 years. Hence, for such incident the duration of living can be considered as one of the important indicators. Again, 64% of the victims of such incidents are tenants in this community whereas 49% among the non-victim respondents are tenant. The overall ownership distribution pattern among the respondents shows that 49% of them are tenants which is the same as the non-victim respondents but significant less than the

victim respondents; thus, ownership pattern can be identified as an important indicator here.

Most of the reported incidents of violence/teasing when fetching water from the current water source took place within last one month, among them 64% (n = 7) took place within last seven days from the interview date. One of the (9%) respondents said she experienced such violence more than 6 months ago. Morning time is when most of the incidents took place (73%) whereas the 2 incidents took place during the evening (18%) and 1 took place during the afternoon. No one claimed to experience violence or teasing when fetching water during the night. The time of the incidents indicates towards two assumptions. One, the mindset of the offenders; two, the professional engagement of the offenders. In other words, the offenders do not treat these incidents as "violence or harassment" or the offenders typically not around during the afternoon thus the occurrence rate is lower during the evening, or both the assumptions are applicable.

91% of the cases (n = 10) are act of verbal violence whereas the rest (n = 1) is claimed as physical violence, however the 91% of 10 out of these 11 respondents think that such incident can happen again with them. The respondents who think such incidents can happen to her again faced the violence more than 6 months ago but still thinks that such incident can happen again, which might happen due to the mental trauma causes to her, due to that incident. Again, the number of physical violence is low compared to the number of verbal violence, which is a notable characteristic.

64% of both the respondents who experienced violence while using their water source and who haven't experienced violence use shared facilities, whereas 27% from each group use communal facilities which indicates that type of facility is not a contributory factor in this regard. However, travel time to the water source is found as an important distinguishing factor. On an average the respondents spent 18.8 minutes to collect water once, which includes the travel time and queuing time (if any). The respondents who experienced violence while using their water source are found spending 26.71 minutes on an average to collect water once, whereas the respondents who haven't experienced violence while using their water source spent 18.2 minutes on an average to collect water once. Which means the respondents experienced violence while using their current water sources need 47% more time compared to the respondents who never experienced such violence. The most important assumption can make out of this comparison is that the respondents become more prone to violence the more distance they travel to fetch water; or the more they need to go far from their house. Though the time also includes queuing time (if applicable) in front of the water point, but still the respondents need to spend more time away from their living space to collect water.

4.6. VAWG in relation to access to sanitation facilities

2% of the respondents (n = 4) said that they have experience any kind of violence/teasing when travelling to or returning from toilet, whereas the rest said no. To understand the

co-relation of the answer with other demographic factors, few more analysis has run. It has found that the average age of the victims of the teasing is 28.09 years, whereas the respondents who said “no” as the answer, their average age is 32.91 years, which proves age is a contributing factor in this case. The respondents who said they have experienced any kind of violence/teasing when travelling to or returning from toilet, 25% of them are unmarried (overall 26% of the respondents are unmarried) whereas 25.6% of the respondents who said no as the answer to the same question are unmarried. Thus, marital status cannot be identified as a contributory factor in this specific case; though the sample size of unmarried victim is only 1 whereas the number is double when it comes to married victims. The respondents who said they never experienced violence/teasing while travelling to or returning from toilet, on an average they are living in this area for 19.93 years, whereas the ones who said yes to the same question are living in this area for more than 8.25 years on an average. Thus, the duration can be considered as a factor in this regard. Again, 49.21% of the respondents who never experienced violence/teasing while travelling to or returning from toilet are living as tenants in this neighbourhood, whereas among the people who said yes to the same question, 50% of them are living as tenants in this neighbourhood.

The respondents who experienced violence/teasing while travelling to or returning from toilet lives within 20 feet proximity of the toilet, they use whereas the ones who said no lives in an average proximity of 40 feet from the toilet they use regularly. So, the people experienced violence while going to or coming back from toilet lives within the proximity compared to the others, and the distance is almost half.

Among the respondents who experienced teasing/violence while travelling to or returning from toilet 25% of their households are head by women, whereas the respondents who never experienced teasing while travelling to collect water 14% of their households are head by women. Figuratively women headed households are more vulnerable to such incidents, or the empowered women and their family members are more prone to such teasing.

Similarly, 68% of the women who never experienced teasing/violence while travelling to or returning from toilet are not engaged with any sort of income generating activities, whereas the rate is 50% when it comes to the group of respondents who answered “yes” against the same question.

In other words, the respondents who are engaged with income generating, 2% among them experienced teasing/violence while travelling to or returning from toilet, whereas the percentage is also 2% among the respondents who are not engaged with any income generating activities. Hence, this cannot be treated as a contributing factor in this case.

While asking about the incidents of teasing/violence 75% of the respondents (n = 3) said that it was last week when she faced such incident last time, 25% of the respondents (n = 1) said it was more than six

months ago when such incident happened to her for the last time. This shows that most of the incidents took place in recent time, or the victims do not remember similar situations as time passes.

75% of the teasing or violence took place during the morning (n = 3), 25% of the incidents took place during evening (n = 1). The time distribution of the incidents indicates that the incidents were not related to the hours of the day, as more than half of the incidents took place during the day light whereas the rest of the incidents took place when there is no day light.

75% of the incidents were related to verbal violence (n = 3) whereas the rest (n = 1) was related to physical violence. 75% of the respondents thinks that such violence could happen again whereas the rest (25%) thinks that such violence might not happen again. This signifies the trauma the respondents are suffering with due to such incident as they still think that such thing can happen again, and this fear always sits in their mind.

3% of the respondents (n = 5) said that they have experienced violence/teasing when using their current toilet, whereas more than 90% said no and 1 respondent preferred not to answer the question. The average age of the respondents who answered with an "yes" is 28 years whereas the average age of the respondents who answered with a "no" is 28.57 years. Through there is an age difference between both the groups but the gap is significantly not enough to make any assumption in this regard.

80% of the victims of this kind of violence are married (n = 4) whereas 20% are either widowed/divorced/separated (n = 1). The ratio of marital status among the victims is 65% (n = 123) which is much lower compared to the victims, thus marital status can be treated as a contributing factor in these specific cases.

The respondents who have experienced violence/teasing when using their current toilet are living in this area for an average of 14 years, whereas the respondents who never experienced such incidents are living in this area for an average of 20 years. Hence, for such incident the duration of living can be considered as one of the important indicators.

Again, 60% of the victims (n = 3) of such incidents are tenants in this community whereas 49% among the non-victim respondents are tenant. The overall ownership distribution pattern among the respondents shows that 49% of them are tenants which is the same as the non-victim respondents but significant less than the victim respondents; thus, ownership pattern can be identified as an important indicator here.

80% of the reported incidents (n = 4) of violence/teasing when using their current toilet took place within last week, and the rest one took place within last 6 months.

Morning time is when most of the incidents took place (80%) whereas the 1 incident took place during the afternoon (20%). No one claimed to experience violence or teasing when using their current toilet during the night, either this kind of incidents do not took place

at night or women and girls took a partner with them when using these facilities during the nighttime! The time of the incidents indicates towards two assumptions. One, the mindset of the offenders; two, the professional engagement of the offenders. In other words, the offenders do not treat these incidents as “violence or harassment” or the offenders typically not around during the afternoon thus the occurrence rate is lower during the evening, or both the assumptions are applicable. (true for this segment as well)

100% of the cases (n = 5) are act of verbal violence and none of the event of the violences are claimed as a physical violence, however the 100% or 5 out of these 5 respondents think that such incident can happen again with them. The respondents who think such incidents can happen to her again faced the violence more than 6 months ago but still thinks that such incident can happen again, which might happen due to the mental trauma causes to her, due to that incident. Again, there is no claim of physical violence is also notable.

80% of the respondents who experienced violence while using their toilet uses shared facilities (#) whereas the rest 20% use communal facility. As, 65% of the overall families use shared facilities and 32% of the families use communal facilities; the assumption can be structed that the women using shared toilets face violence more often.

