Understanding experiences of women's empowerment through WASH/cash transfers toward post-COVID-19 recovery in Ghana

by

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AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

ABSTRACT

The COVID-19 pandemic resulted in increased poverty in sub-Saharan Africa and worsened economic conditions for those at the base of the economic pyramid, particularly women and girls. Since COVID-19, Ghana's gender gap index worsened from 1.01 in 2020 to 0.69 in 2023. This score indicates that women were 31% less likely to have the same socio-economic opportunities as men. Gender inequalities continue to persist in Ghana due to social norms that put women in subservient roles. To address these issues, water and sanitation infrastructure are often argued to empower women. However, with limited power and control over resources, many women have less say, both within the household and the community. This restricts their participation in decision-making processes, such as managing or investing in water and sanitation resources that meet their needs. In the context of development, cash transfers are often promoted as critical for reducing the level and severity of poverty. However, without appropriate attention to gender considerations, there is a concern that cash transfers may fail to reach those left furthest behind, potentially limiting rather than promoting women's empowerment. This research uses feminist political ecology to explore experiences of women's empowerment in Ghana's Upper West Region, one of the poorest areas in the country. The Livelihood Empowerment Against Poverty (LEAP) social protection program was investigated to explore how cash transfers and complementary water services impact women's wellbeing, empowerment, and access to WASH services. Data was obtained by conducting 36 in-depth interviews with women who were either LEAP beneficiaries or non-LEAP beneficiaries identified as impoverished from the Ghana National Household Registry (GNHR) database. The data was thematically analyzed using NVIVO 15. The findings reveal that women and girls were primarily responsible for water provision in the household. This responsibility exposed them to physical, psychosocial, infrastructural, and sexual violence. These

findings also reveal reinforcements of social norms through social sanctions and social benefits, victims having no one to talk to about water struggles, and concealing sexual violence to preserve family honor. During COVID-19, women reported a significant increase in water collection for their households due to public health guidelines urging regular handwashing, especially after leaving and returning home. This placed an extra burden on women, particularly those in larger households or living further from water sources. Furthermore, women were expected to practice social distancing and handwashing at water sites, which prolonged their time spent collecting water, overburdened boreholes and public taps, and increased fighting and arguments over water access. Through cash transfers, women gained decision-making power regarding sanitation expenditures and water allocation. This, according to the Empowerment in WASH Index, is a positive indicator of women's empowerment. Also, through cash transfers, LEAP beneficiary households can pay for water services, which reduced concerns about water shortages compared to non-beneficiaries. These findings also show that cash transfers resulted in an improvement in women's health and wellbeing through increased access to food, nutrition, and healthcare. In addition, cash transfers enabled women to be better prepared and able to withstand shocks from disasters and WASH emergencies compared to non-beneficiaries, helping them to build back better post-COVID-19. These results highlight important links between women's empowerment and the promotion of inclusive water security, gender equality, and post-COVID-19 recovery. Future research can build on these results by investigating the impact of women's empowerment on men, as this area was not captured by the research objectives but could enrich the discussion on cash transfers' impact on women's empowerment. Involving all stakeholders and integrating social norms initiatives into WASH programs is necessary to increase the likelihood of achieving sustainable behavior change.

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DEDICATION

This thesis is dedicated to my dear father, the late Mr. Peter Amininaa Jebuni, who loved me so dearly. *Mba*, I hope you are proud of how much your boy has grown.

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LIST OF ABBREVIATIONS

COVID-19	Coronavirus Disease 2019
DEI	Diversity, Equity, and Inclusion
EWI	Empowerment in Water, Sanitation, and Hygiene Index
FPE	Feminist Political Ecology
GBV	Gender-based Violence
GNHR	Ghana National Household Registry
GSS	Ghana Statistical Service
LEAP	Livelihood Empowerment Against Poverty
LMICs	Low- and Middle-Income Countries
NGO	Non-governmental Organization
NHIS	National Health Insurance Scheme
SSA	Sub-Saharan Africa
SDG	Sustainable Development Goal
UN	United Nations
UNICEF	United Nations Children's Fund
UNDP	United Nations Development Programme
WASH	Water, Sanitation, and Hygiene
WASH-GBV	Water, Sanitation, and Hygiene Gender-based Violence
WHO	World Health Organization

CHAPTER ONE

GENERAL INTRODUCTION

1.1 Research Background

The United Nations (UN) declared access to water as a fundamental human right in 2010. Fifteen years later, an estimated 2 billion people still lack access to safely managed drinking water (WHO & UNICEF, 2022). Women and girls are disproportionately affected by inadequate access to water, sanitation and hygiene (WASH) services as they are primarily responsible for providing water for their households (De Guzman et al., 2023; Nunbogu et al., 2023). According to United Nations Women (2024), women and girls collectively spend an estimated 250 million hours every day collecting water, over three times more than men and boys. In sub-Saharan Africa (SSA), women in urban areas spend about 25 minutes on average in a single roundtrip to collect water and 33 minutes in rural areas. UNICEF estimates that while women in Malawi spent an average of 54 minutes collecting water, men only spent 6 minutes (UNICEF, 2016). When water is not on premises and needs to be collected, it is women and girls who are mostly paying with their time and lost opportunities.

Prevalent social norms put the burden of collecting water on women and girls (Bisung & Dickin, 2021; Adams et al., 2021). For example, in many low- and middle-income countries (LMICs), existing social norms assign the majority of water collection work for domestic purposes to women (Nunbogu & Elliott, 2022a). When work is divided in this manner, women often bear more of the burden associated with household water and sanitation insecurity, such as greater exposure to water-related disease, discriminatory taboos, and unrealized economic productivity (Dery et al., 2021). While women and girls bear the burden of collecting water, they are often restricted from WASH decision-making and implementation processes (Dickin et al., 2021).

Furthermore, women and girls are often vulnerable and at risk of violence and harm during water collection. While fetching water, for example, women and girls may encounter sexual harassment, face a greater risk of injury, and suffer chronic fatigue due to traveling long distances with heavy loads (Nunbogu & Elliott, 2022b). These challenges and risks have only increased since the COVID-19 pandemic.

COVID-19 exacerbated inequalities and gender-based risks globally, and even more severely in SSA (Onyeaka et al., 2023). In Uganda, for example, COVID-19 reinforced gender inequalities as women took on more unpaid housework demands, with increased tendency of risks (Altaf et al., 2024). Again, COVID-19 is said to have reversed progress in several workplace gains for women, having damaged the services industry which is primarily dominated by women (Alon et al., 2022). It is reported that women spent 7.7 more hours a week than men on unpaid household work during the COVID-19 (UN, 2021). Moreover, with the closure of schools and childcare facilities around the world, children were required to stay at home, and this increased the already higher burden of unpaid care work that women performed in the household (Power, 2020). Similarly, it was reported that gender-based violence increased globally due to the restrictions on movement due to lockdown measures (Murhula et al., 2021). Thus, COVID-19 and the associated lockdown measures revealed and intensified pre-existing gender inequalities. Addressing these gaps in the labor market, education, health, and finance will be key to achieving post-pandemic recovery.

Access to safely managed WASH services is often promoted as a crucial intervention in achieving many human development targets, including those for women's empowerment and gender equality (Dickin et al., 2021). The UN's Sustainable Development Goal 6, which is the goal for water and sanitation, calls for universal and equitable access to safe and affordable drinking

water for all by 2030. It is important to provide everyone with access to basic water service within a 30-minute round trip as a short-term goal, with the long-term goal being access to safe water service at home. Water and sanitation infrastructure are mostly argued to empower women, especially when it reduces the time spent on collecting water. This narrative is mostly in NGO materials, where a strong focus on WASH infrastructure is highlighted as a positive tool for women's empowerment (WaterAid, 2017). However, with less power and control over resources, many women have less say, both within the household and community (Dickin et al., 2021). This restricts their participation in decision-making processes, such as management of (or investment in) water and sanitation resources that meet their needs (Dery et al., 2020; Caruso et al., 2022).

In the context of development, there is extensive and consistent evidence that cash transfers can lessen the level and severity of poverty and improve access to healthcare (Awojobi, 2022). While these cash transfer programs mostly target marginalized populations, focusing these programs on women does not automatically produce desirable outcomes for women and girls. While burgeoning evidence on cash transfers suggest positive outcomes for women and girls in many dimensions related to poverty reduction and empowerment, the results are often largely inconclusive, mixed, and complicated. Empowerment is conceptualized by some scholars as a process and not a static state (Cattaneo & Chapman, 2010). This means that to produce conclusive results, evaluations must be conducted over a sufficiently long period of time, which is largely difficult in the context of SSA. Moreover, without proper gender considerations, there is a concern that cash transfers may fail to reach those left furthest behind, potentially limiting rather than generating opportunity for greater gender-transformative change (Okoli, 2024). For example, evidence suggests that certain program design choices that do not address gender power relations can lead to additional burdens like intimate partner violence on women recipients of cash transfers

(Van Daalen et al., 2022). Additionally, there is growing recognition that for cash-based interventions to create broader gender transformative change, they must also involve men and boys (Waldron et al., 2021). Taking that into consideration, my research will draw on relevant concepts to provide a broader perspective on understanding how WASH and cash transfers together can contribute to women's empowerment beyond the provision of infrastructure.

1.2 Research Context

This research is situated within the broader literature on WASH access and women's empowerment toward post-COVID-19 recovery in LMICs. Dominant literature shows that the COVID-19 pandemic created, and continues to produce, unprecedented challenges globally (Lamb et al., 2024; Siddique et al., 2021). A pressing concern COVID-19 presented is feminization of poverty. In SSA, for example, COVID-19 has increased poverty and worsened economic conditions for women and girls, who are often at the bottom of the economic pyramid (Nkansah-Dwamena & Fevrier, 2024; Agbo, 2023). Evidence suggests that the pandemic has reversed decades of progress for women and girls, pushing gender equality further behind (Reford, 2023; World Economic Forum, 2021). In Ghana, some researchers point to COVID-19 as an additional vulnerability that has reinforced already existing inequalities for women (Awuni et al., 2023). Since COVID-19, Ghana's gender gap index worsened from 1.01 in 2020 to 0.69 in 2023 (UNDP, 2024). This score indicates that women were 31 percent less likely to have the same socio-economic opportunities as men.

From a causative point of view, gender inequalities continue to persist in Ghana because of social norms that put women in subservient roles compared to men (Nartey et al., 2023). Some researchers point to the physical, sexual, and psychosocial harms and risks of collecting water

(Nunbogu & Elliott, 2022b), and how the burden is disproportionately shared (Dickin et al., 2021) as evidence that access to WASH services is gendered. At the same time, evidence shows that the gendered nature of WASH access has negative outcomes for women's health and wellbeing (Jalali, 2021). Similarly, social norms and expectations can perpetuate discrimination and inequities and reinforce how societies value women. Without due care, social norms can create a vicious cycle that discriminates, restricts, and excludes women and girls from making relevant socio-economic choices (Bazaanah & Ngcobo, 2024).

In 2008, the government of Ghana started the Livelihood Empowerment Against Poverty (LEAP) social protection program. The main aim of this cash transfer program was to help extremely poor and vulnerable households withstand chronic shocks and emerging catastrophes, including those from pandemics. Each beneficiary of the LEAP program in 2020 received a cash grant of 64 to 106 Ghanaian cedis (i.e., $12 CAD to $20 CAD) every two months, and this amount was increased by 10 Ghanaian cedis during the COVID-19 pandemic. A key part of the LEAP program is to link some beneficiaries to complementary services like enrolment in the national health insurance scheme (NHIS), agriculture input support, microfinance schemes, micronutrient support, and skills training for caregivers of orphans and vulnerable children. However, access to safe water is not part of the complementary services for beneficiaries of the LEAP program despite the challenges many Ghanaian households face regarding access to water. That is, the 2021 Joint Monitoring Program report (WHO & UNICEF, 2022) indicates;/ that 21 percent of households in Ghana lack access to safely managed water, while 87 percent lack access to safely managed sanitation.

The dominant literature on WASH access, women empowerment, and COVID-19 often highlights the connections among these three themes, exploring the significant role of WASH

services in improving gender equality, public health, and community resilience during the pandemic (Okesanya et al., 2024; Sahoo et al., 2022). This research will contribute to knowledge by exploring how these themes intersect, and how cash transfer and access to WASH can contribute to women's empowerment. This research will also bridge knowledge gaps in understanding the complementary benefits and synergies between cash transfer programs and access to WASH, and how that could translate into addressing risks and harms from social norms and to unlocking the economic potential of women at the local level in Ghana and beyond.

1.3 Research Objectives

This research is part of a larger research program that uses gender and health equity lenses to investigate gender transformative change and wellbeing related to accessing WASH services in Ghana. The program aims to understand the impact of cash transfers and complementary water services on the work and health of extremely poor women to facilitate gender transformative policy making across multiple sectors. The overall purpose of this thesis is to understand the role of WASH/cash transfers in empowering women and addressing gender inequalities based in existing social norms. Specifically, this thesis aims to achieve the following objectives:

1. To identify the existing WASH social norms around gender at the community level in Ghana;
2. To explore how cash transfers combined with complementary water services intersect with WASH social norms to influence the health, wellbeing, and empowerment levels of women at the household and community levels in Ghana; and
3. To explore how social protections buffer against emergency WASH-related risks at the household and community levels in Ghana.

1.4 Potential Research Contributions

The research is a response to knowledge gaps around the empowerment of women through WASH and cash transfer programs (Jeong & Trako, 2022). The research offers three main contributions. First, the research will help Ghana and other SSA countries strengthen practices around cash transfer programs and ensure their complementary services are distributed equitably and in line with two key priorities of the global SDG agenda (SDG 5 Gender equality and SDG 6 Clean water and sanitation). Second, the research will significantly expand current knowledge of capturing women's empowerment and identify areas of disempowerment in specific populations. This is necessary to inform the design of interventions that promote inclusive water security, gender equality, and post-COVID-19 recovery. Lastly, the research will transform and challenge conventional norms and thought on gender comparison in SSA, which will be of interest to scholars in many social science and health disciplines.

1.5 Geographies of Health and Empowerment in WASH

This research fits into the sub-discipline of health geography and draws from the broad concepts of power, temporality, and place. Health geography transitioned from medical geography to become a relational concept that includes the social, economic, cultural, and environmental factors that influence health outcomes at various scales (R. Kearns & Moon, 2002). The transition within the sub-discipline enabled health geographers to expand their empirical focus from disease ecology and geographical epidemiology to include the individual, their body, lived experiences, and embodied diseases (Andrews & Kearns, 2005; Kearns & Moon, 2002).

Health is conceptualized in health geography as holistic, and that includes the overall physical, mental, and emotional wellbeing of the individual and recognition that health is

influenced by a wide range of environmental determinants (WHO, 2016; Kearns & Andrews, 2010). The integration of the environmental determinants into the concept of health reflects the idea that our health is not just a result of genetic predispositions or medical treatment, but also intricately linked to the spaces we live in, and the social structures around us. Furthermore, Gatrell & Elliott (2015) define health as the availability of resources for an individual to achieve their potential. These concepts of health will be applied in my research to understand the experiences of women's (dis)empowerment, and how that affects women's health and wellbeing. According to Calderón-Villarreal et al. (2022), access to water is a prerequisite for improved hygiene and sanitary practices, and the associated health outcomes in different geographic contexts and spaces. WASH research often has global health implications, and health geography provides a framework for understanding how WASH challenges intersect with broader global health issues. Similarly, health geographers can contribute to disease risk reduction, including those from pandemics like COVID-19. For example, health geographers incorporate the concepts of power, temporality, and place into the study of embodied diseases, disease exposure, and disease management (Gatrell & Elliott, 2014).

WASH services are mostly promoted as critical for women's empowerment and gender equality. This is because access to safe water and sanitation is necessary for human development. For example, WaterAid (2017) highlights access to WASH infrastructure as beneficial for women's empowerment. However, recent research (e.g., Caruso et al., 2022; Dickin et al., 2021) points out that provision of WASH infrastructure does not necessarily address inequalities in power and control over resources. This is shown in the restrictive role social norms play in women's participation, decision-making, and control over water and sanitation resources in the context of SSA. Within the context of empowerment in WASH, health geography plays a crucial

role in understanding the geographic distribution of water, sanitation, and health outcomes, as well as the barriers that marginalized populations face in accessing these services.

1.6 Outline of Thesis

This thesis has been organized into five chapters. The first chapter presents a general introduction to the thesis, and contains the research problem, objectives, and potential contributions. The second chapter contains a review of literature and concepts related to women's empowerment, access to WASH, cash transfer programs, and post-pandemic recovery. It also covers relevant theoretical frameworks that were used in this research. The third chapter details the research design and methods and provides justification for selection of the study area. The fourth chapter contains the results of the research. These results were organized under the research objectives. The final chapter focuses on providing a summary and discussion of the key findings of the research. As the concluding chapter, it also contains implications of the key findings for policy and practice.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL CONTEXT

2.1 Introduction

This chapter focuses on defining, explaining, and contextualizing the concepts that form the central theme of the research. The chapter provides information on the definition of social norms, including how social norms influence access, use, control, and management of water resources. Other issues explored include an explanation of the concept of women's empowerment, cash transfers in the context of sub-Saharan Africa, and the nexus between WASH, health, and wellbeing. The concluding summary identifies the gaps in the literature. This thesis addresses these objectives: 1) to identify the existing WASH social norms around gender at the community level in Ghana; 2) to explore how cash transfers combined with complementary water services intersect with WASH social norms to influence the health, wellbeing, and empowerment levels of women at the household and community levels in Ghana; and 3) to explore how social protections buffer against emergency WASH-related risks at the household and community levels in Ghana.

2.2 Characterizing Social Norms

2.2.1 Defining Social Norms

Over the years, the concept of social norms has been at the center of a growing body of literature (Yilma & Rimal, 2025; Legros & Cislaghi, 2020). Despite this attention, social norms mean different things to different scholars, with limited consensus both within and across disciplines (Gelfand et al., 2024). Bicchieri (2014) defines social norms as unwritten rules of behavior that people within a group conform to because they think other people conform as well, and because they believe other people expect them to conform. UNICEF (2021) adds to this

definition by highlighting how social norms are situated at the interplay between behavior, beliefs, and expectations. Literature on social norms has mainly focused on the role they play in shaping human behavior (Gross & Vostroknutov, 2022; Cislaghi & Berkowitz, 2021). That is, growing evidence points to the idea that the behaviors and attitudes of people are shaped, in part, by the behaviors and attitudes of other people within their social group (Cislaghi & Berkowitz, 2021). This means that scholars have conceptualized social norms as properties of individuals where people practice a behavior because they believe that it is the right thing to do, and as properties of a social group where behaviors are reinforced through social interactions and expectations. This conceptualization of social norms has come to be known as collective norms and perceived norms (Dannals & Li, 2024).

Collective norms operate at the social group level and represent a collective social group's code of conduct. The nature of collective norms may create and reinforce collective behaviors that affect certain members of a social group. For example, in the context of SSA, Mejía-Guevara et al. (2020) investigated the extent to which reproductive behaviors can be influenced and shaped by social relations and contextual factors. The research identified a collective attitude where wives who supported or demanded the use of contraceptives were met with physical violence from their husbands. Also, Jalali (2021) highlighted that women's exposure to WASH-related diseases is often produced through unfavorable power relations from collective social norms. In contrast to collective norms, perceived norms operate at the psychological level and represent how individuals interpret the collective norm, either correctly or incorrectly (Yilma & Rimal, 2025).

A social norm is called a descriptive norm when the focus of a person's behavior is based on a belief about what other people actually do (UNICEF, 2021). A social norm also exists when people in a social group practice a behavior because they believe that people who are important to

them accept and approve of them practicing the behavior. This type of norm is referred to as an injunctive norm. In most cases, therefore, people who are in a social group behave a certain way due to a belief that others are behaving the same way, and because everyone is expected to behave the same way. However, that is not always the case. There are instances where most group members reject or oppose a norm but incorrectly believe that others do not. This situation is called pluralistic ignorance. For example, while individuals in Korea knew the consequences of poor handwashing during COVID-19, collective norms promoted lower handwashing behaviors among adults (Jo et al., 2023). The concept of pluralistic ignorance illustrates a mismatch between collective and individual norms, making individuals to misinterpret their social group's norms, and often resulting in the reinforcement of behaviors and beliefs that are not actually widely shared (UNICEF, 2021).

Social norms are often unwritten and unplanned. As such, they are enforced informally through social interaction (Gross & Vostroknutov, 2022). UNICEF (2021) highlights that social norms are passed down to children at an early age, mostly at infancy, where they learn to accept certain behaviors. Social norms are sustained by social sanctions for non-compliance and social benefits for compliance (Gross & Vostroknutov, 2022). This way, a person is not only socially punished or excluded for breaking a social norm but stands to benefit if they conform. This emphasizes the capacity for social norms to create and entrench both positive and negative outcomes for people, depending on the nature of the norm. It is important to note that descriptive norms, which refer to perceptions about the prevalence of a behavior, are not typically associated with social repercussions for non-compliance. However, for collective norms, there is real practice and prevalence of the behavior and as such, are associated with social repercussions for non-compliance (Lapinski & Rimal, 2005). Cislaghi & Berkowitz (2021) emphasizes that the resulting

sanctions from social norms can be life threatening. For example, in SSA, such life-threatening sanctions include intimate partner violence and gender-based violence that limit women's ability to access and manage WASH resources (Bachwenkizi et al., 2023). Indeed, social norms are often unconsciously embedded in people's thoughts and actions in such a manner that they do not pay attention to how crucial they are to navigating social and economic relationships (UNICEF, 2021). This also makes it very difficult to break the cycle of social norms, even when they are harmful (Gross & Vostroknutov, 2022).

Nevertheless, there are exceptions. When people interact closely in a social group, such as villages, religious groups, and small professional organizations, a single individual can possibly steer the evolutionary process toward a new norm within a short period (Young, 2015). Such individuals are called "norm entrepreneurs" and they usually hold public and exemplary positions like a village elder or religious leader. Researchers (e.g., Young, 2015; Ellickson, 2001) highlight that "norm entrepreneurs" stand to enhance their status if the new norm becomes acceptable and beneficial to the social group. However, they also have a lot to lose if their efforts fail. Therefore, despite being most capable of bringing about norm shifts, opinion leaders, religious leaders, politicians, and village leaders may be among the least inclined to do so. Even so, UNICEF (2021) highlights that producing positive gender-transformative outcomes are both achievable and sustainable. To do this, especially in the context of WASH, there is a need to first recognize the harmful practices that create and perpetuate harmful outcomes. With that, and collaborating with all stakeholders including marginalized populations, it becomes possible to translate evidence into action by integrating social norms initiatives into WASH programs to increase the likelihood of sustained behavior change (Water for Women, 2022). This has the potential of producing wider social change to ensure no one is left behind.