The respondents who experienced violence while using their toilet use toilets which accommodates 18 people on an average as regular users, whereas the respondents who never experienced violence while using their toilet use toilets which accommodates more than 22 people on an average; whereas the average number of users per toilet in the area is just more than 22 people. This helps to build an assumption that high user vs toilet ratio is not a reason behind violence in this case, whereas the gap between both ratio is not significant to assume the opposite.

Women who reported of facing violence while using their toilet lives of an average distance of 19.2 feet from their toilet whereas the women who never faced violence during the use of their toilet lives of an average 24.7 feet distance from their toilet. The respondent who declined to answer the distance between her toilet and living room is only 12 feet. Interestingly, the incident of violence in this case cannot be said increasing in relation to the increased distance between living room and toilet.

While talking about the gender segregation, 80% of the women faced violence while using the toilet said that the toilet they use have no gender segregation whereas the rest (20%) said they have access to gender segregated toilet chambers, but the users hardly follow the segregation. Though gender segregated toilet is also not a popular option among the women who never faced violence during the use of toilet as 85% of those women use toilet with no gender segregation but 8% said they have access to gender segregated toilet. Interestingly, among the users 75% use a toilet with one chamber only thus it is not possible to have gender

segregation in those toilets and 60% of the victims of violence during the use of their toilets are users of one chamber toilet whereas the rest use toilet with two (2) chambers but no segregation is practiced in those complex.

20% of the women who faced violence during their use of toilet said they don't think that the roof, wall and door of their toilet can always protect their privacy whereas the number is 16% when it comes to the women who said they never experienced such violence while using their toilet facility. Single respondent who expressed her discomfort to answer the question of experiencing violence said that she doesn't think the superstructure of her toilet can always protect her privacy.

100% of the victims think such incident can happen again which means they always feel vulnerable and hardly thinks of asking for a solution.

4.7. VAWG in relation to access to bathing facilities

3% of the respondents said they face violence while going to take a bath or coming back after taking a bath the rest said they never experienced such violence. Among the women who faced violence during their travel to take bath or return 60% said the last incident took place during the last week whereas the rest 40% said the incident took place more than 6 months ago. However, 40% of the incidents took place during the morning and 40% took place during the afternoon whereas 20% took place during the night. all the incidents fall under verbal violence. While asked about the possibility of such incidents happening again 80% said they fear that such incident can happen again. Interestingly, the women who face violence (last time) last among them 20% thinks such incident won't happen again whereas the 40% who faced such violence last time, more than six months ago thinks such violence can happen again.

The average age of the women who faced violence while going to take bath or returning after taking a bath is 34.80 years while the women who did not report any such incidents have an average age of 28.45 years. While talking about the age the youngest one to face violence on her way (or back) to taking a bath is 14 years old whereas the oldest one is 70 years old. As the higher and lower limit of the age of the women who didn't report to face violence is similar no conclusion can be made over the age limits but seems like higher the average age the possibility of facing violence increases, though the number of cases is too small as a sample to take such notes.

40% of the victims to violence while travelling to take bath or returning is married whereas the percentage is higher (66%) for the women who didn't face violence. On the contrary, 40% of the women who faced violence are either separated or widowed or divorced whereas the percentage is as low as 8% in case of women who didn't report of violence. Among the ones faced violence 20% are unmarried whereas the percentage is a bit higher (26%) among the ones who don't face violence. The initial output is quite strong to claim that remaining in active marriage can reduce the vulnerability of a women

which help her to bypass violence in many cases, on the contrary quite opposite happens when the women is separated or divorced or widowed.

The average family size of the women who never faced any violence is 4.63 which is higher than the women who faced violence as their average family size is 4. So, the families of non-victims are on an average larger than the families of victim, though the difference is fractional but is the trend is visible in case of other violences, it could be established as a determinant.

Only 1 women (20%) among the victims led her family by herself whereas among the non-victims the numbers are as higher as 20 though the percentage is lower (11%), but in this case this is hardly a determinant as the head of the family become victim of violence herself is a unique case whereas the in many occasions the other women led of the household not had to face similar violence, which make the determinant weaker.

No one among the victims are owner of their living space as 40% lives under government's/NGOs arrangement and the rest (60%) are tenants, whereas 41% lives under government/NGOs arrangement and 49% are tenants. Seems like the higher percentage of the women facing violence are tenants compared to the women not reported to face violence.

Women who didn't report violence are living in this place for more than 19 years on an average whereas the ones reported violence is living here for more than 20 years on an average. There are women among the victims who is living in the same area for as long as 30 years. So, it is not a determinant in this case.

4% of the respondents reported that they face violence while taking a bath during their stay in the selected slum while 96% of the respondents reported no such incidents. Among the victim women 13% said the last time the violence took place with them was last month whereas 50% said the last time they faced such violence was in last week, and 38% said the last time they witness such violence was more than 6 months ago.

50% of the overall incidents took place during the afternoon, whereas 25% took place during the morning and the rest (25%) during the nighttime. This could be highly relevant to the bathing time of the women in the slum as most of the women took bath during the afternoon after coming back from their works or completion of daily household choruses, thus most incidents took place during the afternoon.

25% of the victim women reported to be harassed sexually whereas 13% reported to face sexual violence and 38% verbal violence. 25% of the victims initially mentioned of "other" as the type of violence but after listening to the event it was understood that such violence also falls under sexual violence which makes sexual violence also stands at 38%.

Among the victims 63% think that such incidents can take place with them again in the future whereas the rest think such incident won't take place with them in future. The

victims who think that such incident will not take place to them in future, the last time the incidents took place with them is either last month or six months ago.

All the victims face violence while taking a bath are aged between 17 to 40 years with an average age of 26.63 years whereas the women who were not reported of facing violence while taking a bath are aged between 12 to 70 years with an average age of 28.70 years. Here the average age of the victims is less compared to the average age of the non-victims and none of the victims are above 40 years.

Among the victims, 38% are married and 38% are separated/divorced/widowed whereas the rest (25%0 are unmarried. On the contrary, only 7% of the reported non-victims are separated/divorced/widowed whereas the 67% are married and 26% are unmarried. Whereas the non-victim women's marital status profile is very much like the overall marital status profile of the whole sample size; the victim women's profile is quite unsimilar. Again, it is showing that women who are divorced or separated or widowed are making a significant percent (38%) among the victims whereas the average percent (9%) among the whole sample is quite lower. This must be bought as an argument that not living in a active marriage might use as a determinant when it comes to violence. Similarly, on an average more than 65% of the responding women are married whereas the rate is lower (38%0 when it comes to victim women's martial profile.

While the average family size of the victims (4.62) and reportedly non-victims (4.61) are almost same 50% of the victims are coming from a women headed family whereas among the overall respondents only 15% are coming from a women led family. Among the reportedly non victim families only 13% are coming from a family that is headed by a woman. Among the victims 25% led their household by themselves and 25% by their mother-in-law. Another perspective must be deep driven here, is there any reference that shows the women who led their families or a member of a women headed household is more vocal about violence compared to women lives in a household led by a man; or a women living in an active marriage or yet to be married is more uncomfortable to talk about violence compared to a women who is either divorced or widowed or separated?

Again, none of the victims are owner of their own land in the slum whereas more than 10% of the nonvictims' families are the owner of their living space. Among the victims 63% are living here either under government's arrangement or NGOs programme and the rest pays rent. While a ownership pattern can be taken as a determinant in this case the duration of stay is also found significantly different on an average for women who reported violence compared to the women who didn't. The women reported violence; their families are living in the slum for more than 24 years on an average whereas the ones who didn't report have an average stay period of more than 19 years. We must remember that they type of violence reported are more than verbal and staying long in the same place might making them enable to make noise of it!

Personal bathing facility is very rare as only a few (4%) have such access to such facilities; the rest depends on the shared (70%) and communal (26%) facilities. among the women reported of violence during taking a bath 38% says they use communal facilities whereas the rest mentioned of shared facilities, the percentage of using communal facilities are much higher than the average whereas the incidents are lower among shared facilities if compared with the general or overall average; on a contrary most of the incidents took place in shared facilities which is again the mostly used type of bathing facilities by the women of the study area.

Among the interviewed women 96% either use shared or communal bathing facilities and among those facilities only 9% follows gender segregation, the rest do not follow any such practice either due to lack of chamber or due to the users reluctance of following such. However, 100% of the incidents of violence during taking a bath happens in facilities with no gender segregation, neither in book nor in practice.

Among the women who reported incidents of violence during bathing 75% said that the roof, wall and door of the bathing facilities they use cannot always provide them enough privacy whereas the rest thinks the walls, roofs and doors are ok to provide them privacy from the outside world. Again, among the women who doesn't report any violence during taking a bath 18% of them also thinks that the wall, roof and door of their bathing facilities cannot always protect their privacy. If number of respondents concerns, the number of non-victim women unsatisfied with the privacy of their bathing facilities is three times higher than the number of women unsatisfied with the privacy of their bathing facilities, which means more women express their potential vulnerability towards violence or breach of privacy alongside the ones who faced the violence.

4.8. Risks and assumptions

Talking about risks and assumptions; the respondents were asked if they ever heard of a friend or relative or neighbour or colleague living in similar type of housing fears of someone secretly watching them when taking bath or using toilet. 8% of the respondents said they heard of such issues frequently whereas 9% said they seldom heard of such issues. However, 50% of the respondents denied of hearing such issues whereas 33% said they don't have relevant knowledge. Respondents learnt of their friends, colleagues etc. fearing of someone watching them while bathing or using toilet have an average age group of 25 years whereas the ones who said they don't know have an average age group of 28 years and the ones said never have an average age group of 30 years. Though not very significant but still the average age among different types of respondents shows that the women belonging to a younger age group are the ones who reported about the issues while than older group (by average age) said they don't know and the older group by average age said such talks were never heard by them.

Similarly, they were asked if they ever heard of a friend or relative or neighbour or colleague living in similar type of housing fears of someone secretly filming them when

taking bath or using toilet. 7% of the respondents said they heard of such fears frequently while 4% said they heard of similar fears seldom, the rest either denied (52%) or responded with -don't know (37%). No variation while analyse based on age, marital status or occupation.

The respondents were asked if they ever had similar thoughts that someone is watching you secretly, when taking a bath or using toilet. 15% of the respondents says they do have similar thoughts frequently, whereas 6% said they seldom have such thoughts. While trying to establish relation with the educational status of the respondents and their response, but no significant deviation was observed from the average response when asked about their education only. Similar observation has found when cross analyse the data with the respondents' age as well as marital status.

On the contrary, 70% said they never had such thoughts and 9% said they don't know. While asked the same question but about filming 77% said they never had such thoughts, 15% said they don't know and 9% of them either said frequently or seldom. The respondents answered with frequently have an average age of 26 years whereas the ones said don't know have an average age of 27 and the ones said never have an average age of 29, whereas the ones said seldom have an average age of 32 years. The average age group in this case doesn't fits as a significant determinant. The same responses are also analysed by marital status and nothing significant has been found. Similarly, no significant observation was made while categorising the data following the education qualification of the respondents, as it mostly follows the average trend with very limited deviation.

4.9. All the VAWG incidents and commonalities

while talking about domestic violence in relation to WASH 32% of the respondents informed that they were teased by their family members at least once over the water, sanitation, or hygiene related issue; however, among the victims some said they face such teasing regularly, some said often/seldom and some said the last of such incident took place quite a while ago. However, the rest (68%) said no such incident happened with them ever.

Similarly, while asked about physical abuse such as beating or hitting over WASH issues by a family member; only 6% of the respondents said they faced such violence at least once in recent times; and there are 4% women who said they were sexually abused by their husbands at least once over an argument related to WASH. Among the respondents there are women who reported both verbal, physical and sexual violence inside their home, over WASH related issues or arguments and there are women who faced either verbal or physical or sexual violence only. Such findings show that being verbally or physically abuse by family members or sexually abused by husbands over water, sanitation or hygiene issue is not a very uncommon scenario in the working community.

Now, while talking about non-partner violence related to WASH, the women complied of becoming victim of different kind of violence 60 times in total which is 31% if compared

to the total number of respondents which is 195. Among them one of the respondents reported to become victim during 4 different events while six different options were given to report violence in relation to WASH by non-partners. However, while subtracted the multiple response from a single women/victim 39 unique responses were reported which means 39 women have reported of becoming victim of violence either during individual or multiple events which means 20% of the overall respondents (unique) faced violence related to water, sanitation, or hygiene at least once, which is a significant number.

While 1 out of each 5 women surveyed reported a non-partner violence related to water, sanitation, and hygiene this also includes minor girls (under 18) and women in their 70's which indicates the women's vulnerability related to WASH is beyond their age; similarly, the other determinants were also analysed in the relevant part of the thesis.

Chapter 5: Research question discussion

5.1. Discussion on demography

The demographic profile paints a picture of a vibrant, youthful community constrained by economic and social challenges. The predominance of young women (average age 29) aligns with global trends in urban slums, where productive-age individuals migrate to cities for economic opportunities, leaving elderly family members in rural areas due to urban living costs (UN-Habitat, 2016). The educational data reveals progress in access to schooling, particularly for younger women, reflecting Bangladesh's strides in improving female education (UNESCO, 2020). However, the persistence of child marriage, with 70% of married women wed before 18, highlights a deeply entrenched form of VAWG, driven by poverty, cultural norms, and lack of enforcement of legal marriage age (UNICEF, 2021). The economic disengagement of 48% of respondents as housewives underscores the gendered division of labour, where women prioritize unpaid caregiving over income generation, limiting their economic empowerment. The presence of female-headed households (15%) suggests some women are taking on leadership roles, possibly due to necessity (e.g., absent male heads) or empowerment, which could influence their vulnerability to violence.

5.2. Discussion on access to WASH

Access to WASH facilities in the slum is heavily constrained, with most women relying on shared or communal sources, increasing their exposure to public spaces and potential violence. The reliance on women for water collection (98%) reflects traditional gender roles, placing the burden of accessing basic services on women and girls, who face risks during travel, especially to public sources requiring 26 minutes per trip (WHO & UNICEF, 2017). The lack of functional lighting at 14% of water points, particularly shared facilities, exacerbates safety concerns, as poorly lit areas are known to increase the risk of VAWG (UN Women, 2017). Similarly, the high user-to-toilet ratio (19 per chamber) and limited gender segregation in sanitation and bathing facilities create environments where privacy breaches are likely, constituting a form of VAWG. The finding that gender-segregated facilities universally ensure privacy

underscores the need for infrastructure improvements to mitigate risks. The proximity of toilets (74% within 30 feet) is a positive factor, but shared facility users traveling farther face greater exposure to potential harassment.

5.3. Discussion on VAWG knowledge

The awareness of VAWG is relatively high (68%), but gaps persist, particularly among older and less-educated women, reflecting limited exposure to formal education or awareness campaigns. The fact that younger women (average age 23) learn about VAWG in schools suggests recent integration of gender-based violence education into curricula, a positive development (UNICEF, 2020). However, the low recognition of sexual harassment, honour killing, and femicide indicates cultural attitudes that normalize or downplay certain forms of violence, a common challenge in patriarchal societies (WHO, 2021). The prevalence of WASH-related teasing (32%) and physical violence (5%) within households highlights how domestic responsibilities, such as water collection, can escalate into verbal or physical abuse, particularly for women in subordinate roles. The reports of sexual abuse over WASH issues, though limited (4%), are significant, as they explicitly constitute VAWG and reflect power imbalances within marriages.