2.2.2 Water as a Gendered Resource

Water is an important community resource (Kangmennaang & Elliott, 2021). Clean, safe water is essential for maintaining health, engaging in social progress, and ensuring environmental sustainability. In fact, the United Nation's Sustainable Development Goal (SDG) 6 is dedicated to water, setting the ambitious goal of universal and equitable access to safe and affordable drinking water for all people by 2030 (UN, 2023). Despite recognition of the importance of water and society's complete dependence on it, shortages of water are common around the world (UN, 2023). The 2023 WHO & UNICEF Joint Monitoring Report estimates that 2.2 billion people lack access to safely managed drinking water while 3.5 billion lack safely managed sanitation (UN Water, 2023), thus highlighting gaps in global WASH access.

Water access, use, control, and management are influenced by gender. Globally, women and girls bear majority of the water collection work in the household, spending an estimated 250 million hours on water collection every day (UN Water, 2024). Sultana (2020) highlights that gender roles are socially constructed and how water is collected and managed can perpetuate inequalities. For example, Dery et al. (2021) highlights that in SSA, social norms assign women as the primary collectors of water. These social expectations mean that women and girls were responsible for performing domestic chores, most of which require water. Domestic work such as caring for children, the sick and elderly, cooking and keeping the house clean would require women to use water daily, producing differential relations to water access, uses, and knowledge between men and women (Sultana, 2020). That way, water access reflects voice, authority, legitimacy. For example, in spaces and places where women and girls labor daily to fetch water under patriarchal social norms, gender becomes a marker of inequality and varied suffering (Dery, 2021). Relatedly, the emotional aspect of women's labor was emphasized by Nunbogu, Elliott, &

Bisung (2023a) and Sultana (2011) as women navigate safety risks, social shaming, and anxiety over water quality.

Women and men relate to water differently. For example, Sultana (2020) indicated that women and men had different priorities regarding aspects of water such as quality, quantity, timing, source, and cost. Men prioritized cost while women focused more on improved services, water quality, and equity of access. As an example, Sultana (2020, p. 1418) highlighted that a man who worked in a factory said this: "Most of my earnings go toward rent and not much is left for purchasing water"; another man also said, "We have to buy our water from the water businessmen, so the government needs to solve our water problems soon". On the other hand, women's responses focused on the embodied emotional aspects of water, such as: "Our sufferings over water are great and it is a daily struggle"; "We also want to raise our children properly but how can we do that without reliable clean safe water"; "I can't haul water from far away due to poor health, so even if it's a burden I have to purchase small amounts of water locally"; "Even if it's difficult for me to carry the water from the public water standpost, I do it for my family". The externalization of costs (physical, social, emotional) onto women results in men focusing more on the monetary costs of water over the more complex actualities of water precarity and water provision. The intersectional and gendered nature of the financial, physical, and emotional burdens reveal systemic gender disparities in accessing water (Nunbogu, Elliott, & Walton-Roberts, 2023b; Sultana, 2020, p. 1418).

2.3 WASH-related Risks in Space and Place

2.3.1 WASH Gender-based Violence

Globally, about 1 in 3 women have experienced violence in some form (WHO, 2021), with inadequate access to WASH services further increasing their vulnerability to such risks. Researchers have identified several gender-based violence in WASH which can be broadly categorized under structural, physical, psychosocial, and sexual violence (Nunbogu & Elliott, 2022b). These forms of violence are interconnected, shaped by and embedded within the broader social and physical environments where they occur.

Access to water and sanitation services is determined by processes and structures such as political, economic, socio-cultural, and institutional (Anwar et al., 2020). These structures have the potential to create and reinforce restrictive patterns of access to WASH services (Nunbogu & Elliott, 2022b). While these structures can affect who, when, and at what cost a person accesses water, they can also expose women to violence. For example, Bisung & Elliott (2016) showed how water insecurity in Usoma, Kenya made women to feel neglected and marginalized by the government. Indeed, when people perceive structural inequalities that impede their access to water, it often produces frustration, anger, and a sense of social injustice (Nunbogu, Elliott, & Bisung, 2023b).

WASH insecurity and precarity also expose women and girls to various forms of physical violence. While meeting their water need, women and girls become vulnerable to not only attacks by non-partners, but they also experience intimate partner violence when water is not available in the household. For example, Ombija et al. (2024) noted that women in Nairobi, Kenya experienced intimate partner violence related to water access and control. Additionally, social norms can permit a man to hit his wife or child when they do not provide water or even sanction a man for refusing

to do so (Dery, 2021). When this happens, women's capacity, movement, and participation in water governance becomes restricted as well. Women themselves could be physically punished for violating these norms or assumed to be neglecting children and household responsibilities (UNICEF, 2021). Again, water insecurity exposes women and girls to interpersonal violence, where they usually fight among themselves due to water shortage (Pommells et al., 2018). At the household level, mothers also demonstrate their anger and frustration on their girls when they must constantly provide water (Mushavi et al., 2020).

Further, some social norms restrict women and girls from admitting they are menstruating, properly washing and drying menstrual materials, or leaving menstrual blood visible on toilets (Water for Women, 2022). Shame surrounding menstruation is common, with women and girls often expressing embarrassment about using sanitation facilities or touching water during their periods (UNICEF, 2021). Norms mean women (including mothers) may think it is right for girls not to attend school while on their period and encourage sanctions for girls if they do, including being beaten. Research have also shown women being exposed to physical violence while meeting their toilet needs. For example, Khanna & Das (2016) reported an incident in rural India where women were verbally harassed, stoned and driven away with sticks at open defecation sites.

While mediating their daily water needs, women and girls are often exposed to various forms of psychosocial violence. This includes feelings of emotional harm, frustration, worry and stress, anxiety and depression, and fear of negative identity and marginalization. Nunbogu et al. (2023) noted that these experiences of psychosocial violence are produced by stressors such as long hours spent fetching water, unsafe water sources, and constant supply of water for daily use. Some of these experiences threatened women's sense of purpose and belonging and reminded them of past struggles. Also, research has found a correlation between WASH-related violence

and depression. For example, Jayaweera et al. (2022) highlighted the prevalence of experiences of WASH-related violence among young women in rural South Africa, and how those experiences produce higher depressive symptoms.

Research has also established links between poor sanitation and psychological wellbeing. For example, Hirve et al. (2015) found that 64% of women practicing open defecation reported stress linked to safety concerns, compared to only 6% of latrine users. Additionally, 44% of open defecators experienced stress due to lack of safety, compared to only 3% of latrine users. Further, research shows how women and girls experience anxiety and stress during open defecation due to fear of harassment, assault, and social humiliation (Nunbogu et al., 2023; Bisung & Elliott, 2016).

WASH insecurity also exposes women to various forms of sexual violence. Nunbogu et al. (2023) documented some of these experiences where women reported occurrence of sexual violence in private spaces, with community structures usually handling such cases in secrecy. Also, Pommells et al. (2018) documented instances where women and girls faced sexual violence while collecting water, where forced to exchange sex for water access due to unpaid fees, or experienced coercion into transactional acts while waiting in water queues.

Equally, researchers have also documented issues of sexual violence associated with sanitation. In households that do not have household latrines and face challenges in accessing toilet facilities at the community level, the members practice open defecation (Adhikari & Ghimire, 2020). Winter & Barchi (2016) identified that women who practiced open defecation were 40% more likely to encounter non-partner sexual violence compared to women who did not primarily practice open defecation. In other cases, women and girls reported being sexually harassed by men

and boys at open defecation sites (Pommells et al., 2018; Nallari, 2015). These experiences add to the suffering of women in meeting their daily water needs.

2.3.2 Disaster and COVID-19 Recovery in the Context of WASH in SSA

The COVID-19 pandemic created, and continues to produce, a myriad of challenges globally. The most pressing concerns raised by COVID-19 include an increase in gender-based violence (K C & MacKenzie, 2024), increase in care burden in the household (Beach et al., 2021), the feminization of poverty (Parry & Gordon, 2021), and increased unemployment (Fagbemi et al., 2022), particularly in the context of SSA. The vulnerability of people to these challenges has increased as traditional support systems have largely struggled to protect them from catastrophic and pandemic-related shocks (K C & MacKenzie, 2024). In addition to that, traditional responses such as emergency food aid and other social protection programs have been largely inadequate (Adams et al., 2021). Moreover, informal safety nets are continually weakened by increased migration, the evolution of traditional family structures, and spread of infectious diseases (K C & MacKenzie, 2024). When that happens, marginalized groups such as widows, orphans, and at-risk children are particularly vulnerable.

Adequate access to safe WASH services is essential to protect human health during infectious disease outbreaks (Jalali, 2021). The WHO & UNICEF (2022) highlighted hand hygiene as a critical control measure to contain spread of COVID-19. Despite this importance, access to water and sanitation resources are often highly inadequate, especially in sub-Saharan Africa (Donde et al., 2021). Issues of water and sanitation are intricately linked (Elliott, 2011). That is, without access to adequate sanitation, many communities practice open defecation. It is important to note that open defecation contaminates scarce water supplies and produce broader societal

harms. For example, Edet et al. (2022) highlights that open defecation disproportionately affects girls' education, as the lack of safe, private sanitation facilities forces those menstruating to miss school entirely. Additionally, women and girls face heightened risks of violent and sexual attacks when seeking isolated locations for privacy to defecate (Pommells et al., 2018). While global efforts have achieved notable progress in water access targets, sanitation initiatives continue to fall short. This is a critical gap given that progress in WASH access remains indispensable in achieving and sustaining COVID-19 recovery (WHO & UNICEF, 2022).

2.4 Conceptualizing Women's Empowerment

2.4.1 Defining Women's Empowerment

According to Kabeer (1999), empowerment refers to the decision-making capacity of an individual. Kabeer added that empowerment is a process that involves three dimensional elements: resources, agency, and achievements. Kabeer highlighted the importance of access to resources as a crucial component in defining empowerment as a process. In that regard, access to various forms of resources (e.g., social, economic) can influence how people negotiate daily choices. Hence, resources are created through social interactions in several institutions (such as family) that form a society. For agency as an element of empowerment, Kabeer (1999) emphasizes that it is more than just action. It moves beyond negotiation and resistance to include the actual exercise of one's right to create goals and pursue them. Furthermore, Sen (1985) highlighted that for a person to succeed at a high level, they need both resources and the capacity to choose and pursue goals.

Women's empowerment, therefore, is a foundational concept within Diversity, Equity, and Inclusion (DEI) efforts, representing the process of enabling women to gain control over their own lives and make independent choices (Borg Ellul & Friggieri, 2025). The UNICEF (2021) adds that

women's empowerment involves removing barriers that restrict women from accessing resources and opportunities. It also includes the promotion of women's wellbeing. According to Silva (2022), women's empowerment includes removing stressors from social interactions that create and reinforce low levels of life satisfaction, loss of identity, and poor mental health. Burgeoning literature (e.g., Nahar & Mengo, 2022; Priya et al., 2021) on the meaning of women's empowerment can be summarized into 10 interrelated themes: 1. It is a process 2. Involves a relationship with external members of the community 3. Involved in a political structure 4. Involves obtaining opportunities to access resources and properties 5. Involves agency 6. Involves fulfillment of different needs of her family and others 7. Involves acquiring power to reach full potential 8. Involves self-efficacy 9. Involves enjoying wellbeing 10. Involves obtaining opportunities to make decisions outside the home.

2.4.2 Empowerment in WASH

Research shows that inadequate access to WASH produce negative wellbeing and disempowerment for women and girls (Dickin et al., 2021). For example, the time women spend searching for water restricts them from engaging in income-earning and skill-development opportunities (Caruso et al., 2022). Also, Edet et al. (2022) highlights that inadequate access to WASH services prevent women from safely managing their menstruation which subsequently affects their educational engagement and attainment. As a result, provision of WASH infrastructure is commonly promoted as critical for addressing WASH-related gender disparities.

However, provision of infrastructure alone does not address decision-making power and control over resources (Dickin et al., 2021). Women who have less say in their household or community, such as in selecting and managing W ASH services, often lack access to services that

meet their needs. For example, the Empowerment in WASH Index (EWI) – which is a tool for measuring empowerment – was used in Banfora, Burkina Faso to identify the indicators that contributed most to women's disempowerment (Dickin & Bisung, 2019). These indicators included: input into household decisions on water and sanitation expenditure; input into household decisions to participate in community WASH activities; work balance; and ability to make complaints about WASH services to local institutions. These gaps in WASH access emphasizes that achieving SDG 6: Clean Water and Sanitation is inextricably linked to progress in achieving SDG 5: Gender Equality (UN Women, 2018).

2.4.3 Empowerment and Cash Transfer Programs

Cash transfer programs are commonly promoted as a critical human development intervention in which monetary stipends are provided to eligible persons. Cash transfer programs vary in design, but most aim to break the inter-generational cycle of poverty by providing direct cash payments to individual or households (Okoli, 2024). In contexts where women have less earnings and women are the transfer recipients, these programs have the potential to be financially empowering (Litwin et al., 2019). However, without proper gender considerations, there is a concern that cash transfers may fail to reach those left furthest behind, potentially limiting rather than promoting women's empowerment (Okoli, 2024). For example, Litwin et al. (2019) highlighted that improvement in women's economic situation could increase intimate partner violence.

In the context of sub-Saharan Africa, there has been an increased support for cash transfer programs. For example, since 2004, the African Union has encouraged countries to develop, expand, and empower social protection programs (Garcia & Moore, 2012). The nature of cash

transfer programs differs between lower-middle-income and lower-income countries in SSA. Despite the varying nature of cash transfer programs, Fisher et al. (2017) highlights that cash transfers can support consumption within a household by sustaining spending on food, shelter education, and healthcare. Also, cash transfers can support investment within the household (Fisher et al., 2017). Aside from that, empirical evidence shows that cash transfers have a potential to promote livelihood activities and promote decision-making within the household (Okoli, 2024). Moreover, an often-cited objective of cash transfer programs in many developing countries is women's empowerment. Many cash transfer programs are designed specifically to prioritize allocating funds directly to women rather than men based on the assumption that cash will not only empower women but also result in the accrual of human capital and household-level benefits (e.g., investments in education, health, child wellbeing) that are less likely to occur if men received the cash. Thus, targeting women is not only expected to make programs gender sensitive but is also often critical to achieving overall program goals (Bonilla et al., 2017). However, while cash transfers hold potential for empowering women, the evidence supporting this outcome is mixed. For example, while Okoli (2024) indicates an improved agency among women recipients of the cash transfer program in Nigeria, Dickin et al. (2021) emphasizes the need to address inequalities in control of resources at both the household and community levels to ensure women not only have access to resources but also have control and decision-making power.

In Ghana, the government introduced the Livelihood Empowerment Against Poverty (LEAP) cash transfer program to help extremely poor and vulnerable households withstand chronic shocks and emerging catastrophes, including those from COVID-19. The program specifically targets individuals aged 65 and above without any form of support, the disabled without productive capacity, orphaned and vulnerable children, and extremely poor and vulnerable

households with women and mothers with infants (MGCSP, n.d.). The beneficiaries receive payments of cash grants bi-monthly, and as a conditional cash transfer program, beneficiary households are encouraged and required to enroll their children in public basic schools, enroll members of the household in the National Health Insurance Scheme (NHIS), and ensure the children in the household are not engaged in child labor, among others (MGCSP, n.d.). Aside from receiving cash grants, the LEAP program link some beneficiaries with complementary services including providing access to micronutrient supplements, microfinance schemes, agriculture input support, and skills training for caregivers of orphans and vulnerable children (MGCSP, n.d.). Since the LEAP program started, several impact evaluations have been conducted in Ghana, with a focus on indicators related to household wellbeing including poverty, food security, health, and education (Kyei-Arthur et al., 2025; UNICEF, 2023; Amarteifio et al., 2022). Evidence from the impact evaluations highlights positive outcomes of the LEAP cash transfers on livelihood, food security, poverty, education, health and nutrition, and gender equality (UNICEF, 2023). Specifically, it is reported that LEAP produced positive outcomes for women's decision-making power and consequently reduced intimate partner violence (UNICEF, 2023). However, inadequate funds and the selection criteria limit cash transfer interventions from reaching a wider population.

2.5 The Nexus between WASH, Health and Wellbeing

2.5.1 Defining Health and Wellbeing

Health is often conceptualized as holistic. That is, health comprises the overall physical, mental, social, and emotional wellbeing of the individual (WHO & UNICEF, 2022). The WHO constitution emphasizes that the health of an individual represents more than the absence of disease or infirmity (Schramme, 2023). In addition, Kearns & Andrews (2010) highlights that health is

influenced by a wide range of environmental determinants. The integration of environmental factors into the concept of health reflects the idea that health is not just a result of genetic predispositions or medical treatment, but also intricately linked to the spaces people live in, and the structures around them (Gatrell & Elliott, 2015).

The concept of wellbeing within health research has gained a lot of attention over the last 20 years (Bautista et al., 2023). Wellbeing is a multifaceted construct that is used across disciplines to portray a state of wellness, health, happiness, and fulfillment (Bautista et al., 2023; Rishworth & Elliott, 2022). The WHO defined wellbeing as the combination of feeling good and functioning well (Schramme, 2023). Researchers highlight that the COVID-19 pandemic has brought more attention to the importance of wellbeing (Lemoine et al., 2022; Alonzo & Popescu, 2021). Specifically, there has been increased concern about the mental health and wellbeing of people due to long periods of lock down and social distancing during COVID-19. For example, Fatahi et al. (2021) identified that the COVID-19 pandemic produced negative psychological wellbeing consequences among the general population. Relatedly, researchers (e.g., Gatrell & Elliott, 2015) are broadly conceptualizing health and wellbeing to mean the availability of resources, drawing attention to resource access and control as critical to human health. Also, Elliott (2021) conceptualizes wellbeing as the space between expectations and reality. This encompasses access to all things that contribute to a good life, such as health, happiness, education, social participation, income, and other essential factors.

2.5.2 WASH, Health, and Wellbeing Nexus

The water-health-wellbeing nexus represents the intersection of water, sanitation, hygiene, and human health and wellbeing (Elliott, 2011). Access to safe water and adequate sanitation is considered integral to human health and wellbeing. However, an estimated 2.2 billion people lack access to safely managed drinking water while 3.5 billion lack safely managed sanitation (UN Water, 2023). Lack of access to safely managed WASH services significantly contributes to poor health and wellbeing outcomes in many spaces and places (Fatahi et al., 2021). For example, estimates indicate that water borne diseases account for approximately 10% of the global burden of illness, with diarrhea being the leading cause of death for children under five in SSA (Black et al., 2019)

Research on water insecurity and poor sanitation has traditionally been approached within the biomedical model, focusing mainly on infectious diseases related to the consumption of contaminated water and food (e.g., Shrestha et al., 2019; Vaz Nery et al., 2019). As a result, WASH interventions often prioritize preventing fecal-oral transmission, while overlooking broader issues like gender-based violence and wellbeing challenges tied to inadequate WASH access (Jain & Subramanian, 2018). However, the definition of health as holistic means that other socio-economic and environmental factors and how they influence human health, and wellbeing should be considered (WHO & UNICEF, 2022). This holistic approach has been applied in some WASH research to explore how women negotiate daily struggles in accessing WASH services (e.g., Nunbogu & Elliott, 2022; Sultana, 2011).

2.6 Theoretical Context

2.6.1 Feminist Political Ecology

This research draws insights from Feminist Political Ecology (FPE), which uses a gender lens to highlight how power relations influence access to and control of resources (Elmhirst, 2011). FPE as a theory developed from Political Ecology. Political ecology emphasizes that conflicts over natural resources and environmental narratives – and the resulting marginalization and vulnerability – are often rooted in systemic inequalities in social, political, and economic power dynamics, rather than purely material factors (Bryant, 1998). Likewise, FPE questions power relations in space and place. In that way, FPE emphasizes the intricate connections between culture, social relations, and identity that perpetuate gendered inequalities in resource access. FPE also challenges simplistic views of gender as a binary (Nightingale, 2006), advocating instead for an intersectional understanding that incorporates class, ethnicity, and cultural norms. This approach provides a critical lens to uncover systemic injustices and exclusion in environmental resource distribution (Sultana, 2020).

Emerging research reveals that gendered inequalities in water distribution reflect deeper social and power imbalances, underscoring the need to analyze how these disparities emerge (Truelove, 2011). FPE bridges the physical realities of water with intangible factors (e.g., institutions, norms, power dynamics) to expose how they govern not just access to water, but also participation in its management. For example, Sultana (2020) used FPE lens to investigate how arsenic-contaminated water in Bangladesh highlighted how women's daily efforts to secure water are intricately linked with power struggles across household, community, and institutional levels.

2.6.2 Application of FPE in WASH and Women's Empowerment Research

Feminist geographers stress that feminist theory and research design are not mutually isolated (Dyck, 2003; Rocheleau, 1995). FPE research has reshaped resources management literature more broadly, by drawing attention to the importance of gender in resource struggles in a variety of contexts (e.g., Adams et al., 2018; Elmhirst, 2011). Recent work in FPE has furthered existing debates by demonstrating that gender is actively shaped through resource struggles and power relations involving bodies, spaces, and environments (Sultana, 2020). This emphasizes how identities like class and race intersect with ecological practices to expose systemic inequalities in resource governance (Elmhirst, 2011).

Scholarly conversations on FPE of water also illustrates how well-meaning water projects often fail because they ignore invisible power dynamics (Truelove, 2011). For example, Water for Women (2022) emphasizes how women can be excluded from decision-making processes when men dominate discussions or when they cannot attend WASH discussion meetings because the meetings clash with their unpaid care work schedule. Adams et al. (2018) highlights that FPE tackle these hidden power imbalances, not just water shortages for example, to ensure fair participation. This is why FPE is necessary for my research, providing a critical lens to explore relevant themes such as social norms, women's empowerment, and women's experiences in accessing WASH services.

2.7 Summary and Gaps in Literature

The literature review provided an overview of synthesized evidence on WASH access, control, and management in SSA and globally. The review identified how social norms combined with gaps in WASH access produce disproportionate outcomes, including negative wellbeing, poor

health, and disempowerment for women and girls in SSA. Additionally, it provides the current state of knowledge and gaps on the role of cash transfer programs in mitigating WASH emergencies, and shocks from the COVID-19 pandemic. A key takeaway from the review is that achieving SDG 6: Clean Water and Sanitation is inextricably linked to progress in achieving SDG 5: Gender Equality.