5.4. Discussion on VAWG in relation of Water facilities

The findings highlight that accessing water facilities exposes women and girls to VAWG, particularly verbal violence, due to prolonged exposure in public spaces. The higher incidence among unmarried women (37% of victims vs. 26% overall) may reflect their perceived vulnerability in public spaces, where they lack the “protection” of a male partner, a dynamic noted in gender studies (UN Women, 2017). Longer residency in the slum (23 years for victims vs. 19.23 for non-victims) and home ownership (63% of victims vs. 49% tenants) suggest that deeper community ties or property ownership may paradoxically increase exposure, possibly due to greater visibility or disputes over resources. The significant time difference in water collection (26.71 vs. 18.2 minutes) underscores how distance and queuing time amplify risks, as women spend more time in potentially unsafe environments (WaterAid, 2019). The high fear of recurrence (85–91%) reflects the psychological toll of these incidents, aligning with studies on trauma from gender-based violence (WHO, 2021). Empowerment factors, such as female-headed households and income generation, appear protective, likely because economically active or authoritative women may deter perpetrators or navigate public spaces with greater confidence.

5.5. VAWG in relation to toilets & bathing facilities

The lack of privacy in shared and communal sanitation and bathing facilities creates a significant risk of VAWG, as women and girls are exposed to potential harassment or surveillance in these spaces. The absence of gender segregation in most facilities (91% of bathing facilities) exacerbates this vulnerability, as mixed-gender environments increase the likelihood of inappropriate behaviour or privacy breaches (UN Women, 2017). The fact that gender-segregated facilities eliminate privacy concerns highlights a clear

intervention point for reducing VAWG risks. The high user-to-chamber ratio (19 for sanitation, similar for bathing) further compounds these risks, as crowded facilities limit personal space and increase opportunities for harassment (WaterAid, 2019).

5.6. Answer to research question ONE

5.6.1. Global literature perspective

Based solely on the contents of the uploaded literature review document, the nature and extent of the relationship between access to water, sanitation, and hygiene (WASH) facilities and violence against women and girls (VAWG) is both profound and multidimensional. The literature gathered from diverse global contexts—including Kenya, Nigeria, India, Nepal, the Solomon Islands, and Bangladesh—collectively highlights that inadequate WASH services directly and indirectly heighten women's and girls' vulnerability to multiple forms of violence, particularly in low-income and informal settlement contexts.

The nature of the relationship is both structural and behavioural. Poor WASH infrastructure and services often force women and girls to navigate unsafe public or semi-public spaces for water collection, defecation, or bathing. These journeys, often undertaken in isolation and during early morning or night-time hours due to privacy concerns, expose them to heightened risks of harassment, physical assault, and sexual violence. For example, in Nairobi's informal settlements, women must often walk over 300 meters to reach latrines, particularly at night, which places them at severe risk of rape and harassment. Many women instead resort to using "flying toilets" (defecating in plastic bags) to avoid these dangers, trading dignity and hygiene for safety. Similar cases were documented in Honiara, Solomon Islands, where women collecting water reported being attacked and raped, and where the absence of adequate WASH infrastructure subjected women to indignities and risks during routine domestic tasks.

This relationship is not only about external threats but extends to domestic settings through intimate partner violence (IPV). The literature from Nepal establishes a link between limited (or no) water access and increased rates of emotional and physical IPV. Women with limited or basic water supply were significantly more likely to experience humiliation and violence from their partners. Here, water scarcity and the associated stress can exacerbate tensions within the household, where women, who are typically responsible for water collection and usage, bear the brunt of frustration and blame.

The extent of this relationship is severe and widespread. In several global studies reviewed in the document: (i) Women practicing open defecation were found to have a significantly higher likelihood—up to 2.14 times in India and 40% higher in Kenya—of experiencing non-partner sexual or physical violence than those with access to private sanitation. (ii) In Nigeria, 77% of women using community toilets reported feeling unsafe, and 8% reported actual physical abuse, while others experienced frequent verbal harassment and violations of privacy. (iii) In India's urban slums, up to 22% of women using communal toilets reported experiencing crimes such as eve-teasing, assault, and robbery. The risk increased significantly where design flaws in sanitation infrastructure allowed for proximity between male and female users without adequate physical separation. (iv) In the Solomon Islands, women faced extreme violence, including gang rape, while walking to collect water, with settlements often lacking lighting or secure routes.

Across all contexts, poverty, poor planning, and institutional neglect compound the problem. When sanitation facilities are poorly designed, far from homes, non-functional, or non-segregated by gender, women are more exposed to violence. Additionally, the silence or inaction of law enforcement agencies, often reported in case studies from Kenya, the Solomon Islands, and Delhi, further enables the cycle of abuse and impunity.

The review also identifies cultural and gendered norms as key drivers of the relationship between WASH and VAWG. Women are often culturally assigned as primary managers of household water and hygiene. This responsibility places them in vulnerable positions without accompanying control over infrastructure placement or resource allocation. The lack of decision-making power, both at the household and community levels, exacerbates their exposure to violence.

In summary, the literature reviewed clearly establishes that the lack of safe, accessible, and dignified WASH facilities contributes significantly to the prevalence and persistence of violence against women and girls. This relationship manifests through exposure to external threats during water collection and sanitation use, and through increased stress and abuse within the household. It is further shaped by socio-economic marginalization, inadequate infrastructure, and entrenched gender roles. Therefore, ensuring gender-sensitive planning, empowering women in decision-making, and improving access to safe WASH services are essential strategies for mitigating VAWG globally.

5.6.2. Study area perspective

The study clearly demonstrates a substantive and multifaceted relationship between access to water, sanitation, and hygiene (WASH) facilities and violence against women and girls (VAWG) in low-income urban areas. This relationship is both direct and indirect, manifesting through experiences of non-partner violence in public or semi-public spaces and domestic violence within households, triggered by the challenges related to inadequate WASH services.

One of the most striking findings is that 20% of the surveyed women—39 out of 195—reported experiencing at least one incident of non-partner violence while accessing WASH facilities. These include instances of verbal harassment, physical aggression, and in some cases, sexual violence, occurring while collecting water, using toilets, or bathing. Moreover, the study recorded a total of 60 instances of WASH-related non-partner violence, indicating that some women faced multiple types of abuse. The psychological impact of such incidents is notable; most of the victims—whether the incident occurred recently or many months ago—reported that they still fear reoccurrence, indicating sustained trauma and anxiety associated with basic activities such as fetching water or using the bathroom.

In addition to non-partner violence, domestic violence associated with WASH-related issues was also prevalent. Approximately 32% of respondents reported being verbally teased by family members over WASH-related matters, 6% reported physical abuse, and 4% revealed experiences of sexual abuse by their husbands stemming from WASH-related disputes. These experiences reflect how the burden of managing household water, sanitation, and hygiene disproportionately falls on women, making them targets of frustration and aggression in situations where services are inadequate or difficult to access.

The study also underscores how verbal violence is the most common form of abuse across all WASH domains, yet physical and sexual violence, while reported less frequently, remain serious

concerns. Importantly, the lack of gender-segregated and private facilities directly correlates with women's exposure to violence. Women who used shared or communal facilities without gender separation, and those who lacked adequate privacy due to poor construction of walls, doors, and roofs, were more likely to report experiencing or fearing acts of violence. This dynamic reveals how the physical design and governance of infrastructure intersect with social norms and safety, making WASH access a highly gendered and risk-laden experience in low-income areas.

Thus, the nature of the relationship between WASH and VAWG is both structural and behavioural. It is rooted in gendered responsibilities, spatial exposure, and the physical insecurity of public utilities. The extent of this relationship is considerable—1 in 5 women directly affected—and compounded by emotional distress, sustained fear, and normalization of violence in both domestic and community settings. It underscores the urgent need to recognize WASH not just as a public health concern but as a protection and gender justice issue.

5.7. Answer to research question TWO

Accessibility and usability of WASH facilities in low-income urban areas in Bangladesh play a critical role in either mitigating or exacerbating the risks of violence against women and girls. This study finds that when access to these facilities is limited, poorly maintained, or poorly designed, women are significantly more vulnerable to various forms of violence and harassment.

The accessibility of water sources has a clear bearing on exposure to violence. Women who had to spend more time collecting water—particularly those who spent more than 26 minutes per trip—were substantially more likely to report incidents of teasing or harassment compared to women who could access water in less than 10 minutes. This extended time outside the home increases their visibility and exposure in public spaces, making them more vulnerable to opportunistic acts of harassment, particularly verbal abuse. The lack of adequate lighting in and around water points further contributes to this risk. Although 84% of respondents reported having functional lighting en route to water points, the 9% who had no lighting faced heightened risk during low-visibility hours. Longer travel distance and poorly lit environments combine to reduce women's sense of safety and privacy, especially during early morning or evening hours.

The usability and conditions of sanitation facilities, such as toilets, also directly affect women’s safety. Shared and communal toilets are the primary form of sanitation for 97% of respondents. However, many of these facilities lack essential design features that ensure privacy and protection. Around 20% of shared toilet users and 12% of communal toilet users reported that their toilets do not provide sufficient privacy through walls, doors, or roofing. This lack of privacy is not only a psychological burden but a physical risk factor. Gender segregation is also severely lacking—only a small percentage of multiple-chamber toilet complexes practice gender separation, and those without segregation show significantly higher levels of reported discomfort and perceived risk. Unsurprisingly, most of the reported violence incidents in toilets occurred in facilities without gender segregation.

Bathing facilities reveal a similar pattern. Most women—96%—use shared or communal bathing spaces, yet only 9% of these have any form of gender segregation. All reported incidents of violence during bathing occurred in non-segregated facilities, with 75% of victims stating their bathing spaces did not adequately protect their privacy. Insecure structural design—combined with high user numbers and a lack of gender-specific access—amplifies women's vulnerability. Bathing-related violence included not just verbal harassment but also sexual harassment and assault, with victims reporting heightened anxiety and a strong belief that such violence could happen again.

Furthermore, marital status and housing tenure emerged as indirect influencers of violence vulnerability. Women who were divorced, widowed, or separated were overrepresented among the victims of bathing-related violence, suggesting reduced household protection or social capital. Similarly, tenants reported higher rates of harassment compared to women who owned their homes. Duration of residence also revealed subtle patterns: those who had lived in the area longer were not necessarily safer, contradicting assumptions that community integration offers protection.

Ultimately, these findings make it evident that the physical accessibility (distance, lighting, time) and usability (privacy, gender segregation, maintenance) of WASH facilities are crucial determinants in the occurrence of violence against women and girls. In low-income urban areas of Bangladesh, inadequacies in WASH infrastructure create conditions where routine activities like collecting water, using a toilet, or taking a bath expose woman to harassment and abuse. Addressing these shortcomings requires a gender-sensitive approach to urban planning, which not only improves service delivery but also reduces risks of violence and promotes women’s safety and dignity in accessing essential services.

Chapter 6: Conclusion

This study has explored the intricate and often perilous relationship between violence against women and girls (VAWG) and access to water, sanitation, and hygiene (WASH) facilities in Sattala Slum, an informal settlement in Dhaka, Bangladesh. Drawing on both extensive literature review and primary data collection, the research clearly demonstrates that inadequate WASH services do not only undermine public health and dignity but also significantly increase the risk of gender-based violence for women and girls.

The findings affirm that poor access to safe and private water and sanitation facilities disproportionately affects women, exposing them to harassment, physical assaults, and sexual violence—especially when collecting water, using communal toilets, or accessing bathing spaces at night. These daily risks are further exacerbated by poverty, overcrowding, lack of infrastructure, limited community oversight, and the prevailing gender norms that marginalize women from decision-making processes.

Moreover, the research confirms that the intersection of WASH and VAWG is deeply embedded in socio-cultural dynamics, institutional neglect, and infrastructural inequalities. Women and girls are rendered vulnerable not merely because of poor services, but because of systemic gender disparities that strip them of agency and safety in urban slum environments.

To address these intersecting vulnerabilities, the study underscores the urgent need for gender-sensitive urban planning and policy responses that go beyond infrastructure provision. Key recommendations include ensuring safe, accessible, and well-lit WASH facilities; involving women in the design and management of these services; strengthening community-based safety mechanisms; and integrating WASH improvements with broader efforts to combat VAWG.

Ultimately, securing women's rights to water, sanitation, and safety is not only a matter of service delivery—it is a matter of justice, dignity, and human rights. Only through coordinated, inclusive, and rights-based approaches can cities like Dhaka hope to create safe and equitable environments for all, especially for their most vulnerable residents.

Bibliography

Abrahams, P., Devries, K., Watts, P., Pallitto, C., Petzold, P., Shamu, S., & García-Moreno, C. (2014). Worldwide prevalence of non-partner sexual violence: a systematic review. *The Lancet*.

Aihara, Y. S. (2016). Household water insecurity, depression and quality of life among postnatal women living in urban Nepal. *Water Health* , 317–324.

Akpabio, E. M. (2012). Water meanings, sanitation practices and hygiene behaviours in the cultural mirror: a perspective from Nigeria. *Journal of Water, Sanitation and Hygiene for Development*, 172-177.

Amnesty International. (2010). *Insecurity and Indignity: Women's Experiences in the Slums of Nairobi, Kenya.* London: Amnesty International. Retrieved from https://www.amnesty.org/download/Documents/36000/afr320022010en.pdf

Amnesty International. (2011). *Where is the Dignity in That? Women in Solomon Islands Slums Denied Sanitation and Safety.* London: Amnesty International. Retrieved from https://www.amnesty.org/en/documents/asa43/001/2011/en/

Bangladesh Bureau of Statistics. (2016). *Report on Violence Against Women (VAW) Survey 2015.* Dhaka: Bangladesh Bureau of Statistics (BBS).

Belur, J., Parikh, P., Daruwalla, N., Joshi, R., & Fernandes, R. (2016). Perceptions of gender-based violence around public toilets in Mumbai slums. *International Journal of Comparative and Applied Criminal Justice*.

Bokhari, J. (2002). *Pakistan: Initiative of One, Relief for All – Women's Leadership in the Banda Golra Water Supply Scheme. .* New York: United Nations.

Brewis, A., Choudhary, N., & Wutich, A. (2019). Low water access and food insecurity as gendered physiological stressors: blood pressure evidence from Nepal. *Human Biol*, 1-10.

Campbell, J. C. (2002). Health consequences of intimate partner violence. *Lancet* , 1331-1336.

Choudhary, N. (2020). Sub-optimal household water access is associated with greater risk of intimate partner violence against women: evidence from Nepal. *Journal of Water and Health*.

Daruwalla, N., Levy, C., & Osrin, D. (2016). *Indefensible space.* London: University College London.

Domenech del Rio, I., & Sirvent Garcia del Valle, E. (2017). The consequences of intimate partner violence on health: a further disaggregation of psychological violence – evidence from Spain. *Violence Against Women*.

Doron, A., & Jeffrey, R. (2014). *Open defecation in India.* Mumbai: Economic and Political Weekly.

FISHER, J. (2006). *For her it's the big issue: putting women at the centre of water supply, sanitation and hygiene.* Loughborough: Water Supply and Sanitation Collaborative Council (WSSCC).

Geere, J.-A. L., Cortobius, M., Geere, J. H., Hammer , C. C., & Hunter, P. R. (2018). Is water carriage associated with the water carrier's health? A systematic review of quantitative and qualitative evidence. *BMJ Glob. Health*.

Gomez, M., Perdiguero, J., & Sanz, A. (2019). Socioeconomic Factors Affecting Water Access in Rural Areas of Low and Middle Income Countries. *MDPI*.