To address gaps, the research draws insights from feminist political ecology and examples of its application in WASH research. The FPE is critical in addressing gaps in literature regarding the impact of cash transfers (e.g., LEAP) on WASH social norms, women's empowerment, and post-COVID-19 recovery in Ghana.

CHAPTER THREE

RESEARCH DESIGN AND METHODS

3.1 Introduction

This chapter describes the research design and methodology used to address the objectives of this thesis: 1) to identify the existing WASH social norms around gender at the community level in Ghana; 2) to explore how cash transfers combined with complementary water services intersect with WASH social norms to influence the health, wellbeing, and empowerment levels of women at the household and community levels in Ghana; and 3) to explore how social protections buffer against emergency WASH-related risks at the household and community levels in Ghana.

3.2 Research Design and Approach

3.2.1 Research Design

This research was designed as a case study of the Upper West region of Ghana. The exploratory case study design was used to explore the experiences of women's (dis)empowerment. According to Yin (2009), exploratory case studies are effective in identifying causal links that are complex in nature. As such, the design allowed an empirical investigation into the real-life experiences of the research participants and the meaning of those experiences to the participants themselves.

Further, (Yin, 2009) highlights that the case study design is more relevant when the research questions seek to explore how or why a phenomenon operates in a particular context, especially when the phenomenon cannot be easily separated from the social, cultural, or institutional conditions surrounding it. For this research, the case study design was ideal because the research questions required not just a description of WASH access challenges in the Upper

West region but also an investigation into the underlying social and power dynamics that shape WASH inequalities.

3.2.2 Research Approach

The qualitative approach was adopted in this research. This was necessary to explore, in a discursive manner, the experiences of women's empowerment and wellbeing through WASH and cash transfers. Lim (2024) highlights that a qualitative approach is particularly useful in focusing on the in-depth distinctiveness of cases.

The qualitative approach adds an additional edge to the research in terms of exploring and interpreting the responses of participants. The qualitative approach made it easier to gather data that provides a deep and nuanced understanding of the health and empowerment levels of women at the household and community levels in Ghana.

3.3 Research Setting

This research was conducted in the context of WASH access in sub-Saharan Africa, using Ghana as a case study. Ghana was selected for this research due to its status as a rapidly transforming economy in sub-Saharan Africa, coupled with the persistent and widening inequalities that highlight urgent socio-economic disparities in the country. For example, 18% of Ghanaian households lack access to toilet facilities, with rural households experiencing rates over three times higher than urban households (Ghana Statistical Service, 2022). The Joint Monitoring Program (WHO & UNICEF, 2022) reports that about 87% of Ghanaian households lack access to safely managed sanitation, while 59% lack access to safely managed water. Additionally, about 51.5% of households lack handwashing facilities with soap and water (GSS, 2018).

The Upper West region (Figure 3.1) was purposively selected for this research because of pronounced regional disparities in access to WASH infrastructure and services. For example, while 4.2% of Ghanaian households have access to improved drinking water sources located more than 30 minutes away, this figure rises to 19.3% in the Upper West region (Ghana Statistical Service, 2022). Also, 1 in 10 households nationwide lack a solid waste receptacle compared to 1 in 5 households in the Upper West region (Ghana Statistical Service, 2022). Furthermore, rural areas also show significantly higher usage of unimproved toilet facilities, with stark regional disparities ranging from 21.9% in Upper West to 3.4% in Greater Accra.

In the Upper West region of Ghana, like much of the country, communities are predominantly patriarchal with strict roles and responsibilities divided by gender. Men typically hold decision-making power, including controlling whether women can attend social events, visit the market, access healthcare, or seek support outside (Dery, 2021). Women in the region also face major barriers in accessing and controlling resources, especially agricultural tools and land (Nyantakyi-Frimpong, 2017). While women in the region are often excluded from the decision-making process, they bear the burden of providing water for their households (GSS, 2018).

The research focused on 9 communities in the Nadowli-Kaleo, Wa West, and Daffiema-Bussie-Issa districts in the Upper West region. These districts have high levels of poverty, inequalities in WASH access, and have been targets of the LEAP social protection program. In fact, the LEAP program provides cash transfers to 28,101 beneficiaries in the Nadowli-Kaleo and Wa West districts, with 55% of these beneficiaries identified as extremely poor women (GSS, 2020). Additionally, the Wa West district is one of the poorest districts in Ghana with a poverty prevalence of 92.4% with only 0.2% of households being able to access piped water within their premises and 79% accessing water further away from where they stay (GSS, 2020). In the

Daffiema-Bussie-Issa district, 38.7% of the population live in multidimensional poverty with 91.2% lacking access to improved toilet facilities (Ghana Statistical Service, 2021).

During the COVID-19 pandemic, the government of Ghana introduced a free water program (April 2020) to support all residents. However, households not connected to the water systems managed by the Ghana Water Company Limited (serving urban areas) or the Community Water and Sanitation Agency (serving rural areas) were excluded from the initiative. This exclusion deepened existing inequalities in access to WASH services (Amankwaa & Ampratwum, 2020; Smiley et al., 2020).

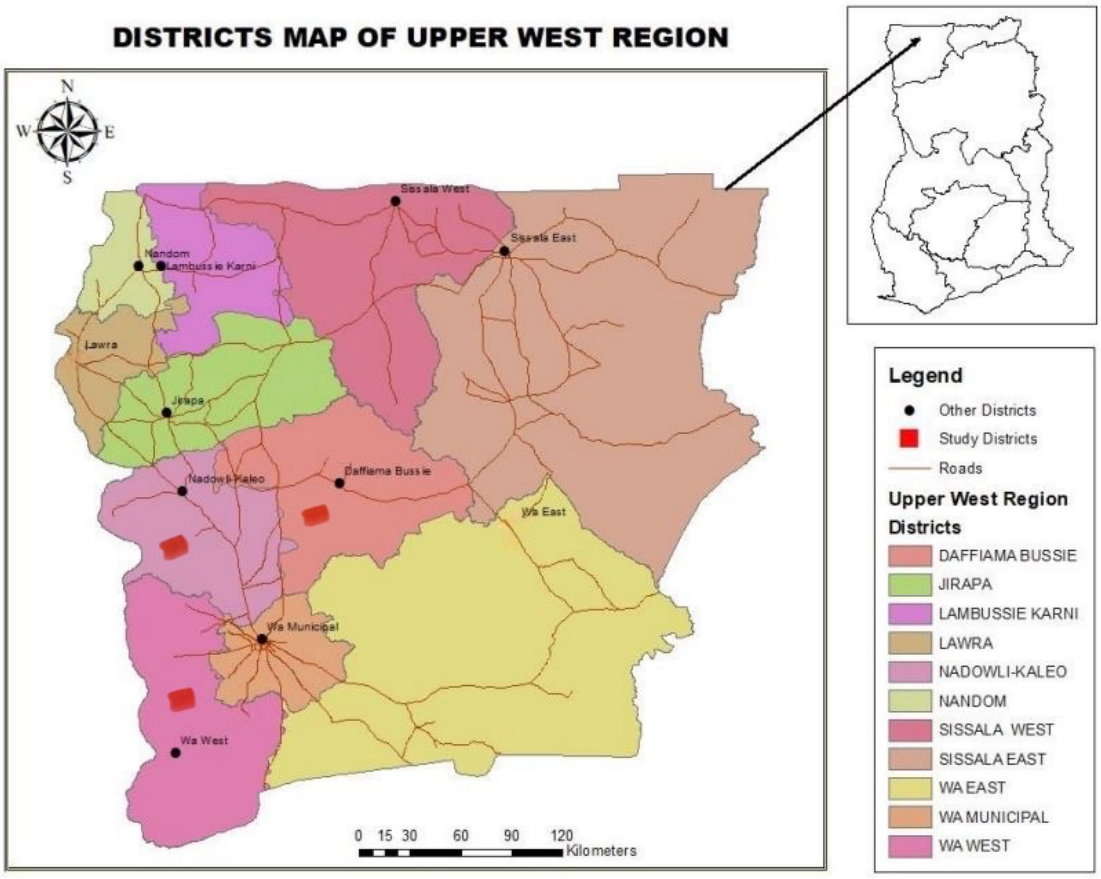


Figure 3.1: Districts map of Upper West Region

Source: Adopted from Sungbaahee & Kpieta, 2020

3.4 Sampling Strategy

3.4.1 Sampling Techniques

A stratified purposive sampling technique was used in this research. It is a non-probability sampling technique used in identifying samples with similar characteristics and interests and facilitating comparisons between different groups. That is, stratified sampling involves dividing a sample into distinct subgroups based on shared characteristics. This ensures that each subgroup is internally similar but differs meaningfully from others, allowing researchers to analyze each group separately for greater accuracy (Nyimbili & Nyimbili, 2024)

This technique was necessary given that the research objectives required data from both LEAP beneficiaries and non-LEAP beneficiaries from impoverished households. Specifically, two strata comprising LEAP beneficiaries and non-LEAP beneficiaries were created and individual members in each group were interviewed. This facilitated effective comparison between groups in analyzing the experiences and responses of the two strata.

3.4.2 Participant Recruitment and Selection

Data was obtained by conducting 36 in-depth interviews with community members across 9 communities in the Nadowli-Kaleo, Wa West, and Daffiema-Busie-Issa districts in the Upper West region of Ghana. The participants comprised women who shared the concerns, needs, experiences, and ideas on their health and empowerment levels. Participants were purposefully sampled based on characteristics such as being water insecure, being beneficiaries of the LEAP social protection program or being non-LEAP beneficiaries identified as extremely poor in the Ghana National Household Registry (GNHR) dataset, and being women who reside in the study communities. The researchers identified the LEAP beneficiaries and extremely poor non-LEAP

beneficiaries using the contact information provided by LEAP and the GNHR dataset, respectively. Then, the interviews were conducted in-person at the participant's place of residence. The women recruited for the research were at least 18 years old, comprising women who were both adults (age 18-64 years) and older adults (age 65+).

Adolescent boys and men were excluded as participants in the research because the research objectives focused on capturing women's voice to understand their lived experiences and perceptions of their own health, wellbeing, and empowerment levels. Also, adolescent girls (17 years of age and younger) were excluded because of the challenges involved in seeking parental consent before recruitment, as well as the adolescents' own busy schedules, which includes school, extracurricular activities, and house chores.

Recruiting 36 participants was adequate for gathering data to answer the research questions. Hennink & Kaiser (2022) emphasizes that research of homogenous populations can reach saturation within a range of 9-17 interviews. Also, during interviews, attention was focused on whether new perceptions and nuances emerged. This cycle continued until nothing new was identified, signaling that the data was rich and comprehensive.

3.5 Data Collection Methods

Qualitative data for this research were collected using an in-depth interview guide (Appendix A). Contrary to "extractive" forms of interviews where participants offer responses to structured questionnaires, these interviews were unstructured and conducted in a more discursive manner. The in-depth interviews allowed for conversation between the researcher and the participant. Baum (2021) highlights that in-depth interviews are highly flexible, and they allow researchers to gather detailed personal experiences, explore participants' perspectives, and find

out the how and why behind decision-making. The interviews were conducted in secluded yet safe areas to ensure the privacy and safety of the participants. This made it easier for the participants to communicate effectively with the researcher.

The in-depth interviews lasted for 40-50 minutes with each participant. Prior to the interview, verbal consent was obtained to confirm willingness to join the research. This process ensured they could freely decide to participate or decline, without any form of coercion. Interviews were conducted by the principal investigator in Dagaare and Waale languages based on the participant's preference. With the participants' consent, all interviews were audio recorded using a digital recording device. The in-depth interviews focused on gathering different aspects of the women's lives, including their perceived levels of health, wellbeing, empowerment, and economic ability.

3.6 Data Analysis Methods

The data from the field survey was audio recorded, translated and transcribed verbatim. The interview transcripts were de-identified and codes that link participants were encrypted and stored in a University of Waterloo server. A coding framework (Appendix B) was created using two approaches: deductive where themes were developed to answer the research questions and inductive where themes emerged directly from the transcripts. This framework was then applied in NVIVO 15 to conduct line-by-line coding of the transcripts. Also, a theme code set was developed in consultation with the coding framework.

Analysis was conducted thematically by identifying, clustering, counting, and comparing patterns within the qualitative data. Ayre & McCaffery (2022) highlights that thematic analysis adopts an interpretive approach to delve deeply into the meaning behind data, helping researchers

to understand the perceptions and experiences of participants and identify recurring themes and patterns within a dataset. This made it easy to identify relationships between the themes. Furthermore, the frequency of themes and sub-themes was summarized in tables to visually highlight their relative significance based on how often they appeared in participants' responses. Direct quotations from participants were included in the analysis to help delve into the meaning of the data beyond counting occurrences.

3.7 Qualitative Rigor

To ensure rigor and reliability of the research, the in-depth interview guide was applied uniformly to each stratum of participants without bias. This was mainly to eliminate variable errors and cover the subject matter of the research objectives. However, questions were open-ended, and the interviews were discursive in nature which allowed for contextually relevant discussions. Nuanced discussions were prioritized because this qualitative research focuses specifically on exploring women's living and lived experiences of WASH access and empowerment in their communities, rather than seeking broad generalizations across populations.

To ensure that data collected on the research variables are valid, questions for the in-depth interview were simple and specific. This helped to maintain the interest of the respondents and ensure the collection of relevant data that addresses the research objectives and variables of interest. Furthermore, the interview guide was designed with themes and sub-themes derived from the objectives of the research which enabled transparent and trustworthy collection and analysis of the data.

3.8 Researcher Reflexivity

As a researcher conducting qualitative research, I recognize that research does not occur in isolation. Rather, researchers and participants are situated within systems of power and historical/ongoing social inequalities that shape interactions and outcomes (England, 1994; Öz & Timur, 2023). As such, I recognize that my role as a researcher actively shapes the research process. Additionally, I acknowledge that my identities, epistemological commitments, and approaches directly influence how knowledge is created and interpreted in this work.

Throughout the research process and particularly during the in-depth interviews, I constantly reassessed the social relations between myself and the participants and how that influenced questions being asked. I grew up in the Upper West region of Ghana, where I conducted the interviews. This made me an insider who spoke the same language as the participants, making it easier for me to "read the room" and inspire trust. My cultural upbringing, which emphasizes respecting elders and valuing their perspectives, also guided me to treat participants as the true experts on their own lives and experiences. My educational background in health geography enabled me to apply the concepts of place and power in exploring the experiences and perceptions of the participants. The ethical procedures I used (e.g., seeking participant's consent, ensuring privacy and confidentiality, and explaining potential risks and benefits to participants) ensures transparency, trust, and rigor in the research process and outcomes.

3.9 Chapter Summary

This research adopted a qualitative approach and a case study design to explore the perceptions and experiences of women's (dis)empowerment and access to WASH services in the Upper West region of Ghana. A total of 36 in-depth interviews were conducted with women who were both LEAP and non-LEAP beneficiaries from impoverished households. The interviews were conducted in Dagaare and Waale languages, audio recorded, translated and transcribed verbatim. Further, a coding framework was developed using both inductive and deductive approaches to code the transcripts in NVIVO 15. The data was thematically analyzed by identifying recurring themes and finding relationships between them. Overall, this chapter explained the reasons for choosing the research methods and design, ensuring transparency and strengthening the credibility of both the research process and findings.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents the research findings which focused on understanding the role of WASH/cash transfers in empowering women and addressing gender inequalities from social norms. Specifically, the research aimed to: 1) identify the existing WASH social norms around gender at the community level in Ghana; 2) explore how cash transfers combined with complementary water services intersect with WASH social norms to influence the health, wellbeing, and empowerment levels of women at the household and community levels in Ghana; and 3) explore how social protections buffer against emergency WASH-related risks at the household and community levels in Ghana. Broadly, the findings have been organized under the three objectives of the research, with the concluding summary highlighting key points of the findings.

4.2 Characteristics of Respondents

A total of 36 respondents participated in this research. The respondents comprised women from 9 communities (i.e., Papu, Sombo, Kaleo, Daffiema, Issa, Kojokperi, Nyoli, Poyentanga, and Ga) in the Nadowli-Kaleo, Wa West, and Daffiema-Busie-Issa districts of the Upper West region, Ghana. The respondents were categorized under two strata based on shared characteristics. The first strata comprised LEAP beneficiaries and the second comprised non-LEAP beneficiaries from impoverished households. The women in each stratum were interviewed individually to identify their perceptions and experiences of WASH access and (dis)empowerment.

Participants comprised adult women from 18 - 65+ age categories. Many were farmers and petty traders with basic or no formal education. Also, the participants were from the Dagaaba, Sisaala, Waala, and Birifo ethnic groups, which provided an opportunity to investigate the existing social norms across these groups. The United Nations (2023) defines extreme poverty as surviving on less than $2.15 USD per person per day at 2017 purchasing power parity. Many participants depended on less than GHS 300 per month (less than $1.00 USD per day), with only six having a monthly income above GHS 300. Aside from being poor, participants had low levels of education which limited their employment opportunities. Participants reported that social capital and community networks were weak, making it difficult for women to get support from friends, relatives, and community institutions during difficult situations like COVID-19.

Table 4.1: Sample Characteristics

Variables	**LEAP Beneficiaries (%)**	**Non-LEAP Beneficiaries (%)**	**Overall (%)**
Age			
Below 30	1 (6)	4 (22)	5 (14)
30-45	6 (33)	3 (17)	9 (25)
46-60	5 (28)	5 (28)	10 (28)
Above 60	6 (33)	6 (33)	12 (33)
Ethnicity			
Dagaaba	13 (72)	14 (78)	27 (75)
Sisaala	1 (6)	3 (17)	4 (11)
Waala	2 (11)	1 (6)	3 (8)
Birifo	2 (11)	0	2 (6)
Occupation			
Farmer	10 (56)	7 (39)	17 (47)
Unemployed	2 (11)	4 (22)	6 (17)
Aged (cannot work)	2 (11)	3 (17)	5 (14)
Agro-processor	3 (17)	0	3 (8)
Trader or retailer	2 (11)	1 (6)	3 (8)
Skilled craftsperson	2 (11)	0	2 (6)
Education			

Variables		LEAP Beneficiaries (%)	Non-LEAP Beneficiaries (%)	Overall (%)
No formal education		12 (67)	13 (72)	25 (69)
Primary/basic school		6 (33)	3 (17)	9 (25)
Secondary school		0	2 (11)	2 (6)
Tertiary		0	0	0
Religion				
Christianity		9 (50)	14 (78)	23 (64)
Islam		8 (44)	4 (22)	12 (33)
African traditional religion		1 (6)	0	1 (3)
Monthly household income				
Below GHS 300		14 (78)	16 (89)	30 (83)
GHS 300 to GHS 600		2 (11)	2 (11)	4 (11)
GHS 601 to GHS 900		0	0	0
Above GHS 900		2 (11)	0	2 (6)
Perceived community size				
Large		13 (72)	12 (67)	25 (69)
Medium		2 (11)	2 (11)	4 (11)
Small		3 (17)	4 (22)	7 (19)
Social capital and community networks				
Do people support each other?	Yes	7 (39)	9 (50)	16 (44)
	No	11 (61)	9 (50)	20 (56)
TOTAL		**n=18**	**n=18**	**n=36**

Given the sociodemographic characteristics of LEAP and non-LEAP respondents were largely similar, their data were pooled in subsequent analysis except were impacts of the cash transfers are discussed. Leap (L) and Non-Leap (N) beneficiaries are identified in the direct quotations used in the following sections.

4.3 Existing WASH Social Norms around Gender at the Community Level

4.3.1 Perceptions of WASH

Interviews began with asking participants to describe themselves and the communities in which they live. In describing their communities, participants recounted several development problems (Table 4.2). Particularly, they highlighted water shortages and poor sanitation as the top

development problems at the community level. For instance, Kaanye, a 20-year-old woman, highlighted the struggles in accessing water and sanitation services in her community.

> *Yes, access to water and sanitation is a big problem. We don't have enough wells, and the few that are available are far from many households. People rely on rivers or ponds that dry up, and there are not enough toilets too.* [Kaanye, N, 20]

While discussing the development problems facing their community, participants stressed the critical role of water in keeping households and the broader community functioning. For example, Yosung commented that:

> *But water has a lot of importance; if you wake up and there is no water in your house you cannot do anything, you cannot cook, and you cannot go anywhere.* [Yosung, L, 60]

Despite the importance of access to water in the household, participants mentioned several challenges that hinder their access. They often experienced delayed access to water at the water source due to overcrowding. Some complained about the high cost of water while others talked about boreholes breaking down frequently. Other challenges include distance to water sources, unclean water, having to fetch water at odd hours, engaging in arguments and fights over water, increased use of water in the household, older women having to still fetch water in some households, and inadequate water containers. When describing the challenges women encounter in accessing water, Dogee explained:

> *The main challenge is the long distance we must walk to fetch water. The borehole often breaks down, and during the dry season, the water level in the wells drops. We also have to wait in long lines at the borehole, which wastes a lot of time.* [Dogee, L, 60]

Buobu narrated a similar experience:

> *The water situation is challenging. I do not even have food to eat, so how will I drill a borehole for myself? A lot of people have taps in their houses, but I do not have one.* [Buobu, N, 50]

Participants reported having experienced different forms of struggles during the COVID-19 pandemic. The pandemic produced additional vulnerabilities for women in accessing water and sanitation services. They reported having difficulty in practicing precautionary measures, fear of contracting COVID-19 during water collection, and pressure on existing water infrastructure. For Buobu, these vulnerabilities compounded the long-standing challenges women encountered while accessing water, leading to further delay in accessing water.