Government of the People's Republic of Bangladesh. (2014). *National Strategy for Water Supply and Sanitation 2014.* Dhaka: Policy Support Unit (PSU). Retrieved from https://www.who.int/globalchange/resources/wash-toolkit/national-strategy-for-water-supply-and-sanitation-bangladesh.pdf

Gulyani, , S., & Talukdar, , D. (2006). Inside Informality : The Links between Poverty, Microenterprises, and Living Conditions in Nairobi's Slums. *Science Direct*, 12.

Heise, L., Ellsberg, M., & Gottemoeller, M. (1999). *Population reports: Ending violence against women.* Maryland: The Center for Health and Gender Equity.

Heise, L., Gottmoeller, M., & Ellsberg, M. (2002). A global overview of gender-based violence.

International Journal of Gynecology & Obstetrics, S5-S14.

Heise, L., Moore, K., & Toubia, N. (1995). *Sexual Coercion and Reproductive Health.* New York: THE POPULATION COUNCIL.

Heise, L., Pitanguy , J., & Germain, A. (1994). *Violence against women: the hidden health burden.* Washington DC: World Bank.

Hirve, S., Lele, P., Sundaram, N., Chavan, U., Weiss, M., Steinmann, P., & Juvekar, S. (2015). Psychosocial stress associated with sanitation practices: experiences of women in a rural community in India. *Journal of Water, Sanitation and Hygiene for Development*, 115-124.

Islam, F., Khan, M. H., Ueda, M., Chowdhury, N. R., Chowdhury, S. M., Delem, M. D., & Rahman, A. (2016). *SITUATION OF SEXUAL AND GENDER BASED VIOLENCE AMONG THE ROHINGYA MIGRANTS RESIDING IN BANGLADESH.* Dhaka: Injury Prevention.

Jadhav, A., Weitzman, A., & Greenaway, E. S. (2016). Household sanitation facilities and women's risk of non-partner sexual violence in India. *BMC Public Health*, 1-9. Retrieved from https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-016-3797-z

Krantz, G., & Garcia-Moreno, C. (2005). Violence against women. *Journal of Epidemiology and Community Health, 59*(10), 818-821.

Lennon, S. (2011). *Fear and anger: Perceptions of risks related to sexual violence against women linked to water and sanitation in Delhi, India.* London: Sanitation and Hygiene Applied Research for Equity (SHARE) Consortium.

Ming, M. A., Stewart, M. G., Tiller, R. E., Rice, R. G., Crowley, L. E., & Williams, N. J. (2016). Domestic violence in the Solomon Islands. *J Family Medicine Primary Care*, 16-19.

Ministry of Water Resources. (1999). *National Water Policy.* Dhaka: Ministry of Water Resources.

Ministry of Women and Children Affairs. (2011). *National Women Development Policy 2011.* Dhaka: Ministry of Women and Children Affairs.

Okoji, M. A. (2000). *Agriculture. In: Southeastern Nigeria.* Kaduna: Abaam Press.

Oxfam GB. (2007). *Gender-Based Violence* (1st ed.). Oxford: Oxfam GB.

Rasanathan, J. J., & Bhushan , A. (2011). Gender-based violence in Solomon Islands: Translating research into action on the social determinants of health. *World Conference on Social Determinants of Health.* Rio de Janeiro: World Conference on Social Determinants of Health.

Ray, I. (2007). Women, Water, and Development. *Annual Review of*

Environment and Resources, 422-432.

Richters, J. A. (1994). *Women, Culture and Violence : a development, health and human rights issue.* Leiden: Women and Autonomy Centre (VENA), Leiden University.

Sahoo, K. C., Hulland, K. R., Caruso, B. A., Swain, R., Freeman, M. C., Panigrahi, P., & Dreibelbis, R. (2015). *Sanitation-related psychosocial stress: A grounded theory study of women across the life-course in Odisha, India.* Odisha: Soc Sci Med.

Secretariat of the Pacific Community. (2009). *Solomon Islands Family Health and Safety Study: a study on violence against women and children.* Honiara: Solomon Islands Ministry of Women, Youth and Children's Affairs.

Shrestha, R. (2002). *Pro-poor water supply and sanitation project (The RWSS experience from Nepal) .* Kathmandu: Development Alternatives Nepal (DAN).

Sifat, R. I. (2020). Sexual violence against women in Bangladesh during the COVID-19 pandemic. *PubMed Central*.

Sommer, M., Ferron, S., Cavill, S., & House, S. (2014). *Violence, gender and WASH: spurring action on a complex, underdocumented and sensitive topic.* New York: International Institute for Environment and Development.

Srinivasan, R. (2015). Lack of Toilets and Violence Against Indian Women: Empirical Evidence and Policy Implications. *SSRN*, 3-26.

Tenthani, R. (2002). *Sisters are tapping it for themselves.* New Internationalist.

UN Women. (2023). *UN Women*. Retrieved September 28, 2023, from https://www.unwomen.org/en/what-we-do/ending-violence-against-women/faqs/types-of-violence

WaterAid. (2012). *Women, Sanitation, and Security Nigeria.* London: GlobeScan Incorporated.

WHO. (1997). *Violence against women: a priority health issue.* Geneva: World Health Organization.

WHO. (2023). *World Health Organization*. Retrieved September 22, 2023, from https://www.who.int/health-topics/gender#tab=tab_1

Wijk, C. (2011). *The Best of Two Worlds? Methodology for Participatory Assessment of Community Water Services.* NY: IRC Technical Paper Series.

Winter, S. C., & Barchi, F. (2015). Access to sanitation and violence against women: evidence from Demographic Health Survey (DHS) data in Kenya. *International Journal of Environmental Health Research*, 6-13.

Wirtz, A. L., Poteat, T. C., Malik, M., & Glass, N. (2018). Gender-Based

Violence Against Transgender People in the United States: A Call for Research and Programming. *Sage Journals*, 1-15.

Appendix: Survey (primary data collection) Questionnaire

নং	প্রশ্ন	কোড	অপশন
ক) পরিচিতি পর্ব			
১	উত্তরদাত্রীর নাম		
২	উত্তরদাত্রীর বয়স		
৩	শিক্ষাগত যোগ্যতা	১	স্কুলে যাওয়া হয়নি
		২	প্রাথমিক পাশ করতে পারেনি
		৩	প্রাথমিক (বা সমমান) পাশ
		৪	মাধ্যমিক (বা সমমান) পাশ
		৫	উচ্চ-মাধ্যমিক (বা সমমান) পাশ
		৬	সম্মান (বা সমমান) বা অধিক পাশ
৪	পেশা	১	গৃহিণী
		২	গৃহকর্মী
		৩	ছাত্রী
		৪	দিন মজুর
		৫	শ্রমিক
		৬	চাকুরী
		৭	ব্যবসা
		৮	অন্যান্য
৫	বৈবাহিক অবস্থা	১	অবিবাহিত
		২	বিবাহিত
		৩	বিধবা/সেপারেটেড/তালাকপ্রাপ্ত
৫ক	৫ নং এর উত্তর ২ হলে; কত বছর ধরে বিবাহহিত?		
৬	পরিবারের মোট সদস্য সংখ্যা কত?		
৭	পরিবারের প্রধান কে?	১	আমি নিজে
		২	আমার স্বামী
		৩	আমার বাবা/শ্বশুর
		৪	আমার মা/শ্বাশুরি
		৫	আমার পুত্র/কণ্যা
		৬	আমার পত্রবধু/জামাই
		৭	অন্যান্য
খ) বসবাস সংক্রান্ত তথ্য			
৮	আপনার পরিবার এখনে কি হিসেবে বসবাস করছেন?	১	মালিক
		২	ভাড়াটিয়া
		৩	কেয়ারটেকার
		৪	সরকারী/বেসরকারী অনুদান
		৫	অন্যান্য