> *We used to practice social distancing at the water source while waiting for our turn to fetch the water, so when it is your turn, you get up, wash your hands and fetch your water. We did not sit close to each other during the COVID-19 period.* [Buobu, N, 50]

While it became difficult to access water, some participants noted that their household's demand for water increased within the same period, creating challenges for women. Maalma, who had such experiences narrates:

> *Well, when COVID-19 started, we had to do a lot of things that require water. Doing things like washing our hands required water. That added difficulty to our access to water.* [Maalma, N, 28]

Nuba added that COVID-19 increased fighting and arguments over water access, saying:

> *When COVID-19 started, it made us perform a lot of work. We used to go to the borehole there and fight. Some even insult each other and say things like; don't infect me with COVID-19 and a whole lot. That was actually a challenge for us.* [Nuba, L, 80]

Table 4.2: Top 8 development problems at the community level

Sub-Theme	Number of Respondents (%)	Number of Mentions (%)
Water shortage	34 (94)	59 (36)
Poor sanitation	31 (86)	40 (24)
Financial constraints	16 (44)	23 (14)
Unemployment	9 (25)	12 (7)
Poor healthcare	7 (19)	12 (7)
High cost of farming	6 (17)	7 (4)
Poor business growth	5 (14)	6 (4)
Poor educational facilities	4 (11)	6 (4)
TOTAL	**n=36**	**165 (100)**

When asked about their sources of water, respondents mentioned several available to them (Table 4.3). It is a common practice in the study communities for households to harvest rainwater by attaching a piece of zinc to their roofs (Figure 4.1). Pogsaa, a 31-year-old woman explained this practice, saying:

> *Yes, we do that to channel the rainwater straight into our water containers and prevent spillage from the roof. Yes, most of the households have adopted that technique. We bathe with the harvested rainwater. We do not drink it. Yes, we also use it for washing purposes.* [Pogsaa, N, 31]

The narratives highlight the critical role of water in household tasks and broader community life. Also, the responses reveal the challenges women face in accessing water and how COVID-19 exacerbated these issues. Collectively, access to WASH services is poor in the study communities, with the participants having to access water several minutes away from their home premises. Furthermore, participants noted that water collected for household use is sometimes contaminated, with visible worms in the water. These challenges undermine access to safe drinking water, sanitation, and hygiene services.

Table 4.3: Water sources in the community

Sub-Theme	Number of Respondents (%)	Number of Mentions (%)
Borehole	26 (72)	33 (32)
Rainwater	20 (56)	24 (24)
Public tap	12 (33)	14 (14)
Dam	8 (22)	10 (10)
Pond / spring / stream	8 (22)	8 (8)
Well	6 (17)	7 (7)
Tap located in house premises	3 (8)	5 (5)
Tanker or vender supplied	1 (3)	1 (1)
TOTAL	**n=36**	**102 (100)**



Figure 4.2: Rainwater harvesting in households

Photo credit: Julius Jebuni, July 2024

4.3.2 WASH Social Norms

Participant voices highlighted existing social norms that shape access to WASH resources within households and communities. They mentioned that women and girls were more likely to be responsible for fetching water in the households. The social expectation that women and girls are solely responsible for water provision reinforces rigid gender roles, leaving women and girls vulnerable to toxic masculinity and physical violence. The study communities operate within deeply patriarchal systems, with men controlling nearly all household decisions and holding ultimate authority (Table 4.4). Maaluu's narrative emphasizes the disproportionate burden of water access on women and girls:

> *It is the responsibility of the woman that when you wake in the morning and there is no water, you will first sweep and clean the container properly, then you go to fetch water to fill it. You clean the container very well, then you fetch water into it so that the water is clean, then you cover it, so that it will be healthy to drink.* [Maaluu, L, 90]

Kaanye agrees with Maaluu, noting that in her household and others across the community, women and girls are responsible for fetching water.

> *Women are responsible for fetching water in almost every household. It's our job to make sure there's enough water for cooking, cleaning, and drinking. It is me and the small girl who goes to fetch water.* [Kaanye, N, 20]

Table 4.4: Who makes decisions in the household?

Sub-Theme	**Number of Respondents (%)**	**Number of Mentions (%)**
Both men and women	34 (94)	34 (92)
Men only	2 (6)	3 (8)
Women only	0	0
TOTAL	**n=36**	**37 (100)**

While narrating the roles women play in providing water in the community, respondents also noted that some categories of people were excluded from providing water. They include men, seniors living in households with younger women, mothers-in-law, and persons with disabilities. Tamba shared an example in her community, explaining that men who collect water face social disapproval:

> *If a man gets married, he got married because of fetching water, you marry a woman to be cooking for you. In this our community, if you get married, you marry because you want the woman to be fetching water and cooking for you. If a man goes to fetch water, people will laugh at him because he has a wife and goes to carry water.* [Tamba, N, 80]

In addition to men being excluded from fetching water, mothers-in-law were not responsible for fetching water. Participants explained that as women age, they often gain authority within the household and delegate water collection to younger women and girls, particularly their daughters or daughters-in-law. Yiriyela, a 30-year-old woman commented on the situation in her community:

> *When you come to meet your mother-in-law, can you sit and allow her to go fetch water? No. You will be the one fetching the water.* [Yiriyela, L, 30]

In these communities, the gendered nature of water access is sustained by social sanctions (Table 4.5) for non-compliance and social benefits (Table 4.6) for women and girls when they provide water for their households. Participants recounted experiences of physical and psychosocial violence when water was not available in their households. For instance, Tamba expressed this:

> *My husband complains, and he used to tell me to go and fetch water. He used to beat me too. If there is no water, your husband will beat you but if there is water, he will not beat you.* [Tamba, N, 80]

Similarly, Zunuo described her struggles with water access, expressing deep anxiety and stress:

> *As for worries, it happens. Sometimes, I even dream about how I will get water during the day. So, I worry and lose sleep because of the water. Sometimes, I wake up in the middle of the night to think about water.* [Zunuo, L, 39]

Table 4.5: Social sanctions women receive when water is unavailable in their household

Sub-Theme	**Number of Respondents (%)**	**Number of Mentions (%)**
Less productivity	18 (50)	18 (30)
Stress / worry	16 (44)	16 (27)
Shame	11 (31)	13 (22)
Physical violence / being beaten	8 (22)	8 (13)
Verbal assault	5 (14)	5 (8)
TOTAL	**n=36**	**60 (100)**

The interviews also reveal that when water is available in the house, women receive social benefits. For example, some of the participants highlighted that when water was available in their household, they had more time to pursue opportunities in education, business, and access to healthcare. Kuulaveng explained this, saying:

> *If you wake up and there is water in your house already, it means you don't need to go and fetch water again. You will just start with your cleaning and cooking when you wake up instead of going to fetch water. After that, you will have more time to take some rest or pursue opportunities outside.* [Kuulaveng, W, 39]

Aside from that, women linked water access in their households to their sense of identity and self-worth. For Malyiri, water shortages in the household erode her feeling of belonging and place.

> *It is the responsibility of a woman to provide water in the household. If you see a woman who does not fetch water, then she is not a woman; she is not a woman at all. A woman who wakes up and says she will not sweep, cook or fetch water is not a proper woman. If you wake up and know you are a woman, no one will tell you before you go to fetch water.* [Malyiri, N, 34]

Corroborating Malyiri's experience, Kaatoori expressed why women should provide water in their households:

> *If she does not have water in the house? Oh, that is bad, if a stranger visits your home and you do not have water for him to drink, don't you see that it is bad? As a woman, you should have water available in your house all the time.* [Kaatoori, L, 52]

Table 4.6: Social benefits women receive when water is available in their household

Sub-Theme	**Number of Respondents (%)**	**Number of Mentions (%)**
Peace of mind / happiness	17 (47)	17 (37)
Identity formation / self-esteem	11 (31)	12 (26)
More time to pursue opportunities	8 (22)	8 (17)
More productive	5 (14)	5 (11)
Praise	4 (11)	4 (9)
TOTAL	**n=36**	**46 (100)**

Broadly, participants' narratives underscore the complex social expectations and compromises tied to womanhood. For instance, Malyiri and Kaatoori's stories reveal how women are pressured to provide water for their households, even when facing physical pain or emotional strain, as this labor is tied to societal ideals of womanhood. These narratives emphasize how social norms not only define what it means to be a woman but also normalize the physical and emotional

burdens of daily WASH responsibilities. While some participants reported that they could seek help from their husbands, children, and community leaders when exposed to harm or risks while fetching water, others disclosed that they could not speak openly about their struggles. Maalma, a 28-year-old woman, shared that voicing her stress over collecting water leads to criticism from her mother-in-law:

> *But when I am stressed about fetching water or I have worries about water, I cannot tell my mother-in-law because she will say that I am just lazy. So, I keep such worries and stress to myself. If you want to tell them that you worry a lot about water and lose sleep over that, they will tell you that you are even better off and enjoying yourself, given that water is now available in the community. Then they will start telling you stories of how women used to travel to access water outside the community. My mother-in-law tells some of those stories. Because of that, we keep it to ourselves and suffer any stress or worry in silence.* [Maalma, N, 28]

This promotes social norms that discourage women from disclosing or seeking help for WASH gender-based violence (WASH-GBV) in their homes and communities. While participants recognized WASH-GBV as a community-wide issue, they noted that individual experiences such as violence are often shaped and reinforced within their own households.

4.4 Exploring how cash transfers combined with complementary water services intersect with WASH social norms to influence the health, wellbeing, and empowerment levels of women at the household and community levels

4.4.1 Harm and Risks in Accessing WASH Services

In narrating their experiences, participants revealed several harms and risks they encountered during water collection (Table 4.7). The harms and risks include psychosocial violence where women experience stress, worry, verbal abuse, anxiety, sadness, insomnia, and frustration over water collection. They emphasized that psychosocial violence happens at home,

at water sources, and on the way to water sources. For instance, Maalma shared her experiences of worry, stress, and insomnia at home about water collection:

> *My husband complains when water is not available in the house. Our household is large, so even when you fetch a lot of water, it finishes so fast. So sometimes he complains and says that "how can women be in the house and water will finish to the point that I cannot get water to bath?" That statement means we are not performing our water fetching duties. My husband has never beaten me because of water. I have never experienced any sexual violence like rape while going to fetch water. I worry a lot about water. Like I was saying, when the boreholes break down and you have to wake up early to go look for water, we become restless through the night, and we hardly sleep. Also, when we are too tired, we find it difficult to wake up early at dawn to go fetch water. It makes us worry and pray that God should help us wake up with good health to go and fetch the water early.* [Maalma, N, 28]

Naah also shared a similar experience, adding that she gets scolded at the water source because she does not have money to pay borehole maintenance dues.

> *They sometimes insult me and even pick up my container and throw it away. Hmm, if you are going to fetch water from a borehole and you haven't paid maintenance dues, someone can just pick your container and throw it away. You have to sometimes beg, be patient, and wait till you are allowed to fetch some home*. [Naah, N, 50]

Participants also highlighted other forms of harms and risks women encounter while accessing water, including physical violence and bodily injury, spiritual attack, and sexual violence. They reported experiencing physical violence and bodily injury such as intimate partner violence or being beaten by their husbands, physical fights at water source, falling because the path is dark, and being vulnerable to dangerous animal attacks on the way to the water source. For spiritual attack, a participant highlighted the importance of beliefs in her community and how she went to fetch water late at night against communal beliefs and ended up getting so sick, which she attributed to "spiritual sanctions" for non-compliance. Beliefs and taboos against fetching water late in the night help reduce sexual violence and other risks that may expose women to harm.

Sharing her experience of physical violence, Dogee said:

> *Yes, there was a time I went to fetch water, and a snake bit me. If we had a borehole in the house would the snake bite me? When it happened, the leg became swollen and I went to the hospital, stayed there till I got better, then they discharged me. In this community, if you are going to fetch water in the evening a snake might bite you*. [Dogee, L, 60]

Other narratives focused on women's experiences of sexual violence while collecting water. For example, Kaanye revealed that while community structures make it difficult to report sex offenders, women including herself have experienced sexual harassment and violence during water collection. She explained:

> *Some women have experienced harassment or even sexual violence on the way to fetch water. The fear of violence is always there. The perpetrators are often men who take advantage of the situation, knowing that women are vulnerable when they are alone. When that happens, it is difficult to report it due to fear of humiliation and divorce. There was a time I was going to fetch water and some men called me. Where they were standing was dark, so I told them I was married and began running. I did not wait to find out because it was dark and I could be at risk of sexual harassment. Perpetrators can be from neighboring communities or even this community. Their actions are motivated by the belief that they can get away with it, as women often don't report these incidents. Even when women report the issue, they are handled in secrecy to avoid disgrace to the family.* [Kaanye, N, 20]

Table 4.7: Harm and risks women experience while accessing water and the toilet

Sub-Theme	**Water**		**Toilet**	
	Number of Respondents (%)	Number of Mentions (%)	Number of Respondents (%)	Number of Mentions (%)
Psychosocial violence	26 (72)	33 (59)	16 (44)	16 (48)
Physical violence / bodily injury	18 (50)	21 (38)	10 (28)	11 (33)
Sexual violence	1 (3)	1 (2)	5 (14)	6 (18)
Spiritual attack	1 (3)	1 (2)	0	0
TOTAL	**n=36**	**56 (100)**	**n=36**	**33 (100)**

The narratives from participants also shed light on some sanitation challenges, particularly the harms and risks women experience when accessing the toilet (Table 4.7). Participants revealed that they encountered psychosocial violence, physical violence and bodily injury, and sexual violence at toilet sites and on the way to and from toilet sites, particularly for women who resort to open defecation. For psychosocial violence, participants revealed that they experience shame, shyness, embarrassment, worry, stress, fear, anxiety, and disgust. Seutaa, expressed her experience of disgust when defecating in the bush, saying:

> *I usually get worried about going to the toilet in the bush when it rains. The place is usually disgusting, you see pig and human feces everywhere and it looks disgusting. But because we do not have a latrine in our house, we must go into the bush despite all these challenges, so it is always worrying.* [Seutaa, L, 30]

Similarly, Torikuubu expressed worry about not having a household latrine:

> *I get worried when I have stomach upsets in the middle of the night. While everyone is asleep, I become afraid and worried over where to go and defecate.* [Torikuubu, N, 40]

For physical violence, participants highlighted that women and girls were vulnerable to bodily harms and risks compared to men and boys. Also, women and girls who entered the bush to defecate or used other open defecation sites were more vulnerable than those who used household latrines. They shared that while accessing open defecation sites, women were at risk of dangerous animal attacks. Kaanye explained the vulnerability, saying:

> *Women and girls are the most vulnerable while accessing the toilet because we are the ones who seek more privacy, so we tend to go further away, increasing the risk. Men and boys are less likely to face these dangers since they can use more public areas without much concern.* [Kaanye, N, 20]

For sexual violence, participants shared that women were insecure at open defecation sites. It was common for men to loiter around open defecation sites, sometimes waiting to see women's

nakedness at these sites. This exposed women to privacy concerns and made them more vulnerable to sexual harassment. As Yiriyela, a 60-year-old woman, explained:

> *Anything bad can happen to you. When we go to the bush to defecate, a woman can expose her nakedness to men without noticing. When you squat, someone behind you can see your nakedness without your notice, isn't that bad? Some men will intentionally let the woman to see that they have seen their nakedness and that is always a disgrace to the woman*. [Yiriyela, N, 60]

Dogee narrated a similar experience:

> *You can get harassed by men. It's unsafe because we are far from the house, and no one can hear us if something happens. There is a risk of sexual violence when we go into the bush. Women can face harassment or assault when alone, and it has happened to others in the community. The constant fear and worry about safety also affect us mentally.* [Dogee, L, 60]

For Maalma, finding a place to defecate becomes a fight for her life:

> *You can go into the bush to defecate only to turn around and see a man behind you. Or while walking to the bush to defecate, a mad person can follow you into the bush. So, when we enter the bush to defecate, any sudden movement or sound gets us anxious, we even get up to check and make sure we are safe before we continue defecating. Because, as a woman, anything can happen to you. There have been instances where we run for our lives due to fear after hearing certain sounds or seeing sudden movements in the bush.* [Maalma, N, 28]

Though participants noted that sexual violence at toilet sites is rare, or even unheard of in some communities, they stressed that when such incidents do occur, they are often shrouded in secrecy, keeping them hidden from public awareness. Also, they added that community structures make it difficult to report such cases. Beyond the community structures, participants noted that preserving family honor is the primary motivation for concealing sexual violence. For example, Asumah explained:

> *What happens is that when a woman goes to the bush to defecate, some men do wait and when you undress, then they will decide to walk and pass in front of the*

> *woman and see what they want to see. You cannot do anything or tell anyone when that happens. If you even tell your husband, they don't do anything about it.* [Asumah, L, 26]

These narratives brought up issues of physical, sexual, and psychosocial violence for women in meeting their daily water and toilet needs. These experiences often expose women to harmful consequences that negatively affect their health and wellbeing. The women's embodied WASH inequalities highlight a gap between their expectations and reality. Also, women's experiences of stress, worry, anger, frustration, shame, embarrassment, intimate partner violence, and exposure to dangerous animal attacks affects their physical and mental health.

4.4.2 Impact of Cash Transfers on Women's Empowerment Levels

When asked what empowerment meant to them as women, respondents lamented about their lack of access to and control over resources, such as inadequate access to facilities and opportunities in education, health, business, and WASH. In particular, respondents revealed that as women, empowerment means access to money, opportunities, power, food, and ability to make decisions (Table 4.8). For example, Tamaa, a 30-year-old woman commented that:

> *Women's empowerment is all about money. If women get money, it will help because when there is any need, they can also support themselves to reduce their burden.* [Tamaa, L, 30]

Sumbu also shared her experience, emphasizing that it is useless to say you are empowering impoverished women without giving them money.

> *Empowerment is when they come and give you something to support yourself like giving us some money, but if they don't give you and only talk about empowerment without support it is still useless.* [Sumbu, L, 80]

Participants also said women's empowerment means having access to opportunities such as having time to pursue education, healthcare, and career goals. Other participants highlighted the need to have control over their own narratives either through investment in farming, saving in a women's group, or making decisions about WASH infrastructure at both the household and community levels. However, the responses revealed that women face several challenges that hinder their empowerment, such as financial constraints, having many dependents, heavy unpaid workload, illiteracy, inadequate opportunities, poor support system, and unfavorable WASH-related gender roles. For instance, Dogee stated that:

> *The responsibility of fetching water falls mainly on women and girls. This takes up a lot of our time, which limits our ability to engage in other activities like income-generating work or education. It also affects our health, as carrying water long distances is physically demanding. We spend so much time on household tasks that there's little time for anything else, which affects our empowerment.* [Dogee, L, 60]

Table 4.8: What does empowerment mean to you?

Sub-Theme	**LEAP beneficiaries**		**Non-LEAP beneficiaries**	
	No. of respondents (%)	Number of mentions (%)	No. of respondents (%)	Number of mentions (%)
Empowerment means money	9 (50)	10 (42)	10 (56)	10 (53)
Having access to opportunities	7 (39)	7 (29)	5 (28)	5 (26)
Gaining power or control	3 (17)	3 (13)	1 (6)	1 (5)
Ability to make choices	1 (6)	3 (13)	1 (6)	1 (5)
Having access to food	1 (6)	1 (4)	2 (11)	2 (11)
TOTAL	**n=18**	**24 (100)**	**n=18**	**19 (100)**

When asked how empowered they feel, women who were beneficiaries of the LEAP cash transfer program shared that the cash enables them to gain some control and make decisions (Table 4.9). For example, women who were LEAP beneficiaries felt empowered and had a say at both the household and community levels, often having decision-making power regarding sanitation

expenditure and water allocation. The responses revealed that women were generally able to express their challenges in accessing WASH services during community meetings with non-governmental organizations (NGOs) and politicians during election campaigns. However, LEAP beneficiaries were more comfortable talking about WASH issues because they had the capacity to pay when it comes to contributions. Nuotama, a 69-year-old beneficiary of the LEAP cash transfer program explained:

> *When they are talking in a meeting and it gets to my turn to talk, I talk. I am not afraid to talk when they are talking, I can also contribute. I can talk because when it comes to contribution, I will be able to contribute.* [Nuotama, L, 69]

Zunuo also shared her experience, highlighting her ability to make decisions as a beneficiary:

> *Yes, we do have a voice in the decision-making process concerning household and community development. Some days ago, some people came to help me connect the piped water to my house. When they came, I was the one that spoke for them to write and send to their directors.* [Zunuo, L, 60]

For Maalma, a non-beneficiary of the LEAP cash transfer, financial constraints have limited her empowerment as a woman:

> *Hm, when you get married there are a lot of decisions you cannot make without first getting your husband's permission. What is even more concerning is that, as women, we do not have money. What choice and action will you take when you do not have money? So that is the challenge we are facing. Yes, poverty is one of the challenges because when you have money, you will not complain that you do not have the power to do what you want to do.* [Maalma, N, 28]

While cash transfers increased women's decision-making power, one participant noted that cash transfers trigger emotional abuse and resentment from men toward women. Men often accused these women of disrespect and divorced or separated women faced derogatory labels like "prostitute," further stigmatizing them and reducing their prospects for remarriage. Kaatoori explained this, saying:

They always say that if women are empowered, they don't respect. The men say that. They have the perception that if women are empowered, they will not respect them and because of that women's empowerment is not improving. [Kaatoori, L, 52]

All recipients of the LEAP cash transfers emphasized that the money does not disempower them but rather produces positive outcomes that promote their empowerment as women.

Table 4.9: How empowered are you feeling?

Sub-Theme	**LEAP beneficiaries**		**Non-LEAP beneficiaries**	
	No. of respondents (%)	Number of mentions (%)	No. of respondents (%)	Number of mentions (%)
I have a say at both household and community levels	13 (72)	13 (76)	1 (6)	1 (6)
I have a say only at the household level	3 (17)	3 (18)	3 (17)	3 (17)
I have a say only at the community level	1 (6)	1 (6)	8 (44)	8 (44)
I do not have a say at both household and community levels	1 (6)	1 (6)	6 (33)	6 (33)
TOTAL	**n=18**	**18 (100)**	**n=18**	**18 (100)**

In general, the responses show that cash transfers resulted in an improvement across other empowerment indicators (Table 4.10), particularly on women's choices about investment in agriculture and business ventures. While non-beneficiaries complained they could not take any initiative to empower themselves because of financial constraints, women who were receiving cash transfers expressed joy and optimism about their investments. For Malyiri, a non-beneficiary, there was no hope about her empowerment:

I do not have any form of help. There is nothing, so how do I empower myself? [Malyiri, N, 34]

As a beneficiary, Yiriyela reported:

> *Well, through the cash transfer I receive, I have taken an initiative to support myself through the business I am doing. I prepare and sell kenkey (local food) to support myself and take care of my child's education.* [Yiriyela, L, 30]

Similarly, Sungzie shared her experience:

> *As I am sitting here, I have also taken some initiatives. If it was not for the cash transfers I receive, I would usually sit idle and helpless. But with the cash, I now travel to Wa to buy ground nuts, tiger nuts, and other foodstuffs to come and sell for profits. With that, I have a place at the market here where I sell the items. I also engage in farming as well, and it is from this I run my household activities and take care of my children.* [Sungzie, L, 40]

Zunuo also narrated how the cash transfers empower her:

> *My husband and I used the cash to hire a tractor for our farm. At first, if he would get money to hire a tractor or cattle to farm for us, he would have to sell some of the food we eat in the household to pay for that. But since we receive the cash, we use that money to farm and rear goats and fowls, and it empowers me a lot.* [Zunuo, L, 39]

Table 4.10: What initiatives did you take to empower yourself?

Sub-Theme	**LEAP beneficiaries**		**Non-LEAP beneficiaries**	
	No. of respondents (%)	Number of mentions (%)	No. of respondents (%)	Number of mentions (%)
Investment in agriculture	8 (44)	8 (40)	3 (17)	3 (15)
Investment in business ventures	7 (39)	7 (35)	4 (22)	4 (20)
Adopting saving options	1 (6)	1 (5)	1 (6)	1 (5)
Investment in building social networks	1 (6)	1 (5)	2 (11)	2 (10)
No initiative	3 (17)	3 (15)	10 (56)	10 (50)
TOTAL	**n=18**	**20 (100)**	**n=18**	**20 (100)**

4.4.3 Impact of Cash Transfers on Women's Health and Wellbeing

Participants revealed that cash transfers enable women to access healthcare, food, WASH services, economic opportunities, and manage difficult situations as well as improve their empowerment levels (Table 4.11). These capabilities help improve the health and wellbeing of

women and other members of the household, enabling them to meet their expectations. For example, Dogee explained that:

> *With the money, I can decide what to buy for the household, and it makes me believe I have a say in the family. It also helps me engage in small business activities, which builds my confidence.* [Dogee, L, 60]

Through cash transfers, LEAP beneficiary households were able to pay for water services, which reduced concerns about water shortages. Others used the cash to buy food, helping to meet nutritional needs in the household. They were also able to allocate the cash toward building sanitation infrastructure, helping to reduce risks and harm in using open defecation sites to meet their toilet needs.

For example, Nuotama said that:

> *When I receive the money, I use it to buy fowls to rear. The cash also helps in cultivating my farm. With that, we get some food and meat to eat, and we sometimes sell it to get additional money.* [Nuotama, L, 69]

Also, beneficiaries of the LEAP cash transfer program indicated that they had access to better healthcare because of the cash they receive. Some beneficiaries were enrolled into the free National Health Insurance Scheme (NHIS) as a complementary service, giving them access to basic healthcare. Sumbu stated how the cash improves her access to healthcare:

> *It helps, If I am sick, I use that to support myself. As I said earlier, I used the LEAP cash to buy and rear goats, so when I was sick and they had not yet paid me the LEAP money that month, I sold a goat and gave it to my children to seek treatment for me.* [Sumbu, L, 80]

Also, Zunuo shared her experience as a beneficiary of the NHIS:

> *The LEAP cash transfers have contributed positively to our health. When we collect them, we use it to renew our health insurance, and we do not have to use our own money. Like, sometimes, for example, the LEAP officials once came and helped*

renew the health insurance of all the children in the household. That has brought positive changes in our access to healthcare. [Zunuo, L, 39]

Table 4.11: Impact of cash transfers to LEAP beneficiaries

Sub-Theme	Number of Respondents (%)	Number of Mentions (%)
Better access to healthcare	17 (94)	18 (29)
Improvement in women's empowerment levels	15 (83)	15 (24)
Improved capacity to manage difficult situations or disasters	15 (83)	16 (25)
Better access to WASH services	11 (61)	12 (19)
Improved economic development	1 (6)	1 (2)
Improved access to food	1 (6)	1 (2)
TOTAL	**n=18**	**63 (100)**

4.5 Exploring how social protections buffer against emergency WASH-related risks at the household and community levels in Ghana

The responses of participants shed light on difficult situations women experienced (Table 4.12). Participants reported that they experienced situations that directly affected their health, living standards, and gave them emotional distress. Such difficult situations include COVID-19 and the outbreak of diseases, sickness, and death of relatives. Other participants experienced natural disasters, such as floods and droughts, which diminished crop yield, increased living costs, heightened emotional distress, and worsened water shortages. Narrating her experience of COVID-19, Dogee said:

When the COVID-19 started it was difficult for us. There was a lot of fear, and we could not even gather at the market. And whenever I went to buy foodstuff, they kept increasing the prices. [Dogee, L, 60]

Maalma also shared her experience of drought, saying:

> *Last year, we experienced a drought. The maize we cultivated did not produce much yield. It was an unexpected experience for us. When it happened, the cost of living was high, and we had to ration our foodstuffs just to get by.* [Maalma, N, 28]

For Malyiri, the sudden sickness of her child worsened her financial condition:

> *Well, for me, the shocks I encountered are many. This year, I suffered a sickness for a long time before I recovered. Just this week, I received a call from teachers that my child was sick and admitted to a hospital. She is in Senior High School. I immediately went to one of my friends and cried for help. My friend gave me GHS 200 and I sent it to my child. I was pleading with my brother to give me money, but he said he didn't have it. Today I will go to market and by God's grace I will make sales and return the money to her. Those are my shocks.* [Malyiri, N, 34]

Table 4.12: Difficult situations women experienced

Sub-Theme	Number of Respondents (%)	Number of Mentions (%)
COVID-19 / disease outbreak	28 (78)	29 (44)
Drought	14 (39)	14 (21)
Sickness	10 (28)	11 (17)
Death of a relative	10 (28)	10 (15)
Flooding	2 (6)	2 (3)
TOTAL	**n=36**	**66 (100)**

Participants also mentioned the strategies they adopted to cope with difficult situations. For LEAP beneficiaries, they mainly depended on the cash grants for support during such situations. As reported in Table 4.11, cash transfers improve beneficiaries' capacity to manage difficult situations and disasters. For Dogee, the cash from LEAP helped her through a drought she experienced:

> *During difficult times, like when there's a drought, the cash transfers from LEAP have helped us buy food and basic necessities. It doesn't solve everything, but it gives some relief when there's no farm income. It has been a small but important buffer against disaster impacts.* [Dogee, L, 60]

Recipients of the LEAP cash grants also shared that the money helped them have better access to WASH services, helping to reduce the WASH-related risks and harm they encounter while meeting their water and toilet needs. Their narratives highlight the transactional nature of WASH violence, where an improvement in infrastructural violence produces desirable outcomes in other types of WASH-GBV including physical, sexual, and psychosocial violence. For example, Maaluu noted how the cash enabled her to afford the toilet and water, helping reduce stress and the time spent fetching water.

> *The LEAP cash, when you receive it, you can use it to buy water and water containers like buckets and cups for fetching water. When you receive it, you can use part to pay for the toilet that is close by, and all that helps us reduce risks.* [Maaluu, L, 48]

Also, Dan-eebu, a 40-year-old woman mentioned that the cash enabled her to access water in her home:

> *The cash helps us access water. Recently I received the LEAP cash, and with some support from my husband, we have paid for them to connect the pipe into our house.* [Dan-eebu, L, 40]

Like Ban-eebu, other beneficiaries emphasized that they could save the cash and connect taps to their homes. Zunuo said this:

> *Yes, the LEAP cash transfers help to mitigate water and toilet related risks. For example, if I do not have a tap in my house but receives the LEAP money, I can use it to connect water to my house. When I connect the tap to my house, it will provide some form of support in that regard. That is, if I can save the cash from LEAP.* [Zunuo, L, 39]

Other participants who were not beneficiaries of LEAP mentioned that they mostly depended on their faith, help from support systems such as from family and friends, and adherence to precautionary measures to cope with difficult situations. Others highlighted that they did nothing

in those situations. Recounting a situation where she had no money to support her sick child, Kaanye shared that:

> *What can we do? We just managed with it like that. When my son was in the hospital, we had nothing to do. We still have bills there to pay.* [Kaanye, N, 20]

Table 4.13: Coping strategies for difficult situations

Sub-Theme	**LEAP Beneficiaries**		**Non-LEAP Beneficiaries**	
	Number of Respondents (%)	Number of Mentions (%)	Number of Respondents (%)	Number of Mentions (%)
Support through LEAP	17 (94)	22 (63)	-	-
Adhered to precautions	7 (39)	8 (23)	7 (39)	7 (29)
Help from support system	3 (17)	3 (9)	3 (17)	3 (13)
Faith	2 (11)	2 (6)	6 (33)	6 (25)
I did nothing	0	0	5 (28)	5 (21)
TOTAL	**n=18**	**35 (100)**	**n=18**	**24 (100)**

When asked the lessons they learnt from difficult situations, the women shared insights on how they survived those situations and how that has prepared them for similar situations in the future. Participants shared that they had learnt the need to save for the future. For example, Maaluu shared that:

> *When you have children in your household, when you get any little thing, you also must try and set part of it aside as savings while you use the rest for your daily needs. You can suddenly become a victim of a disaster, and you would not be able to get help from other people or sources, but if I have set aside something, I can use that to take care of myself while I continue seeking for support from other people during such disasters.* [Maaluu, L, 48]

Banbeu, a 40-year-old woman, narrated a similar experience:

> *Even though we don't really have any source of income, I think it is necessary to also find some money and put it down for emergency situations, like shea butter business like this, whatever we get, we try to save something small.* [Banbeu, L, 40]

Corroborating with Banbeu, Yiriyela noted that failing to save leaves individuals vulnerable to social shame:

> *Well, I have learnt that when we have food to eat today, we should also think about the future. That we should save towards emergencies and the unknown future to avoid shameful moments that result from poverty. You should think about the future when you get food today.* [Yiriyela, L, 30]

While talking on pandemic recovery, Naah emphasized the importance of maintaining good hygiene during and after COVID-19:

> *The lessons we learnt from COVID-19 are many. We have learnt to cover our mouths, wash our hands regularly, and keep our surroundings clean. It was something that really taught us many lessons. We are keeping strictly to that after COVID-19. That is why I said it was one of the good lessons for us.* [Naah, N, 50]

Like Naah, Zunuo's experience highlights the need to keep her surroundings clean:

> *Well, I have learnt from diseases like Ebola. Like, I did not know that cleanliness was good. But through Ebola and COVID-19, I now know that I have to keep my surroundings tidy. Diseases thrive in dirty surroundings. But if you keep your place neat, and you keep all your things clean, the disease will not be happy with that. So, with that knowledge, I know that when a similar disease starts, I will keep cleaning my surroundings.* [Zunuo, L, 39]

For other participants like Pogsaa, COVID-19 revealed the importance of adopting precautionary measures and getting vaccinated:

> *I think that will help. If something like COVID-19 happens again, we have seen that there are vaccinations that can help reduce the spread, so maybe the government will step in to help with vaccinations.* [Pogsaa, N, 31]

Participants also mentioned that difficult situations renewed their faith in God, encourages them to be employed, and build a support system. For example, Pogsaa explained that:

> *There are some difficult situations that you cannot solve on your own, and you may also see someone going through a difficult situation and you feel empathetic. Based on what I have learnt, if I encounter any emergency or difficult situation, I will*

inform both my father-in-law and mother-in-law. I will also inform my husband, and hopefully, they can help find a solution to the issue. [Pogsaa, N, 31]

While some participants said they did not learn lessons from difficult situations, others highlighted that their pain taught them to be resilient and hopeful. As Torikuubu explained:

Well, my lesson is to comfort myself. When my children died, I noticed that death is universal. I decided to comfort myself and stop being troubled by their death. That is what has kept me sane and prevented me from committing suicide. I decided to be strong and stay hopeful. [Torikuubu, N, 40]

Table 4.14: Lesson(s) learnt from difficult situations

Sub-Theme	**LEAP Beneficiaries**		**Non-LEAP Beneficiaries**	
	Number of Respondents (%)	Number of Mentions (%)	Number of Respondents (%)	Number of Mentions (%)
Save for the future	7 (39)	7 (37)	2 (11)	2 (9)
Practice and maintain good hygiene	6 (33)	6 (32)	6 (33)	6 (26)
Adopt precautionary measures	3 (17)	3 (16)	5 (28)	5 (22)
Resilience	0	0	3 (17)	3 (13)
Build a support system	1 (6)	1 (5)	2 (11)	2 (9)
Be employed	1 (6)	1 (5)	0	0
Renewed faith	0	0	1 (6)	1 (4)
No lesson	1 (6)	1 (5)	4 (22)	4 (17)
TOTAL	**n=18**	**19 (100)**	**n=18**	**23 (100)**

4.6 Chapter Summary

The chapter provided the results of the research which were organized under the three research objectives. The findings reveal that women primarily bear the burden of household water collection duties, while men are exempt from this role. When performing their water duties, women face physical dangers, safety risks, and WASH-GBV. Such gender-based disparities in

accessing WASH services directly harm women's health and wellbeing, reinforcing systemic inequalities in resource access and control.

Furthermore, the findings show that cash transfers are significantly impacting women's decision-making power, enabling them to make decisions about sanitation expenditure, water allocation, and community development at both the household and community levels. Also, through cash transfers, LEAP beneficiary households can pay for water services, which reduced concerns about water shortages compared to non-beneficiaries. Additionally, through cash transfers, LEAP beneficiaries were better prepared and able to withstand shocks from disasters and WASH emergencies compared to non-beneficiaries. Overall, the findings and lessons from the women's experiences show the links between cash transfers and the promotion of inclusive water security, women's empowerment, and post-COVID-19 recovery.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

5.1 Introduction

This research explored the role of WASH/cash transfers in empowering women and addressing the gender inequalities based in existing social norms in Ghana. The specific research objectives were to: 1) identify the existing WASH social norms around gender at the community level in Ghana; 2) explore how cash transfers combined with complementary water services intersect with WASH social norms to influence the health, wellbeing, and empowerment levels of women at the household and community levels in Ghana; and 3) explore how social protections buffer against emergency WASH-related risks at the household and community levels in Ghana.

The review of literature identified how social norms combined with poor access to WASH services produce disproportionate outcomes such as negative wellbeing, poor health, and disempowerment for women and girls in SSA. This research draws insights from feminist political ecology to address gaps in literature regarding the impact of cash transfers (e.g., LEAP) on WASH social norms, women's empowerment, and post-COVID-19 recovery in Ghana. The chapter presents a discussion of the key findings of the research. It also discusses the implications for policy and practice, limitations, and direction for future research.

5.2 Key Findings and Discussion

We found the existing WASH social norms around gender at the household and community levels in Ghana. Women and girls were primarily responsible for water provision in the household. This is consistent with dominant literature on WASH access in the context of sub-Saharan Africa, where women and girls bear the burden of water collection in the household (e.g., Adams et al.,

2021; Bisung & Dickin, 2021; Varickanickal et al., 2020). Participants emphasized that when collecting water, women and girls were more vulnerable to risks and harm at home, at water sources, and on the way to the water sources. Their role in water provision exposes them to physical, psychosocial, infrastructural, and sexual violence. This finding is affirmed by Nunbogu et al. (2022) and Meeuwisse et al. (2024), who documented the harmful vulnerabilities associated with women's water provision. Also, Adams et al. (2020) used water journeys to analyze impacts of water insecurity, highlighting women's exposure to multiple risks when fetching water. Since social norms shape acceptable behavior, they have been widely studied for their role in creating and sustaining gender-based violence (GBV). Particularly, feminist literature often frames GBV as rooted in patriarchal systems (Dery et al., 2021; Legros & Cislaghi, 2020). These structures perpetuate GBV by enforcing social norms that prioritize male dominance and systematically marginalize women (F. Dery et al., 2021). In that context, violence acts as a tool to reinforce rigid gender roles created by societal expectations (Nunbogu & Elliott, 2022c).

The findings show reinforcements of social norms through: 1) social sanctions and social benefits; 2) victims having no one to talk to about water struggles; and 3) concealing sexual violence to preserve family honor. In the household and community, being a "proper" woman was measured by one's ability to provide water and take care of domestic work. Holding women to this standard exposes them to multiple vulnerabilities, especially when sick or having physical disabilities. When accessing the toilet, women were more vulnerable to harassment and sexual violence. This happens when men loiter around open defecation sites to look at women's nakedness. This supports existing literature on WASH-GBV, where men in India hid to watch women defecating in open defecation sites (Azeez et al., 2019). When exposed to WASH-GBV, community and household structures make it difficult for women to report and/or get justice. This

is because social norms create and sustain complex social expectations and compromises tied to womanhood. That is, women and girls are expected to provide water without fail, even when the outcome exposes them to abuse and violence. While that happens, issues of abuse and violence against women are usually handled with secrecy at the household level to protect the family name. As a result, when women experience harassment or sexual violence while accessing water or the toilet, perpetrators often face minimal consequences, such as fines, or go unpunished altogether. In some cases, the victims are punished and may get divorced. This is affirmed by Nunbogu et al. (2023), who calls such a situation "double victimization" of women. Furthermore, younger women lamented the difficulty in having someone to talk to when they were stressed and worried about water collection, or when they faced abuse. Many were pressured by their mothers-in-law to endure hardships silently, as "proper" women should, with claims that conditions were better than in the past. This dynamic is particularly significant because mothers-in-law often hold substantial authority within households, and their advocacy could play a vital role in lessening the abuse younger women endure, yet their dismissive attitudes instead amplify the double burden of abuse and societal judgement. These factors promote a culture of silence among women who are abused and makes it difficult for them to seek for justice. Similar to our findings, Ahmed et al. (2021) noted the difficulty for women to get justice when abused while accessing water, saying that the impacts of water on mothers' physical and mental health in Pakistan have largely been ignored. Also, Nunbogu & Elliott (2022) supports that the inability to get justice is caused by discriminatory social norms.

The COVID-19 pandemic exacerbated the challenges women faced in accessing WASH services. During COVID-19, women reported a significant increase in water collection for their households due to public health guidelines urging regular handwashing, especially after leaving

and returning home. This placed an extra burden on women, particularly those in larger households or living further from water sources. Furthermore, women were expected to practice social distancing and handwashing at water sites, which prolonged their time spent collecting water, overburdened boreholes and public taps, and increased fighting over water. This is consistent with Smiley et al. (2023)'s findings in low- and middle-income countries, where COVID-19 worsened pre-existing WASH inequalities, further undermining marginalized populations' capacity to safeguard their health and wellbeing.

The findings show that cash transfers can increase women's decision-making power and choices, including those on sanitation expenditure, water allocation, and investment in agriculture and business ventures. Also, cash transfers can reduce WASH-GBV against women through improved access to WASH infrastructure. Specifically, through the cash, women could connect piped water into their homes, helping to reduce infrastructural violence and other WASH-GBV encountered at home, at water sources, and on the way to the water sources. This is supported by Urbina (2020), who noted that cash transfers can limit controlling behavior by men. Also, we found that through cash transfers, women could pay for water services, which reduced concerns about water shortages compared to non-beneficiaries. At the same time, cash transfers enabled women to participate in decision-making at both the household and community levels. That is, the cash gave them a leverage to voice concerns and share opinions, as their ability to contribute economically strengthened their influence in situations requiring financial input. However, it was found that cash transfers increased the emotional abuse of women. Explanations for this outcome include resentment from men toward women who have an increased income. In such instances, men accused the women of disrespect and divorced or separated women faced derogatory labels like "prostitute," further stigmatizing them and reducing their prospects for remarriage. Baranov

et al. (2021) confirms this, noting that cash transfers increased emotional abuse and intimate partner violence for women in low- and middle-income countries, particularly among those with low education married to men with even lower education levels. To address the emotional abuse of women because they receive cash transfers, Water for Women (2022) and Waldron et al. (2021) highlight the need to include men in discussions of women's empowerment to help teach them how to handle empowered women. Our findings also show that cash transfers resulted in an improvement in women's health and wellbeing through increased access to food, nutrition, and healthcare coverage by the Ghana National Health Insurance (NHIS) for beneficiaries. This is supported by Van Daalen et al. (2022), who noted that globally, cash transfers produced positive impacts on health outcomes and use of health services. Additionally, cash transfers served as a buffer against emergency WASH-related risks at the household and community levels. Specifically, cash transfers enabled women to be better prepared and able to withstand shocks from disasters and WASH emergencies compared to non-beneficiaries. Similar to this, Okoli (2024) found that in Nigeria, cash transfers supported livelihoods and improved people's preparedness toward shocks.

5.3 Implications for Policy and Practice

To mitigate the harm and risks women encounter while accessing water, solutions must account for the physical and emotional burdens of water collection. Sustainable improvements to WASH access require confronting the systemic power imbalances that perpetuate these inequities. Women's responsibility of providing water in the household is premeditated on underlying power dynamics that is crucial to navigating social and economic relationships. This, together with social benefits and social sanctions, make it very difficult to break the cycle of social norms even when

they are harmful. Even so, UNICEF (2021) emphasizes that gender-transformative outcomes in WASH are both achievable and sustainable. To do this, especially in the context of WASH in sub-Saharan Africa, there is a need to first recognize the harmful practices that create and perpetuate harmful outcomes. With that, and collaborating with all stakeholders including marginalized populations, it becomes possible to translate evidence into action by integrating social norms initiatives into WASH programs to increase the likelihood of sustainable behavior change (Water for Women, 2022). For example, influential individuals like "norm entrepreneurs" have the potential to steer the evolutionary process of a social norm. At the community level, such individuals include community, youth, and religious leaders. Within households, older women often hold greater influence than younger women, positioning mothers-in-law as critical advocates. Their authority can be harnessed to amplify marginalized voices, address concerns, and champion the needs of younger women in family and community decision-making. These collaborations have the potential of producing wider social change to ensure no one is left behind.

Water and sanitation infrastructure are mostly argued to empower women. This narrative is mostly in NGO materials, where a strong focus on WASH infrastructure is highlighted as a positive tool for women's empowerment (WaterAid, 2017). However, with less power and control over resources, many women have less say, both within the household and community (Dickin et al., 2021). This restricts their participation in decision-making processes, such as management of (or investment in) water and sanitation resources that meet their needs (Caruso et al., 2022; Dery et al., 2020). As such, it is important to look beyond the provision of infrastructure for broader perspectives on how to empower women.

Cash transfers can be an effective policy instrument to enhance the wellbeing of women and girls. Our overall findings show positive impacts on, among others, reducing monetary poverty,

and improving health, wellbeing, and women's entrepreneurship. If cash transfers are to really contribute to gender equitable outcomes, their design and implementation must be intentionally shaped and monitored to account for existing gender inequalities and power imbalances.

5.4 Conclusions

The COVID-19 pandemic worsened long-standing inequalities for women and girls in sub-Saharan Africa. For countries like Ghana, COVID-19 added to existing social norms to perpetuate struggles for women regarding water provision in the household and community. Our research in Ghana focused on exploring the role of WASH/cash transfers in empowering women and addressing the gender inequalities based in existing social norms. Using feminist political ecology, we identified the existing WASH social norms around gender at the community level, the harms and risks in accessing WASH services, and how cash transfers impact women's health, wellbeing, empowerment levels, and response to emergency WASH-related risks.