৯	আপনার পরিবার এখনে কত বছর ধরে বসবাস করছে?		
১০	আপনাদের ঘরের দেওয়াল কি দিয়ে তৈরি?	১	ইট/সিমেন্ট
		২	কাদা-ইট অথবা সি-আই সিট/কাঠ
		৩	ছন-খড়- পাতা ইত্যাদি
গ) পানি, টয়লেট এবং পরিস্কার-পরিচ্ছন্নতা সম্পর্কিত সুযোগ-সুবিধার তথ্য			
১১	আপনার পরিবার যে টয়লেট ব্যবহার করে সেখানে মোট কতগুল চেম্বার আছে?	১	১ টি
		২	২ টি
		৩	৩ টি
		৪	৪ টি
		৫	৫ টি বা তার বেশি
১২	আপনার পরিবার যে টয়লেট ব্যবহার সেটি আসলে কি ধরনের টয়লেট?	১	শুধু আমার পরিবার
		২	নির্দিষ্ট ক'টি পরিবার
		৩	প্রতিবেশীরা সবাই
		৪	সেটি পাব্লিক টয়লেট
১৩	প্রতিদিন (প্রায়) কতজন মানুষ সেই টয়লেট ব্যবহার করেন?		
১৪	(১২ নং এর উত্তর ১ না হলে) টয়লেটে কি নারী ও পুরুষদের আলাদা চেম্বার আছে?	১	হ্যাঁ
		২	না
		৩	হ্যাঁ, কিন্তু কেউ মানে না
১৫	আপনার ঘর থেকে টয়লেটের দূরত্ব কত ফিট? (কত কদম হিসাব করতে হবে, পরে সেটা কে ২.৫ দিয়ে গুন করলে ফিটের হিসাব পাওয়া যাবে)		
১৬	আপনি যে টয়লেট ব্যবহার করেন, সেই টয়লেটের ছাদ, দেওয়াল, দরজা ইত্যাদি কি আপনার গোপনীয়তা রক্ষা করতে পারে?	১	হ্যাঁ
		২	হ্যাঁ, তবে সবসময় না
		৩	পারে না
১৭	আপনি যে টয়লেট ব্যবহার করেন, সেখানে বা সেখানে যাওয়া আসার যে রাস্তা সেখানে কি রাতের বেলা পর্যাপ্ত লাইটের ব্যবস্থা আছে?	১	হ্যাঁ
		২	টয়লেটে আছে, কিন্তু পথে নাই
		৩	পথে আছে কিন্তু টয়লেটে নাই
		৪	হ্যাঁ, তবে সবসময় না
		৫	না
১৮	খাবার পানির জন্য প্রধান যে উৎস ব্যবহার করেন সেটা আর কারা ব্যবহার করে থাকেন?	১	শুধু আমার পরিবার
		২	নির্দিষ্ট ক'টি পরিবার
		৩	প্রতিবেশীরা সবাই
		৪	সেটি সকলের জন্য উন্মুক্ত
১৯	একবার খাবার পানি সংগ্রহ করতে কত মিনিট সময় লাগে?		বাড়ির নারী সদস্যরা
২০	পরিবারার জন্য পানি সাধারনত কে সংগ্রহ করে থাকে?	১	বাড়ির পুরুষ সদস্যরা
		২	
২১	যেখানে পানি সংগ্রহ করা হয়ে থাকে বা পানি সংগ্রহ করতে যে পথ দিয়ে যেতে হয় সেখানে কি রাতের বেলা পর্যাপ্ত লাইটের ব্যবস্থা আছে?	১	হ্যাঁ
		২	উৎসে আছে, কিন্তু পথে নাই
		৩	পথে আছে কিন্তু উৎসে নাই
		৪	হ্যাঁ, তবে সবসময় না
		৫	না
২২	আপনি যেখানে গোসল করেন, সেই সুবিধা আর কে কে ব্যবহার করে থাকে?	১	শুধু আমার পরিবার
		২	নির্দিষ্ট ক'টি পরিবার
		৩	প্রতিবেশীরা সবাই
		৪	সেটি সকলের জন্য উন্মুক্ত
২৩	(২২ নং এর উত্তর ১ না হলে) গোসলখানায় কি নারী-পুরুষের জন্য আলাদা ব্যবস্থা আছে?	১	হ্যাঁ
		২	না
		৩	হ্যাঁ, কিন্তু কেউ মানে না
২৪	আপনার গোসলখানা কি আপনার গোপনীয়তা রক্ষা করতে পারে?	১	হ্যাঁ
		২	হ্যাঁ, তবে শুধু সন্ধ্যার পর
		৩	না
২৫		১	হ্যাঁ
		২	না

	আপনার গোসলখানা কি মাসিকের প্যাড পরিবর্তন/ব্যবহৃত কাপড় ধোয়া/পরিষ্কার-পরিচ্ছন্ন হওয়ার সময় গোপনীয়তা রক্ষা করতে পারে?	৩	মাঝে মাঝে
		৪	প্রযোজ্য নয়
ঘ) নারীর প্রতি সহিংসতা বিষয়ক জ্ঞান			
২৬	"নারী ও মেয়েদের প্রতি সহিংসতা" এই সম্পর্কে জানেন?	১	হ্যাঁ
		২	না
২৭	(২৬ নং এর উত্তর ১ হলে) নারী ও মেয়েদের প্রতি সহিংসতার ব্যাপারে কিভাবে জেনেছেন?	১	প্রশিক্ষণ থেকে
		২	সচেতনতা সেশনে অংশ নিয়ে
		৩	লিফ্লেট, পোষ্টার, ইত্যাদি থেকে
		৪	গণমাধ্যমে
		৫	সামাজিক যোগাযোগ মাধ্যমে
		৬	অন্য নারী/মেয়েদের থেকে
		৭	অন্যান্য
২৮	(২৬ নং এর উত্তর ১ হলে) আপনি কি নারী ও মেয়েদের প্রতি সহিংসতার কিছু উদাহরণ দিতে পারবেন? (উনার দেওয়া উদাহরগুলো কোন প্রকারে পরে সেই প্রকারে টিক দিতে হবে)	১	মৌখিক সহিংসতা
		২	শারিরিক সহিংসতা
		৩	যৌন সহিংসতা
		৪	যৌন হয়রানি
		৫	বাল্য বিবাহ
		৬	শিশু ভ্রুণ হত্যা
		৭	পরিবারার সন্মানের জন্য নারী হত্যা
		৮	অন্যান্য
ঙ) ওয়াশ সম্পর্কিত সহিংসতার অভিজ্ঞতা (পারিবারিক পর্যায়)			
২৯	পানি, স্যানিটেশন, বা পরিষ্কার পরিচ্ছন্নতা সংক্রান্ত কারনে বা সেগুলো নিয়ে নিজের মতামত দিতে গিয়ে, কখনো আপনার পরিবারের সদস্যদের কাছ থেকে মৌখিক তিরস্কারের শিকার হয়েছেন?	১	সব সময়
		২	প্রায় হয়ে থাকি
		৩	মাঝে মাঝে
		৪	কখনোই না
৩০	পানি, স্যানিটেশন, বা পরিষ্কার পরিচ্ছন্নতা সংক্রান্ত কারনে বা সেগুলো নিয়ে নিজের মতামত দিতে গিয়ে, কখনো আপনার পরিবারের সদস্যদের কাছ থেকে শারীরিক নির্যাতনের শিকার হয়েছেন?	১	সব সময়
		২	প্রায় হয়ে থাকি
		৩	মাঝে মাঝে
		৪	কখনোই না
৩১	পানি, স্যানিটেশন, বা পরিষ্কার পরিচ্ছন্নতা সংক্রান্ত কারনে বা সেগুলো নিয়ে নিজের মতামত দিতে গিয়ে, কখনো আপনার পরিবারের সদস্যদের কাছ থেকে যৌন নিপিড়নের শিকার হয়েছেন?	১	সব সময়
		২	প্রায় হয়ে থাকি
		৩	মাঝে মাঝে
		৪	কখনোই না
চ) ওয়াশ সম্পর্কিত সহিংসতার অভিজ্ঞতা (পারিবারিক পর্যায়)			
৩৭	পানি আনার পথে, কখনো হয়রানি/সহিংসতার শিকার হয়েছেন?	১	না
		২	হ্যাঁ
৩৭ নং এর উত্তর ২ হলে			
ক	শেষ কবে এমন ঘটনা ঘটেছে?	১	শেষ সপ্তাহে
		২	শেষ মাসে
		৩	শেষ ৬ মাসে
		৪	৬ মাসের আগে
খ	ঘটনাটি কখন ঘটেছিলো?	১	সকালের দিকে
		২	বিকেলের দিকে
		৩	সন্ধ্যার দিকে
		৪	রাতের দিকে
গ	ঘটনাটিকে কি ধরনের সহিংসতা হিসেবে চিহ্নিত করবেন?	১	মৌখিক সহিংসতা
		২	শারিরিক সহিংসতা
		৩	যৌন সহিংসতা
		৪	যৌন হয়রানি
		৫	অন্যান্য