The findings show that cash transfers help improve the health and wellbeing of women and other members of the household. That is, when women receive cash transfers, it often leads to improvement in overall household expenditure, food expenditure, health service use, schooling, and child nutrition. Furthermore, cash transfers improved women's decision-making power regarding sanitation expenditures and water allocation. Also, through cash transfers, LEAP beneficiary households could pay for water services, which reduced concerns about water shortages compared to non-beneficiaries. They were also better prepared and able to withstand shocks from disasters and WASH emergencies compared to non-beneficiaries. These results highlight important links between women's empowerment and the promotion of inclusive water security, gender equality, and post-COVID-19 recovery.

A limitation of this research is the lack of investigation into the experiences of men on water provision in the household and community. The research objectives were designed to focus on the experiences of women toward helping them build back better post-COVID-19. This excluded the experiences of men which could have enriched the discussion on WASH social norms. Moving forward, research in that area will provide an understanding of WASH access from the perspectives of both men and women. Also, future research can focus on the impact of women's empowerment on men, as this area was not captured by the research objectives but could enrich the discussion on cash transfers' impact on women's empowerment.

Nonetheless, the research was effective in addressing the objectives and filling knowledge gaps on the impact of cash transfers on WASH social norms, women's (dis)empowerment, and post-COVID-19 recovery in Ghana. By identifying the risks and harm associated with social norms, and collaborating with all stakeholders including marginalized populations, it becomes possible to translate evidence into action to increase the likelihood of sustainable behavior change.

5.5 Directions for Future Research

This research has made several contributions to knowledge, policy, and practice that informs the design of interventions to promote inclusive water security, gender equality, and post-COVID-19 recovery. These contributions align with two key priorities of the global SDG agenda: SDG 5 (Gender equality) and SDG 6 (Clean water and sanitation). Future research can build on these contributions by investigating the impact of women's empowerment on men. Though this research identified abusive behavior by men toward women who received cash transfers, further research is required to understand the underlying causes and impacts of such behavior. Including

the experiences of men would enrich the discussion on cash transfers' impact on women's empowerment.

Further research is also needed to gather stakeholder perceptions on the future of the LEAP cash transfer program. Participants in this research highlighted the importance of cash transfers and the need for additional support. Others noted the limited coverage of the LEAP program in their communities and the need to extend its services to benefit more impoverished and marginalized populations. Conducting research on the scalability and sustainability of the LEAP cash transfer program will help explore its barriers and opportunities and provide empirical data for policy and practice.

Again, this research highlighted the role of "norm entrepreneurs" in transforming harmful social norms. Future research can build on this by investigating the experiences of influential leaders at both community and household levels to identify ways of promoting women's empowerment. Overall, prioritizing research in these areas will bridge gaps in universal access to clean water and sanitation and promote gender equality in communities and households.

REFERENCES

Abdul Azeez E.P., Negi, D. P., & Mishra, A. (2019). Women's Experiences of Defecating in the Open: A Qualitative Study. *Indian Journal of Gender Studies*, *26*(1–2), 160–170. https://doi.org/10.1177/0971521518808098

Adams, E. A., Adams, Y. J., & Koki, C. (2021). Water, sanitation, and hygiene (WASH) insecurity will exacerbate the toll of COVID-19 on women and girls in low-income countries. *Sustainability: Science, Practice and Policy*, *17*(1), 85–89. https://doi.org/10.1080/15487733.2021.1875682

Adams, E. A., Juran, L., & Ajibade, I. (2018). 'Spaces of Exclusion' in community water governance: A Feminist Political Ecology of gender and participation in Malawi's Urban Water User Associations. *Geoforum*, *95*, 133–142. https://doi.org/10.1016/j.geoforum.2018.06.016

Adhikari, R., & Ghimire, S. (2020). Open defecation free: Where do we need to focus ? *Health Prospect*, *19*(1), 1–6. https://doi.org/10.3126/hprospect.v19i0.27394

Agbo, E. I. (2023). *Eradicating Extreme Poverty Amidst Covid-19 Pandemic: A Focus on Sub-Saharan Africa*. https://doi.org/10.5281/ZENODO.8105153

Ahmed, F., Shahid, M., Cao, Y., Qureshi, M. G., Zia, S., Fatima, S., & Guo, J. (2021). A Qualitative Exploration in Causes of Water Insecurity Experiences, and Gender and Nutritional Consequences in South-Punjab, Pakistan. *International Journal of Environmental Research and Public Health*, *18*(23), 12534. https://doi.org/10.3390/ijerph182312534

Alon, T., Coskun, S., Doepke, M., Koll, D., & Tertilt, M. (2022). From Mancession to Shecession: Women's Employment in Regular and Pandemic Recessions. *NBER Macroeconomics Annual*, *36*, 83–151. https://doi.org/10.1086/718660

Alonzo, D., & Popescu, M. (2021). Utilizing social media platforms to promote mental health awareness and help seeking in underserved communities during the COVID-19 pandemic. *Journal of Education and Health Promotion*, *10*(1), 156. https://doi.org/10.4103/jehp.jehp_21_21

Altaf, A., Tsikata, D., Torvikey, G. D., & Dekker, M. (Eds.). (2024). *EQUITY IN COVID-19: Mitigation and Policy Responses in Africa*. Springer International Publishing. https://doi.org/10.1007/978-3-031-58588-3

Amankwaa, G., & Ampratwum, Edward. F. (2020). COVID-19 'free water' initiatives in the Global South: What does the Ghanaian case mean for equitable and sustainable water services? *Water International*, *45*(7–8), 722–729. https://doi.org/10.1080/02508060.2020.1845076

Amarteifio, E. N. A., Dai, B., Nutakor, J. A., & Larnyo, E. (2022). The Mediating Effect of Healthcare Utilization on Livelihood Empowerment against Poverty (LEAP) and Health Security of Older Adults in Ghana: A Case Study on the Ga-West Municipality in Accra, Ghana. *Healthcare*, *10*(2), 370. https://doi.org/10.3390/healthcare10020370

Andrews, G. J., & Kearns, R. A. (2005). Everyday health histories and the making of place: The case of an English coastal town. *Social Science & Medicine*, *60*(12), 2697–2713. https://doi.org/10.1016/j.socscimed.2004.11.004

Anwar, N. H., Sawas, A., & Mustafa, D. (2020). 'Without water, there is no life': Negotiating everyday risks and gendered insecurities in Karachi's informal settlements. *Urban Studies*, *57*(6), 1320–1337. https://doi.org/10.1177/0042098019834160

Awojobi, O. N. (2022). Cash Transfer Programmes For Reducing Poverty And Vulnerabilities: Effects On Children's Health In Sub-Saharan Africa And Latin America. *SocioEconomic Challenges*, *6*(1), 5–23. https://doi.org/10.21272/sec.6(1).5-23.2022

Awuni, E. T., Malerba, D., & Never, B. (2023). Understanding Vulnerability to Poverty, COVID-19's Effects, and Implications for Social Protection: Insights from Ghana. *Progress in Development Studies*, *23*(3), 246–274. https://doi.org/10.1177/14649934231162463

Ayre, J., & McCaffery, K. J. (2022). Research Note: Thematic analysis in qualitative research. *Journal of Physiotherapy*, *68*(1), 76–79. https://doi.org/10.1016/j.jphys.2021.11.002

Bachwenkizi, J., Mohamed, H., Funsan, P., Rweyemamu, D., Nelson, W., Shao, M., Kaijage, H., Muyumbana, N., Salehe, S., Mwelange, L. P., Shabani, S., Olirk, B. T., Mamuya, S., & Mlimbila, J. (2023). Access to water sources and intimate partner violence against women in 26 Sub-Saharan African countries. *Hygiene and Environmental Health Advances*, *7*, 100063. https://doi.org/10.1016/j.heha.2023.100063

Baranov, V., Cameron, L., Contreras Suarez, D., & Thibout, C. (2021). Theoretical Underpinnings and Meta-analysis of the Effects of Cash Transfers on Intimate Partner Violence in Low- and Middle-Income Countries. *The Journal of Development Studies*, *57*(1), 1–25. https://doi.org/10.1080/00220388.2020.1762859

Baum, S. (Ed.). (2021). *Methods in Urban Analysis*. Springer.

Bautista, T. G., Roman, G., Khan, M., Lee, M., Sahbaz, S., Duthely, L. M., Knippenberg, A., Macias-Burgos, M. A., Davidson, A., Scaramutti, C., Gabrilove, J., Pusek, S., Mehta, D., & Bredella, M. A. (2023a). What is well-being? A scoping review of the conceptual and operational definitions of occupational well-being. *Journal of Clinical and Translational Science*, *7*(1), e227. https://doi.org/10.1017/cts.2023.648

Bautista, T. G., Roman, G., Khan, M., Lee, M., Sahbaz, S., Duthely, L. M., Knippenberg, A., Macias-Burgos, M. A., Davidson, A., Scaramutti, C., Gabrilove, J., Pusek, S., Mehta, D., & Bredella, M. A. (2023b). What is well-being? A scoping review of the conceptual and operational definitions of occupational well-being. *Journal of Clinical and Translational Science*, *7*(1), e227. https://doi.org/10.1017/cts.2023.648

Bazaanah, P., & Ngcobo, P. (2024). Shadow of justice: Review on women's struggle against gender-based violence in Ghana and South Africa. *SN Social Sciences*, *4*(7), 126. https://doi.org/10.1007/s43545-024-00926-5

Beach, S. R., Schulz, R., Donovan, H., & Rosland, A.-M. (2021). Family Caregiving During the COVID-19 Pandemic. *The Gerontologist*, *61*(5), 650–660. https://doi.org/10.1093/geront/gnab049

Bicchieri, C. (2014). *Norms, Conventions, and the Power of Expectations*. https://books.google.ca/books?hl=en&lr=&id=Oi0UDAAAQBAJ&oi=fnd&pg=PA208&dq=Bicchieri+(2014)+social+norms&ots=A2ek9gVxk2&sig=CVRYOgqFTejuDrj0ADr1ZukcDpo#v=onepage&q=Bicchieri%20(2014)%20social%20norms&f=false

Bisung, E., & Dickin, S. (2021). Who does what and why? Examining intra-household water and sanitation decision-making and autonomy in Asutifi North, Ghana. *Journal of Water, Sanitation and Hygiene for Development*, *11*(5), 794–804. https://doi.org/10.2166/washdev.2021.039

Bisung, E., & Elliott, S. J. (2016). 'Everyone is exhausted and frustrated': Exploring psychosocial impacts of the lack of access to safe water and adequate sanitation in Usoma, Kenya. *Journal of Water, Sanitation and Hygiene for Development*, *6*(2), 205–214. https://doi.org/10.2166/washdev.2016.122

Black, R., Fontaine, O., Lamberti, L., Bhan, M., Huicho, L., El Arifeen, S., Masanja, H., Walker, C. F., Mengestu, T. K., Pearson, L., Young, M., Orobaton, N., Chu, Y., Jackson, B., Bateman, M., Walker, N., & Merson, M. (2019). Drivers of the reduction in childhood diarrhea mortality 1980-2015 and interventions to eliminate preventable diarrhea deaths by 2030. *Journal of Global Health*, *9*(2), 020801. https://doi.org/10.7189/jogh.09.020801

Bonilla, J., Zarzur, R. C., Handa, S., Nowlin, C., Peterman, A., Ring, H., & Seidenfeld, D. (2017). Cash for Women's Empowerment? A Mixed-Methods Evaluation of the Government of Zambia's Child Grant Program. *World Development*, *95*, 55–72. https://doi.org/10.1016/j.worlddev.2017.02.017

Borg Ellul, D., & Friggieri, J. (2025). A Thriving Future through Diversity, Equity, and Inclusion for Resilient and Innovative Communities. In *Poverty—Associated Risks and Alleviation [Working Title]*. IntechOpen. https://doi.org/10.5772/intechopen.1008368

Bryant, R. L. (1998). Power, knowledge and political ecology in the third world: A review. *Progress in Physical Geography: Earth and Environment*, *22*(1), 79–94. https://doi.org/10.1177/030913339802200104

Calderón-Villarreal, A., Schweitzer, R., & Kayser, G. (2022). Social and geographic inequalities in water, sanitation and hygiene access in 21 refugee camps and settlements in Bangladesh, Kenya, Uganda, South Sudan, and Zimbabwe. *International Journal for Equity in Health*, *21*(1), 27. https://doi.org/10.1186/s12939-022-01626-3

Caruso, B. A., Conrad, A., Patrick, M., Owens, A., Kviten, K., Zarella, O., Rogers, H., & Sinharoy, S. S. (2022). Water, sanitation, and women's empowerment: A systematic review and qualitative metasynthesis. *PLOS Water*, *1*(6), e0000026. https://doi.org/10.1371/journal.pwat.0000026

Cattaneo, L. B., & Chapman, A. R. (2010). The process of empowerment: A model for use in research and practice. *American Psychologist*, *65*(7), 646–659. https://doi.org/10.1037/a0018854

Cislaghi, B., & Berkowitz, A. D. (2021). The evolution of social norms interventions for health promotion: Distinguishing norms correction and norms transformation. *Journal of Global Health*, *11*, 03065. https://doi.org/10.7189/jogh.11.03065

Commentary to Part III: Wellbeing: a means for informed policy-making. (2021). In S. J Elliott, *A Modern Guide to Wellbeing Research*. Edward Elgar Publishing. https://doi.org/10.4337/9781789900163.00024

Dannals, J. E., & Li, Y. (2024). A theoretical framework for social norm perception. *Research in Organizational Behavior*, *44*, 100211. https://doi.org/10.1016/j.riob.2024.100211

De Guzman, K., Stone, G., Yang, A. R., Schaffer, K. E., Lo, S., Kojok, R., Kirkpatrick, C. R., Del Pozo, A. G., Le, T. T., DePledge, L., Frost, E. L., & Kayser, G. L. (2023). Drinking water and the implications for gender equity and empowerment: A systematic review of qualitative and quantitative evidence. *International Journal of Hygiene and Environmental Health*, *247*, 114044. https://doi.org/10.1016/j.ijheh.2022.114044

Dery, F., Bisung, E., Dickin, S., & Atengdem, J. (2021). 'They will listen to women who speak but it ends there': Examining empowerment in the context of water and sanitation interventions in Ghana. *H2Open Journal*, *4*(1), 231–243. https://doi.org/10.2166/h2oj.2021.100

Dery, F., Bisung, E., Dickin, S., & Dyer, M. (2020). Understanding empowerment in water, sanitation, and hygiene (WASH): A scoping review. *Journal of Water, Sanitation and Hygiene for Development*, *10*(1), 5–15. https://doi.org/10.2166/washdev.2019.077

Dery, I. (2021). "Give Her a Slap or Two . . . She Might Change": Negotiating Masculinities Through Intimate Partner Violence Among Rural Ghanaian Men. *Journal of Interpersonal Violence*, *36*(19–20), 9670–9690. https://doi.org/10.1177/0886260519869066

Dickin, S., & Bisung, E. (2019). *Empowerment in WASH Index: SEI discussion brief*. http://www.jstor.com/stable/resrep22981

Dickin, S., Bisung, E., Nansi, J., & Charles, K. (2021). Empowerment in water, sanitation and hygiene index. *World Development*, *137*, 105158. https://doi.org/10.1016/j.worlddev.2020.105158

Donde, O. O., Atoni, E., Muia, A. W., & Yillia, P. T. (2021). COVID-19 pandemic: Water, sanitation and hygiene (WASH) as a critical control measure remains a major challenge in low-income countries. *Water Research*, *191*, 116793. https://doi.org/10.1016/j.watres.2020.116793

Dyck, I. (2003). Feminism and Health Geography: Twin tracks or divergent agendas? *Gender, Place & Culture*, *10*(4), 361–368. https://doi.org/10.1080/0966369032000153331

Edet, O. B., Bassey, P. E. M., Esienumoh, E. E., & Ndep, A. O. (2022). Missing school during period: Perspectives of adolescent schoolgirls in Cross River State, Nigeria. *Pan African Medical Journal*, *42*. https://doi.org/10.11604/pamj.2022.42.65.28244

Ellickson, R. C. (2001). *The evolution of social norms: A perspective from the legal academy*. https://books.google.ca/books?hl=en&lr=&id=uPiFAwAAQBAJ&oi=fnd&pg=PA35&dq=norm+entrepreneur+ellickson+2001&ots=fMamikCaUy&sig=fA2rl0ZCvfa9MvBLi2r0hqEd-xY#v=onepage&q=norm%20entrepreneur%20ellickson%202001&f=false

Elliott, S. J. (2011). The transdisciplinary knowledge journey: A suggested framework for research at the water-health nexus. *Current Opinion in Environmental Sustainability*, *3*(6), 527–530. https://doi.org/10.1016/j.cosust.2011.10.005

Elmhirst, R. (2011). Introducing new feminist political ecologies. *Geoforum*, *42*(2), 129–132. https://doi.org/10.1016/j.geoforum.2011.01.006

England, K. V. L. (1994). Getting Personal: Reflexivity, Positionality, and Feminist Research∗. *The Professional Geographer*, *46*(1), 80–89. https://doi.org/10.1111/j.0033-0124.1994.00080.x

Fagbemi, F., Osinubi, T. T., & Olatunde, O. S. (2022). COVID-19 and Unemployment: Showcasing Sub-Saharan African Experience. *Jindal Journal of Business Research*, *11*(1), 24–33. https://doi.org/10.1177/22786821221082955

Fatahi, N., Kakamad, K., Babakr, Z., Tafran, K., & Okland, O. (2021). COVID-19 and Its Triangle Effects on Human's Well-Being: A Qualitative Research Method Used to Collect Appropriate Data. *Acta Informatica Medica*, *29*(3), 197. https://doi.org/10.5455/aim.2021.29.197-204

Fisher, E., Attah, R., Barca, V., O'Brien, C., Brook, S., Holland, J., Kardan, A., Pavanello, S., & Pozarny, P. (2017). The Livelihood Impacts of Cash Transfers in Sub-Saharan Africa: Beneficiary Perspectives from Six Countries. *World Development*, *99*, 299–319. https://doi.org/10.1016/j.worlddev.2017.05.020

Garcia, M., & Moore, C. M. T. (2012). *The Cash Dividend: The Rise of Cash Transfer Programs in Sub-Saharan Africa*. The World Bank. https://doi.org/10.1596/978-0-8213-8897-6

Gatrell, A. C., & Elliott, S. J. (2015a). *Geographies of health: An introduction* (Third edition). Wiley Blackwell.

Gatrell, A. C., & Elliott, S. J. (2015b). *Geographies of health: An introduction* (Third edition). Wiley/Blackwell.

Gatrell, A., & Elliott, S. J. (2014). *Geographies of health: An introduction*. https://books.google.ca/books?hl=en&lr=&id=6pvmBQAAQBAJ&oi=fnd&pg=PR9&dq=health+geographers+incorporate+the+concepts+of+power,+temporality,+and+place+into+the+study+of+embodied+diseases,+disease+exposure,+and+disease+management+&ots=uv_85bERjK&sig=COq5p0u_3V_5OG6gEDNClntYCKQ&redir_esc=y#v=onepage&q&f=false

Gelfand, M. J., Gavrilets, S., & Nunn, N. (2024). Norm Dynamics: Interdisciplinary Perspectives on Social Norm Emergence, Persistence, and Change. *Annual Review of Psychology*, *75*(1), 341–378. https://doi.org/10.1146/annurev-psych-033020-013319

Ghana Statistical Service. (2021). *Population and Housing Census: Daffiema Bussie Issa District Multidimentional Poverty Fact Sheet*. https://statsghana.gov.gh/gssmain/fileUpload/pressrelease/Daffiama%20Bussie%20Issa.pdf

Ghana Statistical Service. (2022, February). *Ghana 2021 Population and Housing Census: General Report Volume 3M, Water and Sanitation*. https://statsghana.gov.gh/gssmain/fileUpload/pressrelease/Volume%203M_Water%20and%20Sanitation_240222a.pdf

Gross, J., & Vostroknutov, A. (2022). Why do people follow social norms? *Current Opinion in Psychology*, *44*, 1–6. https://doi.org/10.1016/j.copsyc.2021.08.016

Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. *Social Science & Medicine*, *292*, 114523. https://doi.org/10.1016/j.socscimed.2021.114523

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*, *5*(1), 115–126. https://doi.org/10.2166/washdev.2014.110

Jain, A., & Subramanian, S. V. (2018). Intrinsic and instrumental perspectives to sanitation. *SSM - Population Health*, *5*, 267–269. https://doi.org/10.1016/j.ssmph.2018.07.005

Jalali, R. (2021). The Role of Water, Sanitation, Hygiene, and Gender Norms on Women's Health: A Conceptual Framework. *Gendered Perspectives on International Development*, *1*(1), 21–44. https://doi.org/10.1353/gpi.2021.0001

Jayaweera, R. T., Goin, D., Twine, R., Neilands, T. B., Wagner, R. G., Lippman, S. A., Kahn, K., Pettifor, A., & Ahern, J. (2022). Associations between WASH-related violence and depressive symptoms in adolescent girls and young women in South Africa (HPTN 068): A cross-sectional analysis. *BMJ Open*, *12*(7), e061032. https://doi.org/10.1136/bmjopen-2022-061032

Jeong & Trako. (2022). *Cash and in-kind transfers in humanitarian settings: A review of evidence and knowledge gaps*. https://openknowledge.worldbank.org/server/api/core/bitstreams/a0922436-227a-5b3e-8ad6-d88c78326822/content

Jo, S., Han, S.-Y., & Howe, N. (2023). Factors Associated with Handwashing Behaviors During the COVID-19 Pandemic: An Analysis of the Community Health Survey in Korea. *SAGE Open Nursing*, *9*. https://doi.org/10.1177/23779608231172364

K C, L., & MacKenzie, M. (2024). Postcards from the Pandemic: Women, Intersectionality, and Gendered Risks in the Global COVID-19 Pandemic. *International Studies Review*, *26*(4), viae041_1. https://doi.org/10.1093/isr/viae041.1

Kabeer, N. (1999). Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment. *Development and Change*, *30*(3), 435–464. https://doi.org/10.1111/1467-7660.00125

Kangmennaang, J., & Elliott, S. J. (2021). Linking water (in)security and wellbeing in low-and middle-income countries. *Water Security*, *13*, 100089. https://doi.org/10.1016/j.wasec.2021.100089

Kearns, R. A., & Andrews, G. J. (2010). Geographies of Wellbeing. In *The SAGE Handbook of Social Geographers* (p. 309).

Kearns, R., & Moon, G. (2002). From medical to health geography: Novelty, place and theory after a decade of change. *Progress in Human Geography*, *26*(5), 605–625. https://doi.org/10.1191/0309132502ph389oa

Khanna, T., & Das, M. (2016). Why gender matters in the solution towards safe sanitation? Reflections from rural India. *Global Public Health*, *11*(10), 1185–1201. https://doi.org/10.1080/17441692.2015.1062905

Kyei-Arthur, F., Ongoh, M., & Kyei-Gyamfi, S. (2025). Economic and social impacts of the livelihood empowerment against poverty program in Ghana: Perspectives of beneficiaries and officials. *SN Social Sciences*, *5*(6), 72. https://doi.org/10.1007/s43545-025-01108-7

Lamb, J., Thorseth, A. H., MacDougall, A., Thorsen, W., & White, S. (2024). The determinants of handwashing in humanitarian crisis setting during the COVID-19 pandemic: A multi-country analysis. *Health Promotion International*, *39*(6), daae117. https://doi.org/10.1093/heapro/daae117

Lapinski, M. K., & Rimal, R. N. (2005). An Explication of Social Norms. *Communication Theory*, *15*(2), 127–147. https://doi.org/10.1111/j.1468-2885.2005.tb00329.x

Legros, S., & Cislaghi, B. (2020). Mapping the Social-Norms Literature: An Overview of Reviews. *Perspectives on Psychological Science*, *15*(1), 62–80. https://doi.org/10.1177/1745691619866455

Lemoine, P., Ebert, D., Koga, Y., & Bertin, C. (2022). Public interest and awareness regarding general health, sleep quality and mental wellbeing during the early COVID-19 pandemic period: An exploration using Google trends. *Sleep Epidemiology*, *2*, 100017. https://doi.org/10.1016/j.sleepe.2021.100017

Lim, W. M. (2024). What Is Qualitative Research? An Overview and Guidelines. *Australasian Marketing Journal*, 14413582241264619. https://doi.org/10.1177/14413582241264619

Litwin, A., Perova, E., & Reynolds, S. A. (2019). A conditional cash transfer and Women's empowerment: Does Bolsa Familia Influence intimate partner violence? *Social Science & Medicine*, *238*, 112462. https://doi.org/10.1016/j.socscimed.2019.112462

Meeuwisse, S., Elliott, S. J., Bennett, A., & Kapoor, V. (2024). Water fetching and musculoskeletal health across the life-course in Sub-Saharan Africa: A scoping review. *PLOS Global Public Health*, *4*(9), e0003630. https://doi.org/10.1371/journal.pgph.0003630

Mejía-Guevara, I., Cislaghi, B., Weber, A., Hallgren, E., Meausoone, V., Cullen, M. R., & Darmstadt, G. L. (2020). Association of collective attitudes and contraceptive practice in nine sub-Saharan African countries. *Journal of Global Health*, *10*(1), 010705. https://doi.org/10.7189/jogh.10.010705

Ministry of Gender, Children and Social Protection of Ghana. LEAP Programme. Frequently Asked Questions. (n.d.). https://leap.mogcsp.gov.gh/faq/#1644351872293-c5a03a1b-e349

Murhula, P. B. B., Singh, S. B., & Myende, S. M. (2021). *The COVID-19 Pandemic and Its Impact on Gender-Based Violence: A Global Review and Analysis*. https://doi.org/10.5281/ZENODO.4762356

Mushavi, R. C., Burns, B. F. O., Kakuhikire, B., Owembabazi, M., Vořechovská, D., McDonough, A. Q., Cooper-Vince, C. E., Baguma, C., Rasmussen, J. D., Bangsberg, D. R., & Tsai, A. C. (2020). "When you have no water, it means you have no peace": A mixed-methods, whole-population study of water insecurity and depression in rural Uganda. *Social Science & Medicine*, *245*, 112561. https://doi.org/10.1016/j.socscimed.2019.112561

Nahar, S., & Mengo, C. W. (2022). Measuring women's empowerment in developing countries: A systematic review. *Journal of International Development*, *34*(2), 322–333. https://doi.org/10.1002/jid.3594

Nightingale, A. (2006). The Nature of Gender: Work, Gender, and Environment. *Environment and Planning D: Society and Space*, *24*(2), 165–185. https://doi.org/10.1068/d01k

Nkansah-Dwamena, E., & Fevrier, K. (2024). "Are We All in This Together?": The Socioeconomic Impacts and Inequalities of the COVID-19 Pandemic in Ghana's Informal Economy. *Journal of Asian and African Studies*, *59*(4), 1302–1322. https://doi.org/10.1177/00219096221131824

Nunbogu, A. M., & Elliott, S. J. (2022a). Characterizing gender-based violence in the context of water, sanitation, and hygiene: A scoping review of evidence in low- and middle-income countries. *Water Security*, *15*, 100113. https://doi.org/10.1016/j.wasec.2022.100113

Nunbogu, A. M., & Elliott, S. J. (2022b). Characterizing gender-based violence in the context of water, sanitation, and hygiene: A scoping review of evidence in low- and middle-income countries. *Water Security*, *15*, 100113. https://doi.org/10.1016/j.wasec.2022.100113

Nunbogu, A. M., & Elliott, S. J. (2022c). Characterizing gender-based violence in the context of water, sanitation, and hygiene: A scoping review of evidence in low- and middle-income countries. *Water Security*, *15*, 100113. https://doi.org/10.1016/j.wasec.2022.100113

Nunbogu, A. M., Elliott, S. J., & Bisung, E. (2023a). I feel the pains of our past water struggles anytime I turn on the tap: Diaspora perceptions and experiences of water, sanitation, and hygiene (WaSH) gendered violence in Ghana. *Social Science & Medicine*, *317*, 115621. https://doi.org/10.1016/j.socscimed.2022.115621

Nunbogu, A. M., Elliott, S. J., & Bisung, E. (2023b). I feel the pains of our past water struggles anytime I turn on the tap: Diaspora perceptions and experiences of water, sanitation, and hygiene (WaSH) gendered violence in Ghana. *Social Science & Medicine*, *317*, 115621. https://doi.org/10.1016/j.socscimed.2022.115621

Nunbogu, A. M., Elliott, S. J., & Walton-Roberts, M. (2023a). "We are all women here in Canada": Intimate bargains in WASH spaces. *Social Science & Medicine*, *338*, 116343. https://doi.org/10.1016/j.socscimed.2023.116343

Nunbogu, A. M., Elliott, S. J., & Walton-Roberts, M. (2023b). "We are all women here in Canada": Intimate bargains in WASH spaces. *Social Science & Medicine*, *338*, 116343. https://doi.org/10.1016/j.socscimed.2023.116343

Nyantakyi-Frimpong, H. (2017). Agricultural diversification and dietary diversity: A feminist political ecology of the everyday experiences of landless and smallholder households in northern Ghana. *Geoforum*, *86*, 63–75. https://doi.org/10.1016/j.geoforum.2017.09.003

Nyimbili, F., & Nyimbili, L. (2024). Types of Purposive Sampling Techniques with Their Examples and Application in Qualitative Research Studies. *British Journal of*

Multidisciplinary and Advanced Studies, *5*(1), 90–99. https://doi.org/10.37745/bjmas.2022.0419

Okesanya, O. J., Eshun, G., Ukoaka, B. M., Manirambona, E., Olabode, O. N., Adesola, R. O., Okon, I. I., Jamil, S., Singh, A., Lucero-Prisno, D. E., Ali, H. M., & Chowdhury, A. B. M. A. (2024). Water, sanitation, and hygiene (WASH) practices in Africa: Exploring the effects on public health and sustainable development plans. *Tropical Medicine and Health*, *52*(1), 68. https://doi.org/10.1186/s41182-024-00614-3

Okoli, N. (2024). *Can Conditional Cash Transfers Be Gender-Transformative? An Assessment of the Flourishing Outcomes Among Women "Beneficiaries" of Nigeria's Household Uplifting Programme (HUP)*. https://doi.org/10.20381/RUOR-30302

Ombija, S., Wao, H., & Esho, T. (2024). Water, sanitation, and intimate partner violence: Insights from Kibra Slums, Nairobi. *Journal of Global Health*, *14*, 04141. https://doi.org/10.7189/jogh.14.04141

Onyeaka, H., Tamasiga, P., Mazi, I. M., Akegbe, H., & Osiri, J. K. (2023). Gender-based impacts of COVID-19 in Sub-Saharan Africa. *Sexuality, Gender & Policy*, *6*(4), 198–216. https://doi.org/10.1002/sgp2.12077

Öz, G., & Timur, Ş. (2023). Issues of Power and Representation in/of the Local Context: The role of self-reflexivity and positionality in design research. *The Design Journal*, *26*(2), 252–269. https://doi.org/10.1080/14606925.2022.2088097

Parry, B. R., & Gordon, E. (2021). The shadow pandemic: Inequitable gendered impacts of COVID-19 in South Africa. *Gender, Work & Organization*, *28*(2), 795–806. https://doi.org/10.1111/gwao.12565

Pommells, M., Schuster-Wallace, C., Watt, S., & Mulawa, Z. (2018). Gender Violence as a Water, Sanitation, and Hygiene Risk: Uncovering Violence Against Women and Girls as It Pertains to Poor WaSH Access. *Violence Against Women*, *24*(15), 1851–1862. https://doi.org/10.1177/1077801218754410

Power, K. (2020). The COVID-19 pandemic has increased the care burden of women and families. *Sustainability: Science, Practice and Policy*, *16*(1), 67–73. https://doi.org/10.1080/15487733.2020.1776561

Priya, P., Venkatesh, A., & Shukla, A. (2021). Two decades of theorising and measuring women's empowerment: Literature review and future research agenda. *Women's Studies International Forum*, *87*, 102495. https://doi.org/10.1016/j.wsif.2021.102495

Reford, S. (2023). *Women in the Workforce: How COVID-19 Erased 50 Years of Progress*. https://doi.org/10.26153/TSW/46224

Rocheleau, D. E. (1995). GENDER AND BIODIVERSITY: A FEMINIST POLITICAL ECOLOGY PERSPECTIVE. *IDS Bulletin*, *26*(1), 9–16. https://doi.org/10.1111/j.1759-5436.1995.mp26001002.x

Sahoo, K. C., Dubey, S., Dash, G. C., Sahoo, R. K., Sahay, M. R., Negi, S., Mahapatra, P., Bhattacharya, D., Sahoo, B., Pani, S. P., Barrio, M. O. D., & Pati, S. (2022). A Systematic Review of Water, Sanitation, and Hygiene for Urban Poor in Low- and Middle-Income Countries during the COVID-19 Pandemic through a Gendered Lens. *International Journal of Environmental Research and Public Health*, *19*(19), 11845. https://doi.org/10.3390/ijerph191911845

Schramme, T. (2023). Health as Complete Well-Being: The WHO Definition and Beyond. *Public Health Ethics*, *16*(3), 210–218. https://doi.org/10.1093/phe/phad017

Sen, A. (1985). Capability and Well-Being. In *The Quality of Life* (pp. 30–50). https://books.google.ca/books?hl=en&lr=&id=QurkDwAAQBAJ&oi=fnd&pg=PA30&ots=1ABeT_Otl7&sig=cUZBUkzxV2Dhzj7pFLxT-Bm11LE#v=onepage&q&f=false

Shrestha, J., Bhattachan, B., Rai, G., Park, E. Y., & Rai, S. K. (2019). Intestinal parasitic infections among public and private schoolchildren of Kathmandu, Nepal: Prevalence and associated risk factors. *BMC Research Notes*, *12*(1), 192. https://doi.org/10.1186/s13104-019-4225-0

Siddique, A., Shahzad, A., Lawler, J., Mahmoud, K. A., Lee, D. S., Ali, N., Bilal, M., & Rasool, K. (2021). Unprecedented environmental and energy impacts and challenges of COVID-19 pandemic. *Environmental Research*, *193*, 110443. https://doi.org/10.1016/j.envres.2020.110443

Silva, H. M. S. V. (2022). *Defining women's empowerment: A conceptual study*. https://www.researchgate.net/profile/Hm-Silva/publication/385476327_Defining_Women_Empowerment_A_Conceptual_Study/links/6725a74f5852dd723ca2f0c6/Defining-Women-Empowerment-A-Conceptual-Study.pdf

Smiley, S. L., Agbemor, B. D., Adams, E. A., & Tutu, R. (2020). COVID-19 and water access in Sub-Saharan Africa: Ghana's free water directive may not benefit water insecure households. *African Geographical Review*, *39*(4), 398–404. https://doi.org/10.1080/19376812.2020.1810083

Sultana, F. (2011). Suffering for water, suffering from water: Emotional geographies of resource access, control and conflict. *Geoforum*, *42*(2), 163–172. https://doi.org/10.1016/j.geoforum.2010.12.002

Sultana, F. (2020). Embodied Intersectionalities of Urban Citizenship: Water, Infrastructure, and Gender in the Global South. *Annals of the American Association of Geographers*, *110*(5), 1407–1424. https://doi.org/10.1080/24694452.2020.1715193

Truelove, Y. (2011). (Re-)Conceptualizing water inequality in Delhi, India through a feminist political ecology framework. *Geoforum*, *42*(2), 143–152. https://doi.org/10.1016/j.geoforum.2011.01.004

UN. (2023). *The Sustainable Development Goals Report 2023: Special edition*. https://unstats.un.org/sdgs/report/2023/The-Sustainable-Development-Goals-Report-2023.pdf

UN Water. (2023). *WHO/UNICEF Joint Monitoring Program for Water Supply, Sanitation and Hygiene (JMP) – Progress on household drinking water, sanitation and hygiene 2000-2022: Special focus on gender*. https://www.unwater.org/publications/who/unicef-joint-monitoring-program-update-report-2023#:~:text=Water:%20In%202022%2C%202.2%20billion,at%20all%2C%20to%20manage%20menstruation.

UN Women. (2018). *Turning promises into action: Gender equality in the 2030 Agenda for Sustainable Development*. UN Women. https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/Library/Publications/2018/SDG-report-Chapter-3-Why-gender-equality-matters-across-all-SDGs-2018-en.pdf

UNICEF. (2016). *Collecting water is often a colossal waste of time for women and girls*. https://www.unicef.org/press-releases/unicef-collecting-water-often-colossal-waste-time-women-and-girls#:~:text=Press%20release-,UNICEF%3A%20Collecting%20water%20is%20often%

20a%20colossal%20waste,time%20for%20women%20and%20girls&text=NEW%20YORK%2FSTOCKHOLM%2C%2029%20August,waste%20of%20their%20valuable%20time.

UNICEF. (2021). *Defining social norms and related concepts*. https://www.unicef.org/media/111061/file/Social-norms-definitions-2021.pdf

UNICEF. (2023). *Cash transfers in Ghana: Evidence overview of LEAP and LEAP 1000 impacts, 2010-2022*. https://www.unicef.org/ghana/media/5616/file/Cash%20Transfers%20in%20Ghana-Evidence%20Overview%20of%20LEAP%20and%20LEAP%201000%20Impacts.pdf.pdf

United Nations. (2023). *Sustainable Development Goals Report 2023*. https://www.un.org/sustainabledevelopment/poverty/

United Nations Women. (2024). *Progress on the Sustainable Development Goals: The Gender Snapshot 2024*. United Nations.

Urbina, D. R. (2020). In the Hands of Women: Conditional Cash Transfers and Household Dynamics. *Journal of Marriage and Family*, *82*(5), 1571–1586. https://doi.org/10.1111/jomf.12684

Van Daalen, K. R., Dada, S., James, R., Ashworth, H. C., Khorsand, P., Lim, J., Mooney, C., Khankan, Y., Essar, M. Y., Kuhn, I., Juillard, H., & Blanchet, K. (2022). Impact of conditional and unconditional cash transfers on health outcomes and use of health services in humanitarian settings: A mixed-methods systematic review. *BMJ Global Health*, *7*(1), e007902. https://doi.org/10.1136/bmjgh-2021-007902

Varickanickal, J., Bisung, E., & Elliott, S. J. (2020). Water risk perceptions across the life-course of women in Kenya. *Health Promotion International*, *35*(4), 639–648. https://doi.org/10.1093/heapro/daz055

Vaz Nery, S., Traub, R. J., McCarthy, J. S., Clarke, N. E., Amaral, S., Llewellyn, S., Weking, E., Richardson, A., Campbell, S. J., Gray, D. J., Vallely, A. J., Williams, G. M., Andrews, R. M., & Clements, A. C. A. (2019). WASH for WORMS: A Cluster-Randomized Controlled Trial of the Impact of a Community Integrated Water, Sanitation, and Hygiene and Deworming Intervention on Soil-Transmitted Helminth Infections. *The American Journal of Tropical Medicine and Hygiene*, *100*(3), 750–761. https://doi.org/10.4269/ajtmh.18-0705

Waldron et al. (2021). *Addressing Gender Norms to Increase Financial Inclusion*. https://www.cgap.org/sites/default/files/publications/2021_10_Technical_Guide_Gender_Norms.pdf

Water for Women. (2022). *Shifting social norms for transformative WASH: review of concepts, literature and practice*. https://www.waterforwomenfund.org/en/learning-and-resources/resources/KL/Publications/Water-for-Women-TT-Shifting-Social-Norms-for-Transformative-WASH_Literature-Review-web.pdf

Water, Sanitation, and Hygiene Interventions for COVID-19 and the Health of Vulnerable Populations in Sub-Saharan Africa. (2023). In S. L. Smiley, E. A. Adams, B. D. Agbemor, & H. Hungerford, *Global Perspectives on Health Geography* (pp. 111–126). Springer International Publishing. https://doi.org/10.1007/978-3-031-37565-1_8

WaterAid. (2017). *10 reasons WASH is a pathway to gender equality and the empowerment of women and girls*. https://www.wateraid.org/ca/10-reasons-wash-is-a-pathway-to-gender-empowerment-and-the-empowerment-of-women-and-girls

WHO. (2021). *Devastatingly pervasive: 1 in 3 women globally experience violence*. https://www.who.int/news/item/09-03-2021-devastatingly-pervasive-1-in-3-women-globally-experience-violence

WHO & UNICEF. (2022). *PROGRESS ON WASH IN HEALTH CARE FACILITIES 2000–2021*. https://data.unicef.org/resources/jmp-wash-in-health-care-facilities-2022/

Winter, S. C., & Barchi, F. (2016). Access to sanitation and violence against women: Evidence from Demographic Health Survey (DHS) data in Kenya. *International Journal of Environmental Health Research*, *26*(3), 291–305. https://doi.org/10.1080/09603123.2015.1111309

World Economic Forum. (2021). *Global Gender Gap Report*. https://www3.weforum.org/docs/WEF_GGGR_2021.pdf

Yilma, H., & Rimal, R. (2025). Chapter 10 Social norms in health communication. In G.-J. De Bruijn & H. Vandebosch (Eds.), *Health, Media, and Communication* (pp. 187–212). De Gruyter. https://doi.org/10.1515/9783110775426-011

Yin, R. K. (2009). *Case study research: Design and methods* (4. ed., [Nachdr.]). Sage.

Young, H. P. (2015). The Evolution of Social Norms. *Annual Review of Economics*, *7*(1), 359–387. https://doi.org/10.1146/annurev-economics-080614-115322

APPENDICES

Appendix A: In-depth Interview Guide

Purpose: To understand the role of WASH/cash transfers in empowering women and addressing gender inequalities based in existing social norms

Research objectives

1. To identify the existing WASH social norms around gender at the community level in Ghana;
2. To explore how Cash + WS (i.e., cash transfers combined with complementary water services) intersect with WASH social norms to influence the health, wellbeing, and empowerment levels of women at the household and community levels in Ghana; and
3. To explore how social protections buffer against emergency WASH-related risks at the household and community levels in Ghana.

Construct	**Question**	**Probe**
Context The questions in this section will guide our discussion on your water, sanitation, and hygiene situation and that of your community or household members in Ghana.	Can you tell me about yourself?	• Your age • Gender • Ethnicity • Occupation • Education • Religion • Household income
	Can you tell me a little bit about the community that you live in?	• Is it large? Small? • Have people lived here for many generations or are there a lot of people who move in and out? • Are there lots of families and children? • Do people help each other when they are in need?
	Who makes the decisions in your community?	• Elected officials? • Elders/chiefs? • Others?
	Who makes the decisions in the households that make up your community?	• Husbands? • Wives? • Both?
	Are there people in your community who are more in need than others?	• Seniors? • Poor? • Disabled? • Women?
	What are the major development problems in this community?	• What are the top three development problems in the community? Why?

	Development problem refers to a pre-existing condition or big issue that needs to be resolved to ensure good well-being.	• Is access to safe water, sanitation, and hygiene (WASH) infrastructure a development problem in the community?
	What is the water situation in this community?	• What are your water sources? • What are some of the challenges you encounter when meeting your water needs? • How has COVID-19 impacted the water situation (e.g., the demand for water) in this household and the community?
	What is the sanitation and hygiene condition in this community?	• What is the state of access to household latrines in the community? • What is the extent of open defecation in the community? • What are some of the challenges people encounter in meeting their toilet needs? • Is there a toilet facility in this household? • How has COVID-19 impacted the sanitation situation?
Perception and Experiences of WASH The questions in this section will further our understanding of the existing WASH social norms around gender at the community level in Ghana	What roles do women play toward providing water in the community?	• Who is most likely in this household to be responsible for fetching water? Why? Is that different from what your neighbours experience? • Who is excluded from providing water for this household? Why? Is that different from what your neighbours experience? • What form of punishment do women receive when water is not available in their household? Is that different

		from what other women in the community experience? • What form of reward do women receive when water is available in their household? Is that different from what other women in the community experience?
	Did the nature of access to water expose women to any form of harm or risk? If yes, what kind of harm or risk?	• Were you exposed to harm or risks during water collection because you are a woman? What harm or risks? • How about structural, physical, sexual, and psychosocial violence? • Where did the harm or risk occur [e.g., on the way to water point, at water point, home etc.)? • Who was the most vulnerable to harm or risks while accessing water? Men vs women, boys vs girls. • Why were they vulnerable? • Who were the perpetrators of GBV and what motivated their actions? • How were issues of WASH-GBV handled in your community? Were perpetrators reported or community structures shielded them? • How would you rate the incidence of water related harms or risks? • How did this change over time? • Who do you talk to when exposed to harm or risks while accessing water? • Were you able to solve any of the water problems? How did you solve them?