ঘ	আপনি কি মনে করেন সেই ধরনের ঘটনা আবার ঘটতে পারে?	১	হ্যাঁ
		২	না
৩৮	পানি সংগ্রহ করার সময়, কখনো হয়রানি/সহিংসতার শিকার হয়েছেন?	১	না
		২	হ্যাঁ
৩৮ নং এর উত্তর ২ হলে			
ক	শেষ কবে এমন ঘটনা ঘটেছে?	১	শেষ সপ্তাহে
		২	শেষ মাসে
		৩	শেষ ৬ মাসে
		৪	৬ মাসের আগে
খ	ঘটনাটি কখন ঘটেছিলো?	১	সকালের দিকে
		২	বিকেলের দিকে
		৩	সন্ধ্যার দিকে
		৪	রাতের দিকে
গ	ঘটনাটিকে কি ধরনের সহিংসতা হিসেবে চিহ্নিত করবেন?	১	মৌখিক সহিংসতা
		২	শারিরিক সহিংসতা
		৩	যৌন সহিংসতা
		৪	যৌন হয়রানি
		৫	অন্যান্য
ঘ	আপনি কি মনে করেন সেই ধরনের ঘটনা আবার ঘটতে পারে?	১	হ্যাঁ
		২	না
৩৯	আপনি টয়লেটে যাওয়া/আসার পথে, কখনো সহিংসতার শিকার হয়েছেন?	১	না
		২	হ্যাঁ
৩৯ নং এর উত্তর ২ হলে			
ক	শেষ কবে এমন ঘটনা ঘটেছে?	১	শেষ সপ্তাহে
		২	শেষ মাসে
		৩	শেষ ৬ মাসে
		৪	৬ মাসের আগে
খ	ঘটনাটি কখন ঘটেছিলো?	১	সকালের দিকে
		২	বিকেলের দিকে
		৩	সন্ধ্যার দিকে
		৪	রাতের দিকে
গ	ঘটনাটিকে কি ধরনের সহিংসতা হিসেবে চিহ্নিত করবেন?	১	মৌখিক সহিংসতা
		২	শারিরিক সহিংসতা
		৩	যৌন সহিংসতা
		৪	যৌন হয়রানি
		৫	অন্যান্য
ঘ	আপনি কি মনে করেন সেই ধরনের ঘটনা আবার ঘটতে পারে?	১	হ্যাঁ
		২	না
৪০	আপনি টয়লেটে ব্যবহারের সময়, কখনো সহিংসতার শিকার হয়েছেন?	১	না
		২	হ্যাঁ
৪০ নং এর উত্তর ২ হলে			
ক	শেষ কবে এমন ঘটনা ঘটেছে?	১	শেষ সপ্তাহে
		২	শেষ মাসে
		৩	শেষ ৬ মাসে
		৪	৬ মাসের আগে
খ	ঘটনাটি কখন ঘটেছিলো?	১	সকালের দিকে
		২	বিকেলের দিকে
		৩	সন্ধ্যার দিকে
		৪	রাতের দিকে
গ	ঘটনাটিকে কি ধরনের সহিংসতা হিসেবে চিহ্নিত করবেন?	১	মৌখিক সহিংসতা
		২	শারিরিক সহিংসতা
		৩	যৌন সহিংসতা
		৪	যৌন হয়রানি

		৫	অন্যান্য
ঘ	আপনি কি মনে করেন সেই ধরনের ঘটনা আবার ঘটতে পারে?	১	হ্যাঁ
		২	না
৪১	আপনি গোসল করতে যাওয়া/আসার পথে, কখনো সহিংসতার শিকার হয়েছেন?	১	না
		২	হ্যাঁ
৪১ নং এর উত্তর ২ হলে			
ক	শেষ কবে এমন ঘটনা ঘটেছে?	১	শেষ সপ্তাহে
		২	শেষ মাসে
		৩	শেষ ৬ মাসে
		৪	৬ মাসের আগে
খ	ঘটনাটি কখন ঘটেছিলো?	১	সকালের দিকে
		২	বিকেলের দিকে
		৩	সন্ধ্যার দিকে
		৪	রাতের দিকে
গ	ঘটনাটিকে কি ধরনের সহিংসতা হিসেবে চিহ্নিত করবেন?	১	মৌখিক সহিংসতা
		২	শারিরিক সহিংসতা
		৩	যৌন সহিংসতা
		৪	যৌন হয়রানি
		৫	অন্যান্য
ঘ	আপনি কি মনে করেন সেই ধরনের ঘটনা আবার ঘটতে পারে?	১	হ্যাঁ
		২	না
৪২	আপনি গোসল করার সময়, কখনো সহিংসতার শিকার হয়েছেন?	১	না
		২	হ্যাঁ
৪২ নং এর উত্তর ২ হলে			
ক	শেষ কবে এমন ঘটনা ঘটেছে?	১	শেষ সপ্তাহে
		২	শেষ মাসে
		৩	শেষ ৬ মাসে
		৪	৬ মাসের আগে
খ	ঘটনাটি কখন ঘটেছিলো?	১	সকালের দিকে
		২	বিকেলের দিকে
		৩	সন্ধ্যার দিকে
		৪	রাতের দিকে
গ	ঘটনাটিকে কি ধরনের সহিংসতা হিসেবে চিহ্নিত করবেন?	১	মৌখিক সহিংসতা
		২	শারিরিক সহিংসতা
		৩	যৌন সহিংসতা
		৪	যৌন হয়রানি
		৫	অন্যান্য
ঘ	আপনি কি মনে করেন সেই ধরনের ঘটনা আবার ঘটতে পারে?	১	হ্যাঁ
		২	না
৪৩	আপনার বন্ধু/আত্মীয়/প্রতিবেশি/সহকর্মী যারা অনুন্নত এলাকায় বাস করে, গোসল বা টয়লেট করার সময় তাদের কি কখনো মনে হয়েছে যে কেউ তাদের লুকিয়ে লুকিয়ে দেখছে?	১	কখনোই না
		২	মাঝে মাঝে
		৩	প্রায় মনে হয়
		৪	আমি জানিনা
৪৪	আপনার বন্ধু/আত্মীয়/প্রতিবেশি/সহকর্মী যারা অনুন্নত এলাকায় বাস করে, গোসল বা টয়লেট করার সময় তাদের কি কখনো মনে হয়েছে যে কেউ তাদের লুকিয়ে লুকিয়ে ছবি তুলছে?	১	কখনোই না
		২	মাঝে মাঝে
		৩	প্রায় মনে হয়
		৪	আমি জানিনা
৪৫	গোসল করার সময় বা টয়লেট করার সময় আপনার কি কখনো মনে হয়েছে যে কেউ লুকিয়ে আপনাকে দেখতে পারে?	১	হ্যাঁ
		২	না
৪৬	গোসল করার সময় বা টয়লেট করার সময় আপনার কি কখনো মনে হয়েছে যে কেউ লুকিয়ে আপনার ভিডিও করতে পারে?	১	হ্যাঁ
		২	না