	Did the nature of access to toilets expose women to any form of harm or risk? If yes, what kind of harm or risk?	• Were you exposed to harm or risks while accessing the toilet because you are a woman? What harm or risks? • How about structural, physical, sexual, and psychosocial violence? • Where did the harm or risk occur [e.g., on the way to the toilet, at the toilet, home etc.)? • Who was the most vulnerable to harm or risks while accessing the toilet? Men vs women, boys vs girls. • Why were they vulnerable? • Who were the perpetrators of GBV and what motivated their actions? • How were issues of WASH-GBV handled in your community? Were perpetrators reported or community structures shielded them? • How would you rate the incidence of sanitation related harms or risks? • How did this change over time? • Who do you talk to when exposed to harm or risks while accessing the toilet?
Women empowerment through WASH/Cash transfers The questions in this section will guide our discussion on how Cash + WS intersect with WASH social norms to influence health and empowerment levels of women at the household and community levels in	When I say the words *women's empowerment*, what does that mean to you?	• Where or whom did you hear it from? - Family members? - Neighbors? - Community leaders? - Religious leaders? - Institutions? • What does empowerment mean to <u>*you*</u> (as a woman)? • What initiatives did the community take to empower women? Were

Ghana. Also, they will further our understanding of how social protections (e.g., LEAP) buffer against emergency WASH-related risks at the household and community levels in Ghana		women consulted? Did women participate? Were these initiatives enough to empower you? Why? • What initiatives did institutions take to empower women? Were women consulted? Did women participate? Were these initiatives enough to empower you? Why? • What initiatives did you take to empower yourself? Were these initiatives enough to empower you? Why?
	In your opinion, how empowered are women feeling in this community?	• Do you have decision-making power related to sanitation expenditure, community planning, and water collection? Is that different from what your neighbours(women) experience? • What challenges hinder you from being empowered as a woman? Does it include financial constraints? What about water insecurity? • What role does the WASH social gender norms (your water fetching role, for example) in the community play in your current empowerment level as a woman? • Do men (e.g., your husband) support your empowerment as a woman? In what way (explain)?
	Are you a beneficiary of LEAP? If yes, probe.	• How long have you been a beneficiary? • What support have you received from LEAP? Does it include cash transfers? What about complementary water services? Both?
	IF NON-LEAP BENEFICIARY HOUSEHOLD, SKIP	

	What role did LEAP play in mitigating WASH-related risks?	• Was Cash transfers/Cash + WS able to buffer against WASH-related risks? Explain • Did the Cash transfers/Cash + WS contribute to better health(care) for you and your household? How? • Did the Cash transfers/Cash + WS contribute to improvement in your empowerment as a woman? How? • Did the Cash transfers/Cash + WS negatively affect your empowerment as a woman? How?
	What role did LEAP play in mitigating the impacts of disasters?	• What shocks or challenges did you face from disasters (e.g., flooding, drought, COVID-19)? • How did you overcome the shocks or challenges from disasters? • Was Cash transfers/Cash + WS able to buffer against the impacts of disasters? • What initiative(s) was/were taken at the community level to help cope with the shocks or challenges from disasters? How effective were these initiatives? • What lesson(s) did you learn from disasters that may be useful in the future?
	IF LEAP BENEFICIARY HOUSEHOLD, SKIP	
	Now I would like to ask you a few questions about how you manage the impacts of a difficult situation like flooding or drought or like when we had COVID-19. First, can you tell me about the difficult situations like these that you have had in the past?	• How did you cope with these shocks or challenges from disasters like these? • What initiative(s) was/were taken at the community level to help cope with the shocks or challenges from these disasters? How effective were these initiatives?

		• What lesson(s) did you learn from disasters that may be useful in the future?
	Do you think women deserve to be empowered?	• If yes: Why should women be empowered? • At the individual/household scale • In the community • If no: Why not? • At the individual/household scale • In the community
	Based on your current experience, how should women be empowered?	• At the individual/household scale • In the community
	Based on your current experience, how would you recommend problems of WASH be handled?	• At the individual/household scale • In the community
	How do you think women's lives would change if they were empowered?	• Education • Health(care) • Economic development • WASH • Other?
	What do you think the community could gain from women being empowered?	• Household level • Community level • National level
Discussion	Is there anything else you would like to chat about that we have not already covered?	

Appendix B: Initial Coding Framework

Key theme	**Sub-themes**	**Sub-sub themes**	
Context	Gender	Man	
		Woman	
	Age	Below 30	
		31-45	
		46-60	
		Above 60	
	Ethnicity	Dagaaba	
		Waala	
		Sisaala	
		Birifo	
	Occupation	Farmer	
		Agro-processor	
		Trader/retailer	
		Housewife	
		Apprentice	
		Unemployed	
		Aged (cannot work)	
		Other	
	Education	Primary/Basic School	Primary/Basic School=Junior High School Secondary School=Senior High School
		Secondary School	
	Religion	Christianity	
		Islam	
		African Traditional Religion	
	Monthly household income	Below GHS 300	
		GHS 300 to GHS 600	
		GHS 601 to GHS 900	
		Above GHS 900	
	Community size	Small	
		Medium	
		Large	
	Social capital and community networks	Do people live here for many generations?	Yes
			No
		Do people move in and out?	Yes
			No

		Are there lots of families and children?	Yes
			No
		Do people help each other?	Yes
			No
	Who makes decisions in the community?	Elected officials (Assembly member/unit committee member)	Landlords=Tin daamba
		Traditional authority (Elders/chiefs)	
		Landlords	
	People in the community who are more in need than others	Seniors/aged	
		Poor	
		Disabled	
		Women	
		Widows	
		Unemployed	
		Other	
	Major development problems in the community	Water shortage or scarcity	
		High cost of water/high water bill	
		Poor sanitation	
		Poor healthcare	
		Poor education facilities	
		Poor economic development/Poor business growth	
		Inadequate employment opportunities	
		Poverty	
		Poor condition of roads	
		Chieftaincy disputes	
		High cost of farming or farm input/difficulty in harvesting	
		Poor access to information	
		Inadequate support (during difficult situations or disasters)	
		High cost of living or food	
		Other	
	Water sources	Borehole	
		Public tap/standpipe	
		House tap or tap located in house premises	
		Pond/spring/stream	

		Rainwater	
		Well	
		Dam	
		Tanker/vender supplied	
		Other	
	Challenges women encounter when meeting their water needs	Queue or crowd at water source/delayed access at water source	
		High use or demand for water in household	
		High cost of water/high water bill	
		Old women still fetching water/Too old to fetch water	
		Distant proximity to water source/walking long distances to access water	
		Boreholes break down frequently/water shortage	
		Having to fetch water at odd hours (at dawn or at night)	
		Tiredness	
		Fight/insults/argument	
		I do not know/I cannot tell	
		Other	
	How has COVID-19 impacted the water situation?	Fear/fear of contracting COVID-19 during water collection	
		Increased childcare burden in addition to water duties	
		High use or demand for water in household/increased demand for water	
		More stress or more worry	
		Delayed access to water at water source	
		Difficulty in practicing precautionary measures (at water source)	
		Pressure on boreholes or water sources	
		More fight or insults over water	
		I do not know/I cannot tell	

		Other	
	State of access to household latrines in the community	No access/no latrines	
		Little access/few or fallen latrines	
		More access/many latrines	
	Extent of open defecation	Uncommon/rarely practiced	
		Prevalent/widely practiced	
	Challenges people encounter in meeting their toilet needs	Getting bitten by a harmful animal (e.g., snake bite, scorpion sting)	Weather-related risks include risks of going to defecate in the bush during or after a rainfall, such as catching a cold or catarrh, or falling due to slippery ground
		Feeling shy/embarrassed	
		Inadequate toilet facilities	
		Latrines falling/risk of latrine falling on you	
		Weather-related risks	
		Stress or worry (from having to defecate in the bush at odd hours, like at dawn or at night)	
		Distant proximity to toilet facilities	
		Other	
	Is there a toilet facility in this household?	Yes	
		No, it fell	
		No, never had one	
	How has COVID-19 impacted the sanitation situation?	Fear/fear of contracting COVID-19 while meeting toilet needs	
		Difficulty in practicing sanitation or toilet related precautionary measures	
		Increased childcare burden regarding their access to the toilet	
		No impact/no problem	
		I do not know/I cannot tell	
		Other	
Perception and experiences of WASH			
The roles women play in providing water in the community	Who is most likely in this household to be responsible for fetching water?	Women	
		Men	
		Boys	
		Girls	
		Divine reason/God said so	

	Why are women and/or girls responsible for fetching water?	Role passed down from earlier generations	
		It is expected of them/because it is their role or duty	
		To avoid punishment (physical and nonphysical)/to avoid shame or insults	
		Because women depend more on water/women use water a lot	
		Women are more willing to provide water than men	
		Other	
	Why are men and/or boys responsible for fetching water?	Emergency reasons	
		They are unmarried or have no woman to fetch water	
		To support/As a way of supporting their wives	
		Because they are educated	
		Other	
	Are those roles different from what your neighbours experience?	Yes, it is different	
		No, it is the same	
	Who is excluded from providing water for this household?	Men	
		Mother-in-law	
		Old people	
		Disabled	
		Other	
	Why are they excluded from providing water for the household?	They are weak or incapable	
		They have other duties	
		It is not acceptable by society	
		Divine reason/God said so	
		To avoid embarrassment or shame or insults	
		Because they have women or people to do it for them	
		I do not know/I cannot tell	
		Other	
	Is the exclusion different from what your neighbors experience?	Yes, it is different	
		No, it is the same	
		Shame	

	Forms of punishment women receive when water is not available in their household	Insults	
		Being shouted at or scolded	
		Physical violence or being beaten	
		Stress or worry	
		Less productivity	
		Wasted time/Less time to pursue opportunities	
		I do not know/I cannot tell	
		Other	
	Is that punishment different from what other women in the community experience?	Yes, it is different	
		No, it is the same	
	Forms of reward women receive when water is available in their household	Praise	
		Peace/happiness/less worry or stress	
		Productivity	
		More time (to pursue opportunities)	
		Other	
	Is that reward different from what other women in the community experience?	Yes, it is different	
		No, it is the same	
Harm or risks women face while accessing WASH services	Did the nature of access to water expose women to any form of harm or risk?	Yes	
		No	
	During water collection, what harm or risks were you exposed to because you are a woman?	Sexual violence (e.g., rape, assault, fear of sexual violence)	
		Physical violence (e.g., animal bite such as snake bite and scorpion sting, fight or being beaten)	
		Psychosocial violence (e.g., insults, threats, worry or stress)	
		Spiritual attack	
		Falling down/body injury	
		Other	

	What harm or risks were other women exposed to during water collection?	Sexual violence (e.g., rape, assault, fear of sexual violence)	
		Physical violence (e.g., animal bite such as snake bite and scorpion sting, fight or being beaten)	
		Psychosocial violence (e.g., insults, threats, worry or stress)	
		Spiritual attack	
		Falling down/body injury	
		Other	
	Where did the harm or risk occur?	At home	
		On the way to/from water point	
		At water point	
	Who was the most vulnerable to harm or risks while accessing water?	Men	
		Women	
		Boys	
		Girls	
		Both men and women	
		Both boys and girls	
	Why were they vulnerable?	They frequently go to fetch water/they are responsible for fetching water	
		They are less strong	
		They are more stubborn	
		I do not know/I cannot tell	
		Other	
	How often does gender-based violence (GBV) occur while accessing water in this community?	Never	
		Only heard rumors of its occurrence/heard it happened in another community	
		Occasionally	
		Often	
	How were issues of WASH-GBV (water related) handled in your community?	Only the perpetrator was punished	
		Both perpetrator and victim were punished	
		Perpetrator was only reported	
		Community structures shielded perpetrator	
		I do not know/I cannot tell	

		Other	
	How would you rate the incidence of water related harms or risks?	Never	
		Occasionally	
		Often	
	How did water related harms or risks change over time?	No change	
		Little change	
		Much change	
	Who do you talk to when exposed to harm or risks while accessing water?	No one	
		Husband	
		Father-in-law	
		Mother-in-law	
		Other	
	Were you able to solve any of the water problems?	Yes, completely	
		Yes, partially	
		No	
	How did you solve them?	Support from relatives	
		Support from women's group	
		Through borrowing	
		Through personal savings	
		Support from nonprofit	
		Support from community	
		Other	
	Did the nature of access to toilets expose women to any form of harm or risk?	Yes	
		No	
	While accessing the toilet, what harm or risks were you exposed to while accessing the toilet?	Sexual violence (e.g., rape, assault, fear of sexual violence)	
		Physical violence (e.g., animal bite such as snake bite and scorpion sting, fight or being beaten)	
		Psychosocial violence (e.g., insults, threats, worry or stress, shame)	
		Other	
	What harm or risks were other women exposed to while accessing the toilet?	Sexual violence (e.g., rape, assault, fear of sexual violence)	
		Physical violence (e.g., animal bite such as snake bite and	

		scorpion sting, fight or being beaten)	
		Psychosocial violence (e.g., insults, threats, worry or stress, shame)	
		Other	
	Where did the harm or risk occur?	At home	
		On the way to/from the toilet	
		At the toilet	
	Who was the most vulnerable to harm or risks while accessing the toilet?	Men	
		Women	
		Boys	
		Girls	
		Both men and women	
		Both boys and girls	
	Why were they vulnerable?	They frequently visit the toilet	
		They are less strong	
		They are more stubborn	
		I do not know/I cannot tell	
		Other	
	How often does gender-based violence (GBV) occur while accessing the toilet in this community?	Never	
		Only heard rumors of its occurrence/heard it happened in another community	
		Occasionally	
		Often	
	How were issues of WASH-GBV (sanitation related) handled in your community?	Only the perpetrator was punished	
		Both perpetrator and victim were punished	
		Perpetrator was only reported	
		Community structures shielded perpetrator	
		I do not know/I cannot tell	
		Other	
	How would you rate the incidence of sanitation related harms or risks?	Never	
		Occasionally	
		Often	
	How did sanitation related harms or risks change over time?	No change	
		Little change	
		Much change	
		No one	

	Who do you talk to when exposed to harm or risks while accessing the toilet?	Husband	
		Father-in-law	
		Mother-in-law	
		Other	
Women empowerment through WASH/Cash transfers			
Women's empowerment levels	When I say the words *women's empowerment*, what does that mean to you?	Empowerment means money/Empowerment requires money	
		Ability to make choices	
		Gaining power or control	
		Having access to food	
		Having access to WASH services	
		Having access to opportunities (e.g., access to education, healthcare, jobs)	
		Other	
	Where or whom did you hear empowerment from?	Family members	
		Neighbors	
		Community leaders	
		Religious leaders	
		Institutions/Government or nonprofit institutions	
		Radio/television/mobile phone	
	What does empowerment mean to you as a woman?	Financial growth or access to money	
		Economic or business development	
		Access to opportunities (e.g., education, healthcare, jobs)	
		Improved access to food	
		Better housing condition	
		Improved access to WASH services	
		Better investment options (e.g., startup businesses, saving groups, scaling up agricultural activities)	
		Other	
	What initiatives did the community take to empower women?	None	
		Support to women's groups	
		Sensitization/information sharing	

		I do not know/I cannot tell	
		Other	
	Were women consulted when taking community initiatives?	Yes	
		No	
	Did women participate in community initiatives?	Yes	
		No	
	Were these community initiatives enough to empower you?	Yes, fully	Why: Yes, fully, because I can now take care of all my needs Yes, partially, because I still need more empowerment/it was not enough No, it did not help
		Yes, partially	
		No	
	What initiatives did institutions take to empower women?	None	
		LEAP cash transfers	
		Hands-on training	
		Charity (e.g., donating foodstuff)	
		Providing access to opportunities (e.g., access to education, healthcare, jobs)	
		Providing access to WASH services	
		Providing better investment options (e.g., startup businesses, saving groups, scaling up agricultural activities)	
		Sensitization/information sharing	
		I do not know/I cannot tell	
		Other	
	Were women consulted when	Yes	
		No	

	institutions were taking the initiative?		
	Did women participate in initiatives taken by institutions?	Yes	
		No	
	Were the initiatives taken by institutions enough to empower you?	Yes, fully	Why: Yes, fully, because I can now take care of all my needs Yes, partially, because I still need more empowerment/it was not enough No, it did not help
		Yes, partially	
		No	
	What initiatives did you take to empower yourself?	None	
		Investment in building social networks (e.g., joining women's groups)	
		Adopting saving options (e.g., saving in women's groups, personal savings)	
		Investment in agricultural activities (e.g., farming, rearing animals)	
		Investment in business ventures or activities (e.g., agro-processing, trading, selling food)	
		Investment in personal development (e.g., learning a skill)	
		Searching for opportunities (e.g., education, healthcare, jobs)	
		Improving access to foodstuffs	
		Improving housing condition	
		Other	
		Yes, fully	Why:

	Were these initiatives you took enough to empower you?	Yes, partially	Yes, fully, because I can now take care of all my needs Yes, partially, because I still need more empowerment/it was not enough No, it did not help
		No	
	In your opinion, how empowered are women feeling in this community?	Not empowered	
		Partially empowered	
		Fully empowered	
	How empowered are you feeling?	I have control or decision-making power related to sanitation expenditure	
		I have control or decision-making power related to community planning	
		I have control or decision-making power related to water collection/allocation	
		I have a say only at the household level	
		I have a say only at the community level	
		I have a say at both household and community levels	
		I do not have a say at either household or community levels	
		Other	
	Is your decision-making power different from what your neighbors (women) experience?	Yes, it is different	
		No, it is the same	
	What challenges hinder you from being	Financial constraints/poverty	
		Water shortage or insecurity	
		Spiritual attack/Satan	

	empowered as a woman?	Bad luck	
		Little or no opportunities	
		Misperception/Fear of rejection	
		Workload/little or no time to pursue opportunities	
		I have many dependents	
		Little or no support system	
		Unfavourable WASH related gender roles	
		I do not know/I cannot tell	
		Other	
	What role does the WASH social gender norms (your water fetching role, for example) in the community play in your current empowerment level as a woman?	It hinders my empowerment	
		It somewhat hinders my empowerment/it is not the most pressing issue in my empowerment	
		It has nothing to do with my empowerment	
		I do not know/I cannot tell	
		Other	
	Do men (e.g., your husband) support your empowerment as a woman?	Yes	
		Sometimes/Somewhat	
		No	
	In what way do men (e.g., your husband) support your empowerment as a woman?	By being happy for me	
		Through monetary support	
		Sharing information or opportunities/helping me access or search for opportunities	
		By taking part in some "women" chores	
		Other	
Lessons and management strategies for difficult situations or disasters			
	Are you a beneficiary of LEAP?	Yes	Yes – both direct beneficiaries and people from beneficiary households
		No	
	FOR LEAP BENEFICIARIES ONLY		

Impact of LEAP to women	How long have you been a beneficiary?	Less than 2 years	
		2 to 4 years	
		5 to 7 years	
		Above 7 years	
	What support have you received from LEAP?	Cash grants	
		Complementary water services (WS)/Money to buy water	
		Food items/foodstuff	
		Livestock	
		Healthcare/health insurance	
		Education (for children)	
		Other	
	Impact of the LEAP program to women	Improved livelihood/economic development	
		Better access to WASH services	
		Better access to education	
		Better accessing to healthcare	
		Improved capacity to manage difficult situations or disasters	
		Improved access to food	
		Improvement in women's empowerment levels	
		Negatively affected women's empowerment	
Coping strategies for difficult situations or disasters	What difficult situations or disasters have you experienced before?	Flooding	
		Drought	
		COVID-19	
		Death of a relative/road accident	
		Domestic fire	
		Windstorm	
		Pest or insect infestation	
		Sickness	
		Other	
	What shocks or challenges did you face from difficult situations or disasters?	Water shortage/increased demand for water	
		Destruction of farm/reduced farm yield	
		Financial constraints	
		Poor health	
		Destruction of property	

		Emotional distress/stress or worry	
		Other	
	How did you cope with or overcome the shocks or challenges from disasters?	Faith/Pray to God	Precautions – social distancing, handwashing, vaccination, healthy lifestyle Support system – family members, community members or groups or structures
		Adhered to precautions	
		Help from support system	
		Support through LEAP	
		I did nothing	
		Other	
	Initiatives taken at the community level to manage shocks or challenges from disasters	None	
		Sacrifice or prayer to ancestors	
		Mass vaccination	
		Public sensitization/adoption of precautionary measures	
		Public sympathy and support	
		I do not know/I cannot tell	
		Other	
	Effectiveness of community initiatives during disasters	Not effective	
		Somewhat effective	
		Effective	
	What lesson(s) did you learn from disasters that may be useful in the future?	None	
		The need to save for the future	
		Develop support system/seek support/importance of support	
		The need to practice and maintain good hygiene or tidiness	
		Renewed faith	
		Resilience	
		The importance of vaccination or public sensitization or adoption of precautionary measures	
		I do not know/I cannot tell	
		Other	

Recommendations on women's empowerment and access to WASH services	Do you think women deserve to be empowered?	Yes	
		No	
	Why should women be empowered?	Women suffer a lot	
		Women are more vulnerable	
		Women have more responsibilities/dependents	
		Women are less empowered or have access to less opportunities	
		Women need help	
		Empowered women will help other people/Others will benefit	
		Other	
	Based on your current experience, how should women be empowered?	Money or cash grants	
		Hands-on training	
		Improve women's access to WASH services	
		Improve women's access to opportunities (e.g., access to education, healthcare, jobs)	
		Providing foodstuffs	
		Provide investment options (e.g., startup businesses, saving groups, scaling up agricultural activities)	
		Equal WASH related roles for both men and women	
		I do not know/I cannot tell	
		Other	
	Based on your current experience, how would you recommend problems of WASH be handled?	More support from nonprofit or government institutions	
		Women should be empowered	
		Building more WASH infrastructure/Getting better access to WASH services	
		Adopting/practicing good sanitation and hygiene practices	
		I do not know/I cannot tell	
		Other	
	How do you think women's lives would	Improved access to education	
		Improved access to healthcare	

	change if they were empowered?	Increased economic development	
		Improved access to WASH services	
		I do not know/I cannot tell	
		Other	
	What do you think the household, or community, or nation could gain from women being empowered?	Better financial support for children's education	
		Support and commitment to development/more development	
		Business or economic growth	
		Support for other people	
		Better healthcare	
		Improved access to WASH services	
		Improved access to food	
		I do not know/I cannot tell	
		Other	
	Is there anything else you would like to chat about that we have not already covered?	No	
		I need support/I need to be empowered	
		I want my voice to be heard	
		Other	